

Preparing the next steps in regulation of electronic communications

A contribution to the review of the
electronic communications regulatory framework

Final Report

For the European Commission

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**The opinions expressed in this study are those of the authors and do not
necessarily reflect the views of the European Commission.**

About the authors

This **Final Report** was prepared by Hogan & Hartson LLP and Analysys Consulting Ltd for the European Commission. It takes into account the law and market developments as of May 2006. The authors are grateful for the assistance of the Information Society and Media Directorate-General of the European Commission in identifying information sources for this study and providing expert comments on our drafts. We would also like to thank the representatives from the various organisations which have participated in our consultations with stakeholders. However, we emphasise that this study is the work of Hogan & Hartson and Analysys, and does not necessarily represent the views of the European Commission or any other group.

Unless otherwise indicated, all figures and tables in this study are sourced from Hogan & Hartson and Analysys.



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0 Executive Summary

The fundamental goal of this study is to contribute to the Commission's review during 2006 of the Regulatory Framework governing electronic communications in the European Union. This goal requires a mix of backward-looking and forward-looking research, focused on the following questions:

- How well has the existing Regulatory Framework fared in realising the Community's objectives, and what changes might be warranted?
- How is the sector likely to evolve, and do any of these changes have implications for the appropriate regulatory environment?

This study sets forth a substantial number of recommendations. These can be categorised as:

- recommendations that propose technical and legal changes to the Regulatory Framework; for example, correcting or updating a cross-reference between directives (many of our recommendations fall into this category);
- recommendations that do not propose changes to the Regulatory Framework itself but which suggest additional activities aimed at better achievement of current objectives (these include for example recommendations for the establishment of best practice guidelines); and
- recommendations for further investigation. We have identified some issues for which we believe there is insufficient information or the market situation is too early to recommend a specific change to the Regulatory

Framework, but for which the Commission should consider further changes in light of developments or the broader consultation it has conducted as part of the review of the Regulatory Framework.

None of the recommendations suggests sweeping changes to the Regulatory Framework or a change to its basic principles. In the questionnaire we conducted as part of this project respondents indicated broad support for the concept of *ex ante* regulation coupled with competition law as embodied in the Regulatory Framework. Also, we were requested in this project to review specific provisions of certain directives, rather than the Regulatory Framework as a whole. In any event, we did not identify changes required to the overall structure and do not believe that implementation of the recommendations we set forth would require radical legislative changes.

The overall methodology adopted by the study and the relationship to sections of this study is illustrated in Exhibit 0.1 below:

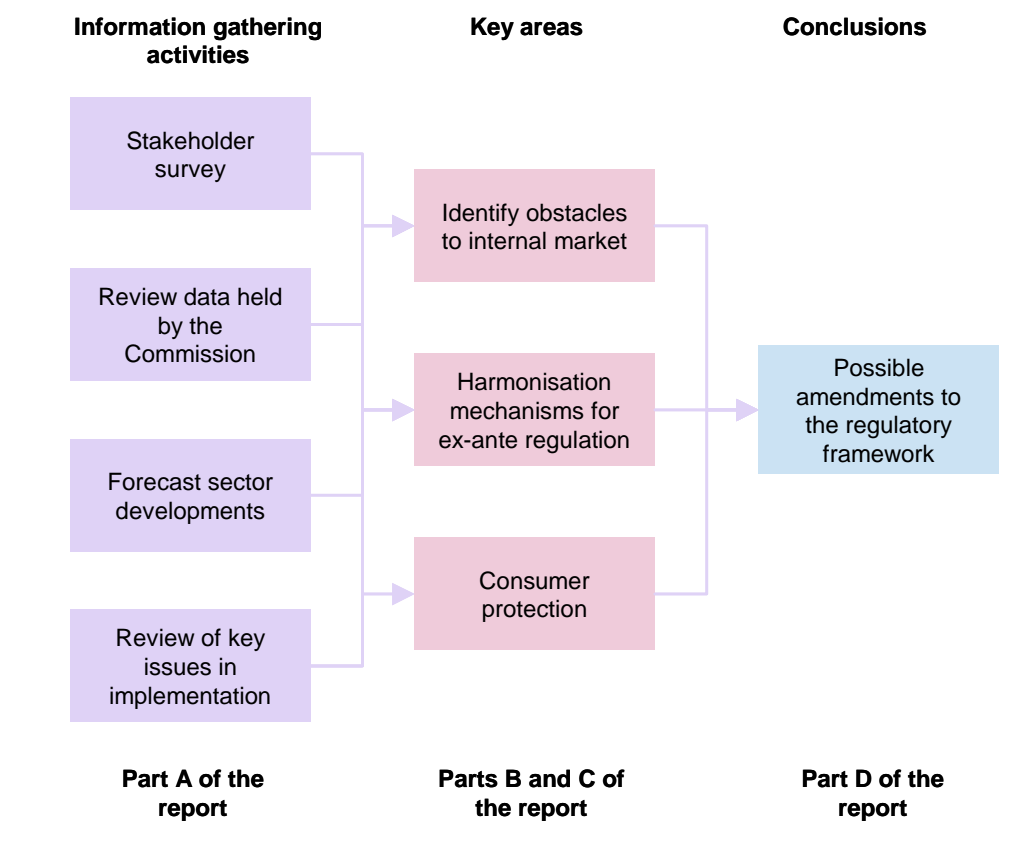


Exhibit 0.1: Overview of methodology adopted [Source: Hogan & Hartson and Analysys]

This study is divided into four sections. In Part A we present the findings of our information gathering activities, which identify obstacles to the Internal Market. Parts B and C correspond to the second column of the above exhibit and review specific aspects of the directives in the Regulatory Framework. Part D summarises all the recommendations for possible amendments to the Regulatory Framework.

0.1 Part A – Obstacles to the Internal Market

At the outset, we conducted information gathering activities to provide a context for the rest of the study. Part A of the study identifies remaining obstacles to the completion of the Internal Market and possible ways to improve competition and efficiency in electronic communications networks and services. We highlight below significant obstacles noted in the course of the study. However, it is important to note that our primary focus is upon the particular provisions of the directives that the Commission specified for this project (and which we identify in the discussion below on Parts B and C).

0.1.1 Forecast sector developments

It is particularly important to consider sector developments for electronic communications, because possible changes to the Regulatory Framework will not be applied in Member States before 2009-2010. Any recommendation for amendment to the Regulatory Framework must take this time frame into account. In Chapter 2, we outline in broad terms the value and structure of the European electronic communications market today, before discussing the key trends that we expect will affect this sector over the next 5–10 years. We discuss likely trends in network and service delivery, and we outline the regulatory issues arising from these trends. Rather than present a single view of how the sector will develop, we discuss possible scenarios arising from key trends and market developments.

The scenarios we develop lead to a series of regulatory issues that may arise from the technological developments and market trends identified. Some of these issues are outside of the scope of our study, including whether broadband should become part of the

universal service obligation, whether standardisation of consumer devices should be strengthened, and the role for NRAs with respect to rights management. Some issues require immediate attention under the Regulatory Framework, including service bundling, treatment of new investment and number portability. Other issues that are raised by the market forecast fit squarely within the scope of this study, including:

- Operators may have an economic incentive to limit the **access of users to network and services**. A key challenge for NRAs is therefore how to ensure that network access and more specifically the openness of the Internet can be maintained.
- Several technological developments and market trends lead to a potential **blurring of existing market boundaries**, particularly with respect to new technology platforms.
- Trends in the use of **devices at the edge of the network** to deliver electronic communications services require discussion of the definitions of “associated facilities” and “associated services,” and the consumer and privacy protections that should be guaranteed.
- Developments in networks and services raise new issues related to **consumer protection**, such as the control of unsolicited communications.

0.1.2 Stakeholder Survey

An important source of information for the study has been a survey of market players and consumer organisations in the EU using a questionnaire to elicit information sufficient to identify major remaining obstacles to a genuine Internal Market. We drafted the questionnaire on the basis of an outline provided by the Commission, designed to solicit the opinion of a wide range of stakeholders across as many of the EU25 as possible and to include the views of smaller players that might not normally contribute to consultations at a European level.

As noted earlier, respondents indicated support for the concept of *ex ante* regulation coupled with competition law as embodied in the Regulatory Framework. However, the majority of our respondents do not believe the Internal Market for electronic communications is complete, for reasons including the weakness of some NRAs, unharmonised implementation, lack of pan-European services in general, problems of *ex ante* regulation as well as the effectiveness of *ex post* regulation, and allegedly asymmetric regulation. The only consistent message from these responses is that implementation needs to be completed, and in some cases improved, a finding that we see repeated frequently. Most operators believe that full implementation of the Regulatory Framework will help remove barriers to completion of the Internal Market. There is consistent support for taking steps to complete the Internal Market, both to harmonise rules on market entry and to foster transnational services. Respondents argue that having different regulatory approaches in different countries adds to the costs of firms operating across multiple countries.

0.1.3 Review of key issues in implementation

In order to inform our assessment of obstacles to the Internal Market and to provide a context for specific issues addressed later in the study we also discuss general themes of implementation. We identify high level issues that we have seen from industry consultation, the Commission's implementation reports and our own analysis of the Regulatory Framework. The implementation issues we have identified and consider relevant in the present context are those that

- create, or may create, serious and recurring obstacles to the Internal Market with implications for the future;
- are linked, at least partly, to particular features of the Regulatory Framework and/or the market sector developments discussed in the Chapter 2; and
- can be potentially addressed through EU measures, in a future revision of the Regulatory Framework.

The main implementation problems identified concern:

- the regulatory treatment of self-supplied new technology;
- the status of VoIP;
- the delays and, occasionally, lack of transparency encountered thus far in the NRAs' market analysis and notification procedures; and
- additional delays due to national appeal proceedings.

As we discuss in Part B, most of these issues can best be addressed through appropriate changes to the Framework Mechanism. The emergence of IP-based networks and the deployment of FTTx may also require possible adjustments to, or clarifications of, the applicable access regime. Finally, while the challenge of VoIP may raise regulatory issues across the board, the most relevant VoIP-specific questions are closely related to the authorisation regime.

0.2 Part B – Harmonisation Mechanisms for *ex ante* Regulation

Part B examines the following aspects of three directives in the Regulatory Framework, which the Commission requested we review.

- Articles 7, 15 and 16 of the *Framework Directive* for defining markets, assessing market power and imposing remedies, and associated provisions on appeal procedures in Article 4;
- Articles 9-13 of the *Access Directive*, and the 'menu' of regulatory obligations; and
- the impact of moving to general authorisations, the extent to which there is harmonised implementation among the 25 Member States of the rules associated with general authorisations, and whether any adaptations or clarifications of the current provisions are needed in respect of achieving

the regulatory objective of facilitating market entry, as well as the single market objectives described above.

0.2.1 Regulatory Mechanisms of the *Framework Directive*

In reviewing the *Framework Directive* we address the point that, despite the experience gained so far and other expected improvements, serious delays in the market analysis process that NRAs carry out under the Regulatory Framework are expected to persist in the future. We recommend some fine-tuning of the overall Framework Mechanism to help address these issues, starting from the perspective that streamlining the process to minimise delays would bring benefits both from an organisational and a substantive perspective. We also discuss timing of notifications and national consultations, as well as transitional measures that could be implemented. We review clustering of notifications and how some of the measures proposed by NRAs that currently require notification to the Commission could be wholly or partly exempted from this requirement and, possibly, from the associated obligation of a public consultation.

The following recommendations from this chapter, just as all the recommendations we set forth in this executive summary, are summaries of the complete recommendations contained in each chapter and in the concluding Part D. Thus, for a full description of the recommendations, plus important limitations and caveats, it is necessary to review the complete text. Recommendations relating to the *Framework Directive* consist of the following:

Streamlining the market analysis and notification procedure

1. Article 7 notifications by NRAs should be subject to a more strictly defined timetable.
2. NRAs should submit their Article 7 notifications to the Commission only once the relevant national consultation procedures have been completed.

3. The Commission should consider amending the Framework Mechanism to allow NRAs at their discretion to apply a short transitional regime in markets found to have become effectively competitive only recently.
4. The NRAs' market analyses and notifications preferably should be grouped in market clusters and follow a systematic sequence (from wholesale to retail), based on non-binding ERG or Commission recommendations.
5. The *Framework Directive* should allow the Commission to define "white listed" market situations that would be subject to a reduced set of consultation and notification obligations.
6. As a general rule, we do not see a compelling case for extending the Commission's veto power to all remedies proposed by the NRAs. However, there may be exceptions to this rule, in narrowly defined cases of particular importance to the Internal Market, and on the basis of more narrowly defined criteria than those that can be relied upon today for the adoption of *ex ante* remedies.

Substantive Issues

7. In general, we see no reason for changes to the market definition methodology and the concept of SMP under the Regulatory Framework. An exception concerns the concept of "collective dominance," which poses serious problems of application in the Framework Mechanism, albeit without any perfect alternative in sight. One possible solution would be to expand the concept of "absence of effective competition" on the market so as to include unilateral effects on competition from oligopolies in which no undertaking has single or collective dominance. Because this solution may be difficult to implement in practice and could raise problems of its own, it should be accompanied by safeguards that could include a Commission veto power against any disproportionate *ex ante* remedies based on an NRA finding of unilateral effects.

8. The Commission should be given the power to define relevant markets prospectively, in exceptional cases and subject to comitology procedures, based on criteria other than those set by competition law.

Policy Objectives

9. More clearly defined criteria for *ex ante* remedies would provide a more credible basis for a Commission veto for the remedies concerned, should such an extension be deemed politically desirable.

Appeal Procedures

10. The conditions under which an NRA decision under appeal may be suspended should be defined more precisely in the *Framework Directive*.
11. A provision similar to the one now in force under the modernised European competition law should allow the Commission to act as *amicus curiae* in national appeals against NRA decisions.

0.2.2 Regulatory Obligations of the *Access Directive*

In reviewing the *Access Directive* we consider specifically whether the regulatory obligations set forth in Articles 9 to 13 of the *Access Directive* may need to be adjusted in response to issues we have identified under the Regulatory Framework. We see no serious substantive problem with the list of the *Access Directive*'s remedies, subject to the specific comments made below.

12. To the extent that more detailed regulatory guidance on appropriate cost methodologies may be necessary, a future revision of the Commission Recommendation on accounting separation would be the appropriate regulatory tool (and consequently, changes to the Regulatory Framework's directives are not required).

13. We recommend that the Commission consider whether the distinction between the connectivity and service levels of an IP-based network should be clarified, for example, through non-binding regulatory guidance.
14. The access regime for FTTx should reflect a clear distinction between the network's active and passive level, and result in distinct sets of access obligations (or in some cases no obligations at all) for each level, regardless of whether these are operated by the same entity.
15. NRAs should have the option to allow structural separation as a measure of last resort subject to the Commission's veto (as is currently the case), and the Commission should clarify in advance the criteria it would rely upon to determine whether or not to veto such a remedy.
16. The Commission should consider expanding the list of *ex ante* remedies to also include organisational and functional separation.

0.2.3 Impact of the *Authorisation Directive*

In reviewing the *Authorisation Directive* we discuss the theory behind general authorisations, including harmonisation and methods to manage pan-European authorisations. We also focus on spectrum and numbering aspects of authorisations, including the impact of spectrum trading on rights of use. In very summary form, the recommendations that arise from this analysis include the following:

17. Clarify under what circumstances self-provided services are within (or outside of) the definition of ECS.
18. Issue further guidance on the status of VoIP.
19. The Commission should consider whether *Authorisation Directive* Article 9 procedures for declarations concerning ECS and ECN should be extended to declarations that a particular service is a PATS.

20. The Commission should consider whether to amend the *Authorisation Directive* to include associated facilities and services.
21. Amend *Framework Directive* Article 19 to give the Commission competence to adopt technical implementing measures as decisions, not solely recommendations, and explicitly to harmonise authorisation conditions, particularly to promote pan-European services.
22. Initiate further dialogue with the ERG to determine how it can contribute more directly to harmonisation of conditions applied to general authorisations and procedures for notifications.
23. The Commission should consider further consultation on the need for pan-European authorisations to identify services that might benefit from such an approach, and adopt amendments that could support an appropriate regulatory structure.
24. Link the issue of pan-European authorisations to transnational markets under the *Framework Directive*, which includes review of how the service providers in that market could operate under a pan-European authorisation.
25. The Commission should consider the implications of the term “harmful interference” for defining when individual rights of use are required. This requirement should be implemented more rigorously, and provisions should be included so that only credible risks of harmful interference are used, keeping in mind the impact of changes on international obligations.
26. The Commission should clarify the application of the *R&TTE Directive* on “unlicensed” or licence exempt ECS and ECN (i.e., ECS and ECN that do not require rights of use).
27. Make explicit reference to the Community objective for “flexible” management of spectrum resources and authorisation structures.

28. We recommend that condition B1 on designation of rights of use contained in the Annex to the *Authorisation Directive* be amended to require strict justification subject to the technology neutrality principle.
29. We recommend adding provisions as appropriate to provide clear legal authority for necessary technical implementation measures for WAPECS.
30. The principle of service neutrality should be incorporated into the policy objectives of the Regulatory Framework.
31. Redraft Article 8 of the *Authorisation Directive* on harmonised assignment of radio frequencies.
32. We “reissue” recommendations on spectrum trading made in our earlier study for the Commission.
33. Adopt further provisions for dispute resolution specifically for complaints of cross-border interference.
34. The Commission should consider whether fundamental change is needed to the development of pan-European structures for the European Telephony Numbering Space (ETNS), because the current system is broken.
35. On market entry for premium rate services, we defer to the recommendations already laid out in an earlier Commission study, but we note that our questionnaire showed there is continuing demand for pan-European services up to 2015.
36. The Commission should consider whether changes are required to provide sufficient guidance and regulatory structure for numbering resources, and amend the *Authorisation Directive* with respect to limits on the number of rights of use for numbers.
37. The Commission should consider whether some Community competence is needed over the long term structure for naming and addressing resources.

38. The Commission should consider whether the scope of the *Framework Directive* with respect to harmonisation of numbering resources should be expanded, so that harmonisation efforts might be supported even for services that are not necessarily pan-European.

0.3 Part C – Consumer Protection Aspects

Part C of the study examines Member State implementation of the following aspects and suggests, where possible, adjustments to the existing legal provisions:

- Provisions to safeguard user privacy and the security and confidentiality of online communications, including the integrity and security of public communications networks pursuant to Articles 4, 5, 6, 8, 9, 12 and 13 of the *e-Privacy Directive* and Article 23 of the *Universal Service Directive*;
- Article 34 of the *Universal Service Directive* on “out-of-court procedures” relating to consumer disputes; and
- the requirement for publishing tariffs and contract terms for calls and access to publicly available telephone service under Article 21 of the *Universal Service Directive*.

0.3.1 User privacy and the security and confidentiality of online communications

We examine measures safeguarding user privacy, security and confidentiality of online communications, including the integrity and security of public communications networks, pursuant to the *e-Privacy Directive* and *Universal Service Directive*. The numerous issues involved directly affect consumers in substantial ways and also affect the cost of doing business, and thus require an extended discussion. Again in very summary form, the recommendations from that chapter are the following:

Recommendations with respect to Article 4 - security

39. Providers should inform subscribers when there is an actual breach of network security, in addition to the current requirement to inform them of the risk of such breaches. The Commission should issue guidance on what constitutes a “breach” for notification purposes.
40. General authorisation condition A16 in the *Authorisation Directive* on security should be updated for coverage of both ECN and ECS providers, not solely ECN.
41. There should be an explicit obligation in *e-Privacy* Article 4(1) for ECNs and ECS providers to cooperate for ensuring data security.
42. All Member States should provide guidance on the obligation to take appropriate technical and organisational measures to guarantee security, and the Commission should encourage dissemination of information on best practice.

Recommendations with respect to Universal Service Directive Article 23 - integrity

43. The Commission should consider whether the scope of network integrity should be expanded beyond the traditional public telephone network to cover mobile or IP networks used for public service.

Recommendations with respect to Article 5 - confidentiality

44. The Commission should encourage best practice and support initiatives to develop technology that promotes confidentiality, such as encryption, but there is no need to change the Regulatory Framework, because this is a matter of best practice that can be encouraged through existing tools.

Recommendations with respect to Articles 6 and 9 – traffic and location data

45. The Commission should consider adopting more detailed standards on when consent can be given, for example, whether consent can be given in the general terms and conditions for ECS at the time of service subscription or during the stage of processing procedures.
46. The Commission should review the application of existing regulatory tools for dealing with converging services that use location data. We do not identify specific changes to the Regulatory Framework in this respect, given the scope of the existing provisions in Article 9 of the *e-Privacy Directive*.

Recommended Action with respect to Article 8 - CLI

47. The Commission should consider changes to improve the availability of CLI across Member State boundaries, without requiring CLI, as there may be valid industry or technical reasons not to provide such service for particular offerings.

Recommendations with respect to Article 12 - directories

48. The reference in *e-Privacy Directive* Article 12(1) to “the directory” should be more precise.
49. We have not seen recent information that gives any reason to amend the Regulatory Framework with respect to reverse directories.
50. We do not recommend change to the Regulatory Framework for the application of Article 12 to legal persons.

Recommendations with respect to Article 13 – spam

51. Consider whether modifications to the definitions of “unsolicited communications” or “communication” are needed for consistency between the *e-Privacy Directive* and other legislation.
52. Member States should be encouraged to join voluntary agreements to handle cross-border spam complaints – nevertheless, we would not recommend change to the Regulatory Framework to make this mandatory, as such an approach would not be “future proof” and there is insufficient international experience to place detail on such activities in primary legislation.
53. ECS providers should inform subscribers of available technical measures that may reduce the impact of spam, but the choice of what measures that an ECS might recommend to customers is best left to market forces.
54. There is a strong consumer concern over mobile spam, but while we recommend that the Commission devote attention to this area, we do not recommend changes to address it as there already are tools in the Regulatory Framework that apply.

Recommendations with respect to general horizontal issues

55. The language of *Framework Directive* Recital 8 should not be repeated, and a new recital should be included in amendments, in order to avoid exclusion of Regulatory Framework obligations to terminals that are associated with ECS but also within the scope of the *R&TTE Directive*.
56. The *e-Privacy Directive* in Article 15(2) refers to the explicit provisions in Chapter III of the *Data Protection Directive* on judicial remedies, liability and sanctions. Thus, there is existing authority for greater emphasis on enforcement efforts. In addition to this, the *e-Privacy Directive* should refer explicitly to Article 27 of the *Data Protection Directive* with respect to codes of conduct, in order to encourage greater reliance on this approach.

0.3.2 Dispute resolution procedures of the *Universal Service Directive*

The dispute resolution procedures of Article 34 of the *Universal Service Directive* do not exist in a vacuum. Even though there is limited information available or experience with out-of-court procedures in the electronic communications field, there are numerous other dispute resolution mechanisms in other sectors that give guidance on how this should work in the Regulatory Framework. Thus we issue relatively few recommendations on this provision.

57. If it is adopted, references to the (now-pending) *Mediation Directive* should be included in the *Universal Service Directive*, just as there is already reference in Recital 47 to the Commission's 1998 Recommendation on out-of-court settlement bodies.
58. Amend the current broad wording of Article 34, which suggests that consumers should have recourse to ADR possibilities for any issue relating to the *Universal Service Directive*, including issues that are not directly consumer-related.
59. The Commission should adopt guidance and further harmonisation efforts for online assistance tools through, for example, the ERG.
60. The Commission should provide benchmark information on the efficacy of NRA involvement in alternative dispute resolution, versus purely private ADR schemes.
61. Benchmarking is needed to determine whether systems in which individual case summaries are published, including systems that publish individual names of operators, contribute to higher consumer confidence and responsible conduct by operators compared to systems that report cases only in a general, anonymous, manner. The Commission can encourage these developments without change to the Regulatory Framework, however, and we do not recommend that mandatory elements be proposed.

62. The Commission should encourage as best practice mediation structures financed by operators, with the level of contribution based in part on the number of cases brought against the operator, so that operators are encouraged to reduce the number of consumer complaints that have to go to mediation.

0.3.3 Transparency and publication of information under the *Universal Service Directive*

Article 21 of the *Universal Service Directive* aims to ensure that end users have access to transparent and up-to date information on pricing and on the standard terms and conditions of telephony services, so that they are able to make informed choices. We describe the inherent challenges in providing price comparison services, due to the wide variety of elements included in service offerings. One of the critical issues in performing such price comparisons is the choice of customer profile used for the comparison, that is, the number of calls made to various destinations, their duration and the time of day at which they occur. The relevance of comparisons provided depends largely on how well the customer profile or basket of calls matches the calling behaviour of an individual user.

NRAs have flexibility under the *Universal Service Directive* in their approach to the provision of information. We believe that this allows NRAs to develop a solution proportionate to the need for consumer information in specific retail markets, depending on the quality of commercial price comparison services already available and the complexity of tariffs in their markets. Therefore, we make the following recommendations:

63. The Commission should amend *Universal Service Directive* Article 21 to oblige service providers to supply transparent information concerning whether or not access to emergency services is offered.
64. *Universal Service Directive* Article 21 could be strengthened to provide NRAs with greater scope to compel operators to comply with particular forms of transparency such as standardised bill formats, or co-operation

with third-party providers of interactive guides, but we do not recommend legally binding changes to the Regulatory Framework.

65. The Commission should consider providing guidance on important aspects of interactive guides or to facilitate information sharing between NRAs on this matter.

1 Introduction

The opinions expressed in this study are those of the authors and do not necessarily reflect the views of the European Commission.

Hogan & Hartson LLP (Hogan & Hartson) together with Analysys Consulting Limited (Analysys) are pleased to provide the Information Society and Media Directorate-General of the European Commission with this Report on preparing the next steps in regulation of electronic communications. This report takes into account the law and market developments as of May 2006.

1.1 Overview

The fundamental goal of this study is to contribute to the Commission's review during 2006 of the Regulatory Framework governing electronic communications in the European Union. This goal requires a mix of backward-looking and forward-looking research, focused on the following questions:

- How well has the Regulatory Framework fared in realising the Community's objectives, and what changes might be warranted?
- How is the sector likely to evolve, and do any of these changes have implications for the appropriate regulatory environment?

With this study, we no longer refer to the *New* Regulatory Framework for electronic communications or "NRF," because it is no longer new – instead, we refer to the exist-

ing “European Regulatory Framework” or “Regulatory Framework.” The directives adopted in 2002 have achieved results during a period of rapid change, creating substantial effects on economic growth and job creation. The directives making up the Regulatory Framework call upon the Commission to review how they are functioning and report to the European Parliament and to the Council. This review will take place at a time that new technologies are providing the opportunity for convergence in services and Next Generation Network (NGN) standards are in preparation.

This study is designed to address the following areas:

Obstacles to the Internal Market – the study identifies remaining obstacles to the completion of the Internal Market or ways to improve competition and efficiency in electronic communications networks and services. We highlight in this study significant obstacles noted in the course of the study and identified in the questionnaire responses by stakeholders that we describe below. But it is important to note that our primary focus is upon the specific issues noted in each of the directives listed below, which the Commission specified for this project.

Examination of harmonisation mechanisms for ex ante regulation of certain markets – particular aspects examined consist of:

- the regulatory mechanisms of the *Framework Directive* for defining markets, assessing market power and imposing remedies, and associated provisions on appeal procedures
- the regulatory obligations in the *Access Directive*, including whether the ‘menu’ of regulatory obligations should be amended, prioritised or expanded
- the impact of moving to general authorisations, the extent to which there is harmonised implementation among the 25 Member States of the rules associated with general authorisations, and whether any adaptations or clarifications of the current provisions are needed in respect of achieving the regulatory objective of facilitating market entry, as well as the single market objectives described above

Consumer protection aspects – the study examines Member State implementation of the following aspects and suggests, where possible, adjustments to the existing legal provisions:

- measures safeguarding user privacy and the security and confidentiality of online communications, including steps taken to address the integrity and security of public communications networks in the *e-Privacy Directive* and the *Universal Service Directive*
- dispute resolution procedures for consumers, in particular pursuant to the *Universal Service Directive* on “out-of-court procedures”
- transparency and publication of information, in particular information concerning tariffs for calls and access in the *Universal Service Directive*

Outcome of the study: possible amendments to the regulatory framework for electronic communications – for each of the sections above, the study suggests possible changes to the Regulatory Framework, where appropriate, in terms of:

- further single market objectives to be achieved, or suggestions for better achievement of current objectives
- improvements to existing mechanisms for achieving objectives together with a reasoning on which recommendations are based
- specific provisions in secondary legislation and implementation measures that may justify adaptation as part of the review process

Any revision of the current Regulatory Framework is unlikely to be implemented in Member States before 2009-2010, and would be expected to remain in force for a number of years. Therefore, the study recommendations take this timeframe into account.

1.2 Background to the Study

The directives adopted as part of the European Regulatory Framework require periodic review of how they function. This study contributes to the process the Commission will rely upon to prepare that review, under the following provisions of the Regulatory Framework.

<i>Directive</i>	<i>Review provision (with specific issues highlighted)</i>
Access Directive 2002/19/EC	Article 17 – Review procedures The Commission shall periodically review the functioning of this Directive and report to the European Parliament and to the Council, on the first occasion not later than three years after the date of application referred to in Article 18(1), second subparagraph.
Authorisation Directive 2002/20/EC	Article 16 – Review procedures The Commission shall periodically review the functioning of the national authorisation systems and the development of cross-border service provision within the Community and report to the European Parliament and to the Council on the first occasion not later than three years after the date of application of this Directive referred to in Article 18(1), second subparagraph.
Framework Directive 2002/21/EC	Article 25 – Review procedures 1. The Commission shall periodically review the functioning of this Directive and report to the European Parliament and to the Council, on the first occasion not later than three years after the date of application referred to in Article 28(1), second subparagraph.
Universal Service Directive 2002/22/EC	Article 36 – Notification, monitoring and review procedures 3. The Commission shall periodically review the functioning of this Directive and report to the European Parliament and to the Council, on the first occasion not later than three years after the date of application referred to in Article 38(1), second subparagraph.
e-Privacy Directive 2002/58/EC	Article 18 – Review The Commission shall submit to the European Parliament and the Council, not later than three years after the date referred to in Article 17(1), a report on the application of this Directive and its impact on economic operators and consumers, in particular as regards the provisions on unsolicited communications , taking into account the international environment . *** Where appropriate, the Commission shall submit proposals to amend this Directive, taking account of the results of that report, any changes in the sector and any other proposal it may deem necessary in order to improve the effectiveness of this Directive.
Pertinent dates	Access, Authorisation, Framework and Universal Service Directives: not later than three years after 25 July 2003 e-Privacy Directive: not later than three years after 31 October 2003

1.3 Methodology of the Study

The overall methodology adopted by the study is illustrated in Exhibit 1.1 below:

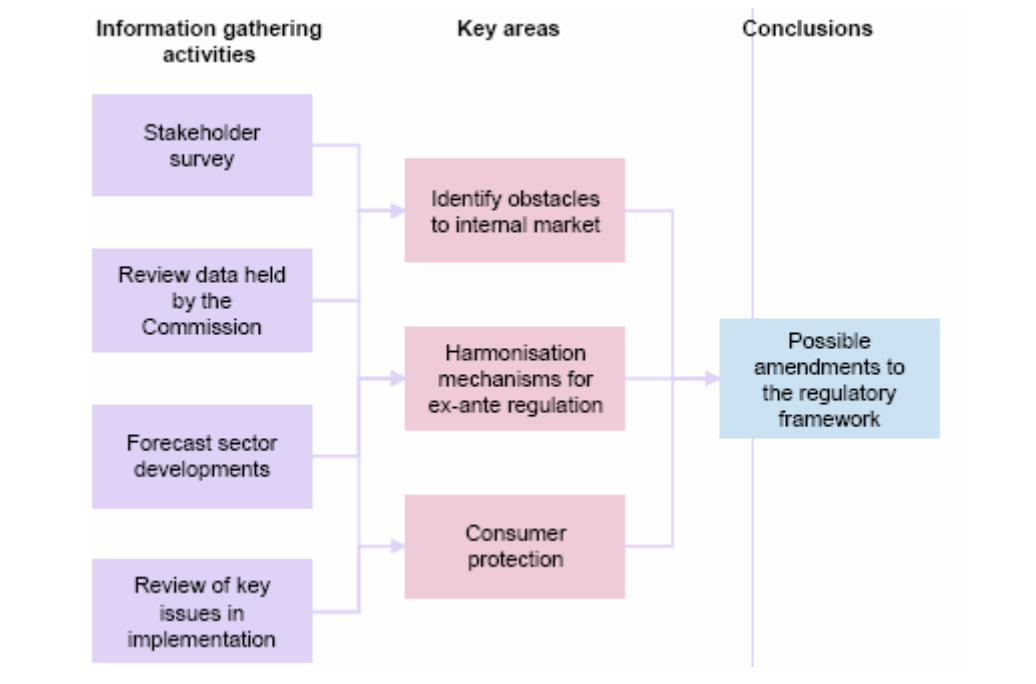


Exhibit 1.1: Overview of methodology adopted [Source: Hogan & Hartson and Analysys, 2006]

Chapter 2 of this study provides a forecast of sector developments. The forecast is important, because changes to the Regulatory Framework will not be applied by Member States before 2009-2010. Therefore, any recommendation for amendment to the Regulatory Framework must take this time frame into account. This time frame implies forecasting sector developments from all perspectives (market, technological and social).

A starting point for the study has been a survey of market players in the EU using a questionnaire designed to elicit information sufficient to identify major remaining obstacles to a genuine Internal Market. Chapter 3 identifies remaining obstacles to the completion of a single market in electronic communications using the information collected in the survey. The questionnaire was drafted on the basis of an outline provided

by the Commission. We conducted interviews with 40 market players, in 23 Member States, based largely on a list of 60 contacts agreed in advance with the Commission, anticipating that not all of those contacted would be willing to participate in the survey.

The questionnaire subjects included consumer organisations as well as a wide range of operators in all market sectors of the electronic communications industry (i.e., fixed, mobile, cable, satellite, broadcasting transmission, ISP), ensuring that smaller operators and those in EU10 countries were over-represented in comparison to a statistically representative sample. One goal was to contact subjects that would not normally provide input on a regular basis to the Commission. This same rationale supported contact with consumer groups and small /medium enterprises. The results of the questionnaire are used throughout this study. Chapter 3 describes the overall results.

Chapter 4 on key issues in implementation has assisted us in identifying specific parts of the Regulatory Framework for which changes are recommended, and identifies pertinent matters for more detailed discussion in the harmonisation and consumer protection sections, Parts B and C, of this study.

We have also drawn upon prior reports that we have prepared for the Commission, such as the study on secondary trading of radio spectrum in which both Hogan & Hartson and Analysys participated, and Analysys' study on IP voice and associated convergent services. Throughout this study we refer to other studies and projects recently undertaken on behalf of the Commission related to the topics and issues we discuss. For certain topics, we have reviewed comments submitted in response to Commission consultations, such as the recent consultation on treatment of Voice over Internet Protocol (VoIP) under the Regulatory Framework, but we have not formally incorporated the results of those comments in this study. We also have not incorporated comments from the Commission's parallel consultation, which were submitted by interested parties on 31 January 2006.

Chapters in Part B of this study examine the implementation of specific aspects of the Regulatory Framework. Those chapters rely heavily on questionnaire results and wide-ranging review of available literature, including reference to the Commission's Implementation Reports. This project is not, however, an implementation report per se, which would only duplicate the Commission's own, more comprehensive, annual re-

ports. Instead, we mainly discuss implementation issues that need attention, and we do not seek to report comprehensively on all Member State developments. Moreover, as a general matter we do not repeat the Commission's own conclusions set forth in the most recent 11th Implementation Report, but instead seek to draw lessons from that report as to what changes are likely needed to the Regulatory Framework in response.

For certain issues we recommend that further targeted consultation or research be conducted. The scope of this study is very broad, and some issues are sufficiently complex or detailed that this study cannot do them justice. For example, the Commission proposes a series of 4 workshops and in-depth consultation on Radio Frequency Identification Devices (RFIDs), in addition to substantial work already undertaken, which this study is not designed to duplicate. We have identified certain actions and possible changes to the Regulatory Framework with respect to RFIDs, but for that and some other issues, more focused examination is clearly necessary.

It is important to note that this study does not review all provisions of all Regulatory Framework directives; instead, we focus on specific aspects of the directives. For example, Chapter 6 on the *Framework Directive* reviews specific articles dealing with the definition of markets, assessing market power and imposing remedies. This project is designed to review mainly the procedural aspects of these provisions, but not the specific markets that are defined so far or possible revisions to the Commission's Recommendation on relevant markets. In the introduction to each chapter, we discuss in detail the precise aspects of the Regulatory Framework that we have been asked to review.

Finally, a set of annexes is attached (in a separate document). The annexes include a glossary of acronyms, more detail on the questionnaire methodology and results, a list of recommendations that our team previously prepared on spectrum trading issues (and that we reissue in this study), and background information on tariff transparency.

1.4 Structure of the Report

The study is structured in four main parts, as described below. Chapter 1 consists of this introductory section, and subsequent chapters cover each of the following items.

Part A: Obstacles to the Internal Market

Part A identifies obstacles to the Internal Market related to the Regulatory Framework and provides input for the rest of the study. It consists of the following chapters:

- Chapter 2: *Sector development forecast* examines the key market trends that will be important to the study.
- Chapter 3: *Results of the questionnaire* describes the results of the survey of market players that elicited information to identify remaining obstacles to the Internal Market.
- Chapter 4: *Key issues in implementation* identifies key recurring issues that have been faced, and are likely to persist in the future environment, in the absence of any change to the Regulatory Framework.
- Chapter 5: *Summary of obstacles to the Internal Market* reviews the obstacles raised in the preceding chapters.

Part B: Harmonisation Mechanisms for ex ante Regulation of Certain Markets

Part B examines the specific provisions that the Commission has asked us to review, relates those provisions to the findings discussed in Part A and develops the analysis for possible changes to the Regulatory Framework that we recommend.

- Chapter 6: *Regulatory Mechanisms of the Framework Directive* discusses the mechanisms set out in Articles 7, 15 and 16 of the *Framework Directive* for defining markets, assessing market power and imposing remedies, and associated provisions on appeal procedures in Article 4.

- Chapter 7: *Regulatory Obligations of the Access Directive* discusses the regulatory obligations provided at Articles 9-13 of the *Access Directive*, and analyses whether the ‘menu’ of regulatory obligations should be amended, prioritised, or expanded.
- Chapter 8: *Impact of the Authorisation Directive* studies the impact of moving to general authorisations, the extent to which there is harmonised implementation among the 25 Member States, and whether any adaptations or clarifications of the current provisions are needed to achieve the regulatory objective of facilitating market entry, as well as the single market objectives described above.

Part C: Consumer Protection Aspects

Part C examines implementation of the following aspects in the Member States and suggests, where appropriate, adjustments to the existing legal provisions.

- Chapter 9: *User Privacy, and the Security and Confidentiality of Online Communications* discusses provisions to safeguard user privacy and the security and confidentiality of online communications, including the integrity and security of public communications networks pursuant to Articles 4, 5, 6, 8, 9, 12 and 13 of the *e-Privacy Directive* and Article 23 of the *Universal Service Directive*.
- Chapter 10: *Dispute Resolution Procedures of the Universal Service Directive* reviews Article 34 of the *Universal Service Directive* on “out-of-court procedures” relating to consumer disputes.
- Chapter 11: *Transparency and Publication of Information under the Universal Service Directive* concerns the requirement for publishing tariffs and contract terms for calls and access to publicly available telephone service under Article 21 of the *Universal Service Directive*.

Part D: Outcome of the Study: Possible Changes to the Regulatory Framework for electronic communications

- Chapter 12 collates the suggestions made in preceding chapters for possible changes to the European Regulatory Framework.

Annexes

- Annex A: Glossary
- Annex B: Background on Questionnaire Results (Chapter 3)
- Annex C: Recommendations on Spectrum Trading (Chapter 8)
- Annex D: Background materials relating to Transparency (Chapter 11)

Part A

Obstacles to the Internal Market

2 Sector Development Forecast

In this chapter, we begin by outlining in broad terms the current value and structure of the European electronic communications market, before going on to discuss the key trends that we expect will affect this sector over the next 5–10 years. We discuss likely trends in network and service delivery, and also outline the regulatory issues arising from these trends. Rather than present a single view of how the sector will develop, we instead reflect the uncertainty by discussing possible scenarios arising from key trends and market developments.

The overall aim of this chapter is to identify the key trends that will shape the sector and affect the requirements for regulation. However, we recognise the high degree to which regulation itself shapes these trends and seek to reflect this in our discussion.

2.1 Current Value and Structure of the European Electronic Communications Market

2.1.1 Market value

From the viewpoint of capital markets, there has been a clear rebound from the pessimism that prevailed between mid-2000 and 2003/4. The industry is emerging from a period of cost cutting and debt reduction, and the increased confidence of capital markets has triggered a wave – albeit a rather small one by the standards of the late 1990s – of investments and M&A activity.

The Commission estimated that the electronic communications market was worth €273 billion in 2005 and that overall growth in the sector continued strongly at a rate of between 3.8% and 4.7% in 2005.¹ However, we note that this overall healthy growth across the EU25 may mask declining revenues in individual Member States and growth in new broadband markets also masks a decline in revenues from traditional markets.

Traditional fixed voice services continue to represent the largest source of revenue to players in fixed markets. However, these are in a gradual decline due to pricing pressure from new entrants and the growth in voice services delivered via mobile or VoIP using a broadband connection. Over the last few years the impact of this pricing pressure has been offset to some extent by increased revenues from dial-up internet access. Nevertheless, more rapid migration to broadband means that we expect to see a significant overall decline in fixed narrowband revenues over the next few years. Fixed broadband services are growing rapidly in terms of penetration and the Commission has noted a rise in the number of broadband lines of almost 20 million during 2005 to reach nearly 53 million broadband lines in the EU25. However, price erosion has reached a point where some operators are already seeing little revenue growth. Due to the cost-cutting and rationalisation processes that these operators have undergone, their revenue streams are particularly exposed to the erosive effects of network commoditisation.

Despite high and growing mobile penetration relative to fixed-line penetration, particularly in some of the EU10 countries, and the fact that voice already dominates mobile ARPU, the majority of voice traffic still resides on fixed networks. We expect that this may change over the next few years as new, higher-capacity mobile networks continue to drive down mobile voice prices. There are also opportunities for operators to increase revenues from data services delivered over new 3G networks.

In broadcast markets, many digital satellite and cable services are well established, whilst digital terrestrial services continue to be rolled out across Member States. There

¹ European Electronic Communications Regulation and Markets 2005 (11th report), COM(2006)68, 22 February 2006, at page 2.

is likely to be some potential for revenue growth as penetration of digital and interactive services increases.

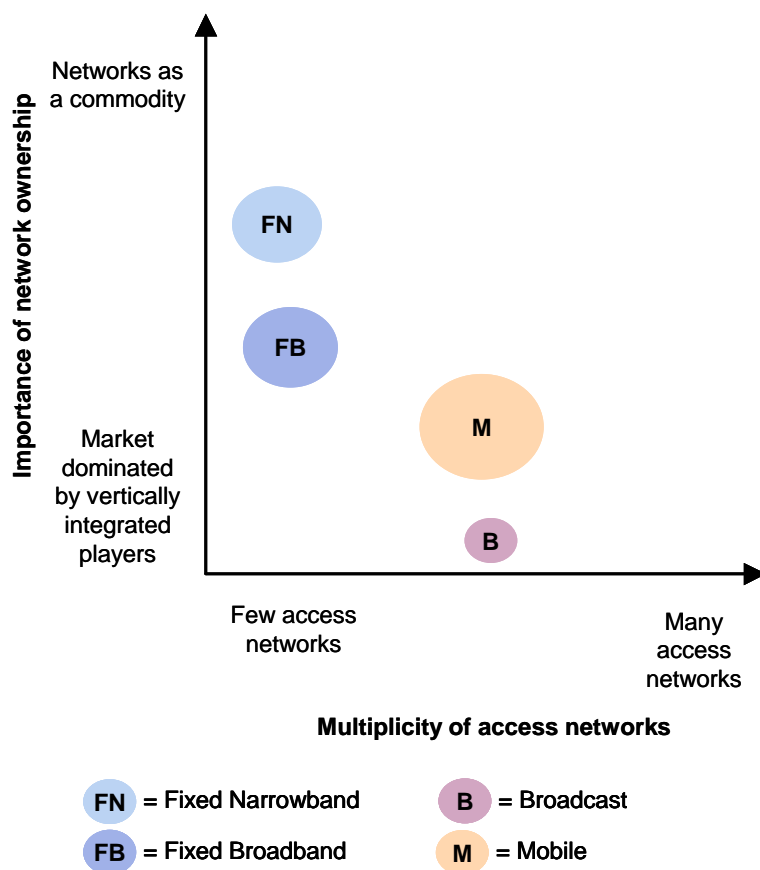
2.1.2 Market structure

Throughout this chapter we assess the possible future impact of technological developments and market trends. We plot this impact on two key axes.

- **Importance of network ownership.** At one extreme, the market is dominated by large, vertically-integrated players, while at the other extreme there is equal network access for service providers and owners of network infrastructure alike – in other words, networks have become a commodity. In the latter case it is likely that consolidation will still drive a trend towards fewer, larger players, but there is more likely to be scope for small, niche players to survive.
- **Multiplicity of access networks.** At one extreme, there is a single access network, while at the other extreme, there are multiple access networks using a variety of technologies. Again, the latter case offers the best prospects for small players to survive.

In order to provide a coherent and condensed overview of how the sector is likely to develop we have simplified matters by considering the impact of historical and future possible trends on four broad markets rather than on a greater number of more narrowly defined markets. These four broad markets are fixed narrowband services (including dial-up Internet access), fixed broadband services, mobile services and broadcast distribution services (excluding content services but including networks, API and EPG services). Before liberalisation, each of these markets were dominated by vertically-integrated players and typically consisted of one or two access networks.

Exhibit 2.1 below presents our view of where the four broad markets typically fit against the two trends described above in the EU25. The size of each circle indicates the relative size of each market in revenue terms.

**Exhibit 2.1**

Current market structure [Source: Analysys, 2006]

The fixed narrowband and broadband markets strongly rely on the network of the incumbent operator, although in some countries (especially the Netherlands, Spain and the UK) cable networks provide competing and fairly widespread telephony and broadband infrastructures. Relatively strong regulation on the wholesale inputs to narrowband services (for example, carrier preselection) has ensured that service providers are not strongly disadvantaged compared to network operators in the provision of basic telephony services. In the broadband markets, there is slightly more competition in the provision of new access networks, particularly from leased-line providers in urban centres, and more recently from WLAN and other fixed wireless operators – although these networks are often focused on delivering services to business customers. The advantage of network ownership in terms of flexibility and the ability to innovate means that infrastructure-based competition is more important (especially in the broadband markets, which are newer). This effect has been reinforced by ideas such as the ‘ladder of investment’ argument, leading to regulatory encouragement for developing infrastructure-based competition.

There are at least two active mobile network operators in each of the EU25, often four or five in the bigger countries. The range of access networks that has been deployed is relatively large, including 900MHz, 1800MHz GSM, UMTS and CDMA-450. However, Mobile Virtual Network Operators (MVNOs) have not been widespread and mobile markets remain dominated by vertically-integrated players.

The broadcast markets have benefited from the emergence of alternative access networks. Analogue terrestrial, digital satellite and cable networks are widespread across the EU25, while digital terrestrial promises to make a significant impact in several countries. In many cases, vertically-integrated network operators control both the delivery platform and the retail relationship with viewers (with the exception of satellite, where satellite capacity is leased as a near-commodity).

Services that are potentially agnostic of access network, such as Instant Messaging (IM) and VoIP, have so far relied heavily on fixed broadband services due to the reliance on standard IP protocols and the flat-rate tariffs available. However, advances in mobile networks and the deployment of IMS mean that these services may be influenced more by mobile services in future.

2.2 Network provision

The electronic communications market continues to be subject to rapid changes and technological developments. In this section we discuss those developments in network provision that we expect to have the greatest significance for the electronic communications market in the next 5–10 years, including the following:

- advances in broadband networks
- roll out of next generation fixed networks (both core and access networks)
- development of 3G and other high-capacity mobile network technologies
- advances in device intelligence

- changes in consumer behaviour

2.2.1 Advances in broadband networks

Broadband is a focus for the investor appetite that is beginning to return to the electronic communications sector as acquisitions and consolidation concentrate on alternative xDSL players and the still somewhat fragmented European cable sector (though the activities of operators such as UGC and several operators in France shows how cable is consolidating).

Broadband technology continues to be subject to rapid change, permitting access to an increasing number of users at increasing data rates. Exhibit 2.2 below shows how the data rates available to the mass market have increased over the period 2001–5.



Exhibit 2.2:
Maximum broadband data rate available to the mass market at a reasonable price in at least two EU countries [Source: Analysys, 2006]

In many Western European countries the incumbent already offers DSL access to over 90% of households and in some countries DSL is available to more than 99% of households. Nevertheless, the local loop length and quality of copper may vary significantly between countries and could result in long-term and significant differences in DSL

availability between countries. For example, in some countries low levels of copper renewal means that metallic paths are older and of lower quality than in other countries.

European incumbents are also beginning to offer VDSL services in urban centres, with potential download speeds of up to 52Mbps. In Germany, Deutsche Telekom has announced a €3 billion investment in fibre to the cabinet (FTTC) and VDSL. VDSL services are being trialled (and in a small number of cases are already available) in countries including Belgium, Finland, France, the Netherlands, Sweden and the UK. These high-capacity offerings may further accentuate the differences between broadband services supplied in urban centres and rural areas, and between different Member States, leading to a 'next generation digital divide' even as the first digital divide is closed.

Ethernet services based on fibre to the building (FTTB) are also being increasingly rolled out in Europe, with substantial deployments in Sweden (where Ethernet accounts for more than 15% of broadband connections partially due to municipal fibre initiatives), as well as Norway and Italy. These deployments often rely on gaining access to existing ducts, of either the incumbent or some other telecoms or utility operator. Aerial cable is an alternative, often cheaper, solution in areas where planning rules permit its use.

The roll out of fibre to the home (FTTH) in Europe will require huge investments and has hardly begun. Fibre itself is a relatively small part of the overall investment, because the main cost is linked to the necessary opening of trenches and laying of ducts for fibre. Real FTTH roll out on a large scale are, at best, still years ahead, and the FTTx projects that have launched concern mainly hybrid local loops whose lines only partly consist of fibre optic but still rely on copper for the last part of the loop that leads into the subscriber's premises. As a typical example, the Danish incumbent TDC announced in January 2006 that it plans to roll out a network that is capable of triple-play service over the next 24 months, with access bandwidth capability of up to 50 Mbps, relying on a combination of copper and fibre cables (i.e., VDSL). However, TDC also argued that if it were to carry out this project by providing all households with fibre, the price would be 10 times higher.

The availability of cable broadband services varies widely across Europe. In almost all countries, cable is used extensively (at least in urban centres) to provide access to TV services, but many networks require a costly upgrade to offer broadband services, and broadband cable services are not widespread in many European countries. For those areas in which broadband cable services are available, Data over Cable Service Interface Specification (DOCSIS) cable standards continue to develop, broadly keeping pace with DSL developments. DOCSIS 2.0 enables downstream data rates of up to 24 Mbps and DOCSIS 3.0 is expected to deliver 100Mbps downstream (at an additional investment cost per home passed of around €100 including the set-top box). These speeds are shared, but it is possible for a cable modem to provide comparable effective data rates to DSL for the near future at least.

Powerline communications (PLCs) offer an alternative approach to delivering broadband by using a country's existing powerline grid. This technology has existed for some years but has been constrained by difficulties with the "last mile" access. There are some key advantages of PLCs that may make it a valuable alternative means of supply in certain circumstances. The technology relies mainly on existing infrastructure so there is minimal capital expenditure required and the utility companies that own the infrastructure often have an existing relationship with potential end users. However, despite a large number of trials there have been few commercial deployments to date² and concerns continue to be raised regarding possible interference with radio spectrum signals. The unit cost of equipment is also high when compared to DSL and cable modem, due to the large economies of scale enjoyed by those technologies. We therefore doubt that PLCs will have a significant impact on the broadband market.

We expect wireless technologies to continue to have a role in providing fixed broadband access in rural areas. Wireless technologies work on the principle of sharing capacity between all users in a cell area (or satellite coverage area); although it is possible to prioritise some users or services (e.g., voice) above others, the total capacity of

² The European Electronic Communications Regulation and Markets 2005 (11th report) estimates that PLCs currently account for 0.2% of non-DSL access lines in Europe. Staff Working Document SEC(2006) 193, Volume I, 20 February 2006, at page 35.

the cell provides an absolute limit. This limit continues to grow as new standards are developed, but remains far below the potential data rates that can be offered using wire-line solutions. We discuss below some of the most significant wireless solutions; true mobile solutions are discussed in Section 2.2.3 below.

Satellite offers an almost ubiquitous solution and has an important complementary role to play in delivering broadband services. Since satellite is also relatively expensive and offers limited data rates, we expect it primarily to remain a niche solution for reaching rural or other low-density areas and specific applications.

Fixed Wireless Access (FWA), including WiMAX and other proprietary technologies, is more likely to emerge as a competitor to DSL services in rural and possibly suburban areas, although we expect it may be a more expensive solution in urban centres due to capacity constraints and the impact of building clutter on cell radii. FWA may be particularly important in Central and Eastern European countries where the extent and quality of copper means that DSL services are more limited.

WiFi already plays an important role in providing broadband hotspots for nomadic use, and can also provide shared broadband connections for fixed access in closely situated locations. However, the range of WiFi is very limited and we expect that it will continue to be used only in conjunction with other wireline and wireless technologies.

Impact

Advances in broadband technologies will enable operators to offer new services, and to offer traditional services such as voice and TV over a broadband platform, rather than using specialist access technologies. These developments are likely to increase the revenue share of fixed broadband services, mainly at the expense of fixed narrowband services – as traditional fixed telephony services are increasingly delivered over broadband. We also expect to see a significant increase in the contestability of service provision, as the link between access provision and service provision is weakened. The possibility of providing services over a broadband platform may decrease the reliance on network infrastructure for both narrowband and broadcast services. The key influences are illustrated in Exhibit 2.3 below (dotted lines indicate a change in relative importance in revenue terms).

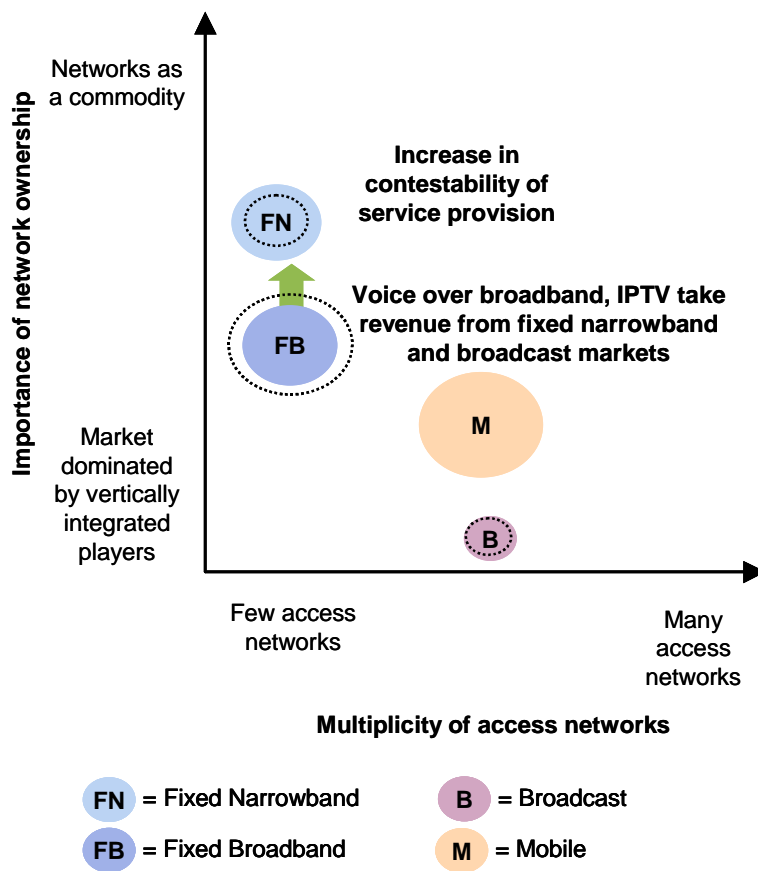


Exhibit 2.3:
Impact of advances
in broadband net-
works [Source:
Analysys, 2006]

These technological changes also raise a number of regulatory issues:

- Should broadband supply be part of the universal service obligation? If not, how can regulators diminish the potentially negative impact of a current (or indeed a future, high-speed) digital divide?
- How should access to the broadband networks of significant market power (SMP) operators be regulated in order to ensure that players other than the network operator are able to offer new and innovative services across the platform without discouraging the SMP operator from investing in new technology?

2.2.2 Roll out of next generation fixed networks

There are several models for the roll out and extent of wireline next generation networks (NGN), differentiated primarily by whether only the core network is upgraded or whether some or all of the access network is also upgraded. We describe each of these models below.

Core network NGN

In this case, the operator retains a traditional architecture in the access network, based on local exchanges and remote concentrators, as illustrated in Exhibit 2.4 below. This approach requires the use of large media gateways at the interface to the core NGN, but reduces the cost of interconnecting Class-5 switches (which are normally fully meshed) to provide voice services. This architecture does not offer enhanced services, but does reduce the core network cost.

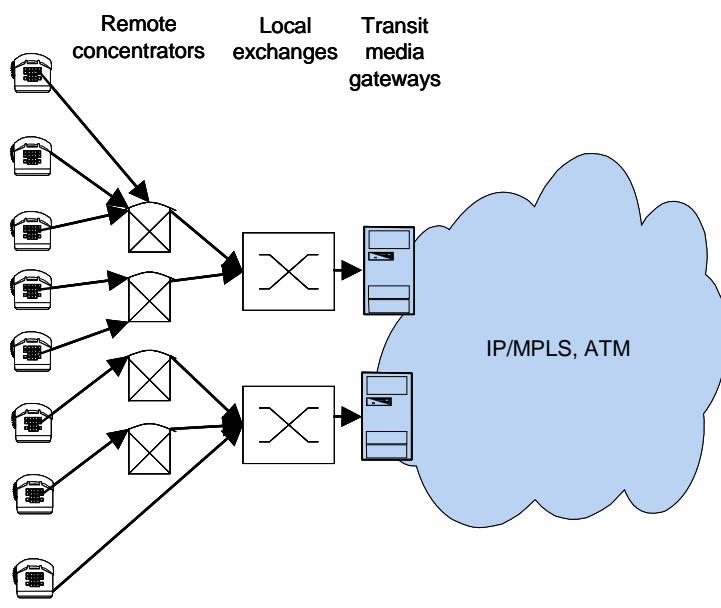


Exhibit 2.4:

Core network NGN

[Source: Analysys,
2006]

Access network NGN

In this case the operator converts not only its core network but also a substantial proportion of its access network to IP. The cost and associated benefits vary depending on how much of the access network is converted; deployment of FTTB potentially delivers

the greatest benefits in terms of the ability to provision very high bandwidth services, but the cost of laying a new access network is immense, even if it is possible to re-use existing ducts.

One such model, essentially that being used in the BT Twenty-First Century Network (21CN), is illustrated in Exhibit 2.5 below. This model is intended to reduce the cost of both broadband deployment and providing voice services. It also offers the prospect of a ‘broadband dialling tone,’ enabling operators to migrate customers to broadband services without physical work being needed at the local exchange. This model needs only to involve conversion of equipment at the edge of the access network, with limited new fibre build beyond existing local exchanges. Nevertheless, the cost of migration to this type of NGN is substantial; for example, BT has estimated that the investment required for its 21CN and associated services would be around £10 billion (and this estimate does not include the costs of interconnection and negotiation of other operators).³ This amount is similar to the capital expenditure BT incurred in upgrading to a digital network in the early 1990s, and in real terms it is somewhat lower.

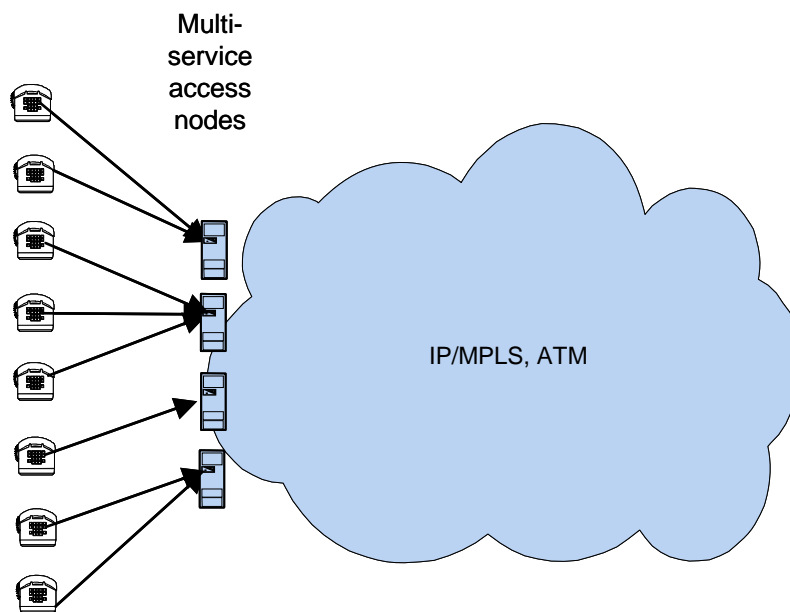


Exhibit 2.5:
BT model for access network NGN
[Source: Analysys, 2006]

³ “BT announces network transformation timetable,” BT Press release, 9 June 2004.

Some European incumbents are considering extending fibre beyond the local exchange, often to street cabinets. This brings the multi-service access node closer to the end user, reducing the length of copper in the final drop and thereby making it possible to deliver the much higher data rates associated with technologies such as VDSL.

An even more radical architecture for NGNs in the access network is the deployment of fibre to the building, curb or home (generically referred to as FTTx), as deployed by operators in countries such as South Korea and Japan. Such deployments allow operators to offer uncontended data rates in excess of 1Gbps. However, such deployments are extremely costly and, in the absence of significant demand for these very high bandwidths, we doubt that European operators will seriously consider such an investment in the medium term outside of the most densely populated urban areas and business districts. This distinction raises important regulatory issues concerning both the potential for a growing 'digital divide' and the access to duct and fibre deployments of SMP operators.

IMS

IP Multimedia Subsystem (IMS) is a standardised NGN architecture designed to provide both fixed and mobile multimedia services, using standard IP protocols defined by the IETF. IMS is part of the NGN plans of many operators (particularly mobile operators) and is likely to facilitate the provision of sophisticated multimedia services to users on a single network as well as users on the networks of different operators.

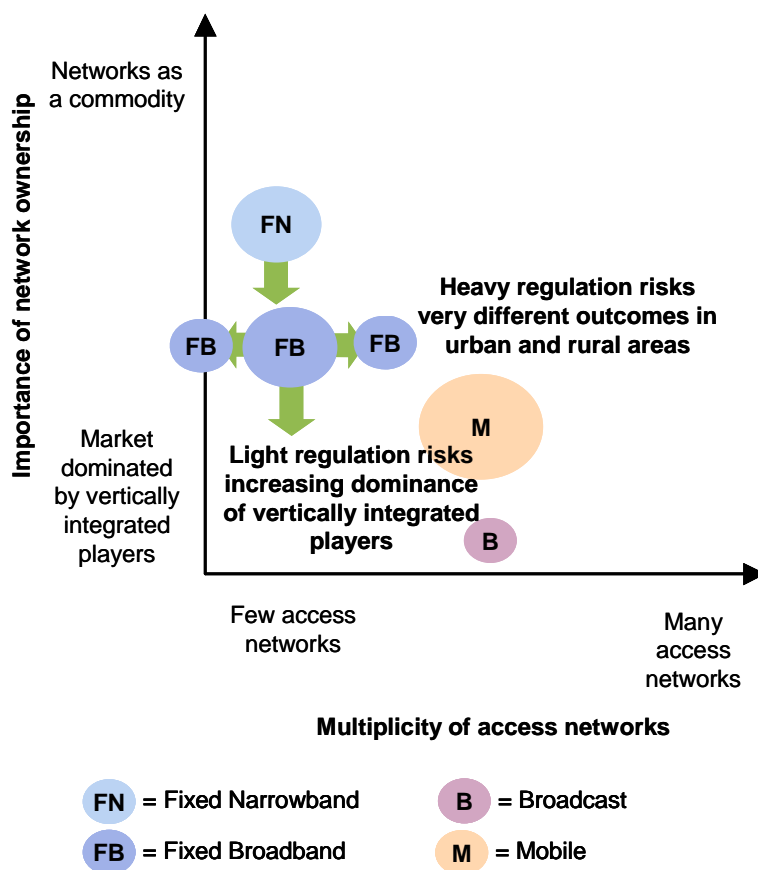
Impact

The impact of NGN roll out will have on the market depends crucially on how access to these networks is regulated. The existing unbundling regulation relates specifically to metallic loops, and some incumbents argue that regulators need to decide in advance on their approach to unbundling of fibre (in particular whether a new relevant market is likely to be defined). They argue that it is not possible to justify the significant investment required without such regulatory certainty.

On the one hand, imposing light regulation may risk increasing the likelihood of a sector being dominated by vertically-integrated network operators. This is essentially the approach taken by the FCC in the US regarding investments of incumbents in FTTx. As a result, US incumbents are planning massive new deployments that are likely to enable them to offer either better or cheaper services than their competitors, who rely on unbundled local loops.

On the other hand, imposing more stringent regulation may limit investment on the part of the incumbent to core network NGNs, or at best partial access network NGNs similar to BT's model. At the same time, alternative operators may invest only in urban centres, risking an increase in the digital divide.

Developments in NGNs are closely linked to developments in device intelligence versus network intelligence and the impact of this is discussed in the next section. Two possible outcomes are illustrated in Exhibit 2.6 below.

**Exhibit 2.6:**

Influence of regulation on the roll out of next generation fixed networks

[Source: Analysys, 2006]

The roll out of next generation fixed networks raises a number of difficult regulatory issues that NRAs already have to consider. These include:

- How should new investments be treated? NGNs are characterised by a need for significant investment and also by significant uncertainty on development issues and consumer-side demands, making these investments risky. This is particularly true of next generation access networks.
- How should IP interconnection be regulated? We anticipate that a number of different commercial models will emerge for IP interconnection in NGNs (transit, peering or something in-between) and it is unclear what role the regulator may need to play in facilitating access. If peering models are successful, there is the potential that the problems created by 'monopoly of termination on individual networks' may effectively cease to exist.

- How should legacy products be treated and at what stage (if any) should NRAs consider lifting regulation on these products? Although continuity of legacy products is important in the short to medium term to avoid disruption in the market, in the long term these products may be less efficient in terms of quality and cost.

2.2.3 Development of 3G and other new mobile network technologies

The Commission has noted that the number of 3G subscribers reached around 15 million by the end of 2005 and we expect this figure to increase rapidly during 2006.

There is uncertainty over whether the development of IMT-2000 (3G) networks will be supported by an increase in demand for mobile capacity, and the extent to which networks might further evolve. Many mobile operators are likely to invest in the deployment of high-speed downlink packet access (HSDPA) and high-speed uplink packet access (HSUPA) technologies in the next few years. However, beyond that, further improvements are less well defined, such as multiple-input, multiple-output (MIMO) and systems beyond IMT-2000. It is also possible that a range of alternative technologies (such as 802.16e WiMAX, Flarion Flash OFDM, IP Wireless UMTS TDD) may be deployed to replace or supplement HSDPA or systems beyond IMT-2000. The potential of mobile WiMAX, or so-called MobileFi (the 802.20 standard) may be of particular interest because it could offer WiMAX operators the opportunity to exploit existing assets to deliver broadband wireless access and VoIP services in a truly mobile manner.

The extent of spectrum trading and liberalisation will clearly affect the extent of 3G roll out and in particular the question of whether the *GSM Directive* might be amended to allow use of 900MHz spectrum for 3G services.

Use of mobile networks for data services

While mobile services are suitable for voice, technological developments are likely to permit mobile services to compete with fixed services for data at lower speeds only. For example, the capacity of an HSDPA cell shared between all users in that cell is ex-

pected to be less than 10Mbps compared with ADSL2+ connections, which are able to deliver 24Mbps to an individual customer.

Data services currently account for around 15% of total mobile ARPU, but most of this arises from basic messaging services. Nevertheless, we expect to see growth in mobile data revenues from more sophisticated services, particularly from mobile entertainment services that provide high value and have relatively limited bandwidth requirements.

