
The Impact of the Technological Convergence on the Brazilian Telecommunications Regulator

Luiz Fernando Ferreira Silva, Ph.D.

Development Symposium for Regulators
Geneva, 20 - 22 November 2000

Contents

- ✓ Introduction
- ✓ The Technological Convergence
- ✓ Regulations toward Convergence
- ✓ Future Actions
- ✓ Concluding Remarks

Introduction

Objective

- ✓ To describe the extent to which Brazil has positioned itself to respond to the impact of the technological convergence on the telecommunication regulation in the country.

Argument

- ✓ The implications of the technological convergence on current regulatory regimes clearly indicate that they will be subject of revisions.
- ✓ The actions to be taken on these regimes, it is argued, need to be in line with the expectations of service providers and consumers in the sense of promoting greater benefits for the society as a whole under an increasing availability of convergent services.

The Technological Convergence

Conceptual Approach

✓ Technological convergence is defined as a process of formation of successive similarities amongst technologies that had been distinct from one another. They have once established clear borderlines amongst the services they have enabled the provision but now share a common digital environment.

The Technological Convergence

Response of Regulatory Authorities

- ✓ Full legislation and regulatory reform results from long-term in-depth assessment of the technological convergence;
- ✓ In the meantime, no reasons are found for legislators and regulators to remain standstill;
- ✓ Technologies and services are evolving rapidly and leaving a large number of legal and regulatory provisions lagging behind;
- ✓ Regulatory uncertainties must be expeditiously and timely removed, in order for the pertaining industries to continue to grow;
- ✓ Initial step toward a future flexible regulatory framework:
 - ✓ to consider technology and platform as neutral so that new developments in services, be they incremental or radical innovations, can be easily accommodated to reflect the expectations and interests of service providers and consumers.

The Technological Convergence

Users Perspective

Contents Services	Voice	Documents/Data	Pictures	Broadcasting
Telephone/Fax	Yes	Yes	No	-
Mobile	Yes	Yes	No	-
Computer	?	Yes	?	?
Terrestrial Radio/Television	Yes	?	-	Yes
Cable TV /Broadband Wireless Cable	Yes	Yes	Yes	Yes

Source: Elaborated from Bill Wigglesworth and Jill Hills. *Convergence of Broadcasting and Telecommunications*, 1999 (mimeo).

The Technological Convergence

Risks and Opportunities

- ✓ The trend of technological convergence will certainly be a challenge to be faced by the telecommunications, broadcasting and computing industries;
- ✓ Regulatory and institutional changes may eventually bring risks and opportunities to all parties involved;
- ✓ There remain questions to be addressed regarding the future of telecommunication services.

The Technological Convergence

Risks

- ✓ Reduces the usefulness of most of regulatory principles;
- ✓ Increases the operators and users claims to the Regulator;
- ✓ Makes hard regulation short lived;
- ✓ Increases the difficulties of inspection;
- ✓ Increases the likelihood of conflicts amongst operators.

The Technological Convergence

Opportunities

- ✓ Reduces the complexity of the regulation;
- ✓ Promotes the development of new technologies and applications;
- ✓ Reduces service costs to the end-users;
- ✓ Allows the expansion of users;
- ✓ Reduces entrance barriers to new competitors;
- ✓ Stimulates growth of the market and service demand;
- ✓ Improves the quality of the services provided;
- ✓ Brings wider choice of operators to the customers;
- ✓ Enhances competition.



Regulations toward Convergence

General Aspects:

- ✓ Anatel's regulatory actions in the light of the technological convergence are mainly concerned with:
 - ✓ The support for the creation of a modern, efficient infrastructure of telecommunications in Brazil;
 - ✓ The supply for the entire Brazilian population of telecommunications services at fair prices;
 - ✓ The re-organization of its own structure and of the telecommunications industry.



Regulations toward Convergence

Regulation for the Use of Paid Mass Communication Service Networks for the Provision of Value Added Services (VAS)

- ✓ Approved through Anatel's Resolution nr. 190 in 1999.
- ✓ The purpose of this regulation is:
 - ✓ To make mass communication service networks (DTH, MMDS and Cable TV) available for providers of VAS;
 - ✓ To allow the network holder to explore VAS only through a separated company established specially for the rendering of VAS.
 - ✓ To promote free-market competition features between Access Network Providers;
 - ✓ To make it possible the interconnection of Cable TV Networks to the Internet.

Regulations toward Convergence

Regulation for Infrastructure Sharing between Telecommunications Services Operators

- ✓ Anatel's Public Consultation nr. 239 (under analysis).
- ✓ The purpose of this regulation is:
 - ✓ To observe the principles of article 73 of General Telecommunications Law and the guidelines laid out in the Joint Regulation (National Electric Power Agency, National Telecommunication Agency and National Petroleum Agency);
 - ✓ To define a methodology for minimum and maximum reference prices for the use of telecommunication infrastructure;
 - ✓ To establish the conditions in which Anatel's mediation procedure is deemed suitable.



