Europe's New Regulatory Framework for Electronic Communications in Action

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Abstract

The European Union's New Regulatory Framework (NRF) for electronic communications officially went into effect in July, 2003. Implementation by Member States has been uneven; nonetheless, there has been enough experience to enable us to make some preliminary assessments.

Preliminary experience suggests that, *where the NRF has been implemented, it is functioning as intended.* Many questions still remain. What are the strengths and weaknesses of the system in practice? What are the greatest challenges to the success of the NRF? What systemic improvements should be considered?

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Contents

1. Introduction

The European Union's New Regulatory Framework (NRF) for electronic communications officially went into effect in July, 2003. Implementation by Member States has been uneven; nonetheless, there has been enough experience to enable us to make some preliminary assessments.

This paper reflects hands-on experience in applying the NRF to challenging, emerging regulatory issues. A key finding is that the core elements of the NRF appear to function as intended. Indeed, taken as a whole, the implementation of the NRF has gone more smoothly than might have been expected of an enterprise of this scope. Nonetheless, many risk areas and some real problems remain.

This paper seeks to identify the strengths and weaknesses of the system in practice, and to identify the greatest remaining challenges to the success of the NRF.

The greatest strengths of the NRF are its technological neutrality, and its close linkage with competition law. The NRF represents an explicit attempt to anticipate and address the convergence of communications and computing markets and technologies, and in most respects it does so admirably.

At the same time, the new and elegant competition-law-based structures do not permeate all aspects of the NRF. A close reading of the Directives that comprise the NRF reveals many vestigial remnants of earlier regulation. Applying these sections of the NRF to emerging, converged technologies is no simpler (but also no more difficult) than the corresponding task in a more traditional regulatory system.

Many Member States were late in transposing the NRF into national legislation – so much so that the European Commission initiated infringement proceedings against seven Member States. Today, most of the pre-accession fifteen Member States have completed transposition (or will shortly), but questions remain about the degree to which these national laws accurately reflect the Directives that comprise the NRF.

The NRF seeks to achieve coherent regulatory treatment across the Member States of the European Union. A concern from the first has been the degree of consistency that might be achievable across the Member States. The NRF sought *harmonisation*, not uniformity; regrettably, it is still too soon to say whether even this more modest goal will be achieved. A significant risk remains that European regulation might continue to be something of a patchwork quilt, and that it might fail to achieve the potential benefits of the single market. Significant progress has been made in this regard over the past year, but risks remain.

Another challenge to the NRF (and indeed to any regulatory framework for electronic communications) lies in the inherent and inevitable tension among multiple regulatory goals. The NRF, for all of its many virtues, provides no panacea, no "silver bullet".

A noteworthy example of this tension of objectives relates to new or emerging technologies and markets. Regulators have an interest in facilitating market entry, and yet at the same time competitive bottlenecks need to be addressed. The NRF clearly recognizes this issue. But how are regulators to strike the right balance?

These challenges notwithstanding, *the NRF should nonetheless be viewed as a bright and promising star on the regulatory horizon.*

The next section of this paper describes the methodology for this study. The subsequent section provides general background on the NRF. The next section considers the various elements of the NRF at a structural level. Next, we take up the challenges and potential risk areas that confront the NRF, and European communications regulation in general. Finally, we offer concluding thoughts and observations.

2. Methodology of this Study

In July, 2002, I published a white paper for the U.S. Federal Communications Commission (FCC), in which I argued that the NRF was a promising and forward-looking approach, and that the U.S. would be well-advised to study it in depth.[2] At the same time, it seemed to me that it was difficult to predict the effects of the new system in practice.

When I wrote the paper, the NRF had been adopted by the European Union, but it had not yet been implemented by any Member State. I subsequently arranged an informal secondment to the European Commission,[3] which provided me with the opportunity to do a further hands-on study pursuant to a grant from the German Marshall Fund of the United States. This paper reflects that experience.

From February through June, 2004, I set to work in DG Information Society (INFSO), where I functioned as if I were a part-time senior staffer working to address strategic issues in the NRF.

I was specifically asked to focus on the challenge of IP telephony. In every respect, this represented an ideal project for my needs. It represented a perfect example of the sort of convergence challenge where one should expect a difference between the NRF and the U.S. regulatory system with which I was familiar; at the same time, it was not a challenge that the NRF had specifically anticipated. Further, this was a project where my experience with U.S. regulation as it relates to the Internet enabled me to add real value.

From time to time, I had the opportunity to contribute to other NRF-related activities at the Commission. Each of these added helpful and complementary insights.

I traveled extensively from May to early July, 2004 giving talks and interviewing stakeholders in Member State governments, in other European institutions, and in industry. The "Acknowledgements" section of this paper recognizes just a small fraction of those who graciously gave of their time.

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[2] Federal Communications Commission (FCC) Office of Strategic Planning and Policy Analysis (OSP) Working Paper 36, "The Potential Relevance to the United States of the European Union's Newly Adopted Regulatory Framework for Telecommunications," July 2002, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-224213A2.pdf. The article and derivative works also appear in: *Rethinking Rights and Regulations: Institutional Responses to New Communications Technologies*, Ed. Lorrie Faith Cranor and Steven S. Wildman, MIT Press, 2003; in the *Journal on Telecommunications and High Technology Law* 111 (2003); and in the *2004 Annual Review* of the European Competitive Telecommunications Association (ECTA).

[3] Note that the views expressed in this paper are solely those of the author.

3. Background[4]

This section of the paper provides a brief overview of the European regulatory framework for electronic communications for readers who may not be familiar with it. Readers who are well-versed in the NRF can skip this section without loss of continuity. The section begins with a brief overview, then follows with the main elements of the NRF: market definition, determination of Significant Market Power (SMP), and remedies.