Use of mobile networks for broadcast services

The emerging digital video broadcast – handheld (DVB-H) standard aims to provide digital TV reception to mobile devices. This provides an alternative mechanism for mobile operators to deliver broadcast technologies rather than streaming over 3G or other data networks. A number of trials of DVB-H are being undertaken by operators in countries including Finland and Germany.

However, the broadcasting signal levels required to deliver high-quality mobile reception are substantially higher than those needed to deliver traditional TV services to rooftop antennas. DVB-H is therefore likely to require a substantial number of transmitter sites, perhaps a similar number to the number of cell sites in a 3G network, and certainly more than in a traditional broadcasting network. Network deployment is likely to be costly, although mobile operators may be well placed to use their existing network infrastructure. It should also be noted that, in some countries, suitable spectrum may not be available before the withdrawal of analogue TV services. The Digital Multimedia Broadcast (DMB) standard (adapted from the DAB standard to carry video traffic) would be subject to similar constraints.

An alternative technology that European mobile operators may consider deploying is Multimedia Broadcast Multicast Service (MBMS), which is able to broadcast a small number of programming channels (up to three). The advantage of MBMS is that it can utilise some of the existing 3G network infrastructure. However, the lack of development of the standard and the fact that it will utilise part of their current 3G spectrum allocation may discourage operators from deploying MBMS.

While extensive deployment of mobile broadcasting networks is not expected in the short term, some EU countries may experience early implementation.

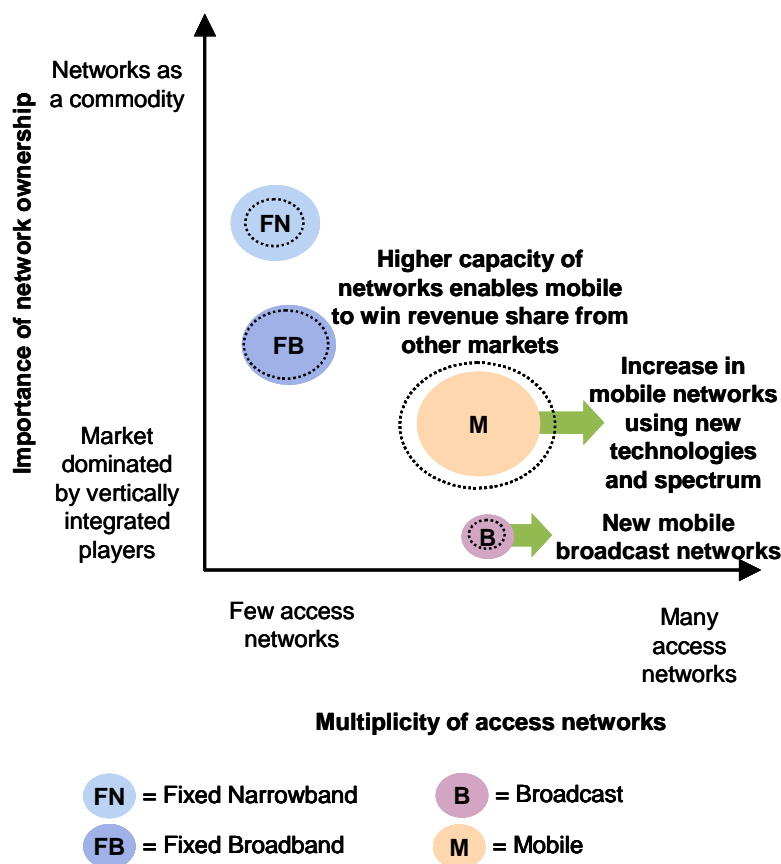
Development of location-based technologies

Mobile networks in Europe already utilise Cell-ID and GPS solutions to provide mobile location-services. Solutions based on Cell-ID are relatively cheap to deploy but provide limited accuracy (100-500m in urban areas with small cell radii, and up to 20km in rural areas). GPS solutions are more expensive to deploy but are much more accurate; as assisted GPS (A-GPS) becomes established in Europe over the next few years we expect mobile operators to be able to identify the location of users to within around 10m. Galileo-based services should also become available over the medium term with similarly high levels of accuracy.

As mobile applications continue to proliferate and A-GPS becomes established we anticipate significant opportunities for revenue growth in the provision of location-based services to both consumers and businesses. This may also lead to increased demand for location-based services by customers roaming on foreign networks and could have potential implications for the way in which end users give permission for their location data to be used by operators.

Impact

As mobile technologies advance and more spectrum potentially becomes available for use by mobile network operators (either through spectrum trading, auctions or changes in allocations resulting from ITU world radiocommunication conference results), there is likely to be an overall increase in the number of 3G and other new mobile and broadcast networks deployed. It is also likely that the increased mobile capacity will reduce the unit cost of delivering voice services, enabling the mobile operators to take market share from fixed narrowband services. It is also likely that, in at least some limited circumstances, mobile services may take revenue share from fixed broadband and broadcast services. These influences are illustrated in Exhibit 2.7 below.

**Exhibit 2.7:**

Impact of the development of 3G and other high-capacity mobile networks [Source: Analysys, 2006]

The further development of 3G and other high-capacity mobile networks raises some important regulatory issues:

- Will mobile become an economic substitute for fixed services, thus affecting market boundaries? This question applies both to fixed narrowband services (for which it seems likely that substitution has already occurred in at least some countries), and also to fixed broadband services (for which substitution seems much less certain).
- How should the principle of technological neutrality be applied to termination markets? Should each network be treated as a separate monopoly market?

2.2.4 Advances in device intelligence

While network technology continues to advance and to allow higher data rates, intelligent devices are also enabling users to make better use of the existing bandwidth. In particular, advances in data compression and multicast or unicast streaming reduce the impact of differentials in available data rates between different technologies and will allow streaming to achieve things for which broadcasting is better suited today. There is also an increase in the storage capacity of consumer devices. For example, personal video recorders (PVRs) allow users to store large volumes of programming and also allow broadcasters to offer near Video-on-Demand (VOD) services without the need for streaming.

Another key advance in device intelligence is the ability to connect to multiple access networks. Many mobile handsets already are able to connect via GSM, 3G and Bluetooth, and we expect a significant volume of handsets may also be WLAN-enabled by 2010. Many laptops are already WLAN-enabled and it is conceivable that 3G chipsets may also be incorporated into many new laptops by 2010. This trend is likely to increase the contestability of access provision, particularly in locations where short-range wireless technologies can be used to connect a user to a fixed network backbone. Challenges remain in achieving a smooth handover between different networks but we expect this to improve in time.

Under the Regulatory Framework, devices beyond the network termination point (e.g., fixed and mobile handsets) are not regulated as part of a relevant market. However, some services are increasingly using devices at the edge of the network to deliver electronic communications services. Examples of this include servers, soft switches and VoIP clients (either on PCs or dedicated handsets).

Intelligent devices also increasingly utilise access to unlicensed spectrum bands, particularly for short-range transmission. Examples include devices incorporating Bluetooth and Radio Frequency Identification Devices (RFID) Near Field Communications (NFC) technology, the latter which is able to identify objects using radio frequencies and can be used, for example, to keep track of manufacturing and retail inventory. Use of spectrum in these cases tends to generate revenue for system integrators and software and hardware providers rather than for ECS or ECN providers.

Impact

We see two possible outcomes for these trends in device intelligence, depending on the ability of network operators to leverage their position from the access market into the device market. This leverage in turn is likely to depend on the size and influence of the network operators.

Larger operators have the greatest chance of influencing the development of devices due to their buying power in the device market and strong brand with end users. For example, Sky has already begun to take advantage of PVR capabilities through its Sky+ box, allowing viewers more flexible access to programming and enabling Sky to capture the resultant revenue. Similarly, Vodafone's provision of branded Live! handsets gives it greater control over the user experience of its customers. In both of these cases, content provision is a key factor in persuading customers to remain on their network and service platforms.

Smaller network operators are likely to have limited influence on the development of device technology and will have more limited access to content. These operators are at greater risk of their access services' becoming a commodity while service providers compete to offer applications that will function over multiple access technologies. In some cases, large manufacturers and application providers such as Microsoft and Skype may be able to influence the development of device technology by selling terminals or software directly to end users rather than to network operators. This approach will also drive networks towards becoming a commodity.

These two possible outcomes are illustrated in Exhibit 2.8 below:

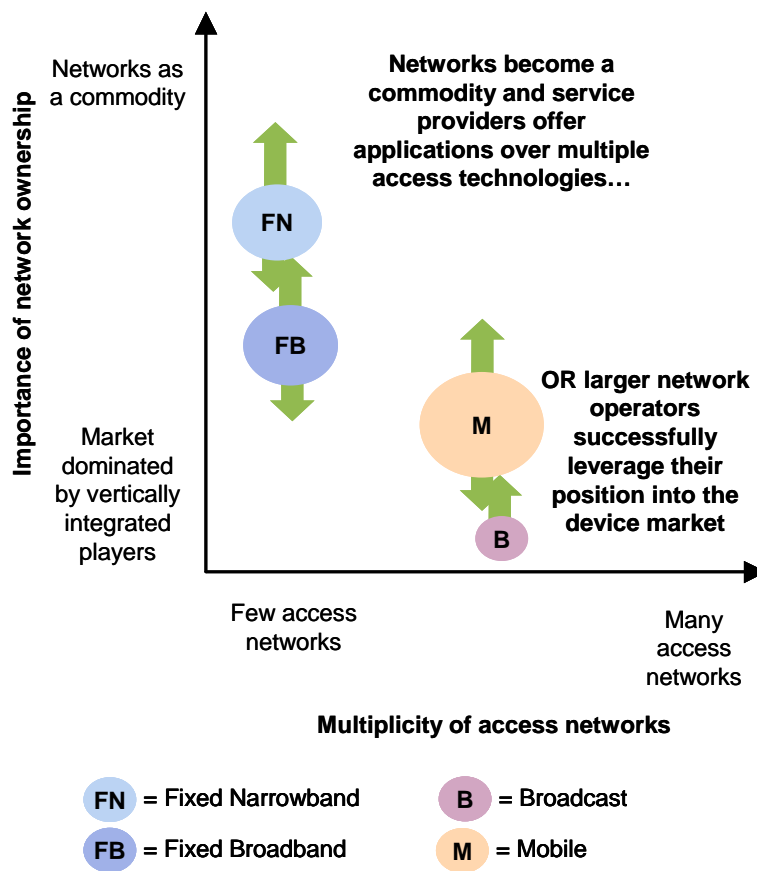


Exhibit 2.8:
Impact of advances
in device intelli-
gence [Source:
Analysys, 2006]

Regulatory issues raised by advances in device and software intelligence include:

- Is there a role for regulators to play in ensuring that common standards develop in devices and network technology? Under what circumstances should a device be considered to be part of the network and regulated accordingly?
- If devices become an integral part of electronic communications services, is it appropriate to regulate the devices themselves as part of a relevant market?

2.2.5 Changes in consumer behaviour

Partly due to improvements in device intelligence and partly due to increased familiarity with technology we are also seeing shifts in consumer behaviour patterns. Peer-to-peer distribution has been highlighted in recent years with respect to music files, but there is an increasing trend for such distribution of other media and content. Peer-to-peer networks that rely on the computing power and bandwidth of individuals in the network rather than concentrating it in a relatively small number of servers are also increasingly common. For such networks, access to bandwidth is important for its members but few other services are required.

Impact

The impact of changes in consumer behaviour depends on whether network operators are able to supply or control the key applications that are used in peer-to-peer distribution, and on the openness of their networks, as discussed in more detail later in this chapter. Nevertheless, trends in consumer behaviour show a decreased reliance on network services, which increases the likelihood that networks will become a commodity. This is illustrated in Exhibit 2.9 below.

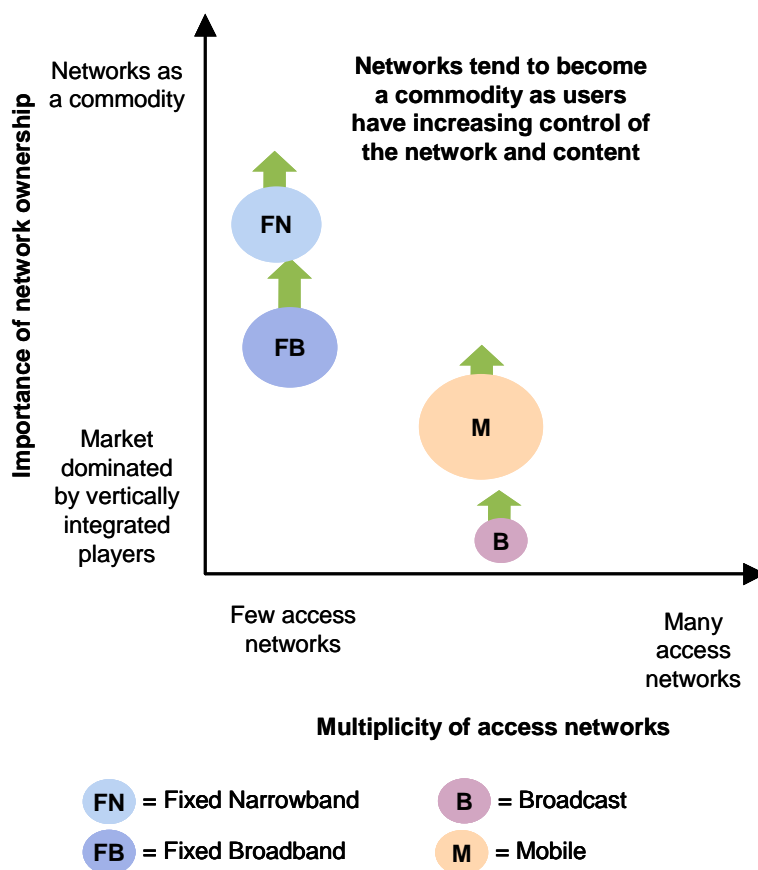


Exhibit 2.9:
Impact of changes
in consumer behav-
iour [Source:
Analysys, 2006]

Regulatory issues raised by changes in consumer behaviour include:

- Is there sufficient protection for end users with regard to privacy, security and confidentiality of online communications in the context of peer-to-peer networks?
- How can digital rights be protected in the context of peer-to-peer distribution?

2.3 Service delivery

In this section we consider the potential impact of changing service delivery mechanisms upon electronic communications markets, and discuss those factors that we

expect to have greatest significance over the next 5–10 years. These factors are listed below:

- openness of networks and services
- convergence of fixed–mobile services
- cross-technology services
- cross-border services

2.3.1 Openness of networks and services

Operators that have invested in building fixed and mobile networks typically prefer to capture high-value service revenue directly from end users rather than to provide basic access services to be exploited by other operators. Hence, network operators may seek to limit the ‘openness’ of Internet access in order to prevent their customers from buying high-margin services from other providers by one of the following means:

- bundling of access with high-value services
- designing the access offer to be incompatible with delivery of high-value services from competitors, for example, by limiting the data rate or quality of service such that TV or voice services are not viable
- using a technical solution such as blocking or impeding traffic to certain destinations
- price-discriminating against packets being used for high-value services in order to capture a greater share of the revenue for themselves

The first two of these options are straightforward to implement, while the other two options depend on the ability of operators to control end user devices and to detect rele-

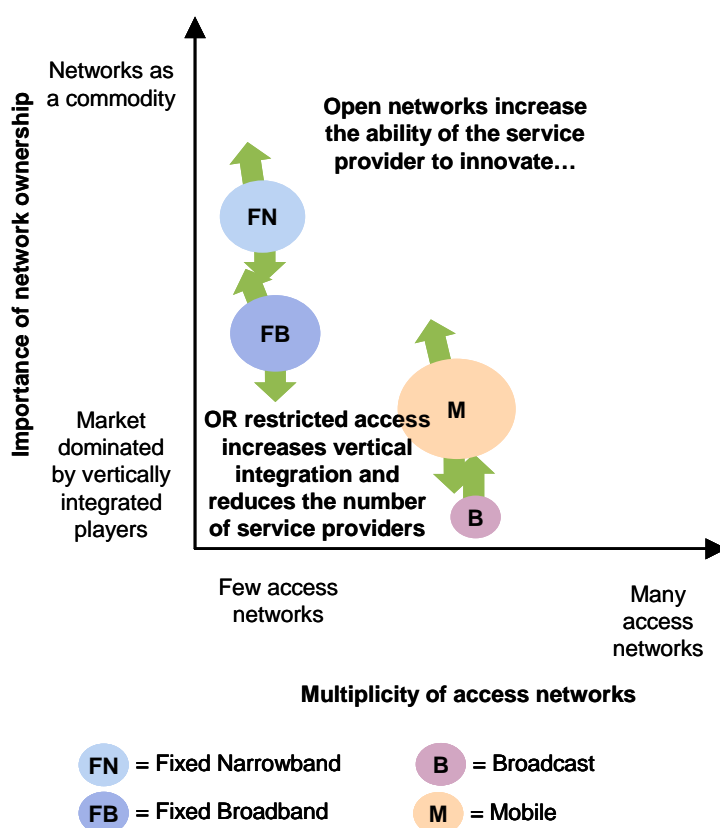
vant ports and packets; we expect this to be possible, but it is not foolproof in the short to medium term.

A related issue is the interoperability of competing ECS models. For example, Skype's VoIP service is not interoperable with SIP-based VoIP solutions, and many IM systems do not currently allow interoperability. While this lack of interoperability is unlikely to raise significant regulatory concerns in the context of uncharged-for access to IM solutions, it may decrease consumer welfare if it becomes necessary to subscribe to a number of separate IM solutions in order for consumers to have access to all of their contacts. In the absence of relevant standards, it is possible that such a situation may develop.

An additional issue to consider relating to the openness of networks and services is the risk of increased vulnerability to attack by network viruses, particularly if services are delivered over an open IP platform. There may be advantages to open platforms, for example, the increased pool of service providers and software developers able to provide new and innovative solutions. However, the implications for consumer trust of a successful attack on, for example, a mobile network, are substantial.

Impact

If regulators are able to ensure open access to networks and services, service providers will have increased an ability to offer new services and to decrease the role of the network operator, perhaps in some cases discouraging the network operators from making additional investments. By contrast, if SMP operators limit access to their networks, this may strengthen the position of vertically-integrated players and risk allowing a small number of service providers to dominate emerging markets such as IM. These contrasting effects are illustrated in Exhibit 2.10 below.

**Exhibit 2.10:**

Impact of the openness of networks and services

[Source: Analysys, 2006]

With the development of 3G networks, these issues may have a greater impact on mobile network operators than on fixed network operators. Voice services account for a greater proportion of mobile revenue than fixed revenue, and prices on fixed networks have already declined substantially. Mobile operators with flat-rate mobile data pricing and high SMS revenues may be amongst the first to seek to limit the openness of their networks in order to restrict loss of revenues to IM and VoIP providers.

Regulatory issues relating to the openness of networks and services (which we discuss in more detail in Chapter 7) include:

- To what extent should regulators ensure that service providers can enjoy appropriate access to the networks of vertically-integrated players? Is there any danger that convergence will deliver small market shares (and no SMP) without leading to vigorous competition in some market segments?

- Should network access be regulated in order to provide the quality of service necessary to run a range of software applications for which user demand may exist? If so, at what level?
- To what extent should regulators allow service providers (vertical or otherwise) to offer substantial pricing and other advantages to their on-net communities?
- Do proprietary solutions cause a loss of consumer welfare? At what stage is it appropriate for regulators to cease treating a service as an emerging market and create a new relevant market?
- Do regulators have a role to play in supporting the development of standards more strongly?
- How should the risk of unauthorised access to networks be diminished? This issue includes unsolicited communications and also extends to attacks from network viruses.

2.3.2 Convergence of fixed–mobile services

Fixed–mobile substitution

While fixed narrowband services have grown very slowly or not at all in most Member States over the last few years, mobile penetration has continued to increase. Prepaid services have been particularly important in driving continued mobile penetration in countries with relatively low fixed penetration because consumers with an insufficient credit rating to obtain a fixed-line service may nevertheless be able to afford prepaid mobile services. In some countries, particularly some of the EU10 countries, long waiting lists to obtain a fixed line are driving some users to rely instead on mobile services.

Consumers appear increasingly to view mobile voice services as a viable substitute for fixed voice services on both a call-by-call basis and on a line replacement basis. Ex-

hibit 2.11 below illustrates our forecast for growth in mobile-only households and mobile originated minutes by 2010.

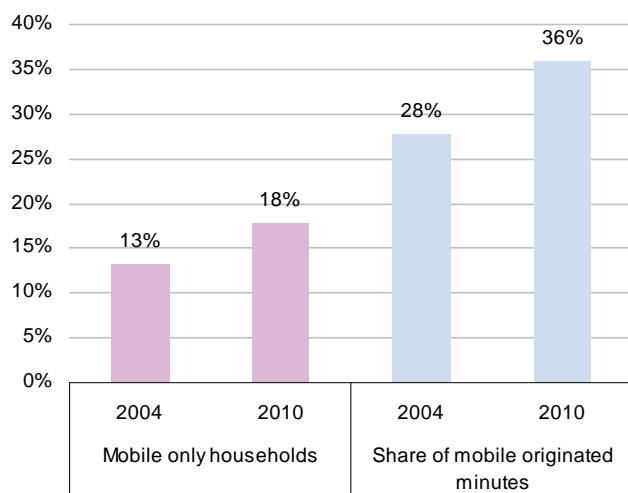


Exhibit 2.11:

*Mobile only households
and share of mobile origi-
nated minutes in Western
Europe, 2004–2010*

[Source: Analysys, 2005]

There are significant differences in these trends between Member States. Exhibit 2.12 below illustrates indicates some significant differences in the rate of fixed and mobile penetration growth between the EU15 and the EU10 countries. The graph shows that for the EU15, mobile penetration overtook fixed penetration in 2001 and that the same happened in the EU10 countries in 2002 (albeit that demand for fixed lines is often limited to one line per household).

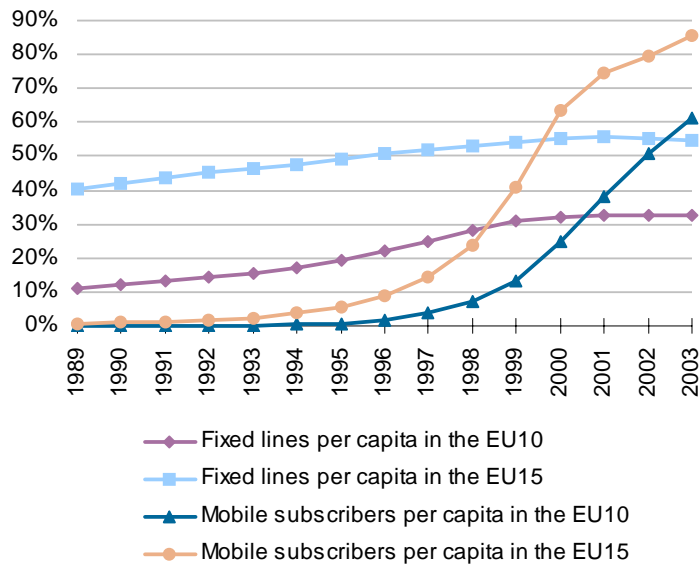


Exhibit 2.12:
Fixed and mobile
penetration per
capita in Europe
[Source:
Euromonitor, 2006]

What is particularly striking is the rapid growth in mobile services, especially in the EU10, compared to fixed line growth. As discussed above, this situation is likely to be caused partly by the preference of some consumers for prepaid services and partly by the fact that fixed network deployment is by its nature slower than mobile network deployment.

One strategy adopted by some mobile operators to encourage fixed–mobile substitution is to mimic fixed telephony services in terms of their pricing structure. At a simple level, this strategy consists of providing large bundles of call minutes at a low price per minute, approaching the price of fixed-line calls. A more sophisticated approach is that of lower charges for calls made in the ‘homezone’ (for consumers) or in the ‘office-zone’ (for business users). Examples of this type of service include O₂ *Genion* and Vodafone *Wireless Office*. Many of these products also provide a fixed-line number for mobiles; the subsequent loss in interconnection revenue is usually recovered from the mobile subscriber via a subscription charge.

As voice prices continue to fall and the differential price of calling from a mobile versus calling from a fixed line is substantially reduced, we expect that consumers will increasingly view fixed and mobile services as a substitute for one another. However, the typically higher quality of service possible over a fixed network may mean that mo-

mobile technology remains unsuitable for certain business voice services even in the long term.

Fixed-mobile convergence (FMC)

While mobile operators attempt to encourage users to substitute their mobile service in place of fixed-line services, many fixed operators are also launching combined fixed and mobile convergent products in an attempt to capture revenue from mobile operators. These services are very similar to the ‘homezone’ products offered by mobile operators, but rather than always relying on mobile technology, these services make use of fixed networks via short-range radio technologies when the user is in a fixed location. Examples of this type of service include BT’s *Fusion* which relies on Bluetooth to connect to fixed networks, and TDC’s *Duet* which works on a call-forwarding basis from fixed to mobile phones.

We expect take-up of FMC services to be significant by 2010, as shown in Exhibit 2.13 below.

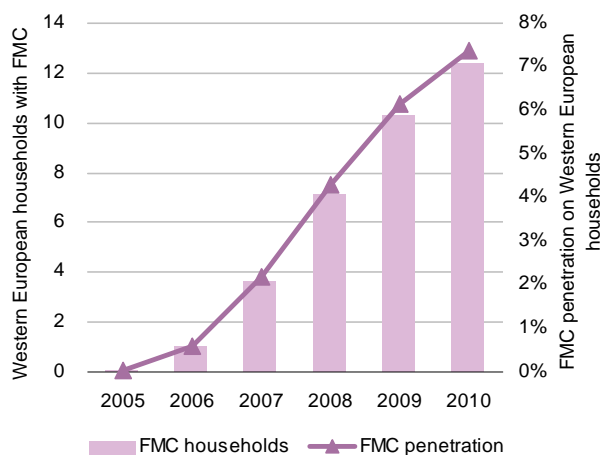


Exhibit 2.13:

FMC services (dual mode handsets) take-up in Western Europe

[Source: Analysys, 2005]

Impact

In some countries, particularly in Eastern Europe, we expect a particular trend towards mobile substitution, as consumers increasingly view mobile services as a substitute for

fixed narrowband services. This substitution effect could result in a merging of the fixed narrowband and mobile markets, with the number of access networks in a combined market likely to be higher than in either individually. The impact of this merger on fixed narrowband networks could be very significant since in most countries incumbents would be unlikely to hold SMP on access and call origination services in a combined fixed and mobile market. Under the Regulatory Framework this loss of SMP would result in regulation being lifted on many of the wholesale inputs used by service providers, as illustrated in Exhibit 2.14 below.

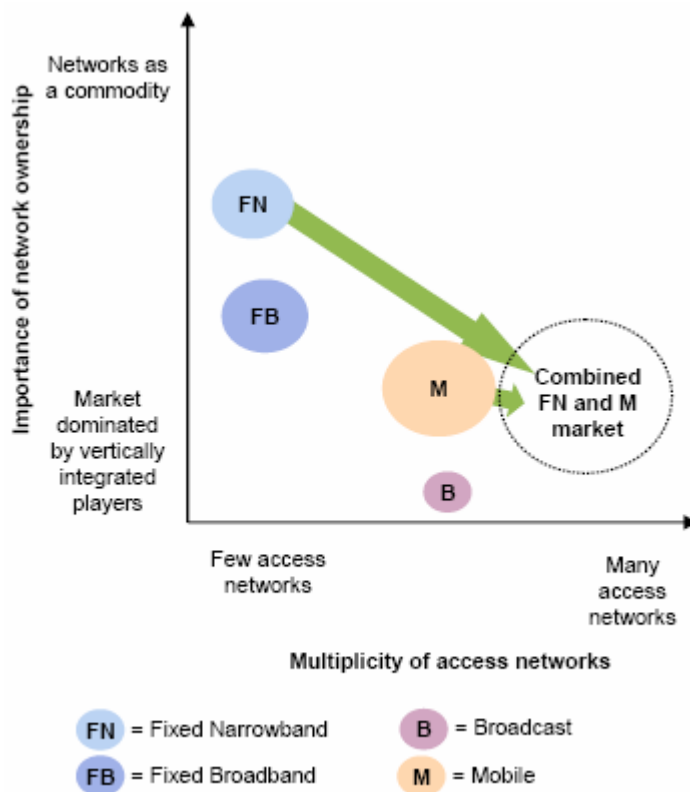
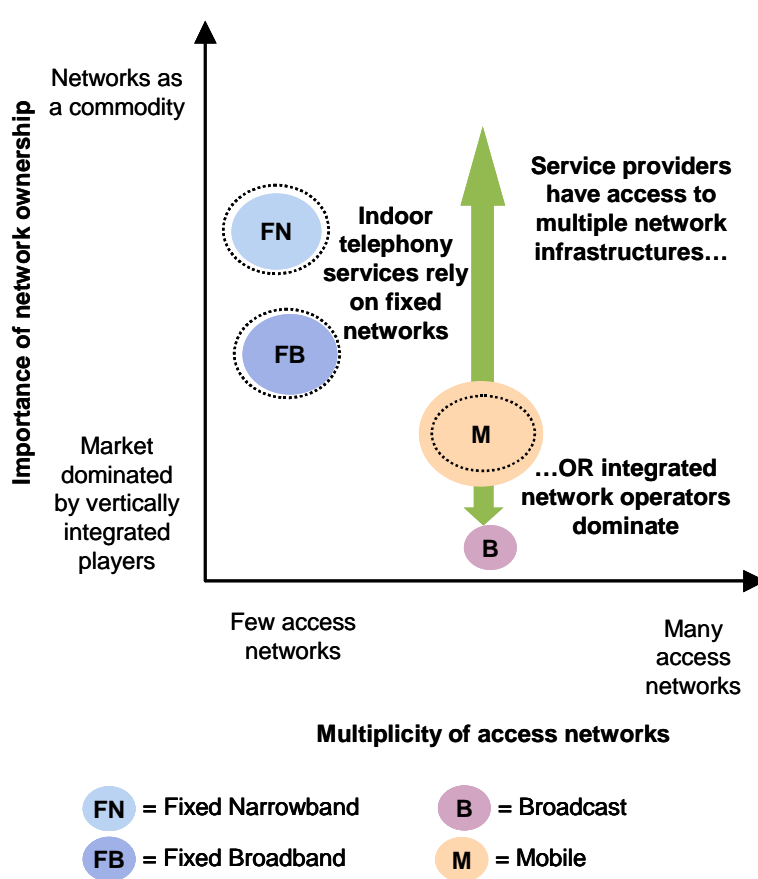


Exhibit 2.14
Impact of fixed–
mobile substitution
[Source: Analysys,
2006]

In countries in which fixed networks retain a high share of voice minutes, the situation may be different. In these markets consumers may continue to pay a premium for mobility, effectively maintaining separate fixed and mobile markets. The market share of fixed networks may even increase as terminals select fixed networks (either narrowband or broadband) whenever a user is inside a building. It is unclear whether the underlying networks would be provided by a single network operator or whether the networks

themselves will become a commodity, with the services being delivered by a third party. These two possible outcomes are illustrated in Exhibit 2.15 below.



Regulatory issues raised by FMC services include:

- What will be the appropriate market boundaries as fixed and mobile services converge? Is there a combined market in which mobile and fixed voice services are substitutes or is it more appropriate to consider the market for a dual fixed–mobile service offering mobility features?
- Should regulators take action to ensure that it is possible for service providers to replicate complete fixed–mobile solutions rather than fixed-only or mobile-only? How should fixed and mobile service bundling by different players be treated when the mobile market is effectively competitive and the fixed market is not? Mobile operators have access to wholesale fixed

call products of the incumbent in this case but the reverse is not the case (due to the lack of SMP).

- Is the fact that MVNOs have not been widespread simply a consequence of market characteristics, is it a fault of the Regulatory Framework or is it a fault in how collective dominance can be established in practice?
- Should number portability be permitted (or even become mandatory) between fixed and mobile networks? How should consumer transparency regarding the costs of calling be handled in this context?
- Should differential termination rates be charged when the user is away from the home location? If so, how can users know what they will pay? Is Mobile Party Pays (MPP) the only solution (as the person receiving the call knows where they are)? If not, how can the average cost be determined?

2.3.3 Cross-technology services

TV over fixed and mobile networks

We expect that delivering high-quality Internet Protocol television (IPTV) into urban homes in countries with good broadband availability will be technologically feasible within a reasonable time frame. The minimum bandwidth requirement for IPTV (5Mbps or lower using improved compression technologies) is possible with conventional ADSL services provided that homes are not too far from the exchange. Viewing multiple channels on multiple TV sets within a household would require ADSL2 or VDSL. High definition TV, which is likely to become increasingly popular, requires about 8Mbps bandwidth using MPEG-4, so ADSL2, VDSL or FTTH are the only real options.

The commercial case for IPTV in a given region depends upon factors that are specific to that geography, such as whether there are cable TV networks and the rules on rooftop satellite dishes. Where digital pay-TV subscribers have a choice of platforms, the business case for IPTV could be weakened, because most of the interactive features of

IPTV are usually replicable by using a mixture of broadcast technologies and intelligent devices (such as PVRs and hard-disk drives for VOD) or a mixture of broadcast technologies and mobile (for e-commerce transactions). Small IPTV players may also struggle to obtain access rights to valuable content. However, offering IPTV as part of a service bundle from a single supplier may be attractive to a consumer even if similar features can be obtained from specialist broadcasters. France is currently the largest market for IPTV in Europe, with Iliad (“Free”) achieving over 200,000 end users for IPTV, along with its broadband and telephony services.

Mobile operators are also beginning to offer TV services using either streaming techniques over 3G networks or broadcast technologies such as DVB-H. The revenue return for mobile operators per Mbyte of data is much lower than for voice or even mobile data services, but nonetheless it may develop into an important revenue stream. Market research seems to suggest significant demand from consumers for mobile TV services and a willingness to pay for such a service. It is also possible that mobile operators could use TV services to generate advertising revenues.

Voice over broadband and IP networks

VoIP technology is already having a significant impact on traditional fixed telephony markets in some countries, with France Telecom forecasting that as much as 40% of all voice traffic in France could be carried over IP by the end of 2006, a significant increase from an earlier forecast of 15%. However, VoIP technology has barely got off the ground in some other countries. The service model relevant to our discussion here is that of so-called voice over broadband (VoB) where the service provider may be independent of the network access provider. (We note that in some markets, such as Poland, high call charges and low broadband penetration mean that a similar service model is popular using dial-up Internet access, but we expect this to be short-lived).

Service providers such as Vonage already enable users to access their services nomadically by accessing the Internet from any location. As devices become more advanced, we expect that it will be possible to extend such nomadic access to mobile handsets relying on access from WLAN or even 3G networks. Unless network operators limit access to their networks as discussed in Section 2.3.1 above, they risk their networks

becoming a commodity with substantial value being extracted by service providers delivering applications across multiple network technologies.

Service bundling

We have already discussed in Section 2.3.2 above the provision of dual-play fixed and mobile services. In this section we consider the bundling of voice, broadband and TV (so-called triple-play services) as well as the bundling of mobile, content and other services.

Triple-play and the bundling of other services currently tend to favour network operators, in particular incumbents (especially those with fixed and mobile operations), cable operators and local loop unbundlers.

Historically, operators using the incumbents' wholesale products to offer broadband services have relied on the customer also renting narrowband access services using the same line. This bundling potentially limits the technology options available to operators that might otherwise market a broadband and VoIP package as a complete replacement for existing broadband and telephony services. It also limits the ability of operators to provide service bundles that exclude fixed narrowband services, which may be particularly relevant if fixed-mobile substitution becomes more significant.

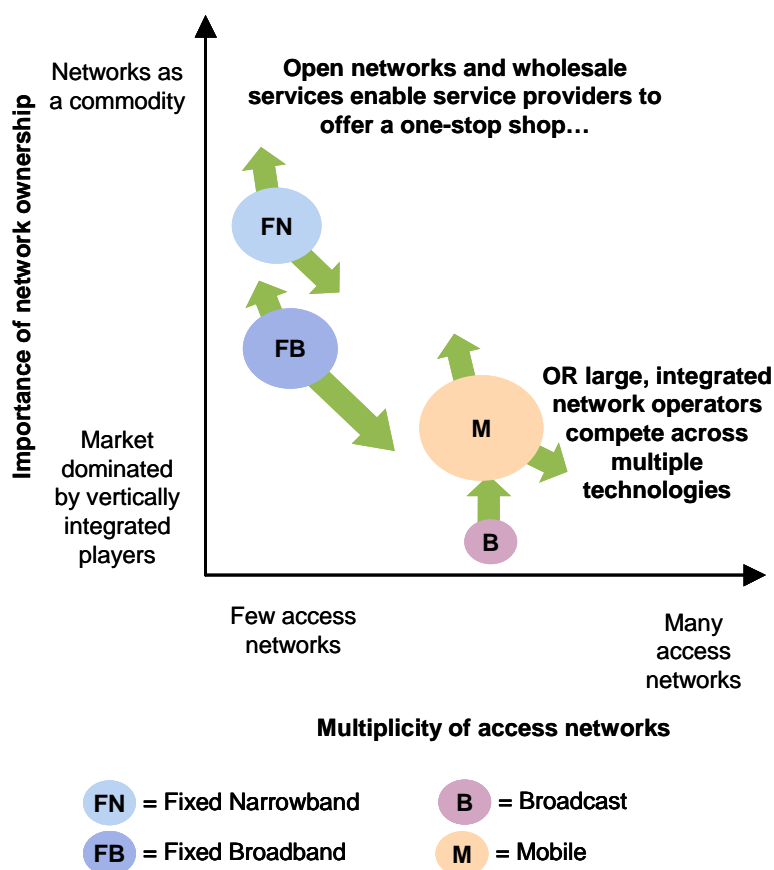
In a few countries, incumbents have removed this limitation (for both themselves and for service providers relying on their wholesale products) by offering 'naked DSL' at the retail level; in other words, by supplying a DSL connection without an accompanying PSTN connection. However, in the absence of regulation, we believe that this practice may remain limited in the short term, since incumbents risk losing revenues for narrowband access and telephony services.

Impact

While it is likely, even in the long term, that some consumers will choose to purchase separate service packages for each access technology that they use, we expect that service providers will increasingly market 'one-stop shop' services that provide a relatively homogenous service across multiple technologies.

There are two ways in which operators might offer a one-stop shop service. The first method relies either on a degree of network openness so that service providers are able to gain access to multiple technologies, or on the provision of wide-ranging wholesale inputs to the retail markets. This implies that networks become increasingly commoditised and risks limiting network investment. The second method relies on the development of a small number of network operators, each with sufficient economies of scale to be able to invest in multiple access technologies. This implies increased vertical integration but a possible increase in the diversity of access networks. In the context of a regulatory approach that favours infrastructure investment, we consider the latter to be a more likely outcome.

The two outcomes are illustrated in Exhibit 2.16 below. There is also likely to be a blurring of market boundaries, which is not illustrated below.



Regulatory issues arising from the delivery of cross-technology services, which are outside the direct scope of this study but which nevertheless will become relevant in the future, include:

- Is there a role for regulators to play in ensuring protection of IPR and enabling DRM?
- Should access obligations be extended to IPTV and mobile-TV operators?
- What demands should be placed on service providers and network operators to provide access to emergency services, particularly for nomadic voice services?
- Should number portability be permitted between PATS and other ECS providers?
- Does service bundling create additional or replacement markets for dual-, triple- and quadruple-play services?
- Under what conditions should regulators consider mandating naked DSL as a retail offering?

2.3.4 Cross-border services

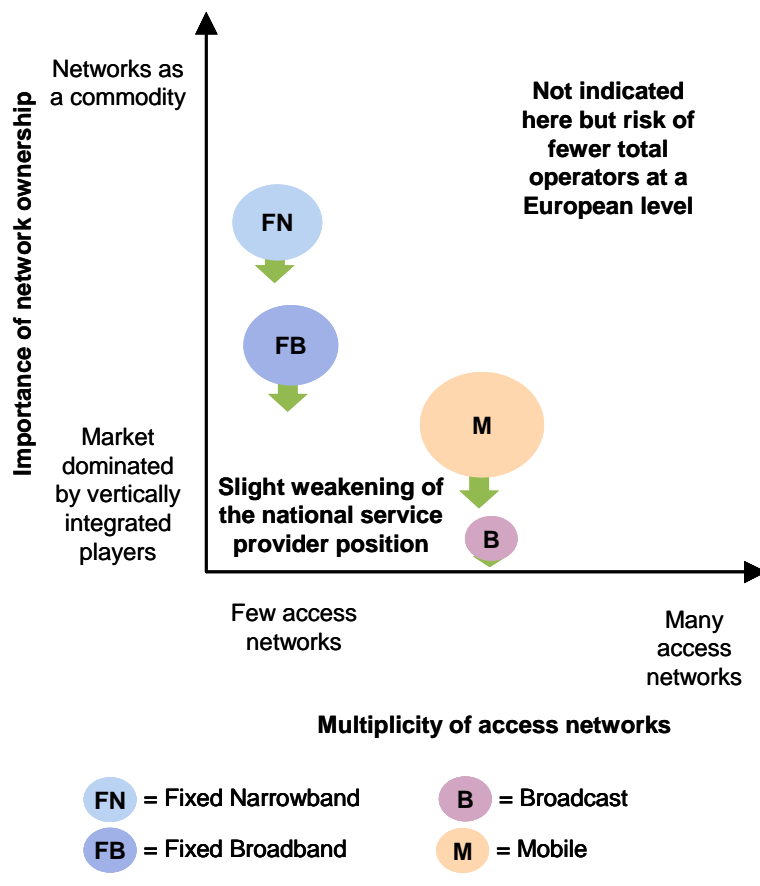
In contrast to the pre-liberalisation period, many operators are already operating in a wide range of countries. In the fixed markets, some operators, such as COLT and Global Crossing, are focused mainly on the EU15, while others, such as Equant and Tele2, are active across most of the EU25. Recent consolidation in the cable sector has strengthened this trend towards pan-European players. In the mobile markets, Vodafone has led the way in forming a coherent multinational group with majority ownership of mobile operators in more than half of the EU25, and having access to partner networks in many other countries. In the broadcast distribution markets, satellite operators already operate at a pan-European level.

The scale of pan-European operators gives them an advantage in terms of their ability to procure equipment more quickly and more cheaply, and the cost of marketing functions can also be reduced. Many smaller operators, particularly in the mobile markets, have sought to develop alliances, such as StarMap and Freemove, in order to enjoy some of these benefits.

Offering cross-border services provides pan-European operators with the clearest advantage, and it is for these services that we expect substantial regulatory issues to arise. Currently the main cross-border service offered is mobile roaming (for both voice and data), and we expect this to continue to be the case in the medium term. Other services that may be effectively classed as cross-border services are networking solutions for multinational corporate firms, nomadic VOB services such as those currently offered by Vonage and possibly some broadcast services (although language and cultural differences in content limit the latter).

Non-network services relying on intelligent devices and unlicensed spectrum such as RFID and other short-range device applications (discussed in section 2.2.4 above) are also effectively cross-border services, and could benefit from a harmonised approach to their development.

For other services, while we expect market development to continue at a national level, it is plausible that pan-European operators may attempt to offer increasingly homogeneous services across Europe for multinational corporate firms and to simplify the sales and marketing process. This homogeneity may extend both to terms and conditions and to pricing of services, provided it is possible to obtain reasonably similar wholesale inputs across Member States. Such a trend could have the effect of driving down prices and driving up quality in those countries in which competition is relatively weak at present, at least for services to large business customers. However, there is also a risk that the advantages of scale for pan-European operators may drive national service providers out of business in some cases. The effect of this risk is illustrated in Exhibit 2.17 below.

**Exhibit 2.17:**

Impact of cross-border services
 [Source: Analysys, 2006]

Regulatory issues arising from increased provision of cross-border services include:

- Should service providers and network operators be permitted to operate in a country without having a national presence or should regulatory policies require functionality location within national borders even if this is inefficient? How might national requirements for legal intercept influence this?
- Are there any markets which the Commission should consider regulating at a European rather than a national-level?
- Is there a consumer benefit to NRAs supporting the development of standards for RFIDs and other short-range devices more strongly?

2.4 Summary of issues identified

In this section we summarise the regulatory issues arising from the technological developments and market trends discussed above.

- **Universal service:** Our discussion of the advances in broadband technology identified an issue relating to whether broadband should become part of the universal service obligation and if not, how NRAs can diminish the potentially negative impact of a digital divide. We note that this is already the subject of a separate consultation being conducted by the Commission and is not within the scope of this study.
- **Standardisation:** In considering the impact of advances in device intelligence and possible scenarios for the openness of networks and services, we identified the issue of whether there may be a consumer benefit to NRAs supporting the development of standards more strongly. This is an important point, but, it is mainly outside the scope of this study.
- **Rights management:** A further issue that we identified relating to advances in device intelligence and the openness of networks and services concerns whether there is a role for NRAs to play in ensuring protection of IPR and enabling DRM. Again, this is an important issue, but it is not within the scope of this study.
- **Network access and openness of the Internet:** Our consideration of the openness of networks and services also identified that operators may have an economic incentive to limit the access of users to their own network and services. A key challenge for NRAs is therefore how to ensure that network access, and more specifically the openness of the Internet, can be maintained. This is discussed further in Chapter 7.
- **Collective dominance:** In our discussion of how the openness of the Internet might be maintained we touched on the issue of collective dominance. This issue also arises in relation to mobile networks when considering why MVNOs have not been widespread and is discussed further in Chapter 6.

- **Market boundary issues:** Several of the technological developments and market trends discussed in this chapter lead to a potential blurring of existing market boundaries. For example, mobile services may become an economic substitute for fixed services in some countries; the development of multiple access network technologies raises questions about whether all the access networks of a single operator should be treated as a single termination market; and some services may increasingly emerge as transnational rather than national markets. Markets might be removed from the list of relevant markets because they are effectively competitive and the Commission no longer considers a market analysis to be necessary. Finally, some of the technological developments and market trends discussed in this chapter are already leading or may lead to the emergence of new markets. For example, IM and FMC products may fall into this category. These issues are discussed further in Chapter 6.
- **Treatment of devices at the edge of the network:** We discussed the fact that some services are increasingly using devices at the edge of the network to deliver electronic communications services. While we do not consider this issue to necessarily require changes to the Regulatory Framework, it may be appropriate to provide NRAs with more detailed guidelines in considering how to determine when a device becomes part of the service itself, perhaps based on the specific role that the device plays. We discuss the definitions of “associated facilities” and “associated services” in Chapter 8.
- **Consumer protection:** Of the various technological developments and market trends discussed, the rise of VoIP has led to a number of particularly difficult issues related to consumer protection and, in particular, to the treatment of access to emergency services. Other consumer protection issues, such as the control of unsolicited communications, are also related, as is the definition of PATS, which was discussed at length in the Analysis

study for the Commission on VoIP⁴ and is also discussed further in Chapter 8.

- **Service bundling:** Service bundling arises in the context of FMC services and more generally in relation to triple-play and quadruple-play offers. The NRAs are already grappling with issues relating to this. These are immediate issues that will need to be resolved within the context of the Regulatory Framework.
- **Treatment of new investments:** In considering the roll out of NGNs we have seen that the potential investments are both large and potentially risky due to uncertainty in consumer demand. This risk raises issues concerning the appropriate level of regulation of such networks, and in particular the need for regulatory certainty in order to encourage operators to invest appropriately. Roll out of NGNs also raises issues concerning IP interconnection and how this might be regulated in future. Again, these are immediate issues that will need to be resolved within the context of the Regulatory Framework, but which we also discuss in Chapters 4 and 7.
- **Number portability:** Number portability issues arise in the context of VoIP and of FMC, with many NRAs yet to decide whether it is appropriate to allow number portability between PATS and ECS providers or between fixed and mobile operators. Linked to this issue is the question of the appropriate termination rate to apply when the link is broken between the number associated with the handset and the cost of making a call to that terminal. Once again, these are immediate issues that will need to be resolved within the context of the Regulatory Framework.

⁴ Analysys, “IP Voice and Associated Convergent Services,” 28 January 2004.

3 Survey of European Companies and Consumer Organisations

3.1 Introduction

As part of this project we approached a diverse group of European companies and consumer organisations associated with electronic communications with a survey designed to understand their views on remaining obstacles to the Internal Market in electronic communications as well as certain other aspects of the Regulatory Framework. We invited organisations to answer the questions posed and state their views on a range of issues relevant to the review of the Regulatory Framework. This section of the study presents the key findings from the survey. Comments on specific issues also are reflected in chapters in Part B and C of this study that deal with particular aspects of the Regulatory Framework.

The sample of respondents is not exhaustive and may not be representative of the views of all interested parties. The statements of the respondents recorded here do not necessarily represent the views of Analysys or Hogan & Hartson, and not all our recommendations in subsequent chapters are consistent with the views of all respondents. Care should therefore be taken not to infer too much from the response of one or two individuals.

3.1.1 Diversity of respondents

We approached organisations in both EU15 and EU10 countries. Emphasis was placed on approaching companies and organisations that are less likely to be directly involved with the Commission or to contribute in other ways to the review of the Regulatory Framework. We also sought representation from as many Member States as possible. However, this did not exclude also approaching some larger companies and organisations, often with pan-European interests.

We obtained independent responses from a total of 40 stakeholders, based in 23 countries of the EU25. The full list of survey respondents is provided in a confidential annex for the Commission.

Exhibit 3.1 shows the number of respondents that operate mainly in an EU15 country, operate mainly in an EU10 country or are pan-European. The pan-European operators are all based in EU15 countries.

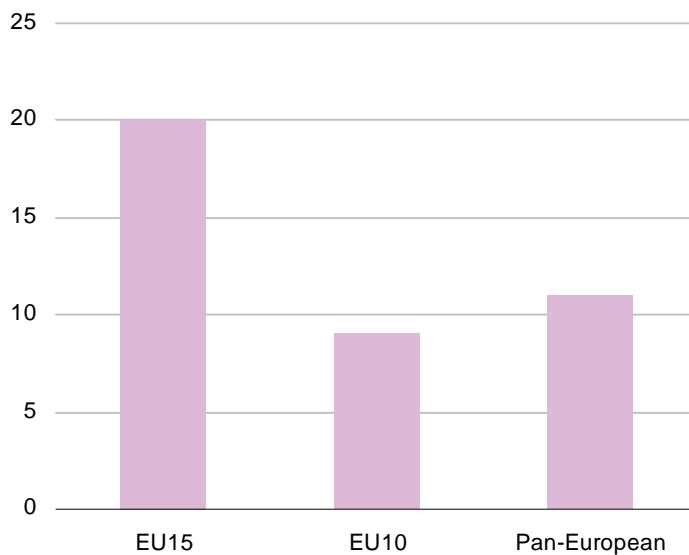


Exhibit 3.1:
Breakdown of organi-
sations by source
region [Source: Analy-
sys, 2006]

Whilst the sample of respondents is not statistically significant in size, we nevertheless sought to contact a diverse group of organisations including incumbents, alternative fixed operators, mobile operators, ISPs, satellite service providers and consumer or-

ganisations. We classified these organisations into eight types according to the main focus of their activities. The number of respondents of each type is shown in Exhibit 3.2.

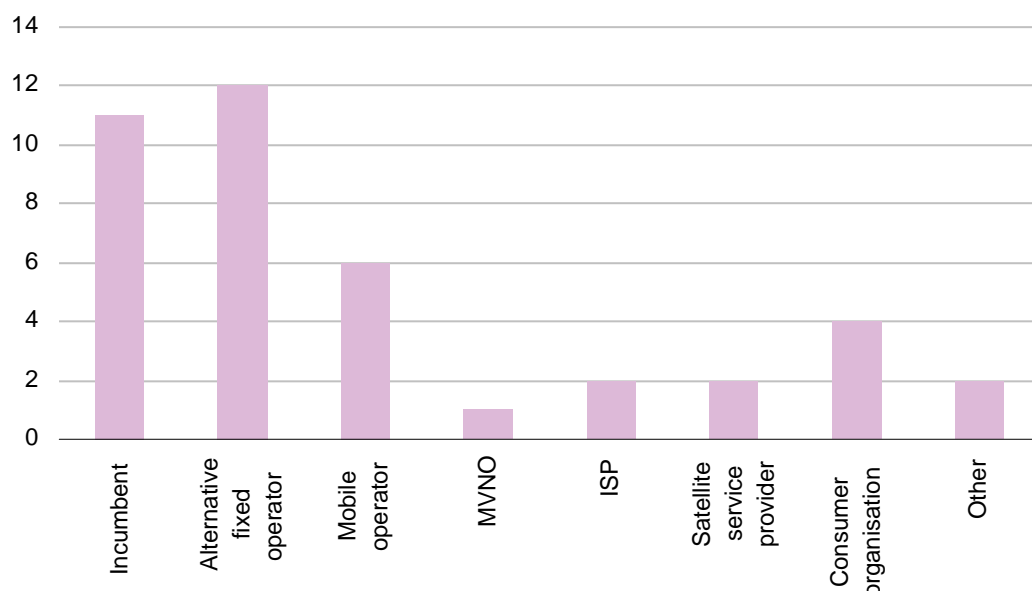


Exhibit 3.2: Breakdown of participants by organisation type

3.1.2 Methodology

In collaboration with the Commission, Analysys and Hogan & Hartson compiled a list of contacts at 60 companies and organisations throughout Europe to be invited to participate in the survey. This list was later extended in order to ensure that responses were received from as many Member States as possible. In many cases we were able to directly approach the regulatory specialists in these companies and organisations. Where this was not possible, our existing contacts were often able to direct us to the relevant personnel.

Often, those organisations contacted welcomed the opportunity to participate in the survey, but in some cases they declined. The main reasons given for not responding were

pressure of work, and a view that the Regulatory Framework had not been implemented to a sufficient extent or for a sufficient period in their country of interest for them to have yet reached a view on its impact. The latter reason was particularly common in EU10 countries and explains why we received a majority of responses from organisations based in the EU15.

Those organisations that agreed to participate in the survey were provided with a copy of a questionnaire developed in collaboration with the Commission. This questionnaire invited participants to comment on a range of issues, illustrated in Exhibit 3.3 below. A copy of the questionnaire is provided in the annexes to this study, together with details of the number of responses received in each area.

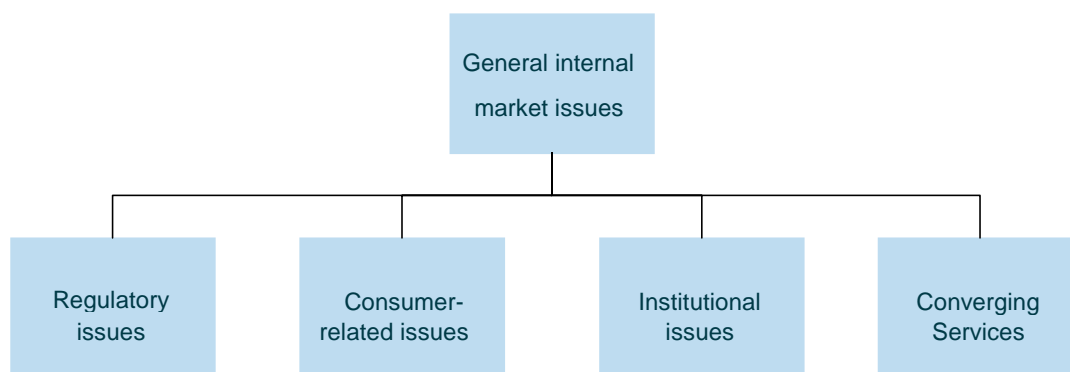


Exhibit 3.3: Structure of the survey [Source: Analysys, 2006]

The majority of respondents submitted their responses in writing. Seven organisations preferred to provide a response by teleconference and in these cases we sought to ensure that those conducting the interviews did not influence the views expressed. The responses received represented the opinions of the individuals approached, and not necessarily of the organisations as a whole.

3.2 General Internal Market Issues

In this section of the survey, we asked firms and organisations to state their views on the completeness of the Internal Market, whether competition is constrained more by

the market or regulatory structure, whether a full implementation of the Regulatory Framework would be beneficial, and what scope there is for further legislation at Community level. We also invited respondents to comment on the desirability of transnational services for businesses and customers.

Almost all respondents answered this section of the questionnaire at some length and in most cases general Internal Market issues were well covered. From the results, it appears that many companies throughout Europe are supportive of the concept of *ex ante* regulation coupled with competition law as embodied in the Regulatory Framework. The responses are discussed under the following headings below:

- views on the completeness of the Internal Market
- views on the benefit of full implementation of the Regulatory Framework
- views on the scope for further legislation at Community level
- views on the desirability of transnational services

3.2.1 Views on completeness of the Internal Market

The majority of those stakeholders who expressed a view believe that the Internal Market for electronic communications is not complete. Some respondents (mostly incumbents) argued that no major barriers exist any longer given the availability of wholesale products. There are six main reasons why the other respondents see the Internal Market as constrained, which we present in the paragraphs below.

The relevant NRA failing to perform its duties adequately

In some cases, respondents feel that the national regulation and competition authorities fail to perform their duties adequately, in particular the duty to curtail persistent abuse of Significant Market Power (SMP). For instance, a mobile operator in an EU10 country stated that this failure results in a situation “where the incumbent can leverage the low profitability treatment on the retail market in the form of predatory pricing, price

squeezing and high hardware subsidy.” In another example, one respondent believed that sometimes all users other than the incumbent pay annual fees for use of a public domain, which gives the incumbent an unfair competitive advantage because the other users suffer higher costs than the incumbent.

Unharmonised implementation of the Regulatory Framework across countries

According to a pan-European alternative fixed service provider from the EU15, a lack of harmonised implementation of the Regulatory Framework forms “a ‘regulatory patchwork’ that makes the launch of pan-European services extremely difficult.” Many respondents, especially alternative operators, noted that in some countries the Regulatory Framework has not been fully implemented in practice for some or all markets, which is of concern to them.

Lack of homogeneous pan-European services

A satellite provider and an alternative fixed service provider, both from the EU15, stated that pan-European products are required for Internal Market completion. This requirement magnifies the problem of unharmonised regulation already noted. The satellite operator said that it is “in the consumer interest, ultimately, that all communications networks are [...] provided in a competitive, European environment.”

Problems with ex ante over-regulation and ex post remedial regulation

Numerous respondents identified problems in these areas. For example, a mobile operator from an EU10 country stated that “NRAs in Member States are still applying excessive *ex ante* control and remedies, which apart from serving as a disincentive also deter investors because of lack of certainty.” It advocated better application of the principles of *ex post* competition law as potentially “a main driver for the attainment and development [of an Internal Market].”

The respondents expressed a broad range of opinions on *ex post* regulation. To uphold the principles of the Regulatory Framework, an alternative mobile operator from an EU10 country desired “a better application of *ex post* competition law in areas where there are no bottlenecks.” An incumbent from an EU10 country responded that *ex post*

regulation should be applied only “in the event of a market failure.” Several respondents noted that the Regulatory Framework to a large extent relies on the quality of *ex post* competition law within each country and the willingness and ability of regulators to carry out their functions, both *ex ante* and *ex post*. For example, an alternative fixed operator in the EU15 said that “the corporate structure of the [vertically-integrated] incumbent is the primary cause of our difficulties, but the regulator has no power to address this fundamental issue.”

Failure to implement/weak implementation of the Access Directive

Failure to fully implement the *Access Directive* is identified as a particular failing of some states and NRAs. An EU15 alternative fixed operator commented that “[access] on fair terms and in a reasonable timeframe is vital but remains very difficult to achieve.” Examples of operators bundling PSTN access with other products at the retail level were also presented. A mobile operator was critical of the fact that Article 5 has not been used in cases where, in its view, there exist “serious obstacles to the achievement of adequate interconnection and other forms of inter-working between operators.”

A user organisation suggested that, as the communications market depends upon networks, those operators that own networks rationally protect their shares of the retail markets in their respective countries and that other service providers are put at a disadvantage.

Allegedly asymmetric regulation

An incumbent in an EU10 country stated that one of the remaining barriers to Internal Market completion was asymmetry in the regulation of fixed and mobile services.

Other issues raised

Several incumbents expressed concern that an assessment of competition according to the number of active players is too simplistic and that in some markets the existence of many small players may not be efficient. This view was also supported by an end user association.

Some respondents from smaller countries felt that there is scope for more simplified regulation and argued for a greater use of regulatory impact assessments to ensure that the cost of specific pieces of regulation do not outweigh the benefits to consumers. Use of either a cost-benefit analysis or a regulatory impact assessment was also supported by an incumbent in a larger country.

3.2.2 Views on the benefit of full implementation of the Regulatory Framework

Most operators believe that full implementation of the Regulatory Framework will help remove the barriers to completion of the Internal Market. One incumbent in an EU15 country suggested that the most important markets are the larger ones. It argued that competition in each market is a necessary condition for establishing a competitive Internal Market, and that the countries that have the greatest weight in the Internal Market are those with the largest economies. Therefore, the incumbent argues that the Commission should ensure that priority is given to establishing competition in the larger markets. However, no other respondents suggested this. Indeed, some respondents were concerned that large NRAs might be able to unduly influence the practices of small NRAs.

3.2.3 Views on the scope for further legislation at Community level

Areas where respondents suggested that further legislative action at EU level might be justified are listed below. Some of these suggestions do not necessarily involve changes to the Regulatory Framework, but instead are ideas for other legislative actions that would make the Internal Market for electronic communications function better.

- solving the persistent access bottleneck problems: According to one respondent “the same key bottleneck identified at the start of the liberalisation process still prevails, i.e., ‘access.’” It goes on to say that access “remains the main bottleneck in the electronic communications sector and, as markets have become more complicated, contamination from entrenched monopolies predominantly within the incumbents’ historic access infrastructure and related services has spread down the value chain.”

- harmonising and simplifying the process of licensing rights of use: A satellite operator commented “licensing ‘rights of use’ is too cumbersome and too much left to national discretion [inconsistency].”
- further action on spectrum aimed , according to some respondents, at harmonisation of the rules and, according to others, movement towards spectrum liberalisation and action to improve the efficiency of frequency use: This point is discussed in more detail in Section 3.3.2.
- further action on intellectual property rights and digital rights management to ensure rights are protected but new service provision is not stifled: A mobile operator commented that “patent royalties and patent stacking are a fork in the road of convergence and the advancement of electronic communications services.” Although this may not be an issue for the review of the Regulatory Framework, the respondent nevertheless believed that further action in this area may make the Internal Market for electronic communications function better.
- involving the Commission Competition Directorate-General, to improve competition law and its application: This issue is beyond the scope of our study but is touched upon in later chapters.
- improving technological standardisation (especially broadband)
- more rigorous implementation of technological neutrality with fixed and mobile being treated the same way; or, stated by another respondent, levelling the playing field between fixed and mobile operators
- equalising the ease of access to rights of way between operators (especially between the incumbent and other alternative operators) was highlighted by an alternative fixed service provider
- legislation to assist with the development of VoIP: According to an alternative fixed service provider, “the lack of harmonised rules risks jeopardising the development of this new product.”

- implementing an assignment process for the so-called ‘must carry’ television channels
- creating a Commission check on “whether NRAs are effectively enforcing the remedies they have imposed”
- firmer focus from the Commission on promoting the Internal Market, combined with a revision of the directives to cater for future deregulation
- setting a deadline for finalising the market reviews

3.2.4 Views on the desirability of transnational services

Respondents said it would be desirable for a number of services to exist on a transnational basis. A user organisation was of the opinion that major pan-European mobile operators are currently “acting as a set of independent national companies,” suggesting that transnational services are currently limited. The services suggested for transnational consumption are:

- services related to spectrum (for example, mobile)
- business services (since businesses, according to a fixed service provider, often “require services in multiple countries”)
- international roaming services
- premium rate services
- triple-play services
- VoIP
- mass market electronic communications services (for example, mobile and satellite)

Most respondents who expressed an opinion on wholesale pan-European service provision see such services as being in the consumers' interest. Examples of pan-European wholesale services the respondents believe are in demand include roaming services, European freephone numbers and B2B services. Several respondents stated a belief that transnational services would be of greater benefit to businesses than to consumers.

We recall that a lack of homogeneous pan-European services was also referred to as a barrier to Internal Market completion.

3.3 Regulatory Issues

This section of the survey invited respondents to consider general authorisation, spectrum and numbering issues:

- We asked respondents whether the general authorisation has facilitated market entry and whether it would be beneficial if implemented at a transnational level.
- Respondents were asked their views on what changes might be required in relation to management of the radio spectrum and whether there is a need for particular measures such as harmonisation of conditions attached to spectrum usage rights.
- Finally, respondents were asked whether national numbering impeded completion of the Internal Market and if there would be significant demand for EU-wide premium rate services in the period to 2015.

3.3.1 Views on general authorisation

Most operators believe that the general authorisation has simplified market entry. This is the case in both the EU15 economies and EU10 countries. Two operators, a satellite operator and an incumbent, both from the EU15, said that the general authorisation has

not had a significant impact on ease of market entry, but they did not have any specific complaints to make about it.

An incumbent operator from an EU10 country suggested that the authorisation regime could be improved by “removing excessive and unnecessary conditions attached to the authorisations in the national authorisation regimes.” On the other hand, some respondents argued in favour of greater NRA powers to enforce compliance with general authorisation conditions.

Value of a pan-European authorisation

Opinion as to whether a single general authorisation for pan-European services would add value is divided. Organisations who believed that a pan-European general authorisation would add value argued that it would simplify both administration and the process of establishing operations in different countries. An EU15 alternative fixed service provider believed that “there probably would be added value in the establishment of a European general authorisation (because) it would simplify certain procedures.” However, this operator was not keen that there should be any additional administrative burden placed on operators, noting that the general authorisation “could prove burdensome if network providers were then obliged to provide connection data, traffic data, volumes, minutes, etc., for statistical purposes.” Other respondents noted that a centralised process could facilitate business development. By contrast, another respondent noted that the Commission should look carefully at the situation in each Member State before making any decisions, since each European country is different.

An incumbent from an EU15 country commented that while a pan-European general authorisation may not be desirable “[harmonising] the format of the notification to regulators within the Member States (thanks to a unique form for instance) could be useful.”

Arguments against a single pan-European general authorisation included the importance of local knowledge, market sensitivity and the observation that spectrum is a limited resource. One respondent wrote that when general authorisations are received, NRAs should conduct due diligence on market entrants. However, we believe that this comment is based on a misunderstanding about the purpose of general authorisations.

An alternative fixed operator from the EU15 made some suggestions for changes to the regime on the basis of accountability and consumer protection. The operator is concerned that the general authorisation has facilitated entry and created many players, without allowing the regulator to know who is acting in the market, which can result in harm to consumers going unpunished. The respondent said that monitoring all the new entrants is hard and that universal service obligations can cause complications as the operator is not always aware what its network is being used for. It recommends that the amended Regulatory Framework take these issues into account.

3.3.2 Views on spectrum

Most respondents that commented on this issue agreed that there is a need for EU harmonisation of conditions attached to spectrum usage rights. For example, an alternative mobile operator from an EU10 country wrote that “frequency channels should be equally available across the entire EU,” “allocated to the same units (civil, government, etc.),” that bands should be identically defined across a range of uses and that policy should be uniform across areas of frequency reservation, spectrum fees and permits.

Some respondents argued that, although flexibility in the use of spectrum could generate efficiency gains, it might also prevent smaller or credit-constrained operators, who may offer a service of greater value to society than an incumbent, from purchasing the relevant band of spectrum. The respondents implied that spectrum should be awarded at least partly on the basis of potential consumer gain rather than to the party for whom it is most affordable. Similarly, an alternative fixed network operator argued in favour of spectrum allocation for smaller geographies in order to cater for more specialised operators, and for greater use of unlicensed spectrum. An incumbent operator in an EU10 country expressed a belief that auction processes for spectrum resulted in excessive licensing prices, and that this in turn may have pushed back innovation and product development, and so customer choice, by some years.

An alternative fixed service provider suggested applying the ‘laissez-faire’ principle of technology neutrality to spectrum management. However, an EU10 country operator suggested installing common frequency management across a number of uses.

Respondents advanced a number of ways to increase efficient use of spectrum. An alternative fixed service provider suggested opening more spectrum for unlicensed use as a potential solution to the problem of operators being unable to secure suitable frequencies for specialist uses. Another respondent said that promoting spectrum trading and providing information at the European level about upcoming spectrum auctions and other allocations in Member States might facilitate the purchase of spectrum by those who would be able to put it to valuable use but are not otherwise sufficiently well informed to take part. Another suggestion was to grant the NRAs rights to redeem unused spectrum, which would help ensure that all spectrum is used.

