

**Consultation of the 7th Global Symposium for Regulators on the subject  
"The road to next-generation networks: Can regulators promote investment and  
achieve open access?"**

**Contribution from FRANCE - ARCEP**

Migration towards next-generation networks (NGNs) has been initiated by a number of organizations in France, Europe and elsewhere, and there is a need for analysis and planning to take into account its impact. National regulators have a particular need to follow developments, especially during the transition period, during which there will be parallel operation of conventional architectures.

The most obvious manifestation of this major change is the introduction of new technologies at the heart of the network, and accordingly it is here that most of the new regulatory issues can be expected to arise. While there are other important issues raised by the new deployment of fibre-optic access networks, the present document focuses on the core of the network.

**Definition of NGNs**

NGNs are networks capable of carrying different forms of traffic thanks to a unique architecture and protocol (Internet protocol or IP), independently of the terminal or access technology used. Migration to NGNs will be a catalyst for rapid development of innovative services including mobile and convergent services, either by bringing different types of content together for shared access, or by routing a particular content for access by means of different technologies, or by services that include localization or presence management.

These concepts and technologies are not new. Most of them date from the 1990s, and have already been incorporated to a degree in the architecture of intelligent networks. It should be borne in mind that developments naturally vary from country to country in terms of timelines, mobile-fixed convergence, type of transition, final architecture and strategies for migrating existing client bases.

This movement of fixed, mobile, and multimedia networks towards a single form of transport shared by various types of access and controlled by a unified service platform will take several years, and is in need of regular monitoring by regulators.

**How should evolution towards NGNs be approached?**

The context within which current technology was developed is essentially that of the 1970s: network interconnection and service interoperability are based on implicit and explicit rules set up separately for each type of service, beginning with the conventional public telephone service at that time. The development of NGNs and the growth in the number of operators will lead to a revision of those rules in order to maintain effective interconnection between the networks and, in some cases, interoperability with the supported old or new services where it is justified.

The goal is to protect the interests of the consumer and market competition. Manufacturers and operators should be exposed to some regulatory scrutiny sufficiently early to avoid, wherever possible, unsatisfactory deployment or the proliferation of proprietary solutions, which would fragment the market and degrade the quality of interoperator services.

Such scrutiny must include domains such as interoperability, interconnection, quality of service, numbering, portability, security and integrity of networks, information and protection of the consumer, etc.

Interconnection and the quality of service for the consumer, particularly in connection with symmetric regulation, are becoming crucial issues that have to be examined quite early by the regulators.

### **Symmetric regulation of interconnection**

In view of the variety of initial conditions, timelines, types of transition and target architectures, it is vital to look at the question of interconnection:

- looking toward the future, with a view to facilitate the adoption of common rules for interconnection, and end-to-end service interoperability;
- with respect to the questions about transition, which can be significant given the differences in initial conditions and timelines between different countries and players.

### **Asymmetrical regulation within this framework**

As far as the fixed network is concerned, the deployment of alternative NGNs clearly lowers the barriers to entry for new multiservice operators. The deployment of NGNs by newcomers on the French market is therefore of real benefit, from the viewpoint of competition as well as that of consumer interests.

Falling prices for NGN hardware and the glut of high-speed capacity have encouraged significant investment in the development of alternative IP networks on the French market.

The regulator has encouraged the deployment of innovative alternative networks with wholesale prices adapted so as to diminish the barriers to entry for potential new operators, while increasing the security of their investments. In France, the success of alternative operators of this type has created a situation in which a number of effective operators, fully interconnected at the network and service level, co-exist on the market. This has allowed the regulator ARCEP to cut back asymmetrical regulation and revise the special obligations imposed on the dominant operator of the fixed network.

Overall, the migration to an NGN for fixed networks is not expected to lead to major adjustments in the asymmetrical regulation of the existing services, although skilful management of the transition will be required.

### **Fixed-mobile convergence and NGNs**

Regulators will need to face new issues with the emergence of convergence between the fixed and mobile services.

One of the key issues in the development of NGNs, apart from falling costs, is the possibility of providing customized innovative services that use fixed, mobile and cellular access networks alike. This convergence can create players who will be stronger than those who currently rely exclusively on the fixed networks.

There is therefore a risk that a single operator will ultimately, remain offering fully integrated packages with all associated services. The risk depends on the type and the effectiveness of the obligations that can be imposed by the regulator on the fixed, mobile and cellular markets. In France, the instruments used for regulating the wholesale market for broadband have been shown to be effective in the fixed broadband market, but they will probably prove inadequate for regulating convergent services.

## **Conclusion**

The transition periods, which will vary from one country to another, will have a significant impact on national regulations concerning these new networks. NGNs, as catalysts for a boom in new services, may not in themselves create new markets requiring regulation, nor transform the dominant positions of the players on the telecommunication market; nonetheless they will make it necessary sooner or later to adapt the regulations governing the existing markets.

One thing is clear: regulators should direct their efforts towards regulations that are symmetrical, *ex ante*, proactive and proportionate, harmonized internationally, especially on the issues of interoperability, quality of service, security, and interconnection and consumer protection.

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