The NRF recognizes that a large portion of telecommunications regulation deals, in one way or another, with responses to market power. In particular, it associates the possession of *Significant Market Power (SMP)* with obligations that could include transparency[5], non-discrimination[6], accounting separation[7], access to and use of specific network facilities (including Unbundled Network Elements [UNEs], wholesale obligations, collocation, and interconnection)[8], price controls and cost accounting[9], making necessary leased lines available[10], and carrier selection and pre-selection[11].

The basic concept of the regulation is simple and straightforward. The European Commission begins by defining a series of relevant electronic communications markets[12] and by providing a set of guidelines for determining the presence or absence of market power,[13] all based on methodologies borrowed from competition law and economics. Within each market, the National Regulatory Authority (NRA) in each Member State

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[4] This section of the paper is largely derivative from the author's earlier work, "The Potential Relevance to the United States of the European Union's Newly Adopted Regulatory Framework for Telecommunications," op. cit.

[5] *Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive)*, Official Journal of the European Communities, L 108, April 24, 2002, Article 9.

[6] Ibid., article 10.

[7] Ibid., article 11.

[8] Ibid., article 12.

[9] Ibid., article 13.

[10] *Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (Universal Service Directive)*, Official Journal of the European Communities, L 108, April 24, 2002, Article 18.

[11] Ibid., article 19.

[12] This was done in *Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services*, Official Journal of the European Communities, L 114, (2003/311/EC), May 8, 2003.

[13] This was done in *Commission guidelines on market analysis and the assessment of significant market power under the Community Regulatory Framework for Electronic Communications Networks and services*, Official Journal of the European Communities, C 165, (2002/C 165/03), July 7, 2002.

determines whether one or more parties possess Significant Market Power (SMP). If SMP exists, the NRA will impose appropriate obligations from the set noted in the previous paragraph, taking into account the specifics of the particular marketplace in question. These obligations are imposed *ex ante*, based on the presence of SMP – it is not necessary to demonstrate that market power has been abused. Conversely, if the NRA fails to find SMP, then any such obligations that may already be in place must be rolled back.

In doing so, the European Union seeks to move completely away from technology-specific and service-specific legislation. This is a significant and dramatic innovation.

We now consider each element of the framework in greater detail.

3.1 Market Definition

In the new framework, it is the European Commission, the executive branch of the European Union, that provides a Recommendation on Relevant Product and Service Markets[14] "in accordance with the principles of competition law."[15]

National Regulatory Authorities then take the European Commission's recommendation and define markets within their geographic territories. They are to take "the utmost account" of the recommendation, but the Framework Directive also envisions that NRA definitions might diverge from those of the European Commission in some instances.

Article 7 of the Framework Directive establishes procedures whereby the NRAs and the Commission coordinate with one another in regard to market definition (and also SMP determination and the application of remedies).

The European Commission could also adopt a Decision identifying transnational markets, markets that span all or a substantial portion of the EU. To date, no transnational markets have been identified.

The process for market definition is described in a document referred to as the *Guidelines*[16]. The Guidelines adopt a common framework for *National Regulatory Authorities* (*NRAs*) and *National Competition Authorities* (*NCAs*), with the recognition that this should ideally lead to equivalent market definitions; however, the Guidelines recognize that the European Commission or national competition authorities may in some

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[14] *Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a a common regulatory framework for electronic communications networks and services*, Official Journal of the European Communities, L 114, (2003/311/EC), May 8, 2003.

[15] *Directive 2002/20.EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive)*, Official Journal of the European Communities, L 108, April 24, 2002, Article 15.

[16] *Commission guidelines on market analysis and the assessment of significant market power under the Community Regulatory Framework for Electronic Communications Networks and services*, Official Journal of the European Communities, C 165, (2002/C 165/03), July 7, 2002.

instances diverge from market definitions established by European Commission or national communications regulatory authorities for good and valid reasons. They are dealing with somewhat different issues.

European competition law is similar to that of the United States as regards market definition. The economic procedure employed is based on a hypothetical monopolist test, assuming a "small but significant, lasting increase" of 5% to 10% in price of a product or service.[17] The relevant market then includes all products and services that are readily substitutable for the services in question.[18]

This market definition immediately addresses a number of fundamental convergence issues, and technological neutrality is a direct consequence. As the Guidelines note:

> Although the aspect of the end use of a product or service is closely related to its physical characteristics, different kind of products or services may be used for the same end. For instance, consumers may use dissimilar services such as cable and satellite connections for the same purpose, namely to access the Internet. In such a case, both services (cable and satellite access services) may be included in the same product market. Conversely, paging services and mobile telephony services, which may appear to be capable of offering the same service, that is, dispatching of two-way short messages, may be found to belong to distinct product markets in view of their different perceptions by consumers as regards their functionality and end use.[19]

3.2 Significant Market Power (SMP)

Per the Framework Directive, "[a]n undertaking shall be deemed to have significant market power if, either individually or jointly with others, it enjoys a position equivalent to dominance, that is to say a position of economic strength affording it the power to behave to an appreciable extent independently of competitors, customers and ultimately consumers."[20]

The Guidelines distinguish between determining market power *ex post* and *ex ante*. In an *ex ante* world, the only meaningful measure of market power is the ability "… of the undertaking concerned to raise prices by restricting output without incurring a significant loss of sales or revenues."[21]

As a proxy for market power, the Guidelines suggest computing market shares, typically based on sales volume or sales value. SMP is normally viewed as being a factor only

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[17] Guidelines, at 40.

[18] Ibid., at 44. "According to settled case-law, the relevant product/service market comprises all those products or services that are sufficiently interchangeable or substitutable, not only in terms of their objective characteristics, by virtue of which they are particularly suitable for satisfying the constant needs of consumers, but also in terms of the conditions of competition and/or the structure of supply and demand on the market in question. Products or services which are only to a small, or relative degree interchangeable with each other do not form part of the same market."

[19] Ibid., at 45.

[20] Framework Directive, Article 14, at 2.