3.3.3 Views on numbering

Opinion among the respondents was predominately that, although in a few cases there was scope for productive harmonisation, national numbering plans should be left alone. It was thought by some respondents that a European freephone code would be much appreciated, but several expect the demand for premium phone services at the EU level would be limited, perhaps because of language and cultural barriers. An Internet provider in a founder Member State suggested that booking air tickets may be an example of a premium phone service which could be demanded at the EU level. It was suggested that interconnection may be a major difficulty in establishing a pan-European number service. Another respondent said that harmonising number systems may expand market opportunities and lead to the entry of national players into new territories. The same respondent also suggested that “service providers – particularly broadcasting and print media – could extend their revenue streams just as network operators would be able to increase their revenues,” as a result of establishing European-wide premium rate numbers.

A group representing business users was very positive about the potential benefits of initiatives such as the European Telephony Numbering Space (ETNS).

An operator from an EU10 country suggested that the implementation costs of numbering harmonisation could be prohibitive. By contrast, there were also concerns that different numbering systems prevent consistency of delivery and that this could constrain the delivery of EU-wide services. The potential of fixed–mobile convergence to

raise new issues was also mentioned, as was the value of transparency for end users to facilitate market entry.

One alternative fixed network operator noted several related issues of concern including number portability between fixed, mobile and VoIP services.

3.3.4 Views on scarce resources as a whole

An incumbent operator suggested that issues relating to scarce resources, including both spectrum and numbering, should be addressed by an independent specialist body rather than by NRAs.

3.4 Institutional Issues

We asked the participants if there should be European Regulatory Authority (ERA). Such a body would be responsible for performing at a Community level some activities for which NRAs are currently responsible. We also asked whether or not the existing disputes and appeals process was a hindrance to the completion of the Internal Market.

3.4.1 Views on the establishment of a European Regulatory Authority

More respondents were opposed to establishing an ERA than supported the idea. We outline the reasons given for and against this.

Reasons to support the establishment of an ERA

One argument presented in support of an ERA is that it may be able to apply regulation in a more consistent manner and to “stand up to incumbents” when the current NRA may not. Some respondents alleged that their NRA was either lax or ineffective in imposing regulation. There appears to be an expectation that an ERA could alleviate the negative effects of tensions between the NRA and the government in certain countries. In support of this notion, an alternative fixed operator stated that an ERA “would pre-

vent or at least reduce the possibility of political interference.” An EU10 country alternative mobile operator lamented that the “competition protection authority is not performing its duties,” which implies that there may be scope for correction of a national regulatory failing.

A respondent representing a mobile virtual network operator suggested that “the European authority [would] deal with the transnational problems we are facing” but did not elaborate on this point. In a similar vein, a TV network operator argued, “25 regulatory authorities dealing in a separate, piecemeal manner with the regulation of media and communications sectors creates unnecessary risks for the industry and often leads to divergent, inconsistent administrative practices in the various Member States, thus undermining legal certainty and raising the costs of doing business across the EU.” We note that this may be an argument for more harmonisation rather than support for an ERA per se.

Some respondents considered that an ERA could help create regulatory harmony, which may facilitate the completion of the Internal Market. An alternative fixed service provider commented that establishing an ERA “would make business operations easier and differences between the regulations in the Member States would be minimized.” One respondent also noted its belief that an ERA would benefit pan-European operators since they would need to deal with only one regulatory authority instead of several authorities. Other respondents noted that an ERA may have a role to play in regulating pan-European services such as international mobile roaming and voice over broadband.

On a practical note, an EU15 incumbent suggested that “lessons learned from the FCC [in the United States could] be used to set up a European look alike.” Several respondents noted that if an ERA were set up, it would require complete autonomy and independence from the political authorities.

Reasons not to support the establishment of an ERA

Noting that each Member State in the European Union has individual characteristics and issues, an alternative fixed operator argued that “the decision on the dividing line between EU and national regulatory authorities will be difficult to determine. The EU body should not seek to cover all issues and should not replicate functions undertaken

by national regulators.” Similarly, another operator wanted “the debates to focus on improving the institutions currently in place and the procedures available to the Commission to ensure proper, effective and timely implementation of the Regulatory Framework.” One incumbent said that national issues “are dealt with ... in a very effective manner.”

Some operators suggested that if an ERA were to be established, it could be too distant from those markets it is intended to regulate. An Internet provider commented that “a Euro regulator could not possibly obtain the level of information that is needed to consistently make correct decisions informed by practical market circumstances.” This could result in the regulator not having a sufficient understanding of local issues to effectively carry out its duties. One alternative fixed service provider stated that an ERA “would be too far from the regulated markets, lacking knowledge of the specificities and thus having a tendency to become bureaucratic and legalistic.” Several other respondents raised concerns regarding the risk of increased bureaucracy, and one respondent expressed concern that it would be difficult for smaller operators to engage with an ERA based in Brussels.

Other operators expressed other reasons why an ERA may not be beneficial. An incumbent believed that the establishment of a regulator at European level would only bring more complexities within the framework. An alternative fixed operator said that “the action of structuring the market should not be deemed achieved. We therefore consider that it would be premature to transfer [...] these activities to a transnational body.”

Alternative approaches suggested

A mobile operator suggested that “the review of the Regulatory Framework be used not to establish a European Regulatory Agency but rather to identify the rights and obligations of the Commission (and NRAs) on the one hand and of market players on the other,” implying that the Regulatory Framework is not currently clear on this point.

An alternative fixed service provider believed that, although an ERA is not feasible, a more harmonised application of the Regulatory Framework is possible. It wrote that “we do not believe that the creation of such an agency is feasible. In the absence of an

effective European Regulatory Authority, stronger coordination would certainly contribute to a harmonised application of the Regulatory Framework.”

Some operators suggested an extension of the Article 7 powers to allow the Commission to have a veto on remedies applied to dominant operators would be helpful since in their view there is less likelihood of political interference in Brussels than in individual countries. An alternative fixed service provider hopes that this centralised Article 7 process could help ensure that market reviews are carried out as quickly and efficiently as possible. An alternative fixed service provider suggested that the Article 7 task force should be able to issue a “partial” veto where some parts of notifications are implemented immediately and others are resubmitted for review. One alternative fixed operator felt that the Article 7 task force was not as transparent as it should be. An EU10 country incumbent worried that the Article 7 task force is afraid of setting precedents where action might be useful. Concern was also expressed that the Article 7 task force should have power to specifically request an NRA to address all relevant issues, citing as an example the exclusion of a consideration of VoIP in market reviews by some NRAs.

One alternative fixed operator noted examples of notifications from its NRA that differed from the draft in “important” ways, which denied the operator any opportunity to comment on the final draft. Another respondent suggested that the Commission should ensure that final notifications account appropriately for the views expressed in the national consultations.

On the subject of the European Regulators Group (ERG), it was not generally felt that this is an appropriate body to take a policy-making role, due to the national interests of its members. Indeed, some respondents raised concerns that the ERG is increasingly exceeding its function of supporting the Commission as an advisor. However, it was noted that the ERG may have a role to play in increasing harmonisation and in monitoring compliance.

3.4.2 Views on the appeals and disputes processes

On the question of the appeals procedure, the universal answer was that appeals and dispute processes are not working effectively in many countries. There are two main reasons for this, expertise and timing, which we discuss below.

Expertise

An EU10 country incumbent noted that the modern telecommunications market is large, complex and difficult to understand. It believed that in many cases the courts lack a suitable amount of time to give fair treatment to all the wide range of issues and this could inhibit a judge's ability to deliver appropriate judgements. One alternative mobile operator from the EU15 was in favour of the Commission providing "intellectual leadership to the review process, including imposition of remedies."

Timing

Many respondents expressed concern over the length of the appeals process and were concerned that by postponing the implementation of regulatory decisions, their potential to have a positive impact may be diminished. The appeals process was also described as cumbersome. A possible solution was suggested by a satellite operator in the form of "a European Arbitration Court where the procedures are agile and fast." Another respondent believed that the lengthy appeals send negative signals to new entrants and potential new entrants and that this could affect their behaviour and even their entry decision.

One operator suggested that a strengthened Article 7 that is taken into account by national courts is the key to improving the appeals process and highlighted a case where the courts had effectively overruled the Commission's view. It suggested that further review by the European Court of Justice on the conclusions of the task force might give weight to Article 7. Another operator suggested the removal of the Communications Committee as a deciding factor on the Article 7 veto, instead making the veto a direct responsibility of the Commission. Another operator felt that appeal bodies must "take the utmost account of Article 7 decisions."

The survey participants suggested a number of ways to improve the disputes and appeals processes:

- granting relief only when there is a threat to the business of the applicant – which might avoid spurious claims
- streamlining the appeals process and imposing binding deadlines
- providing specialist courts or providing an official programme for the education of judges
- fast-track procedure for rejecting spurious appeals
- creating a European mediator for specific areas
- having non-suspensive appeals: the respondent who raised this point believes that in the past “delay and legal gamesmanship by incumbents” has led to “irreparable harm to the process of competition by the time a well-resourced incumbent has exhausted its hierarchy of appeal rights within the Member State’s judicial system.” The respondent believes that the *Framework Directive* must be changed to state formally that appeals must be non-suspensive
- modifying the Regulatory Framework in consumer support and post-sales areas to strengthen the incentives to build high-quality products or services and so reduce the number of consumer complaints
- benchmarking of appeal mechanisms in Member States
- introducing an annual review of the appeals and disputes process in each Member State
- clear, concrete guidelines on the approach to regulation and dispute resolution

- Commission to act as amicus curiae
- involving the Article 7 task force to ensure that appeal bodies cannot be used to negate the harmonising function of the Commission
- if reasonable time limits are exceeded, provision for the case to be taken over by an EU-body

3.5 Views on Consumer-Related Issues

We asked respondents what they saw as the main concerns for consumers and how the Regulatory Framework might be modified to better address these concerns. They were also asked what extra guidance should be given to NRAs on how to address the trade-off between increased consumer rights and the resulting lower profits for operators. The consumer organisations gave more detailed responses than most of the operators who answered these questions.

3.5.1 Views from operators

Operators tended to feel that the industry is able to deal with consumer issues without regulatory intervention and that multiple bodies (regulators, competition authorities and consumer organisations) offer consumers routes for complaints to be dealt with. However, operators did not provide a detailed discussion of issues such as fraud and spam and many declined to comment at all on these issues. An EU15 alternative fixed service provider noted that “the demand for quality and price of service information must ... be proportionate to the need for such a regulatory obligation.” It was also noted that in some countries the industry has taken self-regulatory measures by establishing Codes of Conduct or Guidelines. One operator, while emphasising that the industry is best placed to agree solutions to consumer issues, noted the positive role that governments and regulators can play in facilitating dialogue.

An EU15 incumbent operator argued that many of the articles relating to consumer protection in the *Universal Service Directive* “belong to a market where exclusive rights

exist. This is incompatible with a fully competitive telephony market and duplicates general law principles.”

Nonetheless, operators did raise some interesting points regarding consumer protection. An alternative fixed service provider noted that “in certain cases incumbents use ‘consumer protection’ as an excuse to ask regulators to set in place additional barriers to entry for alternative operators,” for example, burdensome procedures for carrier pre-selection designed to prevent slamming (the illegal practice of changing a consumer's telephone service without permission).

Some mobile providers thought that transparent information was important and recommended that the authorities should better educate consumers about the products and services available in the marketplace.

One respondent observed that consumer protection should not be unduly extended from consumers to non-consumers (businesses), because this would increase the costs of regulation while providing limited consumer benefit. This was to some extent supported by an association of business users. Another respondent noted that in its home country three different institutes (NRA, competition agency, consumer protection agency) act in parallel regarding consumer protection and suggested that in this case the Regulatory Framework should clearly define the cases in which each agency has responsibility to act.

Some respondents emphasised that customers’ safety and security are important issues.

3.5.2 Views from consumer organisations

Consumer organisations expressed concern about protecting customers from scams, providing security and ensuring dominance is not abused by setting high prices. They do not tend to share operators’ desire that there should be little regulation to protect consumers. A wide variety of issues were raised by those respondents representing consumer organisations. They were:

- performance and reliability

- pricing
- transparency of information and protection from scams
- creation of new consumer products

On the issue of price, consumer organisations felt that prices are still too high. An EU15 consumer organisation said that consumers in the relevant country were “still awaiting the much-vaunted benefits of quality of the service and reduction in prices.” The same consumer organisation criticised the unbundling process for its lack of impact on pricing, claiming that unbundling “which should enable the consumer to move easily to alternative operators to avoid the highest fees, remains an arduous and complex process ... [and] ... it is always the consumer that bears the cost.”

With regard to transparency of information, an EU15 consumer organisation was concerned that even though number portability has been introduced, “callers have been unable to find out which network the party uses, and therefore the tariff applicable for the call.” The same consumer organisation wished to “prevent [the local incumbent’s] bills from being an easy instrument for unconstrained operators to extract payment for useless and unrequested [premium rate] services.” The consumer organisation suggested that “operators must invoice to the customers directly, and therefore assume responsibility in case of fraud” and the consumer should “know with certainty the identity of the organisation behind (a non-transparent charge as well as the chain of other interested parties.)”

With regard to protection from scams, one consumer organisation from an EU10 country stated that consumers “very often lack evidence, especially when they see it [only] on their bill a month later after it happened.” The same consumer organisation went on to say that “the service provider should provide evidence that the consumer was informed about the price, ordered the service, and that it was delivered to him” rather than the consumer being the one required to provide evidence to the contrary.

3.6 Views on Converging Services

Respondents were asked whether existing rules constrain the ability of service providers to deliver new products to the market. Opinion on this issue was divided.

One alternative fixed service provider stated that “the [...] Framework does not constrain the provision of new services.” However a satellite operator believed that, although there are no particular constraints, there are “not enough incentive(s).” This view was supported by an incumbent, who said that the Regulatory Framework “does constrain the provision of new services insofar as these mostly require investments in new technologies and the current Regulatory Framework does not offer any incentives for investments in it.”

Several respondents expressed the opinion that different services “are regulated separately and should the service provider decide to venture into any one of them he would be subject to different licensing and regulation, which apart from being very costly is also a big operational burden for the service provider.” Another mobile operator questioned whether the use of the ‘relevant markets’ approach “enables regulators to take a broad enough view of the competitive situation within national markets to capture adequately the potential for dominant players to abuse their market position when making ‘triple-’ or ‘quadruple-play’ offers.” An incumbent operator pointed towards dynamic inefficiencies associated with regulation, by responding, “strict regulation constrains [future] development, investment and innovation.”

Respondents also commented that several issues should be taken into greater account, including the multi-play trend, fixed–mobile convergence and the ‘*Television Without Frontiers*’ Directive. One respondent stated that it does not believe the distinction between delivery and content markets will disappear but that there should be greater application of technological neutrality principles to delivery mechanisms.

An alternative fixed operator from an EU10 country noted that, although in its opinion no particular rule constrains the delivery of new services, the application of current regulation can constrain the delivery of new services. It gave a hypothetical example in which an NRA places heavy burdens on a new service provided by an SMP operator, which constrains long term return on investments.

3.7 Summary of Obstacles Identified

In this section we summarise the obstacles arising from the issues discussed above and identify whether they are due to:

- fundamental economic characteristics of the market
- timing
- a partial or limited implementation of the Regulatory Framework
- the effectiveness of the Regulatory Framework in general

We draw preliminary conclusions regarding possible solutions to the problems taken from survey results and identify those issues that will be addressed in more detail later in the study.

We note that many of the obstacles identified are interdependent and there are also some issues surrounding, for example, technological standards and content which have been discussed above and are not explicitly summarised here.

3.7.1 The appeal process

Many respondents raised concerns regarding the effectiveness of the appeal process as an obstacle to the development of the Internal Market. In particular, many respondents expressed the view that the process is slow and cumbersome and that courts may lack the necessary expertise. We note that this problem could apply both to appeals involving proposed *ex ante* regulation as well as to *ex post* regulation.

In some countries it has been contended that the regulator and legal bodies lack the resources, expertise or legal powers to apply the Regulatory Framework effectively, although it is unclear to us whether this is a weakness in the legal position of the Regulatory Framework as designed, or a weakness in the transposition into local law. It could well be argued that the Regulatory Framework is designed to require NRAs for

the first time in many instances to review market details in a rigorous fashion, and the early experience is certain to need improvement. This may not be a weakness of the Regulatory Framework, but an expected early outcome that supports more effective implementation and more focused Commission infringement procedures, rather than changes to the Regulatory Framework.

In our view, the most interesting solutions suggested to this problem are to:

- strengthen Article 7 of the *Framework Directive*
- create a fast-track procedure for rejecting spurious appeals – although such intervention into national court procedures may be beyond Internal Market principles
- make appeals non-suspensive (although an exception might need to be made in some cases)
- provide specialist courts or specialist training for judges
- include greater involvement of the Commission in national courts, for example allowing the Commission to act as *amicus curiae*, or ensuring that greater weight is given to the views of the Article 7 task force

We discuss these issues and possible solutions in more detail in Chapter 6 on the *Framework Directive*.

3.7.2 Need for regulatory harmonisation

Some respondents, especially operators seeking to offer similar services across several EU countries, raised concerns that having different regulatory approaches in different countries adds to the costs of firms operating across multiple countries. In particular, a lack of common wholesale inputs in each country can inhibit basic supply, innovation and the roll out of homogeneous services across the Community, restricting consumer choice and creating an inefficient outcome.

This appears to be an issue related to the effectiveness of the Regulatory Framework in general since NRAs have the freedom within the Regulatory Framework to select remedies relevant to their local context. While we believe that such freedom is highly desirable, achieving closer harmonisation when local conditions are similar may assist the development of the Internal Market.

In our view, the most interesting solution suggested to this problem was:

- extend Article 7 procedures to allow the Commission to veto proposed remedies on SMP operators

This issue (and possible solutions) will be dealt with in more detail in Chapter 7.

3.7.3 *Ex ante* over-regulation

Several respondents (mainly but not exclusively incumbents) expressed the view that the Regulatory Framework had resulted in excessive *ex ante* regulation and had failed to achieve the focus on *ex post* measures based on competition law that had been originally envisaged. In particular, there is a concern that *ex ante* regulation may be based on inaccurate forward-looking views and may turn out to be inappropriate.

It is not clear to us whether this problem arises from a limited implementation of the Regulatory Framework or the effectiveness of the Regulatory Framework when fully implemented. Certainly it is the case that in some countries and in some markets *ex ante* regulation has increased as a result of the application of the Regulatory Framework (e.g., imposition of wholesale line rental remedies).

In our view, the most interesting solution suggested to this problem was to

- strengthen competition law in Member States (to allow the safe removal of *ex ante* regulation)

This issue (and possible solutions) will be dealt with in more detail in Chapter 7.

3.7.4 Access bottleneck

Many respondents raised concerns about the “access bottleneck.” In general, respondents are concerned that failing to regulate this effectively may cause high equilibrium prices, inhibit consumer choice and prevent the establishment of socially desirable businesses, which all reduce the economic benefits of electronic communications. These effects are true in general market power cases and in particular for the access bottleneck, since limiting network usage, raising consumer prices and restricting entrepreneurs’ incentives all contribute to an inefficient outcome.

The existence of the access bottleneck is a fundamental economic characteristic of the electronic communications market. Respondents did not point to specific failings in the Regulatory Framework in addressing this bottleneck but appeared rather to be critical of the failure of some NRAs to implement the Regulatory Framework.

In our view, a crucial component of the solutions proposed for this problem is a full transposition and timely implementation of the Regulatory Framework. One respondent suggested that the process might be improved by the Commission itself undertaking market analysis itself where NRAs fail to meet deadlines.

3.7.5 Weakness of NRAs in dealing with SMP operators

This is a particular concern of one particular alternative mobile operator in an EU10 country that claimed the incumbent is supported by an illegal state subsidy and is therefore able to engage in predatory pricing and other practices with catastrophic effect on market efficiency. In its view, the key problem is that the NRA is not doing its job properly. From other respondents, there were complaints that the NRA is not upholding decisions regarding SMP operators or failing to make the decisions in the first place. Some respondents also raised concerns regarding the politicisation of regulation, which in some circumstances might lead to a similar outcome.

This problem, if genuine, would appear to be caused by a partial or limited implementation of the Regulatory Framework, in particular in terms of the legal powers of NRAs.

Of the solutions suggested to this alleged problem, the key in our view is again a full transposition and timely implementation of the Regulatory Framework.

4 Key Issues in Implementation

4.1 Objective of This Chapter

This chapter discusses general themes of implementation as a prelude to specific issues raised later in this study. Thus, it identifies high-level issues that we have seen from industry consultation, the Commission's implementation reports and our own analysis of the Regulatory Framework. It does not focus on recommendations for any required changes to the Regulatory Framework or other remedial measures, as these are discussed under subsequent parts of this study.

Some implementation issues are merely transitional or too country-specific to have material repercussions for the future Regulatory Framework. Others may have more general implications, but are not linked to the particular challenges raised by the future market and regulatory environment. For example, remaining restrictions on the independence or resources of certain NRAs – a matter raised in the questionnaire results by several parties – are a serious implementation problem, not confined to a single Member State. However, such restrictions are not a new or “future-specific” problem. On the contrary, they should be addressed, one way or the other, in the coming years, through existing EU and national instruments and procedures.

Similarly, in this chapter we will not examine certain substantive implementation issues that are likely to gain in importance very soon, but can be resolved without any changes to the Regulatory Framework. The implementation issues we have identified and consider relevant in the present context are those that

- create, or may create, serious and recurring obstacles to the Internal Market with implications for the future;
- are linked, at least partly, to particular features of the Regulatory Framework and/or the market sector developments discussed in the Chapter 2; and
- can be potentially addressed through EU measures, in a future revision of the Regulatory Framework.

4.2 Recurring Market Analysis Issues: Self-Supply and New Technology

An essential component of the Regulatory Framework is the market analysis mechanism set forth in the *Framework Directive*. As discussed in more detail in Chapter 6 (Framework Mechanisms) below, this mechanism consists of three steps:

- **Market definition:** NRAs must define relevant markets appropriate to national circumstances taking the utmost account of the Commission’s relevant Recommendation, which defines 18 such markets within the electronic communications sector, susceptible to *ex ante* regulation.
- **Market analysis with SMP designation:** NRAs must then analyse these markets based on competition law principles and the Commission’s Guidelines to decide whether they are effectively competitive or whether one or more of the operators active in the market concerned has “significant market power,” i.e., is dominant, based on general competition law principles.
- **Application of *ex ante* remedies:** Depending on the outcome of this market analysis, the NRAs must then introduce, withdraw or amend appropriate *ex ante* remedies from the appropriate “menu” of such possible remedies set forth in the Regulatory Framework.

This three-step mechanism involves a series of public consultations and exchanges between the NRAs and the Commission. Under certain circumstances, the Commission

may veto the market definition or designation of SMP operators by the NRAs, but not the remedies that the NRAs propose to adopt. As noted in Chapter 3, some stakeholders have suggested that there should be increased power for the Commission in this process.

The market analysis mechanism lies at the heart of its structure and implementation. Inevitably any debate on the implementation of the Regulatory Framework must also take into account the way that Member States have applied market analysis in practice thus far. Certain recurring issues have arisen in the market analysis process, with implications that seem to exceed the limits of market- or country-specific analyses and point to broader lessons or challenges for the future EU regulatory environment. As a starting point, we believe that the interaction between the recurring issues of “self-supply” and new technologies and services needs to be examined in the context of technological neutrality. To review these issues we take self-supply as the starting point.

4.2.1 Self-supply in the Regulatory Framework market analysis

Self-supply or “captive sales” generally refers to the provision of services or products for the provider’s own, internal, needs. In the electronic communications sector, self-supply typically includes services provided by the wholesale to the retail divisions of the same company or group. Exhibit 4.1 shows examples of market analyses in which self-supply has given rise to questions thus far.

Market	Market description	Key question related to self-supply
Market 8	Call origination on the public telephone network at a fixed location (e.g., carrier selection and pre-selection service)	Should on-net calls be included in the market share calculation?
Market 12	Wholesale broadband access (e.g., bitstream products)	Should cable-based services be included in the market definition?
Market 13/14	Wholesale terminating/trunk segments of leased lines (e.g., half-links)	Boundaries between terminating and trunk segments, defined by the NRA, often do not match existing commercial products. In this context, how can self-supply help quantify and assess operators’ market share?
Market 15	Access and call origination on public mobile telephone networks (e.g., MVNO agreement)	Mobile operators are usually vertically-integrated and genuine MVNO agreements are currently rare. In this context, could the inclusion of self-supply be avoided in the market definition and calculation of market share?

Exhibit 4.1 Source: *Analysys and Hogan & Hartson, 2005*

Questions on self-supply tend to arise in the NRAs' analysis of wholesale markets, in a variety of situations, and the role of self-supply in the market analysis varies accordingly. In some cases, such as mobile call origination or the provision of bitstream access, self-supply can be the only available form of supply on the market. In such cases, the Commission's position is that the structure of supply at the wholesale level is derived from supply at the retail level, and the relevant market needs to be analysed on the basis of the competitive conditions at the retail level.⁵ Much less frequently, self-supply and sales to third parties may arguably constitute part of the same relevant market, to the extent they can be considered equivalent from a demand substitution perspective.

The most controversial cases arise when self-supply is combined with a new technology platform. In such situations, the regulatory approach followed would seem to evidence a distinction between new technology platforms offered by new entrants and those controlled by the incumbents (or other existing SMP holders).

4.2.2 Self-supply and new technology by new entrants

Generally, the Commission and several NRAs have tended to conclude that self-supplied services by *alternative* operators, using new or alternative technologies should be *excluded* from the definition of the relevant product market led by the incumbent, but be taken into account as an indirect competitive constraint in the assessment of the incumbent's SMP. However, this view is not always shared by the NRAs. Exhibit 4.2 sets forth the different views that several NRAs and the Commission have reached on the inclusion of alternative technologies in the wholesale broadband market.

⁵ See, e.g., the Commission's comments dated 1 October 2004 in Case HU/2004/0096, "Market for access and call origination on public mobile telephone networks in Hungary."

Country	Alternative technologies included in the definition	Commission comments
Austria	Cable, Fixed Wireless Access, Fibre-to-the-Home	Insufficient evidence provided to support that wholesale offers over cable are close substitutes to bitstream from the demand side
Finland	Any (specific reference is made to cable)	Insufficient evidence provided. There is no wholesale service offered over cable.
Germany	Hybrid Coaxial Fibre	Insufficient evidence provided. There is no wholesale service offered over HCF.
Ireland	Cable and Fixed Wireless Access	No demand side substitutability at the wholesale level. Cable and FWA cannot exert any direct price constraint on bitstream services.
Italy	Fibre-to-the-Home, Satellite	No demand side substitutability at the wholesale level. FTTx and satellite cannot exert any direct price constraint on bitstream services
The Netherlands	Cable and LLU-based networks	Limited demand side substitutability at the wholesale level. Cable and LLU-based networks cannot exert any direct price constraint on bitstream services
Portugal	Cable	Insufficient evidence provided. There is no wholesale service offered over cable.
Sweden	Cable, Local Area Networks (only when a wholesale offer over these networks is provided)	No wholesale service is offered over cable or LAN, PTS should make clear the exclusion of these technologies from the definition of the market.
UK	Cable	No demand side substitutability at the wholesale level. Cable cannot exert any direct price constraint on bitstream services.

Exhibit 4.2 *NRAs that have included technologies other than xDSL in the definition of the wholesale broadband access market [Source: Analysys, 2005]*

This frequent divergence of views between some NRAs and the Commission can be illustrated in the example of the inclusion, in the wholesale broadband access market, of self-supply of broadband services by cable TV and FWA operators. Certain NRAs have chosen to include this type of self-supplied service in the definition of the wholesale broadband access market, based on the indirect constraint exercised by such cable TV and FWA operators at the retail level. The Commission has generally criticised this choice, considering that such indirect constraints are insufficient to expand the scope of the relevant market, even though they may need to be taken into account in a subsequent stage, i.e., the assessment of SMP in the defined market. This position is illustrated in the Commission's comments in a recent notification:

[The NRA] does not provide evidence of any direct demand side substitution, and states that to its knowledge there has been no switching at the wholesale level between [either] DSL-operators and cable operators, [or] between DSL-operators mutually. Such demand side substitution would rest on the assumption that operators currently buying DSL based wholesale bitstream products could readily switch to a bitstream product offered on an alternative technological platform, *i.e.*, a cable network, in response to a price rise of the DSL based product. In practice, such switching could be restricted by considerable switching costs.⁶

Despite the merits of this argument, we believe that the related discussion is not over, and similar problems are bound to reappear in various forms in the future. As discussed in Chapter 2, retail services such as voice and TV are increasingly likely to be delivered over a variety of access networks and using a variety of technologies. Assessing substitutability of demand will remain a qualitative, case-specific and difficult exercise, with constantly shifting parameters. This is bound to fuel future disagreements between regulators and market players.

A more fundamental, but related problem relates to the impact of existing regulation on direct supply side substitutability. For example, the market for bitstream access has come into being solely as a result of regulatory interventions, some of which have predated the Regulatory Framework. This legacy regime on wholesale bitstream access has been confirmed and strengthened in the Regulatory Framework, through the inclusion of a distinct market for wholesale broadband access (Market 12) in the Commission's Recommendation on markets susceptible of *ex ante* regulation.

Under the Recommendation, Market 12 also includes other (*i.e.*, non DSL 'bitstream') "wholesale access provided over other infrastructures, if and when they offer facilities equivalent to bitstream access." However, the fact that bitstream access is *a priori*

⁶ Commission comments pursuant to Article 7(3) of Directive 2002/21/EC, dated 2 December 2005, in Case NL/2005/0281 – Wholesale Broadband Access in The Netherlands, page 5 (footnote re possible ISP subsidies to retail customers omitted).

regulated, while other, potentially equivalent infrastructure facilities can be regulated only if they are found equivalent, risks creating an asymmetry on the market, at least in so far as “potential equivalence” needs to be assessed based on demand-side substitutability.

Because one type of broadband access (bitstream) is already regulated and others, such as cable or FWA, are not, the search for any evidence of direct supply-side substitutability between these different technology platforms may be a somewhat futile exercise. For as long as access to a technological platform such as cable or FWA is not regulated and mandatory, there are likely to be few applicants for this service and, hence, there will be no evidence or realistic prospect of customer switching between the two platforms. Further, for as long as no such switching is evident, there will arguably be no basis, under the Regulatory Framework, to extend the wholesale bitstream access regime to alternative technological platforms, such as cable or FWA.

This “regulatory circularity” or, in colloquial words, chicken-and-egg situation, is by no means limited to questions linked to traditional copper pair vs. cable or FWA networks. On the contrary, it could resurface each time new, alternative and unregulated access technologies effectively compete with established ones on the retail level – but are not included in the wholesale market definition, thus keeping the incumbent supplier regulated *ex ante*. This result is likely to be a frequent theme in coming years. Examples may include optical fibre versus metallic fixed access networks; FWA (especially WiMAX) vs. fixed local loops; and 3G broadband vs. fixed or 2.5G mobile broadband.

The resulting asymmetry may pose a serious test for the Regulatory Framework’s required technological neutrality and impartiality. This situation would arise if new technologies by alternative operators attain substantial market shares or even SMP without being regulated, while established technologies remain subject to *ex ante* obligations – and are not in a position to shake it off, for as long as the relevant wholesale market definition remains unchanged.

Such conceptual difficulties do not necessarily translate into serious problems in practice. For example, the indirect constraint could be considered to be so strong that only mild *ex ante* remedies (e.g., transparency or non-discrimination) would be required, rather than more intrusive ones, such as price control.

While NRAs may be able to find a way through any of these fact-sets, based on the existing provisions of the Regulatory Framework and associated regulatory guidance, experience so far suggests that this may not be that easy. There is clearly room for additional regulatory guidance and, perhaps, new, legally binding provisions. We discuss possible solutions in Chapter 6 (Framework Mechanisms) and Chapter 7 (Access Obligations). In addition, alternative or complementary solutions may be based on adjustments to the list of markets in the Recommendation, a subject that falls outside the scope of this study.

4.2.3 Self-Supply and new technology by the incumbents

So far, we have looked at new technology by new or alternative market players. However, there are also several examples of new technology by incumbents that have raised market analysis issues. Arguably, the most significant and legally controversial of these examples include optical fibre connections and the status of the incumbents' NGNs, generally describing a future network based on IP technology, capable of servicing a multitude of services and different access network technologies.

In principle, the regulatory challenges raised by such emerging technologies and potentially new markets controlled by incumbents are broadly similar to those raised in the case of similar new/alternative technological platforms controlled by new entrants. However, the central role still played by incumbents in electronic communications markets render the position more complex and politically controversial.

A prime example of such controversy concerns the future deployment of FTTx by at least some of Europe's incumbents, starting from hybrid copper/optical access networks and gradually bringing fibre closer to the subscriber's home. Generally, incumbents are better placed than any other operator to move to a progressive FTTx deployment, making use of their existing rights of way, network facilities, financial clout and overall market presence.

The deployment of optical fibre has been the subject of at least one recent Article 7 procedure. Initially, the German NRA argued that VDSL access offered over Deutsche Telekom's hybrid optical fibre local loops (FTTCab and FTTCurb) should be carved

out of the market for wholesale bitstream access for two years. The Commission objected and the NRA revised its initial assessment accordingly. (Several of the survey respondents noted that there is an urgent need for regulatory certainty on this issue, implying that it will need to be resolved before the Framework can be amended.)

The resulting impression is that, at least in the first phases of such a step-by-step deployment of hybrid fibre links, and assuming the current Framework Mechanism is applied without any adjustments or broader political coordination, the incumbents' optical fibre installations will tend to fall under the existing market definition for fixed networks (particularly as regards Market 12 for wholesale bitstream access) and will therefore automatically be subject to market analysis and the possibility of *ex ante* remedies.

This is presently perceived as a problem by the incumbents and other parts of the industry, such as the producers of optical fibre. Moreover, it may be part of a more general and fundamental question: if the incumbents' move to new technology is a step-by-step process, involving gradual and/or local upgrades rather than the unrealistic prospect of an overnight comprehensive switchover to a new technology, should one assume that this new, gradually deployed technology will be brought under market definitions applying to the incumbent's existing network and services? If that is the case, should the *ex ante* remedies already in place for the incumbent's existing technology be automatically extended to the new one? If not, what is the precise point after which an incumbent's new technology should be considered to fall outside the existing market definitions and/or be subject to a different set of *ex ante* remedies (or no such remedies at all)?

This may be less of a problem if the deployment of new technology presents a viable business case right from the start and can be fine-tuned along the way. It can, however, be a serious problem if the choice of new technology requires a long term significant commitment to very substantial investments whose economic returns, if any, will take a long time to materialize. An automatic extension of existing *ex ante* remedies to this type of new technology may be a serious disincentive against any large scale investments and a barrier to large-scale serious commitment to this technology. Conversely, however, a "regulatory holiday" to incumbents for such new technology can lead to

early market foreclosure by these incumbents, with broader anti-competitive repercussions.

From a regulator's perspective, the problem is not just one of finding the right balance between these two extremes; it is also one of casting such a balanced solution in a manner that is stable and predictable enough over a longer period of time, so as to encourage long term investment.

A related problem with the current *ex ante* regulatory regime is that it may be forward-looking, but it is not supposed to regulate markets that do not yet exist and are not likely to emerge in the immediate future. By their very nature, the criteria for the definition of relevant markets that may be subject to *ex ante* remedies are generally applied based on at least some basic empirical evidence. Thus, for example, no such empirical evidence exists yet in Europe for genuine, large-scale, FTTH deployment by incumbents and none is likely to emerge in the immediate future. Further, the typical time horizon covered in an Article 7 market analysis (two years) may be too short to cover a longer term project such as FTTx deployment in the EU. It is therefore bound to leave some uncertainty on the regime that will apply after the expiry of this relatively short two year period.

The extent to which this potential shortcoming of the Regulatory Framework is a real problem that needs to be addressed in the review also depends on broader policy considerations that are beyond the scope of this study. Thus, for example, if FTTx roll out is identified as a high policy priority requiring long term commitment on the Community level – just like GSM technology was identified as such in the 1990s – this would underscore the importance of a regulatory solution to the problem identified above. In Chapter 6 we discuss such a possible regulatory solution.

4.3 Status of VoIP

No other service may affect the business fundamentals of the traditional telecommunications industry as profoundly as VoIP. The electronic communications industry has gone through, and recovered from, various crises in recent years, typically relating to premature, overpaid or overextended expansion into new markets or products. In con-

trast, VoIP poses a direct threat to what has been the telecommunications industry's core business since the late nineteenth century.

In this section we consider the three types of VoIP that have an impact on the retail services market:

- *Managed VoIP*: VoIP managed by the broadband access provider (e.g., an unbundler or cable operator)
- *Independent VoIP*: VoIP managed by an independent voice service provider (e.g., Telio, Vonage or SkypeOut)
- *VoIP as a PVA*: VoIP as a “personal voice application” (Skype, but not SkypeIn or SkypeOut).

4.3.1 Commission position on VoIP

In June 2004, the Commission launched a consultation on the treatment of VoIP services under the Regulatory Framework to clarify the application of the Directives to VoIP services. However, as a result of the consultation, it chose not to develop detailed guidelines but instead, in February 2005, stated its intention to promote the development of VoIP services and urged NRAs to take a “light touch” approach to regulation in order to allow innovative services and market structures to emerge. Although the ERG has issued guidelines in some areas, NRAs have been free to develop their own approaches to the treatment of VoIP.

4.3.2 NRA approach to VoIP in market reviews

The question of whether VoIP services are part of the retail telephony markets (Markets 3, 4, 5 and 6) is complicated by a number of issues.

First, even within the three VoIP categories listed above there are a number of different services that can be provided to consumers. For example, the service may be presented

as a direct substitute to voice telephony, it may be a real-time service arguably little different any other computer application such as IM, or it may fall somewhere between these extremes. Therefore, only a subset of VoIP products may be considered to be substitutes for voice telephony and potentially part of the relevant market.

Second, the costs of switching to a service based on VoIP differ substantially if the voice service customer is already a broadband access customer or not; accordingly VoIP may be a (demand-side) substitute product only for a subset of customers. In some cases VoIP may be sold only as part of bundles that include other unregulated services such as free-to-air television and retail Internet access, also making substitutability arguments difficult.

It is not surprising therefore that NRAs have taken a variety of approaches to the treatment of VoIP in market reviews. As of December 2005, 12 NRAs had completed the reviews of the retail telephony markets (Markets 3, 4, 5 and 6). A summary of their findings is presented below:

- Four NRAs (UK, Hungary, Finland and Portugal) have not explicitly addressed the issue of whether to include VoIP in the relevant markets. These four were among the first NRAs to conduct the retail telephony market reviews and it is becoming increasingly difficult to justify this approach as VoIP operators are beginning to gain significant market share.
- Four NRAs have considered but excluded VoIP from retail markets for calls, either because of service characteristics (Denmark) or because of its early stage of development (Austria, Ireland and Spain). Again, this approach is becoming increasingly difficult to justify in many countries.
- Four NRAs have actually included VoIP in Markets 3, 4 5 and 6 as a substitute of traditional telephony. Germany and Sweden have included both managed and independent VoIP; however, France and the Netherlands have included only managed VoIP.

These views are summarised in Exhibit 4.3 below.

Member State	NRA decision on the inclusion of VoIP and rationale		Commission comments
UK		Not addressed	
Ireland	No	VoIP is at an early stage of development	No specific comments
Hungary		Not addressed	
Finland		Not addressed	
Denmark	No	VoIP is not a demand-side substitute of traditional telephony and has had low impact on the market	The NRA's decision is not supported by an adequate substitutability analysis
Austria	No	VoIP not relevant	No specific comments
Portugal		Not addressed	
France	Yes	VoIP is a demand-side substitute of traditional telephony. ARCEP included only managed VoIP	In France, this is justified by the high broadband penetration and because VoIP products are comparable to traditional telephony
Sweden	Yes	PTS included IP telephony, without distinguishing between various types of VoIP	This decision is not supported by an adequate substitutability analysis. However, Markets 3-6 are effectively competitive, so the inclusion of VoIP would not affect SMP conclusion
The Netherlands	Yes	VoIP is a substitute of traditional telephony. OPTA included only managed VoIP ⁷	The inclusion of managed VoIP is in line with the Dutch market environment (high broadband penetration)
Germany	Yes	VoIP is a demand-side substitute of traditional telephony. BNetzA included both managed and independent VoIP	Additional analysis should be dedicated to verify whether independent VoIP has similar characteristics to traditional telephony
Spain	No	VoIP is not significant due to the limited development of broadband	No specific comments

Exhibit 4.3: NRAs decisions on the inclusion of VoIP in Markets 3, 4, 5 and 6 and rationale, along with relevant EC comments (order indicates timing of notification)
[Source: Analysys, 2005]

⁷ The Netherlands is the only Member State where VoIP has been included both in the markets for retail calls (Markets 3-6) and retail narrowband access (Markets 1-2). OPTA is also the only NRA that has imposed remedies on VoIP provisioning, namely price floor obligations on KPN.

4.3.3 NRA approach to VoIP in other areas

Many NRAs have considered other regulatory issues relating to VoIP not necessarily within the context of market reviews and we highlight the most relevant ones here. Again, NRAs have taken a variety of positions on these issues.

Access to emergency services

Due to technical limitations, VoIP providers often cannot provide guaranteed access to emergency services and there are particular difficulties with the identification of caller-location if VoIP services are provided nomadically. Many NRAs therefore require VoIP providers to provide access on a ‘best-efforts’ basis (although it is generally unclear how this is defined) but some have not issued any specific rules.

Number allocation

For services at a fixed location, most NRAs have allowed VoIP operators to use geographic numbers from the national numbering plan. However, only about half of Member States have provided access to non-geographic numbers (often in addition to geographic numbers) and it is unclear whether this practice may become more widespread.

For nomadic VoIP services, only a few NRAs have allowed VoIP operators to use geographic numbers and access to non-geographic numbers is more common.

4.3.4 Conclusions

The different approaches of Member States to VoIP regulation raise a number of issues including:

- *Access Issues:* what is the network access regime that the providers of VoIP should be entitled to? We discuss this issue in Chapter 7.

- *General authorisation:* does VoIP constitute a publicly available telephony service (PATs) and, if so, what are the general authorisation requirements applying to VoIP? We discuss this issue in Chapter 8.
- *Numbering:* what are the numbering resources, if any, reserved for VoIP and what are the related rights and obligations of VoIP providers? We discuss this issue in Chapter 8.
- *Consumer protection/Universal Service:* what is the extent to which consumer protection/universal service requirements (e.g., access to emergency numbers) should be extended to VoIP providers? We discuss this issue in Chapter 9.

4.4 Implementation Delays/Limited Transposition

Implementation of the Regulatory Framework has been delayed on two levels: the transposition of the Regulatory Framework into the Member States' national legislation and the market analysis process that NRAs need to carry out under the Regulatory Framework.

4.4.1 Delays in national implementation of Regulatory Framework

It is clear that the Commission has responded with unusual speed to delays of the Regulatory Framework's implementation by the Member States. By the middle of December 2005, the Commission had opened infringement proceedings against 23 EU Member States in more than 50 cases relating to failures to implement correctly the Regulatory Framework.⁸ This rigorous EU regulatory response reflects the high political priority

⁸ "Telecoms: Commission opens new round of infringement proceedings, but also sees positive results of previous ones," Commission Press Release IP/05/1585 of 14 December 2005.

given by the Commission to the creation of a modern electronic communications environment in the Internal Market, as part of the Lisbon Agenda. In the rapidly evolving market environment for electronic communications, varying national speeds and delays in the implementation of EU regulation can lead to serious Internal Market problems.

Whatever the reasons and seriousness of these implementation delays, it is logical to assume that they represent a transitional, “one-off,” problem, without long-term implications for the future Regulatory Framework. Therefore, there is no reason to examine these implementation delays in more detail in the context of the present study.

4.4.2 Delays in market analysis procedures

The situation is different as regards the delays encountered thus far in the NRAs’ market analysis procedures required under the Regulatory Framework. Contrary to legislative implementation of the Regulatory Framework, market analysis will not be a “one-off” process, but will need to be repeated at regular intervals in the future. Hence any delays encountered thus far might conceivably persist and perhaps be aggravated in the future, with potentially serious and lasting repercussions.

The market analysis process has taken off very slowly and remains behind schedule, despite a recent acceleration of NRA notifications to the Commission. By the end of January 2006, 30 months after the legislative deadline for the Regulatory Framework’s implementation by the Member States, the Commission had received a total of 339 notifications, from 21 NRAs (4 Member States had not yet submitted any notifications).⁹ The subject-matter of these notifications covered about half of the theoretical total of 450 notifications (18 markets x 25 Member States) required under the Regulatory Framework.¹⁰ At present, it is conceivable that the first round of notifications may still

⁹ Data compiled by Hogan & Hartson and Analysys, based on information published on the Commission’s website.

be incomplete at the time where some Member States will move forward with a second round of market analyses and notifications.

As an additional problem, the notifications have followed an uneven pace among Member States that can only result in varying speeds in the implementation of the Regulatory Framework across the Internal Market – admittedly, not a new phenomenon. Moreover, because of the delays encountered during the first two years of the Regulatory Framework’s entry into force, several NRAs have had to speed up the process considerably, squeezing a substantial number of notifications into a relatively short period.

The market analysis process, and associated delays, tend to be particularly long in cases of conflicting views between the NRA concerned and the Commission. In those rare cases where the Commission has exercised its veto, the required follow-up by the NRA regarding the market concerned has repeatedly taken more than a year to complete.

Delays that have followed an NRA’s voluntary withdrawal of its notification after informal exchanges with the Commission have produced a more mixed picture. In some cases, the NRA’s follow up was fairly quick; in some others, the market analysis concerned seems to have been demoted further down the NRA’s priority list. Lack of transparency on the informal views exchanged between the Commission and the NRA concerned can only contribute to legal uncertainty and affect the stance of other NRAs vis-à-vis the market(s) concerned. Therefore, in addition to being a problem in itself, such lack of transparency may arguably contribute to delays in more than one way.

Before discussing the necessity and relative merits of any solutions to these apparent procedural problems, it is worth considering whether delays similar to the ones experienced thus far are likely to repeat themselves in the future or whether the current delays

¹⁰ Among the 339 notifications submitted, there was often more than one concerning the same relevant market by the same Member State; others concerned dispute resolution procedures; and others concerned more narrowly defined markets. Therefore, these 339 notifications represent about 50% of the required total.

are more of a one-off transitional problem – and hence not an issue that needs to be examined any further in this study.

Forecasts concerning the timing and progress of future NRA market analyses and notifications under the Regulatory Framework are obviously speculative. Nevertheless, there are good reasons to think that, without any streamlining of the current procedure, delays are likely to persist to a similar, and possibly worse, degree.

On the optimistic side, once NRAs have gone through the first round of notifications, familiarised themselves with the markets, arguments and procedures involved, and reached their decisions on the appropriate *ex ante* remedies, it should be substantially easier for them to repeat the exercise, especially if the outcome is not drastically different from the one reached at the first time. Similarly, there is a growing body of Commission decisions, ERG documents and on-going public exchanges on the issues involved in market analysis under the Regulatory Framework. This should normally help the whole process in the meantime: fine-tuning an existing regulatory regime is usually easier than starting it up. Moreover, markets found to be competitive will most probably not be included in the next round of reviews, or be subject to a faster and simpler review procedure by the NRA concerned.

Nevertheless, there are also reasons to believe that the market analysis process may gradually become a more complex and slow process.

Declining Market Shares of the Incumbents

Thus far, the starting point of many SMP assessments has been the very high market share held by the incumbent. With market shares in the order of 70-100%, the finding of SMP is not particularly controversial. Consistent with the Commission's Guidelines, NRAs have tried to strengthen finding of SMP by taking into account variety of factors (e.g., the incumbent's vertical integration, extensive distribution network, economies of scale and integration), even in cases of particularly high market shares. However, the

overall impression emerging from most of the present notifications is that high market share has been by far the main factor in the finding of SMP.¹¹

Things are likely to become more complicated in the next few years. Logically, the incumbents' market shares should continue to decline, consistent with current trends and the policy objective of increasingly competitive electronic communications markets. Inevitably, this will shift the focus of SMP analysis to more qualitative factors than market shares, which, by their very nature, are far more open to debate and may require a more thorough economic analysis, market investigation, comprehensive data and extensively reasoned conclusions. We also note the views of some survey correspondents that it is not always appropriate to focus attention on market share if other factors such as innovation, low prices and high quality of service suggest that markets are competitive. This does not seem to be a recipe for an easier and faster market analysis procedure.

Increasingly Sophisticated Market Definitions

By and large, NRAs have tended to adopt or follow very closely the 18 market definitions listed in the Commission's Recommendation, with some exceptions (e.g., SMS termination as an additional market). These market definitions largely reflect the market reality in most Member States at the time of their inception: a near-monopoly on fixed communications by the incumbent (with some exceptions, notably regarding international traffic) and an oligopoly on the mobile market – with “convergence” more of an overused buzzword than an immediate reality. However, technological and market evolution in the coming years is likely to result in genuine convergence and overlaps, and a more fluid and complex picture, as we note in Chapter 2.

This evolution will likely require re-assessment of the current market definitions, on a broader or more sophisticated basis and stronger references to local market conditions.

¹¹ As discussed below, this problem was highlighted in two successful appeals against two NRA findings of dominance in the market for the termination of calls in an individual mobile network.

For example, fixed-mobile substitution may have more impact in Eastern and Central European countries, where the fixed network is less extensive and modernised, potentially leading to a single market for fixed and mobile voice telephony in these markets, while in other countries the markets remains distinct.

NRAs are more likely to use the experience gained in the market analysis process in order to produce more sophisticated and (usually) narrower market definitions, rather than rubber-stamp their earlier conclusions without any substantive changes. While this may reflect a more mature and confident regulatory approach, it may also contribute to the complexity and duration of the future market analysis process.

Litigation

The prospect of litigation has accompanied the Regulatory Framework's market analysis from the start, and is now very much part of the overall picture. Such litigation can take a variety of forms. In the most common form, electronic communications operators have appealed the NRAs' decisions adopted at the end of the market analysis process. The right to such appeals is enshrined, *inter alia*, in Article 4 of the *Framework Directive*.

Examples of relevant recent or pending litigation include:

- (a) A successful appeal, by affiliates of the same group, against two NRAs' separate findings that a mobile operator had SMP in the market for wholesale mobile voice call termination on its network operated in each of the two Member States concerned. The two separate NRA findings had been communicated to the Commission without objection. In both cases, the appellant argued successfully that the NRA had erred by failing to assess the extent to which the incumbent fixed operator had countervailing buyer power.¹² These proceedings

¹² Decision of the (Irish) Electronic Communications Appeal Panel, dated 26 September 2005, in respect of Appeal No ECAP 2004/01; Decision of the (U.K.) Competition Appeal Tribunal, dated 29 November 2005, in Case No 1047/3/3/04.

are not yet final, but serve as a strong reminder that even extremely high market shares (100% in the cases in question) are not sufficient, by themselves, to justify a finding of SMP, and that there should be no “shortcuts” in the remainder of the NRAs’ market analysis.¹³

- (b) The appeal against an NRA’s rejection of an applicant’s request to be considered a party in market analysis procedures conducted by that NRA. The NRA argued that the market analyses in question did not concern the imposition of *ex ante* obligations on the applicant, but only on its competitors, i.e., other electronic communications operators. Following an appeal by this applicant, the appeal court has asked the Court of Justice of the European Communities to clarify the meaning of the term “affected” (party) used in Article 4 (“Right of Appeal”) of the *Framework Directive*, in conjunction with Article 16 of the same directive which deals with the market analysis procedure. The national court asked whether parties against whom no obligations are imposed under the *Framework Directive*’s market analysis procedure have the right to appeal the relevant NRA decision relating to such obligations. Further, the court has also asked whether, in the event of a positive answer to the first question, Article 4 of the *Framework Directive* would preclude a national provision that would define the right to appeal more narrowly.¹⁴
- (c) A reference for a preliminary ruling by an NRA pursuant to Article 234 EC, concerning the legality of a Commission veto against a draft decision notified by that NRA on the market for transit services in the fixed public telephone network.¹⁵ The NRA’s reference was summarily rejected by the Court on the

¹³ However, it is worth noting that cases such as these caused a number of survey respondents to raise concerns that the views of the Commission should be at least accounted for in appeal proceedings.

¹⁴ Case C-426/05, reference for a preliminary ruling from the (Austrian) Administrative Court by application of 22 November 2005 in a procedure concerning Tele2 UTA’s appeal against the Austrian NRA’s decision of 6 September 2004.

¹⁵ Case C-256/05, reference for a preliminary ruling from the (Austrian) Telekom-Control-Kommission by application of 13 June 2005 in a procedure concerning Telekom Austria AG, OJ C 205/13, 20 August 2005.

ground that this clearly had no jurisdiction under Article 234 EC to answer the questions referred to by the NRA.¹⁶

These examples relate to different sets of facts, legal provisions and markets. Nevertheless, such litigation can have much broader implications, given the obvious similarities among market analyses across the EU. Administrative appeals against NRA decisions are not a novelty. Indeed, in some Member States, the incumbents appear to have adopted a strategy of systematic appeals against any NRA decision they consider prejudicial to their legitimate interests. Until recently, however, such appeals have tended to focus on dispute resolution procedures and *ex post* regulatory intervention, and their immediate impact often was restricted to a very specific set of facts between two or a few parties. The implications of appeals against *ex ante* regulatory measures may be broader and more important for the market at large, and were raised by several respondents to the survey.

Incumbents are likely to continue their policy of appealing the NRAs' decisions and may indeed intensify it, as their market shares decline and their core revenues are under increasing threat from new entrants and new platforms (e.g., VoIP). These factors can both add legal credibility to the substance of their case against *ex ante* remedies imposed on them and, at the same time, lead to a more litigious response to the loss of market share and revenues. Alternative operators may well adopt a similarly aggressive stance – depending on the outcome of the pending reference for a preliminary ruling mentioned above, which will hopefully clarify the conditions and scope of third parties' legal standing in such appeal procedures.

Litigation should not necessarily be considered a problem. It can contribute to the quality of regulatory analysis and intervention. It is also a natural price to pay for a regulatory approach that is driven by competition law principles and fact-specific findings, rather than a more abstract and potentially arbitrary regulatory intervention. Nevertheless, frequent litigation will also slow down the overall market analysis and notification process.

¹⁶ Order of the Court of 6 October 2005, OJ C 10/7, 14 January 2006.

The conclusion from the above is that, in the absence of any streamlining and other measures, delays in the current market analysis and notification process will in our view continue and may perhaps worsen.

In Chapter 6 (Framework Mechanisms) below, we shall discuss ways in which the Regulatory Framework's mechanisms for the definition of markets, assessment of SMP and imposition of remedies could be streamlined and adjusted to address the problem of such future delays.

4.5 Delays in Appeal Procedures Against NRA Decisions

Appeals against NRA decisions in market analysis procedures were discussed in the previous section as a possible ground for delays in the market analysis process. More generally, however, appeals against NRA decisions of any kind (including, e.g., dispute resolution decisions or *ex post* measures) are frequently highlighted as a problem in several Member States. In many EU jurisdictions, appeal procedures against NRA decisions are embedded in the country's administrative law system and share the fate of typical administrative appeals, whose duration can be long. However, delays due to prolonged court proceedings that might be tolerable in more customary markets are a more acute problem in the electronic communications environment, where the market needs to move on more quickly. This was also a problem highlighted by several respondents to our questionnaire.

Potential solutions, if any, to this problem could conceivably seek to strengthen the Regulatory Framework's existing provisions dealing with national appeals (i.e., Article 4 of the *Framework Directive*) and/or introduce parallel dispute resolution procedures making use of arbitration or a supra national forum for dispute resolution. These potential solutions are discussed in Chapter 6 (Framework Mechanisms).

4.6 Summary of Key Implementation Problems

The main implementation problems identified in this Chapter concern

- the regulatory treatment of self-supplied new technology;
- the status of VoIP;
- the delays and, occasionally, lack of transparency encountered thus far in the NRAs' market analysis and notification procedures; and
- additional delays due to national appeal proceedings.

As will be discussed in the coming chapters, we believe that most of these issues can best be addressed through appropriate changes to the Framework Mechanism (see Chapter 6). The emergence of IP-based networks and the deployment of FTTx may also require possible adjustments to the applicable access regime, a subject we address in Chapter 7. Finally, while the challenge of VoIP may raise regulatory issues across the board, the most relevant, VoIP-specific, questions are closely related to the applicable authorisation regime and will therefore be addressed in Chapter 8.

5 Summary of Obstacles to the Internal Market

This chapter summarises and assesses the obstacles to completion of the Internal Market found from the questionnaire results we obtained as part of this project, informed by our forecast of sector developments and with additional details from our review of implementation issues. Chapter 3 supplied general indications of these obstacles, limited by the size of our sample of respondents.¹⁷ Chapter 4 added an important element to our review of obstacles, especially because the majority of respondents referred to implementation as the most substantial obstacle, rather than flaws or gaps in the Regulatory Framework itself.

These obstacles must be assessed against the backdrop of the time period over which revisions to the Regulatory Framework would be made. Chapter 2 described substantial changes likely to occur over the lifetime of the next Regulatory Framework, which may be revised and implemented by 2009-2010. Changes in consumer behaviour together with advances in broadband networks and NGNs, 3G and other mobile systems, and increased device intelligence will challenge the Regulatory Framework. Changes in the way services are provided will also create new challenges for ensuring that the Internal Market in electronic communications networks and services functions optimally.

The first section of this chapter summarises findings on obstacles identified in the questionnaire, focusing on regulatory, institutional, appellate and consumer issues. The

¹⁷

A substantial number of undertakings have responded to the Commission's call for comments with its deadline of 31 January 2006. Therefore, we view our questionnaire as a complement to the Commission's effort.

second section reviews implementation aspects of self-supply, the impact of VoIP, and delays in the system that should be addressed.

5.1 Questionnaire Findings

5.1.1 Regulatory issues

The majority of our 40 respondents do not believe the Internal Market for electronic communications is complete, for reasons including the weakness of some NRAs, un-harmonised implementation, lack of pan-European services in general, problems of *ex ante* regulation as well as the effectiveness of *ex post* regulation, and allegedly asymmetric regulation. The only consistent message from these responses is that implementation needs to be completed, and in some cases improved, a view that we see repeated frequently. Most operators believe that full implementation of the Regulatory Framework will help remove barriers to completion of the Internal market. There is consistent support for taking steps to complete the Internal Market, both to harmonise rules on market entry and to foster transnational services. Respondents argue that having different regulatory approaches in different countries adds to the costs of firms operating across multiple countries.

No respondents seemed to challenge the Regulatory Framework itself or argue that the Internal Market cannot be developed through that structure (except that some said they did not think a complete Internal market was possible for all services because they were national by nature). From the results, it appears that many companies throughout Europe are supportive of the concept of *ex ante* regulation coupled with competition law as embodied in the Regulatory Framework. Our impression is that obstacles to the Internal Market, in the view of respondents, are due to details or implementation, and there was no support for complete overhaul of the Regulatory Framework to achieve Community goals.

Respondent's views on how to complete the Internal Market in electronic communications can be divided into the following (self-explanatory) topics:

- the relevant NRA failing to perform its duties adequately

- unharmonised implementation of the Regulatory Framework across countries
- lack of homogeneous pan-European services
- problems with *ex ante* over-regulation and *ex post* remedial regulation
- failure to implement/weak implementation of the *Access Directive*
- allegedly asymmetric regulation (raised by an incumbent in an EU10 country)

Most operators believe the general authorisation regime has simplified market entry. But opinions are divided on whether a single general authorisation for pan-European services would add value. Those in favour argue it would simplify administration and the process of establishing operations in different Member States. Those opposed stressed the importance of local knowledge and sensitivity to the national market. It is likely that these views depend strongly on whether the respondent believes the NRA is doing a good job – some respondents argued that NRAs are not implementing the Regulatory Framework correctly, which colours their views on whether a single licence would be a viable substitute for national authorisations.

Views on spectrum were mixed. Most respondents that commented on this issue agreed that there is a need for EU harmonisation of conditions attached to spectrum usage rights (but we note that the term “harmonisation” conceals many complexities). The views expressed on spectrum authorisations were not sufficiently detailed to draw hard conclusions on how much the current system creates barriers. Generally, respondents advanced a number of ways to increase efficient use of spectrum, which were not always consistent. Methods cited included opening more spectrum for unlicensed use, promoting spectrum trading and providing information at the European level about upcoming spectrum auctions, and granting the NRAs rights to redeem unused spectrum, which would help ensure that all spectrum is used.

Views on numbering were not extensive. Opinion among the respondents was predominantly that, although in a few cases there was scope for productive harmonisation,

national numbering plans should be left alone. An interesting comment from one operator was that issues relating to scarce resources, including both spectrum and numbering, should be addressed by an independent specialist body rather than by NRAs.

5.1.2 Institutional issues

To assess the institutional structure under the Regulatory Framework and obtain views on whether that structure could be improved, we asked participants if there should be an ERA, responsible for performing at the Community level some activities for which NRAs are currently responsible. We also focused on appeals and disputes, and consumer issues.

Establishment of an ERA

More respondents were opposed to establishing an ERA than supported the idea. Those in favour of the concept advanced arguments such as the following:

- an ERA would provide a substitute for inadequate NRA activities
- harmonised regulation would avoid separate piecemeal regulation and minimise differences amongst Member States
- an ERA would support pan-European services

Reasons given against the concept include the following:

- the difficulty of distinguishing between national and Community issues
- an ERA would be too distant from the market
- an ERA would create additional complexities

Alternatives to creation of an ERA can be summarised as follows:

- emphasise stronger coordination of national activities under the Regulatory Framework
- strengthen Article 7 procedures, e.g., give the Commission a veto over remedies

The ERG was not viewed as the appropriate body to take the leading role on policy making and harmonisation (although we caution that there were not many comments on this topic).

Appeals and Dispute Processes

The universal response in our questionnaire was that appeals and dispute resolution processes are not working effectively in many countries. This failure is attributed to a lack of expertise in the courts and the complexity of the issues. (Respondents suggested numerous ways to improve the process, which we listed in Chapter 3.) The effectiveness of the appeal process was identified as a primary obstacle to development of the Internal Market, probably only second to the general issue of implementation.

This factor does not point to changes in the Regulatory Framework. Respondents did not comment in sufficient detail to identify that the problem is a weakness in the Regulatory Framework or a weakness in the transposition into local law. Moreover, it can be argued that the Regulatory Framework is forcing NRAs to take rigorous positions and review complex market details sometimes for the first time, which could explain why early experience is certain to need improvement.

Consumer Issues

Although operators and consumer associations had different views, as expected, on consumer issues, we did not identify major issues that appear to be obstacles to the Internal Market. Instead, we found differences of opinions and areas where there is room for improvement. As a general matter, however, the level of comment did not go into the detailed assessment of provisions in the *e-Privacy* and *Universal Service Directives* that we were asked to undertake in Chapter 9 below.

Operators tended to feel that industry is able to deal with consumer issues without regulatory intervention, and that multiple bodies already offer consumers sufficient routes for complaints. Consumer organisations, by contrast, expressed concern about protecting consumers from scams, providing security and ensuring that dominance is not abused by setting high prices. Again, neither of these positions pointed to strong recommendations for change in the Regulatory Framework or obstacles to the Internal Market to be overcome.

One factor that we note, and that we will review in more detail in Chapter 9, is that the main consumer protection provisions in the Regulatory Framework (other than high level provisions to protect against abusive behaviour and high prices) have evolved from similar provisions under the Open Network Provision (ONP) rules and general data privacy rules. Thus, there is more extensive experience with these rules than with the Regulatory Framework as a whole that was adopted in 2002. The result is that issues have been assessed in more detail and obstacles to the Internal Market arising from these issues would not be solved solely or even primarily through reform to the Regulatory Framework.

5.1.3 Implementation findings

The strongest message coming from the questionnaire is that full implementation of the Regulatory Framework is needed. An exception to this finding could be that simplification of the Regulatory Framework or stronger tools to harmonise regulatory actions could both assist implementation by making it easier, and also improve national activities by encouraging best (harmonised) practice.¹⁸

¹⁸

One justification for the general authorisation structure was that by decreasing the use of licensing and harmonising the types of conditions that could be applied, the need for a single European licence was diminished. Further, by defining precisely which conditions could be applied, NRAs would decrease their national lists of authorisation conditions, leading to better national procedures. Nevertheless, as we see in Chapter 8, there is room for improvement in harmonisation of national procedures and conditions.

As we noted in Chapter 4, some implementation issues are merely transitional or country-specific; thus, they should not be identified as obstacles to development of the Internal Market in the context of this study. We focused instead on issues that (a) may create serious and recurring obstacles; (b) are linked at least partially to features of the Regulatory Framework; and (c) potentially can be addressed through revisions to that framework. Taking this approach, we identified three general categories of implementation issues that deserve review, relating to self-supply, VoIP and implementation delays arising from both the Article 7 process and appellate procedures.

5.1.4 Self-supply issues

We examined how the issue of self-supply now affects the essential component of the Regulatory Framework for defining and analysing markets in order to apply *ex ante* regulation. These questions already arise, and if not handled properly they can affect the Article 7 process in ways that create obstacles to achieving the goals of the Regulatory Framework.

The most controversial cases arise when self-supply is combined with a new technology platform. In such situations, the regulatory approach followed would seem to evidence a distinction between new technology platforms offered by new entrants and those controlled by the incumbents (or other existing SMP holders). We see these issues resurfacing each time new, alternative and unregulated access technologies effectively compete with established ones on the retail level – but are not included in the wholesale market definition, thus keeping the incumbent supplier regulated *ex ante*. This result is likely to be a frequent theme in coming years. Examples may include optical fibre vs. metallic fixed access networks; FWA (especially WiMAX) vs. fixed local loops; and 3G broadband vs. fixed or 2.5G mobile broadband.

The resulting asymmetry may pose a serious test for the Regulatory Framework's required technological neutrality and impartiality. This situation would arise if new technologies by alternative operators attain substantial market shares or even SMP without being regulated, while established technologies remain subject to *ex ante* obligations – and are not in a position to shake it off, for as long as the relevant wholesale market definition remains unchanged.

Such conceptual difficulties do not necessarily translate into serious problems in practice. For example, the indirect constraint could be considered to be so strong that only mild *ex ante* remedies (e.g., transparency or non-discrimination) would be required, rather than more intrusive ones, such as price control.

While NRAs may be able to find a way through any of these fact-sets, based on the existing provisions of the Regulatory Framework and associated regulatory guidance, experience so far suggests that this may not be that easy. There is clearly room for additional regulatory guidance and, perhaps, new, legally binding provisions. We discuss possible solutions in Chapters 6 (Framework Mechanisms) and 7 (Access Obligations).

5.1.5 Status of VoIP

No other service may affect the business fundamentals of the traditional telecommunications industry as profoundly as VoIP. Handled incorrectly, or in a disharmonised manner, the regulatory response to this service can magnify obstacles to the Internal Market or create new large barriers. We will discuss regulatory responses to VoIP in several chapters of Part B and C in this study, but it is necessary at the beginning to focus on the implementation issues it raises.

VoIP poses challenges to implementation of the Regulatory Framework. NRAs have taken a wide variety of approaches to treatment of VoIP in market reviews, as well as in other regulatory areas. It is likely that the tools for regulating VoIP mainly exist under the Regulatory Framework, but failure to create an appropriate and consistent regulatory model creates a large risk to the Internal Market.

5.1.6 Implementation and appellate delays

Some implementation delays relate to transposition of the Regulatory Framework into Member State national legislation, and to the market analysis approach that NRAs need to carry out. Additional delays result from appeals against NRA decisions of any kind (including dispute resolution or *ex post* measures). Whatever the cause of the delay, because implementation seems universally to be viewed as an obstacle to completion of

the Internal Market, there is good reason to address the causes of these delays and seek ways to minimise them.

Delays in National Implementation

The Commission has responded with unusual speed to delays in Member State implementation of the Regulatory Framework. As we noted in Chapter 4, these are transitional problems without long-term implications for the Regulatory Framework. The number of delays could suggest, nevertheless, that timetables for action under the Regulatory Framework be specified in detail, rather than relying on vague requirements such as “as soon as possible.” (We examine the impact of such a non-binding requirement in the market notifications that we discuss in the next subsection and in Chapter 6.)

Delays in Market Analysis Procedures

Delays in the market analysis procedures under the Regulatory Framework are not a transitory issue, because the need for market analysis will need to be repeated at regular intervals in the future. We have identified the uneven pace of notifications amongst the Member States and analysed why this situation will likely continue in the future. NRAs have gained experience with the procedures and analysis, and reached many decisions on appropriate *ex ante* remedies. Further, there is a growing body of precedent and guidance from Commission decisions, ERG documents and ongoing public discussion, which should help the process in future. Nevertheless, there are reasons to believe that the market analysis process may become more complex and slow in the future. These reasons relate to:

- declining incumbent market share, which may make arguments that they continue to hold SMP all the more difficult
- increasingly sophisticated market definitions
- litigation – which may contribute to the quality of regulatory analysis and intervention, but which nevertheless causes delays

In Chapter 6 (Framework Mechanisms) below, we shall discuss ways in which the Regulatory Framework's mechanisms for the definition of markets, assessment of SMP and imposition of remedies could be streamlined and adjusted to address the problem of such future delays.

