Regulatory Challenges for Broadband Innovation

Enzo Savarese
AGCOM
Commissioner

Innovation in Broadband Networks and Services

Athens, 6-7-8 June 2008

Functions, Services and TLC Networks Convergence as Business Strategy (1/6)

Thanks to the adoption of the IP protocol and to the start of the first policies of NGN development, that constitute the qualifying factors of new convergent services, the convergence processes are at the basis of new business models and innovative offers from operators.

The process of technological evolution of services, thanks to the use of IP technology, lead, in a long term, to services of various nature (voice, Internet, video) regardless their access modalities and placement.

Technology convergence is increasing faster than economic and market convergence.

Functions, Services and TLC Networks Convergence as Business Strategy (2/6)

The convergence development process takes different connotations which get more complex introducing cyclical and retroactive characteristics.

This process of “horizontal convergence” comes in effect at market level and the traditional borders fall down between services and products of telecommunication, computer science and audiovisual, involving all the areas of ICT and giving life to what is defined as the new field of ICMT (Information, Communication and Media Technologies).

Functions, Services and TLC Networks Convergence as Business Strategy (3/6)

The aspects at the bottom of this process of horizontal convergence are :

- the increasing necessity for operators in traditional ICT collaborating fields with industries previously clearly separated, like contents production;
- the increasing competition among operators of various market segments (like, in TLC world, between fixed and mobile network operators);
- the income in several convergent fields of new or previously operating subjects in different industries.

Functions, Services and TLC Networks Convergence as Business Strategy (4/6)

We see, moreover, that the “vertical convergence” process that comes into effect between the several phases of the chain of value that concur to the realization of the final service (voice/data/video, the production of devices, the development of telecommunication standards and the management of networks).

This involves the necessity to realize technical and operating solutions, with the aim to guarantee the interoperability of products and services offers. This favors the vertical integration, or a more tightening collaboration between the device producers and the development of standard and telecommunication solutions.

Functions, Services and TLC Networks Convergence as Business Strategy (5/6)

The migration to the NGN happens in a gradual way passing from the long distance transport network to the access network.

The migration on one hand simplifies the network management, on the other hand allows costs to go down today associated with the management and the maintenance of distinguished networks for every service (phone, data, video-audio services).

Functions, Services and TLC Networks Convergence as Business Strategy (6/6)

The necessary investments to the realization of NGN in the transport network are generally inferior compared to the access network.

In Italy only one access network to telephone services is present and distributed capillary over the whole national territory and there are not any alternative networks to that in copper (only one part is in fiber).

Roll out and development in Italy (1/6)

The dependence from the only infrastructure in copper determines the subsistence of at least three structural problems, that weaken the system in the new technological and market framework:

- a single network and the vertical integration of the incumbent produces negative effects on the competitive dynamics of the sector,
- in the mid-long term, with the spread of broadband and integrated service, the copper network is destined (particularly in the city) to endure saturation and interference problems. In perspective, therefore, the system risks being characterized from bottlenecks that could make, the service supply difficult to all customers, in some city areas,
- the absence of alternative networks also does not allow a solution to digital divides.

Roll out and development in Italy (2/6)

The technological bottleneck connected to the throttling of the copper network transmission capacity will be solved by the coming of new wireless infrastructures and next passage to the NGAN.

However, the advent of the NGAN also make rise competitive problems. In fact, the incumbents, that have the access infrastructures capillary spread all over the national territory, take a remarkable advantage, in terms of both investment ability and market position.

Roll out and development in Italy (3/6)

Such circumstance generates doubts on the effective possibility of contenders to be able to compete in a long period with the ex-monopolists.

The debate assumes therefore importance on whether the prescribed regulation is most suitable to encourage the investments in new generation infrastructures, also in the access, without however threatening competition that is finally asserting as a result of the liberalization process of the sector.

Roll out and development in Italy (4/6)

Actually, the other transmission technologies - fiber optic and satellite - hardly catch up to 1% of the (equivalents) fixed line totals.

Italy has one of the most elevated percentages of dependence from x-DSL technologies to supply broadband services: 96% of the broadband access is DSL.

In Italy, only little metropolitan areas are provided with alternatives networks to Telecom Italia: the lack of infrastructure development of alternative networks has definitely limited the possibility to have full competition.

Roll out and development in Italy (5/6)

The Country orography has deeply affected the development of infrastructures, carried out on several Local Switch (approximately 10.500) much more than in other European Countries: with the first 1.000 Local Switch, only half of Italian population is caught up, for the remaining 50% approximately 9.000 Local Switch are necessary.

The lack of alternative infrastructures and the territory orography have determined that Italy has, more than elsewhere, problems with digital divides in the long run that would require high, long and complex contributions: with population that still lives in areas not covered by broadband fixed connection.

Roll out and development in Italy (6/6)

Moreover, the fragmentation of the Italian territory, contributes to this situation determined by the great number of small villages: with a total of 8.101 Italian municipalities, approximately 3.200 are totally lacking DSL, while more than 2.400 are covered by DSL in only a part of the communal territory.

The possible market evolution is extended also to the competition of the entire row of the electronic communications field.

Challenges implied by NGN (1/7)

Considering the insufficient “appeal” for the development of alternative access infrastructures, it is more likely that, with NGN development, the access part of the network will continue to represent a bottleneck on all national territory, or at least in the areas where alternatives networks will not be developed.

All around Europe, there is a growing attention around the creation of NGN supplying services with the widest band capacity: the public interest, connected to the influence on the entire national economic and social system, in the development of new infrastructures, is certain.

Challenges implied by NGN (2/7)

The development of the new networks can produce positive effects in terms of diffusion of television services on Internet Protocol - IP TV - and would be therefore suitable to determine an increase of means and information sources, and as a consequence of information pluralism.

Another factor, along with such evolution processes, is obviously represented by the regulatory framework, in its interaction with technological and market dynamics.

Challenges implied by NGN (3/7)

On one hand, we can assume that the development of convergence processes is definitely oriented to innovative services, freedom for new comers, possibility of agreements and partnership, and high technological innovation rate, which involves a competition increase between the different solutions.

On the other hand, the development of convergence processes, based on the incumbents position and the presence of entry barriers, might help competition between the few big integrated subjects only.

Challenges implied by NGN (4/7)

Network costs are driven by capacity requirements. In integrated IP-based networks, where voice may represent only a small fraction of the traffic, total costs might have little to do with minutes of voice use.

It is evident that the introduction of NGN, as qualifying factor of convergent services and stimulus for new processes of vertical and horizontal integration, will favor competition between alternative platforms, but only in a mid-long term process.

Challenges implied by NGN (5/7)

Traditional interconnection arrangements historically represented an attempt to use wholesale payments (between network operators), in order to correct the unbalanced retail payments (between service providers).

To the extent that network and service providers are different firms, and that voice is only a small fraction of network cost, this system makes even less sense the more time passes.

Challenges implied by NGN (6/7)

The greatest challenge will be to promote a favorable environment so that operators would find convenient to invest in convergence; this, bearing in mind that regulation is one of the variable that influences the enterprise risk and therefore the decision of operators whether to and when carry out investments characterized from high fixed and sunk costs.

Challenges implied by NGN (7/7)

On one hand, a tight regulation could reduce the incentives or delay the convenience, mainly for the incumbent, to carry out investments in the new networks.

On the other hand, it must be considered that contenders must carry out heavy investments that will produce particularly favorable pro-competition effects for the well-being of the consumers.

Thanks for your attention

Enzo Savarese
AGCOM
Commissioner