[21] Guidelines, at 73.

where the market share exceeds 40%. Where the market share exceeds 50%, SMP is assumed to be present.[22]

The Guidelines also deal with market power in upstream or downstream vertically related markets[23], and with collective dominance.[24]

3.3 Remedies

As previously noted, the EU Framework requires NRAs to impose appropriate remedies *ex ante* from the list of possible options[25] where one or more firms are found to have SMP. Absent SMP, the NRAs must eliminate remedies from this list that might have previously been imposed.

> Where a national regulatory authority concludes that the market is effectively competitive, it shall not impose or maintain any of the specific regulatory obligations referred to in paragraph 2 of this Article. In cases where sector specific regulatory obligations already exist, it shall withdraw such obligations placed on undertakings in that relevant market. An appropriate period of notice shall be given to parties affected by such a withdrawal of obligations.
>
> Where a national regulatory authority determines that a relevant market is not effectively competitive, it shall identify undertakings with significant market power on that market … and the national regulatory authority shall on such undertakings impose appropriate specific regulatory obligations referred to in paragraph 2 of this Article or maintain or amend such obligations where they already exist.[26]

In the European system, unlike the United States, competition law is seen as an *ex post* complement to *ex ante* regulation.

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[22] Ibid., at 75.

[23] Ibid., at 83-84.

[24] Ibid., at 86-106. The concept of collective dominance has become well established in European case law. By contrast, collective dominance is rarely raised as a concern in the U.S. unless there is actual evidence of collusion.

[25] Framework Directive, Article 16, at 2.

[26] Ibid., at 3-4.

4. The Mechanisms of the NRF

The newer portions of the NRF appear to be working well, to the extent that there is sufficient experience to enable us to judge. In particular, it appears that the novel central elements of the NRF adapt gracefully and effortlessly to new technologies such as VoIP. At the same time, other portions of the NRF use definitional structures that continue to be threatened by technological and market convergence.

4.1 Essential mechanisms: Market definition, SMP and remedies

As we have seen, the core methodology of the NRF relates to the definition of relevant markets amenable to *ex ante* regulation; the identification of market players, if any, that possess SMP on that market; and the implementation of minimally intrusive remedies on undertakings that possess SMP.

These core mechanisms provide a simple and holistic approach to economic regulation. The intent was to "future proof" the NRF by means of technological neutrality.

Attempting to apply the framework to IP telephony provided an acid test of these mechanisms. The results are evident in the Commission's public consultation on IP telephony: "…changing the underlying technology used for a specific service offering, without changing the services offered, does not constitute grounds to alter the obligations or rights associated with provision of that service."[27]

If an undertaking that had previously been found to possess SMP in providing a service on a market were to change the technology used to deliver that service without changing the nature of the service itself, as perceived by the user, then the finding of SMP should *ceteris paribus* remain unchanged. To the extent that a new service is different, an economic assessment is required: Does the new service logically participate in the same market as the old? To what degree are the old and the new services substitutable for one another, in a formal economic sense? Are there differences in service quality or mode of use that interact with substitutability?

The market definition, SMP and remedies aspects of the NRF appear to accommodate Voice over IP with no strain at all. Given that the NRF clearly was not designed with VoIP in mind, this bodes well for the ability of these portions of the NRF to adapt to the new converged technologies to come.

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[27] European Commission, DG Information Society, *Commission Staff Working Document on the Treatment of Voice over IP (VoIP) under the EU Regulatory Framework*, June 14, 2004. See: http://europa.eu.int/information_society/topics/ecomm/doc/useful_information/library/commiss_serv_doc/406_14_voip_consult_paper_v2_1.pdf.

4.2 Other mechanisms

The focus in the NRF has been on the core market/SMP/remedies mechanisms. Many other regulatory obligations are scattered throughout the various directives that comprise the NRF. The Universal Service Directive, as a conspicuous example, contains dozens of potential regulatory obligations.

These obligations are independent of the market/SMP/remedies mechanisms. They are based on definitions embedded in the Directives themselves. These definitions may not be explicitly technology-specific, but assumptions about the technology are deeply embedded in them. In consequence, adapting these portions of the NRF to new converged technologies is comparably difficult to performing the equivalent task in a traditional regulatory system.

It must be emphasized that the NRF provides more than adequate flexibility to enable regulators to deal appropriately with these issues. The point is that the NRF, which addresses so many other regulatory challenges in such a clean and elegant way, does little to simplify this class of regulatory challenges.

The most relevant definitions are *electronic communications service* (*ECS*),[28] *publicly available telephone service* (*PATS*),[29] and the *public telephone network* (*PTN*).[30] Many observers have noted problems in applying the definition of PATS to VoIP services.

The definition of the PTN is also problematic. The NRF implicitly decomposes telephony services into PATS, the service, which operates over the PTN, the network.[31] The Universal Service Directive implicitly presumes that the PTN provides various functions, including call setup and tear-down. In consequence of this presumption, the obligation to support CLI and DTMF falls to undertakings that operate PTNs,[32] as does the obligation to make caller location information available to authorities handling emergencies.[33]

IP telephony service can be viewed as comprising at least three distinct elements: (1) call setup and tear-down, (2) the call itself, and (3) the transmission of the underlying Internet protocol (IP) data associated with (1) and (2). In the traditional telephone network, (1) and (2) are distinct, but a single undertaking generally provides both services to the user. In the IP telephony world, a different operator might provide each of these elements to a user, and the IP data transmission might well be provided by multiple operators. The PTN is most nearly analogous to the third of these elements; however, an IP network does not inherently know anything about telephone calls. The IP network is not the right place to address the requirements for CLI or DTMF. Whether it has a role to play in making caller location available is debatable.

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[28] Framework Directive, article 2(c).

[29] Universal Service Directive, article 2(c).

[30] Universal Service Directive, article 2(b).

[31] Ibid. PTN is defined as "… an electronic communications network which is used to provide [PATS]…"

[32] Ibid., article 29(1).

[33] Ibid., article 26(3).