Delays in Appeal Procedures

This last factor of litigation will affect not only Article 7 market analysis, but all aspects of Regulatory Framework implementation and enforcement. Appeal procedures are a cause of serious delay and significant national variations. We discuss potential solutions to strengthen the appellate process or to rely more on alternate dispute resolution procedures in Chapter 6. The issue of consumer alternative dispute resolution is reviewed in Chapter 10, but we do not consider this a factor in creating implementation delays.

Part B

Harmonisation Mechanisms for *ex ante* Regulation

6 Regulatory Mechanisms of the Framework Directive

This Chapter examines the mechanisms for market analysis, assessment of SMP, consultation and notification to the Commission, and the right to appeal against NRA decisions. The relevant issues are addressed, respectively, in Articles 7, 15, 16 and 4 of the *Framework Directive* and we shall generally refer to them as the “Framework Mechanism.” The discussion that follows focuses on recommended changes to these individual provisions or the overall Framework Mechanism that can help address the issues identified in Chapters 2 to 4 of this study or which may be necessary next steps in the future regulation of electronic communications.

6.1 Overview of Existing Provisions

As mentioned briefly in Chapter 4, the Regulatory Framework introduced a radically new approach for the application of any *ex ante* regulatory measures in the electronic communications sector. Prior to their adoption, any such measures must be communicated by the NRA concerned to the Commission and the other NRAs using a consultation mechanism. The key features of this procedure are laid down in Article 7 of the *Framework Directive*. Hence the overall mechanism is loosely referred to as the “Article 7 procedure,” even though there are further relevant provisions in the remaining parts of the Regulatory Framework including, in particular, Articles 15 and 16 of the *Framework Directive*.

Article 15 of the *Framework Directive* requires NRAs to define relevant markets appropriate to national circumstances taking the utmost account of the Commission’s

Recommendation and Guidelines, both of which were adopted after the entry into force of the *Framework Directive*. The Recommendation defines 7 retail and 11 wholesale markets within the electronic communications sector that are susceptible to *ex ante* regulation. The Guidelines discuss the principles that should govern the NRAs' market analysis and assessment of SMP under the Regulatory Framework. The legislative definition of SMP in the Regulatory Framework is essentially identical to the one applied for "dominance" under customary EU competition law standards and related case law.

During this first step of the Article 7 procedure, NRAs may define relevant geographic markets within their territory. In practice, they have tended to designate their whole national territory as the relevant geographic market, with few exceptions. They may also define relevant markets that differ from those laid down in the Recommendation, but this can be vetoed by the Commission. Again, NRAs have generally tended to follow the Recommendation's relevant product market definitions, with some exceptions, mostly consisting in narrower market definitions than the ones proposed in the Recommendation.

The second step in the Article 7 procedure is described more closely in Article 16 of the *Framework Directive*. This article concerns the analysis of the defined relevant market(s) by the NRAs, which must be based on the Guidelines and general EU competition law principles. The aim of this analysis is to determine whether the market in question is "effectively competitive," i.e., whether there are one or more undertakings with SMP in that market. If any undertaking is found to have SMP in the market in question, the market is not effectively competitive and the NRA is required to impose, maintain or amend at least one regulatory *ex ante* obligation on the undertaking(s) in question – the third step in the Article 7 procedure. If the market is effectively competitive, no *ex ante* obligations may be imposed or maintained, and any such existing obligations must be withdrawn by the NRA.

The Commission may veto the NRA's conclusion on the "effectively competitive" nature of a market. It may not veto the NRA's choice of specific remedies, unless these remedies are not covered by the allowed "menu" of *ex ante* remedies set forth in various Regulatory Framework directives. The Commission has used its veto powers

sparingly, but one should also keep in mind that a number of notifications have been withdrawn by NRAs following an initial negative response by the Commission.

The Commission has one month to provide its comments, if any, to notifications by NRAs. If it finds that an NRA's proposed measures would create a barrier to the Internal Market or if it has serious doubts as to these measures' compatibility with Community law, it can initiate a so-called "phase two" procedure of up to two months, for a more detailed investigation of the measures concerned. At the end of this in-depth investigation, the Commission may withdraw its serious doubts or veto the NRA's proposal.

The Framework Mechanism involves an ongoing exchange of views between Member States, the NRAs and the Commission, through various platforms. The Communications Committee (CoCom) was established by the *Framework Directive* to replace the previous regulatory framework's ONP Committee and the Licensing Committee, and it assists the Commission through a largely advisory role. The European Regulators Group (ERG) brings together representatives of the Member States' NRAs. Both the CoCom and the ERG play an important role as platforms for the day-to-day exchange of views and a more coordinated response to the new challenges posed by the Regulatory Framework.

6.2 Procedural Issues: Streamlining the Market Analysis and Notification Procedure

In Chapter 4, we saw that the market analysis process that NRAs need to carry out under the Regulatory Framework has incurred serious delays. We concluded that, despite the experience gained so far and other expected improvements, these delays are expected to persist in the future.

This is not a merely administrative problem. A streamlining of the process that could minimise delays would bring benefits both from an organisational and a substantive perspective. While the Commission has been meeting its deadlines, many NRAs have been left behind in the process. The pressure on them to "catch up" may not be conducive to a thorough and innovative regulatory approach in cases where it will be needed;

this pressure may, on the contrary, tempt NRAs to opt for tried and tested solutions, rather than benefit from the flexibility allowed under the Regulatory Framework – which, to date, remains somewhat unexploited. The quality of the regulatory analysis can only improve through such streamlining, especially if it can help NRAs focus their resources on the more important regulatory tasks ahead.

Several survey respondents, especially those from smaller countries, mentioned the difficulties faced by smaller, less well-resourced regulators and stated that they believed there was scope for streamlining the process in such cases.

In our view, each of the measures discussed below may help streamline the market analysis and notification process, without affecting its fundamental principles, which are generally well-received by the market.

6.2.1 Timing of notifications

The Regulatory Framework is vague on the timing of the NRAs' consultation and notification obligations linked to the Recommendation's 18 markets. Article 16(1) of the *Framework Directive* requires NRAs to carry out an analysis of the relevant markets "as soon as possible after the adoption of the recommendation." The vagueness of this provision effectively allows delays and complicates recourse to the normal procedures available under the EC Treaty against infringements of a Member State's obligations: what is the precise point in time by which a Member State can be held to have infringed its obligation to act "as soon as possible"? Identifying this as a problem is also consistent with the view of some stakeholders that there should be enforceable deadlines for the completion of market reviews.

The wording "as soon as possible after the adoption of the recommendation" may need to be revised, in any event, as it provides no indication on the required timing of any subsequent NRA notifications that might be deemed necessary as a result of market changes rather than as a result of updating of the Commission's Recommendation. Thus, the timing for any updated notifications on the same or future new markets remains unclear, which obviously needs to be addressed.

As mentioned in Chapter 4, the uncertainty on the timing of market analysis and notification procedures becomes particularly problematic in cases involving a veto by the Commission or initial, informally exchanged, concerns leading to a withdrawal of the NRA's notification. In such cases, and despite the fact that a significant part of the market analysis and public consultation procedures have been completed already, the divergence of views between the Commission and the NRA concerned can lead to a long period of silence and associated legal uncertainty. A precise timetable would be particularly helpful in such cases.

We therefore propose that the *Framework Directive* be amended to provide a precise and legally binding timetable for the future Article 7 notifications by the NRAs. This should be flexible enough to allow NRAs to prioritise their notifications so that the process is sufficiently spread across a reasonable time period; a near-simultaneous notification of all relevant market analyses and remedies, by all Member States, would lead to an unmanageable bottleneck.

One way to rationalise this process would be by requiring Member States to communicate to the Commission, by a certain date each year, a proposed timetable for any Article 7 market analyses and notifications they intend to carry out, for example, during the next calendar year. NRAs could be free to propose a timetable for these actions, within certain basic parameters, which could be set forth in the *Framework Directive* or in non-binding measures. Each NRA's timetable could be the subject of a short consultation between the Commission and the NRA, similar to the current Article 7 procedure for the notification of individual measures. The consultation would allow the NRAs and the Commission to discuss the timing and the sequencing of notifications, in light of any specificities of the national market(s) concerned and the NRA's policy priorities. It could also accommodate some flexibility, within reasonable limits. Once finalised, the timetable would become legally binding for the Member State concerned. The procedure would not apply to dispute resolutions and those other measures requiring NRA action and Commission approval that cannot, by their nature, be scheduled in advance.

This procedure could be set forth in the revised text of the *Framework Directive*, thus also providing a legal basis for the possible future initiation of infringement proceedings under Article 226 EC against any Member States that failed to respect their self-imposed target notification dates.

As part of the same change, NRAs could be required to re-submit any vetoed or withdrawn notification within a relatively short period. Typically a Commission veto or objections leading to withdrawal concern a single or only a few, specifically defined issues. Normally, the NRA concerned needs to address these specific issues only, rather than restart the whole market analysis and consultation process. This should not be allowed to result in substantial delays.

An amendment to the *Framework Directive*'s provisions on the timing of notifications could perhaps also address the closely related question of insufficient transparency surrounding an NRA's voluntary withdrawal of its notification. This typically follows an informal – and hence confidential – exchange of views between the NRA and the Commission, and the expression of some initial objections or concerns by the Commission's services. While such withdrawals are not very common (they have occurred in about 5% of the total number of notifications), it would sometimes be useful for the market players and other NRAs alike to obtain timely information on the nature of the informal divergence of views, so as to anticipate similar issues in their own sphere of activity.

Having said that, we do not believe it would be appropriate to formalize the procedure of currently informal exchanges between the Commission and the NRAs, as this could undermine their flexibility and practical advantages. Instead, there could be a provision in the *Framework Directive* allowing the Commission to publish a summary of any withdrawn notification on a case-by-case basis and following consultation with the NRA concerned, to the extent that this withdrawal had more general implications for the market analysis and notification process. The continuing appeal of such informal exchanges is in the best interests of both the NRAs and the Commission. By itself, this should ensure that the Commission's services would use such opportunities for extra transparency as judiciously and discretely as possible.

6.2.2 Timing of national consultations and notifications

A different timing problem concerns the relation between national consultation procedures and notification to the Commission. Many NRAs have submitted notifications to the Commission prior to, or in parallel with, the corresponding national consultation

procedures. This may require a re-notification to the Commission if the national consultation leads to any material changes to the originally notified market analysis or proposed remedies. Such re-notifications encumber the process with an additional, potentially unnecessary, step.

Similarly, some NRAs have chosen to split the consultation and notification process in two parts, the first dedicated to market analysis and SMP assessment, and the second to the proposed remedies. This approach may have served a purpose in the early stages, while NRAs and the Commission were first facing the issues. It will be more difficult to justify in the future, especially as this approach can contribute to delays. One possible justification for this split has been the NRAs' concern that if the Commission objected to their market definition or SMP assessment, the development of remedies would be a wasted effort. However, so far, the Commission has exercised its veto powers very sparingly and any uncertainty regarding its likely response to a notification can be minimised through informal pre-notification meetings between NRAs and the Commission's Article 7 Task Force. On balance, therefore, the advantages of a complete, one-step, notification outweigh those of a split, two-step notification.

We would therefore propose that the *Framework Directive* be amended to require that NRAs: (a) submit their notifications to the Commission only once the relevant national consultation procedures with stakeholders and the national competition authorities have been completed and their results have been evaluated; and (b) include, in their notifications, all three parts of the Article 7 market analysis mechanism, i.e., the definition of the relevant market, the assessment of SMP and the application or withdrawal of the relevant remedies.

6.2.3 Transitional Regulation

The Regulatory Framework provides a solid analytical basis for the progressive relaxation of *ex ante* legislation. While it is true that, during the first phase of its implementation, its provisions have been routinely used by NRAs to re-confirm, and even extend, the *ex ante* obligations imposed under the previous regulatory framework, this will presumably change in the future, and the partial or full withdrawal of *ex ante* regulations should eventually become the rule rather than the exception.

For some NRAs, the risk of excessive *ex ante* regulation may be preferable to the risk of a premature removal of any *ex ante* remedies. As a consequence, NRAs may be tempted to err on the side of caution and maintain at least some *ex ante* remedies where none are actually needed. The move from an *ex ante* regulatory regime to the removal of any *ex ante* regulation whatsoever may represent a qualitative step that some NRAs may hesitate to take – and from which there may be no easy way back, as the Framework Mechanism could render such a return to *ex ante* regulation difficult. Faced with such a dilemma, some NRAs may insist on finding that a relevant market is not yet effectively competitive, despite strong indications to the contrary, if only to be able to maintain at least one mild *ex ante* regulatory remedy (e.g. a reporting obligation), which they would otherwise not be in a position to impose. While the direct burden of such mild *ex ante* obligations may be negligible, the finding of SMP on which such obligations, however mild, would have to be based could have serious consequences for the operator concerned, effectively exposing it as “dominant” in any *ex post* regulatory intervention. At least in theory, an SMP finding under the Regulatory Framework does not mean that the operator concerned would be found to be dominant based on an *ex post* analysis. As a practical matter, however, this will almost certainly be the case. At a minimum, an SMP finding will create a strong presumption of dominance in any *ex post* dispute.

Such a potential problem could be addressed through the introduction of a transitional regime in the Framework Mechanism, which NRAs would be free to adopt for the period immediately following the removal of any *ex ante* remedies in markets found to have become effectively competitive only recently. The maximum duration of such a transitional regime should be limited (e.g., not more than a year). During this period, the NRA could be given the power to impose reporting or other mild *ex ante* remedies, which could be defined specifically in the revised Regulatory Framework. No later than the end of this transitional period, the NRA would be required to take a decision to lift any such *ex ante* remedy or, conversely, re-impose some or all of the *ex ante* remedies that had been in force prior to the transitional period. The NRA’s decision could be subject to a simplified market analysis/consultation procedure and/or a Commission veto. Beyond such basic safeguards, however, it would seem appropriate to allow for a faster and more flexible procedure at the end of such a transitional phase than the one normally followed under the Framework Mechanism, in order to avoid any further delays. However, we only recommend implementing this change if there is support from

NRAs to indicate that such an approach is likely to assist them in reducing unnecessary *ex ante* regulation more quickly.

6.2.4 Grouping market analysis

Many NRAs have found it more appropriate to analyse closely related markets in groups (or “clusters”), although different NRAs have sometimes used different clusters. This is the case, for example, with Markets 1 to 6 of the Recommendation, all of which concern retail level services provided through the public fixed telephone network. NRAs have followed different approaches in the sequencing and clustering of notified market analyses, sometimes submitting separate notifications and sometimes grouping several notifications into one. In some cases (e.g., residential and business telephony retail markets), NRAs have merged two distinct markets into one.

Based on collective experience gained thus far, NRAs should be able to cluster their market analyses and notifications more systematically in the future. Grouping several closely related notifications into one could help avoid repetition, contribute to the quality of the market analysis and facilitate a more coherent and “holistic” approach for the remedies imposed.

In addition to grouping closely relating notifications together, NRAs should be (at least) encouraged to optimize the sequencing of their market analysis and notifications. Typically, the analysis of a wholesale market and the imposition of any required *ex ante* remedies in that market should precede that of the NRA’s analysis of the associated (downstream) retail market. This will improve the quality of the market analysis and allow for a less pervasive regulatory regime on the retail level, to the extent that *ex ante* remedies on the wholesale level are sufficient to guarantee effective competition on the downstream markets. While this principle has been highlighted on a number of occasions, its application in practice has not been systematic in the sequencing followed by some NRAs.

Despite these obvious benefits, we do not recommend that the process be “over-formalised” through a legally binding set of market clusters and a mandatory sequencing. More flexible, non-binding measures, for example recommendations through the

ERG or changes to the current non-binding text of the Guidelines and the Recommendation, should generally suffice to address this issue, by encouraging market cluster notifications and suggesting appropriate market clusters and their appropriate sequencing.

6.2.5 NRA Measures Requiring Notification/Commission Approval

A more fundamental and substantive question than those discussed above concerns the extent to which some of the measures proposed by NRAs and currently requiring notification to the Commission could be wholly or partly exempted from this requirement and, possibly, from the associated obligation of a public consultation.

The Framework Mechanism relies strongly on EU competition law principles. It is therefore appropriate to consider whether the last decade of experience with EU competition law implementation can offer some lessons for a possible simplification of the Article 7 notification mechanism.

The wish to avoid an unmanageably high number of potentially unnecessary notifications lies behind several EU legislative initiatives in the competition sector. These initiatives include *de minimis* notices, Commission block exemption regulations and the modernisation of the EU competition law system through Regulation 1/2003, which has replaced the notification/negative clearance/individual exemption of potentially anti-competitive agreements with self-assessment by the parties concerned.¹⁹ Note that in the last years of the pre-modernisation system, the number of antitrust notifications to the Commission (other than merger filings) had dropped to around 100 or less per year; furthermore, the Commission was not bound by a particular deadline for processing these notifications and relied on very detailed market information provided by interested parties.

¹⁹

Council Regulation (EC) No 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty, OJ L 1/1, 4 January 2003.

By contrast, the Framework Mechanism involves a theoretical number of 450 notifications. In practice, the number could end up being much higher, as NRAs have been adding new markets, breaking down their notifications into more than one, and withdrawing and re-submitting notifications. Such a large number of notifications is inconsistent with a system that aims for a light regulatory touch. This view is supported by some survey correspondents who suggested a streamlined analysis at the second round, particularly for those markets already found to be competitive.²⁰

If fewer notifications are an objective worth pursuing, it will be necessary to rely on one or more criteria for a distinction between necessary and potentially unnecessary notifications. As a starting point, the regulatory cost of Article 7 consultation and notification procedures is easier to justify where the absence of these mechanisms could lead to potentially more serious violations of the overarching policy objectives governing the Framework Mechanism. These objectives are the promotion of competition, the development of the Internal Market and the promotion of EU citizens' interests, as elaborated in more detail in Article 8 of the *Framework Directive*. However, this is a wide-ranging, discretionary and multi-faceted set of priorities that does not allow for an easy distinction between "important" and "less important" Article 7 procedures.

Taking EU competition law as a (distant) analogy, we examine two possible criteria for such a distinction in the context of the Framework Mechanism:

- (a) a "non-appreciability" factor: NRA measures that, by their nature, could not have an appreciable effect on the Internal Market for electronic communications would not need to be notified or could be subject to one of the "simplified notification" variants discussed further below;

²⁰ In the same context, Mrs Viviane Reding made a telling remark in her speech of 6 March 2006 before the European Policy Centre: "At the moment there are 18 markets which are considered to be relevant for ex-ante regulation. If we calculate that we have already today 25 member states, that makes for 450 different market analyses. I think you will agree that makes for considerable regulatory complexity, which I would very much like to reduce."

- (b) a “white list” (i.e., approved list) of fact sets, based on similar precedents involving the same or other NRAs and suggesting that the Commission would have no objections to the market analysis and the regulatory measures proposed.

Unfortunately, the standard of “non-appreciability” cannot be easily applied in the context of the Article 7 notification process. Market share and turnover, the criteria typically used in antitrust and State Aid cases to distinguish *de minimis* cases from the rest, would not work here. For example, as noted above, in the Framework Mechanism even a 100% market share can lead to a difficult debate; market share alone cannot be an automatic filtering criterion between “notifiable” and “non-notifiable” NRA decisions. Further, the “appreciability” factor should not be linked to turnover in a specific area, because it would be inconsistent with EU case law if Article 7 procedures were deemed unnecessary, in the case of smaller Member States or specific geographic territories within larger Member States. Perhaps more importantly, the mere fact that any market fulfils the three criteria necessary for *ex ante* measures under the Framework Mechanism suggests that the competition problem it raises are (at least) appreciable by definition.²¹

A “white list” of *a priori* non-problematic NRA decisions that would be excluded from notification to the Commission could be a more realistic way forward. Admittedly, such a “white list” will be difficult to define in the abstract. Market analyses under the Framework Mechanism are – or should be – very fact and country-specific, and do not lend themselves to easy generalisations. Nevertheless, this may not be an impossible exercise, given the sheer volume of precedent now at the disposal of the Commission and the public, and the recurring market-specific “themes” addressed in the NRAs’ or the Commission’s comments. Drawing conclusions from this rapidly growing case law and recasting them in the form of “white listed” market situations that would benefit

²¹ As mentioned in the 9th recital in the preamble to the Commission’s Recommendation, these criteria are: (a) high and non-transitory market entry barriers, (b) market structure not tending towards effective competition within the relevant time horizon and (c) insufficiency of competition law alone as a means of redressing the market failure(s) concerned.

from simplified processing could be a logical next step to ease the administrative workload ahead.

A typical structure for such a “white list” NRA decision that would not require notification could include, for example, the following elements:

- (a) description of the relevant market concerned;
- (b) reference to certain basic features that would need to be present in the previous market analysis adopted by this NRA for that market (e.g., the incumbent found to have more than x% market share and SMP);
- (c) a detailed description of *ex ante* remedies whose maintenance would not require notification to the Commission, as long as the conditions referred to under (b) were still in place; the imposition of new remedies or the amendment of the existing ones would need to be notified separately to the Commission, but perhaps be subject to a simplified procedure (see our suggestions below).

Other than being removed entirely, a notification obligation under the Article 7 mechanism could be simplified in several ways, applied separately or in combination. For example, it could be limited to

- (a) the summary notification currently submitted by the NRAs, without the related market analysis and consultation documents;
- (b) a voluntary notification by the NRA concerned, e.g., in the event that the NRA wants to reinforce its proposed conclusions through a positive Commission response; or
- (c) a notification to the Commission for information purposes only.

While the practical difficulties of such white lists should not be ignored, it should be also remembered that each “clause” within this list could spare up to 25 notifications (and perhaps even more in practice, if NRAs continue to notify their analysis first and their remedies later, as some of them have done so far), thus appreciably reducing the

regulatory cost. On the negative side, such a white list could create an incentive for NRAs to stick to conservative regulatory approaches rather than venture into uncharted regulatory territory requiring notification and possibly prolonged exchanges with the Commission. Such an approach might be a particular problem given the changes forecast in the market and discussed in Chapter 2. Moreover, if the “white list” were used primarily to preserve existing intrusive *ex ante* obligations without prolonged consultation, SMP operators would likely insist on a full justification of such continued obligations, rejecting the idea of a fast track procedure.

6.2.6 Commission power to veto remedies proposed by the NRA?

In the previous subsection, we discussed ways for NRAs to minimise notification obligations. However, it is worth examining whether the Framework Mechanism could potentially also benefit from a change in the opposite direction.

It is at the remedy stage, the third step in the Article 7 procedure, that the two preceding steps of market analysis and SMP assessment come to their logical conclusion, with tangible consequences for the market concerned. Nevertheless, the Commission can exercise its veto only against the first two steps of the procedure – whose consequences, without the third step, remain theoretical. The Commission has no such veto right against the *ex ante* remedies imposed by the NRAs, as long as these remedies fall within the relevant “menu” of remedies set forth in the Regulatory Framework. Several survey respondents suggested that the possibility should be considered of a veto on remedies in order to facilitate greater harmonisation and availability of consistent wholesale products across Europe.

The background for this allocation of powers was a politically necessary compromise for the new (at the time) Regulatory Framework to be adopted. From a technical viewpoint, however, the solution appears less than optimal, even if NRAs have tended to take into account the Commission’s remarks on the proposed remedies (and NRAs are legally obliged to “take the utmost account” of these remarks). The wrong *ex ante*

remedies are far more capable of distorting competition or otherwise creating barriers to the Internal Market than a conceptually flawed market analysis that does, however, somehow arrive at the right conclusions at the remedies stage.²²

Political considerations aside, if the Commission could obtain a power to veto remedies, what would its likely effects be in practice? While it is difficult to draw any conclusions based on hypotheses, it may still be possible to balance the pros and cons of a Commission veto against remedies.

- (a) A Commission veto power could increase pressure for more uniform remedies, thus encouraging pan-European or cross-border offerings. At least according to some pan-European operators included in our survey, more uniform remedies would help reduce the costs of doing business across Europe and enable operators to offer consistent products, by relying on consistent wholesale products. The same remedy in different countries is not always the appropriate solution, but where remedies are already similar, making them identical could be helpful. However, a Commission veto against a proposed remedy based solely on the fact that it is not “similar enough” to those proposed elsewhere would seem excessively intrusive and may not be easy to defend. Alternatively, it may be easier to strengthen the NRAs’ current obligation under Article 7(2) of the *Framework Directive*, which requires them to “seek to agree on the types of instruments and remedies best suited to address particular types of situations in the market place.”
- (b) More delays likely: A Commission power to veto the proposed remedies would be likely to cause further delays in the procedure, at least from the NRAs’ side. An NRA faced with the prospect of a veto against its proposed remedies would presumably tend to spend some extra time justifying them – not a bad thing substantively, but likely to cause additional delay. In cases

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The Commission has disagreed with some of the market analyses conducted by NRAs but did not escalate this to a veto, as the difference of opinions did not have any practical consequences.

where the Commission would actually use, or threaten to use, its veto against the proposed remedies, the resulting delays would be more substantial.

- (c) Do the Commission and the NRAs actually disagree on the right *ex ante* remedies, and if so, who is right? It is difficult to draw any clear conclusions from reported instances of disagreements between the Commission and NRAs in the context of the Article 7 procedure. While divergence of views on market definition and SMP assessment have been spelled out more clearly (as they ought to, given the Commission's related veto powers), occasional disagreements between the Commission and NRAs on the appropriate remedies have been more limited and less public, and have tended to focus on the need for more detail and clarifications rather than a substantive Commission objection to the proposed remedy. On that basis, there is little, if any, empirical basis to conclude that the Commission would have taken a different, better or worse, decision on remedies than the NRAs concerned (other than to note that very different approaches have arisen from different NRAs).
- (d) How can the Commission veto a discretionary decision? NRA decisions on remedies are, inevitably, more discretionary than the exercise of market definition and SMP assessment. Under the *Framework Directive*, *ex ante* regulatory remedies must be based on the nature of the problem identified, proportionate and justified in light of the objectives laid down in Article 8 of the *Framework Directive*. The policy objectives set forth in this provision and elsewhere in the Regulatory Framework are numerous, flexible and open to interpretation. NRAs, being closer to their national market and more directly accountable, should be generally at least as well placed as the Commission to exercise such a discretionary decision. A discretionary Commission veto against discretionary Member State measures, drawing its justification from vague policy objectives would be an unprecedented, and perhaps even legally questionable, EU measure.
- (e) It could be argued that if the Commission could veto a remedy, it should also have the power to propose the right solution. Without such a right, the notification procedure would be seriously delayed. Such a "creative" regulatory

intervention by the Commission would be politically controversial and could not draw credibility from established general principles of EU competition law. In “normal” *ex post* interventions against infringements of EU competition law under Articles 81 and 82 EC, the Commission can prohibit various forms of anti-competitive conduct but it cannot reshape them proactively. Even in the case of commitments by the parties concerned, the Commission’s role in normal competition cases must remain reactive rather than proactive.

- (f) A Commission veto power against the details of national remedies would arguably be difficult to reconcile with the principle of subsidiarity.

To conclude, there are theoretical grounds to argue that it would have been consistent with the logic of the Regulatory Framework to vest the Commission with the power to veto the *ex ante* remedies proposed by NRAs. However, from a more practical perspective, there are a number of serious difficulties in implementing such a solution.

Ultimately, the case for or against a more decisive, legally binding, Commission role in the determination of *ex ante* remedies depends on the extent to which the present, largely discretionary, basis for the adoption of these remedies by the NRAs can be recast in a more precise, “quantifiable” form. If NRAs had very precise, result-oriented targets to meet in their respective markets and the *ex ante* remedies they chose to apply were manifestly inappropriate, a Commission veto against such remedies could be more easily defensible. If, on the contrary, the future Regulatory Framework continues to rely on a broad set of discretionary policy objectives as the basis for the choice of specific *ex ante* regulatory remedies, a Commission power to veto these remedies may be politically unrealistic and legally vulnerable.

A similar concern is reflected in some of the responses we have received to the questionnaire. Some stakeholders we interviewed were concerned that the ERG was straying too much into policy making in its recommendations on remedies. An exact dividing line between neutral, competition law driven regulatory intervention and policy making may be impossible to draw; but the need to draw such a line at some point seems to be a matter of some concern to some of the respondents to our questionnaire.

6.3 Substantive Issues

6.3.1 SMP, collective dominance and “effectively competitive” markets

The fundamental principles of the Regulatory Framework seem to have met the market’s broad approval, at least as reflected by the responses we have received to our questionnaire. Under the circumstances, we see no room for a revision of the key concepts applied to market definition and SMP, especially as these are not an invention of the electronic communications framework, but derive their definition, interpretation and legitimacy from well-established principles of EU competition law.

As a possible exception, the case of collective dominance may require closer attention. In the practice of Article 7 procedures thus far, the concept of collective dominance has been applied in public mobile communications markets, typically characterised by the presence of between two to four mobile network operators. The two markets where the issue of collective dominance seems relevant include access to and origination of mobile calls, and international roaming. The experience gained thus far leads to two, seemingly contradictory, remarks:

- (a) Collective dominance is difficult to prove, and NRA findings of collective dominance are bound to be legally vulnerable and exposed to appeals. If, on balance, the prevailing view is that collective dominance should remain covered by the Framework Mechanism, then the conditions for the application of *ex ante* remedies in such situations may need to be simplified.
- (b) A finding of collective dominance should not automatically lead to intrusive *ex ante* regulation, particularly in the mobile sector, which still generally remains more competitive than most fixed electronic communications markets.

While these two remarks would seem to point to different policy directions, we believe it would be appropriate to address them both. An over-intrusive *ex ante* regulation of oligopolies based on a vulnerable NRA finding is the worst of both worlds. Conversely, a more measured *ex ante* regulatory response, based on a more solid legal basis, would be both substantively appropriate and legally less controversial.

Legal Basis

The principle of collective dominance is firmly established in EU competition law, but concrete findings of collective dominance have tended to be particularly uncertain and controversial, usually leading to litigation. Critical cases concerning collective dominance in electronic communications markets are currently under appeal or still pending, and the whole question of collective dominance and the appropriate remedies remains open.

While collective dominance can distort competition as much as sole dominance, it is generally more difficult to prove. This is because, in line with EU case law, the concept of collective dominance requires the cumulative presence of three *additional* conditions on top of those required for sole dominance. As determined in the *Airtours* case²³ and recapitulated in the Commission's guidelines, the following three additional conditions are necessary for a finding of collective dominance in an oligopoly:

- (a) sufficient market transparency: each member of the dominant oligopoly must have the ability to know how the other members are behaving, in order to monitor whether or not they are adopting the common policy;
- (b) sustainability: tacit coordination must be sustainable over time. There must be an incentive not to depart from the common policy on the market, notably including deterrents against any such deviant conduct by one of the members of the dominant oligopoly;
- (c) the foreseeable reaction of current and future competitors, as well as of consumers, would not jeopardise the results expected from the common policy.

It is up to the NRA concerned to prove that these conditions are met. Moreover, in order to apply *ex ante* regulation, the NRA must demonstrate that an oligopolistic market with collectively dominant operators also meets the three criteria of the Recommenda-

²³ Case T-342/99, *Airtours v Commission* [2002] ECR-II 2585, paragraph 62.

tion, i.e., (a) high and non-transitory market entry barriers, (b) market structure not tending towards effective competition within the relevant time horizon and (c) insufficiency of competition law alone as a means of redressing the market failure(s).

The combination of these conditions, all of which must apply cumulatively, renders the application of *ex ante* remedies on collectively dominant operators a particularly challenging regulatory exercise. This challenge raises the likelihood of a successful appeal against the NRA decisions. By itself, this represents an increased regulatory cost, which may conceivably counterbalance the advantages of bringing collective dominance under the Framework Mechanism.

Possible Alternatives

There are two conceivable responses to this challenge. A first solution could be to remove collective dominance from the whole Article 7 procedure, thus allowing only for *ex post* regulatory intervention. A solution in the opposite direction could be to add “unilateral effects” in oligopolistic markets to the factors that prevent a market from being effectively competitive and can thus render it susceptible to *ex ante* regulation. Both alternatives have their weaknesses and would be inherently controversial.

The first solution

Carving collective dominance out of the Framework Mechanism would create a significant regulatory gap, as collective dominance cases are likely to remain relevant in the future. For example, the essentially oligopolistic structure of the mobile communications market is unlikely to change in the near future. On the contrary, it is now moving towards consolidation, with the disappearance of the weaker mobile operators from the market. Generally, consolidation in the broader electronic communications sector seems inevitable and may give rise to new oligopolies, e.g., in the provision of wholesale broadband services.

The argument that *ex post* regulatory intervention would be sufficient to address competition problems (other than cartel-like conduct infringing Article 81 EC) in oligopolistic electronic communications markets does not seem convincing. *Ex post* intervention against unilateral effects is effectively impossible, as these are clearly not

covered by Article 82 EC, whose scope is limited to the abuse of dominance. Further, the test for *ex post* intervention against collective dominance is even more difficult than the one for *ex ante* intervention as it also requires proof of abuse – in addition to the conditions for joint dominance discussed above. Finally, there is little, if any, empirical evidence of successful *ex post* regulatory interventions against real or alleged abuses of collective dominance in the electronic communications sector, despite many years of related EU and national investigations.

Removing collective dominance from the Framework Mechanism would be a sensible solution if the competition problems associated with oligopolistic electronic communications markets could be dealt with through other regulatory means. At present, an obvious related area of concern in these markets is international roaming fees. These are also the object of a draft Regulation currently in preparation by the Commission and expected to be published in July 2006. If adopted, this Regulation would put an end to at least part of the regulatory debate concerning oligopolistic conduct in the electronic communications sector. However, the debate is not limited to international roaming and is likely to evolve and re-emerge in the years to come.

The second solution

An alternative solution may draw inspiration from the parallel evolution in the EU merger review area since the adoption of the Regulatory Framework in 2002. As a general rule, market definition under the EU Merger Control Regulation (“MCR”) is forward-looking and hence more closely related to market definition under the Regulatory Framework than the one relied upon for the purposes of Articles 81 and 82, where markets are defined on an *ex post* basis.²⁴

At the time of the Regulatory Framework’s adoption, the creation or strengthening of sole or joint dominance was the benchmark justifying the prohibition of a notified transaction under the MCR. Commission decisions on joint dominance were typically controversial and not always successful for the Commission – as evidenced by the

²⁴ See the Commission’s remarks in paragraph 26 of its Guidelines.

Court of First Instance decision in *Airtours*. For the reasons discussed already, joint dominance is not easy to demonstrate convincingly; if the Commission’s Merger Task Force has found this a challenging task, it is reasonable to expect NRAs to face similar, if not greater, problems in practice.

In 2004, the substantive test for the prohibition of concentrations under the MCR was revised to a broader benchmark, the “significant impediment of effective competition.”²⁵ As stated in Article 2 of the revised MCR, such an impediment can be the result *in particular* of the creation or strengthening of a dominant position. The change was deemed necessary to cover so-called non-coordinated effects from oligopolies, whose status under the previous MCR test was unclear. As further stated in Recital 25 of the revised MCR, “[t]he notion of ‘significant impediment to effective competition’ in Article 2(2) and (3) should be interpreted as extending, beyond the concept of dominance, only to the anti-competitive effects of a concentration resulting from the non-coordinated behaviour of undertakings which would not have a dominant position on the market concerned.” The advantage of this change – or clarification – of the substantive test applied under the MCR is that collective dominance is not the “final border” for the prohibition of a transaction; and the anti-competitive effects of non-coordinated behaviour may be easier to prove, depending on the circumstances, than collective dominance.

Under Article 16 of the *Framework Directive*, *ex ante* remedies are possible only if the NRA determines that the relevant market “is not effectively competitive.” Recital 27 of the Directive’s preamble clarifies that the absence of effective competition means that there is one or more undertakings with SMP on the market concerned, and national and EU competition law remedies are not sufficient to address the problem. Clearly, therefore, there is no basis to impose *ex ante* remedies if no undertaking is found to have sole or, at least, joint dominance in the market concerned.

²⁵ Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the “Revised MCR”), OJ L 24/1, 29 January 2004.

The test under Recital 27 could benefit from parallel evolutions that have occurred in the EU merger review system since 2002, which directly concern the question of collective dominance in a forward-looking competition analysis. Adjusting the equivalent of Recital 27 (and, more generally, the Framework Mechanism) to the new substantive test of the MCR would be arguably consistent with the competition-law driven approach of the Regulatory Framework and would allow it to benefit from the experience gained in a closely related area of EU law and policy.

This adjustment could be reflected in new recitals in amendments (similar to current Recital 27) or elsewhere in the *Framework Directive* through a statement that the “absence of effective competition” can be due to (a) the presence of one or more undertakings with SMP or (b) significant non-coordinated effects on competition in an oligopolistic market even where no undertaking in this market has sole or joint SMP.

The fundamental problem with this solution is that it may work less well in practice than in theory. The doctrine of unilateral effects, although clearly embedded in EU legislation after the amendment to the Merger Control Regulation, has not been sufficiently explored yet in practice. We are not aware of any EU case prohibiting a proposed concentration based solely on unilateral effects. Moreover, such a case, if and when adopted, would likely be appealed before the Court of First Instance and, perhaps before the European Court of Justice after that. This process is likely to create years of legal uncertainty concerning the exact contours of the unilateral effects doctrine and the way it could be applied in the electronic communications sector in particular. The resulting situation would seriously dilute the theoretical advantages of NRAs’ possible reliance on unilateral effects, leading to manifold problems: at one end of the spectrum, NRAs could refrain from using this doctrine altogether, fearing (rightly) that it would only increase the likelihood of prolonged appeals. At the other end, they could use it very aggressively to “over-regulate” the sector, imposing *ex ante* remedies all too easily, based on speculation about unilateral effects. Some of the respondents to our questionnaire have already criticised such a trend of over-regulation. The introduction of the unilateral effects doctrine in the Article 7 mechanism could encourage such over-regulation in more than one market, in ways that may not be easy to anticipate.

If this change were to be accepted in the revised Regulatory Framework, it would need to be accompanied by further adjustments to the operative text of the *Framework Direc-*

tive to clarify that, subject to conditions, *ex ante* remedies could be also imposed on the members of an oligopoly who do not have sole or joint SMP. Because of the possible downsides described above, further clear regulatory guidance, e.g., in the Commission's revised Guidelines, would be indispensable. This could take as a starting point the corresponding Commission comments in its 2004 "Guidelines on the assessment of horizontal mergers" including, in particular, paragraphs 24 to 38 dealing with non-coordinated effects,²⁶ but it should refer specifically to the circumstances of electronic communications markets, in order to both minimize legal uncertainty and prevent over-regulation by the NRAs.

It should be made clear from the start that the extension of the concept of "not effectively competitive" markets to oligopolies with non-coordinated effects should not be interpreted as an automatic "licence to regulate" these markets. As a starting point, the finding of unilateral effects would need to be the result of an NRA's market analysis and would therefore be subject to the Commission's veto, consistent with the current Article 7 regime. Further, any imposition of *ex ante* remedies in these markets should be subject to procedures and substantive conditions that should be at least as strict as those applying for the typical regulated markets, i.e., those characterised by the presence of one or more SMP operators. Additional safeguards could be considered, such as the possibility of a Commission veto against *ex ante* remedies that were based solely on unilateral effects, at least during a transitional period.

6.3.2 New technologies and technological neutrality

In our discussion of new technologies in Chapter 4, we concluded that the Regulatory Framework may be insufficient to address some of the long-term policy and regulatory issues associated with certain new technological platforms, as illustrated in the case of

²⁶ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03), OJ C 31/5, 5 February 2004.

future FTTx deployment in Europe. Measures to address these shortcomings of the Framework Mechanism could include a combination of the following elements:

- (a) An amendment of Article 15(1) of the *Framework Directive* to allow the Commission, subject to comitology procedures, to define additional markets based on criteria other than those of competition law in exceptional situations relating to markets and technology of particular importance to the European information society.²⁷ Such an amendment could address, for example, the difficulty of the prospective definition of a future FTTx market based on defined parameters and standards, despite the absence of any empirical market evidence that can be presently relied upon to substantiate this market definition. At the same time, this change to Article 15(1) could help bring a future technology market such as FTTx under the ambit of the Regulatory Framework, minimising legal uncertainty on its future treatment by NRAs. Such a deviation from the normal definition of relevant markets based on competition law principles, if at all acceptable, would represent a regulatory exception that would need to be justified by broader EU policy considerations. The merits and form of EU support for FTTx deployment are still part of an ongoing policy debate. In any event, the above proposed change to Article 15(1) would not have to name any specific markets to be defined separately by the Commission, but simply allow this as an option, which the Commission might or might not use, depending on the outcome of any relevant EU policy debate.
- (b) Limits to the margin for divergent NRA *ex ante* remedies in markets that are defined through the above, exceptional, mechanism. The most obvious way to avoid excessively divergent national *ex ante* remedies would be to vest the Commission with a power to veto these remedies. The present Framework Mechanism allows NRAs to decide on the appropriate *ex ante* access remedies based on a very flexible list and discretionary criteria, with no veto power by

²⁷ The Regulatory Framework already includes an example of *ex ante* regulation without reliance on competition grounds in the interoperability requirements for conditional access in Article 6 of the *Access Directive*, which are independent of Article 7 market analysis.

the Commission. This could allow NRAs to over-regulate new technological platforms in advance – thus creating a serious disincentive for investment – or, conversely, to provide incumbents with a regulatory holiday that would distort competition on the market and effectively reinstate the incumbents’ former fixed monopolies. Drawing a balance between these two extremes will be a challenging, country and market-specific regulatory exercise, and the NRAs are best placed to take the first step in this regard. However, a deviation from the definition of relevant markets based on criteria other than those of competition law (if at all adopted and ever applied in practice) would be an inherently risky regulatory and policy experiment. A veto power by the Commission against the proposed remedies in such cases would be an additional and sensible safeguard. As an alternative, the Commission could obtain the power to propose a narrowly defined list of *ex ante* remedies for specific relevant markets defined on criteria other than those of competition law. NRAs would then be allowed to depart from this list, but such deviations would be subject to a veto by the Commission.

In Chapter 7, we examine more closely some of the substantive questions likely to arise in connection with appropriate *ex ante* remedies for new technology networks under the *Access Directive*. The overarching problem in changes to the *Framework Directive* aimed at addressing new technology issues as regards, in particular, FTTx deployment is timing. The regulatory debate on FTTx is already at an advanced stage and it may be inappropriate to wait for several years before an EU regulatory solution (if one is needed) is finally in place. Some of the accompanying measures (e.g., those relating to State Aid issues, outside the scope of the Regulatory Framework) could, perhaps, be resolved relatively quickly. Furthermore, on the remedies side, the Regulatory Framework already provides a range of thus far underexploited but potentially appropriate *ex ante* access remedies (such as mandatory sharing of ducts, buildings or masts covered by the *Access Directive* Article 12(f)). These remedies would fit in the debate on the access regime for FTTx deployment, although this debate would still have to overcome the problem of relevant market definition. Comprehensive legislative changes to the market analysis mechanism and their subsequent implementation by NRAs will take a

much longer time. Unless such changes can be significantly accelerated, and depending on the outcome of the current policy debate on FTTx, the adoption of stand-alone FTTx-specific EU legislation could emerge as a credible option,²⁸ even though this would inevitably reflect a more drastic exception to the Regulatory Framework's emphasis on technological neutrality.

6.3.3 Policy objectives

The main policy objectives underpinning the Regulatory Framework are set forth in Article 8 of the *Framework Directive*. They include the promotion of competition in electronic communications networks, services and associated facilities; the contribution to the development of the Internal Market; and the promotion of EU citizens' interests. More specific obligations are listed under each of these general headings, bringing the total to 14 policy objectives. Other policy objectives are spread across different parts of the Regulatory Framework.

Virtually all of these policy objectives make sense and it would be difficult to criticise their individual merits. However, one question that can be raised in this context concerns the wide margin of interpretation that these objectives allow.

Most, if not all, of the policy objectives set forth in Article 8 of the *Framework Directive* are discretionary. Consistent with basic EU law principles, they have no direct effect and cannot be invoked by private parties before a national court. If any of these

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Such an approach would not be unprecedented. The Regulation of 2000 on local loop unbundling was adopted in record time, driven by the Member States' political commitment to a competitive electronic communications environment. Regulation (EC) 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop, OJ L 336/4, 20 December 2000. The relatively quick adoption of a similar stand-alone measure on FTTx, possibly under *Framework Directive* Article 19 but without changes to the Regulatory Framework as a whole, or binding measures outside the Regulatory Framework, may be a possible alternative, depending on the readiness of the Member States to commit to FTTx deployment. The Commission's current proposal for stand-alone legislation on international roaming fees presents another example of such a (potentially) fast track deviation from the general Regulatory Framework.

provisions are transposed into national law, they are likely to remain equally discretionary. Accordingly, as a matter of principle, they should not be relied upon as a legal basis for NRA decisions that directly affect the rights and obligations of private parties – such as those *ex ante* remedies. However, this risk cannot be excluded. Although the policy objectives of Article 8 are not the main legal basis of NRA decisions on remedies, both the *Access* and the *Universal Service Directive* provide that the obligations imposed by the NRAs must be, *inter alia*, “justified in the light of the objectives laid down in Article 8 of Directive 2002/21/EC.”²⁹

In practice, experience with the Regulatory Framework thus far suggests that NRAs have substantiated their decisions on remedies through fact-specific and competition law driven analyses, rather than vague reliance on the more general policy objectives set forth in Article 8. Nevertheless, in its present form, justification of remedies by reference to Article 8 policy objectives may create a source of disproportionate discretionary power which, if used more assertively by NRAs, could lead to very disparate remedies. For the reasons discussed already, such a margin of discretion also weakens the case for a possible future Commission veto against NRA remedies.

A Commission veto would be easier to justify and apply in practice if it is linked to fundamental Member State obligations under the EC Treaty, such as the free movement of goods and services, or the protection of competition, rather than being linked to discretionary policy prerogatives, such as the interests of consumers or the promotion of technology. There is a substantial body of EU rules and case-law confirming and interpreting the Commission’s power and duty to act as the guardian of the Treaty with regard to free movement or competition issues. This could be relied upon to strengthen the case for a Commission veto against remedies by Member States that would be incompatible with such fundamental EC Treaty obligations.

Put simply, therefore, we believe that the choice is between

²⁹. See Articles 8(4) of the *Access Directive* and 17(2) of the *Universal Service Directive*.

- a more neutral and technical system of remedies relying on a shorter and more precisely defined set of criteria that lend themselves more easily to judicial review and a Commission veto; or
- the present, more discretionary, system for the definition of appropriate remedies, with the possible risk (at least in theory) of a more incongruent choice of *ex ante* remedies, against which the Commission will have no veto power.

In our view, each of these two options has its relative strengths and weaknesses, but they are both valid, mutually exclusive, alternatives.

6.4 National Appeal Procedures

In this section, we focus on national appeal procedures relating to the Article 7 mechanism set forth in the *Framework Directive*.³⁰ By contrast, national appeal procedures in disputes between electronic communications operators and consumers are part of the discussion in Chapter 10 of this study.

As seen in Chapter 4, national appeals against NRA decisions, including those on market analyses and remedies measures adopted under Article 7 of the *Framework Directive*, are generally considered a serious implementation problem. Systematic appeals against NRA decisions are not unheard of; any such appeal is likely to lead to prolonged legal uncertainty; and appeals, just like any form of litigation, can represent a serious regulatory cost.

³⁰. As mentioned earlier in Chapter 4, the possibility and scope of a Member State appeal against a Commission decision in an Article 7 consultation procedure is currently the subject of at least one pending case before the European Court of Justice. Discussion of this type of appeal would effectively consist in an attempt to “second guess” the Court’s judgment, which we do not propose to undertake.

Most respondents to the survey raised the appeals process as a major area of concern, particularly with respect to the length of proceedings.

In principle, we believe there are two potential directions for a solution to the problem: (a) measures at the national level that can effectively strengthen the current provisions of Article 4 of the *Framework Directive*, and (b) other dispute resolution mechanisms that can serve as alternatives to the national appeal procedures or even, conceivably, replace them.

6.4.1 Strengthening the provisions of Article 4

Member States follow different approaches to the implementation of Article 4, which largely reflect their diverse general legal systems for the resolution of appeals against public bodies. In some cases, notably concerning European civil law countries, appeals against NRAs are covered by the general procedural regime for administrative appeals, and share the strengths and weaknesses of that regime. In some other cases, appeals against NRAs are dealt through more *ad hoc* appeal bodies and procedures. Such *ad hoc* appeal bodies may be more specialised and knowledgeable in the field as compared to general appeal bodies (such as administrative appeal courts) that deal with all sorts of other administrative appeals. The creation of sector-specific appeal bodies and procedures constitutes a regulatory cost which some Member States may prefer to avoid. Nevertheless, several of the survey respondents suggested that more specialist bodies, or specialist training for members of the existing bodies, could improve and speed up the appeals process.

National differences may need to be harmonised to the extent they can result – as they often do – in fairly different national regimes regarding the duration of appeal procedures, the available grounds for appeal, the quality of appeal decisions, the availability of interim measures and the ease with which the appeal court or other body may be prepared to suspend an NRA’s decision under appeal. It should be ultimately for a Member State to choose whether the appeal procedure is part of an *ad hoc* or a broader administrative law regime, but this flexibility should be subject to harmonised parameters that would ensure equally effective appeal procedures across the Internal Market.

In this regard, there is room to refine and strengthen the current general requirements of Article 4 of the *Framework Directive*.

Article 4 currently provides that pending the outcome of an appeal against an NRA decision, the latter must stand, unless the appeal body decides otherwise. We propose that the conditions for such a suspensive effect be defined more precisely. Conditions could be aligned to those developed by the European Court of Justice for the suspension of operation or measures adopted by the Commission and other EU institutions.³¹ This alignment would help ensure a more coherent EU-wide regime for national appeals against NRA decisions, based on reasonably balanced common standards. This change was supported by some of the survey respondents.

Accordingly, Article 4 could be revised to provide that a suspension of the NRA decision may be ordered by the court or other body dealing with the appeal only if all of the following conditions are met:

- (a) an application for such a suspension may be allowed as an interim measure, but be admissible only if made by a party to an appeal pending before the same court or other body and relates to that case;
- (b) the application must state the pleas of fact and law establishing a *prima facie* case for the suspension applied for;
- (c) the suspension must be urgently required inasmuch as the implementation of the NRA decision pending the outcome of the appeal will certainly or probably cause serious and irreparable damage to the applicant. The applicant must prove the facts forming the basis of the alleged damage; and

³¹. See, in particular, Article 104 of the CFI Rules of Procedure. For a more detailed discussion of these principles in recent EU case law see, e.g., T-201/04 *R Microsoft v Commission*, Order of 22 December 2004; T-198/03 *R Bank of Austria Creditanstalt AG v Commission* [2003] ECR II – 04879.

- (d) the grant of the requested suspension will not prejudice the final outcome of the appeal;

We also recommend introducing a provision similar to Article 15 (“Cooperation with National Courts”) of Regulation 1/2003 on the modernisation of the European competition law, to allow the Commission to act as *amicus curiae* in national appeals against NRA decisions that were previously communicated to the Commission under the Article 7 mechanism. As is the case in Article 15 of Regulation 1/2003, appeal courts should be able to ask the Commission to transmit to them information in its possession or its opinion on questions related to the pending appeal. This change was supported by several of the survey respondents.

As mentioned in Chapter 4, the legal standing of third parties in appeal procedures against an NRA’s decision under the Framework mechanism is currently the subject of a reference to the European Court of Justice for a preliminary ruling. The necessity of any future legislative clarification of this point will strongly depend on the Court’s decision, which we will not attempt to anticipate here.

A more generally worded obligation of Member States to ensure that appeal procedures falling under the scope of Article 4 of the *Framework Directive* allow for the rapid adoption of a decision would certainly not be damaging, but would be difficult to enforce in practice.³²

6.4.2 Alternative Dispute Resolution mechanisms

The Regulatory Framework’s market analysis mechanism and the NRAs’ related justifications of *ex ante* remedies are very fact-based exercises, linked to the concrete circumstances of national markets. Not surprisingly, appeals against the NRAs’ decisions are far more likely to be fought on concrete facts and data rather than general

^{32.} Provisions on appeal procedures could be based on the model of Article 18(1) of the *e-Commerce Directive*.

principles of law. Such fact-based disputes do not “travel well;” it is difficult for supranational authorities to deal with them as efficiently as local authorities, because the latter are more familiar with local market conditions and regulatory circumstances.

It may be helpful to look at the analogy of appeals against Commission decisions relating to competition law matters that are brought before the Court of First Instance. In this type of appeal procedure, the Court does not shy away from reviewing the facts and circumstances of the case in considerable detail. However, when it comes to questions involving a complex economic analysis, the Court accepts that the Commission has a margin of appreciation and limits its review to the relevance of the facts relied upon by the Commission. But economic (or market) analysis lies at the heart of “Article 7 decisions” and these decisions often relate to “esoteric” technology issues and conflicting economic views about their implications, as well as very country-specific rules and case histories. In these circumstances, it is fairly likely that if the Court of First Instance were given the power to adjudicate appeals against NRA “Article 7 decisions,” it would be difficult to meet this challenge efficiently. From a policy perspective, it would seem unreasonable to expect the Court of First Instance to develop sector-specific expertise (or even a sector-specific Chamber) for the sake of a single sector, and especially one supposedly moving to a lighter regulatory regime.

Similar concerns would apply with regard to the competence of any other supranational court or other international dispute resolution body to deal with appeals against NRA decisions. Reliance on voluntary arbitration would not be an acceptable alternative. NRA decisions in Article 7 or similar matters raise public interest issues that cannot be dealt with as a private party dispute. An arbitration panel is not the appropriate body to decide on the appropriate *ex ante* regulation of a country’s electronic communications market.

Therefore, we believe that there is no acceptable alternative to national appeal procedures before national appeal courts or similar public bodies.

6.5 Recommendations

In sum, we recommend the following changes to the Framework Mechanism:

Streamlining the market analysis and notification procedure

1. Article 7 notifications by NRAs should be subject to a more strictly defined timetable. This should be subject to consultation with the Commission, possibly on an annual basis, and should take into account country-specific policy priorities and market features. Once agreed, it should be legally binding for the NRA concerned.
2. NRAs should submit their Article 7 notifications to the Commission only once the relevant national consultation procedures have been completed. The notification should include all three parts of the analysis, i.e., market definition, SMP assessment and proposed *ex ante* remedies.
3. The Commission should consider amending the Framework Mechanism to allow NRAs at their discretion to apply a short transitional regime in markets found to have become effectively competitive only recently. However, we only recommend implementing this change if there is support from NRAs to indicate that such an approach is likely to assist them in reducing unnecessary *ex ante* regulation more quickly.
4. The NRAs' market analyses and notifications preferably should be grouped in market clusters and follow a systematic sequence (from wholesale to retail), based on non-binding ERG or Commission recommendations.
5. The *Framework Directive* should allow the Commission to define "white listed" market situations that would be subject to a reduced set of consultation and notification obligations.
6. As a general rule, we do not see a compelling case for extending the Commission's veto power to all remedies proposed by the NRAs. However, there may be exceptions to this rule, in narrowly defined cases of particular importance to

the Internal Market, and on the basis of more narrowly defined criteria than those that can be relied upon today for the adoption of *ex ante* remedies.

Substantive issues

7. In general, we see no reason for changes to the market definition methodology and the concept of SMP under the Regulatory Framework. An exception concerns the concept of “collective dominance”, which poses serious problems of application in the Framework Mechanism, albeit without any perfect alternative in sight. One possible solution would be to expand the concept of “absence of effective competition” on the market so as to include unilateral effects on competition from oligopolies in which no undertaking has single or collective dominance. However, such a solution, if acceptable, should not be allowed to lead to over-regulation. Related safeguards could include a Commission veto power against any disproportionate *ex ante* remedies based on an NRA finding of unilateral effects.

8. Besides any general regulatory guidance required with regard to new technology, we recommend that the Commission be given the power to define relevant markets prospectively, in exceptional cases and subject to comitology procedures, based on criteria other than those set by competition law. This power might be combined with a Commission competence to determine or veto appropriate *ex ante* remedies for such future markets. This rule could help address the important long term policy, market and regulatory challenges posed by the future deployment of new technology (such as FTTx or NGNs) that may be difficult to deal with under the Regulatory Framework, given its more limited time horizon.

Policy objectives

9. Broadly defined and discretionary policy objectives in the Framework Mechanism are difficult to reconcile with a predictable system of checks and balances. More clearly defined criteria for *ex ante* remedies would provide a more credible basis for a Commission veto for the remedies concerned, should such an extension be deemed politically desirable.

Appeal procedures

10. The conditions under which an NRA decision under appeal may be suspended should be defined more precisely in the *Framework Directive*.
11. A provision similar to Article 15 (“Cooperation with National Courts”) of Regulation 1/2003 on the modernisation of the European competition law should allow the Commission to act as *amicus curiae* in national appeals against NRA decisions that were previously communicated to the Commission under the Article 7 mechanism.

7 Regulatory Obligations of the Access Directive

In this Chapter, we review whether the regulatory obligations set forth in Articles 9 to 13 of the *Access Directive* may need to be adjusted in response to issues we have identified under the Regulatory Framework. The discussion that follows focuses on the substance of the current remedies list. The procedure for their application by the NRA is a subject we have already examined in Chapter 6.

7.1 General Theory and Practice of Access Obligations

Prior to liberalisation, electronic communications markets were dominated by the incumbent's monopoly on fixed and, in some cases, mobile communications. Interconnection of the alternative operators' network to the incumbent's PSTN was a necessary condition for the formers' entry into the market. Starting from an initial set of general rules on the new entrants' right to interconnect to the incumbent's public fixed network, the EU regulatory framework and national practice have progressed to a system of *ex ante* interconnection and access obligations that are increasingly sophisticated and comprehensive in their scope and detail.

As a complementary regulatory tool, *ex post* remedies can be effective in addressing various instances of common abusive conduct in access disputes, such as discrimination, margin squeeze, and excessive or predatory prices. *Ex post* remedies are generally not very effective, however, as a means of ensuring comprehensive, well-defined and effective access to an operator's network or other facilities. Early attempts to force such access *ex post* were frequently based on the "essential facilities" doctrine. This proved to be more useful as a threat rather than as a practical legal tool. Following the European Court of Justice's decision in the *Bronner* case the limitations of the "essen-

tial facilities” doctrine have become all the more clear.³³ Therefore, for as long as access to an operator’s network or other facilities are deemed necessary and unlikely to be commercially available, *ex ante* access remedies will remain a regulatory tool that cannot be substituted through *ex post* intervention.

The Regulatory Framework has complemented the concept of interconnection with the more loosely defined term of “access,” and the *Access Directive* generally refers to “access and interconnection.” Essentially, the *Access Directive* gives NRAs a wide margin of discretion to define remedies that go clearly beyond the “traditional” terms and conditions of interconnection. This flexibility is reflected in the list of access and interconnection remedies provided in Articles 9 to 13 of the *Access Directive*, which include, in particular, broadly phrased obligations of

- (a) transparency, including the publication of reference offers, whose content, level of detail and manner of publication can be specified by the NRAs (Article 9);
- (b) non-discrimination (Article 10);
- (c) accounting separation, based on a format and accounting methodology that can be defined by the NRAs (Article 11);
- (d) access to, and use of, specific network facilities, a catch-all category of various listed obligations covering various aspects of access/interconnection agreements (Article 12); and

³³ Case C-7/97, *Oscar Bronner v. Mediaprint* [1998] ECR I-7791. In the *Bronner* decision, the Court of Justice reviewed the refusal by a dominant press undertaking that operated the only nationwide newspaper home-delivery scheme in Austria to allow the publisher of a rival small circulation newspaper to have access to that home-delivery scheme for appropriate remuneration. The Court set fairly high standards for the conditions that the party requesting such access would need to prove in order for the refusal to qualify as an abuse of a dominant position. While there may be important differences between the distribution of newspapers and the electronic communications market, the *Bronner* case has raised the standards for the grant of any *ex post* access remedies.

- (e) price control and cost accounting that can also extend to cost orientation (Article 13).

This list was drafted with the pre-2002 set of interconnection-related obligations as a starting point, but its wording is sufficiently general to allow for much wider discretion in the NRAs' determination of *ex ante* remedies. The key condition allowing NRAs to impose these remedies is the finding of SMP. Up to that point, the NRA analysis is subject to a veto by the Commission. Beyond that point, the Commission has no veto, and the NRAs are only required to impose one or more *ex ante* obligations that are "based on the nature of the problem identified, proportionate and justified in the light of the objectives laid down in Article 8" of the *Framework Directive* – which, as discussed already, are fairly broad and discretionary.

Thus far, NRAs have been relatively conservative in their choice of access remedies. Typically, they have relied on the Framework Mechanism either to reinstate *ex ante* obligations in place before the adoption of the Regulatory Framework or to extend these obligations to operators that were not subject to the previous set of interconnection and access obligations. The prime examples in this last category are alternative fixed and mobile operators with less than 25% market share. Under the previous regime, these operators typically had no, or only minimal, obligations to grant access to their networks under defined terms. Under the Regulatory Framework, they are typically deemed to have SMP on the newly defined relevant market(s) for call termination on their individual public, fixed or mobile, network and are therefore subject to various forms of interconnection and other *ex ante* obligations from the *Access Directive* list.

Among the various access remedies provided under both the previous and the current Regulatory Framework, cost orientation (as the most intrusive remedy) has undoubtedly attracted the lion's share of the regulatory debate, economic analysis and theoretical views. Historically, EU views on the proper application of the cost orientation principle, including the identification of the proper cost methodology, were developed against the model of a public circuit switched telecommunications network, run by a former monopoly that had enjoyed several decades of lead time to amortise the substantial costs associated with non replicable network elements and facilities. Further, retail charges for voice telephony, the main public service offered over this type of network, were distance and time-dependent. This factor has been generally reflected in the struc-

ture of interconnection fees charged for wholesale services aimed at supporting voice telephony services provided, wholly or partly, over the public circuit switched network.

Against this background, the clear regulatory trend in the EU has been towards a forward-looking long run average incremental cost model (FL-LRAIC) as the appropriate cost methodology in a modern and competitive electronic communications environment. This trend has never been crystallised in a legally binding manner – and wisely so, as this could have rendered it an inflexible and blunt regulatory measure.

The Regulatory Framework preserves this flexibility. Recital 20 of the *Access Directive*'s preamble clarifies that if price control is deemed to be necessary, NRAs have a wide choice between a relatively light regulatory obligation for “reasonable” fees and the much heavier one of fully justified cost orientation. The same recital confirms that the calculation of costs in such circumstances should allow for a reasonable return on the capital employed. Cost orientation obligations in the operative part of the *Access Directive* (Article 13) are described in even broader terms.

A more concrete Commission position on the appropriate cost accounting systems under the Regulatory Framework can be found in the Commission's September 2005 Recommendation on accounting separation.³⁴ This remains, however, a non-binding measure, and it must be reviewed before October 2008.

Essentially, therefore, the provisions of the Regulatory Framework on cost orientation allow for a very substantial margin of case-by-case discretion by the NRAs. Where cost orientation is considered necessary, the basic formula of fees = cost + reasonable rate of return remains in place, but the concepts of “cost” and “reasonable rate of return” are not subject to legally binding detailed parameters.

³⁴

Commission Recommendation of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications, OJ L 266/64, 11 October 2005.

Our study is not designed to propose appropriate cost methodologies for the new regulatory and market environment. Instead, we assess whether the current framework for access remedies is sufficiently flexible and well-structured to accommodate the alternative access scenarios most likely to emerge for the future electronic communications networks and services. To the extent that more detailed regulatory guidance on appropriate cost methodologies may be necessary, a future revision of the Commission Recommendation on accounting separation mentioned above would be the appropriate regulatory tool (and consequently, changes to the Regulatory Framework's directives are not required).

In addition, we discuss other questions concerning the application of access remedies under the Regulatory Framework. In practice, most of these questions focus on specific issues that fall within the scope of the existing list of remedies – we are not aware of any fundamental objection to the key elements of this list as such. However, there are at least a few general questions that have repeatedly come up in the relevant regulatory debate, which we discuss in the remainder of this chapter. These questions concern:

- (a) the access regime for new technology platforms including, in particular, IP-based NGNs;
- (b) the access regime for FTTx;
- (c) whether functional and/or structural separation should be added to the existing access remedies; and
- (d) possible issues in a transition to any new set of access remedies.

These questions relate primarily to new technology platforms and, in particular, to future upgrades or extensions of the traditional PSTN controlled by the incumbents. Other new technology platforms, such as WiFi and WiMAX, do not yet seem to raise any distinct regulatory access issues. Thus far, incipient WiFi and WiMAX services and networks have been excluded from the existing list of relevant markets and have not, therefore, been subject to *ex ante* access remedies. This is likely to remain the case with regard to such services and networks that are controlled by new entrants. However, as discussed in Chapter 4, the deployment of the same wireless technology by

incumbents may be less easy to carve out from existing relevant market definitions (and associated *ex ante* obligations) and that deployment thus would be unlikely to benefit from “regulatory holidays.”

To the extent that any of the existing incumbents wish to deploy or otherwise control WiFi and WiMAX networks, they are unlikely to pursue this as a stand-alone business case, but will probably prefer to integrate such wireless services in combined multi-network broadband offerings. At present, such a deployment of combined networks and services by incumbents is at an experimental or very early stage, and its immediate regulatory implications may vary substantially from country to country. We can assume, however, that such combined offerings by the incumbents will be eventually brought under the umbrella of IP-based network architecture, as this is ideally suited to link different technologies into a seamless, convergent platform. Therefore, the question of the appropriate access remedies for such combined access networks is part of the broader discussion on NGNs that follows.

7.2 Access Regime for IP-based Next Generation Networks (NGNs)

In Chapter 2, we discussed the NGNs’ salient features and current expectations on their deployment in coming years. For present purposes, it is worth underlining that the pace and scope of this deployment is bound to vary significantly among Member States, based on different network architectures, financial capacity and incentives to invest, local demand patterns and, possibly, different regulatory responses.

The impact of NGN decoupling networks from services³⁵

Despite such differences, future NGNs should share at least some common features. Notably, their architecture and reliance on IP technology will allow the decoupling of the NGNs’ connectivity (or transport) and service functions. Instead of different paral-

³⁵ Although this section refers to “networks” and “services”, these terms are not intended to refer to the specific definitions associated with ECN and ECS.

lel networks, each tailored to a different type of retail service, an NGN will provide a common platform for the delivery of a variety of voice, data, content and other, as yet unknown, services.

The decoupling of connectivity and service functions raises an obvious question for the appropriate interconnection/access regime: should the connectivity and service functions be subject to different regulatory interconnection/access regimes? The answer may be that, at least in a simplified model, the service level would *not* seem to be subject to the Regulatory Framework's access regime to begin with, unless the latter is changed to cover these services. As discussed below, this hypothesis is strongly supported by the current definition of "electronic communications service" in Article 2(c) of the *Framework Directive* and the description of "obligations of access to, and use of, specific network facilities" in Article 12 of the *Access Directive*. It is at best uncertain whether the scope of these provisions covers the services provided on the decoupled "service level" of an IP network.

Under Article 2(c) of the *Framework Directive*, "electronic communications service" means a service "normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks ...; it does not include information society services, ... which do not consist wholly or mainly in the conveyance of signals on electronic communications services." Information society services include, in principle, any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services.

At least as a starting point, one would not expect the services provided on the service level of an IP-based NGN to consist "wholly or mainly in the conveyance of signals," as this would normally be a typical service provided on the connectivity level of the NGN. Therefore, the service level of this network may include services that do not qualify as "electronic communications services" under the *Framework Directive* (and cannot, in all likelihood, be considered "associated facilities" for reasons discussed below).

Such a distinction between connectivity and services may make sense in a theoretical model, but may not be as easy to apply in practice. The exact dividing line between the network and the service level of an IP-based network is bound to raise questions of in-

interpretation. The switchover to an IP network environment will be a gradual, step-by-step process, involving various hybrid network architectures during the transition. Furthermore, there are a number of facilities in an IP environment, including software at the end user's premises or application-specific hardware, which may not readily qualify as part of the "service level" or the "network level," and which may support services consisting partly (but not "mainly") in the conveyance of signals. If such subtle distinctions can justify a radically different regulatory treatment, it is clear that they can become a very contested issue, calling for urgent regulatory guidance.

Similarly, the "obligations of access to, and use of, specific network facilities" covered by Article 12 of the *Access Directive* might not, in principle, apply to the service level of an IP-based NGN. Article 12(1) refers to "access to, and use of, specific network elements and associated facilities" – but not services. While the term "associated facilities" may be subject to different interpretations, there may be services whose principal feature is that they are actually *disassociated* from the network.

Hence there may be no obvious legal basis under the *Access Directive* to extend *ex ante* access remedies to the service level of the future IP-based NGN. If so, the NRAs might lack the power, at least under the current Regulatory Framework, to extend *ex ante* intervention to the access/interconnection regime for the NGN's service level. On the contrary, an NRA assessing an NGN in the context of a market analysis similar to those conducted under Article 7 would need to ensure that any *ex ante* remedies it imposes on the NGN operator properly reflect the decoupling between the network and the service level. Any interconnection obligation in this context would apply to the network irrespective of the services being offered.

The need to ensure competition on the service level of an IP network would probably not call for *ex ante* intervention on this level. *Ex ante* remedies on the network level, combined with the possibility of *ex post* regulatory intervention should normally be sufficient to avert restrictions of competition on the service level.

Ex ante regulation in a packet-switched environment

We already mentioned, in Chapter 2, the emerging technical possibility of price-discrimination by the operators of an IP network against packets being used for high-

value services, in order to capture a greater share of the revenue for themselves. Consistent with the conclusions reached above, such price-discrimination by an SMP operator that did not reflect objective costs incurred on the network level (for example by providing differential quality of service) or reflect the value of service to consumers, would likely constitute an abuse of a dominant position that could be treated through *ex post* remedies. An SMP operator linking its provision of connectivity to other operators to the “service level” services that these intended to provide could arguably be making this agreement discriminatory and/or “subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts” – the fourth example of abusive conduct listed in Article 82 EC. This conclusion is consistent with well-settled principles of EU competition law that have been clarified by the Commission at an earlier stage of liberalisation of electronic communications but are all the more pertinent in the IP-environment described in this section.³⁶

Similar arrangements proposed by SMP operators on a genuinely commercial and voluntary basis, or by non-SMP operators acting independently, would not seem to raise competition law concerns.

This leaves us with the question of the appropriate access regime for the network level of NGN. Again, our study is, in principle, agnostic as to whether it is appropriate to impose cost orientation, or (assuming that it is imposed) to define an appropriate cost methodology, recognising that the relevant debate is ongoing and likely to result in more than one acceptable alternative. For example, in areas where it is expected that

³⁶ See in particular the comments made by the Commission in paragraph 120 of its Notice on the Application of the Competition Rules to Access Agreements in the Telecommunications Sector, OJ C 265/2, 22 August 1998: “A dominant access provider may not discriminate between the parties to different access agreements where such discrimination would restrict competition. Any differentiation based on the use which is to be made of the access rather than differences between the transactions for the access provider itself, if the discrimination is sufficiently likely to restrict or distort actual or potential competition, would be contrary to Article [82]. This discrimination could take the form of imposing different conditions, including the charging of different prices, or otherwise differentiating between access agreements, except where such discrimination would be objectively justified, for example on the basis of cost or technical considerations or the fact that the users are operating at different levels.”

part of an NGN network forms an enduring economic bottleneck, strong regulation may be necessary. On the other hand, in areas where competitive infrastructure investment might be viable (such as dense urban areas) a lighter regulatory approach could be appropriate. We believe, however, that the Regulatory Framework provides sufficient flexibility and a good basis for the determination of *ex ante* remedies for connectivity in an IP-based NGN.

Interconnection in a packet-switched network environment has largely evolved outside regulatory constraints, as the markets or market segments concerned tended to be competitive. While this may largely remain the case in the future, it is reasonable to assume that not all segments of an incumbent's NGN will operate in a competitive environment. Bottlenecks will almost certainly persist on the level of the NGN's access segment and, less likely, various segments of the core network. Depending on the exact market definition at the time these changes take place, operators may be found to have SMP on at least defined parts of their NGN and thus be subject to *ex ante* remedies.

As mentioned in Chapter 2, we expect that the existing transit and peering models prevalent in IP traffic today will be maintained in various similar forms in the future. However, an NGN operator with SMP may have no commercial interest in such a model and prefer, instead, to draw revenue from its provision of connectivity to other network operators that are more dependent on connectivity by the NGN operator than *vice versa*. At least under the current Regulatory Framework, a cost-based interconnection fee for such a service by the NGN may consist in a variant of a capacity-based fee arrangement. In an IP-environment, the "cost" of the connectivity service is relatively disassociated from the distance travelled by the IP-packets – which cannot even be defined in advance – or the duration of the "connection" – as there is none, in the sense one would expect in a circuit-switched network environment. Different classes of services may require different effective bandwidth and other quality specifications. This provides an objective justification for different "connectivity offerings" by an SMP operator of an IP network. However, if cost orientation is required, the cost structure of these offerings should be objectively justified and may, in at least some cases, depend on the capacity provided more than on any other feature.

Ex ante regulation of capacity-based interconnection may, in some ways, be more straightforward and simple than for traditional interconnection models. However, there

is at least one area of possible concern, specific to capacity-based interconnection, which calls for regulatory vigilance. This issue has been raised under the title of “network neutrality” in the United States, and essentially relates to the desire by network operators to extract some portion of the value of the services delivered via their facilities, in an effort to avoid the pure commoditization of network infrastructure.

It will be tempting for NGN operators with SMP to attempt to extract part of the value of IP-traffic packets that service higher-value retail services (e.g., video). If the service level remains “off limits” as a basis for setting connectivity charges, SMP NGN operators could attempt to obtain a roughly equivalent result by differentiating their charges at the network connectivity level, based on the capacity provided or quality of service specifications, i.e., charging higher prices for faster or more reliable delivery. High-value retail services are more likely to demand higher capacity and higher quality specifications – although the example of SMS shows that this is not always the case.

If connectivity and service level in an NGN are to remain disassociated, the decoupling should not be circumvented through discriminatory capacity-based fees for connectivity. Fees for NGN connectivity may obviously differ depending on the type of connectivity being offered, but the difference should be justifiable based on objective cost parameters. Further, they should also take into account the substantial cost savings that NGN operators will achieve from operating a single, service-independent, network platform. These and other NGN-specific questions present challenging regulatory issues, in their earliest stage of debate. We recognise that the regulatory approach we discussed above is based on a conceptual IP-based network model that may be difficult to translate in practice without further regulatory guidance, albeit not necessarily through legally binding measures. Indeed, despite several uncertain parameters, the prospect of the future deployment of NGN does not seem to call for any substantial legislative adjustments to the Regulatory Framework. On the contrary, at least in theory, the model of an IP network is based on a distinction between network and service level that seems to coincide with the existing regulatory distinction between ECS and non-ECS services, and the associated different implications for the right *ex ante* or *ex post* access regime. It is certainly tempting to rely on this basic distinction made in existing EU legislation, as a starting point for the regulatory debate ahead.

7.3 Access Regime for FTTx

In Chapters 2 and 4, we discussed policy and regulatory issues raised by FTTx deployment in Europe. Under any of the regulatory scenarios discussed today, the future EU access regime for FTTx networks might be a key factor in the business case for FTTx in Europe (even acknowledging the impact of complementary or competing wireless platforms). More specifically, and as in other types of networks, access issues are likely to focus on conditions under which FTTx operators will be required to allow other parties access to their network, and the structure and level of fees they will be allowed to charge for such access.

Whatever the outcome of the ongoing debate on FTTx, we believe that the idea of a “regulatory holiday” for FTTx networks deployed by incumbents in the EU would be an untenable regulatory solution. Such discrimination between unregulated and proprietary optical fibre on the one hand, and regulated copper loops on the other, would be arguably incompatible with fundamental principles of the Regulatory Framework (such as non-discrimination and technological neutrality), and would likely lead to a distortion of competition. If so, such discrimination may be incompatible with the EC Treaty Article 3(1)(g) requirement to ensure that competition is not distorted, or provisions on State Aid. Therefore, in our view, the regulatory debate should not be spent on the “if” of third party access to FTTx but on the “how” – and here, there is an obvious case for a novel and balanced regulatory approach, rather than a simple replication of conventional access models.

As a starting point, and regardless of overarching policy considerations or preferred scenarios in FTTx deployment, we would not recommend any departure from the basic formula “interconnection fees = costs + reasonable profit margin”, which is deeply ingrained in EU competition and electronic communications law, and for which we see no credible alternative. However, the specificities of FTTx deployment will require a fresh look at the definition of “costs” and “reasonable profit margins” specific to FTTx.

The costs of large scale FTTx roll out are going to be huge, under any regulatory scenario. A significant difference between the costs taken into account for access to the PSTN and those for access to an FTTx network is that, in the former case, a substantial part of the huge fixed costs associated with the laying of the network infrastructure has

already been amortised, during the long period of a statutory monopoly. In the latter case, fixed costs for the FTTx must be amortised in the future over an as yet undefined period.

A key element in the cost structure of FTTx roll out is the fundamental distinction between the network's "passive layer" (rights of way, ducts, fibre) and "active layer" (switches, routers, customer premises equipment, network management). Roughly speaking, the passive layer accounts for around 80% of the total initial cost of the network. By its nature, the active layer has a relatively short life cycle (5-10 years, and possibly shorter), as electronic communications equipment becomes rapidly obsolete. On the other hand, the passive layer, once the ducts and the fibre have been laid, can have a substantially longer life cycle. The passive layer, once installed, will in all likelihood constitute a non-replicable monopoly, at least outside densely populated urban areas. Based on current projections regarding the theoretical maximum capacity of a genuine (i.e. not hybrid) FTTx network and the capacity needs of any retail services that it could service, there would seem to be no business case for a second, competing, FTTx network in most areas. An exception may possibly be justified in certain densely populated (and relatively high income) urban areas, where the static inefficiency of multiple FTTx networks could be overcome by the additional dynamic efficiency benefits of competition, such as competitive pricing.

The risk profiles of active and passive layers are drastically different – on the one hand, the passive layer may represent a substantially higher investment but it is, in all likelihood and in most areas, a non-replicable natural monopoly. The active layer, on the other hand, requires a much lower investment, but has a shorter life cycle and is potentially open to competition. The same passive layer can, in theory at least, accommodate more than one operator of competing active layers (e.g., via Wave Division Multiplexing (WDM) or using different fibres), each one of which can service a multitude of different service providers.

The drastically different profiles of the two layers of an FTTx network result in two distinct business cases, with repercussions for the relevant regulatory access regime including, in particular, the concept of "cost" and "reasonable profit margin."

As the passive layer is a natural monopoly in most, if not all, cases, its profit margins would naturally tend to be excessive, unless regulated. The ceiling for a reasonable profit margin in this case would need to be set at a level that corresponds to that of a typical utility: high sunk costs, long amortization period allowing the spread of capital expenditure over a longer period, low but less risk-prone profit margins.

As mentioned above, the active layer is not a natural monopoly. More than one active layer can coexist over the same passive layer (with relatively little static inefficiency). This, combined with the short life cycle of active layer investments, clearly raises the profit margin that would correspond to a reasonable return on investment. The shorter amortisation periods for capital expenditure will also raise cost accordingly.

This distinction has implications for both the “cost” and the “reasonable profit margin” that would need to be applied to each of the passive and active layer of the FTTx – assuming that both of them would be subject to an obligation to grant cost-oriented access.³⁷ Thus the determination of the appropriate cost methodology and cost standards for FTTx access will not require “reinventing the wheel” through a radical departure from established regulatory principles applied to access fees. It would, however, require distinct sets of standards for what are (at least conceptually) two distinct businesses.

In light of this situation, we recommend that the access regime for FTTx should reflect a clear distinction between the network’s active and passive level, and result in distinct sets of access obligations (or in some cases no obligations at all) for each level, regardless of whether these are operated by the same entity. This distinction can be made already under the Regulatory Framework without substantive amendment, but due to its importance we note this among the recommendations made in this chapter.

³⁷ The need to apply such obligations will not necessarily arise for the active layer in urban centres, where competition may be sufficient to render *ex ante* intrusive regulation unnecessary.

7.4 Structural Separation

Recent debate on the possible merits of structural separation has tended to focus on: (i) continuing bottlenecks in the incumbents' fixed access networks and (ii) a distinction between the passive and the active layer of FTTx networks. In both cases, the starting point is the argument that accounting separation and other "tried and tested" *ex ante* remedies may not be sufficient to avoid distortions of competition.

The primary role of accounting separation is to ensure that the operator adheres to non-discrimination, transparency and other obligations. Nevertheless, a case can be made, based on experience, that accounting separation is difficult to implement and gives rise to delays, conflicts and uncertainty. Based on the same argument, if accounting separation is not enough to prevent distortions of competition, structural separation may be the next logical alternative.

Structural separation is a drastic regulatory intervention that does not sit comfortably within the Regulatory Framework's provisions and principles. For a start, it is not listed among the available *ex ante* access remedies.³⁸ A Member State is, arguably, allowed to propose it under Article 8(3) of the *Access Directive* in exceptional circumstances, but the Commission would have the power to veto it because it is not on the list. On substance, structural separation brings in the advantage of increased transparency and easier enforcement, but is also a disruptive measure that can reduce the efficiencies of integration. It is not, therefore, a measure that can be easily added to the list of Access remedies.

In the United Kingdom, where the debate focused on enduring bottlenecks in BT's access network and has reached a particularly advanced stage, structural separation was, in the end, avoided by BT through its commitment to detailed undertakings that provide for "real equality of access" in its copper access network. BT's commitments may be

³⁸ However, Article 13(1)(b) of the *Framework Directive* imposes structural separation between activities associated with the provision of electronic communications networks or services on the one hand, and the provision of services in other sectors on the other hand, if these are provided through special or exclusive rights.

described as an intermediary form between typical accounting separation and structural separation. They require BT's own downstream operations to use the same products, processes and prices as those used by their retail rivals. They also include operational and functional separations within BT, aimed at ensuring a genuine "arm's length" relationship between various BT divisions and functions.

BT's commitments are a complex, operator- and market-specific set of rules, combining different types of remedies, which cannot be summarily transposed into the short, abstract but meaningful legal provisions in the list of the *Access Directive's ex ante* remedies. Moreover, the actual effect of these commitments in practice remain to be seen, as the measure was adopted very recently. However, the process followed to obtain such a highly complex set of rules may provide a broader lesson for other regulatory environments. It is reasonable to assume that any incumbent is far more likely to contribute creatively to a regulatory agreement involving intrusive regulation and a complex set of rules, if it is under a credible threat of forced structural separation. Any attempt by an NRA to define in advance and subsequently enforce such a complex set of rules *ex ante* could be easily weakened through prolonged negotiations and delaying tactics based on technicalities. Therefore, there are some obvious advantages in maintaining the option of structural separation, at least as the ultimate regulatory alternative, if all else fails – as either an *ex ante* or *ex post* remedy.

At present, most NRAs are likely to be reluctant to impose such a drastic measure or even threaten to do so. Inhibiting factors include that structural separation is not on the list of *Access Directive* remedies, and a relative uncertainty concerning the Commission's response, were an NRA to propose structural separation as a remedy.

The Commission could address such hesitations by clarifying its position in advance, for instance through appropriate amendments to its Guidelines or other non-binding measures. Essentially, the Commission would need to describe in advance those situations in which it would not exercise its veto power against structural separation remedies, in the event such a remedy is notified under *Access Directive* Article 8(3).

Because structural separation is an extreme, and still disputed, regulatory remedy, the Commission could not provide comprehensive guidance for every situation where structural separation might arise as a possible issue, and indeed it may not be appropri-

ate to do so. Instead, we recommend that the Commission considers focussing on priority areas, such as the incumbent's access network and/or FTTx deployment. Early Commission guidance on the conditions under which structural separation could be mandated by NRAs in such cases would be helpful. In the absence of guidance, NRAs may be unwilling to use structural separation even as a threat due to the uncertainty that it would be an acceptable remedy. Conversely, if two or three NRAs decided to apply such a remedy, in the absence of guidance the result would be two or three different approaches and more confusion on the market.

Organisational and functional separation within the existing corporate structure are less controversial than structural separation, and it should be easier to add them to the existing list of *ex ante* access remedies, (for example by strengthening the text of Article 13) if this was felt to be helpful. Alternatively, this lower level of separation also could be part of the Commission's informal guidance.

7.5 Possible Transition Issues

Issues are bound to arrive during the transition to a new access regime. These issues are especially likely where the fundamental changes to a network that justify switching to a different cost methodology or other access obligations do not occur uniformly and over a short period, but involve step-by-step and physically dispersed adjustments, over a prolonged period of time. This scenario is very likely for the transition of today's PSTN to an IP-based access network.

There can be no perfect solution to this problem, which must remain under close scrutiny by the NRAs. The transition process and its implications for existing interconnection arrangements should be described clearly and precisely in the SMP operators' interconnection offers. For example, relevant interconnection agreements should allow interconnected operators to benefit as rapidly as possible, if not automatically, from any cost savings achieved through the SMP operator's transition to IP-based network architecture that renders parallel network facilities redundant. Further, SMP operators should be required to report regularly to the NRA any optical fibre and/or IP-network deployment in their PSTN.

7.6 Recommendations

The deployment of NGN and FTTx in Europe is very likely to be influenced by the applicable *ex ante* access regime. This poses a regulatory challenge for European regulators, given the political importance attached to a rapid, large-scale move to deployment of NGN and FTTx (even though the policy and business case for NGN and FTTx are not the same).

Despite the magnitude of this challenge, we believe that the existing access remedies under the Regulatory Framework are generally comprehensive and flexible enough to address NGN and FTTx deployment, if the changes to the Framework Mechanism that we suggested in Chapter 6 are implemented. We see no serious substantive problem with the list of the *Access Directive*'s remedies, subject to the specific recommendations made below.

1. The obligation of cost orientation and the basic formula “access fees = costs + reasonable profit margin” should be preserved as an option for NGN, FTTx and new technology, but also should be properly adjusted to the cost and risk profile of new networks and services, which may be very different from those typically applied to the incumbents’ PSTN, and may require different approaches to accounting separation, costing methodology and cost standards. To the extent that more detailed regulatory guidance on appropriate cost methodologies may be necessary, a future revision of the Commission Recommendation on accounting separation would be the appropriate regulatory tool (and consequently, changes to the Regulatory Framework’s directives are not required).
2. Interconnection/access fees in an IP-based network, if at all applicable, may be (primarily) based on capacity and independent of the network’s service level. We recommend that the Commission consider whether the distinction between the connectivity and service levels should be clarified, for example, through non-binding regulatory guidance.
3. The access regime for FTTx should reflect a clear distinction between the network’s active and passive level, and result in distinct sets of access obligations

(or in some cases no obligations at all) for each level, regardless of whether these are operated by the same entity.

4. While we do not in principle recommend structural separation as a remedy, NRAs and the Commission should have the option to allow it as a measure of last resort. The Commission should consider clarifying its position on this remedy in non-binding guidance measures, by reference to its existing veto power under Article 8(3) of the *Access Directive*, clarifying the criteria it would rely upon to determine whether or not to veto such a remedy.
5. The Commission should consider expanding the list of *ex ante* remedies to include organisational and functional separation. This could be done through an appropriate amendment of Article 13 of the *Access Directive* and/or non-binding Commission guidance, in conjunction with the question of structural separation, along the lines proposed under the previous recommendation.

8 Impact of the Authorisation Directive

This chapter studies the impact of moving to general authorisations, the extent to which there is harmonised implementation among the 25 Member States, and whether any changes to the *Authorisation Directive* are needed to achieve the regulatory objective of facilitating market entry, as well as the single market objectives of the European Regulatory Framework. In particular, this chapter focuses on cross-border aspects of current provisions. Specific issues examined include spectrum and numbering aspects of authorisations.

8.1 General Theory and Practice of Authorisations

We start this chapter with discussion of the general theory of authorisations, in order to establish the structure for more specific questions in subsequent subsections.

8.1.1 The scope of general authorisations

Article 1(1) of the *Authorisation Directive* establishes the objective “to implement an Internal Market in electronic communications networks and services through the harmonisation and simplification of authorisation rules and conditions....” An important aspect of that objective is that “[i]n the EC regulatory framework, individual authorisations (i.e., licences) should be the exception, rather than the rule.”³⁹ To an extent, this

³⁹ Commission, “A forward-looking radio spectrum policy for the European Union: Second Annual Report,” COM(2005) 411, 6 September 2005, at page 8.

approach of relying on general authorisations has decreased the demand for a single European regulator or for mutual recognition of licences across national borders. In principle there is less pressure to obtain a single source of authorisations, because the burden of obtaining licences is decreased. Nevertheless, some respondents to the survey in this project indicated the burden could be decreased further through consistent application procedures and information requirements.

Conversely, due to the reach of the Regulatory Framework, some service providers are brought into the authorisation system for the first time. As the Swedish government noted when introducing its new electronic communications bill in 2002, “[f]or example, some Internet operators and broadcasting network suppliers will be covered by the new obligation to notify.” Some administrations, concerned about the possible extension of general authorisations into areas previously unlicensed, expressly exempted certain areas, such as Italy which adopted a Resolution in 2003 to exempt the owners of “retail businesses or public houses such as bars, hotels, pizzerias or tobacco shops” from any form of authorisation for merely offering terminal use in their establishments.

The extent to which general authorisations are required for new services will be increasingly relevant as new technologies and services develop, even if the burden of obtaining general authorisations is low. Questions on how to characterise services already are being raised, and we expect these types of questions to increase in the future. We identify three such questions in this subsection:

- whether self-provided services, without remuneration, are ECS – which could expose some gaps in the Regulatory Framework
- the division between ECS and publicly available telephone services (PATS) – which becomes important due to additional rights and obligations for PATS
- authorisation of associated facilities and services – which again could expose some gaps in the Regulatory Framework

Whether self-provided services, without remuneration, are ECS

If IP services migrate further to network edges as forecasts predict there are increasing prospects for more self-provided services, which may normally not involve payments to a service provider. But the definition of ECS indicates that they would “normally” be provided for remuneration. If services fall outside the ECS category due to the lack of remuneration, then NRAs may not be able to apply general authorisation conditions. An example could be Instant Messaging services. On the one hand, these services do not appear to be ECS as there is no direct remuneration, which means that NRAs cannot apply regulatory conditions to the service providers. On the other hand, the inability to apply conditions may actually be a Regulatory Framework benefit, as a means to avoid needless regulation (beyond data privacy consumer protection, which would apply through the *Data Protection Directive* independently of whether the service was an ECS).

The example of VoIP shows this situation. VoIP may or may not be an ECS. Some forms of VoIP (e.g., Skype) may not be an ECS – as Skype takes pains to point out. However, VoIP that connects to the public network may be an ECS (e.g., Vonage). There is general disagreement whether self-provided VoIP, for example by a business undertaking for its own purposes without using a service provider, also is correctly treated as an ECS and thus requires a general authorisation.

The limiting effect of the ECS definition could increase in the future if service providers rely on business models based on advertising revenues that do not directly charge the service user (and therefore are not “for remuneration”). Thus, the Commission may seek to consider the implications of the *Framework Directive* Article 2(c) ECS definition (“service normally provided for remuneration”) and for the question whether self-provided (non-remunerated) services can be defined as ECS and thus are subject to general authorisations. There is case law that says that indirect remuneration does not have to come directly from the user for a service to be a “service provided for remuneration”.

neration,” but this precedent comes from outside the communications field and so the question is not totally settled.⁴⁰

The division between ECS and PATS

There is additional debate over whether new services characterised as ECS also are a PATS under *Universal Service Directive* Article 2(c). This issue has arisen especially in the discussion of new VoIP services and will likely arise for other new technologies or services. The answer is important, because a PATS provider is subject to additional rights and obligations under the Regulatory Framework.⁴¹

There appears to be growing divergence amongst Member States as to whether VoIP is treated as PATS or not. At least one Member State (Austria) has created two categories of VoIP, based on the service structure, with one category outside the scope of general authorisations. France also has distinguished between VoIP and voice over broadband. The prospect of differing definitions and standards across the Community poses higher costs to industry, and hence possibly lower levels of consumer service or, more likely, services structured outside of particular Member States or even outside the Community to avoid regulatory conditions.

The issue of whether VoIP falls within the category of PATS is part of a broader question. It has been argued that the definition in Article 2(c) of the *Universal Service Directive* is circular, as it defines PATS in terms of obligations that are required by other provisions of the directive for any PATS providers, which then presumably means that a service that does not comply with those obligations is not a PATS in the first place (for example, if the service provider does not provide access to emergency ser-

⁴⁰ The court has held that a service does not have to be paid for by those for whom it is performed to qualify as “provided for reimbursement.” C-352/85 *Bond van Adverteerders* [1988] ECR 2085, §16. Cf. C-51/96 *Deliège* [2000] ECR I-2549, §46 (amateur athletics may constitute an economic activity).

⁴¹ The Commission already initiated a consultation and workshop on the treatment of VoIP, following submission of the Analysys study on “IP Voice and Associated Convergent Services,” 28 January 2004.

vices, then it is not a PATS, in which case it cannot be required to offer emergency service under Article 26 of the directive). This argument seems to be recurring in the VoIP debate, and again it becomes important because it affects whether VoIP providers must provide emergency services.

The suggestion has been made that service providers could seek declarations from NRAs that they are providing PATS under *Authorisation Directive* Article 9; but the countervailing question has been raised whether this is legally possible under Article 9, which calls on NRAs to issue declarations that an undertaking has submitted a notification for a general authorisation but says nothing about whether the undertaking is a PATS provider or not. Thus, the Commission should consider whether the language of Article 9 should be modified with additional guidance in the Regulatory Framework to permit NRAs to issue declarations that a particular ECS is also a PATS. Nevertheless, this approach would not foster harmonisation amongst Member States, so we recommend further attention to development of a harmonised approach towards such services with possible consideration of clarifying the definition of PATS in Article 2 of the *Universal Service Directive*.

Authorisation of associated facilities and services

There appears to be a gap in the Regulatory Framework with respect to authorisations for “associated facilities” and “associated services.” Associated facilities and services are legally distinct from ECN and ECS. The definition of associated facilities in *Framework Directive* Article 2(e) says they are enabling or supporting facilities associated with ECN or ECS, and gives the examples of conditional access systems and electronic programme guides. There is no definition of associated services in the Regulatory Framework.

Despite this reference to associated facilities and services in the *Framework Directive*, the *Authorisation Directive* does not refer to them and the directive’s scope is limited in Article 1 to ECN and ECS. Further, the definition of general authorisations in *Authorisation Directive* Article 2(a) applies only to ECN or ECS, again not mentioning associated facilities and services. By contrast, the *Access Directive* states that its scope and aim are to harmonise the way in which Member States regulate access to both ECN and associated facilities (Article 1(1)). This contrast could create an anomalous situa-

tion in which access related conditions could be applied to certain associated facilities and services under *Access Directive* Article 5, but there is no possibility to apply general authorisation conditions. This could mean that an intrusive measure (using *Access Directive* Article 5 powers) is the only option for applying conditions.

At least one respondent to our questionnaire suggested that the Regulatory Framework should apply general authorisations to associated facilities and services. And it has been recommended in other literature that component services used within next generation networks may technically not be ECN or ECS, but could instead be regulated as associated facilities. Relying on this approach as a default would not work if associated facilities are not covered by the *Authorisation Directive*. Thus, the Commission should consider whether or not associated facilities and services can be subject to general authorisations and conditions. Taking this step, however, could widen the range of activities that could be authorised – which many respondents opposed.

8.1.2 Degree of harmonisation

The general view on authorisations expressed in our questionnaire is that the system has simplified market entry. Recent Commission implementation reports have noted problems of detail, rather than a widespread failure to permit easier market entry through the general authorisation approach. But the general authorisation approach is not designed completely for harmonisation purposes – by definition, it allows NRAs to develop conditions for general authorisations that are based on national considerations. The more that NRAs apply conditions to general authorisations, the more scope there is for substantive divergence between the conditions that apply to the same networks or services.

On the procedural level there already is a substantial lack of harmonisation. For example, experience with obtaining general authorisations for cross-border satellite services demonstrates that burdens remain in researching the general authorisation procedures and requirements that are different in every Member State, and preparing documentation for the notices that vary amongst the Member States. These burdens may not be substantial for existing or large undertakings who treat them as simply another cost of doing business. Nor are they normally substantial for an undertaking providing network or services in a single Member State. However, for small and medium enterprises

seeking to provide cross-border service, it is our impression that the wide variation in procedures to obtain general authorisations can have a substantial effect on market entry.

The Commission has at least one tool under the Regulatory Framework to seek harmonisation of such conditions and procedures. *Framework Directive* Article 19 provides for harmonisation of provisions of the Regulatory Framework in general using comitology procedures, by reference to Council Decision 1999/258/EC.⁴² The Commission has relied on the Article 19 procedure at least on four occasions to apply to:

- conditions applicable to use of radio frequencies for RLAN services (Commission Recommendation 2003/203/EC);⁴³
- processing of caller location information (Commission Recommendation 2003/558/EC);
- provision of leased lines – major supply conditions (Commission Recommendation 2005/57/EC); and
- broadband electronic communications through powerlines (Commission Recommendation 2005/292/EC)

Despite this wide range of applications in a relatively short period, we have the impression that Article 19 is not sufficient for harmonisation purposes. At the end of the day,

⁴² Council Decision 1999/468/EC of 28 June 1989 laying down the procedures for the exercise of implementing powers conferred on the Commission, OJ L 184/23, 17 July 1999.

⁴³ This particular recommendation was for Member States to apply only one condition to a particular service, thus serving as a precedent for harmonisation of conditions under the *Authorisation Directive*. Commission Recommendation of 20 March 2003 on the harmonisation of the provision of public R-LAN access to public electronic communications networks and services in the Community, OJ L 78/12, 25 March 2003.

Article 19 results in a recommendation that NRAs can choose not to follow, and this process may be viewed as exceptional, so that it is not a tool for frequent application in the current Regulatory Framework.

We recommend two changes to Article 19. First, we recommend that Article 19 should be amended to permit the Commission to adopt decisions, rather than solely recommendations, similar to the way in which the Commission can adopt decisions under the *Radio Spectrum Decision*. We understand that this competence was debated when the Regulatory Framework was first adopted, but with the success of the Radio Spectrum Committee procedures, it seems reasonable to propose that a similar approach could be adopted for general authorisation conditions. Article 19 is already based on procedures involving the Communications Committee (CoCom) and comitology standards for advisory procedures. If the article were amended to permit the Commission to develop binding decisions, then the same structure could be retained, with mandates issued to CoCom if needed, based on comitology standards for regulatory procedures.⁴⁴ This procedure already is followed with respect to numbering resources, under *Framework Directive* Article 10(4), and CoCom already has been involved in the preparation of (at least one) Commission decision using comitology regulatory procedures.⁴⁵

Second, we recommend that Article 19 should explicitly apply to harmonisation of authorisation conditions, so that Member States would apply reasonably similar conditions to the same types of networks or services. Currently, this Article applies to recommendations on harmonised application of the Regulatory Framework in general. Given this general scope, Article 19 conceivably already could apply to Article 1(1) and Recital 38 of the *Authorisation Directive*, which state that the aim of the directive is to harmonise authorisation rules and conditions. Nevertheless, for clarity and emphasis we recommend that *Framework Directive* Article 19 be amended specifically to give

⁴⁴ Contrast Article 3 (Advisory procedure) and Article 5 (Regulatory procedure) of Council Decision 1999/468/EC.

⁴⁵ See Cocom Doc(06)04, “Draft Commission Decision on reserving the number range beginning with ‘116’ for harmonised numbers for harmonised European services: revised draft,” 6 February 2006.

the Commission competence to take action to harmonise regulatory conditions for general authorisations (we discuss conditions that apply uniquely to spectrum rights of use in the next section).

In particular, we recommend that this competence be established to harmonise authorisation conditions for pan-European services, similar to the way in which the Regulatory Framework already supports harmonisation of number resources for pan-European services. The *Framework Directive* Article 10(4) and Recital 20 provide explicitly that Member States shall support harmonisation of numbering resources to support development of pan-European services. There is no similar explicit goal stated for harmonisation of authorisation conditions to support pan-European services. *Authorisation Directive* Recital 7 says that the “least onerous authorisation system possible” should be implemented to support pan-European ECS and ECN. But there is no corresponding provision in, for example, Article 6 of that directive on conditions that support harmonisation efforts; nor is there a provision that gives the Commission competence to propose technical implementing measures for general authorisation conditions. The contrast between treatment of numbering resources and authorisations shows a gap in the Regulatory Framework – efforts to support pan-European services through number resources could be thwarted if the conditions for those services are not harmonised.⁴⁶

Other mechanisms also can be used for promoting harmonisation of regulatory conditions. As early as 2002, business consumer association INTUG Europe urged the European Regulators Group (ERG) to focus on harmonising conditions under the *Authorisation Directive*. The ERG has focused on harmonising remedies and other issues under the Regulatory Framework, and is expressly charged with the goal of contributing to a consistent application of rules.⁴⁷ Thus, the Commission should consider the extent

⁴⁶ We have seen precisely this situation with respect to ETNS, where the CEPT declined to allot numbering resources because conditions for providing service varied so widely across administrations. See section 8.4.2, *infra*.

⁴⁷ Commission Decision 2002/627/EC established the European Regulators Group for Electronic Communications Networks and Services, OJ L 200/38, 30 July 2002, as amended by Commission Decision 2004/641/EC, OJ L 293/30, 16 September 2004. The ERG has, for example, focused on the regulatory treatment of VoIP. ERG(05)12, “ERG Common Statement on VoIP regulatory approaches” (undated 2005).

to which the ERG, or some other body, can act as an impetus to adequate harmonisation. We do not, however, believe this approach can substitute for an explicit change to Article 19 in order to harmonise regulatory authorisation conditions, at a minimum for pan-European services. Nor would it make sense to seek harmonisation efforts on the same topic using both the ERG and comitology procedures under Article 19.

This harmonisation cannot extend to all conditions, because some conditions will necessarily diverge amongst the Member States. Certain conditions applicable to general authorisations in the Regulatory Framework clearly relate to matters that the principle of subsidiarity would demand be handled at the national or even local level. For example, condition A8 in the Annex to the *Authorisation Directive* relating to “consumer protection rules” and condition A5 relating to zoning/ town planning appear to require national definitions. There is likely value for general authorisations to have national flexibility in some respects, and reliance on self-regulation will imply variations in national practice. Thus, a revised competence in Article 19 to issue harmonisation decisions would not cover all those conditions listed in the Annex; for example, conditions A5 and A8.

8.1.3 Management of pan-European general authorisations

Our questionnaire requested views on whether a European Regulatory Agency should be established. Some respondents said yes, some said no; some focused on benefits of harmonisation while others noted that the regulator needed to be closer to the market. One respondent mentioned advantages of managing a single general authorisation and harmonised regulation of international roaming as a reason to favour a single regulator. This idea has floated around since at least the mid-1990s – the Commission received a

study in April 1997 on the subject of a European regulatory authority, which at the time advised that Treaty issues would be involved in creation of such an entity.⁴⁸

Before the possibility of a pan-European regulator is broached, however, the question must be posed whether pan-European general authorisations are needed. If a general authorisation requires only the filing of a notice, then what is the point of having a single regulator? If the system can be further simplified with more harmonised conditions and procedures, then at most the creation of a centralised clearing house or information portal, on the analogy of what the ERO has attempted in the past, would seem appropriate. It seems clear that a single authorisation structure for all services is unworkable. Hence, any single authorisation structure at the outset means a degree of duplication between the ERA and the pre-existing NRAs. As noted above, there are both costs and benefits to general conditions that are specific to Member States, and creating a duplicative structure may create new costs without creating large benefits.

As noted above, obtaining general authorisations for pan-European services is not a matter of filing a series of simple notifications. The experience of the ERO with a One Stop Shop for satellite authorisations (OSS), although initiated before the Regulatory Framework was adopted, showed the difficulties of coordinating forms and formats for applications. The ERO made a big effort to prepare a database and create a coherent approach towards applications for satellite earth station authorisations. It sought to create a common application form (CAF), which was never used. Its OSS was used, but suffered the immense drawback that only those CEPT administrations that had the most open application procedures ever participated in it – those administrations that actually had the more difficult application procedures and requirements did not respond to the OSS process. This imbalance caused some potential users of the OSS not to use it, because they had to go directly to national NRAs for the more difficult applications. Ultimately, the ECC killed the project in 2004, despite disappointment from industry,

⁴⁸ NERA and Denton Hall, “Issues associated with the creation of a European Regulatory Authority for Telecommunications,” April 1997, page 117 (“the ECJ has ... held that executive powers may be delegated by the Community provided they are subject to strict review”).

due to resistance to the programme from some CEPT administrations who felt that the OSS was not worth the bother.

The OSS experience provides the additional lesson that if Member States are free to add regulatory conditions to a pan-European authorisation, then the value of centralising some aspects of the procedure are of lessened value, because network and service providers must still establish liaisons with NRAs and understand national rules irrespective of the pan-European structure. Based on this experience, in our view a pan-European authorisation for any given service would only be of value if it covers all Member States in a mandatory fashion – the voluntary approach of the CEPT did not work because it delivered insufficient added value to potential users. Thus, any such authorisation should not be created on a voluntary “opt-in” basis or under a recommendation.

An alternative structure for pan-European authorisations would be a system of mutual recognition that leaves enforcement with NRAs while minimising barriers to entry. This approach still raises issues of implementation if the types of conditions are not harmonised. For instance, under *Authorisation Directive* Article 6(3) Member States must avoid applying conditions to general authorisations if those matters are covered in general legislation. Member States approaches may vary, however, in the scope of national legislation, which could mean there will be varying levels of authorisation conditions.

The principle of mutual recognition has a long history, stemming from the 1979 Court decision in *Cassis de Dijon* applicable to products⁴⁹ and more recent Commission communications on its application generally.⁵⁰ This principle has been applied to information society services in the *e-Commerce Directive* and to mutual recognition of

⁴⁹ Case 120/78, *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* [1979] ECR 649.

⁵⁰ E.g., Commission 1999 communication on the application of the mutual recognition principle, followed by Council Resolution of 28 October 1999 on mutual recognition (2000/C 141/02), OJ C 141/5, 19 May 2000.

conformity of terminal devices in the *R&TTE Directive*. At an early stage the Commission proposed a system of mutual recognition of national authorisations in the telecommunications field,⁵¹ but replaced this with the proposal for a common framework for general authorisations and individual licenses in 1995,⁵² later adopted as *Licensing Directive* 97/13/EC.⁵³

The advantage of applying mutual recognition to general authorisations could be to facilitate entry into the market, so that an operator or service provider would not need to obtain a new set of authorisations in each Member State in which it seeks to operate. This advantage would be large in Member States that impose onerous procedural requirements even for general authorisations, but the advantage would be small in other Member States with light notification or even no procedural requirements. The disadvantage of seeking to adopt a system of mutual recognition of e-communications authorisations is that it would resurrect an approach that the *Authorisation Directive* (and the *Licensing Directive* before it) was supposed to make unnecessary.⁵⁴ Because mutual recognition would be a substantial change from the underlying theory of the Regulatory Framework, and one for which we have not seen strong support in comments or in current literature, we do not recommend a mutual recognition approach applicable to all ECN and ECS. Nevertheless, the concept cannot be disregarded and could be used in Article 19 recommendations (or decisions, if our recommendation above is adopted).

So far, no pan-European services have been identified under the *Market Guidelines*. The likeliest candidate for such services are in the satellite sector. Several countries have declined to designate satellite distribution under Market 18 Broadcast Distribution,

⁵¹ COM(94) 41 final, 22 March 1994.

⁵² COM(95) 545 final, 14 November 1995, at page 4.

⁵³ Directive 97/13/EC of the European Parliament and of the Council of 10 April 1997 on a common framework or general authorizations and individual licences in the field of telecommunications services, OJ L 117/15, 7 May 1997.

⁵⁴ The Commission took this position in its proposal for the *Authorisation Directive* in COM(2000) 386, 12 July 2000, at page 3.

because they have no jurisdiction over the satellites that serve as an ECN for the service. In response to these submissions, the Commission noted that it might at a later date identify a transnational satellite broadcasting transmission market under Article 15(4) of the *Framework Directive*. Any action along these lines would raise the question of which Member State would apply *ex ante* regulation to the transnational ECN, and how conditions would be applied outside that Member State's boundaries. This issue relates to the management of pan-European authorisations and should be considered at the same time.

As a final consideration, enforcement of conditions would seem to be a matter beyond the competence of Community institutions, as enforcement generally is viewed to be a matter for national authorities. Thus, it is our conclusion that management of pan-European authorisations, no matter how structured, must always include participation of NRAs and application of some set of Member State standards.

8.2 Spectrum Aspects of Authorisations

8.2.1 The relation of spectrum management to authorisation of spectrum usage

By “spectrum aspects of authorisation” we refer to granting the rights of use for spectrum resources. This is not the same as spectrum technical management, which “does not cover assignment and licensing procedures,” but instead covers harmonisation and allocation of radio spectrum. (This distinction is made in the *Radio Spectrum Decision*, Recital 11.) A major activity in spectrum management, aside from enforcement, involves defining which spectrum bands are used for which services or applications. Using ITU technical terms, the *allocation* or *allotment* of frequencies involves this aspect of spectrum management. The activity of authorising spectrum to individual users – which is our topic here – is defined as the *assignment* of spectrum.

Nevertheless, these concepts remain closely related in practice, because the manner in which radio spectrum is allocated to particular services or applications will normally affect how the regulator subsequently assigns the spectrum. Thus, if a particular radio spectrum band is allocated to a service that presents high potential for causing or re-

ceiving harmful interference, or with technical conditions that require exclusive usage, that allocation generally requires the assignment of individual rights of use under the Regulatory Framework (as we describe further below). By contrast, if a particular band is allocated to low power applications defined with technical conditions that present low potential for harmful interference, that band could be used under general authorisations. General authorisations are normally seen as appropriate for spectrum bands where the risk of interference between users is low, partially because of the low power nature of services, but also because levels of demand are not expected to exceed the amount of spectrum available, i.e., congestion is not expected to occur. A decision to allocate or manage spectrum in a specific way can thus have a direct impact on how the use of that spectrum is authorised.

The *Framework Directive* links allocation and assignment in Article 9(1), which requires that Member States shall ensure that the allocation and assignment of radio frequencies “are based on objective, transparent, non-discriminatory and proportionate criteria.” Article 9(2) requires Member States “to promote the harmonisation of use of radio frequencies,” which encompasses allocation more than assignment issues, but also could extend to conditions of radio spectrum use, which we discuss in the next section.

As a result, our discussion of spectrum aspects of authorisations inevitably touches upon the allocation as well as the assignment stage of radio spectrum management. We limit our discussion of spectrum management, however, to issues that affect authorisation structures, which is the focus of this chapter.

8.2.2 Rationale for individual rights of spectrum use

An important element of the Regulatory Framework is that Member States shall “where possible” not require individual rights of spectrum use, in particular if the risk of “harmful interference” is negligible (*Authorisation Directive* Article 5(1)). If there is no such risk from using particular radio frequencies, then normally there is no justification under the Regulatory Framework for requiring individual rights of use and, instead, conditions for using those frequencies should be included in the general authorisation. The 10th Implementation Report noted that a few Member States require individual rights of use for any use of radio spectrum. While the 10th Implementation Report cau-

tiously says this approach “raises questions” of objective justification and proportionality, in our view this approach is *prima facie* inconsistent with the clear language of the directive.

The definition of “harmful interference” set forth in *Authorisation Directive* Article 2(2)(b) is based almost verbatim on ITU definitions.⁵⁵ In principle, this definition sets a high standard, with the requirement that the “interference” (also a defined term in the ITU Radio Regulations) be “harmful,” i.e., that which “endangers” functioning of a radionavigation service or other safety service, or “seriously degrades, obstructs or repeatedly interrupts” other non-safety services. The international rules specify three other levels of interference, ranging from basic “interference” that could produce any performance degradation, to “permissible interference” to “accepted interference.” The implication of this series of definitions is that only credible and serious risks of interference should lead to a requirement for individual rights of use. It is our impression, nonetheless, that administrations require individual rights of use and seek to protect services – and incumbents certainly argue for protection – relying on a lower standard than that of harmful interference (i.e., they want to avoid any interference or insist on relying on worst case assessments that are statistically improbable in the real world). Insistence on this high level of protection leads to disproportionate rigidity in spectrum management, and by extension to rigidity in the authorisation structure. The Commission should give consideration to the implications of this definition and whether clarification is needed.

NRAs argue that once spectrum is licence exempt it is extremely difficult to reverse, because no one knows who or where the users are. Nevertheless, the approach of not requiring an individual right of use is widespread in the radio spectrum field, especially for consumer applications. Administrations permit a large range of applications labelled “short range devices” (SRD) that include such diverse devices as car door

⁵⁵ Both ITU Radio Regulation 1.169 and the ITU Constitution, Annex provision 1003 (Geneva, 1992) define “harmful interference.” If the Commission considers changes to the definition of “harmful interference” in the Framework, it should consider the impact on international obligations and also whether the change away from ITU wording would have any impact on judicial interpretation of the phrase.

openers, medical devices used for telemetry, communications devices on building cranes and, increasingly in the future, a substantial range of RFIDs and WiFi broadband applications.

These unlicensed devices will play an increasingly important role for many electronic communications applications, such as eHealth, eSafety and other important aspects of i2010 and beyond. Other examples of unlicensed devices outside the SRD field include satellite terminals for mobile and interactive communications. Many of these devices are operated on a licence exempt basis under ECC decisions in conjunction with the *R&TTE Directive* 1999/5/EC. There has been disagreement in recent years over whether the application of the *R&TTE Directive* means that the licensing exemption approach taken by the ECC is superseded.

The *R&TTE Directive* establishes a structure for placing radio equipment and telecommunications terminal equipment on the market, as well as free movement and putting that equipment into service. *R&TTE Directive* Article 7(2) permits Member State to restrict putting equipment into service for reasons relating to radio spectrum. This provision thus refers the issues back into the Regulatory Framework, which establishes the standards for radio spectrum regulation.⁵⁶

Market players who operate under licensing exemption decisions support them as a means to obtain a formal instrument indicating that their use of the particular spectrum should be exempt from licensing, and thus should be subject at best to general authorisations. They say that an explicit decision is more helpful than relying solely on the principles of the *R&TTE Directive*. Pragmatically, there is substantial and consistent comment from industry that NRA practice for regulating terminals varies amongst ad-

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The *Authorisation Directive* Annex condition A17 provides that general conditions relating to spectrum use must conform to *R&TTE Directive* Article 7(2). That article, in turn, says Member States may only restrict putting radio equipment into service for reasons, inter alia, related to the “effective and appropriate use of the radio spectrum....” The wording of this standard is not identical to standards for limiting the number of rights of use in the *Authorisation Directive* or the regulatory principles in the *Framework Directive*.

ministrations, and therefore industry values highly the clarity of ECC statements that certain terminals or classes of terminals should be licence exempt.⁵⁷

One common element of these devices is the assessment that due to their ubiquity or consumer focus, individual rights of use are infeasible (for example, imagine licensing car door openers on an individual basis). A substantial base of devices are operated on an altogether unlicensed basis, subject to technical conditions set by ETSI standards or ECC conditions implemented in national laws or both. A challenge under the future Regulatory Framework will be to set sufficient legal conditions that these devices are used consistent with general policy objectives, especially to the extent these devices are not ECN and, hence, fall outside the general authorisation structure. Because this issue becomes more relevant to the *R&TTE Directive*, however, we believe it is beyond the scope of this study.

8.2.3 Harmonisation elements of the authorisation structure

The twin concepts of harmonisation and flexibility are increasingly seen to be essential elements of spectrum management and authorisation structures. The goal of harmonising use of radio frequencies already is explicitly established in *Framework Directive* Article 9(2). As consumer ICT applications based on spectrum use increasingly become important, concepts of economies of scale and business certainty support harmonisation of spectrum management structures within the Community (and globally). No parties responding to the questionnaire challenged the concept of harmonisation as a goal – on the contrary, some insisted that harmonisation is absolutely vital to the development of certain electronic communications sectors, such as satellite communications. In fact, they said there is not enough harmonisation, which

⁵⁷ The Council has invited the Commission to further ensure a “coherent implementation” of the *R&TTE Directive* and the Radio Spectrum Decision, Council Conclusions 15533/04 of 3 December 2004, which we would recommend be extended to the interaction of the *R&TTE Directive* with the entire Framework. This issue is under consideration by the ECC, with a report pending in mid-2006.

could be a question of implementation instead of a sign of needed change to the Regulatory Framework.

As technology and applications change rapidly, the concept of flexibility is also coming to the forefront as a prerequisite both for spectrum management and authorisations. While noting that “flexibility and harmonisation are not incompatible,” a report from the Electronic Communications Committee within the CEPT notes:⁵⁸

The changing spectrum management environment and the increasing pace of change require improvement of the spectrum management system, including increased flexibility, in order to be able to respond quickly to new technological and commercial developments so as to make optimal use of the radio spectrum and promote European competitiveness.

This position seems to reflect a consensus view that improvement to the current spectrum management system is needed. Nevertheless, this view does not necessarily mean that changes to the Regulatory Framework pertaining to authorisations involving spectrum are also needed. It does mean, however, that harmonisation should also include attention to the ways in which spectrum management creates a need for *flexible* responses to the market.

Given the strong emphasis in recent spectrum management theory and policy discussion, the Commission should include an explicit reference to the need for flexible measures in future wording of the Regulatory Framework with respect to spectrum and

⁵⁸ ECC Report 80, “Enhancing Harmonisation and Introducing Flexibility in the Spectrum Regulatory Framework,” 2 March 2006, at page 15.

rights of use.⁵⁹ The term “flexible” does not now appear in any context relating to spectrum authorisations or management in the Regulatory Framework. Article 8(2)(d) of the *Framework Directive* provides the general policy objective of “encouraging efficient use and the ensuring effective management of radio frequencies...” The requirement for “effective and efficient” policy is also set forth in *Framework Directive* Article 9(2) and *Authorisation Directive* Annex condition B2. While some parties have called for clarification of what “efficient” spectrum policy might be, we are not convinced that further detail at the level of primary (or even secondary) legislation is possible or useful. But we do believe that reference to flexibility is needed as an additional element to define what “effective and efficient” means.

8.2.4 Harmonisation of conditions for right to use spectrum

As noted above, *Authorisation Directive* Article 1(1) states that the aim of the directive is to harmonise and simplify authorisation rules and conditions. Nevertheless, the list of conditions that can be applied to rights of use for radio spectrum contained in Annex B of the directive is not simple, and there is no explicit structure in the *Authorisation Directive* to harmonise those conditions. We identify a series of issues below that need to be addressed.

The burden of proof for conditions

Authorisation Directive Recital 15 states that conditions attached to specific rights of use should be limited to what is “strictly necessary.” Article 6(1) says that conditions for either general authorisations or rights of use must be “objectively justified” as well

⁵⁹ See, e.g., Council Conclusion 15530/04 of 3 December 2004 on the First Annual Report on Radio Spectrum policy in the European Union. This conclusion expressly invites the Commission to balance the benefits of harmonisation with “more flexible adaptation to local market conditions.” The CEPT also has adopted an explicit policy goal on introducing flexibility. CEPT ECC Policy Goal number 5 is to “[i]ntroduce more flexibility in the mechanisms of frequency spectrum management to respond more effectively and in a timely manner to changing market conditions and increase opportunities for innovative technologies and applications, while providing a sufficient degree of certainty for spectrum users.” The CEPT ECC Policy Goals are available, in undated format, at www.ero.dk under dropdown menu “ECC Activities” – “ECC.”

as “non-discriminatory, proportionate and transparent.” These requirements seem to place a burden upon spectrum managers and NRAs responsible for developing and justifying conditions.

We do not believe the Regulatory Framework needs amendment to make this burden clearer – although in our experience spectrum managers may not always focus on these legal requirements. However, it is useful to identify this burden at the outset, because it implies that Member States must strictly justify any such conditions.

Designation of rights of use is too broad

The Annex of the *Authorisation Directive* sets forth the conditions that can be applied to rights of use, commencing with Condition B1 “Designation of service or type of network or technology for which the rights of use for the frequency has been granted, including, where applicable, the exclusive use of a frequency for the transmission of specific content or specific audiovisual services.”

This condition is problematic because designation in this sense creates a tension, if not an outright conflict, with the *Framework Directive* requirement that regulation be technologically neutral, “that is to say that it neither imposes nor discriminates in favour of the use of a particular type of technology....” (Recital 18). This neutrality requirement is laid out in Article 8(1) paragraph 2, which requires Member States to ensure that NRAs “take the utmost account of the desirability of making regulations technologically neutral.” The neutrality principle thus applies to all conditions and regulations in general. It is not an absolute, as Recital 18 also provides that it “does not preclude the taking of proportionate steps to promote certain specific services where this is justified,” giving the example of digital television as a method to increase spectrum efficiency.

The CEPT has recognized this tension. CEPT ECC policy goal 11 and explanatory text on frequency designation refer to these provisions of the *Framework Directive*, and also state that “any such designation must be objectively justified.” Nevertheless, the goal also continues, echoing Recital 18, “although this does not preclude the taking of proportionate steps to promote certain specific services where this is justified.”

The ECC's Report 80 issued in March 2006 points to Annex condition B1 to maintain that technological neutrality does not contradict identifying specific technology in regulations.⁶⁰ The report essentially says that technology neutrality is required except where it is justified not to require it. So long as Annex condition B1 explicitly says that Member States can designate services, types of networks or technology, the ECC characterization seems an accurate statement. An observer or court assessing this policy would be hard pressed to find any standard at all, and this policy gives an insufficient presumption in favour of technology neutrality.⁶¹

We considered whether to recommend that Annex condition B1 should be deleted outright. There is a need for the "designation" conception in certain circumstances, however, because in certain bands there is a need to ensure through administrative controls that interference is avoided and sometimes the only means to achieve this is to specify types of technology. Moreover, certain allocations or allotments of spectrum on the international level are made to specific broad ranges of technology (e.g., allocations to specific satellite services such as Mobile-Satellite Service or Broadcasting-Satellite Service (MSS or BSS) in the ITU Radio Regulations). Nevertheless, the current wording of condition B1 is overly broad and permits any type of designation. Almost by definition the "designation" process is an administrative action to pick winners and losers, and to limit the number (or the types) of rights of use to be granted in a frequency

⁶⁰ ECC Report 80, cited above, at Executive Summary page 6, section 3.2.4 and also page 34, section 3.3.4, both on "technological neutrality." Report 80 states that it is necessary "to balance the principle of technology neutrality and the aim of effective and efficient spectrum use." *Id.* at page 32. Due to the language of the *Framework Directive* Article 8, it is a difficult question whether one concept is of equal weight with the other, and how precisely a regulator would balance them against each other.

⁶¹ We do not see guidance from international rules, because the ITU uses the term "to designate" in several contexts, usually meaning that a type of application or service is "designated" to use certain frequencies that have been "allocated" to a formal type of "Service" in the ITU nomenclature. In 2005 the ECC adopted a definition of "designation" that requires ECC member administrations to assess whether the market demand for a service is sufficient to exclude other services from the harmonized band. ECC Rules of Procedure, paragraph 12.1.1bis, edition 4 (24-28 October 2005). We note that for EU Member States, such decisions can only be taken consistent with *Framework Directive* Articles 8 and 9, as well as Article 7 of the *Authorisation Directive* on limiting the number of rights of use to be granted. Basing designations on "market demand" determined by regulators may be inconsistent with Community standards unless carefully made within standards set by the Regulatory Framework.

band. We recommend that at a minimum the condition be amended or language introduced in the directive to make clear that the designation process must be “strictly justified” and subject to the technology neutrality principle.

The designation condition is even more inconsistent with the concept of spectrum trading, which we discuss in section 8.3 of this chapter. To the extent a designation condition is attached to a right of use, the “tradability” of that right is impaired. This effect is another reason why Annex condition B1 should be amended so that it is an exceptional approach, rather than being the rule as appears in many CEPT decisions currently.

WAPECS as a non-designated service

In early 2004, the Commission requested the RSPG to prepare an opinion on a coordinated Community spectrum policy approach for wireless communications, which the RSPG subsequently adopted in November 2005.⁶² The resulting Wireless Access Policy for the Electronic Communications Services (WAPECS) concept is a framework for providing ECS within a set of frequency bands in which a range of services and networks can be offered on the basis of technology and service neutrality. The concept is supposed to signal a move away from “too narrowly specified allocations and applications.” In our view, if the concept moves away from reliance on traditional ITU allocations and applications, then it moves even further away from “designations,” which in the CEPT parlance would normally be more specific than “Service” allocations.

One comment from the RSPG’s WAPECS drafting group was that the concept seeks to “move the regulatory process away from trying to predict the future.” This again is the antithesis of the “designation” approach, which at least in the CEPT definition relies on spectrum managers to assess whether particular services need spectrum in the future or not. The RSPG opinion emphasises the importance of both technological and service

⁶² RSPG, “Opinion on Wireless Access Policy for Electronic Communications Services (WAPECS),” RSPG05-102 final, 23 November 2005. We recognise this opinion does not necessarily reflect Commission policy.

neutrality for WAPECS bands (Opinion at paragraphs 5.5.3 and 5.5.4). As such, WAPECS could provide a concrete implementation of the technology neutral approach that is not sufficiently implemented under the current Regulatory Framework.

The RSPG opinion identified one theme amongst the comments that “there needs to be an alignment of national procedures as national regulation should not cause regulatory barriers.” The RSPG does not identify whether the current Regulatory Framework would be sufficient for this alignment. We believe this alignment may require changes to *Framework Directive* Article 19, *Authorisation Directive* Article 8 or both. Alternatively, a specific provision on WAPECS could be added to *Framework Directive* Article 9 on management of radio frequencies, to provide clear legal authority for necessary technical implementing measures.

Service neutrality

As noted above, one aspect of WAPECS is the emphasis on service neutrality, which has been defined as “any service can be provided in the spectrum you use.”⁶³ Strictly speaking, this principle is not contained in the Regulatory Framework. And similar to technological neutrality, it cannot be an absolute principle. The fact that some services are viewed to be required for universal service commitments indicates that there is no neutrality with respect to them, just as a service of general economic interest would not always be treated neutrally. The example given in the Framework Directive of digital television for where technological neutrality is not required may actually be a better example of where it would be proportionate not to require service neutrality, because digital television is delivered by a variety of technologies but is an overarching type of service.

⁶³ Speech by Viviane Reding, “Reaping the full benefits of a more coherent European approach to spectrum management,” European Spectrum Management Conference, 29 March 2006. See also “A market-based approach to spectrum management in the European Union,” COM(2005) 400 final, 14 September 2005, section 5.6 (“[s]ervice neutrality means that the choice of service offered via spectrum usage rights is made by the rights holder.”)

For many other services and applications, service neutrality would minimise constraints on spectrum use so that users, industry and standards bodies could identify the most efficient use. It is also a concept associated with spectrum trading, which we discuss in a subsequent section of this chapter and generally support. To the extent that service neutrality is required in order to foster efficient use of spectrum rights under a trading regime, there needs to be some legislative support for the concept.

To obtain this legislative support, we recommend that the principle of service neutrality be included in the Framework Directive Article 8 on policy objectives and regulatory principles. It would likely be given the same level of priority as technological neutrality and could well be inserted into the same provision of Article 8(1) second paragraph, as that provision might be amended during the review.⁶⁴

Other conditions are broadly worded

Other conditions in the *Authorisation Directive* Annex for rights of use are very broad as well, in particular condition B7 (“any commitments the undertaking made during a competitive or comparative selection procedure”) and condition B8 (“obligations under relevant international agreements relating to the use of frequencies”). These terms give broad authority to spectrum managers to apply conditions. The theory of condition B7 seems to be that if an undertaking is prepared to offer what the regulator is not legally entitled to require, there is little to restrict the resulting condition. However, such a condition could undercut harmonisation efforts or development of pan-European services and networks. For this reason we refer back to our recommendation that a general provision should be added to the *Framework Directive* or *Authorisation Directive* to promote harmonisation of conditions, which could be used to restrain the scope of this condition B7.

With respect to condition B8, it is little appreciated that legally all Community obligations under ITU radio regulations have always been made subject to the obligations

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To the extent this recommendation is adopted, it may mean there is no need for the preceding recommendation for a specific provision on WAPECS, because WAPECS would be supported by the overall policy objective for technological and service neutrality.

being consistent with Community law by a standard reservation that the Community takes. It may be worthwhile to caveat the otherwise open-ended condition B8 with the phrase “obligations consistent with this directive under relevant international agreements...”

8.2.5 Harmonisation of selection procedures for spectrum rights of use

Article 8 of the *Authorisation Directive* was apparently designed to provide for harmonised assignment of radio frequencies where that use has been harmonised.⁶⁵ The language of the provision is unclear and substantial amendments are needed to make it meaningful. The article, with our comments, reads:

Clause	Comment
Where the usage of radio frequencies has been harmonised, ...	This provision does not define who does the harmonisation; presumably this harmonisation would be accomplished through the Radio Spectrum Decision – but in several contexts the Commission has recognised that most frequencies are not harmonised at EU level
access conditions and procedures have been agreed ...	It is unclear who is to agree to access conditions and what procedures are implicated
and undertakings to which the radio frequencies shall be assigned have been selected...	It is unclear who would have chosen the undertaking(s) or what procedures might apply to that selection
in accordance with international agreements and Community rules,...	Non-specific reference
Member State shall grant the right of use for such radio frequency in accordance therewith.	If the undertaking has been selected to use the radio frequencies as in the earlier clause, this statement is at best unclear

⁶⁵ See Presidency Note, “Council response to key demands of the European Parliament,” 6 December 2001, concerning the draft *Authorisation Directive*. The Commission proposal said this article “ensures the correct implementation of agreements for harmonised assignment of radio frequencies (e.g., as for [satellite-personal communications services] (S-PCS) at national level without restrictions, alternations or delays.)” COM(2000)386, 12 July 2000, at page 6. It appears this article was intended to enforce decisions under the (future) *Radio Spectrum Decision*. DG Information Society Working Document, “The authorization of electronic communications networks and services,” 27 April 2000, at page 10.

Provided that all national conditions attached to the right to use the radio frequencies concerned have been satisfied in the case of a common selection procedure, ...	There is no common selection process provided in the Regulatory Framework
Member States shall not impose any further conditions, additional criteria or procedures which would restrict, alter or delay the correct implementation of the common assignment of such radio frequencies.	There is no common assignment process in the Regulatory Framework and this clause is not meaningful in light of the preceding clause (“provided that all national conditions have been satisfied ... Member States shall not impose further conditions”)

Recital 24 does not make this article any clearer by stating that “[w]here the harmonised assignment of radio frequencies to particular undertakings has been agreed at European level, Member States should strictly implement such agreements in the granting of rights of use of radio frequencies from the national frequency usage plan.” The main problem is that there is no common assignment process or way to grant radio frequencies to a particular undertaking at the European level in the Regulatory Framework.

Article 8 is insufficient to establish that the same spectrum users get the same spectrum in all Member States, because key elements that are presupposed in the various clauses of the article simply do not exist. If this article was originally targeted at satellite personal communication service networks, then its focus now is too narrow. There is a need for more precision in this article, and likely new provisions, in order to accomplish an objective of harmonised assignment procedures. If the objective is a common selection process, then entirely new provisions are required.

In the section on management of pan-European general authorisations, we posed the question of whether such authorisations are needed in the first place. The same question applies to the need for pan-European rights of use. There are many pan-European uses of spectrum that are provided by national service providers, e.g., GSM and other mobile services. There are some pan-European uses of spectrum that are accomplished through avoiding authorisations altogether, such as SRD applications or other licence exempt facilities. Many satellite services involve pan-European uses of spectrum, but the authorisation process is a combination of a single national authorisation for the space station, and multiple national rights of use (or exemptions) for the services pro-

vided to ground-based terminals or earth stations. A Community licence for satellite space stations would be inconsistent with the ITU Radio Regulation structure (also it would be politically very difficult to adopt). But pan-European authorisations for the services provided by satellite space stations or for the ground based terminals could provide a substantial benefit to the satellite sector and its consumers, by avoiding the need to satisfy diverse licensing procedures within the footprint of the satellite. There could be other future usages of spectrum that could also justify a pan-European authorisation, for example some automotive applications being discussed in the eSafety programme and Intelligent Car Initiative.

8.2.6 Timing Issues – duration of rights of use and renewals

A final issue relating to spectrum involves the duration of both rights of use and renewal activities. *Authorisation Directive* Article 5(2) provides in its second paragraph that if rights of use are granted for a limited period of time, the duration of that period shall be “appropriate for the service concerned.” Annex condition B4 permits NRAs to impose maximum duration conditions. These provisions provide no guidance to NRAs, but we have seen controversy arising from decisions on the duration of rights of use.

There also appears to be ambiguity in the Regulatory Framework on the approach to licence renewals or transitions, e.g., for GSM spectrum rights of use renewals or transitions from 2G to 3G systems. Some regulators believe the Regulatory Framework obliges them to offer the spectrum to everyone in the market and then only if there are sufficient licences for all the applicants are all the licences automatically renewed. Other regulators automatically renew the GSM licences. The issue of renewals is likely to be specific to each type of network or service, the amount of investment, and the demand for the related spectrum.

These issues could become more important in the future, however, as long terms for rights of use could obstruct Community measures towards spectrum flexibility or trading, especially to the extent such measures apply across all Member States, in which event a lengthy licence term could impede applying the measure to incumbent spectrum users.

It is difficult to see how specific terms for licensing or renewals could be specified in a directive in a “future proof” manner. Thus, we do not identify changes in the Regulatory Framework for issues of licence duration or renewals, but instead guidance under the Regulatory Framework and efforts towards best practice and benchmarking should be sufficient. These issues likely can be resolved under the Regulatory Framework, based on harmonising efforts undertaken through CoCom or the ERG.

8.3 Impact of Spectrum Trading on Rights of Use

The authors previously prepared a study for the Commission on secondary trading of radio spectrum.⁶⁶ We take that previous study as a starting point for assessing what changes to the Regulatory Framework should be considered, without re-assessing the benefits and costs of spectrum trading shown in the previous study.

To expand our analysis of recommended changes that should be considered to the Regulatory Framework, we have reviewed public comment on our previous spectrum trading study and subsequent national proceedings. Few responses to the questionnaire in this project were relevant – some few parties referred to the need for spectrum trading, but with less detail than the extensive consultation results that resulted from the spectrum trading study.

8.3.1 Harmonisation elements from spectrum trading – facilitating market entry

The lead recommendation of our spectrum trading study was that the Commission should initiate action to obligate Member States to introduce spectrum trading and lib-

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Analysys, DotEcon and Hogan & Hartson, “Study on conditions and option in introducing secondary trading of radio spectrum in the European Community,” May 2004 (“spectrum trading study”). As in the spectrum trading study, in this study we also distinguish between trading, which is the transfer of spectrum usage rights between parties in a secondary market; and liberalisation, which is relaxation of restrictions on the services and technologies associated with spectrum usage rights.

eralisation through the use of appropriate binding measures. One of the main reasons for this recommendation was that reliance on voluntary implementation would not deliver sufficient coordination over a reasonable timeframe, especially given the impact on the Internal Market. Our previous study said, as of early 2004, that practice varied immensely amongst the Member States, with some Member States still in the process of discussing whether regulations are needed, and wide variations amongst the Member States in their proposals or practices for how spectrum trading would be implemented. In our view, that situation persists, two years later.

One of the basic elements of spectrum trading is to establish a market, and thereby market pricing, for spectrum resources. As we earlier concluded, this increased transparency can raise awareness of market entry opportunities and thus reduce barriers to entry. The opportunity to obtain access to spectrum through market mechanisms can lower barriers to expansion and permit new entry. We also stressed the beneficial impact on innovation and the creation of incentives to develop and launch new services.

Commenting parties have stressed that fragmentation or additional interference could arise from spectrum liberalisation, decrease market entry possibilities and raise the price of service. We will not re-enter into this debate, but the Commission must take both views into account. One concern we have seen in comments, ironically, is that Community action to foster spectrum trading and liberalisation could thwart “early adoption” by Member States taking the lead in this field. It would seem that Community legislation could be drafted that obliges all Member States to move forward, without necessarily stopping advance guard action by Member States that seek to obtain the early economic advantages of spectrum liberalisation.