4.3. Law as a State Machine

Computer programs are logical constructs, as are laws. Understanding the design principles of one can sometimes provide useful insights about the other. In this case it is instructive to consider the Directives as a form of *finite state machine* – a logical structure where a defined set of circumstances trigger entry into a logical state, as well as the performance of some predefined set of actions (see Figure 1). The computer program might remain in that state until some other event triggers exit, and entry into the next state.

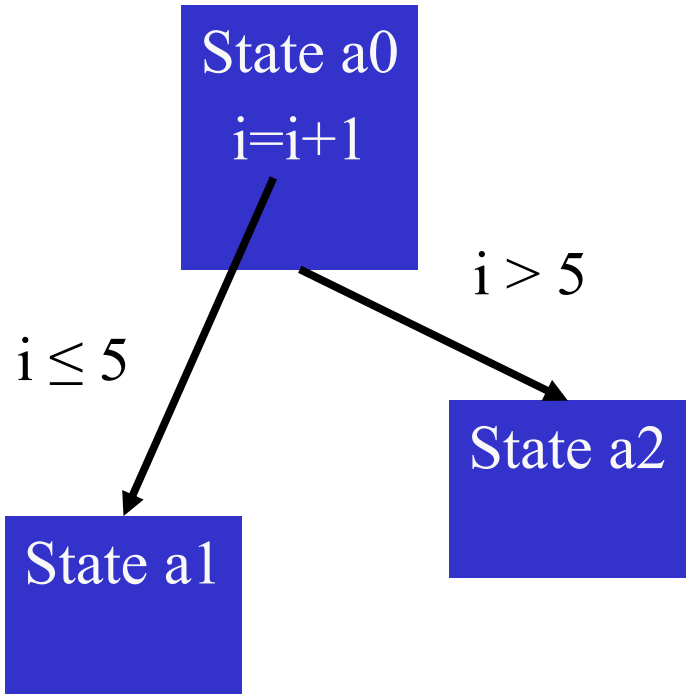

Figure 1. A finite state machine.

For an undertaking to become a provider of a publicly available electronic communications service (ECS) can be viewed as entry into a state. For an undertaking to become a provider of a publicly available telephone service (PATS) can be viewed as entry into a different state.

States have entry conditions. States have exit conditions. In the NRF, publicly available ECS has well-defined entry conditions, as specified in the Authorisation Directive. The entry conditions to PATS may be implied, but they are not explicitly specified.

Paradoxically, neither state has a defined set of exit conditions.[34] There is an Authorisation Directive, but no Deauthorisation Directive. What does it mean to have a state that has an entry but no exit – a regulatory "roach motel"?[35]

One might imagine that a provider of publicly available ECS simply turns in the general authorisation[36]. This necessarily begs the question: If the provider has received assignments of spectrum, or of telephone numbers, what happens to those assignments should the provider exit the business altogether? Many aspects of the Nextwave case are unique to the U.S.; nonetheless, that case dramatically illustrates the danger of underspecification of consequences when a service provider exits the market.

What are the rights of subscribers to a service when the provider wishes to exit the business? Is there a glide path, a transition period, to enable the subscriber to switch to another service provider?

The reticence of the Directives on this subject is perhaps understandable. As regulators, we seek to promote market entry. We do not like to think about market exit.

It should be possible to complete transactions in a reasonable and predictable amount of time, barring antitrust concerns. The lack of specificity in the Directives as regards market exit, and also as regards transfers of control, incurs the risk that national regulators might needlessly delay transactions.

[34] In U.S. law, by contrast, section 214 of the Communications Act of 1934 specifies certain limited actions when a carrier initiates or discontinues service.

[35] "… We are programmed to receive. You can check out any time you like, But you can never leave." *Hotel California,* The Eagles.

[36] The general authorisation ensures rights and obligations in connection with the provision of ECS or electronic communication networks. See Authorisation Directive, article 2(2)(a).

5. Challenges

The NRF continues to offer an elegant and comprehensive approach to a broad class of regulatory problems. Experience to date has been limited, but generally positive. At the same time, a number of risk areas have become clear.

5.1 Achieving correct and timely transposition

In the two years that have elapsed since my first paper on the NRF[37] appeared, many have commented on my references to the "theoretical elegance" of the NRF. In fact, the theoretical elegance is not a weakness of the system – *it is a strength*. But theoretical elegance cannot be the end of the story. The challenge before the European Commission and the NRAs today is to achieve workable, timely and effective implementations so as to fully achieve the benefits of the single market.

The Directives that comprise the New Regulatory Framework (NRF) obliged Member States to *transpose*[38] the Directives into national law and regulations by July 24, 2003[39]. Some Member States, notably including the UK, have moved forward expeditiously with transposition and implementation.

Others have lagged behind – so much so that the European Commission took formal action against seven of the fifteen Member States, beginning with invocation of infringement proceedings in early October, 2003.[40] The Commission clearly has recognized that "… late transposition and ineffective enforcement remain a serious problem for the functioning of the single market as a whole."[41] The infringement process could in theory have led to eventual action by the European Court of Justice, but seems to be leading instead to compliance on the part of the Member States. Notably, France and Germany appear to within a few weeks of completing the transposition process.

Meanwhile, ten new Member States joined the European Union on May 1, 2004. The new Accession States are required to have fully adopted EU communications policy

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[37] Marcus, "The Potential Relevance to the United States of the European Union's Newly Adopted Regulatory Framework for Telecommunications," op. cit.

[38] The Member States must sensitively fit the NRF into their existing laws and institutions.

[39] See Article 28 of the Framework Directive; Article 18 of the Access Directive; Article 18 of the Authorisation Directive; and Article 38 of the Universal Service Directive.

[40] See "Electronic Communications: Commission takes further steps in enforcement action against seven Member States", Brussels, 17 December 2003, (IP/03/1750), available at: http://europa.eu.int/information_society/topics/ecomm/doc/all_about/implementation_enforcement/infringements/ip17dec03_1750.pdf.