8.3.2 Recommended changes to current provisions

The set of recommendations issued in the spectrum trading study provide guidance for changes that should be considered to current Regulatory Framework provisions. We thus “reissue” those recommendations as changes recommended to the Regulatory

Framework and include them in Annex C to this study. Most of these recommendations are consistent with the Commission's list of next steps towards spectrum trading, contained in its September 2005 communication.⁶⁷

Of most importance, *Framework Directive* Article 9(3) provides that Member States "may make provisions for undertakings to transfer rights to use radio frequencies with other undertakings." Article 9(4) provides details, including some procedural requirements, for trading regimes. Our spectrum trading study indicates that this permissive provision should be made mandatory, and that Article 9(4) should be expanded with further details and generic features of a mandatory spectrum trading regime. To the extent that spectrum trading and liberalisation are covered by the term "flexible", we now further recommend that this term be included as an Internal Market objective, as we suggest above.

A theme running through comments to the spectrum trading study, and also set forth in the RSPG recommendation on spectrum trading, is that the liberalisation of spectrum use should be achieved progressively, on a band-by-band basis, rather than as a disruptive "big bang."⁶⁸ The RSPG's approach indicates there would be Member State opposition to far-reaching efforts to mandate spectrum trading and liberalisation. The Commission will need to consider how far change to the Regulatory Framework can go in mandating this approach. Notably, the RSPG's cautious approach virtually by definition would rule out cross-border spectrum liberalisation efforts in all but the very longest term, which as our spectrum trading study indicated creates substantial opportunity costs.

⁶⁷ COM(2005) 400 final, cited above. Elements of the Commission's next steps can be met under the current *Radio Spectrum Decision* in the medium term, but we recommended that binding measures be supported in the Regulatory Framework itself. The Commission already stated it intends to accomplish this goal in its review of the Framework.

⁶⁸ RSPG Opinion 04-54 Rev. final, 19 November 2004. The RSPG suggests a very cautious phased introduction, taking minimum risk, carefully monitored, with *ex ante* regulation of any proposed changes of spectrum usage on a national basis. Under these circumstances, the benefits to the Internal Market could be expected to be minimal for the next decade due to the long delay before any form of trading would be introduced that supported cross-border usage.

Our spectrum trading study also identified a limited number of areas in which a coordinated approach is recommended, in order to promote efficiency and minimise costs of both implementation and trading. These included:

- a commitment not to impose prior restrictions on the type of trades possible, the reconfiguration of usage rights or the emergence of trading mechanisms
- clear rules on the association of rights and obligations of spectrum users and how these transfer under a spectrum trade
- ensuring Member States adopt orderly and transparent approaches towards renewal of licences, to avoid uncertainty over licence expiry inhibiting trading and disincentivising investment
- retaining a common set of minimal powers to reclaim spectrum, for example if required for pan-EU harmonisation
- an obligation that interference management regimes be maintained in a manner consistent with trading and liberalisation
- defining a minimum set of information that parties to a spectrum trade must disclose⁶⁹

In particular, we recommended that even if the Commission does not mandate trading and liberalisation in each country, it is still worth mandating the form of implementation (in areas listed in Section 8.2.3 of the study, where coordinated approach is

⁶⁹ See generally, spectrum trading study at “Overview,” paragraph 6, and Chapters 6 at pages 16-17. We do not include the recommendation for limited coordination for spectrum trading frameworks relating to competition law matters, from Chapter 8 of that study, as that is not a regulatory function of the Framework and thus not pertinent to this work.

recommended) for those countries that voluntarily wish to move ahead with trading and liberalisation.

The spectrum trading study assessed (and we continue to agree) that coordination goals could be mainly achieved through technical implementation measures, through the Radio Spectrum Committee. To achieve these coordination goals over the long term, the language of the revised Regulatory Framework must ensure that there is clear Community policy in favour of coordination for spectrum trading, so there could be no question of the authority of the RSC to adopt technical implementation measures for these aspects. This step could be taken either through an additional policy objective and regulatory principle added to *Framework Directive* Article 8. Alternatively, additional provisions could be added to *Framework Directive* Article 9 on management of radio frequencies; for example, providing that interference management regimes shall be consistent with trading and liberalisation, and making a change in Article 9(3) that currently permits but does not require any level of spectrum trading.⁷⁰

There may remain areas in which coordinated action should be encouraged or enforced, through changes to the Regulatory Framework, because technical implementation measures that require qualified majority through the RSC are either unrealistic or would be unduly delayed. Thus, Community standards for reclaiming spectrum rights, i.e., for “refarming” or clearing a band of existing usage, would both add greater certainty for existing users and also help future decisions on which spectrum bands are best suited for trading and liberalisation. These standards need not be set forth in the Regulatory Framework, but the explicit ability to do so on the Community level through technical implementation measures may aid future spectrum management. Another example is creating an EU-wide one-stop portal for information on spectrum markets, suggested in the Commission’s September 2005 Communication. As we discussed above, a voluntary approach for spectrum or authorisation information will not work, and any such

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It may also be necessary to amend the last sentence of Framework Directive Article 9(4) that says where radio frequency use has been harmonised, no transfer shall result in a change. New policies with respect to spectrum trading or WAPECS may harmonise radio frequency use in a broad sense that includes changes of use, so that this clause could be troublesome.

approach must be mandatory. Thus, we recommend that this approach be required in amendments to the *Authorisation Directive*.

One final related matter, discussed later in this study, is how interference complaints should be managed. In light of our findings in Chapter 10 on dispute resolution, and the general lack of cross-border resolutions, we recommend that the Commission should adopt further provisions for dispute resolution specifically for complaints of cross-border interference, especially as such disputes could arise more frequently in a spectrum trading context where users have the right to change the use of spectrum. *Universal Service Directive* Article 34 currently would not extend “out-of-court dispute resolution” to spectrum issues, because that article applies only to issues covered by that directive. *Framework Directive* Article 21 provides that NRAs should resolve cross-border disputes, but does not include such disputes within the sphere of out-of-court dispute resolution techniques. That article states that NRAs should decline to resolve disputes if “other mechanisms, including mediation,” are available. Explicit provision should be made that such other mechanisms shall be available, in light of the strong Commission policy described in Chapter 10 to foster such mechanisms.

Even though the spectrum management agencies likely will continue to be responsible at least in part for such complaints, due to their expertise and history of managing enforcement, it would foster Internal Market objectives to require explicitly that spectrum users negotiate interference management arrangements in good faith, and that administrations should foster harmonised approaches for handling disputes, using out of court mechanisms discussed in our Chapter 10, where parties cannot resolve issues independently, possibly bringing spectrum issues within the scope of *Universal Service Directive* Article 34. The Commission’s September 2005 Communication refers to approximation of rights, but there needs to be emphasis on enforcement and dispute resolution relating to rights of use as well.

8.4 Numbering Aspects of Authorisations

8.4.1 Impact of numbering on Internal Market objectives

As part of this project we directed one question to market players concerning number allocation, specifically about obstacles to cross-border access to telephone content services.

In this section we focus on the impact of numbering practices for content and premium rate services (PRS). We also discuss how numbering is allocated to VoIP service. That latter topic has been widely studied and is the subject of other Commission analyses, including one following from the VoIP study that Analysys finalised in January 2004 and the ensuing public consultation. Instead of duplicating that discussion, we now focus on numbering allocation issues, rather than regulation of the services to which the numbers would be allocated – although as we will see, the lack of harmonised regulatory conditions has been used as the reason to deny numbering resources to certain services.

The topic of regulating PRS was the subject of a study on the market, including the regulatory structure, submitted in June 2005 (the “PRS Study”).⁷¹ In particular, the PRS Study recommends the development of a Community instrument, possibly a directive, on PRS together with a code of conduct for pan-European PRS and memorandum of understanding between PRS-responsible authorities. We do not review in any detail the numerous recommendations of the PRS Study, but agree that the scope of the issues raised in that study are not likely to be sufficiently addressed solely through implementation of *Framework Directive* Article 10 and *Authorisation Directive* Article 6 conditions related to numbering.

⁷¹ Cullen International and WIK Consult, “Study on pan-European market for premium rate service,” 24 June 2005.

Responses to our questionnaire on numbering varied, with modest detail. We received only a few opinions on geographic numbering. Support for number allocation at the Community level for NGN and media services was limited (with few comments), and the market for pan-European services was held to be small (due to cultural and language factors). Freephone numbers nevertheless were viewed to be important at the Community level.

Typical of the comment in favour of greater Community involvement in numbering was the input from a mobile operator that “different numbering regulations prevent consistency of delivery; geographic numbering needs to be rethought.” By contrast, another operator providing mainly fixed network services said “national numbering is not a barrier to completion of the Internal Market. NGN difficulties are interconnection issues.” An alternative fixed voice provider stated that the way numbers are assigned at national level is not necessarily a problem. But the same service provider also reported that there needs to be consistency in the conditions attached, number availability and reselling. We did not see a consistent pattern in our (limited) sample of responses. Those few that did comment on the demand for services using non-geographic services agreed there would be such demand up to 2015.

The issues we are seeing indicate that obstacles relating to PRS and other pan-European content services are less related to number allocation practices and more to the regulation of the basic service itself, such as the divergence amongst Member States on authorisation conditions that are applied. Many of those regulatory issues go beyond the Regulatory Framework, as they involve content matters (not subject to the Regulatory Framework) or information society services that fall within the e-commerce sphere.

8.4.2 Harmonisation aspects of numbering

Framework Directive Article 10(4) provides that Member States shall support harmonisation of numbering resources where necessary to support development of pan-European services. That provision also permits the Commission to take appropriate technical implementing measures in this field. This structure gives a tool that could be

used if the need arises for further development of Internal Market objectives with respect to numbering.

The annex to the *Authorisation Directive* contains a list of conditions that can be applied to rights of use for numbers. We are not aware of any substantial or sustained harmonisation efforts for these conditions – but we also caution that CEPT efforts through the ECC Working Group on Numbering, Naming and Addressing (WGNNA) are not transparent, as this ECC working group has not opened its documentation to public oversight (despite ECC instructions generally for working groups to do so).

Nor is harmonisation always achievable through the CEPT, which stated in a WGNNA recommendation in 2005 that “although a certain degree of harmonisation in Europe is desirable, numbering arrangements cannot be standardised as the national numbering plans (E.164) have to take into account legacy aspects and differences in market conditions of the country....”⁷²

Issues that arise under this topic include:

- use of the European Telephony Numbering Space
- facilitating market entry for PRS
- assignment practices of numbering (blocks, assignment to users versus operators, costs, etc.)
- future reliance on addressing resources
- geographic numbering

⁷²

ECC Recommendation (05)03, “Numbering For Nomadic ‘Voice Over IP’ Services,” 10 May 2005, considering “e.” This recommendation urged administrations to adopt either geographic numbering or new numbering ranges for VoIP services.

- number portability (a substantial issue, but not within the scope of this study)

Use of the European Telephony Numbering Space (ETNS)

The CEPT has recognised that some pan-European services have been thwarted due to the lack of a harmonised pan-European regulatory structure. At a 2004 plenary meeting, the ECC affirmed a decision to refuse to grant an ESI (European Service Identifier) to an applicant who had pursued an identifier for a telemedia service for two years under the European Telephony Numbering Space structure. The ECC concluded that “after considerable work in [the CEPT] this was decided because the regulatory regimes of the ECC countries were too divergent to accommodate such services. Issues such as consumer protection against abuses, harmful contents, and tariff transparencies could not be resolved without major changes in different national regulations and legislations.”⁷³ It bears noting that the barriers in this case were not defined as the numbering allocation structure itself, but the lack of harmonised regulation of the services involved.

The European telephony numbering space itself is now decrepit for commercial pan-European services, and the CEPT is no longer administering it, despite *Universal Service Directive* Article 27(2), which requires Member States to ensure that all public telephony operators can handle calls to the ETNS. While certain basic level ETNS services may be available, there essentially does not appear to be an available structure for pan-European service. This situation may require wholesale revision to Article 27.

In light of the ETNS situation, we recommend that the Commission should consider whether fundamental change is needed to the development of pan-European structures for ETNS. The first step is to harmonise regulatory conditions, so that the fragmented regulatory situation is not used as an excuse not to grant numbering, which in turn thwarts commercial development of any services.

⁷³ ECC, Minutes of the 9th Meeting, Brugge, 8-12 November 2004, Doc. ECC(04)100 Rev1, section 7.3 at page 10.

Facilitating pan-European market entry for PRS

It appears that harmonisation of regulations for PRS is moving backwards rather than forwards. The PRS Study developed an atlas of national implementation, showing “wide divergences on almost every single aspect of PRS, including on the definition of PRS itself.”

With respect to the pure question of numbering resource allocation, this issue is raised in the ETNS discussion. There simply does not exist an adequate structure for pan-European numbering. From the ETNS situation, it appears that a regulatory structure for pan-European PRS is necessary before adequate numbering resources can be assigned in a workable manner. On this issue, we defer to the recommendations already laid out in the PRS Study.

The PRS Study discusses the issue of use of numbers for cross-border access to non-geographic services, noting that “cross-border access to PRS via the E.164 country code ... is not yet implemented in the EU.”⁷⁴ One reason for this situation is the apparent failure to implement *Universal Service Directive* Article 28 on access to non-geographic numbers, which is an access issue beyond the scope of this study. Another reason described in the PRS study is that *Framework Directive* Article 10(4) on harmonisation of numberings plans has so far not been used to harmonise pan-European PRS numbers. As we noted at the outset of this section, this provision gives authority to support harmonisation in the Regulatory Framework and the Commission has authority to take technical implementing measures, so we do not identify recommendations for changes to the Regulatory Framework, but recommend use of the tools that already exist.

⁷⁴

PRS Study at Section III, C, and Annex Table 14. Section IV.A.2 deals with this issue as well, noting that although *Universal Service Directive* Article 28 requires Member State to ensure access to non-geographic numbers “where technically and economically feasible,” no Member State had relied on Article 28 to enable cross-border traffic.

Assignment practices of numbering

The CEPT reported on number assignment practices in May 2005.⁷⁵ As a general matter, in most countries all types of numbers are assigned via administrative assignment procedures, in which the first applicant to request a particular number range is assigned that number. Lotteries have been used in some instances, and the report noted that the Netherlands proposed to hold an auction for a number range in the third quarter of 2004. *Authorisation Directive* Article 5(4) permits Member States to grant numbers of “exceptional economic value” through auctions, and while the report does not indicate that any such auctions had been held, it provides views from 22 countries as to what kinds of numbers might have such value – notably, there is little agreement except that valuable numbers should be short.

The report identifies “considerable variation” amongst countries regarding administrative charges and fees, but no indication that these variations serve as any kind of barrier to market entry. The variations are extremely substantial, but we do not include them as an issue for change to the Regulatory Framework, because there already are provisions in the Regulation Framework to prohibit disproportionate fees. While we query whether Member States comply in all instances with *Authorisation Directive* Article 12(2) requirement to publish information on administrative charges in relation to numbering, this is an implementation issue rather than a reason for changes to the Regulatory Framework.

The issue of numbering assignment practices is of sufficiently technical complexity that our expectation that we would not receive substantial comment on the questionnaire was confirmed by the responses. The Commission said in the 10th Implementation Report that the availability or management of numbering resources has not been identified as a major concern, which appears to be confirmed by the consultation in our study.

⁷⁵ ECC Report 60, “Number Assignment Practices in CEPT Countries,” May 2005. This report is based on surveys conducted in late 2002 and 2003, updated in the first half of 2004. It appears to include responses from about 22 CEPT countries, of which 16 are Community Member States. The WGNNA has developed updated reports as of January 2006.

One issue to be considered is whether the *Authorisation Directive* provides sufficient guidance and regulatory structure for numbering resources. For instance Article 5(5) of the directive provides that Member States “shall not limit the number of rights of use to be granted except where this is necessary to ensure the efficient use of radio frequencies...” but there is no reference to numbering resources. Strictly speaking, this provision indicates that Member States have no authority to limit how many rights of use can be granted for numbers, which could conflict with Article 5(4) on rights for use of numbers of “exceptional value” and in any event does not seem to accord sufficient flexibility for future consideration of numbering resources. We recommend that the Commission review the wording of the *Authorisation Directive* with respect to numbering to determine if it covers numbering resources adequately.

Future reliance on naming and addressing resources

Future development of services and technologies in the electronic communications field increasingly will rely on Internet resources. This in turn could lead to further reliance on Internet names and addresses rather than traditional E.164 telephone numbers. But the Regulatory Framework does not seem to cover Internet naming and address resources. Recital 20 states that the *Framework Directive* “[does] not establish any new areas of responsibility for the national regulatory authorities in the field of Internet naming and addressing.” Article 10, which is entitled “Numbering, naming and addressing,” does not provide any standards or structure for regulation of naming and addressing, but instead relies on the term “numbering,” which is otherwise undefined throughout. The only broader reference is in Article 10(5), which requires Member States to coordinate positions in international organisations in which decisions are taken on issues relating to numbering, naming and addressing. This explicit treatment of addressing in Article 10(5) seems to establish as a matter of legal interpretation that addressing is a distinct term that cannot be included in the term “numbers” or “numbering resources.” Further, the conditions set forth in the annex to the *Authorisation Directive* concerning rights of use for numbering also do not refer to naming and addressing. In sum, it is difficult to support any legal argument that “numbering resources” include Internet naming and addressing, and thus there is limited authority in the *Framework Directive* to apply any Community rules to that area.

The legal implication of this distinction would seem to be that “naming and addressing” are outside all aspects of the Regulatory Framework other than for international coordination. Thus, the Commission would appear to hold no authority to consider technical implementing measures with respect to naming and addressing, at least under the Regulatory Framework. This situation could provide a conundrum, for example with respect to ENUM, which converts E.164 telephone numbers to Internet names or addresses. While the issues and possible conditions for naming and addressing are outside the scope of this study, we recommend that the Commission consider whether some Community competence is needed over the long term, and adopt changes to the Regulatory Framework to permit such structure.

Geographic numbering

The *Authorisation Directive* contains no explicit reference to non-geographic numbers and no standards for allocating them, although the *Universal Service Directive* Article 28 requires Member States to ensure that end users can access such numbers “where technically and economically feasible,” unless the called subscriber wants to limit access to specific geographical areas.⁷⁶ The issue of how to allocate geographic numbers, and which services can or cannot be eligible to obtain such allocations, increasingly will become relevant as new IP-based services challenge the concepts used for traditional voice telephony.

The issue of how geographic numbers should be allocated at the national level has been raised in the context of VoIP service. Traditional fixed voice telephony E.164 numbers are based by definition on fixed geographical locations. IP-based services increasingly may be nomadic (this concept is distinguished from mobile services and associated mobility, which we do not discuss in this section). Further, work within the CEPT ECC Project Team TRIS on technical standards identifies other dynamics that will affect the demand for geographic numbers. For example, geographic numbers may no longer need to support distance-related tariffs, so geographical boundaries can enlarge, with

⁷⁶ Geographic and non-geographic numbers are defined in *Universal Service Directive* Article 2(d) and (f) respectively.

the result that geographic numbers become more “non-geographic.” Nevertheless, revising existing ranges is always expensive and confusing to the public. Apart from the pricing dimension there is also a benefit to local numbers in knowing what area a caller is from – likely there are significant groups of consumers who value this.

Some argue that IP-based services should not be assigned blocks of geographic numbers, for various reasons relating to tariff transparency, scarcity of number ranges, access to emergency service and so on. There already are significant variations in national practice, which increasingly will create cost and market entry barriers for IP-based services. As noted above, the ECC has adopted a recommendation on numbering for VoIP, but this recommendation does not harmonise approaches toward numbering, as it supports both options of allocating geographic numbers or allocating numbers from a new number range – i.e., supporting any policy national administrations are likely to adopt.

It appears there is insufficient analysis or experience to require uniform Community practice in this respect. Nevertheless, the scope of the Regulatory Framework should give a platform for subsequent harmonisation. Currently, Article 10(4) of the *Framework Directive* requires Member States to support harmonisation of numbering resources where necessary to support pan-European services. It may be, however, that requirements for harmonised practice with respect to geographic versus non-geographic numbering arise for reasons unrelated to pan-European service. Thus, we recommend that the Commission consider whether the scope of that provision should be expanded.

8.5 Recommendations

The following list incorporates the recommendations set forth in this chapter. It does not include all those areas where we explicitly declined to recommend changes on a specific issue. We group the recommendations based on the previous subsections.

8.5.1 Recommended changes to current provisions

In light of the previous discussion, we recommend that the Commission consider the following issues:

Definitions and scope of general authorisations

1. We recommend that the Commission clarify under what circumstances self-provided services are within (or outside of) the definition of ECS, because there are different interpretations, and substantial implications based on the outcome – future new services may fall out of the category of general authorisation altogether or be regulated differently amongst the Member States if this matter is left unclear.
2. We recommend that the Commission issue further guidance on the status of VoIP. We expect that principles established for clarifying this status will apply to other new services as well.
3. We recommend that further detail on PATS be established, and that the Commission consider whether *Authorisation Directive* Article 9 procedures for declarations concerning ECS and ECN should be extended to declarations that a particular service is a PATS.
4. We recommend that the Commission consider whether to amend the *Authorisation Directive* to include associated facilities and services, but the broader implications of this issue must also be considered, i.e., should general authorisations be required for such facilities and services in all instances?

Degree of harmonisation

5. We recommend that *Framework Directive* Article 19 be amended to give the Commission competence to adopt technical implementing measures as decisions, not solely recommendations, and also that the Commission have competence explicitly to adopt decisions to harmonise authorisation conditions, particularly to promote pan-European services.

6. We recommend that the Commission initiate further dialogue with the ERG to determine how it can contribute more directly to harmonisation of conditions applied to general authorisations and procedures for notifications.

Management of pan-European authorisations

7. We recommend the Commission consider further consultation on the need for pan-European authorisations to identify services that might benefit from such an approach, and adopt amendments to the Regulatory Framework, such as the changes to Article 19 discussed above, that could support an appropriate regulatory structure.
8. The issue of pan-European authorisations relates to transnational markets under the *Framework Directive*, and should be considered at the same time. This may not require a change to the Regulatory Framework if other changes we recommend are adopted (for instance the ability to harmonise conditions for pan-European services noted above), but if the Commission reviews market definitions and proposes adoption of a new market category that is transnational, it also at that point should review how the service providers in that market could operate under a pan-European authorisation.

8.5.2 Recommended changes to current provisions with respect to spectrum aspects

Definitions and scope of terms relating to spectrum

9. We recommend that the Commission consider the implications of the term “harmful interference” for defining when individual rights of use are required: this requirement should be implemented more rigorously, and provisions should be included so that only credible risks of harmful interference and not worst case assessments are used.
10. We recommend that the Commission should clarify the application of the *R&TTE Directive* to “unlicensed” or licence exempt ECS and ECN (i.e., ECS and ECN that

do not require rights of use). The impact of this directive on the Regulatory Framework, and vice versa, should be carefully coordinated. The tools provided under the *Radio Spectrum Decision* are substantial, but we recommend that the Commission consider whether additional tools for managing unlicensed services are needed.

11. We recommend that the principles and objectives of the Regulatory Framework be amended to make explicit reference to the Community objective for “flexible” management of spectrum resources and authorisation structures.
12. We recommend that condition B1 on designation of rights of use contained in the Annex to the *Authorisation Directive* be amended to require strict justification subject to the technology neutrality principle.
13. We recommend adding provisions as appropriate to provide clear legal authority for necessary technical implementation measures for WAPECS.
14. The principle of service neutrality should be incorporated into the policy objectives of the Regulatory Framework.
15. Article 8 on harmonised assignment of radio frequencies should be redrafted. The language of the provision is unclear and substantial amendments are needed to make it meaningful.
16. We “reissue” recommendations on spectrum trading made in our earlier study for the Commission and set them forth in Annex C to this study.
17. The Commission should adopt further provisions for dispute resolution specifically for complaints of cross-border interference. *Universal Service Directive* Article 34 currently would not extend “out-of-court dispute resolution” to spectrum issues, because that article applies only to issues covered by the *Universal Service Directive*. Even though the spectrum management agencies likely will continue to be responsible for such complaints, due to their expertise and history of managing enforcement, it would foster Internal Market objectives to require explicitly that spectrum users negotiate interference management arrangements in good faith, and

that administrations should foster harmonised approaches for handling disputes where parties cannot resolve issues independently, possibly bringing spectrum issues within the scope of *Universal Service Directive* Article 34.

8.5.3 Recommended changes to current provisions with respect to numbering

Use of the ETNS

18. This system is broken. We recommend the Commission consider whether fundamental change is needed to the development of pan-European structures for ETNS.

Facilitating market entry for PRS

19. On this issue, we defer to the recommendations already laid out in the PRS Study. Our consultation indicates there is continuing demand for pan-European services up to 2015.

Assignment practices of numbering

20. The Commission should consider whether changes to the *Authorisation Directive* are required to provide sufficient guidance and regulatory structure for numbering resources, and amend the directive with respect to limits on the number of rights of use for numbers.

Future reliance on addressing resources

21. The Commission should consider whether some Community competence is needed over the long term structure for naming and addressing resources, and adopt additional provisions in the Regulatory Framework to permit such structure.

Geographic numbering

22. We recommend that the Commission consider whether the scope of Article 10(4) of the Framework Directive with respect to harmonisation of numbering resources should be expanded, especially with respect to premium numbers, so that harmonisation efforts might be supported even for services that are not necessarily pan-European.

Part C

Consumer protection aspects

9 User privacy and the security and confidentiality of online communications

9.1 Consumer Protection Aspects

This chapter examines measures safeguarding user privacy, security and confidentiality of online communications, including the integrity and security of public communications networks, pursuant to Articles 4, 5, 6, 8, 9, 12 and 13 of the *e-Privacy Directive* and Article 23 of the *Universal Service Directive*. The numerous issues involved directly affect consumers in substantial ways and also affect the cost of doing business, and thus require an extended discussion. Throughout this chapter we refer to examples of how Member States have implemented the various provisions, not as a comprehensive analysis of implementation, but as a guide to how terms can be interpreted differently and as indicators of where modifications to the Regulatory Framework should be considered.

A recurring theme throughout this chapter is the interaction between the *e-Privacy Directive* and the general *Data Protection Directive* 95/46/EC, as well as other Community instruments relating to consumer data protection, network integrity and related topics. Because definitions and concepts in the *e-Privacy Directive* are based on the general *Data Protection Directive*, when the Commission considers change to the former, it must also take into account possible changes or at least the implications for the latter.

The *e-Privacy Directive* is similar in many respects to its predecessor in the 1997 regulatory package, Directive 97/66/EC.⁷⁷ The Regulatory Framework did not change privacy expectations or obligations for data protection to the same extent that other aspects of regulation were changed. As a result, there is substantial experience with similar obligations, and concerns over implementation are also different from those that have arisen for other aspects of regulation. In particular, the variations amongst national practices may be based on legitimate issues of subsidiarity and national legal traditions, and the influence of the Article 29 Working Party lends a harmonising pressure.

In the survey response to our questionnaire, operators unsurprisingly said that existing legislation and competition are doing their job. One respondent, for example, warned against extending consumer protections to business users, instead advising reliance on commercial incentives and self-regulatory protections. The consumer associations that responded did not have concrete suggestions, with the exception of one that suggested the burden of proof should be placed on the operator rather than on consumers in dispute cases. There was general concern over handling of premium rate services, because abusive practices in that service are very visible to consumers.

This chapter first reviews specific provisions of the *e-Privacy Directive* and *Universal Service Directive*. After making recommendations on the basis of those provisions, we review several general horizontal issues, including the impact of cross-border service, the impact of user hardware and software (with particular reference to RFIDs), and means to foster better enforcement, either through further sanctions or self-regulatory mechanisms.

Recommendations in the data privacy and protection area are particularly sensitive. Thus in some cases, we recommend that the Commission “consider” specific options, rather than that the Commission should make specific changes. This study covers nu-

⁷⁷ Directive 97/66/EC of the European Parliament and of the Council of 15 December 1997 concerning the processing of personal data and the protection of privacy in the telecommunications sector, OJ L 24/1, 30 January 1998, repealed by *e-Privacy Directive* Article 19.

merous topics, many of which justify more detailed analysis than a single high-level review can cover. Raising some issues for consideration is the appropriate action if more investigation is needed and detailed information from the sectors affected could give the Commission better information to decide if a change is necessary.

9.2 Privacy and Confidentiality

9.2.1 E-Privacy Article 4 – Security

Relevant Provisions

E-Privacy Directive Article 4 is very similar to its predecessor Article 4 in Directive 97/66/EC. Article 4(1) stipulates that a provider of publicly available ECS must take “appropriate technical and organisational measures to safeguard security of its services.” The provider must take this action “if necessary” in conjunction with the public ECN provider. These requirements are not absolute, as they are modified by “the state of the art and the cost of their implementation” and must ensure “a level of service appropriate to the risk presented.”

An additional provision in Article 4(2) is that the ECS provider must inform “subscribers” of “a particular risk of breach” of network security – if the risk is outside the safeguard measures, the provider must tell subscribers of possible remedies they can take and the likely costs. Recital 20 of the directive at one point refers to the examples of “users and subscribers” (a slight inconsistency by also including *users*, which should not be repeated in subsequent recitals) being informed of measures such as certain kinds of software or encryption, and notes that this information does not absolve the provider from ensuring “at its own costs” measures to restore the “normal security level of the service.”

Notably, Article 4(2) speaks only in terms of risks of a breach of network security, and not what happens if there actually is a breach of network security. We see from the software field the importance of early notification to consumers, in order to permit them to take preventative or defensive actions. For this reason, we recommend that this arti-

cle should require providers to inform subscribers of both risks and actual breaches, especially if there is a breach that the provider is not taking measures itself to solve (which presumably would not happen very often).

Such an approach could assist customers in assessing the level of security of a particular ECS, by providing access to information on security breaches that have occurred, and giving customers the ability to judge the level of reliability of the service.⁷⁸ Further, it would permit customers to respond if their data has been disclosed, for example permitting them to respond to compromised credit cards or financial histories.

Recital 20 adds that security is to be appraised in light of Article 17 of the *Data Protection Directive*, which deals with security of personal data processing in a general context.⁷⁹ Applying Article 17 to ECS, the provider of such services may in many cases not be the sole data controller as defined in the *Data Protection Directive*, because the ECS provider may not control all aspects of the means of processing data. “Processing” is defined broadly to cover any operation or set of operations which is performed upon personal data, whether or not by electronic means. Thus, providers of public ECS could qualify either as (joint) controllers or as processors under certain circumstances. As noted below, this distinction could increase in the future.

⁷⁸ The European Network and Information Security Agency supported this approach in its “Survey on Industry Measures taken to comply with National Measures implementing Provisions of the Regulatory Framework for Electronic Communications relating to the Security of Services,” Ref. number ENISA/TD/SP/06/0055, published in February 2006, at page 25. This issue also has been debated in the United States. California adopted a Database Breach Notification Act in 2002 and there are similar laws in other states requiring companies to notify consumers of security lapses involving their private data. Significant issues of timing, level of disclosure and related details that have been raised in the U.S. debate go beyond the scope of this study, but specific detail should not be specified in Community legislation in any event, so that the Regulatory Framework remains “future proof.” It may be helpful, nevertheless, for the Commission to give guidance on what constitutes a “breach,” to avoid conflicting views at the Member State level.

⁷⁹ Article 17(1) specifies that the “data controller” must implement measures to protect personal data against accidental or unlawful destruction or accidental loss, alteration, unauthorized disclosure or access, and all other unlawful forms of processing.

As one final relevant security provision, we mention a technical legal matter to be corrected in general authorisation condition A16 in the Annex to the *Authorisation Directive*, which permits Member States to apply conditions relating to “security of public networks against unauthorised access according to Directive 97/66/EC.” The reference to repealed Directive 97/66/EC is technically correct, because *e-Privacy Directive* Article 19 provides that references to the repealed directive shall be construed as a reference to the *e-Privacy Directive*. The reference should be updated at the same time other changes to the *e-Privacy Directive* are proposed, but more importantly, condition A16 should be broadened to match *e-Privacy Directive* Article 4 so that it covers both networks and services, instead of applying only to security of networks.

Implementation and Harmonisation Issues

Member States generally have implemented data security requirements in Article 4 of the *e-Privacy Directive* and Article 17 of the *Data Protection Directive* in terms identical or close to those used in the directives themselves. National laws require, in slightly varying terms, that data controllers take appropriate technical and organisational measures, depending on the risks involved. Some national laws include additional requirements, such as an obligation for data controllers to limit access by employees to personal data (for example, on a need-to-know basis). What follows are representative examples of different Member State interpretations of “appropriate” security measures, including the importance of employment-related security steps.

Member State	“Appropriate” security measures
Belgium	Under a test of “best available technology not entailing excessive costs” the data controller must verify which technologies are available on the market and continuously update and upgrade its security measures.
Italy	The provider of a publicly available ECS must take suitable technical and organisational measures adequate in light of existing risk, in order to safeguard security of services and integrity of traffic data, location data and electronic communications against any form of unauthorised utilisation or access.
Sweden	The controller must assess the appropriate level of security based on technical possibilities available, costs of the measures, particular risks to the processing of the personal data, and the level of sensitivity of the data.
	Employment-related security steps
Austria	Employers must inform their employees of security requirements under the Data Protection Act as well as of the employer’s data protection policy.
Latvia	Only persons authorised by the employer may access or process personal data files. The employer must be able to trace all the relevant information (persons, time and date) through all the processing stages
The Netherlands	Employers are responsible for ensuring that access to personal data within the organisation is restricted to those employees who need to have such access as part of their job description.
UK	Employers must take reasonable steps to ensure that any employee with access to personal data is reliable; reasonable steps could range from minimal supervision to positive vetting.

Although most of the Member States have imposed a **general security obligation** on data controllers rather than defined concrete security means, there are exceptions to this approach, as shown in the next table.

Member State	Specific Security Regulations
Italy	Detailed security measures and technical specifications in the Personal Data Protection Act include: a) computerised authentication, b) authentication credentials management procedures, c) use of an authorisation system, d) regularly updated processing specifications, e) protection of electronic means and data against unlawful data processing, unauthorised access and specific software, f) safekeeping backup copies and restoring data and system availability, g) up-to-date security policy document, and h) encryption techniques or identification codes for specific processing performed in respect of data disclosing health and sex life.
Poland	Regulations specify data processing documentation and technical/organisational criteria for processing personal data.
Spain	Detailed rules define necessary technical and organisational measures, depending on the risk to individuals' fundamental privacy rights.

Some Member States have introduced **evidentiary requirements** with regard to security measures, as shown in the next table.

Member State	Evidentiary requirements
Belgium	The data controller must provide a general description of security measures in the notification form submitted to the Privacy Commission.
Finland	The NRA supervises telecommunications operators with respect to information security; it collects information from different sources, including case by case inspections.
Ireland	In the event of a dispute, the regulatory authority, in consultation with the data protection authority, may determine the appropriateness of security measures.
Luxembourg	Data controllers must submit details of their security measures in an annual report.
Slovakia	Data controllers must issue a "security document" describing technical, organisational and personnel measures in place to avoid privacy risks. The law sets forth detailed information that a security document must contain
Sweden	The data protection authority has issued guidance on data security measures, and may impose security measures the data controller should take, subject to penalties or fines.

As regards the **role of ECN providers**, in the UK and Ireland, regulations clarify that security measures are to be taken by the service provider in conjunction with the ECN provider, and the latter is obliged to comply with any reasonable requests made by the service provider for these purposes. Whenever security of service or personal data makes it necessary to take measures applying to the network, the provider of a publicly available ECS in Italy and the Netherlands must take those measures jointly with the

ECN provider. Failing an agreement between two providers, the dispute shall be settled by the competent regulatory authorities. In Cyprus, network and service providers must take appropriate technical and organisational measures and inform subscribers in the event of a particular risk of a breach of security. Similarly, under German law, both ECS and ECN providers are required to take appropriate security measures, although ECN obligations relate primarily to safeguarding network integrity.

Notably, Article 4(1) is open to interpretation whether ECN providers are obliged to act in conjunction with providers of ECS, even upon request. Although ECN providers likely have market incentives to do so, we recommend this matter should be spelled out in a revised Article 4 for the avoidance of doubt.

The **information duty towards subscribers** described in Article 4 of the *e-Privacy Directive* has been implemented slightly differently by the Member States. The UK requirements, for example, track closely the language of the directive. By contrast, in Italy, the provider of a publicly available ECS shall inform subscribers and, if possible, users of the possible risk, possible remedies and the likely costs involved. The provider must share this information with the Italian data protection authority and the Authority for Communications Safeguards.

Future Considerations

Some variations noted above in implementation of data security requirements can be attributed to different legal traditions or conditions in Member States. Further, there exist mechanisms already to encourage harmonisation, such as the Article 29 Working Party. However, we note best practice seems to include giving guidance on technical and organisational measures. With explicit guidance, national variations will become more obvious, which could support harmonisation efforts where needed.

The issue of what is “appropriate” or “normal” security levels under Article 4 may well lead to future variations amongst the Member States, particularly as this provision is interpreted on a case-by-case basis. While we have not seen complaints or legal cases

on this topic, we presume that what is appropriate should be largely defined by reference to ITU and industry standards (e.g., ETSI and IETF).⁸⁰ Because this matter can only be defined in light of evolving technology and industry standards, we do not recommend that the Regulatory Framework should define “appropriate” security in any greater detail. There was general support in the survey for regulators to play a role of facilitation rather than for specific intervention. Operators argued that they themselves are in the best position to develop solutions. It was also noted that technology changes so quickly that addressing today’s specific issues (such as spyware) would not be appropriate in the Regulatory Framework.

There is no uniform practice in Member States of identifying a particular competent authority to define appropriate technical and organizational methods to ensure security. Because the state of the art and what are viewed to be appropriate security measures change so rapidly, it is best to rely on providers to determine in the first instance the appropriate level of security. Nevertheless, NRAs should provide some level of guidance to ensure that providers comply with minimum levels of appropriate security measures. Moreover, it is important to ensure that best practice is disseminated throughout the Community, which the Commission can foster through support to targeted research, benchmarking and industry initiatives, which can then be used in NRA guidance. We do not see that these efforts necessarily require changes to the Regula-

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See generally, ITU-T, “Security in Telecommunications and Information Technology: an overview of issues and the deployment of existing ITU-T Recommendations for secure telecommunications,” October 2004, at <http://www.itu.int/itudoc/itu-t/86435.html> (accessed 30 March 2006)

tory Framework, but due to their importance we still set forth the recommendation below that guidance be provided and best practice encouraged.⁸¹

One issue under discussion is how responsibility for network security will be managed for future NGNs and in light of new technologies that further separate service from network functions. As the number of ECS providers grow, and to the extent that their role in actual network operation further decreases, the need to augment *e-Privacy* protections may actually decrease, as data protection commissioners rely more on general interest regulation and the *Data Protection Directive* rather than sector specific regulation. There always will remain a requirement for adequate security. Nevertheless, because Article 4 seems to provide sufficient scope for necessary regulatory measures towards security, we do not recommend any substantial revisions beyond the small changes proposed below.

Recommendations

In light of the previous discussion, we recommend the following under the *e-Privacy Directive* with respect to security of electronic communications:

- The scope of Article 4(2) should require providers to inform subscribers of actual breach of network security, in addition to the current requirement to inform them of the risk of such breaches. The Commission should issue guidance on what constitutes a “breach” for notification purposes.

⁸¹ Such guidance can be provided through the i2010 initiative. The Commission has announced its intention to support measures for information society security as part of i2010, in “a Strategy for a Secure Information Society to combine and update the instruments available, including raising awareness of the need for self-protection, vigilance and monitoring of threats, rapid and effective response to attacks and system failures. Support will be given to targeted research to ‘design-in’ security and to deployment measures....” COM(2005) 229 final, 1 June 2005, at page 6. Further guidance can be fostered through the European Network and Information Security Agency (ENISA), which “serves as a centre of expertise for both Member States and EU Institutions to seek advice on matters related to network and information security.” ENISA website at <http://www.enisa.eu.int/>, accessed 20 March 2006.

- General authorisation condition A16 in the *Authorisation Directive* on security should be updated and broadened to match *e-Privacy Directive* Article 4 for coverage of both ECN and ECS providers, not ECN alone.
- There should be an explicit obligation in *e-Privacy Directive* Article 4(1) on ECN and ECS providers to cooperate to ensure data security.
- In some Member States specific requirements apply to the obligation to take appropriate technical and organisational measures, while others leave the assessment of the security level to the providers without offering guidance. This divergent approach complicates cross-border electronic communications service. All Member States should provide guidance in this respect, and the Commission should consider whether changes to the Regulatory Framework are necessary in this respect.

9.2.2 Universal Service Article 23 – Integrity of the Network

Relevant Provisions

We place this discussion of the *Universal Service Directive* provision on integrity of the public telephone network between discussion of security and confidentiality Articles 4 and 5 of the *e-Privacy Directive*, because integrity of the network could involve aspects of both these articles. The otherwise undefined term “integrity” in this context seems to have a narrow scope. Article 23 applies to the integrity of the “public telephone network at fixed locations.” In context, the term seems designed to ensure a functioning fixed network and uninterrupted access to emergency services. Article 23 itself does not provide that a network must be in place in any particular location – that provision is elsewhere. Article 23 provides that where the network is located, it must work, and that Member States should ensure availability of the public telephone network in case of catastrophe or *force majeure*.

Article 23 must be read in conjunction with *Universal Service Directive* Article 4, which defines the connection that must be provided at a fixed location. In some respects, Article 23 overlaps also with *Universal Service Directive* Article 11 on quality of ser-

vice. In this study, however, we review only the integrity aspects of the directive, and not the types or quality of services that must be offered.⁸² This distinction is important, considering that in the future service providers increasingly may not be the same undertakings that provide the physical infrastructure.

Implementation and Harmonisation

We have seen no significant discussion of problems with implementation of Article 23. The basic requirement for network integrity has been around for a long time, as it was contained in 1990 and 1998 ONP Directives.⁸³ There do not appear to be implementation or harmonisation issues that recommend change in the provision. Some Member States have implemented the provision virtually verbatim, e.g., Portugal Law no 5/2004, Article 49.

Future Issues

The most basic issue concerning Article 23 is whether its scope is adequate in light of increasing reliance on mobile networks and whether the application to the “public telephone network” at “fixed locations” should be expanded. The wide variety of new services, applications and technologies featured in Chapter 2 on market sector development point to increasing reliance beyond the traditional network.⁸⁴ The

⁸² The term “network integrity” is mentioned in a couple of other provisions of the Regulatory Framework. Recital 19 to the *Access Directive* refers to protection of “network integrity” as an objective criterion for refusing access, but this criterion is not mentioned in Article 12 of that directive on access conditions. The *Authorisation Directive* in general authorisation condition A15 provides a cross-reference to maintenance of the integrity of public communication networks in accordance with the *Access Directive* and the *Universal Service Directive*. That reference to network integrity in condition A15 extends integrity, however, to measures “including ... to prevent electromagnetic interference....,” which stretches the concept of “network integrity” beyond the use of the term in the *Universal Service Directive*. As a technical matter, this different usage of the term “integrity” should be reconciled.

⁸³ “Network integrity” was defined as an essential requirement in Article 2(6) of the Council Directive of 28 June 1990 on [ONP], OJ L 192/1, 27 July 1990.

⁸⁴ This same issue is raised in the Commission’s consultation on the *Universal Service Directive* in general. “On the Review of the Scope of Universal Service...,” COM(2005) 203, 24 May 2005, at page 9.

Commission's 11th Implementation Report shows that 92.8% of the Community population have mobile phones, which emphasises the immense importance this service now holds in European society.

Heightened reliance on mobility during emergency situations may justify application of the network integrity requirement of Article 23 to mobile networks rather than solely to services at fixed locations. Most Member States have applied quality of service and coverage requirements for certain categories of mobile networks, so it should be considered whether those requirements already support a harmonised application in Article 23. Arguably the reference to "fixed locations" could be interpreted to apply to all GSM base stations and distribution links, although we have not seen national discussion on the scope of the provision.

We agree with the conclusion the Commission staff issued for consultation in June 2004 that only those service providers that have control over or ownership of the underlying transport infrastructure are able to ensure the availability of publicly available telephone services in cases of *force majeure*.⁸⁵ However, providers of mobile communications networks and services often control their own infrastructure to the same extent as do the traditional providers of the public telephone network. Calculating the cost of extending a network integrity obligation to mobile network operations is not within the scope of our study, and this information is probably necessary to make the required impact assessment. In the abstract, however, the importance of mobility in catastrophic situations or cases of *force majeure* requires that this extension be strongly considered.

It is argued that the nature of network integrity may differ for fixed locations as opposed to radio network coverage. Article 23 includes the limit that Member States shall ensure that operators "take all reasonable steps," which can take into account differences between fixed and mobile network coverage.

⁸⁵ "Commission Staff Working Document on the treatment of Voice over Internet Protocol (VoIP) under the EU Regulatory Framework," 14 June 2004, at section 5.1.1.1 (un-numbered page 12).

A portion of the debate over VoIP raises this issue, in the discussion concerning access to emergency services. The integrity of the traditional fixed network is not necessarily recreated in a PC or IP environment to the same degree due to differences such as access to electrical power, distribution of PCs and related factors, which need to be considered when examining the scope of Article 23 and the precise language should be examined to ensure that it can be applied to future critical infrastructure.

Recommendations

- The Commission should consider whether to expand the scope of *Universal Service Directive* Article 23 beyond the traditional public telephone network, for instance to cover mobile or IP networks used for voice service. Whether this expansion should be adopted will depend on specific impact assessment of the cost of the expansion.

9.2.3 E-Privacy Article 5 – Confidentiality

Relevant Provisions

Article 5 of the *e-Privacy Directive* requires Member States to ensure the confidentiality of “communications and the related traffic data” provided by means of publicly available ECN and ECS. This requirement extends beyond voice telephony and faxes to e-mail, SMS or MMS messages conveyed by means of a PATS, because they are communications, which is widely defined in Article 2(d). Interception or surveillance is prohibited without user consent (except when legally authorised under Article 15 relating to national security or crime prevention).

Article 5(3) in turn refers to requirements to provide information to subscribers or users in compliance with the *Data Protection Directive*. Article 16 of that Directive on confidentiality imposes a general obligation that any person acting under the authority of a data controller or processor should process personal data only in accordance with the instructions received from the data controller.

Implementation and Harmonisation Issues

To ensure confidentiality, ECS or ECN providers should take appropriate measures needed to make the interception of telecommunications by unauthorised parties impossible, or as technically difficult as the current state of the technology allows. The Article 29 Working Party has emphasised that the implementation of effective means of intercepting communications, using the most advanced techniques, must not result in a lowering of the level of confidentiality of communication and protection of the privacy of individuals.⁸⁶ According to the Article 29 Working Party, there are different ways to promote confidentiality, including, for example:

- **Encryption** of the content sent via electronic communications, using programs that supplement ordinary e-mail programs (“plug-ins”) or e-mail programs and browsers that include encryption capabilities. In some Member States, such Italy and France, data protection requirements may include the use of encryption in particular circumstances (e.g., when sensitive data are being processed). The UK Code of Practice on directories recommends that electronic directories be encrypted to avoid misuse. Although encryption is a useful measure to safeguard confidentiality in many cases (e.g., to protect health-related data), we have not come across convincing arguments for it to be generally required. In any event, encryption issues are typically covered under issues of security, and the requirement in Article 17 of the *Data Protection Directive* to prevent unauthorised access, as well as normal industry practice and commercial incentives, would seem to provide sufficient protection.
- **Data integrity guarantees** that information is not altered accidentally or on purpose. Integrity can be ensured by calculating a special code on the basis of the content and transmitting this special code encrypted along with

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See generally Article 29 Working Party, Working Document Privacy on the Internet - An integrated EU Approach to On-line Data Protection, 5063/00/EN/Final, adopted 21 November 2000. Portions of the following discussion in text on ways to promote confidentiality are taken from that working document.

the content itself. The receiver of the communication can then decrypt the code and, by re-calculating the code, verify whether the content has been tampered with.

- **Authentication** to guarantee that a user is who he or she claims to be. Authentication can be verified by exchanging digital signatures based on digital certificates. These certificates do not need to mention the real name of the user and can instead mention pseudonyms, as stipulated in Article 8 of the *Electronic Signature Directive*.⁸⁷

In some Member States, specific confidentiality measures are required for individuals who have access to personal data. In Cyprus, employers must select employees with suitable qualifications for technical knowledge and personal integrity. Similarly, Polish data protection law provides that only those acting with specific authorisation from the data controller, acting under a duty of confidentiality, may use computer systems and equipment that process personal data.

E-Privacy Article 5(3) protects confidentiality of information stored on **terminal equipment** of subscribers or users of ECNs. This provision was new to the Regulatory Framework, no analogous provision was contained in Directive 97/66/EC, and so there is less experience with implementation. By reference to *e-Privacy Directive* Recital 24, Article 5(3) applies to spyware, web bugs, hidden identifiers and other similar devices, as well as to “cookies” (i.e., tracking devices that identify and register users’ preferences as they visit websites).

This article requires Member States to ensure that ECNs are not used to store or gain access to information on subscriber or user terminals. But the ECN provider is not generally the undertaking that is responsible for this activity – for the placement of cookies, the ECN is normally almost irrelevant. Further, the service providers who typically

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Directive 1999/93/EC of the European Parliament and of the Council of 13 December 1999 on a Community framework for electronic signatures, OJ L 13/12, 19 January 2000.

would be “violating” this provision are not providing ECS either, but instead would be characterised as information society service providers. Thus, interpretation of rules against placement of cookies may logically be considered more in the context of the *Data Privacy Directive* than in the context of the sector specific *e-Privacy Directive*.

The general view is that cookies are not harmful *per se*. Cookies with a limited lifespan (so-called “session cookies”) can be legitimate and useful tools, for example, to assess the effectiveness of website design and advertising, and to verify the identity of users involved with online transactions. However, other cookies may be active over a longer period of time, which increases privacy risks. In this regard, the Article 29 Working Party advised as early as 1999 that the configuration of hardware or software products should not allow for processing of “client persistent information.” Article 5(3) provides that where cookies are intended for a legitimate purpose, their use should be allowed on condition that subscribers and users are provided with clear and precise information in accordance with the *Data Protection Directive*. Because cookies have been around for a substantial period, general industry codes of conduct now typically include that users should be informed online about storage and processing of their data (e.g., TrustUK Ltd, which set core principles for online codes of practice – notably these may apply more to e-commerce than ECS).

Future Considerations

Data confidentiality takes on increasing importance as critical services move online. With the advent of online banking, e-Health, purchases using the Internet and reliance on datastreams for communications of many sorts, users and subscribers must have confidence that the data they rely on is confidential. Tracking data, which records where transactions are made and where users are located, also will raise substantial new confidentiality issues, which we discuss in more detail under horizontal issues.

It is necessary, however, to define the reach of the Regulatory Framework. Most of these new services and applications provided on terminal devices or using tracking data appear to be information society services, not ECS. Nevertheless, Article 3(1) of the *e-Privacy Directive* gives a potentially wide scope of application to processing of personal data “in connection with the provision of publicly available [ECSs] in [ECNs].” The interpretations and application of the both this directive and the *Data Protection*

Directive must therefore be kept consistent, noting that they do not overlap entirely. For example, the *e-Privacy Directive* Article 5 requirement to maintain confidentiality of communications and traffic data, complements the *Data Privacy Directive* (which does not concern communications per se).

This broad scope of the *e-Privacy Directive* is already matched by the substantial authority given in Article 5 on ensuring confidentiality. Thus, we develop relatively few recommendations for this matter (other than the horizontal recommendations later in this chapter). It is necessary to separate the issue of regulations to ensure confidentiality by “normal law abiding” ECN and ECS providers, as opposed to criminal and civil sanctions to deter and stop activities by those who rely on spyware, keystroke monitors, phishing attempts, and other malware, but are not themselves ECN and ECS providers. These malefactors can only be dealt with through effectively enforced criminal and civil sanctions, which we also discuss in the section below on horizontal measures.

Recommendations

- The Commission should encourage best practice and support initiatives to develop technology that promotes confidentiality, such as encryption. We do not, however, see a need to change the Regulatory Framework to be more specific in this respect. The use of encryption appears to be a matter of best practice that can be encouraged through existing tools.

9.2.4 Articles 6 and 9 - Traffic Data and Location Data other than Traffic Data

Relevant Provisions

Article 2(b) of the *e-Privacy Directive* defines **traffic data** as any data processed for the purpose of the conveyance or billing of a communication on an ECN. **Location data**, on the other hand, in Article 2(c) refers to any data processed in an ECN, indicating the geographical position of the terminal equipment of a user of a publicly available ECS. Location data may refer to the latitude, longitude and altitude of the user’s terminal equipment, to the direction of travel, to the level of accuracy of the location information, to the identification of the network cell in which the terminal equipment is

located at a certain point in time or to the time the location information was recorded (Recital 14).

E-Privacy Directive Articles 6 and 9 protect traffic data and location data respectively, and require that both types of data must be erased or rendered anonymous when they are no longer needed for transmitting an electronic communications. In both cases, consent of the users or subscribers must be obtained in order to process the data for specific purposes. Although the *Data Protection Directive* does not deal with traffic or location data in particular, certain principles of that directive are relevant because they apply to data processing in general.

We discuss these articles jointly due to the common issues they implicate for data storage principles. We do not, however, discuss data retention principles for national security and crime prevention, raised in the *Data Retention Directive* 2006/24/EC,⁸⁸ because the issues raised by that directive are beyond the scope of this study.

Implementation and Harmonisation Issues

E-Privacy Directive Article 6 on traffic data is analogous to Article 6 of predecessor Directive 97/66/EC, while *e-Privacy Directive* Article 9 is totally new. At the end of 2004, some general implementation issues remained, with a number of countries not having notified transposition measures.

Most divergences in the Member States' implementation rules involve **data storage periods** in the context of billing and interconnection practices. The different contract laws of the Member States include various provisions regarding the length of time dur-

⁸⁸ Directive 2006/24/EC of the European Parliament and of the Council on the retention of data processed in connection with the provision of public electronic communications services and amending Directive 2002/58/EC, OJ L 105/54, 13 April 2006. *E-Privacy Directive* Article 6(1) refers to traffic data “processed and stored;” while Article 15(1) provides for “retention” of data justified for public order purposes. Both the title of the *Data Retention Directive* and its Article 1(1) refer to “retention of certain data.” We thus use these key terms “storage” and “retention” to distinguish between the data storage for business purpose and retention for public order purposes.

ing which legal action can be initiated so long as bills remain unpaid or can be challenged.

In the view of the Article 29 Working Party, the application of the proportionality principle to Article 6(2) means that traffic data should be stored for only so long as necessary to enable bills to be settled and disputes resolved, which the Article 29 Working Party said would typically involve a maximum storage period of 3-6 months or less in cases where bills have been paid and do not appear to have been disputed or queried.⁸⁹ In exceptional cases, data may be stored for longer periods to facilitate the settling of the bill. Even where a bill has been paid, a longer storage period might be justified if there are concrete indications that a dispute or query will arise.

These limits are likely to be affected by the national security data retention periods for public order purposes, but Article 6 constraints remain for data stored for business purposes. Examples of national variations for storage periods,, shown in the following chart, indicate that there is no pattern to the national requirements. We have not seen evidence that current storage periods have caused problems for service providers, but it is likely that the “outer limits” of the storage / retention period in the future will be set by the *Data Retention Directive* rather than by current provisions of the *e-Privacy Directive*. As such, the more important harmonization efforts will arise under the new directive rather than the current Regulatory Framework. For this reason, we do not recommend that changes be made to the Regulatory Framework in order to harmonise the national storage periods.

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Article 29 Working Party, Opinion 1/2003 on the storage of traffic data for billing purposes, 29 January 2003, section 2.7 at page 5. It is not immediately apparent how this specific period was derived or whether it fits national practice.

Member State	Data storage period
Finland	An obligation to store, for two years, information on the time of the processing, the duration of the processing and the person who processed the data.
Spain	A maximum storage period of twelve months.
UK	Until the end of the period during which the bill may lawfully be challenged or payment pursued – there is a limitation period of six years (plus possible appeals), so when a provider's bill is challenged, the data could be retained until all legal action has been exhausted.

The national laws of the Member States generally do not define what types of traffic data can be stored with much greater specificity than provided in Article 6(2) – this issue also is likely to be settled by the new *Data Retention Directive*. In this context, the Article 29 Working Party emphasised that Member States have the responsibility to take measures to prevent excessive storage of data that are not necessary to either billing or interconnection payments for different categories of traffic data.

Location data may be processed only if made anonymous or, with user/subscriber consent, “for the duration necessary for the provision of a value-added service” (*e-Privacy Directive*, Article 9(1)). Member States laws typically do not impose time limits in this regard. Should service providers wish to keep a record of the locations of their service users/subscribers without consent, they must first render the data anonymous.

A point of divergence involves how and when **consent** must be obtained and from whom for the purposes of offering value-added services on the basis of location data. Article 2(h) of the *Data Protection Directive* defines consent as “any freely given specific and informed indication of his wishes by which the data subject signifies his agreement to personal data relating to him being processed.” According to a recent in-

interpretation of the Article 29 Working Party, this definition explicitly rules out consent being given as part of accepting the general terms and conditions for ECS.⁹⁰

This interpretation of consent would create marketing difficulties for value-added applications. A value-added service based on location data may be provided either directly by the provider of ECS or via a third party-service provider. In the latter case, it is presumably the third party provider who would obtain the data subject's consent. Except where the location data is produced by the terminal equipment itself, this could require providers systematically to query customers whether location-based service is agreed each time a service is offered.⁹¹ Article 9 already unambiguously requires informed opt-in consent for the provision of ECS based on use of location information, and permits consumers to opt-out at any time. We recommend that the Commission considered adopting more detailed standards on when consent can be given, clarifying whether consent can be given in the general terms and conditions for ECS at the time of service subscription or during the stage of processing procedures.

As to whose consent is required, *e-Privacy Directive* Recital 31 clarifies that the answer to this question will depend on: a) the data to be processed; b) on the type of service to be provided; and c) on whether it is technically, procedurally and contractually possible to distinguish the individual using an ECS from the legal or natural person who subscribed to it. The Article 29 Working Party has suggested that when a value-added service is offered to private individuals, consent must be obtained from the person to whom the data refers, i.e., the user of the terminal equipment. This also appears to be

⁹⁰ Article 29 Working Party 29, Opinion on the use of location data with a view to providing value added services, 2130/05/EN, WP 115, 25 November 2005, section 1.3 at page 5. This view appears inconsistent with the earlier opinion of the Working Party that consent can be given on the occasion of the acceptance of terms and conditions, provided that the consent is informed, specific and freely given. See Opinion 5/2004 on solicited communications for marketing purposes under Article 13 of Directive 2002/58/EC, 27 February 2004, at page 5. In any event, the definition of consent in Article 2(h) clearly does not “explicitly rule out” a general consent given at time of contracting for an ECS.

⁹¹ The Article 29 Working Party has suggested measures to enhance the protection of location data in this context, involving either customer management services based on subscriber aliases or Identity Management Systems built into end-user terminals.

the position taken by the French data protection authority ('CNIL'). Nevertheless, practical issues are likely to arise in the case of corporate subscribers with numerous user-employees if the approach of the Article 29 Working Party is followed. The UK takes the approach that if someone holds himself or herself out as capable of making decisions on behalf of a company, that person is likely to be able to give consent on behalf of employees (unless the communications provider has reasonable grounds to believe otherwise).

Future Considerations

Both Articles 6 and 9 provide that data processing (of traffic data or location data) must be restricted to persons acting under the authority of the public ECN or ECS. It is our impression that companies comply with these provisions using the same methods that apply to protect data security discussed above. The phrase "acting under the authority" could be strained by future value-added services, if the provider of that service is not also the ECS provider. For future converging services, the distinction between the ECS and the value-added provider may become even more attenuated, and guidance is likely to be necessary to ensure any degree of harmonisation among Member State applications. That harmonisation is likely to become more important to the extent that pan-European services are offered.

It is very conceivable that future services may combine elements of information society or audiovisual services, which would not technically be subject to Articles 6 and 9. If an ECS is associated with the service, then the *e-Privacy* principles may still apply regardless of the content of the communications. If no ECS is associated with the service, then difficult issues may arise as to who is responsible for traffic and location data protection, and whether the general provisions of the *Data Protection Directive* fill the gap.

It is also conceivable that issues of traffic and location data will affect future converged services. For example, broadcasting or audiovisual services carried over 3G may be tied to value-added location data, which will raise issues of intrusiveness and consumer consent. There already is extensive discussion of how advertising might be directed to specific 3G terminals based on the location of the terminal. It will likely become increasingly important to consumers to be able to block this service and certainly to

ensure that traffic data showing their viewing habits is not processed in ways incompatible with data privacy principles.

It is our impression that there has been insufficient debate over the privacy implications of such services, and how future services will be provided is unclear. But the general tools of the *e-Privacy Directive* (particularly Article 9) and the *Data Protection Directive* appear broadly to encompass this topic. It appears that future issues will arise over the interpretation of those tools, rather than the need for additional regulations. For this reason, we recommend only that the Commission initiate further preparatory studies or analysis specifically targeted at this topic, but at this point we do not recommend changes to the Regulatory Framework.

Recommendations

- The Commission should consider adopting more detailed standards on when consent can be given, for example, whether consent can be given in the general terms and conditions for ECS at the time of service subscription or during the stage of processing procedures.
- The Commission should review the application of existing regulatory tools for dealing with converging services that use location data. We do not identify specific changes to the Regulatory Framework in this respect, given the scope of the existing provisions in Article 9 of the *e-Privacy Directive*.

9.2.5 E-Privacy Article 8 - Calling and Connected Line Identification

Relevant Provisions

Article 8 of the *e-Privacy Directive* on calling and connected line identification (collectively “CLI”) involves consumer protection and privacy issues. Solutions under that article are based more on technical considerations relating to numbering practices than to privacy policy. Thus, the issues raised are somewhat separate from other data pro-

tection issues, and the solutions are implemented more through technical groups such as ETSI and CEPT working groups, rather than by data protection agencies.

The requirements of this article should be interpreted in light of *e-Privacy Directive* Recital 19, which clarifies that mandatory CLI requirements for subscriber lines “connected to analogue exchanges” should not apply if technically impossible or if application would require a disproportionate economic effort. We are not certain why this limitation applies only to analogue exchanges, because any requirement that is technically impossible or disproportionate would appear to be inconsistent with general Community legal principles.

Implementation and Harmonisation Issues

Article 8 of the *e-Privacy Directive* on CLI is virtually the same as Article 8 of its predecessor Directive 97/66/EC and, as such, has been on the books long enough for widespread national implementation. We received no comments on this issue and the ECC noted in 2003 that “for the most part, CLI related services are working satisfactorily within networks.”⁹² The ECC also noted, however, in both 2000 and 2003 that on certain traffic routes across national boundaries, implementation of CLI services has developed slowly, and the consumer association INTUG complained in 2003 that there are significant failings at least for GSM roaming CLI.

The fact that CLI information has not been offered satisfactorily across borders since before 2000 is not evidence of failure to implement Article 8, because this *e-Privacy* provision only applies conditions “where presentation of [CLI] is offered....” If the service is not offered in the first place due to unresolved technical issues, then there is

⁹² ECC Recommendation (03)01, “Implementation and use of CLI ... within CEPT countries,” 25 March 2003, at page 1. It is not immediately apparent how the ECC reached this conclusion. The ERO website shows that only one administration has implemented the recommendation and there is “no information” for the other 45. (This sole administration was EEA member Norway, as of 31 March 2006.) The predecessor to ECC Recommendation (03)01 was an ECTRA Recommendation in 2000, ECTRA REC (00)03, which basically said exactly the same thing as the 2003 recommendation and for which there was “no information” for any administrations.

no apparent breach of the *e-Privacy Directive* (although there may be a breach of *Universal Service Directive* Article 29 and Annex 1, Part B(b)). Nevertheless, this is not a totally satisfactory situation. As early as 2000, European regulators noted that “CLI is a key component in the delivery and supply of a wide range of services and its ability to be delivered satisfactorily across interconnected networks and borders is crucial to the development of a vibrant European service market.”⁹³ They stated that investments in European service markets could be “seriously hampered or substantially curtailed” if CLI is not processed satisfactorily. We thus recommend the Commission consider whether Community action to improve the availability of CLI across Member State boundaries is required.

The Commission’s 9th Implementation Report showed fairly consistent implementation of all aspects of Article 8, except perhaps for Article 8(3) relating to what is called anonymous call rejection (“ACR”). It seems that the CEPT and ETSI are still working on standards for this service. An ECC report on implementing ACR supplementary service indicates that standards have been adopted for ACR for PSTN/ISDN networks, but not yet for the GSM networks.⁹⁴ While the lack of a standard may not necessarily impede implementation, it indicates there is a problem to some extent, especially as the CEPT has noted insufficient cross-border implementation of CLI since before 2000.

Future Considerations

CLI is already recognised to be an important component of electronic communications service, with privacy issues that require application of Article 8 conditions. By its terms, Article 8 would seem to apply to any ECS whenever CLI is offered. Thus, in principle, if CLI is offered for IP telephony or any other new services, then the *e-Privacy* protections should apply. The availability of privacy protected CLI may be

⁹³ ECTRA REC(00)03, *supra* at “background” paragraph 5. This ECTRA recommendation followed a report to the Commission on an “Action Plan on Calling Line Identification,” Norcontel, February 1999.

⁹⁴ ECC Report 77, “Implementation of ACR Supplementary Service,” 20-24 March 2006.

come increasingly important, as it is considered as a possible tool for preventing unsolicited communications on future terminal devices.

Apparently ETSI already commenced preparing standards for CLI on NGNs. There may not be a need for change to the Regulatory Framework in order to apply *e-Privacy* principles, but the current failure to adopt standards for GSM networks years after those principles were supposed to apply is a warning that the standards exercise should not be allowed to lag.

Recommendations

- The Commission should consider changes to improve the availability of CLI across Member State boundaries – it appears that technical solutions have been delayed even since 2000. We do not recommend that the Commission require CLI, as there may be valid industry or technical reasons not to provide such service for particular offerings. It may be sufficient, for example, to note in recitals the importance of this service and to stress that technical solutions for CLI across boundaries are significant for development of the Internal Market.

9.2.6 E-Privacy Article 12 - Directories of Subscribers

Relevant Provisions

ECS or ECN subscriber directories are widely distributed and publicly available. Their main function is to list the telephone, fax or e-mail contact details of network subscribers, which can be obtained by anyone who has a minimum amount of information (such as name and approximate address). Directories are (or have been) considered indispensable in everyday life and as such, directory services form part of universal service, being part of “publicly available telephone service” (*Universal Service Directive* Article 2(c)).

Universal Service Directive Article 5 appears to apply to directories and enquiry services only for telephone service, which would limit the requirement from applying to

many future converged or “non-telephone” services. Article 12 of the *e-Privacy Directive* provides simply that data privacy safeguards apply to information in “the directory” or “a public directory,” without defining the term “directory,” while recitals refer to directories for ECS in general (e.g., Recital 38). This is a matter to be cleared up at the beginning, and we thus recommend that the types of directories to which Article 12 applies should be clarified, possibly by cross-reference to the directories required in *Universal Service Directive* Article 5.

Article 12 itself establishes that consumers must be informed and have an opt-in right before they are included in “the directory,” including information on search functions embedded in the electronic version of the directory. Article 12(3) further provides that Member States may require additional consent for any but the most basic search procedure.

In addition to Article 12, certain provisions of the *Data Protection Directive* are of relevance in this context. Article 6 of that directive, for example, establishes that personal data must be collected for specified, explicit and legitimate purposes only and may not be further processed in a way incompatible with those purposes. As discussed below, other provisions of that directive may also be relevant with regard to specific services based on subscriber directories.

Implementation and Harmonisation Issues

The Commission has reported that in ten of the 25 Member States comprehensive directories and/or directory enquiry services are not yet available. Where directories are available, we understand that harmonisation issues have arisen regarding the use of **directories for reverse or multi-criteria searching services**. These services use directories to search the personal data of a given person or even of a group of people who match the search criteria.

UK law prohibits reverse searching unless the person in question has given prior consent. The UK Code of Practice for directory information has prohibited reverse search capacity since at least December 1998. The UK view is not necessarily shared by other Member States, where reverse search applications are more commonly accepted or opt-out provisions are applied. Representatives of the data protection authorities in Austria

and Portugal in 2000 indicated that reverse searches did not give rise to specific issues in their countries (but that was before the Regulatory Framework applied). German law permits reverse searching provided that individuals whose personal data is in the directory are informed of the processing and given the opportunity to opt out of the database. The French CNIL has taken the view that subscribers must be properly informed and given the possibility to opt out from the reverse directory (free of charge and without justification). Finnish rules on electronic communications, on the other hand, do not limit reverse search capacities. In 2002, notably, Finnish industry argued that reverse search functions are a “widely used and highly appreciated” practice in the Nordic countries. At the time, it was noted that in total 45 million reverse search requests were made in Norway, Sweden and Finland in 2001, representing approximately 15% of the total directory enquiry requests in these countries.

It is argued that this reverse search application is a new purpose incompatible with the initial one, under Article 6 of the *Data Protection Directive*. This principle is raised in *e-Privacy* Recital 39. As a new purpose, the service providers would have certain information obligations towards subscribers, pursuant to Articles 10 and 11 of the *Data Protection Directive*. The Article 29 Working Party took the position in 2000 that as soon as additional information or complementary functions of the public directory are concerned, new consent of the individual is required, as the processing of such additional information could be regarded as an unexpected invasion of privacy.⁹⁵ This position is shared by Ofcom in the UK, but it would appear that cultural differences in some countries are inconsistent – the sheer number of reverse searches in the Nordic countries, if continued today, would indicate that the function is a normal practice. This issue led to controversy between Council and the Parliament in 2002, resulting in a compromise adopted in Article 12(3). We have not seen recent information that gives any reason to amend the Regulatory Framework on this matter.

⁹⁵ Article 29 Working Party, Opinion 5/2000 on the Use of Public Directories for Reverse or Multi-criteria Searching Services (Reverse Directories), 5058/00/EN/Final, WP33, 13 July 2000. In this decision, the Working Party extended its analysis to all kinds of public directories (traditional telephony, mobile telephony, electronic mail, electronic signatures) used for reverse or multi-criteria searches. In this respect, the decision extends further than the directories considered in the *e-Privacy Directive*, as we discussed above.

With regard to the application of Article 12(4) to subscribers other than natural persons, Member States are required to ensure that the legitimate interests of **legal persons** are sufficiently protected, but the standards in the directive provide little guidance. In the UK, corporate subscribers may request that their telephone numbers be excluded from the directory, although they cannot invoke the full range of rights available to individual subscribers. In Finland, a provider of electronic communications must grant companies and other organisations listed in a directory the right to review, amend or remove their contact information.

The reverse directory data protection principles of the *Data Protection Directive* will not apply to legal persons in the majority of Member States where personal data refers to natural persons only, but we have seen no discussion that this causes problems for use of reverse directories. Thus, we only recommend further study of this matter. It is possible that differing national standards for protection of subscribers other than natural persons could cause cross-border difficulties, although we have seen no hard evidence of this effect. In the absence of any such evidence of such difficulties, we do not recommend any change to the Regulatory Framework.

Recommendations

- We recommend that the reference in *e-Privacy Directive* Article 12(1) to “the directory” should be more precise, possibly by an explicit cross-reference to the *Universal Service Directive* Article 5 reference to directories of publicly available telephone service.
- Due to the substantial differences in national approaches to reverse directories that led to compromise language in the Regulatory Framework, we do not recommend that further harmonisation is needed in this field. We have not seen recent information that gives any reason to amend the Regulatory Framework in this matter.
- There are varying national implementation models for the application of Article 12 to legal persons, because national laws and juridical standards differ for “legal persons.” In the absence of any hard evidence that these

variations have caused cross-border difficulties, we do not recommend any change to the Regulatory Framework in this matter.

9.2.7 Article 13 - Unsolicited Communications ('Spam')

Scope of the Problem

The impact of spam is undeniably substantial. Estimates of the amount of spam vary substantially; at the high end, we have seen the claim that as of the fourth quarter of 2005 approximately 85% of Internet traffic is "abusive e-mail."⁹⁶ International organizations, including the ITU and OECD, are focusing on the international dimensions of the problem. This international dimension is important, because Europe's legal and regulatory tools against spam do not necessarily stem unsolicited communications sent from outside the Community.

Nevertheless, there should be a fine balance between controls on spam and imposing new costs on European providers of ECS and ECN in order to stop spam from outside of the Community. As noted in a recent ITU publication, anti-spam rules around the world "have often had negative side effects, in the form of transaction costs, administrative costs, and a chilling effect on legitimate senders of e-mail."⁹⁷ We have found no objective and reliable quantification of these costs.

⁹⁶ Messaging Anti-Abuse Working Group, "MAAWG Email Metrics Program: The Network Operators' Perspective," 4th Quarter 2005 Report (issued March 2006). Methodological questions may affect this estimate (e.g., the MAAWG measurements do not account for false positives and the geographic range of the measurements is not specified). Nevertheless, the magnitude of the problem is confirmed by other sources – the ITU referred to estimates that spam accounted for around 70% of all traffic by mid-2005, "Trends in Telecommunication Reform 2006: Regulating in the broadband world," summary chapter at page 25 (7th ed. 2006), accessed on 21 March 2006 at http://www.itu.int/ITU-D/treg/publications/Chap%207_Trends_2006_E.pdf.

⁹⁷ Id. at chapter 7, page 111.

A relatively new phenomena also requires attention. Complaints about “mobile spam” started to soar around 2002, as consumers found unsolicited communications on their mobile terminals. By February 2006, a significant number of leading mobile operators signed a code of conduct through the GSM Association (GSMA) to work together against mobile spam. At the time, the GSMA said that mobile spam was more manageable and less of a problem than e-mail spam, partially because the operators could better control traffic over their networks.⁹⁸

Relevant Provisions in the Regulatory Framework

Article 13 of the *e-Privacy Directive* protects subscribers of electronic services against intrusion of their privacy by unsolicited communications for direct marketing purposes, in particular by means of automated calling machines, faxes, and e-mails. Article 13(5) provides that Member States “shall take appropriate measures” against unsolicited communications. In principle, *e-Privacy Directive* Article 13 applies to spam on SMS and MMS, particularly because “electronic mail” that requires an opt-in consent under Article 13(1) is defined broadly in Article 2(h), which does not limit the term to the colloquial understanding of e-mail but extends also to “any text, voice, sound or image message ... which can be stored ... in the recipient’s terminal equipment until it is collected by the recipient.”

Because similar safeguards and provisions relating to essentially the same activity are covered in the *e-Commerce Directive*,⁹⁹ it is important that there be consistency between the directives. Yet we note a variation between Article 13 and the *e-Commerce Directive* in the definition of unsolicited communications. *e-Privacy Directive* Article 13 uses the term “unsolicited communications” in the context of direct marketing, with the term “communication” defined broadly in Article 2(d). The *e-Commerce Directive*

⁹⁸ “Leading Operators Join Forces to Tackle Mobile Spam,” GSMA Press Release, 15 February 2006.

⁹⁹ Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, OJ L 178/1, 17 July 2000 (the “*e-Commerce Directive*”).

Article 7 uses the term “unsolicited commercial communication,” with the term “commercial communication” defined in Article 2(f), also very broadly but without the concept of something being conveyed as in the *e-Privacy* definition. Only in *e-Privacy* Recital 40 is there reference to “unsolicited commercial communications,” but that term cannot be identical to the e-commerce definition due to the different senses of the word “communication” used in the two directives. Some observers have noted that, if the *e-Privacy Directive* generally used the term “unsolicited commercial communication” instead of the term “electronic mail for purposes of direct marketing,” there would have been greater consistency with the *e-Commerce Directive*.¹⁰⁰ This consistency could avoid legal confusion and assist the application and enforcement of the rules, which may be especially important for future converged services to which both the Regulatory Framework and the *e-Commerce Directive* may apply.

Implementation and Harmonisation Issues

The 10th Implementation Report says that the *e-Privacy* opt-in rules on unsolicited communications have in general been transposed and there also is a welcome development of reliance on voluntary codes to protect users. As recently as November 2004, the summary of a public consultation by the Commission noted “legislation is in general deemed to be adequate at the European level, precisely because of the opt-in regime that introduced a general ban on spam.”¹⁰¹ The Commission has expended sub-

¹⁰⁰ The Commission has started using the term “unsolicited commercial communications” fairly consistently, as in its 10th Implementation Report and its 2004 communication, “On unsolicited commercial communications or ‘spam,’” COM(2004) 28 final, 22 January 2004. Thus, we suggest that the term be amended in the next version of the *e-Privacy Directive*. This change also would separate the issue of spam from regulation of “direct marketing,” which is not per se an ECS.

¹⁰¹ “Results of questionnaires on spam,” Public consultation and workshop on combating “spam,” 15 November 2004 Commission presentation. A contrary view that most national anti-spam rules have not worked is set forth in the ITU Trends in Telecommunication Reform 2006, *supra*. The opening sentence of chapter 7 of the ITU publication argues that anti-spam laws have been largely unsuccessful around the world. That statement, however, is in-turn based predominately on sources focused on U.S., rather than European, experience. Nevertheless, the sheer amount of spam indicates that there remains a global problem.

stantial energy on efforts to combat spam, as in its January 2004 Communication,¹⁰² establishing the Contact Network of Spam Enforcement Authorities (CNSA) and follow-up in the Safer Internet plus 2005-2008 programme.

Despite the harmonisation efforts, some concepts used in Article 13 of the *e-Privacy Directive* on unsolicited communications appear to have been interpreted differently in certain Member States. For instance, the concept of customers mentioned in Article 13(2) is approached differently amongst Member States.

Member State	Interpretation of “customer”
France	A person who has never previously placed an order is excluded from the scope of the exception.
Germany	Electronic contact details require the existence of a contract (for the sale of goods or services) concluded with the customer.
Ireland	There is no customer relationship if a person does accept a business offer after asking for a quote on a product or service. Nonetheless, in such a case, it is considered permissible to send a follow-up e-mail to such potential customer to enquire why the offer was not accepted.
Luxembourg	Service providers who directly obtain electronic contact details from customers in the course of the sale of a product or a service may use such details for the purposes of direct marketing of products or services similar to those already offered.
Spain	A previous contractual relationship is required in order to invoke the exception, but it is not necessary that the data are collected in the context of a sale, it suffices that the data have been “lawfully obtained.” Such unsolicited communications could in principle be sent to existing customers, even if their electronic contact details have been obtained from a third party.
UK	Contact details of the recipient of the e-mail must have been obtained directly from that individual in the course of a sale or negotiations for the sale of a product or service.

There are also variations for interpreting the exception in Article 13(2) that an e-mailer can send information to customers of **similar products or services**.

¹⁰² COM(2004) 28, cited *supra*.

Member State	Interpretation of “similar products”
Belgium	Preparatory works of the Royal Decree on the regulation of publicity sent by electronic mail state that that products or services within the “same category” of products or services are to be considered as “similar.” (CDs, DVDs and videotapes are given as examples of similar products.)
France	Judicial interpretation given to the term “similar” in the area of promotional sales (albeit in a different context) suggests that French courts may interpret the exception quite restrictively. In one case, a colour TV was not regarded as similar to a black and white TV.
Germany	Although this concept has not been considered in court, it is accepted that the product or service offered to the customer has to be of the “same kind” (i.e., it must have the same purpose, intended use or customer demand). In addition, it is assumed that accessories and supplies that are directly related to the goods ordered are similar.
Ireland	The word “similar” implies that customers may have a reasonable expectation of receiving e-mail from the same company, which would require a case-by-case assessment according to guidance from the Irish data protection authority.
UK	Someone who has shopped online would expect to receive e-mails promoting the diverse range of goods available from the operator of that website.

While there is clear evidence of national variations in the way in which Article 13 is interpreted and implemented at the Member State level, there is no evidence that this lack of harmonisation has affected the spread of spam one way or the other. The core feature of Article 13 is the opt-in principle, and that concept is harmonised across the Community. As discussed later in this chapter, the failure to curb the increase of spam more likely relates to international considerations and spam from abroad, rather than a lack of harmonisation of existing Community instruments.

Issues concerning natural and legal persons

The *e-Privacy Directive* obliges Member States to protect the legitimate interests of legal persons with regard to unsolicited communications for direct marketing purposes, but they remain free to determine the appropriate safeguards to do so. Recital 45 states that where Member States have established an opt-out register for such communications to legal persons, the provisions of *e-Commerce Directive* Article 7 are fully applicable.

Regarding the protection of the interests of **legal persons** (as opposed to natural persons, i.e., individuals) there is complete divergence, as shown in the following table:

<u>Member States implementing:</u> opt-in for legal persons	opt-out for legal persons
Spain, Denmark, Italy, Belgium, the Netherlands, Germany, Hungary, Poland, Czech Republic, Slovakia and Slovenia	Portugal, France, United Kingdom, Austria, Ireland, Sweden and Finland

Source: Hogan & Hartson compilation taken from Commission Staff Working Paper Annex to 10th Implementation Report

Within these categories there are further variations in how the opt-out requirement is applied to legal persons. In Belgium, consent requirements for unsolicited communications do not apply to corporate subscribers, provided that the subscriber's e-mail address contains generic or business terms instead of personal data (such as, for example, an employee's last name). In France, the opt-in system does not apply to corporate subscribers. In Germany, the courts have made it easier to invoke the opt-out exception for unsolicited communications sent to business-to-business customers.

Even though *e-Privacy* Article 13(5) leaves it to the Member States to choose how to protect legal persons, practical problems are likely to arise for operators confronted with both natural and legal persons. In addition the distinction between legal person and natural persons is not the same everywhere. In some cases small businesses, such as micro businesses, do not qualify as legal persons but are treated as natural persons. In Sweden and the UK, the general prohibition in Article 13 only applies when the recipient of the e-mail is a natural person, but this includes partnerships and sole traders.

It may not always be easy in practice to distinguish between natural and legal persons. A relatively straightforward situation would be where electronic contact details have been disclosed by a potential addressee, e.g., on a website or otherwise. It may then be simple to ask for the nature of the person. For those Member States that distinguish between communications to legal and to natural persons, the Article 29 Working Party

is of the opinion that practical rules should be developed.¹⁰³ In particular, the Working Party has raised the following issues:

- Practical rules should take account of cross-border effects. It should be clarified, according to the Article 29 Working Party, what rules to apply to e-mails originating in a Member State not affording safeguards for legal persons received in a Member State offering the same level of protection for legal and natural persons.
- What efforts should a sender be required to make to verify whether the number /address really belong to a legal or natural person? Often senders cannot be sure whether or not an e-mail address belongs to a legal person, considering that natural persons may be using e-mail addresses with pseudonyms or generic terms.
- What if the recipients are not directly ECS subscribers? This can be the case for the members of a single family or for employees working for a given company. In this case, the Belgian solution is possibly the most practical one: if the address contains personally identifiable data, the (opt-in) regime for natural persons should be applied.

In our view, at most further preparatory studies should be targeted to this specific matter, and we note the Commission said in its 11th Implementation Report that it is examining divergences in Member State practice. We have seen no evidence that the lack of harmonisation has impeded efforts to stop unsolicited communications and the varying definitions of legal personage are too deeply embedded in national legal structures and traditions to be modified by legislation in the electronic communications sector. Thus, we do not recommend changes to the Regulatory Framework on this issue based on currently available information.

¹⁰³ Article 29 Working Party, “Opinion 5/2004 on unsolicited communications for marketing purposes under Article 13 of Directive 2002/58/EC,” 27 February 2004, at page 8.

Enforcement considerations

Member States must ensure that effective remedies are in place dealing with infringements of Article 13. In its January 2004 communication on spam the Commission discussed Member States remedies, which typically include fines or injunctions to cease unlawful data processing, occasionally including “blocking” the websites involved. It was noted that judicial redress is not considered to be sufficient, but instead administrative actions are the better remedy because the sector is so dynamic.¹⁰⁴

The communication notes experience by France and Belgium, as well as by the Federal Trade Commission (FTC) in the USA, with dedicated e-mailboxes to receive specific complaints about spam. The Commission could encourage this approach as well as other enforcement approaches. Nevertheless, we do not recommend such an approach being contained explicitly in the Regulatory Framework, because it is unlikely to be future proof, taking into account how long the next version of the Regulatory Framework would be in place.

The Commission also discussed industry contracts as a tool against spam, including contractual obligations that ISPs and ESPs already apply, prohibiting use of their services for sending spam or bulk e-mail. The question arises whether some specific right of action might be created to improve specific enforcement. There has been international discussion of this possibility. Some countries have explicitly not created such a private right of action, e.g., Australia, which enacted anti-spam legislation in 2003 that is generally considered to be effective, but which did not include a private right of action, in order to avoid vexatious or nuisance suits. When Canada considered this approach, apparently the ISPs opposed it, on the grounds that government and the public would then expect them to engage in costly law suits, when they would rather work on technological solutions. In May 2005, Canada’s Task Force on Spam nevertheless recommended establishing such a private right of action. In the United States, anti-

¹⁰⁴ The Commission said also that it would review whether national implementation included sufficient enforcement mechanisms and penalties, and whether national authorities had sufficient investigation and enforcement powers. COM(2004) 28, cited *supra*, at page 15.

spam legislation explicitly permits ISPs to sue, and they have taken action, in addition to government enforcement actions.

Some limited court actions have been brought in Europe (e.g., Microsoft brought lawsuits against spam providers starting in 2003 and has initiated numerous referrals to public authorities and cease and desist letters; and a December 2005 suit by a private business in the UK said to be the first of its kind). Some national legislation assists ISPs in anti-spam efforts, such as the UK Misuse of Computers Act, the UK Privacy and Electronic Communications (EC Directive) Regulations 2003 (section 20), French contract law, German unfair competition law and Dutch property law standards. These causes of action rest on different areas of law (including criminal, competition, privacy and contract laws). It is probably not effective to define standards or solutions for anti-spam rights any more specifically in an electronic communications regulatory framework that likely will not be amended frequently, other than the general requirement in *e-Privacy Directive* Article 13(5) for Member States to take “appropriate measures.” A Member State that wants to adopt a private right of action based on its own legal structure would not need amendments to the Regulatory Framework to do so, and we do not advise that this be made mandatory. Thus, we do not identify recommendations for change specifically to the Regulatory Framework to foster private rights of action, but instead recommend that the Commission rely on existing tools to encourage national adoption of rules that permit greater access to court actions.

ISPs and providers of ECS and ECN in general have strong economic incentives to decrease the amount of spam. Nevertheless, it would not seem to be disproportionate to add to the Regulatory Framework an affirmative requirement for ECS and ECN provid-

ers to inform subscribers of technical or other measures to reduce the impact of spam.¹⁰⁵ Already *e-Privacy Directive* Article 4 requires ECS providers to inform consumers of risks to security and Recital 20 to the directive says that service providers should inform users and subscribers of means to protect the security of their communications. A similar requirement to inform subscribers of tools against spam should be added to Article 13 on unsolicited communications. We do not believe it is possible to specify what those measures might be, because their nature will evolve over time, and the choice of what measures that an ECS might recommend to customers is therefore best left to market forces.

Finally, the Commission also noted that the Article 29 Working Party can approve EU-wide codes of conduct (see *Data Protection* Article 30). This idea has initial attractiveness, in that a harmonised code of conduct would rely on industry self-regulation while giving a level of certainty, if reasonable codes can be approved.

Cross-Border Considerations

In February 2005, authorities in 13 European countries agreed to share information and pursue complaints across borders in a pan-European drive to decrease spam. The main purpose of this agreement is to assist the identification and prosecution of spammers across Europe. The agreement was developed by the Contact Network of Spam Enforcement Authorities” (CNSA), set up at the initiative of the Commission following its January 2004 Communication. The countries involved have agreed to make their “best

¹⁰⁵ On 28 March 2006, Australia implemented a similar requirement by registering a binding industry code of conduct that as one element requires ISPs to notify subscribers of anti-spam measures. This approach is consistent with the ITU recommendations issued in its “Trends in Telecommunication Reform 2006,” *supra*. We considered whether to recommend that the Commission propose binding industry codes in the Regulatory Framework in a similar manner. This approach would seem inconsistent with the general principle of decreasing regulatory burdens and we are not aware of binding codes of practice in the electronic communications field on the Community level (although there is Member State experience with such an approach). Further, the *Data Protection Directive* already encourages reliance on codes of conduct in Article 27, without making them mandatory. Thus, we do not recommend this approach as a mandatory element in the Regulatory Framework but note it as a topic for further review.

efforts” to address complaints forwarded to them, “to ensure that more extensive cooperation closes any loopholes that could be exploited by spammers.” This cooperation is supposed to facilitate the linking of national complaints mechanisms, so that complaints from users in one Member State regarding messages originating in another Member State can be dealt with effectively.

This initiative recognises that efforts to block spam must inevitably focus on cross-border enforcement across the Community, because the problem is recognised to be a global issue. On the international level efforts are also substantial, with initiatives by the OECD and ITU focused on how to harmonise and enforce rules on trans-border spam.¹⁰⁶ The ITU most recently has emphasised that countries should encourage ISPs to enforce codes of conduct, and regulators should have authority to enforce adherence.

Issues of international trade are implicated in any efforts to block spam. Creating enforceable ISPs codes of conduct would lead to blocking their customers and other ISPs with whom they peer from other countries. The Community should continue international multilateral efforts to create structures for such codes and such remedies. These efforts should not require new authority under the Regulatory Framework, because the Community and Member States already have participated in numerous such international initiatives under current legislation. For instance, we reviewed the OECD’s April 2006 recommendation on cross-border cooperation and found no “holes” in the Regulatory Framework that prevent cooperative measures on the OECD or ITU level.

Recommendations

- The Commission should review whether modifications to the definition of “unsolicited communications” or “communication” are needed for consistency between the *e-Privacy Directive* and other legislation. This

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See, e.g., OECD, Task Force on Spam, “Anti-Spam Regulation,” DSTI/CP/ICCP/SPAM (2005)10 /FINAL, 15 November 2005, as well as the 13 April 2006 OECD Recommendation on Cross-Border Co-operation in the Enforcement of Laws against Spam; ITU, Note by the Secretary-General, “Report on Spam,” Doc. C-5/EP/10-E, 9 May 2005. These efforts on the ITU level led to the report cited above, released in March 2006.

consistency could avoid legal confusion and assist the application and enforcement of the rules, which may be especially important for future converged services to which both the Regulatory Framework and the *e-Commerce Directive* may apply.

- Member States should be encouraged to join the voluntary agreement to handle cross-border spam complaints – nevertheless, we would not recommend change to the Regulatory Framework to make this mandatory, as such an approach would not be future proof, and there is insufficient international experience to place detail on such activities in primary legislation.
- ECS providers should better inform subscribers of other available technical measures that may reduce the impact of spam. Such a requirement could, for instance, be modelled on *e-Privacy Directive* Article 4 on security, which requires ECS providers to inform consumers of risks to security. A similar requirement to inform subscribers of tools against spam should be added to Article 13 on unsolicited communications. We do not believe it is possible to specify what those measures might be, because their nature will evolve over time, and the choice of what measures that an ECS might recommend to customers is therefore best left to market forces.
- Because mobile spam is a relatively new phenomena and there appear to be high-visibility industry initiatives to stop it, as well as tools to do so in the Regulatory Framework, we see no reason to recommend amendment of the Regulatory Framework with respect to it.

9.3 General Horizontal Issues

9.3.1 Impact of Cross-Border Service

An issue to be assessed is whether the obligations in the *e-Privacy Directive* can be applied effectively in cases where cross-border elements are present and in particular in the case of the involvement of third countries. Considering for instance the obligations

related to security (Article 4) and confidentiality (Article 5), to traffic and location data (Articles 6 and 9), cookies (Article 5(3)), to directories (Article 12), or to the use of communications for marketing purposes (Article 13), the question arises whether the cross-border supply of electronic communications requires fine-tuning of the *e-Privacy Directive* for effective implementation of these obligations.

Electronic communications knows no boundaries and many ECS will be provided in the future on a cross-border basis. Already issues arise over how obligations and consumer protection provisions can be applied to such cross-border services. These issues cross over many consumer protection aspects of the *e-Privacy Directive*. With respect to security, ECS located in one Member State increasingly rely on ECN in another Member State where customers are located, which will increase the burden of cooperation to ensure adequate security. With respect to Article 5(3) confidentiality, the Article 29 Working Party held that an undertaking that places a cookie on a user's computer is subject to the national rules where that user is located – a situation that creates jurisdictional nightmares and which might be ignored by providers in many third countries.

The cross-border issues arise particularly in the context of spam as we discussed above, with further considerations for international issues:

- Although national hotlines for countering spam have been established, we see complaints that Internet users cannot report or seek protection from spam sent from other countries.
- Conversely, over-ambitious filtering can impede cross-border service – one major non-EU ISP in recent years blocked reception of all e-mail traffic from Europe in an effort to block spam. (This episode indicates why caution is needed in specifying remedies for spam, because some remedies can be worse than the problems they are intended to address.)

Recognising these cross-border elements, the major emphasis we see from respondents to the questionnaire in this project as well as general research is that there is a need for greater focus on implementation and enforcement in general. Inadequacy in the enforcement of current rules and holes in implementation are likely to be the far greater barrier to achieving effective results. In other words, to have effective cross-border

enforcement requires effective Member State enforcement in the first place. Thus, while we have identified a series of (sometimes technical) recommended changes to the Regulatory Framework, we have not identified general changes that apply specifically to cross-border applications.

The *Data Protection Directive* would already apply to any transmission of personally identifiable data outside the Community – no change to the Regulatory Framework is needed to accomplish that general goal, which would seem to protect directories and location data. Security and confidentiality requirements in the *e-Privacy Directive* cover the ECS or ECN provider within the Community, and also would seem to prevent any ECS or ECN provider from relying on insecure or non-confidential arrangements outside the Community if the service is provided to Community citizens.

We have referred to Community participation in efforts to control spam and cookies above. Commentary from the international community, such as the OECD, generally call for more international cooperation – which is a good suggestion but which does not require changes to the Regulatory Framework.

To a substantial extent, responses to cross-border problems of spam or other privacy issues depends on cooperation between administrations. In the general field of consumer protection, the Commission concluded that “there was a need for a legal framework for cooperation between public authorities responsible for the enforcement of consumer protection laws.”¹⁰⁷ Based on this analysis, the ensuing *Consumer Protection Cooperation Regulation* was adopted to assist intra-Community cross-border enforcement while respecting each Member State’s laws and institutions. The objective of the regulation is to define conditions for Member State authorities to cooperate with respect to “laws that protect consumers’ interests.” Those laws are listed and include,

¹⁰⁷ Commission, “On cooperation between national authorities responsible for the enforcement of consumer protection laws,” COM(2003) 443 final, 18 July 2003, at page 2. This proposal led to adoption of Regulation (EC) No 2006/2004 of the European Parliament and the Council of 27 October 2004, OJ L 364/1, 9 December 2004 (the *Consumer Protection Cooperation Regulation*). This Regulation, plus others referenced in the Commission’s communication, provides precedent for the use of Internal Market principles under Article 95 of the treaty to support enforcement efforts.

for example, the *e-Commerce Directive* and directives on misleading advertising and distance contracts. The list does not include any of the Regulatory Framework or the *e-Privacy Directive* specifically. As a result, the regulation would apply to spam that is misleading or violates other consumer protection directives – which may be a large set of the existing spam problem – but would not apply to the full set of other consumer protection matters covered in the *e-Privacy Directive*.

While the primary focus of the regulation is on intra-Community infringements, it also provides in Article 18 that the Community shall cooperate with international organisations. That article also gives competence for mutual assistance arrangements between the Community and third countries. This competence could support efforts to control abusive spam or transmission of other electronic communications that violate provisions of the *e-Privacy Directive*, so that further changes to the Regulatory Framework are not needed.

If there is a need for further enforcement of cross-border consumer protection in the electronic communications field, and specifically for measures safeguarding user privacy discussed in this chapter, then one method to satisfy this requirement could be to bring elements of the Regulatory Framework within the *Consumer Protection Cooperation Regulation*. It is too early to assess the impact of the regulation – it only applied from 29 December 2005 and the intra-Community mutual assistance provisions it contains (but not the international mutual assistance Article 18) do not apply until 29 December 2006. Presumably there were reasons it was not extended to the Regulatory Framework in the first place, as the regulation was both proposed and enacted after the Regulatory Framework had come into force. In its January 2004 communication on spam, the Commission recommended that the regulation be extended to the *e-Privacy Directive*, but this recommendation was not a part of the regulation as adopted.¹⁰⁸ For these reasons, we do not recommend that an explicit linkage be made between the regulation and the Regulatory Framework, but offer the subject for (re)consideration.

¹⁰⁸

See COM(2004) 28 at page 18. The Economic and Social Committee supported this approach. See Opinion 2004/C 108/18, OJ C108/86, 30 April 2004, at page 89.

9.3.2 User Hardware and Software

The Regulatory Framework is aimed at networks and services. When looking at privacy, confidentiality and security of communications services, one issue is whether end user hardware and software equipment used to transmit or receive communications must also be considered. An increasing number of devices and applications are being placed on the market that are neither technically ECS nor ECN (such as RFIDs and many categories of short range devices). And many new services are software driven, with no direct contact between the service provider and user (such as certain VoIP business models).

For the articles of the *e-Privacy Directive* we were asked to review, it does not appear that the use of subscriber terminals raises substantial new data protection issues. The provisions of the *Data Protection Directive* will apply regardless whether the terminals are connected to an ECS or ECN. In addition, if the consumer hardware or software is used to receive / transmit communications, then the underlying ECN or ECS provider is subject to existing provisions that already apply to terminals and devices. The *e-Privacy Directive* provisions on confidentiality in Article 5(3) with respect to storing or gaining access to information on terminal equipment (e.g. cookies and spyware) explicitly apply to consumer terminals. Further, *E-Privacy Directive* Article 14 extends data protection provisions to terminals. In particular, Article 14(3) permits Member States to adopt measures to ensure that “terminal equipment is constructed in a way that is compatible” with personal data rights, with an explicit reference to the *R&TTE Directive*.¹⁰⁹

¹⁰⁹ Article 14(1) provides that no mandatory requirements for specific technical features should be applied to terminals or other equipment in a manner that impedes the Internal Market. Articles 14(2) and (3), however, permit Member States to implement provisions of the *e-Privacy Directive* after notifying the Commission through procedures of the *Transparency Directive* 98/34/EC of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services, OJ L 204/37, 21 July 1998, as amended by Directive 98/48/EC, OJ L 217/18, 5 August 1998.

As background to this Article, Recital 46 stresses that the functionalities of ECS can be integrated into various places, including the network or in user terminals or software. It says that specific rules may thus be necessary in accordance with the *R&TTE Directive* to harmonise technical features of equipment, including software, for data protection safeguards.

Data protection for terminals is already covered in the Regulatory Framework, and we do not believe additional detail at the level of primary legislation is required. We recommend only one small change to make Article 14 consistent with the *R&TTE Directive*. The word “terminal equipment” is used in a wide variety of contexts in the *e-Privacy Directive* and the Regulatory Framework as a whole, but without a clear-cut definition. As noted, Recital 46 provides a link from Article 14 to the *R&TTE Directive*, which defines “telecommunications terminal equipment” at Article 2(b). However, *Framework Directive* Recital 8 that says it does not cover equipment within the scope of the *R&TTE Directive*. This is an inconsistency, because the *Framework Directive* sets overall policies and objectives for regulation in this field, which could lead to the conclusion that terminal equipment may be subject to rules under the *e-Privacy Directive* but not to any of the standards and provisions of the *Framework Directive*. This could become important if certain terminals were considered to be necessary for ECS (perhaps defined as associated facilities) but because of Recital 8 may be excluded because they would also fall within the scope of the *R&TTE Directive*.

- Thus we recommend that the Commission include language in the recital in amendments to *Framework Directive* analogous to existing Recital 8 to avoid exclusion of Regulatory Framework obligations to terminals that are associated with ECS but also within the scope of the *R&TTE Directive*. (The effect of this recommendation for the *R&TTE Directive* should be considered, as there could be implications beyond the scope of our study.)

A substantial recent topic, and the upcoming subject of multiple Commission workshops and a consultation, is the example of RFID technology and its impact on consumer privacy. Again, Article 14 supports the straightforward assessment that there already is sufficient authority to impose conditions on “terminal or other electronic communications equipment.” Thus, there is no need to change the Regulatory Framework to use this authority to apply relevant conditions to such devices, although the

Commission may need new provisions to harmonise conditions for those devices, as we discuss above.

Some Member States are moving faster than others to adopt rules in the RFID area, e.g., Italy's March 2005 RFID safeguards. The Commission has tools, within the standardisation process, to encourage harmonisation, and we recommend this be done. As the Commission is initiating a full consultation on RFID issues, however, we do not seek to second guess that process with more detailed recommendations here.

9.3.3 Remedies and Sanctions

Should further sanctions be considered in the privacy field to improve effective enforcement? To some extent the response to this question depends on the manner in which Member States have related *e-Privacy* requirements to those of the general *Data Protection Directive*. The *e-Privacy Directive* in Article 15(2) refers to the explicit provisions in Chapter III of the *Data Protection Directive* on judicial remedies, liability and sanctions. Chapter III gives rights to judicial remedies for breach (Article 22), provides that persons who suffer damage from failure to comply with privacy protections are entitled to receive compensation (Article 23) and calls on Member States to adopt "suitable measures" (Article 24).

We have not seen any complaints about the general scope or extension of these provisions under either directive. Some parties have noted that the existing penalties for data misuse are not always sufficient on the national level. Some potential penalties do appear low, for example, the UK limits direct administrative fines to up to £5,000 for persistent misuse of electronic networks. Some penalties are measured by the number of infractions, so the level of the possible fine could be misleading, but the total penalty still appears minimal. In Ireland's recent first prosecution of a mobile spammer, the courts could have fined the spammer up to €3,000 per message sent, but instead assessed fines only of €300 per count, a total of €1,500, plus costs of €1,000. By contrast, in late 2005 the Netherlands regulatory authority fined spammers as much as €60,000. If some Member States impose sanctions that are viewed to be insufficient deterrents, then the Commission should encourage more "suitable" measures under Article 23 without any change to the Regulatory Framework.

E-Commerce Directive Articles 18 and 20 on court actions and sanctions, respectively, are arguably more precise provisions than those contained in the Regulatory Framework. For instance, Article 18 requires available court actions to allow for “rapid adoption of measures,” and Article 20 requires sanctions to be “effective, proportionate and dissuasive.” We have not, however, seen evidence that Chapter III of the *Data Privacy Directive* on remedies and sanctions has been insufficient. Note that above we recognised the utility of rights of action by ISPs against spam, but recommend reliance on existing tools rather than changes to the Regulatory Framework.

It is likely that experience with these provisions is still insufficient to develop recommendations for legislative changes or to institutionalise provisions in the Regulatory Framework. There are only a limited number of enforcement actions that relate to the *e-Privacy* provisions, and not so many more under the *Data Protection Directive*.¹¹⁰ For this reason, we do not recommend changes at this time to be considered for enforcement activities, noting that the Commission also has the ability to suggest changes to the *Data Protection Directive* if later experience shows a need for change – without having to touch the *e-Privacy Directive* or get caught up in the overall Regulatory Framework revision. The Commission may want to consider further preparatory studies on this issue at a later date, after further experience is gained.

One measure to study will be the implementation of the 2005 *Framework Decision on Illegal Attacks against Information Systems*, which implicates issues of network security.¹¹¹ Under this Decision, illegal access and interference with information systems will be punishable in national law, as of March 2007, with criminal penalties up to several years of imprisonment in the most severe cases. Each Member State will have jurisdiction for offences committed on its territory or by one of its nationals. Where

¹¹⁰ In its 2003 review of the *Data Protection Directive*, the Commission did, however, refer to the phenomena of “[a]n under-resourced enforcement effort and supervisory authorities with a wide range of tasks, among which enforcement actions have a rather low priority...” COM(2003) 265, 15 May 2003, page 17. This situation was not judged to be sufficiently a problem to justify legislative changes.

¹¹¹ Council Framework Decision 2005/222/JHA of 24 February 2005 on attacks against information systems, OJ L 69/67, 16 March 2005.

several Member States consider that they have jurisdiction, they must cooperate with the aim of centralising proceedings in a single Member State (Article 10).

This Decision, adopted under Title VI of the Treaty on European Union, rather than Internal Market principles, applies to information systems and not *per se* to electronic communications networks or services. By contrast, the *e-Privacy Directive* provides a structure for harmonising high level data protection (see Article 1), but not for harmonising penalties that might apply to violations of ECN or ECS security.¹¹² Thus, on the one hand, the Commission may consider if a similar framework for attacks on ECNs would be appropriate, in particular as ECNs are vital for the conveyance of the information systems. On the other hand, when considering the matter of further sanctions to enforce network security, the Commission should take into account that a framework should be implemented already by 2007 for protection of information systems, and as a result there may not be a need to expand the scope of the Regulatory Framework.

All the remedies and enforcement tools thus far considered relate to penalties and actions by NRAs or data commissioners. As recognised in the 10th Implementation Report, there is increased reliance on self-regulatory mechanisms. Nevertheless, there is not an explicit link between the *e-Privacy Directive* and provisions in the *Data Protection Directive* Article 27 relating to codes of conduct (nor any link to Article 16 of the *e-Commerce Directive* on codes). Those provisions require Member States and the Commission to encourage drawing up of codes of conduct, which can then be reviewed by national authorities or approved for Community application by the Article 29 Working Party. This approach would work for all areas in which there is an overlap between the two directives – the Commission referred to this possibility of Community codes of conduct when discussing remedies for spam. Further, the approach of relying on codes of conduct has recently been advocated by the ITU and adopted on a mandatory basis for combating spam by Australia, as discussed above.

¹¹² Article 1(3) of the *e-Privacy Directive* makes clear it does not apply to activities that are covered by Titles V and VI of the Treaty.

- The *e-Privacy Directive* in Article 15(2) refers to the explicit provisions in Chapter III of the *Data Protection Directive* on judicial remedies, liability and sanctions. Thus there is existing authority for greater emphasis on enforcement efforts. In addition to this, we recommend the Commission amend the *e-Privacy Directive* to refer explicitly to Article 27 of the *Data Protection Directive* with respect to codes of conduct, in order to encourage greater reliance on this approach.

9.4 Recommendations

The following list incorporates all the recommendations set forth in this chapter. It includes some, but not all those areas where we explicitly declined to recommend changes relating to a specific issue. All references to articles or recitals refer to the *e-Privacy Directive* unless otherwise noted. It is particularly apt for this chapter to note that there are many actions that can be recommended to deal with the issues raised by each of the *e-Privacy Directive* that we have examined, but that many of these actions do not require change to the Regulatory Framework and are, thus, not the topic of this report.

Recommendations with respect to Article 4 - security

1. The scope of Article 4(2) should require providers to inform subscribers when there is an actual breach of network security, in addition to the current requirement to inform them of the risk of such breaches. The Commission should issue guidance on what constitutes a “breach” for notification purposes.
2. General authorisation condition A16 in the *Authorisation Directive* on security should be updated and broadened to match *e-Privacy Directive* Article 4 for coverage of both ECN and ECS providers, not solely ECN.
3. There should be an explicit obligation in *e-Privacy Directive* Article 4(1) for ECNs and ECS providers to cooperate for ensuring data security.
4. In some Member States specific requirements apply to the obligation to take appropriate technical and organisational measures, while others leave the as-

assessment of the security level to the providers without offering guidance. This divergent approach complicates cross-border service of electronic communications. All Member States should provide guidance in this respect, and the Commission should encourage dissemination of information on best practice.

Recommendations with respect to Universal Service Directive Article 23 - integrity

5. The Commission should consider whether the scope of Article 23 should be expanded beyond the traditional public telephone network, for instance to cover mobile or IP networks used for public service. Whether this expansion should be adopted will depend on specific impact assessment of the cost of the expansion.

Recommendations with respect to Article 5 - confidentiality

6. The Commission should encourage best practice and support initiatives to develop technology that promotes confidentiality, such as encryption. We do not, however, see a need to change the Regulatory Framework to be more specific in this respect. The use of encryption appears to be a matter of best practice that can be encouraged through existing tools.

Recommendations with respect to Articles 6 and 9 – traffic and location data

7. The Commission should consider adopting more detailed standards on when consent can be given, for example, whether consent can be given in the general terms and conditions for ECS at the time of service subscription or during the stage of processing procedures.
8. The Commission should review the application of existing regulatory tools for dealing with converging services that use location data. We do not identify specific changes to the Regulatory Framework in this respect, given the scope of the existing provisions of Article 9 of the *e-Privacy Directive*.

Recommendations with respect to Article 8 - CLI

9. The Commission should consider changes to improve the availability of CLI across Member State boundaries – it seems that technical solutions have been delayed since 2000. We do not recommend that the Commission require CLI, as there may be valid industry or technical reasons not to provide such service for particular offerings. It may be sufficient, for example, to note in recitals the importance of this service and to stress that technical solutions for CLI across boundaries is significant for development of the Internal Market.

Recommendations with respect to Article 12 - directories

10. The reference in *e-Privacy Directive* Article 12(1) to “the directory” should be more precise, possibly by an explicit cross-reference to the *Universal Service Directive* Article 5 reference to directories of publicly available telephone service.
11. Due to the substantial differences in national approaches to reverse directories that led to compromise language in the Regulatory Framework in 2002, we do not recommend further harmonisation is needed in this field. We have not seen recent information that gives any reason to amend the Regulatory Framework in this matter.
12. There are varying national implementation models for the application of Article 12 to legal persons, because national laws and juridical standards differ for “legal persons.” In the absence of any hard evidence that these variations have caused cross-border difficulties, we do not recommend any change to the Regulatory Framework in this matter.

Recommendations with respect to Article 13 – spam

13. The Commission should review whether modifications to the definition of “unsolicited communications” or “communication” are needed for consistency between the *e-Privacy Directive* and other legislation. This consistency could avoid legal confusion and assist the application and enforcement of the rules,

which may be especially important for future converged services to which both the Regulatory Framework and the *e-Commerce Directive* may apply.

14. Member States should be encouraged to join the voluntary agreement to handle cross-border spam complaints – nevertheless, we would not recommend change to the Regulatory Framework to make this mandatory, as such an approach would not be future proof, and there is insufficient international experience to place much detail on such activities in primary legislation.
15. ECS providers should inform subscribers of available technical measures that may reduce the impact of spam. Such a requirement could, for instance, be modelled on Article 4 on security, which requires ECS providers to inform consumers of risks to security. A similar requirement to inform subscribers of tools against spam should be added to Article 13 on unsolicited communications. We do not believe it is possible to specify what those measures might be, because their nature will evolve over time, and the choice of what measures that an ECS might recommend to customers is best left to market forces.
16. Because mobile spam is a relatively new phenomena and there appear to be high-visibility industry initiatives to stop it, as well as tools to do so in the Regulatory Framework, there is no reason to recommend further measures with respect to it. Nevertheless, there is a strong consumer concern over mobile spam and, given the scope of the problem on fixed networks, we recommend that the Commission devote attention to this area.

Recommendations with respect to general horizontal issues

17. The language of *Framework Directive* Recital 8 should not be repeated, and a new recital should be included in amendments, in order to avoid exclusion of Regulatory Framework obligations to terminals that are associated with ECS but also within the scope of the *R&TTE Directive*. (The effect of this recommendation for the *R&TTE Directive* should be considered, as there could be implications beyond the scope of our study.)
18. The *e-Privacy Directive* in Article 15(2) refers to the explicit provisions in Chapter III of the *Data Protection Directive* on judicial remedies, liability and

sanctions. Thus there is existing authority for greater emphasis on enforcement efforts. In addition to this, the *e-Privacy Directive* should be amended to refer explicitly to Article 27 of the *Data Protection Directive* with respect to codes of conduct, in order to encourage greater reliance on this approach.

10 Dispute Resolution Procedures of the Universal Service Directive

10.1 Background to EU policy for out-of-court dispute resolution

The dispute resolution procedures of Article 34 of the *Universal Service Directive* do not exist in a vacuum. Even though there is limited information available or experience with out-of-court procedures in the electronic communications field, there are numerous other dispute resolution mechanisms in other sectors that give guidance on how this should work in the Regulatory Framework.

The Commission has been promoting alternative dispute resolution (ADR, another term for out-of-court procedures) for over a decade. The principal milestones for Commission action are as follows:

- Commission Green Paper of 16 November 1993 on the access of consumers to justice and the settlement of consumer disputes within the single market, COM (93)576;
- Commission Recommendation 98/257/EC of 30 March 1998 on the principles applicable to the bodies responsible for out-of-court settlement of consumer disputes, OJ L115/31, 17 April 1998, which is referenced in Recital 47 of the *Universal Service Directive*;
- Commission Communication of 30 March 1998 on extrajudicial resolution of consumer disputes, COM(1998)198;

- Commission Recommendation 2001/310/EC of 4 April 2001 on the principles for the out-of-court bodies involved in the consensual resolution of consumer disputes (this recommendation explicitly refers to electronic commerce in several provisions), OJ L109/56, 19 April 2001;
- Commission Communication of 4 April 2001 on the widening of access of consumers to other dispute resolution systems, COM(2001)161;
- Commission Green Paper of 19 April 2002 on alternative dispute resolution in civil and commercial law, COM (2002) 196 final; and
- Proposal for a Directive of the European Parliament and of the Council on certain aspects of mediation in civil and commercial matters, 22 October 2004, COM(2004) 718 final.

The Lisbon European Council in March 2000 invited the Commission and the Council to consider how to promote consumer confidence in electronic commerce, with particular emphasis on alternative dispute resolution systems.¹¹³ This objective was reaffirmed at the European Council at Santa Maria da Feira in June 2000 in connection with the e-Europe 2002 Action Plan.¹¹⁴

Several Council and European Parliament Directives contain provisions encouraging the use of alternative dispute resolution. Article 17 of the *e-Commerce Directive* provides that “Member States should ensure their legislation does not hamper the use of out-of-court schemes available under national law, for dispute settlement, including appropriate electronic means.” Article 17 also instructs Member States to encourage “the bodies responsible for the out-of-court settlement to operate in a way which provides adequate procedural guarantees for the parties concerned.”

¹¹³ Paragraph 11 of the Presidency conclusions.

¹¹⁴ Paragraph 22 of the Presidency conclusion on the e-Europe action plan.

Several other directives, dealing with particular sectors, contain provisions on alternative dispute resolution. For example, Directive 97/5/EC on cross-border credit transfers provides, at Article 10, that Member States shall put into place “adequate and effective complaints and redress procedures for the settlement of disputes.” Article 11 of Directive 97/7/EC on the protection of consumers in respect of distance contracts states that Member States may provide for recourse to self-regulatory bodies for the settlement of disputes.

As noted above, the Commission in October 2004 proposed the adoption of a directive on certain aspects of mediation in civil and commercial matters. The proposal seeks to ensure that national laws permit alternative dispute resolutions, suspend statutes of limitations while ADR procedures are pending, and protect the confidentiality of mediator conclusions. In the proposed directive, the Commission justified the need for community harmonisation through the need to avoid creation of different standards for mediation in Member States, thereby leading to potential discrimination amongst users of mediation services situated in different Member States. The Commission stressed that mediation is particularly important in resolving cross-border consumer disputes, where access to the court system may be more difficult for a consumer located outside the Member State of the vendor.

Presumably, by the time amendments to the Regulatory Framework are tabled, the status of the October 2004 *Mediation Directive* will be clear. If it is adopted, we recommend that references to this (now-pending) directive be included in the *Universal Service Directive*, just as there is already reference in Recital 47 to the Commission’s 1998 Recommendation on out-of-court settlement bodies. Given the substantial amount of Community activity in this field and the need to coordinate such procedures horizontally across sectors, it is important that dispute resolution procedures of the *Universal Service Directive* are completely consistent with the more general procedures and prin-

ciples.¹¹⁵ It follows that there is limited reason to amend the Regulatory Framework for dispute resolution, because the primary effort is done at the more general level, and it is mainly important that the Regulatory Framework be consistent with general principles.

In parallel, the Council created a European network of extra-judicial bodies responsible for dispute resolution (the so-called European Extra-Judicial Network, “EEJ-Net”¹¹⁶), and has created a single point of contact so that consumers from other Member States can be aware of the alternative dispute resolution bodies that exist in various Member State jurisdictions. In the field of retail financial services, the Commission launched a network of alternative dispute resolution organisations focused on solving cross-border disputes involving financial services,¹¹⁷ as well as a problem-solving portal called “SOLVIT,” dedicated to solving problems between individuals and public authorities.¹¹⁸

Member States themselves have widely divergent provisions on ADRs. In some countries (e.g., Belgium), ADR seems to be well developed and is expressly referred to in the relevant law on electronic communications. In other countries (e.g., France), the use of mediation is more limited, legislative measures having focused so far only on mediation conducted at the request of a court.¹¹⁹

¹¹⁵ The Danish Consumer Complaints Board, which the Commission in the 11th Implementation Report identified as an example of best practice, created a telecommunications complaint board as one of a series of boards under the general Consumer Complaints Act, administered through the National Consumer Agency of Denmark, an agency of the Ministry for Family and Consumer Affairs. Thus, this model of out-of-court dispute resolution places the electronic communications procedures firmly within the general structure of out-of-court procedures.

¹¹⁶ Council Resolution of 25 May 2000 on a Community-wide network of national bodies for the extra-judicial settlement of consumer disputes, OJ C 155/1, 6 June 2000.

¹¹⁷ Commission Press Release dated 1 February 2001, IP/01/152.

¹¹⁸ http://europa.eu.int/solvit/site/index_en.htm (accessed 23 March 2006).

¹¹⁹ Articles 131-1 through 131-5 of the New Code of Civil Procedure.

10.2 Article 34 of the Universal Service Directive

The wording of Article 34 raises two initial questions of transparency and scope, which we discuss before examining Member State experience with alternative dispute mechanisms.

10.2.1 Transparency

Article 34 refers to “transparent” procedures, but without guidance as to what is meant by the term. In the various electronic communications directives, “transparency” generally refers to the fact that information, for example tariffs or interconnection conditions, should be publicly available. In the context of ADR, “transparency” could have multiple meanings.

First, transparency means that the rules governing the procedures (e.g., how complaints are filed, what kind of disputes can be referred to mediation) are publicly available in easily accessible format. In most existing ADR schemes, the procedures for using the scheme are clearly described on the ADR organisation’s website. Transparency in this sense does not raise problems.

Second, transparency can also mean that the existence of the ADR procedure itself is well publicised so that consumers know it exists. For example, the existence of the ADR scheme may be mentioned on the invoices and websites of providers of electronic communications services. The website of the NRA may mention the existence of ADR procedures and help the consumer understand how to access them. The website of consumer organisations may also mention the existence of such procedures.

In this area, practice to date varies in Member States, with different levels of public communication (and awareness) existing in different Member States. In some Member States (e.g., Belgium and the UK), the number of cases brought before ADR organisations is high compared to, for example, France. This shows either that the public is more aware of the existence of ADR mechanisms in Belgium and the UK, or that there are proportionally more disputes in those countries. Even so, from a recent public con-

sultation, Ofcom concluded that the existence of ADR mechanisms in the UK was still not sufficiently known by the public.¹²⁰

Finally, third, transparency can mean that the workings of the ADR organisation itself are made public, so that consumers, operators, the NRA and the government can have full knowledge of, and learn from, the experience gained from ADR cases. This aspect of transparency might imply:

- that the organisation responsible for ADR should publish an annual report summarising the number and type of cases handled, the organisation's functioning, financing, relationship with the NRA and/or consumer organisations. This aspect is non-controversial.
- that the organisation should publish statistics on the number and kind of cases filed against each operator. This is controversial if the names of individual operators are mentioned, but otherwise should not raise issues.
- that the ADR organisation should publish summaries of relevant cases, including a summary of facts, the recommendation or outcome reached in the dispute, and possibly the name(s) of the relevant operator(s) involved. This aspect of transparency is the most controversial, and is discussed in more detail below.

Publishing certain cases or statistics can ensure that operators responsible for a situation giving rise to a consumer complaint take prompt measures to correct the situation and thereby avoid other similar complaints arising in the future. We also discuss this aspect of transparency below.

¹²⁰

Ofcom Review of Alternative Dispute Resolution Schemes, Report and Draft recommendations, 27 July 2005.

10.2.2 Scope of Coverage of the Directive

Article 34 of the *Universal Service Directive* refers to “unresolved disputes, involving consumers, relating to issues covered by this Directive.” The issues covered by the *Universal Service Directive* are numerous, including leased lines, must-carry obligations for cable operators, television interoperability, universal service and its funding, regulatory controls on retail tariffs, quality of service indicators, the necessity of preparing written contracts, and transparency of tariffs. Not all these subjects are appropriate for consumer dispute resolution procedures.

In considering the scope of coverage of Article 34 we consider two questions:

- Is there an overlap with other Articles of the Regulatory Framework?
- What types of consumer dispute does Article 34 cover?

Possible overlap with Article 20 of the Framework Directive

Article 20 of the *Framework Directive* requires that NRAs act as arbitration bodies for certain kinds of electronic communications disputes, with the following language:

“1. In the event of a dispute arising in connection with obligations arising under this Directive or the Specific Directives between undertakings providing electronic communications networks or services in a Member State, the national regulatory authority concerned shall, at the request of either party, and without prejudice to the provisions of paragraph 2, issue a binding decision to resolve the dispute in the shortest possible time frame and in any case within four months except in exceptional circumstances.”

Article 20 relates to disputes “between undertakings providing electronic communications networks or services,” in other words disputes in which *both parties are operators or service providers*, whereas Article 34 of the *Universal Service Directive* deals only with disputes in which one of the parties is a “consumer” or “other end user.” There appears to be no risk of overlap between the two articles because the terms “con-

sumer”¹²¹ and “undertaking providing electronic communications networks and services” are mutually exclusive. A dispute could not fall under both regimes.

Possible Overlap with Article 21 of the Framework Directive

Article 21 of the *Framework Directive* applies in the event of a cross-border dispute “between parties in different Member States, where the dispute lies within the competence of [NRA] from more than one Member State.” Unlike Article 21, this article is not limited to disputes between operators or services providers.

Article 21(3) permits, but does not require, NRAs jointly to decline to resolve cross-border disputes where other, better, mechanisms exist. The article refers explicitly to mediation, a form of ADR.¹²² There is implicit overlap between this article and Article 34(3) of the *Universal Service Directive*, because the latter requires Member States to coordinate their efforts in the event of disputes involving parties in different Member States.

Types of consumer disputes covered

The other more difficult question relates to the types of consumer disputes that Article 34 is meant to cover. The issues relate to the provision and financing of universal service, the provision of public pay phones, directories, directory assistance, measures for disabled users, and measures to help consumers control expenditures. Not all of these subjects are likely to generate disputes with consumers, so the scope of Article 34

¹²¹ Article 2(i) of the Framework Directive defines consumer as “any natural person who uses or requests a publicly available electronic communications service for purposes which are outside his or her trade, business or profession.”

¹²² The operation of this article is discussed generally in ECC Report 43, “Dispute Resolution Settlement Procedures,” October 2003, at section 5.1. ECC Report 43 also describes various means of out-of-court and ADR techniques. The information in the report is taken from sources before the effective date of the Regulatory Framework, and the report notes that requirements of the Regulatory Framework may cause many Member States to reorganize their dispute resolution processes. *Id.* at section 1.1. Thus, we generally did not rely on information in that report for describing Member States procedures.

seems too broad. Most existing ADR arrangements permit consumers to raise disputes regarding invoicing and service quality problems with their service provider. The current wording of Article 34 may incorrectly suggest that consumers also have the right to bring out-of-court dispute resolution proceedings in connection with issues such as “must carry” rules, or the interoperability of television equipment, which would seem to be inappropriate.

It is our impression that existing Member State structures do not extend consumer out-of-court procedures to the full limit of what seems to be covered by the *Universal Service Directive*. Thus, for example, the Danish Consumer Complaints Board limits its coverage to claims that can be settled by a sum of money – complaints concerning poor service cannot normally be heard although apparently issues of telecommunications contract interpretation are reviewed.

The table below shows the fields covered by the *Universal Service Directive*, with an indication of the likelihood of a given issue generating a consumer dispute appropriate for out-of-court dispute resolution procedures:

Subject		Consumer dispute amenable to ADR?	Comment
1.	Availability of universal service	No	Member State governments must ensure that affordable service is available independently of geographical location. Consumers have no direct claim against providers for lack of “affordability.”
2.	Provision of access at a fixed location	No	Same comment as in 1. above.
3.	Directory enquiry services and directories	Yes	Consumers may have claim against providers of directory assistance services, either with regard to charges, or quality of service
4.	Public pay telephones	Yes	Consumers may have a claim against the providers of public pay phones
5.	Special measures for disabled users	Yes	Consumers could have claim against providers with regard to special measures installed to assist disabled users
6.	Designation of undertakings	No	Same comment as in 1. above
7.	Affordability of tariffs	No	Same comment as in 1. above
8.	Control of expenditures	Yes	Consumers could have claim against providers for defective “controls”

9.	Quality of service (QoS) of designated undertakings	Yes	Universal Service Directive Article 11 deals with publication of QoS standards. Consumers potentially could have QoS claims against their providers based in part on QoS standards published
10.	Costing of universal service obligations	No	See comment in 1. above
11.	Financing of universal service obligations	No	See comment in 1. above
12.	Transparency	No	See comment in 1. above
13.	Regulatory controls on retail services	No	See comment in 1. above
14.	Leased lines	Very unlikely	Leased lines are for business users, not consumers
15.	Carrier selection and preselection	Yes	Consumer disputes are likely regarding the functioning or charging of carrier selection or preselection
16.	Minimum content of consumer contracts	Yes	Consumers could raise disputes based on the content of consumer contracts (clauses not clear, misleading, etc.)
17.	Transparency and publication of information	Yes	Consumers may have a dispute with providers based on information published by the provider
18.	Integrity of the network	Yes	Consumers may complain based on a provider's non-fulfilment of its basic "network integrity" obligation
19.	Interoperability of consumer digital television equipment	Disputes possible, but arguably outside the intent of Article 34	Most existing ADR systems for electronic communications would not extend to consumer disputes regarding television equipment. Yet Article 34, by its terms, suggests that such disputes would be covered
20.	Operator assistance and directory enquiry services	Yes	Consumers may have disputes with providers of directory enquiry and operator assistance services
21.	Single European emergency call number	Possibly	Consumers could have a claim for damages based on a provider's non-routing of calls to the single European emergency call number
22.	European telephone access code	Unlikely	Consumer damage unlikely
23.	Access to non-geographic numbers from other member states	Yes	Numerous consumer disputes arise in connection with the charging for calls to non-geographic numbers, and there is no reason that ADR should not be extended to disputes involving access to cross-border non-geographic numbers
24.	Provision of itemised billing,	Yes	Consumers may have a dispute regarding the provision of itemised billing (or the lack thereof)
25.	Provision of selective call barring	Yes	A provider's failure to implement selective call barring could trigger a consumer dispute
26.	Provision of prepayment systems	Yes	The provision of prepayment systems could trigger consumer disputes

27.	Procedures regarding non-payment of bills	Yes	Cut-off of service after non-payment of bills is a major source of consumer disputes and highly appropriate for ADR
28.	Tone dialling	Unlikely	Thus far, the provision of tone dialling has not given rise to consumer disputes in reported ADR cases
29.	CLI	Unlikely	Thus far, the provision of CLI has not given rise to consumer disputes in reported ADR cases
30.	Number portability	Yes	Number portability is a source of frequent consumer disputes
31.	Must carry obligations	No	See comment in 1. above

If Article 34 were to be redrafted in a subsequent version of the *Universal Service Directive*, it may be useful to modify the language to state that: “Member States shall ensure that transparent, simple and inexpensive out-of-court procedures are available for dealing with unresolved disputes between consumers, on the one hand, and providers of electronic networks or services, on the other hand, relating to the conditions of supply of such networks or services.”

10.3 Member State Models for ADR

We found relatively little published information on current ADR activity in the Member States under Article 34. We focus in this section on the limited number for which we did find information, as guidance for increased activity under the Regulatory Framework.

Systems of reimbursement and/or compensation

Article 34 provides that Member States “may, where warranted, adopt a system of reimbursement and/or compensation.” ADR systems currently in effect are for the most part consensual, with the mediator issuing a recommendation for compensation or reimbursement of consumers, the parties being free to accept or reject the mediator’s recommendation. In some cases (e.g., Otelo, the Office of the Telecommunications Ombudsman in the UK), the service provider has agreed in advance, through membership in Otelo, to accept the mediator’s recommendation if the recommendation has also been accepted by the consumer. Some ADR systems also have the power to act as arbitrator, but this is rarer and requires a special agreement to be signed between the

consumer and the service provider after the dispute has arisen.¹²³ Most ADR systems limit the monetary compensation that the mediator or arbitrator is permitted to award, thereby ensuring that more significant cases go directly to the court system.

Complaints offices and online service

Article 34 provides that “Member States shall ensure that their legislation does not hamper the establishment of complaints offices and the provision of online services at the appropriate territorial level to facilitate access to dispute resolution by consumers and end users.”

Ofcom has made an interesting application of this provision, by featuring on its website a step-by-step interactive guide for consumers to help them understand how to deal with a given complaint.¹²⁴ Ofcom’s guide seems to be a good example of what a “complaints office” and “online service” look like, as those terms are used in Article 34 of the *Universal Service Directive*. The website helps the consumer narrow down the issues through successive web pages that ask more and more specific questions. For example, the first level of choice asks whether the problem relates to a landline phone, to a mobile phone, to Internet service, or to television or radio. If the consumer clicks “problem with Internet service,” the next web page asks if the problem relates to billing, to the quality of service (e.g., speed), or to changing service providers. The next level of inquiry asks the consumer what has happened so far; e.g., no complaint raised so far with the provider, complaint raised with the provider but unsatisfactory answer received, mediation started. Each page also features several “hot topics” that inform the consumer about current problems (and solutions) encountered in the market similar to the consumer’s own problem. At the end of the path, the consumer is guided to the service provider’s internal complaints procedure or appropriate mediation service. Users are told that they also have the option of lodging a complaint with Ofcom, but that Of-

¹²³ That is the case in Belgium, for example, where the mediation institute can act as arbitrator provided the consumer and provider sign an agreement to arbitrate after the dispute has arisen.

¹²⁴ <http://www.ofcom.org.uk/complain/> (accessed 19 May 2006).

com has no authority to adjudicate individual complaints, and that the complaint will be used (if at all) only for the purposes of determining whether action should be taken against the operator for breach of licence terms or applicable law.

In other countries, the mediation service itself may contain a similar guide to assist the consumer in deciding whether to file a mediation claim or pursue other avenues of redress. Given the NRA's visible role as 'policeman' of the market, many consumers will naturally consult the website of the national regulatory authority first to understand their rights. The use by the NRA of a pedagogical website to guide the consumer step-by-step therefore seems a good way to advance the objectives of Article 34 of the *Universal Service Directive*, which is to facilitate access by consumers to simple and inexpensive dispute resolution procedures.

Pedagogical online tools are likely to become increasingly required by consumers as more and more services are bundled into the same invoice. Electronic communications services are already bundled with other services, such as content. Invoices today combine television, Internet and fixed telephony (the so-called "triple play"), and will soon include mobile services as well (the so-called "quadruple play"). An online tool would help consumers understand, for example, that a problem with the billing for a given video programme may implicate a programme provider unrelated to the electronic communications service provider who sends the bill, and help consumers to decide how best to pursue their interests against the parties responsible for the problem. Such a tool would also be useful where several ADR schemes exist in parallel, each with different jurisdiction (such as the situation in France, where telephone disputes are referred to one ADR scheme and Internet disputes to another).

Most service providers have their own websites designed to help consumers deal with complaints. Those websites are generally well designed, but do not replace the need for a separate and independent online tool. The benefit of having such a tool on the NRA's website would be to help consumers feel that when they encounter a problem with a service provider, they are not obliged to consult only the service provider's own internal website to understand their rights. Consumers who experience frustration in making complaints to a service provider may prefer to rely on a neutral online assistance tool to guide them in understanding their rights, rather than one provided by that same service provider.

Level of involvement of the NRA

Full NRA involvement: ADR schemes in Member States show varying levels of involvement by the NRA. In Belgium, the mediation organisation is part of the national regulatory authority itself. Except for the two mediators in the Belgian mediation institute, the entire staff of the institute consists of employees of the regulatory authority, BIPT. The Belgian mediation institute was created by provisions in the Belgian law, and communications providers are required to contribute financially to the institute's annual operating budget.

Partial NRA involvement: The UK represents a slightly lower level of NRA involvement. The general conditions for authorisations in the United Kingdom require that operators have a code of practice for handling consumer complaints, and that operators implement an approved ADR scheme. Ofcom has approved two ADR schemes for electronic communications, Otelo and CISAS. Unlike the mediation scheme in Belgium, however, Otelo and CISAS operate independently of Ofcom.

Little or no NRA involvement: In France, the national regulatory authority ARCEP has little or no involvement in consumer dispute resolution. A mediation scheme has been put into place through an association of French operators, grouped together in an association called "AMET," or "Association pour la Médiation en Téléphonie." The association includes the three French mobile network operators, and the largest landline operators, but excludes many important ISPs. ISPs have created a separate ADR scheme called "Le Médiateur du Net." French law, including general conditions for authorisations, contains no obligation for operators to submit their consumer disputes to mediation. Consequently, the French NRA appears to have no legal authority to supervise the ADR process, or to make sure that operators use it properly. In the Netherlands, the ADR process for electronic communications is under the exclusive control of the *Stichting Geschillencommissies voor Consumentenzaken* (SGC). Like ARCEP in France, the Netherlands regulator OPTA appears to have no role in the dispute resolution process. However unlike in France, all mediations in the Netherlands must be referred to a single entity, SGC.

The *Universal Service Directive* does not require NRAs to be involved in consumer dispute resolution procedures. The Directive requires only that such procedures be

available. By contrast, Article 21 of the *Framework Directive* requires NRAs to coordinate in the event of a cross-border dispute. From the standpoint of Member States' compliance with both directives, any of the three options examined above would appear acceptable, including:

- Full NRA involvement, in which the ADR organisation is a department within the NRA. This option is used in Belgium, but requires detailed legislation to implement.
- Partial NRA involvement: the NRA approves independent ADR schemes and requires operators to use one of the approved schemes. This is the option used in the UK, where operators' licence terms make use of an approved ADR scheme mandatory.
- Little or no NRA involvement at all: the NRA has no role in approving ADR schemes and cannot force operators to use them. This is the situation in France.

The choice of which method to use is, in our view, appropriately left to Member States to decide. However, the Commission could helpfully provide benchmarking references to help gauge the efficacy of the various methods. Based on such a benchmarking exercise, it might be possible to determine whether a strong implication of the NRA in the dispute resolution process contributes to higher consumer confidence in the regulation of the electronic communications market, or whether purely private ADR arrangements fulfil this function just as well.

Level of transparency in reporting cases

Another difference observed between ADR systems is the level of transparency used in reporting mediation cases. Notably, Article 20(4) of the *Framework Directive* on dispute resolution between undertakings requires publication of NRA decisions. Neither Article 21 of the *Framework Directive* nor Article 34 of the *Universal Service Directive* on dispute resolution that may involve consumers contains a corresponding publication requirement. Thus, national practice varies.

In France, the mediation authority issues an annual report that describes, at a relatively high level, the kinds of disputes encountered, but does not reveal details of individual cases or the names of operators. Otelio in the UK publishes detailed summaries of individual cases in monthly “Case Study Bulletins,” but without the names of the operator involved. The case studies are organised according to a classification system listing 40 kinds of disputes, going from “Auto Diallers” (subject n° 1.0) to “Wireless Access Protocol (WAP)” (subject n° 40.0). In Belgium, the mediation institute publishes an annual report containing summaries of selected individual cases (the summaries are much shorter than the ones published by Otelio), but which include the name of the operator involved. The individual summary published by the Belgian institute also indicates whether the operator involved in the mediation accepted or rejected the mediator’s recommendation. The Belgian institute also publishes detailed statistics showing the number of complaints filed against each operator, and the evolution of those figures over time.

Transparency which involves naming individual operators may have both positive and negative effects. The positive effect on the market include exposing to public scrutiny certain commercial practices by operators and putting operators under pressure to improve their annual score in terms of the number of consumer complaints that result in mediation. Consumers would also have greater confidence in the efficacy of the process if they see how other similar cases are handled. This kind of transparency seeks to improve conditions in the market for the benefit of consumers, which is a natural objective of regulators pursuant to Article 8 of the *Framework Directive*. However, it has little to do with individual dispute resolution, and publication of individual cases carries the risk of tarnishing an operator’s reputation without the operator having had the benefit of a court proceeding. It is perhaps no coincidence that the only ADR scheme to publish the names of the operators that we found is the Belgian scheme, which is operated by the NRA.

In at least one Member State, publication of certain types of decisions is required. In the Czech Republic, the NRA responsible for ADR does not publish an individual decision regarding a dispute. However, the NRA is required to publish decisions concerning

price regulation in the official bulletin and these decisions are also available on the NRA web page.¹²⁵

The publication of fact patterns, including “hot topics,” could increase consumer confidence by showing that they are not alone in having a given problem, and that they have several options for recourse. The recommendations on the NRA’s website could also influence how operators deal with the problem in the future, particularly if the NRA issues recommendations on how operators should avoid this kind of problem occurring. The system of publishing anonymous fact patterns would have less of a dissuasive effect for operators than would the publication of individual cases citing the operator by name, but citing the name carries the risk of unduly harming the operator’s reputation.