[41] European Commission, *Ninth report on the implementation of the EU electronic communications regulatory package* (hereinafter *9th Implementation Report*), COM(2003) 715 final, 19 November 2003, section 9, page 43.

legislation by that date;[42] however, the initial requirement in most respects is implementation of the pre-2003 framework, with subsequent full adoption of the NRF.[43] The arrival of the new Accession States is sure to pose new issues and new challenges for the NRF. In particular, many of the Accession States have much lower penetration rates for telephones at fixed locations than are prevalent for the current fifteen Member States, thus posing special challenges for the deployment of Universal Service.[44]

5.2 Implementation

Notifications pursuant to the NRF are publicly available on the web site of the European Commission.[45] The posted notifications provide a window into the implementation process.

Not surprisingly, the first thing that we see through this window is that implementation experience continues to be very limited. As of June 15, 2004, only the UK and Finland could be said to be deep into implementation, with a large number of measures adopted. Sweden, Ireland and Portugal are in various intermediate stages. Two Member States have filings, but have not gotten as far as an SMP notification in any market. The eight remaining historic Member States and the ten new accession Member States have no filings at all.

The UK has been the clear front-runner throughout this process. A recent comparative survey by the European Competitive Telecommunications Association (ECTA)[46] considers the UK to be the best regulatory environment among the ten European Member States evaluated. In particular, they rated the UK at the top of their scale in terms of the total number of employees used for general regulatory issues (excluding frequency and numbering management); salaries and benefits able to attract key staff; and access to outside expertise.

By all accounts, the very substantial progress that the UK has made required a substantial investment of resources and management attention.

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[42] See "EU Enlargement" at http://www.europa.eu.int/information_society/topics/telecoms/international/news/index_en.htm#eu%20enlargement.

[43] See *9th Implementation Report*, section 7, pages 41-42.

[44] In particular, the paucity of wired infrastructure in many of the new accessions states inevitably raises the question of whether universal access to publicly available telephone service (PATS) might not best be achieved using mobile phones. There is nothing in any of the Directives that comprise the NRF that would preclude the provision of access to PATS at a fixed location (cf. Universal Service Directive, article 4) by means of a service that happens to also provide mobility.

[45] See http://forum.europa.eu.int/Public/irc/infso/ecctf/library.

[46] *ECTA Regulatory Scorecard: Report on the effectiveness of the regulatory frameworks for electronic communications in Belgium, Denmark, France, Germany, Ireland, Italy, the Netherlands, Spain, Sweden and the United Kingdom* (hereinafter *ECTA Scorecard*), May 2004.

Implementation of the NRF is resource-intensive. Many markets need to be analysed by skilled economists.[47] This is likely to put a serious strain on many NRAs, particularly those that lack the depth and breadth of the UK NRA, Ofcom. Delays are possible.

On the other hand, NRAs that implement later may benefit from the trail-blazing work of the UK and the other NRAs that are leading the charge. This may mean result in less effort per notification for those NRAs that implement later on.

Meanwhile, implementation could potentially cause a flood of paperwork at the Commission. There are twenty-five Member States, and eighteen relevant markets defined by the Commission.[48] For each relevant market, a Member State could generate notifications for market definition, determination of SMP, and (where SMP has been found) remedies, although in practice these are often combined. Simple multiplication suggests that, if the NRAs were to switch into high gear, the Commission could be barraged with one or two thousand notification documents. Should that happen, the Commission's outstanding staff might find that it is difficult to drink from a fire hose.

To the extent that the notifications are largely routine, or perhaps become largely routine, this might never become an issue. On the other hand, it is possible that some future notifications might turn out to be more contentious, and therefore more resource-intensive, than those to date. It is too soon to tell.

For all of these reasons, it may take time to get the NRF fully implemented in all twenty-five Member States.

5.3 Consistent implementation among Member States

In establishing a common regulatory framework, it was necessary to delicately balance the prerogatives of NRAs against the needs of the single market, and the prerogatives of the European Commission in maintaining that single market.

It is noteworthy that the NRF seeks *harmonisation* rather than uniformity.[49]

Historically, European communications services were operated by interconnected but independent national operators (PTTs[50]). Today, communications is a global marketplace that demands regulatory coherence on a larger geographic scale. European industry is mindful of both the need and the opportunity to operate at a trans-European scale, as envisioned in Article 8(3) of the Framework Directive.

At the same time, no one-size-fits-all solution could possibly serve the needs of the European Union as a whole. The markets in the various Member States are not at the same level of competitive development.

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[47] Some NRAs may choose to stretch the capacity their scarce economists by outsourcing work. They will still need specialized in-house resources to oversee and manage the work.

[48] As of 15 June 2004, the UK already has 32 open notification dockets open. Finland has 14.

[49] Framework Directive, Article 19.

[50] A *PTT* is an operator of Post, Telegraph and Telecommunications.

The NRF seeks to resolve this tension by providing a consistent overall framework within which the Member States can exercise their respective defined authority. The balance that was struck preserves the ability, in general, of NRAs to initiate actions unilaterally, but with notice to the European Commission and to other NRAs, and with due consideration of their responses. The European Commission retains the ability to require that a market definition or a designation of SMP be withdrawn where it would create a barrier to the single European marketplace, or would be incompatible with the EU policy objectives embodied in Article 8 of the Framework Directive.[51]

To an American, this strikes a familiar chord – it is reminiscent of our own federalism.[52]

A key open question to date has been whether the Commission and the NRAs would be able to strike the right balance. In particular, there seemed to be a real danger that centrifugal forces might prevail, thereby preventing the European Union from achieving the true benefits of the single market.[53]

A recent report by the European Competitive Telecommunications Association (ECTA) argues that there are very significant differences in orientation, capability and conduct among European regulators.[54]

The existence of both centrifugal and centripetal forces is undeniable. This tension has not yet been fully resolved.[55]

At the same time, two important developments reflect favorably on prospects for the ultimate achievement of an appropriate level of harmonisation.