We do not believe these national variations justify a change to the Regulatory Framework in order to require a certain level of publication. However, Commission benchmarking would be useful to determine whether the two methods used above, i.e., the publication of summaries of selected individual cases, with the names of operators, versus the publication of anonymous fact patterns differ in terms of contributing to consumer confidence in the electronic communications market.

Financing of ADR organisations

The financing systems for ADR arrangements vary. One common thread is that the organisations are entirely financed by operators in the telephony and/or Internet sector. However, the modes of financing of mediation differ, and can affect the incentives for operators generally (1) to reduce consumer complaints but also (2) to resolve consumer complaints internally, i.e., before they get to the mediation stage.

France’s mediation system was created and implemented by telephony operators themselves. Seven telephony operators created an association in 2003 for the purpose of appointing the *Médiateur de la Téléphonie*. In Belgium, Article 45 bis of the Law of March 21, 1991 imposes an obligation on every operator to pay an annual “mediation

¹²⁵ ECC Report 43, *supra* at section 12.10.

fee” based on the annual budgeted cost of the mediation service in the telecommunications sector. IBPT sets the mediation fee for every company based on this annual global cost of the mediation service, multiplied by a coefficient equal to the company’s share in the turnover realised in the preceding year by all companies concerned, in each distinct field covered by mediation.

The Belgian method has raised some concerns because operators’ contributions are the same regardless of the number of complaints referred to mediation. In other words, an operator is obliged to contribute the same percentage of the budget regardless of whether the operator has generated a large or a small number of complaints. This method would appear to discourage internal solutions. The initial idea was based on fairness considerations (an operator should only be asked to contribute in proportion to its revenue), but a system where “polluter pays” would appear to be more adequate (and better proportioned) from an equitable standpoint, and also more efficient because it would create a strong financial incentive for operators to limit consumer disputes that proceed to mediation.

The UK provides an interesting example of such an incentive. In the UK, Otelio is funded by its industry members who pay 20% of budgeted costs by subscription, with the remainder being paid by case fees. This form of financing creates an incentive for every operator to resolve a case promptly on an internal basis, since 80% of the monies paid by an operator to finance the mediation system are directly related to the number of cases filed against that operator.

10.4 Recommendations

Based on the foregoing, we have identified six conclusions. Of these six, however, only the first two support change to the Regulatory Framework.

1. Presumably by the time amendments to the Regulatory Framework are tabled the status of the October 2004 *Mediation Directive* will be clear. If it has been adopted, we recommend that references to this (pending) directive be included in the *Universal Service Directive*, just as there is already ref-

erence in Recital 47 to the Commission's 1998 Recommendation on out-of-court settlement bodies.

2. The current wording of *Universal Service Directive* Article 34 may be unduly broad, because it suggests that consumers should have recourse to ADR possibilities for any issue relating to the Directive. In fact, only a portion of the issues covered by the *Universal Service Directive* is appropriate for consumer ADR, and thus we recommend the Commission modify the language of that article.
3. With the increasing use of bundled services, online assistance tools seem useful to help the consumer understand options for a given problem. It is not likely to be necessary to amend the Regulatory Framework to encourage this approach, but Commission guidance and further harmonisation efforts through, for example, the ERG, would be beneficial.
4. Member State practices vary considerably in the level of involvement by the government and the NRA in consumer dispute resolution. While the choice of how to implement ADR lies with Member States, the Commission could usefully provide benchmark information on the efficacy of NRA involvement, versus purely private ADR schemes.
5. One aspect of transparency is that consumers must be made sufficiently aware of ADR schemes. Another more complex aspect is whether the publication of case information, including the names of individual operators, should be encouraged. Benchmarking is needed to determine whether systems in which individual case summaries are published, including systems that publish individual names of operators, contribute to higher consumer confidence and responsible conduct by operators compared to systems that report cases only in a general, anonymous, manner. The Commission can encourage these developments without change to the Regulatory Framework, and we do not recommend that mandatory elements be proposed.
6. Where mediation is financed by operators, the level of contribution should be based in part on the number of cases brought against the operator, so

that operators are encouraged to reduce the number of consumer complaints that have to go to mediation. Again, this is a matter for the Commission to encourage as best practice, without making it mandatory through changes in the Regulatory Framework.

11 Transparency and Publication of Information under the Universal Service Directive

11.1 Introduction

Article 21 of the *Universal Service Directive* aims to ensure that end users have access to transparent and up-to date information on pricing and on the standard terms and conditions of telephony services, so that they are able to make informed choices. The article applies to the services offered by all PATS providers, although there is a particular obligation to provide information on end users rights as regards universal service. Article 21 also leaves open to NRAs to publish the information themselves, to require individual operators to do so, or so ensure publication by some other means.

Much of the information referred to in Article 21, including the relevant facts relating to standard offers, maintenance contracts and dispute resolutions, is straightforward to provide. However, the article also states that NRAs shall encourage the provision of information to enable end users to make an independent evaluation of the cost of alternative usage patterns, as far as appropriate. It provides the specific example of interactive price guides as a means to achieve this but does not present this as the only possible solution. It is this particular aspect of Article 21 that is most complex for NRAs to achieve and we have been directed by the Commission to focus on this in our analysis.

In this section we provide examples of different approaches taken by NRAs in addressing Article 21, particularly with regard to the provision of interactive guides. We also consider the specific issues of the scope of the article and the transparency for interna-

tional roaming tariffs. We conclude by making some preliminary recommendations concerning whether issues of transparency and publication of information may be better addressed via changes to the Regulatory Framework.

11.2 Challenges in Providing Transparent and Accurate Information

Comparison of prices for telecoms services is inherently complex, given the wide range of possible customer usage patterns, the detailed variations in telecoms price levels and price structures (particularly for fixed telecoms service packages) and the number of possible discount and bundling schemes available. A competitive market will seek to segment users according to their needs and an operator will derive superior margins if it can successfully charge more for certain types of call. The analogy with the airline market is quite close: tariffs seek to discriminate against certain users who have no option but to book late and travel during the week (business users), but offer a lower price to more price sensitive users (e.g., students with flexibility on departure times and dates).

In this section we highlight some of the particular challenges in providing transparent and accurate price comparisons.

11.2.1 Inherent challenges in providing price comparison services

Tariff plans employ an increasing variety of structures and discount schemes such as:

- per-minute charge with minimum call charge
- call set-up charges plus per-minute charge
- peak / off-peak rates
- volume discounts
- discounts on favourite numbers

- discounts on local calls
- cheaper calls as calls get longer
- cheaper calls as total usage in a billing period increases
- every third minute free
- voice calls with different billing increments (one second, one minute, one hour)
- data calls with billing increments in time and/or Mbyte
- flat-rate calls
- different peak/off-peak periods (e.g., choose your own off-peak period)
- development of hybrid prepaid and postpaid mobile tariffs
- subscription charges that decrease over time (e.g., every six months)
- bundling of fixed and mobile, voice and data services
- free trial periods for new services

The raw tariff data is often not provided in a digestible form. In this context it is increasingly difficult for consumers to make sense of the raw data associated with these different structures and discounts; users are also often unaware of the detail of their calling patterns. Many price comparison services therefore seek to interpret tariffs in terms of total cost to the end user (“bill comparison”).

One of the critical issues in performing such price comparisons is the choice of customer profile used for the comparison, that is, the number of calls made to various destinations, their duration and the time of day at which they occur. The relevance of the comparisons provided depends largely on how well the customer profile or basket of calls matches the calling behaviour of an individual user.

If price comparisons are to be the basis for a decision to switch suppliers, they must also be based on up-to-date information. The nature of the telecoms industry is such that operators and service providers regularly adjust their pricing strategies either through changes in (components of) their tariff structure, or the introduction/withdrawal of various discount schemes and service packages. Equally, new providers may enter the market, and others may cease trading or can be acquired by competitors.

The notion of accuracy in the context of telecoms price comparisons is a complex one. As a minimum, we believe that fair and accurate price comparison services should meet the following criteria:

- *Tariffs should be faithfully represented:* The process through which tariffs are acquired from operators and service providers, and then converted into formats appropriate to the price comparison service, should not introduce any form of ‘translation’ error. In addition, the way in which tariff information is used within any calculation models should properly reflect the operator’s/provider’s own definitions, including structural factors such as call setup and minimum call charges, peak/off-peak rates, and per-call charge caps.
- *Customer profiles should be carefully defined:* Unless price comparison services are provided by the operators themselves, it is unlikely that those developing the service will have access to comprehensive call record data needed to construct and maintain detailed customer profiles. It is likely that a pragmatic view will have to be adopted in relation to the accuracy of customer profiles used, based on publicly available information including statistical information often gathered by NRAs. Customer profiles should therefore be transparent and expressed to a level of detail consistent with that required by any calculation model.
- *The price comparison model should be based on a rigorous methodology:* Customer profile information, tariffs and packages/discounts should be treated in a consistent manner and in sufficient detail such that the final pricing information captures the critical features of each tariff/package/discount combination considered.

11.2.2 Challenges highlighted in the course of our research

In the course of the stakeholder survey conducted as part of this study, those representing end users regarding the transparency of tariff information raised various concerns. For example, one consumer organisation noted that it is difficult for consumers to compare the various rates available and that the incentive for switching from one operator to another is obscured.

Our review of forecast developments in the electronic communications sector highlighted an increased trend towards fixed–mobile convergent offerings and more general service bundling. Such offers are likely to increase rather than decrease the complexity of price comparisons. However, it is possible that the deployment of increasingly high-capacity, high-bandwidth networks, and the potential development of peering agreements for IP voice interconnect may drive flat-rate pricing, at least for basic services. This latter trend is already evident in markets such as France, where fixed domestic calls are bundled free with broadband access offers.

Our review of forecast developments also highlighted the increasing importance of VoIP as a means of delivering fixed voice services. Given that it is not yet certain which, if any, of these services will be defined as PATS, it is relevant to consider whether Article 21 should be extended to include VoIP or other new services. This issue is discussed further in section 11.4 below. Transparency of information has not been a particular issue for regulators in implementing the Regulatory Framework, but it continues to be of concern to consumers and regulators.

11.3 Approaches Taken by NRAs

Annex II of the *Universal Service Directive* provides discretion as to the extent to which NRAs meet the obligations of Article 21 by obliging operators to publish infor-

mation and the extent to which it is published by the NRAs.¹²⁶ Accordingly, NRAs have adopted a variety of approaches to the provision of transparent and up-to-date tariff information, some relying on service providers to do this, and some developing their own price comparison services. It is also worth noting that since the transposition of Article 21 may differ between Member States, the ability of NRAs to impose specific measures on operators concerning the provision on information in particular formats or mediums may vary. In this section we review the various forms of interactive price guides that available across Europe. More details concerning specific examples of some of these guides are available in Annex D to this study.

- **Commercial guides provided by operators:** There are many examples of such guides, and operators are generally free to develop the guides to their own specification, although on occasion regulators or advertising standards agencies have been required to intervene in disputes concerning the accuracy of such guides. At the simplest level, these guides provide basic information concerning the price of making individual calls to different destinations at different times of day, often for the benefit of existing customers. At a more complex level, the guides may attempt to compare a customer's complete bill based on its own tariffs compared to those of the customer's current supplier or of other competitors.
- **Guides funded by consumer organisations:** In several countries, consumer organisations sponsor price comparison services; a typical example is that of the Spanish consumer organisation, OCU. In some countries, access to these services may be restricted to end users paying a subscription fee, but in others the service is freely available. This is a potentially valuable service to consumers, although there is a risk that in some cases the consumer organisation may not be sufficiently knowledgeable concerning electronic

^{126.} “It is for the national regulatory authority to decide which information is to be published by the undertakings providing public telephone networks and/or publicly available telephone services and which information is to be published by the national regulatory authority itself, so as to ensure that consumers are able to make informed choices.” *Universal Service Directive*, Annex II (preamble).

communications services or may not have access to sufficient funding to provide very high quality or up-to-date information.

- Commercial guides provided by independent third parties, without support from the regulator: Again, there are many examples of such guides, such as webandco.be in Belgium and tariffe.it in Italy. The normal funding model for such guides is to receive commissions from service providers when end users switch suppliers as a result of using the service (usually a click-through facility is provided to facilitate this). Clearly, there is a risk that such models may be biased towards those service providers offering commissions, but nevertheless many of these price guides are relatively popular and any serious problems with the services can be dealt with through national consumer protection measures. Some of these guides include a review of VoIP tariffs, but these are not normally presented as a direct alternative to traditional telephony services.
- Commercial guides provided by third parties and accredited by the regulator: At least one regulator, Ofcom, runs an accreditation scheme offering a ‘seal of approval’ on commercial price comparison services meeting some pre-defined criteria. In the case of Ofcom the criteria are intended to ensure that the information provided is impartial and accurate.¹²⁷ This approach seeks to take advantage of the fact that commercial price comparison services have developed, but at the same time to ensure that the information is of sufficiently high quality to meet the requirements of Article 21.
- Guides run by or funded by the regulator: In some countries, in response to concerns about the level of information available to consumers, regulators have funded the development of their own price comparison guides. An early example of this is Teleprisguide run by the NTA in Denmark, which

¹²⁷. See “Ofcom Pass Code,” undated accessed on 19 May 2006 at http://www.ofcom.org.uk/telecoms/ioi/orp/comparative_20031214/pass20031214

was launched in 2000 and which covers fixed, mobile, voice and data services. The website is regularly advertised in the national press and according to the NTA continues to record an average of 700 hits per day. A more recent example is that of “callcosts.ie,” which is funded by Com-Reg in Ireland and delivered by an organisation offering similar commercial services in Sweden. The website received over 700 hits per day during its first three months of operation and there has been broad support for the initiative from consumer organisations. Clearly, it is easier for regulators to control the quality of information provided under this model but the funding required may be quite significant and it is unlikely to be appropriate for these guides to provide a ‘click-through’ service for consumers to switch directly to an alternative supplier.

Looking across the EU as a whole, it appears that the number of commercially-funded price guides is increasing, particularly in larger, more competitive markets where the potential for earning revenue from consumers’ switching is greatest. In some cases, these price guides go beyond the scope of Article 21 by also providing information on VoIP providers that may be classified as ECS rather than PATS.

However, the recent launch of the NRA funded price guide in Ireland and continued attention to similar issues by other regulators indicates that these, together with information provided directly by operators, are not yet sufficient to address all the Article 21 aims, at least in some countries. It is also the case that in some countries there appear to be many more price comparison services available.

11.4 Scope of Article 21

Obligations for transparency and publication of information under the *Universal Service Directive* complement both specific obligations that may be imposed on SMP operators and more general consumer protection legislation. Recitals 30, 31 and 49 appear to indicate an intention that it should be possible to apply this aspect of the directive to a broad range of ECS. For example, Recital 31 states that

[u]ndertakings providing communications services, operating in a competitive environment, are likely to make adequate and up-to-date information on their services publicly available for reasons of commercial advantage. National regulatory authorities should nonetheless be able to require publication of such information where it is demonstrated that such information is not effectively available to the public.

Furthermore, the intention does not appear to be to restrict the scope to consumer services. Recital 49 states that the directive should “encourage the extension of such benefits to other categories of end users, in particular small and medium-sized enterprises.”

These intentions are not reflected in the wording of Article 21, which specifically applies to PATS rather than to ECS more generally. It is therefore appropriate to consider whether the scope of the article should be extended. This is particularly true given the growth in VoIP services, which have challenged the de-lineation between PATS and non-PATS services.

A broad extension of Article 21 to include all electronic communications services is an unnecessary step unless there were serious concerns that more general consumer protection legislation provides insufficient protection to end users. This does not appear to be the case. However, a more narrowly defined extension of the article, perhaps to include ‘services available to the public for originating and receiving national and international calls *but not necessarily access to emergency services* through a number or numbers in a national or international telephone numbering plan’ may be worthy of serious consideration. One benefit of such a change would be to limit the additional transparency obligations faced by a PATS operator compared with a non-PATS VoIP operator offering very similar services except for access to emergency services.

Whether or not the whole of Article 21 is extended to include some non-PATS voice services, we recommend that the Commission introduce an obligation to provide transparency with regard to whether or not access to emergency services is offered. Under the current Regulatory Framework it appears that there is the potential for an operator to provide non-PATS VoIP services without an obligation to inform consumers that access to emergency services is not provided.

We also recommend that the Commission consider including recitals that are used in amendments to refer to transparency of ECS in a broad sense, to bring them into alignment with the scope of Article 21 (whether revised or not).¹²⁸

11.5 International Roaming Tariffs

The issue of international roaming tariffs and the regulation that should apply to these is currently one of hot debate. We do not intend the discussion here in any way to pre-judge the outcome of that debate. Rather, we seek only to report, for the sake of completeness, the degree to which transparency currently exists and note initiatives that are seeking to improve such transparency.

11.5.1 Introduction

International mobile roaming has been a great success in Europe from the point of view of inter-operability, and it is taken for granted by most end users that they will be able to use their mobile device while overseas. However, many consumers may not be aware of the high charges levied for roaming, or that there is normally a charge to receive calls as well as to make them.

When international roaming was initially established in Europe charges were based on the standard retail tariff of the visited network, with operators later permitted under GSM Association rules to apply a small premium (up to 1.15 times the normal network tariff). However, since 1998 operators have been able to independently set inter-operator tariffs (IOTs) with no requirement to reflect the standard retail tariff in the market. This has led to the development of high prices for international roaming because there is a very limited incentive for visitor networks to offer IOTs at a low rate.

¹²⁸

Technically recitals to a directive are not amended when the directive is amended, as there is a whole new set of recitals to the amendments.

After all, the cost is passed on not to their own customers but to those of the home network operator.

Historically, operators have had only limited control over which networks their subscribers use while outside home network coverage. However, advances in mobile technology are beginning to provide operators with greater control over the network onto which handsets roam when overseas. This control means that the home network operator now has a greater opportunity to control its roaming costs by forcing its customers to roam on networks for which it can get the best IOT rates. This effect is particularly true if the operator is a pan-European player or part of a mobile operator alliance that has agreed discounts on IOTs for its members. This, together with other potential developments such as the ability to use VoIP solutions to by-pass mobile networks, offers the opportunity for increasing competition to develop in the roaming market. We believe that this opportunity could be enhanced by improved transparency of pricing.

In some respects, retail tariff structures for roaming have become simpler over the last few years, for example, many operators now offer the same roaming rates in groups of countries in each of a small number of different bands. However, new and innovative pricing models are also emerging, for example *Vodafone Passport* which levies a fixed charge for making or receiving a call while roaming regardless of call duration. While these new models are to be welcomed, in some cases they may make it more difficult for consumers to compare prices between different operators and tariff packages. This is particularly true as consumers make increasing use of not only voice, but also SMS and data roaming services.

11.5.2 Current status of tariff transparency

The *GSM Europe Code of Conduct for Information on International Roaming Retail Prices*, which was first drawn up in 2001 (and subsequently amended), is an industry initiative aiming to provide greater consistency and clarity to the range of information

available to consumers on roaming services.¹²⁹ This code states that the delivery of retail roaming information to customers via the customer care services of the home operator is the most effective tool, as it is the easiest and most commonly used by the customer. It also notes the value of other means of communication including web-based services, SMS alerts and leaflets accompanying bills.

However, in the course of the stakeholder survey conducted as part of this study, end user organisations raised specific concerns regarding international roaming tariffs. For example, one respondent stated that “the high cost of international roaming is not acceptable.” While this is not a direct criticism of the *transparency* of roaming prices, it is nevertheless linked, as transparency is required in order to enable users to make an informed choice based on relative price levels and to drive price competition between suppliers.

A survey among regulators run in 2004 by the Mobile Markets and the End Users Working Groups of the IRG also identified that in most Member States consumers experienced low awareness of tariffs for international roaming and that measures to inform end users were quite diverse. The same survey also identified that, while most operators provide information on international roaming on their website, more detailed information such as billing increment is often absent. It also identified that call centre information does not always make it clear that customers are also charged for receiving calls.

11.5.3 Recent initiatives to improve transparency

In October 2005, the Commission helped to address the issue of transparency for international roaming tariffs by launching a pan-European website providing consumer information on roaming. This provides basic information about how roaming works

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http://www.gsmworld.com/gsm europe/documents/positions/2004/coc_roaming_revised_010604.pdf, version dated 29 October 2003, accessed 19 May 2006.

and typical charges made by operators in each country, and has been well-received by the press in most Member States. However, in order to make a detailed comparison, consumers are directed to contact their service provider directly or to investigate the websites of individual operators.

The ERG has also made a number of recommendations designed to complement initial Commission initiatives, including the establishment of national websites, and SMS operator initiated and end user initiated alerts. It also recommended that NRAs encourage the GSM Association to explore the possibilities of expanding the “Welcome SMS” concept, cooperate with one another on the format of national websites, and use market surveys to develop more effective solutions.

11.6 Recommendations

The current obligations of NRAs under Article 21 of the *Universal Service Directive* allow flexibility in the approach to the provision of information. We believe that this allows NRAs to develop solutions that are proportionate to the need for consumer information in specific retail markets, depending on the quality of commercial price comparison services already available and the complexity of tariffs in their markets. Such flexibility is likely to be of continued importance given the uncertainty regarding whether tariffs will become more complex in future or will be simplified around flat-rate offers for basic services. Therefore, we make the following recommendations:

1. With regard to the scope of *Universal Service Directive* Article 21, we recommend that the Commission consider extending this to include “services available to the public for originating and receiving national and international calls *but not necessarily access to emergency services* through a number or numbers in a national or international telephone numbering plan.” At the very least, we recommend that the Commission amend the directive to oblige providers of such services to provide transparent information concerning whether or not access to emergency services is offered. We also recommend that the Commission consider including recitals in amendments that refer to transparency of ECS in a broad sense, to bring them into alignment with the revised scope of Article 21.

2. It is possible that *Universal Service Directive* Article 21 could be strengthened to provide NRAs with greater scope to compel operators to comply with particular forms of transparency such as standardised bill formats, or cooperation with third-party providers of interactive guides. However, we have not identified any strong evidence to support such changes and thus believe the Commission should rely on guidance or encouraging best practice rather than legally binding changes to the Regulatory Framework.
3. With the exception of the change to the scope of Article 21 we do not recommend any changes to the Regulatory Framework in this area. However, given the complexity and importance of pricing issues, it may be beneficial for the Commission to conduct further research in order to provide guidance on the important aspects of interactive guides, or to facilitate information-sharing between NRAs on this matter. For example, it might be helpful to develop detailed usage baskets that are representative of the behaviour of a set of typical European consumers, or best practice guidelines regarding the methodology used to calculate price comparisons.

Part D

Recommended Changes

12 Recommended Changes

This chapter sets forth below the recommendations from each Chapter in Parts B and C, with the recommendations renumbered consecutively. We provide some commentary for certain recommendations, but the full discussion will necessarily be contained in each chapter of the study. As in the chapters themselves, we do not lay out all the items that we did not recommend, or identify all areas where we identified issues but did not ultimately recommend changes to the Regulatory Framework itself, except where we felt that specific Commission measures short of change to the Regulatory Framework are particularly important to emphasise.

Chapter 6 – Regulatory Mechanisms of the Framework Directive

This Chapter examined the mechanisms for market analysis, assessment of SMP, consultation and notification to the Commission, and the right to appeal against NRA decisions. These issues are addressed in Articles 7, 15, 16 and 4 of the *Framework Directive*; we used the term the “Framework Mechanism” to refer to the structure those articles establish. It is important to note that we have not reviewed the actual markets identified or other issues raised by the *Framework Directive*.

We recommend the following changes to the Framework Mechanism:

Streamlining the market analysis and notification procedures

1. Article 7 notifications by NRAs should be subject to a more strictly defined timetable. This should be subject to consultation with the Commission, possibly on an annual basis, and should take into account country-specific policy

priorities and market features. Once agreed, it should be legally binding for the NRA concerned.

2. NRAs should submit their Article 7 notifications to the Commission only once the relevant national consultation procedures have been completed. The notification should include all three parts of the analysis, i.e., market definition, SMP assessment and proposed *ex ante* remedies.
3. The Commission should consider amending the Framework Mechanism to allow NRAs at their discretion to apply a short transitional regime in markets found to have become effectively competitive only recently. However, we only recommend implementing this change if there is support from NRAs to indicate that such an approach is likely to assist them in reducing unnecessary *ex ante* regulation more quickly.
4. The NRAs' market analyses and notifications preferably should be grouped in market clusters and follow a systematic sequence (from wholesale to retail), based on non-binding ERG or Commission recommendations.
5. The *Framework Directive* should allow the Commission to define "white listed" market situations that would be subject to a reduced set of consultation and notification obligations.
6. As a general rule, we do not see a compelling case for extending the Commission's veto power to all remedies proposed by the NRAs. However, there may be exceptions to this rule, in narrowly defined cases of particular importance to the Internal Market, and on the basis of more narrowly defined criteria than those that can be relied upon today for the adoption of *ex ante* remedies.

Substantive Issues

7. In general, we see no reason for changes to the market definition methodology and the concept of SMP under the Regulatory Framework. An exception concerns the concept of "collective dominance", which poses serious problems of application in the Framework Mechanism, albeit without any perfect alternative

in sight. One possible solution would be to expand the concept of “absence of effective competition” on the market so as to include unilateral effects on competition from oligopolies in which no undertaking has single or collective dominance. However, such a solution, if acceptable, should not be allowed to lead to over-regulation. Related safeguards could include a Commission veto power against any disproportionate *ex ante* remedies based on an NRA finding of unilateral effects.

8. Besides any general regulatory guidance required with regard to new technology, we recommend that the Commission be given the power to define relevant markets prospectively, in exceptional cases and subject to comitology procedures, based on criteria other than those set by competition law. This power may be combined with a Commission competence to determine or veto appropriate *ex ante* remedies for such future markets. This rule could help address the important long term policy, market and regulatory challenges posed by the future deployment of new technology (such as FTTx or NGNs) that may be difficult to deal with under the Regulatory Framework, given its more limited time horizon.

Policy Objectives

9. Broadly defined and discretionary policy objectives in the Framework Mechanism are difficult to reconcile with a predictable system of checks and balances. More clearly defined criteria for *ex ante* remedies would provide a more credible basis for a Commission veto for the remedies concerned, should such an extension be deemed politically desirable.

Appeal Procedures

10. The conditions under which an NRA decision under appeal may be suspended should be defined more precisely in the *Framework Directive*.
11. A provision similar to Article 15 (“Cooperation with National Courts”) of Regulation 1/2003 on the modernisation of the European competition law should allow the Commission to act as *amicus curiae* in national appeals

against NRA decisions that were previously communicated to the Commission under the Article 7 mechanism.

Chapter 7 – Regulatory Obligations of the Access Directive

This Chapter reviewed whether the regulatory obligations set forth in Articles 9 to 13 of the *Access Directive* may need to be adjusted. The deployment of NGN and FTTx in Europe is very likely to be influenced by the applicable *ex ante* access regime. This poses a regulatory challenge for European regulators, given the political importance attached to a rapid, large-scale move to deployment of NGN and FTTx (even though the policy and business case for NGN and FTTx are not the same).

Despite the magnitude of this challenge, we believe that the existing access remedies under the Regulatory Framework are generally comprehensive and flexible enough to address NGN and FTTx deployment, if the changes to the Framework Mechanism that we suggested in Chapter 6 are implemented. We see no serious substantive problem with the list of the *Access Directive*'s remedies, subject to the following recommendations:

12. The obligation of cost orientation and the basic formula “access fees = costs + reasonable profit margin” should be preserved as an option for NGN, FTTx and new technology, but also should be properly adjusted to the cost and risk profile of new networks and services, which may be very different from those typically applied to the incumbents’ PSTN, and may require different approaches to accounting separation, costing methodology and cost standards. To the extent that more detailed regulatory guidance on appropriate cost methodologies may be necessary, a future revision of the Commission Recommendation on accounting separation would be the appropriate regulatory tool (and consequently, changes to the Regulatory Framework’s directives are not required).
13. Interconnection/access fees in an IP-based network, if at all applicable, may be (primarily) based on capacity and independent of the network’s service level. We recommend that the Commission consider whether the distinction between

the connectivity and service levels should be clarified, for example, through non-binding regulatory guidance.

14. The access regime for FTTx should reflect a clear distinction between the network's active and passive level, and result in distinct sets of access obligations (or in some cases no obligations at all) for each level, regardless of whether these are operated by the same entity.
15. While we do not in principle recommend structural separation as a remedy, NRAs and the Commission should have the option to allow it as a measure of last resort. The Commission should consider clarifying its position on this remedy in non-binding guidance measures, by reference to its existing veto power under Article 8(3) of the *Access Directive*, clarifying the criteria it would rely upon to determine whether or not to veto such a remedy.
16. The Commission should consider expanding the list of *ex ante* remedies to include organisational and functional separation. This could be done through an appropriate amendment of Article 13 of the *Access Directive* and/or non-binding Commission guidance, in conjunction with the question of structural separation, along the lines proposed under the previous recommendation.

Chapter 8 – Authorisation Directive

This chapter studied the impact of moving to general authorisations, the extent to which there is harmonised implementation among the 25 Member States, and whether any changes to the *Authorisation Directive* are needed to achieve the regulatory objective of facilitating market entry, as well as the single market objectives of the European Regulatory Framework. In particular, this chapter focused on cross-border aspects of current provisions. Specific issues examined include spectrum and numbering aspects of authorisations, and we divide the following recommendations into topical groups based on the structure of the chapter.

Definitions and scope of general authorisations

17. We recommend that the Commission clarify under what circumstances self-provided services are within (or outside of) the definition of ECS, because there are different interpretations, and substantial implications based on the outcome – future new services may fall out of the category of general authorisation altogether or be regulated differently amongst the Member States if this matter is left unclear.
18. We recommend that the Commission issue further guidance on the status of VoIP. We expect that principles established for clarifying this status will apply to other new services as well.
19. We recommend that further detail on PATS be established, and that the Commission consider whether *Authorisation Directive* Article 9 procedures for declarations covering ECS and ECN should be extended to declarations that a particular service is a PATS.
20. We recommend that the Commission consider whether to amend the *Authorisation Directive* to include associated facilities and services, but the broader implications of this issue must also be considered, i.e., should general authorisations be required for such facilities and services in all instances?

Degree of harmonisation

21. We recommend that *Framework Directive* Article 19 be amended to give the Commission competence to adopt technical implementing measures as decisions, not solely recommendations, and also that the Commission have competence explicitly to adopt decisions to harmonise authorisation conditions, particularly to promote pan-European services.
22. We recommend that the Commission initiate further dialogue with the ERG to determine how it can contribute more directly to harmonisation of conditions applied to general authorisations and procedures for notifications.

Management of pan-European authorisations

23. We recommend the Commission consider further consultation on the need for pan-European authorisations to identify services that might benefit from such an approach, and adopt amendments to the Regulatory Framework, such as the changes to Article 19 discussed above, that could support an appropriate regulatory structure.
24. The issue of pan-European authorisations relates to transnational markets under the *Framework Directive*, and should be considered at the same time. This may not require a change to the Regulatory Framework if other changes we recommend are adopted (for instance the ability to harmonise conditions for pan-European services noted above), but if the Commission reviews market definitions and proposes adoption of a new market category that is transnational, it also at that point should review how the service providers in that market could operate under a pan-European authorisation.

Definitions and scope of terms relating to spectrum

25. We recommend that the Commission consider the implications of the term “harmful interference” for defining when individual rights of use are required: this requirement should be implemented more rigorously, and provisions should be included so that only credible risks of harmful interference and not worst case assessments are used.
26. We recommend that the Commission should clarify the application of the *R&TTE Directive* to “unlicensed” or licence exempt ECS and ECN (i.e., ECS and ECN that do not require rights of use). The impact of this directive on the Regulatory Framework, and vice versa, should be carefully coordinated. The tools provided under the Radio Spectrum Decision are substantial, but we recommend that the Commission consider whether additional tools for managing unlicensed services are needed.

27. We recommend that the principles and objectives of the Regulatory Framework be amended to make explicit reference to the Community objective for “flexible” management of spectrum resources and authorisation structures.
28. We recommend that condition B1 on designation of rights of use contained in the Annex to the *Authorisation Directive* be amended to require strict justification subject to the technology neutrality principle.
29. We recommend adding provisions as appropriate to provide clear legal authority for necessary technical implementation measures for WAPECS.
30. The principle of service neutrality should be incorporated into the policy objectives of the Regulatory Framework.
31. Article 8 on harmonised assignment of radio frequencies should be redrafted. The language of the provision is unclear and substantial amendments are needed to make it meaningful.
32. We “reissue” recommendations on spectrum trading made in our earlier study for the Commission and set them forth in Annex C to this study
33. The Commission should adopt further provisions for dispute resolution specifically for complaints of cross-border interference. *Universal Service Directive* Article 34 currently would not extend “out-of-court dispute resolution” to spectrum issues, because that article applies only to issues covered by the *Universal Service Directive*. Even though the spectrum management agencies likely will continue to be responsible for such complaints, due to their expertise and history of managing enforcement, it would foster Internal Market objectives to require explicitly that spectrum users negotiate interference management arrangements in good faith, and that administrations should foster harmonised approaches for handling disputes where parties cannot resolve issues independently, possibly bringing spectrum issues within the scope of *Universal Service Directive* Article 34.

Use of the European Telephony Numbering System (ETNS)

34. This system is broken. We recommend the Commission consider whether fundamental change is needed to the development of pan-European structures for ETNS.

Facilitating market entry for PRS

35. On this issue, we defer to the recommendations already laid out in the PRS Study. Our consultation indicates there is continuing demand for pan-European services up to 2015.

Assignment practices of numbering

36. The Commission should consider whether changes to the *Authorisation Directive* are required to provide sufficient guidance and regulatory structure for numbering resources, and amend the directive with respect to limits on the number of rights of use for numbers.

Future reliance on addressing resources

37. The Commission should consider whether some Community competence is needed over the long term structure for naming and addressing resources, and adopt additional provisions in the Regulatory Framework to permit such structure.

Geographic numbering

38. We recommend that the Commission consider whether the scope of Article 10(4) of the *Framework Directive* with respect to harmonisation of numbering resources should be expanded, especially with respect to premium numbers, so that harmonisation efforts might be supported even for services that are not necessarily pan-European.

Chapter 9 – User privacy and the security and confidentiality of online communications

This chapter examined measures safeguarding user privacy, security and confidentiality of online communications, including the integrity and security of public communications networks, pursuant to Articles 4, 5, 6, 8, 9, 12 and 13 of the *e-Privacy Directive* and Article 23 of the *Universal Service Directive*. The numerous issues involved directly affect consumers in substantial ways and also affect the cost of doing business.

Recommendations in the data privacy and protection area are particularly sensitive. In this chapter more than others, we recommend that the Commission “consider” specific options, rather than that the Commission make specific changes. This study covers numerous topics, many of which justify more detailed analysis than a single high-level review can cover. Raising some issues for consideration is the appropriate action if more investigation is needed and detailed information from affected sectors could give the Commission the information to decide if a change is necessary. All references to articles or recitals in the following recommendations refer to the *e-Privacy Directive* unless otherwise noted.

Recommendations with respect to Article 4 - security

39. The scope of Article 4(2) should require providers to inform subscribers when there is an actual breach of network security, in addition to the current requirement to inform them of the risk of such breaches. The Commission should issue guidance on what constitutes a “breach” for notification purposes.
40. General authorisation condition A16 in the *Authorisation Directive* on security should be updated and broadened to match *e-Privacy Directive* Article 4 for coverage of both ECN and ECS providers, not solely ECN.
41. There should be an explicit obligation in *e-Privacy Directive* Article 4(1) for ECNs and ECS providers to cooperate for ensuring data security.
42. In some Member States specific requirements apply to the obligation to take appropriate technical and organisational measures, while others leave the assessment of the security level to the providers without offering guidance. This

divergent approach complicates cross-border service of electronic communications. All Member States should provide guidance in this respect, and the Commission should encourage dissemination of information on best practice.

Recommendations with respect to Universal Service Directive Article 23 - integrity

43. The Commission should consider whether to expand the scope of Article 23 beyond the traditional public telephone network, for instance to cover mobile or IP networks used for public service. Whether this expansion should be adopted will depend on specific impact assessment of the cost of the expansion.

Recommendations with respect to Article 5 - confidentiality

44. The Commission should encourage best practice and support initiatives to develop technology that promotes confidentiality, such as encryption. We do not, however, see a need to change the Regulatory Framework to be more specific in this respect. The use of encryption appears to be a matter of best practice that can be encouraged through existing tools.

Recommendations with respect to Articles 6 and 9 – traffic and location data

45. The Commission should consider adopting more detailed standards on when consent can be given, for example, whether consent can be given in the general terms and conditions for ECS at the time of service subscription or during the stage of processing procedures.
46. The Commission should review the application of existing regulatory tools for dealing with converging services that use location data. We do not identify specific changes to the Regulatory Framework in this respect, given the scope of the existing provisions in Article 9 of the *e-Privacy Directive*.

Recommendation with respect to Article 8 - CLI

47. The Commission should consider changes to improve the availability of CLI across Member State boundaries – it seems that technical solutions have been delayed since 2000. We do not recommend that the Commission require CLI,

as there may be valid industry or technical reasons not to provide such service for particular offerings. It may be sufficient, for example, to note in recitals the importance of this service and to stress that technical solutions for CLI across boundaries is significant for development of the Internal Market.

Recommendations with respect to Article 12 - directories

48. The reference in *e-Privacy Directive* Article 12(1) to “the directory” should be more precise, possibly by an explicit cross-reference to the *Universal Service Directive* Article 5 reference to directories of publicly available telephone service.
49. Due to the substantial differences in national approaches to reverse directories that led to compromise language in the Regulatory Framework in 2002, we do not recommend that further harmonisation is needed in this field. We have not seen recent information that gives any reason to amend the Regulatory Framework in this matter.
50. There are varying national implementation models for the application of Article 12 to legal persons, because national laws and juridical standards differ for “legal persons.” In the absence of any hard evidence that these variations have caused cross-border difficulties, we do not recommend any change to the Regulatory Framework in this matter.

Recommendations with respect to Article 13 – spam

51. The Commission should review whether modifications to the definition of “unsolicited communications” or “communication” are needed for consistency between the *e-Privacy Directive* and other legislation. This consistency could avoid legal confusion and assist the application and enforcement of the rules, which may be especially important for future converged services to which both the Regulatory Framework and the *e-Commerce Directive* may apply.
52. Member States should be encouraged to join the voluntary agreement to handle cross-border spam complaints – nevertheless, we would not recommend change to the Regulatory Framework to make this mandatory, as such an approach

would not be “future proof” and there is insufficient international experience to place detail on such activities in primary legislation.

53. ECS providers should inform subscribers of available technical measures that may reduce the impact of spam. Such a requirement could, for instance, be modelled on Article 4 on security, which requires ECS providers to inform consumers of risks to security. A similar requirement to inform subscribers of tools against spam should be added to Article 13 on unsolicited communications. We do not believe it is possible to specify what those measures might be, because their nature will evolve over time, and the choice of what measures that an ECS might recommend to customers is best left to market forces.
54. Because mobile spam is a relatively new phenomenon and there appear to be high-visibility industry initiatives to stop it, as well as tools to do so in the Regulatory Framework, there is no reason to recommend further measures with respect to it. Nevertheless, there is a strong consumer concern over mobile spam and, given the scope of the problem on fixed networks, we recommend that the Commission devote attention to this area.

Recommendations with respect to general horizontal issues

55. The language of *Framework Directive* Recital 8 should not be repeated, and a new recital should be included in amendments, in order to avoid exclusion of Regulatory Framework obligations to terminals that are associated with ECS but also within the scope of the *R&TTE Directive*. (The effect of this recommendation for the *R&TTE Directive* should be considered, as there could be implications beyond the scope of our study.)
56. The *e-Privacy Directive* in Article 15(2) refers to the explicit provisions in Chapter III of the *Data Protection Directive* on judicial remedies, liability and sanctions. Thus, there is existing authority for greater emphasis on enforcement efforts. In addition to this, the *e-Privacy Directive* should be amended to refer explicitly to Article 27 of the *Data Protection Directive* with respect to codes of conduct, to encourage greater reliance on this approach.

Chapter 10 – Dispute resolution procedures of the Universal Service Directive

As we described in this chapter, the dispute resolution procedures of Article 34 of the *Universal Service Directive* do not exist in a vacuum. Even though there is limited information available or experience with out-of-court procedures in the electronic communications field, there are numerous other dispute resolution mechanisms in other sectors that give guidance on how this should work in the Regulatory Framework. Due to this substantial experience, we identified six conclusions, but only two recommend change to the Regulatory Framework.

57. Presumably by the time amendments to the Regulatory Framework are tabled the status of the October 2004 *Mediation Directive* will be clear. If it has been adopted, we recommend that references to this (pending) directive be included in the *Universal Service Directive*, just as there is already reference in Recital 47 to the Commission's 1998 Recommendation on out-of-court settlement bodies.
58. The current wording of *Universal Service Directive* Article 34 may be unduly broad, because it suggests that consumers should have recourse to ADR possibilities for any issue relating to the Directive. In fact, only a portion of the issues covered by the *Universal Service Directive* is appropriate for consumer ADR, and thus we recommend the Commission modify the language of that article.
59. With the increasing use of bundled services, online assistance tools seem useful to help the consumer understand options for a given problem. It is not likely to be necessary to amend the Regulatory Framework to encourage this approach, but Commission guidance and further harmonisation efforts through, for example, the ERG, would be beneficial.
60. Member State practices vary considerably in the level of involvement by the government and the NRA in consumer dispute resolution. While the choice of how to implement ADR lies with Member States, the Commission could provide useful benchmark information on the efficacy of NRA involvement, versus purely private ADR schemes.

61. One aspect of transparency is that consumers must be made sufficiently aware of ADR schemes. Another more complex aspect is whether the publication of case information, including the names of individual operators, should be encouraged. Benchmarking is needed to determine whether systems in which individual case summaries are published, including systems that publish individual names of operators, contribute to higher consumer confidence and responsible conduct by operators compared to systems that report cases only in a general, anonymous, manner. The Commission can encourage these developments without change to the Regulatory Framework, and we do not recommend that mandatory elements be proposed.
62. Where mediation is financed by operators, the level of contribution should be based in part on the number of cases brought against the operator, so that operators are encouraged to reduce the number of consumer complaints that have to go to mediation. Again, this is a matter for the Commission to encourage as best practice, without making it mandatory through changes in the Regulatory Framework.

Chapter 11 – Transparency and publication of information under the *Universal Service Directive*

The current obligations of NRAs under Article 21 of the *Universal Service Directive* allow valuable flexibility in the approach to the provision of information. We believe that this allows NRAs to develop a solution proportionate to the need for consumer information in specific retail markets, depending on the quality of commercial price comparison services already available and the complexity of tariffs in their markets. Therefore, we make the following recommendations:

63. With regard to the scope of *Universal Service Directive* Article 21 we recommend that the Commission consider extending this to include “services available to the public for originating and receiving national and international calls but not necessarily access to emergency services through a number or numbers in a national or international telephone numbering plan.” At the very least, we recommend that the Commission amend the Directive to oblige providers of such services to provide transparent information concerning whether

or not access to emergency services is offered. We also recommend that the Commission consider including recitals in amendments that refer to transparency of ECS in a broad sense, to bring them into alignment with the revised scope of Article 21.

64. It is possible that *Universal Service Directive* Article 21 could be strengthened to provide NRAs with greater scope to compel operators to comply with particular forms of transparency such as standardised bill formats or co-operation with third-party providers of interactive guides. However, we have not identified any strong evidence to support such changes and thus believe the Commission should rely on guidance or encouraging best practice rather than legally binding changes to the Regulatory Framework.
65. With the exception of the change to the scope of Article 21 we do not recommend any changes to the Regulatory Framework in this area. However, given the complexity and importance of pricing issues, it may be beneficial for the Commission to conduct further research in order to provide guidance on the important aspects of interactive guides or to facilitate information-sharing between NRAs on this matter. For example, it might be helpful to develop detailed usage baskets that are representative of the behaviour of a set of typical European consumers or best practice guidelines regarding the methodology used to calculate price comparisons.

Preparing the next steps in regulation of electronic communications

A contribution to the review of the
electronic communications regulatory framework

Annexes to Final Report

For the European Commission

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The opinions expressed in this study are those of the authors and do not
necessarily reflect the views of the European Commission.

Preparing the next steps in regulation of electronic communications

A contribution to the review of the electronic communications regulatory framework

Annexes to report for the European Commission

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Annex A

List of Acronyms

Acronym	Description
ADRs	Advanced Digital Recorders
ADSL	Asymmetric Digital Subscriber Line
A-GPS	Assisted Global Positioning System
API	Application Programming Interface
ARPU	Average Revenue Per User
CoCom	Communications Committee
DOCSIS	Data Over Cable Service Interface Specification
DRM	Digital Multimedia Broadcasting
DVB-H	Digital Video Broadcasting – Handhelds
ECN	Electronic communication network
ECS	Electronic communication service
EITO	European Information Technology Observatory
EPG	Electronic Programme Guide
ERA	European Regulatory Authority
ERG	European Regulators Group
ESP	Encapsulating security payloads
ETNS	European Telephony Numbering Space
FCC	Federal Communications Commission
FL-LRAIC	Forward-looking long run average incremental cost model
FMC	Fixed–Mobile Convergence
FTTB	Fibre To The Building
FTTC/FTTCurb	Fibre To The Curb
FTTCab	Fibre To The Cabinet
FTTH	Fibre To The Home
FTTx	Generic term for fibre access
FWA	Fixed Wireless Access
GPS	Global Positioning System

HSDPA	High Speed Downlink Packet Access
HSUPA	High Speed Uplink Packet Access
IM	Instant Messaging
IMS	IP Multimedia Subsystem
IMT 2000	International Mobile Telecommunications 2000 (also UMTS and 3G)
IOTs	Inter-operator tariffs
IP	Internet Protocol
IPR	Intellectual Property Right
IPTV	Internet Protocol Television
ISP	Internet Service Provider
MBMS	Multimedia Broadcast/Multicast Service
MCR	Merger Control Regulation
MIMO	Multiple-input multiple-output communications
MobileFi	Mobile Fidelity – IEEE 802.20 standard
MVNOs	Mobile Virtual Network Operators
MPP	Mobile Party Pays
NGNs	Next Generation Networks
NFC	Near field communications
NRA	National Regulatory Authority
OFDM	Orthogonal frequency division multiplexing
ONP	Open Network Provision
PATS	Publicly available telephony service
PLC	Powerline Communications
PVRs	Personal video recorders
RFIDs	Radio Frequency Identification Devices
RSPG	Radio Spectrum Policy Group
SIMs	Subscriber Identity Modules
SIP	Session initiation protocol

SMP	Significant Market Power
SNMP	Simple network management protocol, symmetric multiprocessing
TDC	Transparent Data Channel
TDM	Time Division Multiplexing
UMTS	Universal Mobile Telecommunications System (also IMT-2000 or 3G)
VDSL	Very High Rate Digital Subscriber Line
VoB	Voice over Broadband
VOD	Video on Demand
VoIP	Voice over Internet Protocol
WAPECS	Wireless Access Policy for Electronic Communication Services
WDM	Wave Division Multiplex
WiMAX	Wireless industry coalition advancing IEEE 802.16 standards for broadband wireless access networks
WLAN	Wireless LAN
xDSL	generic term for Digital Subscriber Line

Annex B

Questionnaire Used in the Survey

We list below the questionnaire provided to participants in the survey and provide details regarding the number of responses obtained:

- General/Internal market dimension

- (1) In your opinion what are the main remaining barriers to the development of the Internal Market in electronic communications? Is the ability to compete throughout Europe constrained more by competition in the market or by the regulatory environment? To what extent would these barriers be overcome by full implementation of the EU regulatory framework in all Member States, and to what extent do the barriers lie outside the current regulatory framework. Please identify areas where you think further legislative action at Community level may be justified.
- (2) Would it be in the consumer interest to have some services provided in a competitive trans-national, European-wide environment? Which types of services would benefit most from such an approach?

- Regulatory issues

- (3) The concept of a **general authorisation** is designed to simplify market entry in the electronic communications markets of the EU. Has this been your experience? Would there be added value in the establishment of a single European general authorisation for the provision of certain pan-European electronic communications services and electronic communications networks, to be used in all Member States? Are there any other changes you would like made to the authorisation regime?
- (4) What changes would be required to the current regulatory package in relation to management of the radio spectrum in the Community, so as to consolidate the Internal Market for wireless electronic communication services and equipment and to optimise the use of this resource? Is there a need for particular measures to ensure pan-European services, such as EU harmonisation of conditions attached to the spectrum usage rights or the creation of rights at EU level or pan-European authorisations?
- (5) To what extent does the existing system of **number assignment at national level**, hinder the completion of the Internal Market? What are the main obstacles restricting cross-border **access to telephone content services in the Community**, (e.g. freephone services, and services that use premium rate numbers and other non-geographic numbers)? Will there continue to be a demand for such services up to 2015?

- Institutional issues

- (6) Would you support the establishment of a **European Regulatory Agency** involving a transfer of some activities from national to Community level? If so, what activities do you consider could be better undertaken at Community level? What level of regulatory control (guidance, binding decisions, etc.) should such an agency have over a) market participants, and b) national regulatory authorities? What type of organisation should be envisaged?
- (7) Do you see difficulties from the perspective of developing the Internal Market in the various dispute resolution and appeal mechanisms that exist in Member States? Which initiative, if any, could speed up the **regulatory decision-making** and **appeals**?

- Consumer-related aspects

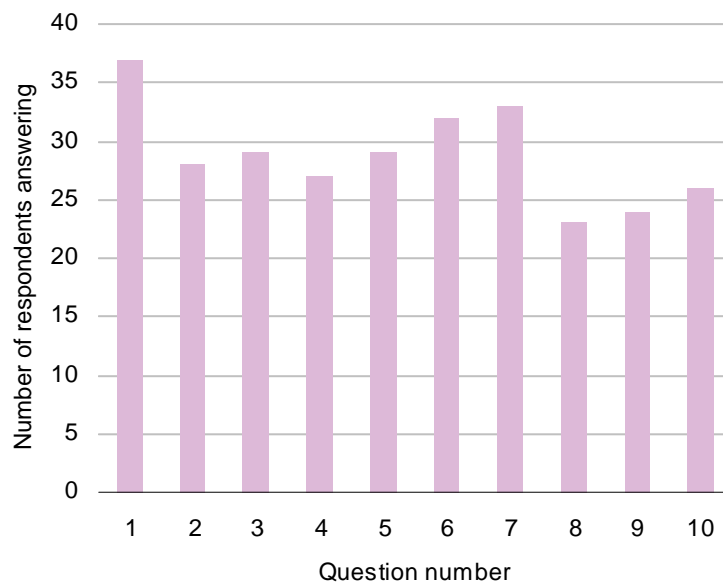
- (8) Consumer protection and user confidence are crucial elements for the future development of the market for communications services. What are the main concerns of consumers with regard to eCommunications networks and services? In what areas could the regulatory framework be modified to better address these concerns?
- (9) There is often a trade-off between improving consumer protection and the higher costs for services providers. What extra guidance, if any, should be given to NRAs on how to address this issue?

- Converging services

- (10) Do existing rules constrain the ability of service providers to deliver new services (e.g. hybrid broadcasting communications) to the market?

Not all respondents answered all the questions since not all were always relevant, and in some cases the participant did not have a particular view on the topic. For example, consumer organisations typically addressed only questions 8 and 9 and many fixed operators declined to comment on spectrum issues.

Nearly all the respondents addressed the first question relating to the internal market, and all questions were addressed by at least half the participants. The response rates are illustrated in Exhibit B.1 below.

**Exhibit B.1:**

Number of respondents addressing each question

[Source: Analysys]

We received responses from 23 out of the 25 countries in the European Union and from a mixture of alternative fixed operators, alternative mobile operators, alternative fixed service providers, consumer organisations, Internet providers, TV network operators, incumbent fixed operators, satellite providers and MVNOs. Many of the larger companies from which we received a response are active in several countries and reflect this in their responses. The responses received were the opinions of the individuals approached, although normally after consultation with colleagues.

Annex C

Recommendations on Spectrum Trading

Recommendations from Study on conditions and options in introducing secondary trading of radio spectrum in the European Community (Chapter 18)

Recommendation 1: Overall approach to spectrum trading

The Commission should initiate action to obligate Member States to introduce spectrum trading and liberalisation through the use of appropriate binding measures.

Recommendation 2: Detailed implementation of spectrum trading frameworks

The details of how spectrum trading is implemented can be devolved to Member States, providing that national spectrum management frameworks have certain generic features. There are benefits to ensuring that these generic features are present in Member State frameworks even if some states do not initially introduce spectrum trading. Therefore, this recommendation is not contingent on implementation of Recommendation 1.

Recommendation 3: EU implementation measures

Individual aspects of spectrum trading frameworks could be co-ordinated using a combination of binding and non-binding measures. Existing bodies, including the RSPG and RSC, could take the lead in co-ordinating many of the detailed aspects of spectrum trading frameworks across Europe.

Recommendation 3(a): Creation of tradable rights

Member States should base the definition of usage rights on a minimum set of parameters (e.g. geographic extent, frequencies, etc.), co-ordinated by means of a technical implementation measure (potentially through the RSC).

Recommendation 3(b): Forms of trading and management rights

Appropriate binding measures should be introduced to ensure that Member States:

- (i) place no prior restrictions on the type of transfer permitted (sale, lease, derivatives, etc.), without good reason
- (ii) place no constraints on reconfiguration of usage rights, without good reason
- (iii) introduce clear rules on the transfer of the additional rights and obligations that are associated with a usage right (but Member States retain discretion over the actual rules).

Recommendation 3(c): Interference Management

- (i) Member States should be required, through appropriate binding measures, to introduce an interference management regime suitable for trading and liberalisation. Member States should retain discretion over the definition of the regime (but spectrum users should not be prevented from directly negotiating interference thresholds with each other).
- (ii) The Commission should initiate technical implementation measures on methods for specifying interference thresholds and establishment of initial threshold levels (for example through the CEPT, with a mandate from the RSC).

Recommendation 3(d): Expiry and reclamation of usage rights

- (i) Member States should be required, through binding measures, to adopt orderly and transparent approaches towards renewal of usage rights.
- (ii) While it is not necessary for Member States to adopt identical procedures for renewal of usage rights, best practice is likely to involve the award of usage rights that effectively have an expectation of continuation (e.g. perpetual rights, expectation of automatic renewal on expiry or rolling notice periods).
- (iii) Member States should retain powers to reclaim usage rights when necessary (e.g. in response to an EU decision to harmonise a band, or in extremes to address undesirable fragmentation). The Commission should use technical im-

plementation measures to set parameters for such powers and the circumstances under which they can be used.

Recommendation 3(e): Availability of information

- (i) The Commission should actively enforce the existing requirement of Member States to maintain a public register of spectrum assignments (i.e. owners of usage rights). These should follow a consistent format.
- (ii) All Member States should develop public register of trades. These should follow a consistent format. The Commission should define a minimum set of information to be collected by Member States on each spectrum trade and establish a maximum time period for disclosure of information. This requirement should be established by binding measure, with detailed co-ordination of contents and format determined through the RSC and/or CEPT.
- (iii) Registers of trades should include information on prices, given that price discovery might be limited in thin markets, although a pragmatic approach may need to be taken to collation of such data, as auditing may be difficult.

Recommendation 3(f): Trading mechanisms

Member States should be required by appropriate binding measures not to restrict, without good reason, any of types of trading mechanism (bilateral trades, auctions, brokers, spectrum exchanges, etc.) from developing in the market.

Recommendation 3(g): Competition

Member States should adopt a common approach, based on general EU competition law. Member States should not be able to introduce ex ante sector-specific rules unilaterally.

Recommendation 3(h): Transition issues

- (i) Member States should have a high degree of autonomy in organising their transition to spectrum trading, so as to reflect local market conditions, subject to obligations to introduce trading and liberalisation for particular bands by specific dates.
- (ii) National governments should retain discretion over treatment of incumbent users, use of spectrum pricing and the treatment of windfall gains and losses.

Recommendation 4: Suitability of spectrum bands for trading and liberalisation

The introduction of trading and liberalisation across different bands should be coordinated. Further examination of the applicability of trading and liberalisation will need to be made for each specific frequency band prior to implementation.

Annex D
Background Materials Relating to Transparency
(Chapter 11)

In this section we present more details concerning some of the interactive price guides discussed in Chapter 11.

D.1 OCU phone tariffs: a guide funded by a consumer organisation

Country: Spain

Web site: www.ocu.org/aspx/OCU.Calculators/PhoneTariffs

D.1.1 Background

OCU is a Spanish consumer organisation and this price guide, which appears to be funded solely by OCU, appears to have been developed independently of the NRA.

D.1.2 Price features

Users are able to compare either fixed, Internet, fixed and Internet or mobile pricing offers. The user profile takes into account the end user's regional location (we assume so that availability issues can be accounted for). Other user profile details accounted for are as follows.

- For fixed, users must:
 - provide number and average duration of calls
 - sort calls by destination (local, provincial, national, mobile)
 - sort calls by time (peak, off-peak)
 - provide percentages of calls to assorted operators (optional)
- For Internet, users must:
 - define connection type requested (for example, ADSL, dial-up)
 - specify whether the connection is always on
 - if not always on, sort by session use (peak, off-peak)]
 - if not always on, specify the average duration of sessions.

- For mobile, users must:
 - provide number and average duration of calls
 - sort calls by destination (fixed, mobile)
 - sort calls by time (peak, off-peak)
 - specify number of SMS messages sent per week
 - determine the percentage of calls made to a sole fixed number
 - determine the percentage of calls made within a region
 - determine the percentage of calls requiring MMS
 - provide percentage of calls to assorted operators (optional)

An example input screen is illustrated in Exhibit D.1 below.

¿Qué tipo de consulta desea hacer?

Elegir comunidad:

Elegir Periodo de facturación:

TELÉFONO

A continuación detalle el número de llamadas realizadas y su duración media según el destino y el horario.

Destino de las llamadas	Nº llamadas según horario		Duración media
	Lunes a Viernes (8-18 h)	Resto, incluido fin de semana	Minutos
Local	<input type="text"/>	<input type="text"/>	<input type="text"/>
Provincial	<input type="text"/>	<input type="text"/>	<input type="text"/>
InterProvincial	<input type="text"/>	<input type="text"/>	<input type="text"/>
Móvil	<input type="text"/>	<input type="text"/>	<input type="text"/>

Opciones avanzadas : ☐

INTERNET

¿Qué tipo de conexión desea? (módem, ADSL...):

¿Desea tarifa plana?:

Exhibit D.1 User profile details [Source: OCU]

The results are presented sorted by the monthly bill total, as illustrated in Exhibit D.2 below, but can also be sorted by other criteria. Consumers can view each offer, which provides detailed information on the service provider and the offer itself. Prices are

broken down by spend on line rental, calls to fixed numbers, calls to mobile numbers, one-off charges, operators, contracts, billing and minimum spend.

The screenshot shows the OCU website interface. On the left is a navigation menu with categories like 'canales', 'especial 2005', 'archivos', and 'sitios de OCU'. The main content area is titled 'Nuevo Ahorrador Telefónico' and features a banner for 'ENCUENTRE LA MEJOR OFERTA DE TELEFONÍA E INTERNET'. Below the banner is a table titled 'TELÉFONO E INTERNET' with the following data:

Operador / Tarifa	Línea fijo	Coste mensual tarifa	Llamada fijos	Llamada a móvil	Sesiones Internet	Caract. Internet	Total Mensual	Índice
SUPERBANDA ADSL MEDIUM con router/modem+voz 2 Mb	15.58	32.42	0	0	0	ADSL: 2048/300- T, Plana	48	100
WANADOO Navegable Directo 24h ADSL 2Mb Ciudad	15.58	34.68	0	0	0	ADSL: 2048/300- T, Plana	50.26	105
SUPERBANDA ADSL PREMIUM sin modem + voz 2 Mb	15.58	34.74	0	0	0	ADSL: 2048/300- T, Plana	50.32	105
TELE2 Plan ADSL 1 Mb 24H	15.58	34.38	0.79	0	0	ADSL: 1024/300- T, Plana	50.75	106
SUPERBANDA						enci...		

Exhibit D.2: Results for a sample search [Source: OCU]

D.1.3 Transparency

Consumers are able to see clearly the details of their user-profile but little information is provided on the assumptions made in the calculation model.

D.1.4 Other features

Some quality of service information is also provided through the publishing of some comments made by 'other consumers'. The price guide does not offer a 'click through'

service allowing consumers to sign up directly to services, but does provide links to the Web sites of individual service providers.

D.2 Teleprisguide: a guide run by the regulator

Country: Denmark

Web site: www.teleprisguide.dk ; also available in paper copy in national libraries.

D.2.1 Background

This guide was launched in December 2000, at a time when telecoms liberalisation was accelerating. The Danish regulator wished to provide consumers with a quick and easy way of comparing prices in the face of a wide selection of providers. For two years prior to this the NRA had published a list of the five cheapest providers for fixed, mobile and Internet services on a quarterly basis.

The guide is funded entirely by the NRA, three of its staff working part-time to maintain it. The guide is regularly advertised in the national press and the web site has recorded an average of 700 hits per day.

The guide can be used to compare the offerings of all operators in the market for fixed, mobile and Internet communications. In the event of market entry, new service providers are invited to join the guide. The providers continuously update their data and the NRA staff responsible for Teleprisguide are responsible for checking any changes made before they are made live on the site. A general site management review is also conducted on a quarterly basis.

D.2.2 Price features

The guide provides information on fixed and mobile, voice and data services. An overview of the services provided by each service provider allows users to select providers

of services they require. A price list is calculated for each service, allowing users to establish which are the cheapest and most expensive providers of a given service. For broadband, data on minimum downstream and upstream bandwidths are given. Multiple service comparisons are possible and users can specify whether or not they wish to take all services from a single provider.

Users are able to input a usage profile based on typical daily usage across a wide range of telecoms services. Exhibit D.3 illustrates the starting page to input this information.

Exhibit D.3: Calculation front page [Source: Teleprisguide]

Exhibit D.4 below shows the results of a sample calculation. There is no opportunity to compare offers with a user's current bill and no opportunity to click through to sign up for a new service.

Teleprisguide

IT- og Telestyrelsen
Ministeriet for Videnskabelig Teknologisk og Udvikling

Din profil TOP 20 abonnenter

Fastnet: 1350 min/kvartal = ca. 15 min/dag
Mobil: 1350 min/kvartal = ca. 15 min/dag SMS/uge: 20 MMS/uge: 2 GPRS MB/uge: nej
Højhastigheds Internet: Down/upstream 512/128 MB pr. måned 1700 % oprettelse 0

Vis antal: 20

Selskab	Abonnement	DKK inkl. moms pr. kvartal
Universal Telecom	Universal Telecom Fastnet Analog	797
3	3Talk 500	1000
Tele2	ADSL Tele2 Highway	721
nr. 1		Ialt DKK pr. kvartal 2518
ELRO	ELROTEL fastnet	815
3	3Talk 500	1000
Tele2	ADSL Tele2 Highway	721
nr. 2		Ialt DKK pr. kvartal 2536
Energi Randers Tele	Energi Randers Tele Fastnet	821
3	3Talk 500	1000
Tele2	ADSL Tele2 Highway	721
nr. 3		Ialt DKK pr. kvartal 2542

Listen til venstre viser, hvilke abonnenter der er billigst for dig i følge dine indtastede oplysninger. Den billigste står øverst.

Klik **Præcisér**

for at præcisere dine oplysninger. Så vil du kunne udføre en mere præcis beregning og får MÅSKE et andet resultat i listen til venstre.

Klik **Oversigtstabel**

for at få en oversigt over højhastighedsinternet - abonnenter, med mulighed for at angive kriterier for abonnementet.

NB: Resultatlisten kan afvige fra IT- og Telestyrelsens trykte prispjece "Hallo, hallo - Ved du hvad det koster?"

Exhibit D.4: Results of a sample calculation [Source: Teleprisguide]

D.2.3 Transparency

Information on assumptions made in carrying out price calculations is readily available.

D.2.4 Other features

Detailed descriptions of each offer are provided and a glossary defines telecoms-specific terminology (for example, ADSL, FWA, cable).

D.3 callcosts: a guide funded by the regulator

Country: Ireland

Web site: www.callcosts.ie

D.3.1 Background

The Irish NRA launched this guide in November 2005, initially to allow consumers to compare mobile services, although there are plans to add features for fixed and broadband comparison services in early 2006. In launching the guide, ComReg noted that Ireland has relatively high mobile prices for Europe, especially for postpaid low and medium users, and it was concerned that tariffs were not sufficiently transparent to end-users.

Although ComReg is funding the site, the company responsible for the day-to-day running of callcosts has been operating a similar guide in Sweden on a commercial basis (www.easychange.se) since 2003.

D.3.2 Price features

The site allows users to compare the prices of mobile packages. All of the mobile operators currently (Meteor, O₂, 3 and Vodafone) active in Ireland are included in the package. As with other sites, users enter details of the desired calling behaviour by time of day and duration of call and are then presented with a list of mobile price plans ranked according to their cost. In common with the previous case studies, callcosts does not allow users to subscribe to a service directly from the site.

The following data can be input:

- time of day most calls are made
- duration of calls in minutes
- percentage of minutes used calling mobiles
- number of SMS and MMS messages sent
- distribution of minutes used across peak, off-peak and weekend times (optional)
- number of minutes used calling voicemail (optional)

- number of minutes used calling preferred numbers (optional).

A screenshot of the calculations page is shown in Exhibit D.5 below.

The screenshot shows the 'callcosts.ie' Mobile Calculator interface. The sidebar on the left contains links to 'Mobile Phones', 'Mobile Calculator', 'How it works', 'Featured Services', 'Model Assumptions', and 'Choosing an Operator'. The main content area is titled 'Mobile Calculator' and includes a 'Payment' section with radio buttons for 'Pre-pay', 'Bill pay', and 'Don't mind'. Below this is a 'Voice Usage' section with a dropdown for 'When do you mostly use your phone?', a text input for 'How many minutes do you use?' (set to 0), and a text input for 'What percentage of your minutes are to other mobiles?' (set to 0). The 'Other Services' section has text inputs for 'Number of Text Messages (SMS)' and 'Number of Picture Messages (MMS)', both set to 0. At the bottom, there is a confirmation box with a checkbox for 'I Accept (Please check box to continue)' and a 'Get Results Now >' button.

Exhibit D.5: Calculation details [Source: callcosts.ie]

The results take the form of a list of mobile price plans as illustrated in Exhibit D.6 below.

The screenshot shows the 'callcosts.ie' website with the 'Mobile Calculator' tool. The results section displays a table of mobile tariffs from various operators, including Meteor, O2, and Vodafone. The table lists the tariff name, monthly cost, tariff type, and plan features. Below the table, there are links for 'Enter Usage', 'View Detailed Usage', 'View Results', and 'View Price Plan'.

Operator	Tariff Name	Monthly Cost	Tariff Type	Plan Features
Meteor	Meteor Leisure Time Plus	€ 16.88	Prepaid	Cust Service, Billing Option, Payment Option, Other
-> Includes Meteor Text Bundle Add On at a cost of €7.50				
Meteor	Meteor Anytime Plus	€ 18.90	Prepaid	Cust Service, Billing Option, Payment Option, Other
-> Includes Meteor Text Bundle Add On at a cost of €7.50				
O2	Speakeasy Nightowl	€ 19.58	Prepaid	Cust Service, Billing Option, Payment Option, Other
-> Includes Text 100 Add On at a cost of €7.50				
Vodafone	Vodafone Social Life	€ 19.89	Prepaid	Cust Service, Billing Option, Payment Option, Other
-> Includes Text 100 Add On at a cost of €8.00				
-> Operator's Top Up Discount has been applied				
Vodafone	Vodafone Work & Leisure	€ 20.73	Prepaid	Cust Service, Billing Option, Payment Option, Other
-> Includes Scent Text 100 Add On at a cost of €5.00				
-> Operator's Top Up Discount has been applied				
VideoTalk	VideoTalk & Text 200	€ 25.00	Bill Pay	Cust Service, Billing Option, Payment Option, Other
Meteor	Meteor Talk 60	€ 26.30	Bill Pay	Cust Service, Billing Option, Payment Option, Other
O2	Facu Life 150	€ 28.44	Bill Pay	Cust Service, Billing Option, Payment Option, Other

Exhibit D.6: Results of a sample search [Source: callcosts.ie]

D.3.3 Transparency

The site contains a whole section dedicated to explaining the model and information on the assumptions made in calculating the price comparison is provided.

D.3.4 Other features

Further information is available for each price plan and includes details of customer service provision and contact details. General advice is also available to facilitate the choice of a mobile provider.