The first of these was a recent agreement on the part of the NRAs and the Commission, convened as the European Regulators' Group (ERG), on an *ERG Common Position on the approach to Appropriate remedies in the new regulatory framework*.[56] The document includes a review of the principles that should guide regulators in choosing appropriate remedies, and a lengthy discussion relating specific competition problems to corresponding remedies.

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[51] Framework Directive, Article 7.

[52] For there to be tension between centralization and decentralization in the implementation of the new telecommunications regulatory framework in the EU is not surprising – similar tensions have existed in many political systems, and in many eras. Indeed, this is a classic problem in social sciences.

[53] There is, to be sure, also the risk that the Commission might impose too rigid a centralization of control, thereby preventing the NRAs from exercising needed flexibility at the national level. The industry participants I met with tended to be far more concerned about a potential lack of harmonization than they were about a possible lack of sufficient consideration of local or regional differences.

[54] *ECTA Scorecard*, op. cit. They go on to say: "In general countries which score well have fully privatised SMP operators whilst those which score less well have active state ownership in the incumbent."

[55] Consider, for example, the remarks of German State Secretary Dr. Alfred Tacke, at a WIK conference in Berlin, 28 October 2003: "Harmonisation needed; But: greater observation of subsidiarity principle; No permanent centralisation of regulatory powers in Brussels; In European interest, competition is needed between different regulatory approaches".

[56] ERG, document ERG(03)30rev1, approved 1 April 2004, available at: http://www.erg.eu.int/doc/whatsnew/erg_0330rev1_remedies_common_position.pdf.

Note that the document deals with *remedies*. In the areas of market definition, and of determination of SMP, the Commission already has sufficient authority to maintain an appropriate level of coherence among NRA decisions.[57] In the area of remedies, the Commission has the opportunity "make comments",[58] and the NRA has the obligation to "take the utmost account" of those comments;[59] nonetheless, the Commission lacks the immediate means to require withdrawal of a remedy that appears to violate Community law.[60] By establishing a common approach to remedies, the ERG has addressed the area that posed the greatest risk of arbitrarily inconsistent regulation among the Member States.

The Common Position can be viewed as a direct expression of article 7(2) of the Framework Directive: "National regulatory authorities shall contribute to the development of the internal market by cooperating with each other and with the Commission in a transparent manner to ensure the consistent application, in all Member States, of the provisions of this Directive and the Specific Directives. To this end, they shall, in particular, seek to agree on the types of instruments and remedies best suited to address particular types of situations in the market place."

The Common Position does not in and of itself ensure harmonisation. In the nature of things, NRAs have (and need) considerable scope for independent judgment, and the Framework Directive specifically intends that they exercise this independent judgment. Independent decisions are not likely to be uniform decisions, and in fact there is no need that they be uniform. What is to be hoped is that, where two NRAs are presented with a similar set of facts, they should analyze the problem in roughly the same way and arrive at similar conclusions.

The Common Position represents an important first step in the right direction. That the Commission and the NRAs were able to agree on a common text is in itself a powerful statement that all parties understand the need for cooperation.

The other positive development is visible in the notifications and in the Commission responses on file.[61] The Commission has made clear its intention to "enforce the specific notification requirements on Member States under the new framework", primarily in Article 7 of the Framework Directive, in order to "ensure the consistent application of the new framework."[62] In the author's opinion, the Commission has been effective to date in utilizing the Article 7 notification procedures to foster the evolution of the single market.

The Commission has made a wide range of comments. Many are procedural. Some are substantive, but fairly minor in impact. Some are substantive and significant. In at least

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[57] Framework Directive, article 7(4).

[58] Ibid., article 7(3).

[59] Ibid., article 7(5).

[60] The Commission would, however, have other ways of dealing with a dispute of this type.

[61] See http://forum.europa.eu.int/Public/irc/infso/ecctf/library?l=/commissionsdecisions&vm=detailed&sb=Title.

[62] 9th Implementation Report, section 9, page 43.

one instance, the Commission required outright withdrawal of a draft measure that had been notified.[63]

At the same time, the Commission appears to be supportive of experimentation at the national level where it is not incompatible with Community law.[64]

A preliminary judgment is that the Commission appears to have struck the right balance to date, protecting and fostering the development of the single market without being too heavy-handed in dealing with the NRAs. This augurs well for the future of the NRF.

[63] This relates to cases FI/2003/0024 and FI/2003/0027: publicly available international telephone services provided at a fixed location for residential and non-residential customers. See: http://forum.europa.eu.int/irc/DownLoad/kCe_A4JDmRGRUS7cuqGQKvSlotN2sR5GlXTAZ0ylTHISRQTyGqBI76tSp0iyJaSsJxgftmr/SG%20%20EN%20%20FI%202003%200024-27.pdf.

[64] See, for instance, the Commission's comments of 9 June 2004, "Case SE/2004/0050: Call termination on individual public telephone networks provided at a fixed location in Sweden: Comments pursuant to Article 7 (3) of Directive 2002/21/EC", at http://forum.europa.eu.int/irc/DownLoad/kVeUAoJ-mTGtGV2OGE-pBsCwUINUn4c0xyNLZFuh2HJ26CawHjUsPD1q6wVIhaNsLk30u/SG%20Greffe%20%282004%29%20D%20202305.pdf.

5.4 Tension of objectives

In an insightful paper, Prof. Nicholas Garnham has argued that a basic problem with communications policy research in Europe is its tendency to try to simultaneously achieve too many different policy (sometimes mutually contradictory) goals, based on analysis using too many different (sometimes mutually contradictory) theoretical models, and by means of a limited set of policy instruments.[65] These conflicting goals can have mutually contradictory implications as to what should be done with that limited number of policy instruments.

This problem is by no means unique to European regulation, but it is a useful organizing schema for considering a number of thorny issues in communications regulation in Europe today.

Garnham views broadband policy as a case in point. He notes that "… the regulatory structure needed to encourage … entrepreneurial innovation is quite different to that required to maximise consumer welfare in established product and service markets. The problem in recent years in the telecommunication/ICT field has to been to know which situation we face. Thus, we have witnessed, and continue to witness in broadband, a constant policy fluctuation between the need to support network and service innovation and the need to maximise consumer welfare."

The relevant regulatory objectives appear in article 8(2) of the Framework Directive. Electronic communications regulators are simultaneously tasked with promoting competition by "… ensuring that users … derive maximum benefit in terms of choice, price and quality", "…encouraging efficient investment in infrastructure, and promoting innovation", and at the same time "… ensuring that there is no distortion or restriction of competition in the electronic communications sector." The inherent tension among these objectives is manifest.

5.4.1 Single market versus competition concerns

Another regulatory tension exists between promoting competition[66] versus "…encouraging the establishment and development of trans-European networks and the interoperability of pan-European services…", as well as "…removing remaining obstacles to the provision of electronic communications networks … and … services at European level."[67]

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[65] Prof. Nicholas Garnham, "Contradiction, Confusion and Hubris: A Critical Review of European Information Society Policy", keynote address to the EuroCPR conference, Barcelona, March, 2004. The paper will be available on the web site of the European Network for Communication and Information Perspectives (ENCIP) at www.encip.org.

[66] Framework Directive, Article 8(2). The relevant text is quoted in previous paragraph in the text.

[67] Framework Directive, Article 8(3).

In 2000, Vodafone Airtouch merged with Mannesman.[68] Commission competition authorities were concerned that the merged firm would be the only entity able to offer pan-European mobile telecommunication services in a majority of Member States. The merged entity would hold a controlling interest in mobile telephony operators in eight Member States, and joint control in mobile telephony operators in three more.

The merging parties resolved the competition concerns by agreeing to provide roaming tariffs to affiliated and unaffiliated mobile operators on a nondiscriminatory basis. As a practical matter, this eliminated the merged entity's incentives to offer pan-European service packages with flat rates, large buckets of minutes and low or zero roaming fees.

Comparison with experience in the United States is instructive. AT&T Wireless offered a plan with flat rates across the United States (*Digital One Rate*) in 1998. As long as the customer used not more than some fixed (and typically large) number of minutes of air time, the customer would incur no per-minute charges, no long distance charges, and no roaming charges for domestic calls.[69]

Not surprisingly, Digital One Rate was immensely popular. The success of Digital One Rate effectively forced AT&T Wireless's mobile competitors to provide a competitive response; however, initially they were hampered by their lack of nationwide scale. The net result was a wave of consolidation, alliances and joint ventures that ultimately resulted in a nationwide market for mobile telephone services with multiple carriers, each offering nationwide flat rate service.

One dramatic result has been a reduction in roaming charges. While roaming charges comprised 14% of mobile revenues in 1995[70], they represented just 4% of mobile revenues in 2003[71].

The intent here is not to second-guess the competition authorities. Their decision rested, among other predicates, on a reasonable belief that European mobile telephony competitors could not merge to sufficient scale quickly enough.[72] The intent here is merely to note that a tension exists among regulatory objectives. Until it is resolved, European businesses and consumers are unlikely to experience the full benefits of electronic communications operators with true pan-European scale.

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[68] *Case No COMP/M.1795 – VODAFONE AIRTOUCH / MANNESMANN Article 6(1)(b) NON-OPPOSITION,* April 12, 2000. CELEX document 300M1795.

[69] Cf. *8th CMRS Competition Report*, §94: "AT&T Wireless's Digital One Rate ("DOR") plan, introduced in May 1998, is one notable example of an independent pricing action that altered the market and benefited consumers. Today all of the nationwide operators offer some version of DOR pricing plan which customers can purchase a bucket of MOUs to use on a nationwide or nearly nationwide network without incurring roaming or long distance charges." Several mobile operators offer a variant of this plan where there are no roaming charges as long as the customer is using that operator's facilities.

[70] Cellular Telecommunications and Internet Association, *Semi-Annual Wireless Industry Survey (see* http://www.wow-com.com/industry/stats/surveys/).

[71] Ibid.

[72] *VODAFONE AIRTOUCH MANNESMAN*, op. cit., article 41.

This is an issue that is not specific to the NRF, and that in fact antedates the NRF. It is rather part of the European communications regulatory environment in the large. It sits at intersection of competition policy and telecommunications regulatory policy.

5.4.2 Emerging markets and technologies

Another tension exists between the need to foster innovation, and the need to avoid distortions and restrictions of competition.[73] It relates to emerging markets and technologies. Within the Directives that comprise the NRF, it is recognized in Recital 27 of the Framework Directive, which cautions against the imposition of "inappropriate obligations" in a "newly emerging market[], where de facto the market leader is likely to have a commanding share."

The Guidelines[74] note that emerging markets "… should not be subject to inappropriate *ex-ante* regulation. This is because premature imposition of *ex-ante* regulation may unduly influence the competitive conditions taking shape within a new and emerging market. At the same time, foreclosure of such emerging markets by the leading undertaking should be prevented."[75]

In principle, this would appear to represent appropriate guidance. In practice, it may be difficult for NRAs to determine whether the imposition of *ex ante* regulation is appropriate or not, and it is natural to wonder whether different NRAs will be able to apply this guidance in a consistent way across the EU. Moreover, there is no guidance as to when a market that was once viewed as emerging should no longer be so viewed.

It is also worth noting that this recognition of emerging markets is specific to the application of remedies in response to SMP. The NRF contains many more possible obligations on service providers, notably in the context of the Universal Service Directive, as previously noted. The NRF provides regulators with substantial flexibility, but the NRF does not explicitly recognize the possible need for special treatment for emerging services as regards these other obligations.

The Commission's recently released consultation document on VoIP[76] is a promising sign in terms of the ability of the NRF to avoid premature regulation of emerging services. At the same time, experience with emerging services under the NRF remains extremely limited.

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[73] Framework Directive, article 8(2).

[74] Guidelines on Market Analysis.

[75] Guidelines, at 32. See also Recital 27 of the Framework Directive.

[76] European Commission, DG Information Society, *Commission Staff Working Document on the Treatment of Voice over IP (VoIP) under the EU Regulatory Framework*, June 14, 2004. See: http://europa.eu.int/information_society/topics/ecomm/doc/useful_information/library/commiss_serv_doc/406_14_voip_consult_paper_v2_1.pdf.

5.5 Call Termination

The assessment of termination fees for completing a call is a complex area that represents a distinct risk as regards NRF implementation. For a more comprehensive treatment, see papers by S.C. Littlechild[77] and by this author.[78]

Call termination fees tend not to be constrained by normal economic factors due to an effect known as the *terminating monopoly*. High and asymmetric call termination rates have raised concerns because they effectively force fixed consumers to provide irrational subsidies to mobile users,[79] and also because they are one of several factors that contribute to European mobile rates per minute of use that are about twice as high as comparable prices in the United States.[80]

The Commission has addressed this problem through the market definition mechanism. The Commission has identified eighteen markets that are potentially amenable to *ex ante* regulation. Among these are markets for call termination *to the customers of an individual fixed or mobile operator*.[81] Defining the market in this way will tend to create a strong presumption of SMP in regard to termination of calls for that operator's own customers, unless rebutted by specific facts. If SMP is found, the NRA determines what regulatory remedy is appropriate. This process may eventually lead to cost-based termination rates for far more carriers than are presently subject to them.

This overall approach is logical, and is in fact the most natural way to deal with high termination fees under the NRF. At the same time, it will tend to lead to highly regulated outcomes. In the cases that have been notified[82], it has generally led to heavy regulatory controls, including cost-orientation for termination rates.

For now, *it is vitally important that regulators stay the course in order to reduce regulatory asymmetries*. The magnitude of the economic distortions is such that a regulated glide path may be necessary in some Member States.

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[77] Littlechild, Stephen C., "Mobile Termination Charges: Calling Party Pays versus Receiving Party Pays", in preparation.

[78] Marcus, J. Scott, "Call Termination Fees: The U.S. in global perspective", 4th ZEW Conference on the Economics of Information and Communication Technologies, Mannheim, July 2004.

[79] The termination rates of the wired incumbent are typically limited by regulation to less than two eurocents per minute of use (Cion, *9th Implementation Report*), while European mobile termination rates average about 19 eurocents per minute of use (FCC, *8th CMRS Competition Report*). Thus, the subsidy flows from fixed operators to mobile operators.

[80] FCC, *8th CMRS Competition Report*.

[81] *Commission Recommendation of 11 February 2003 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services*, Official Journal of the European Communities, L 114, (2003/311/EC), May 8, 2003. Market 9 is "Call termination on individual public telephone networks provided at a fixed location"; market 16 is "Call termination on individual mobile networks."

[82] See http://forum.europa.eu.int/Public/irc/infso/ecctf/library.

One promising development that bears watching is the termination rate scheme recently notified by the Swedish NRA.[83] The NRA required the largest incumbent to implement a full system of cost accounting and cost-oriented termination rates. Two other operators were required to provide cost accounting, but merely to charge "reasonable and fair prices", presumably no higher than those of the incumbent. The remaining small operators must charge reasonable and fair prices, but were obliged to provide cost accounting data only upon the regulator's request.[84] U.S. experience suggests that systems of this type can achieve low termination rates while burdening only a few operators with full cost accounting and cost orientation.

Call termination remains an important challenge, and also a topic for further research. Comparative study of other regulatory environments may provide useful insights,[85] but new ideas are needed as well. Systems have been proposed[86] that might simultaneously avoid regulatory distortions and address convergence challenges, but no country has implemented a system that fully and simultaneously achieves both objectives for all communication services.

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[83] See "Case SE/2004/0050: Call termination on individual public telephone networks provided at a fixed location in Sweden", op. cit.

[84] The proposed approach of the Irish NRA is somewhat similar. See "Consultation on Remedies – Wholesale voice call termination on individual mobile networks", document 04/62b, 8 June 2004. See also the UK approach in case UK/2003/0003.

[85] The call termination system in the United States arguably avoids some of the worst economic distortions inherent in the current European system, without excessive regulatory intrusiveness.

[86] See Federal Communications Commission (FCC) Office of Strategic Planning and Policy Analysis (OSP) Working Papers 33 and 34: Patrick DeGraba, "Bill and Keep at the Central Office As the Efficient Interconnection Regime"; and by Jay M. Atkinson, Christopher C. Barnekov, "A Competitively Neutral Approach to Network Interconnection", both December 2000. Both are available at http://www.fcc.gov/osp/workingp.html.

6. Concluding thoughts

The key finding of this paper is that, based on the limited experience to date, the system seems to be working as intended. Implementation has been slow, but surprisingly few problems in the basic market/SMP/remedies mechanisms of the NRF have turned up. There is thus very little to say about the most novel, and therefore most risky, parts of the NRF. They simply appear to be working correctly. To the extent that they work correctly, they generate coherent and appropriate regulatory results that are not at immediate risk of being compromised or obsoleted by technological convergence.

Further experience with the NRF is needed. The findings in this paper must be viewed as preliminary, because there is so little history with the system.

This paper has raised many potential concerns, but they need to be seen in perspective. On balance, the NRF provides a simpler and more straightforward approach than traditional regulatory structures. We noted that some areas of the NRF are not significantly easier to work with than a traditional, definitional regulatory system. At the same time, they are no worse. Overall, the NRF appears to generate good and rational regulatory policy decisions, with net benefits for regulators.

We have raised concerns about call termination and its impact on the European mobile telephony marketplace. This does not reflect a defect in the NRF; rather, it is a problem that was brewing for a long time, and that is coming to a head now because the NRF finally provides a means of addressing it.

There are many opportunities to improve the NRF over time, but for now the system appears to be working well. The better is the enemy of the good.

The task before the Commission and the NRAs today is to complete the job of transposition and to proceed with effective implementation in all of the Member States.

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