Regulations toward Convergence

Regulation for the Multimedia Communication Service

- ✓ Anatel's Public Consultation nr. 246 (under analysis).
- ✓ Assumes capacity for providing multimedia applications, such as data, images, audio & video, texts, configuring it as a convergent service;
- ✓ Can be provided over any telecommunications network;
- ✓ Excludes the Public Switched Telephone Service, broadcasting and Pay-TV Service.

Regulations toward Convergence

Regulation for Mass Electronic Communication Services for Subscribers (SCEMa)

- ✓ Public Consultation yet to be published;
- ✓ The purpose of this regulation is:
 - ✓ To introduce the term “electronic” and adequate the regulatory framework to the current context of the telecommunications sector, which has been changed as a result of the adaptation of the article 4 of Telecommunications Services Regulation;
 - ✓ To review and consolidate a single regulatory Act for pay-TV services.
 - ✓ To license services and radiofrequencies separately;
 - ✓ To regulate this service independent of the technology employed in its provision.



Regulations toward Convergence

Regulation for Service Indicators of Mass Electronic Communication Services for Subscribers

- ✓ Public Consultation yet to be published;
- ✓ The purpose of this regulation is:
 - ✓ To provide Anatel with technical, operational, economic and administrative information related to the Paid Mass Electronic Communication Service;
 - ✓ To stand as a “tool” for controlling and supervising the obligations of Paid Mass Electronic Communication Service providers;
 - ✓ To serve as a source of official information to the general public and to investors willing to invest in this market segment.



Regulations toward Convergence

Guidelines for the Authorization to the Use of Radiofrequency for the Provision of Collective Interest Telecommunications Services

- ✓ Public Consultation yet to be published;
- ✓ Establishes basic guidelines for authorizing the use of radiofrequencies for telecommunication services of collective interest.

Regulation for the Use of Telecommunications Networks

- ✓ Public Consultation yet to be published;
- ✓ The purpose of this regulation is:
 - ✓ To regulate the use of telecommunications service suppliers and Valued Added Services providers;
 - ✓ To provide Brazilian citizens with an access to telecommunications networks, at reasonable prices.



Anatel's Regulatory Action

Other Actions Taken

- ✓ Joint Regulation for Infrastructure sharing between Electric Power, Telecommunications and Petroleum Sectors - Approved through Joint Resolution nr. 1 in 1999;
- ✓ Adaptation of the article 4 of Telecommunications Services Regulation, approved through Anatel's Resolution nr. 73 - Approved through Anatel's Resolution nr. 234 in 2000;
- ✓ Assignment of a Frequency Band to be used as the MMDS's return channel (2.170 MHz a 2.182 MHz) - Approved through Anatel's Resolution nr. 236 in 2000.



Anatel's Regulatory Action

Others Public Consultations - done

- ✓ Joint Regulation for the Arbitration Procedure between Electric Power, Telecommunication and Petroleum Regulatory Agencies - Joint Public Consultation nr. 002.
- ✓ Regulation for Telecommunications Services for Scientific or Experimental Purposes - Anatel's Public Consultation nr. 266.

Other Public Consultation - yet to be published

- ✓ Analysis of the Reports on Laboratory and Field Trials of Digital TV systems carried out in Brazil and the Technical and Marketing Report on Digital TV Systems.
-

Future Actions

Introduction

- ✓ Analysis of the impact of the technological convergence on the Brazilian telecommunication market to be carried out by Anatel and Specialized Consultants.

Objective

- ✓ Expose about the impact of technological convergence in the telecommunications sector, including the radio broadcast and information sectors, that addresses:
 - ✓ the most recent technological developments and provides an extensive review of the process by which software has replaced hardware on telecommunications service platforms;
 - ✓ the digitization of signals in the provision of the various types of services;
 - ✓ the multiservice transport networks and their applications.

Future Actions

Purpose

- ✓ To identify the technological development of the telecommunications sector, including the radio broadcast and information technology sectors, as well as to assess the impact that the process of technological convergence will have on those sectors in Brazil.
- ✓ To review the telecommunications regulatory regime in the country, including the radio broadcast and information technology regimes presently in force
- ✓ To develop relevant and consistent regulations that do not hinder the growth of the telecommunications sector, including the radio broadcast and information technology sectors, and that foster, at the same time, technological innovations that can be extended to all associated industries.

Future Actions

Expected Products

- ✓ An analysis of the current and future setting, the risks and opportunities for the development of the telecommunication sector, including the radio broadcast and information sectors;
- ✓ A description of the future scenarios for the technological development of these sectors and how these elements can contribute to the various modes of telecommunications (voice, data, video, multimedia, etc. signal transmissions) in urban and rural areas;
- ✓ A regulatory and licensing framework that is capable of promoting the compatible development of communications, the redesign of Anatel's organizational structure and competencies, and the establishment of an action plan for adjusting to the changes.

Conclusion

- ✓ While the process of technological convergence progresses the world over, policy strategies need to be found on the extent to which the pace toward the establishment of convergent services can be accelerated, whereas we all share the idea of the direction the whole global society is heading;
- ✓ Back to the concept of evolutionary process that telecommunication, broadcasting and computing technologies have embarked on, it can be asserted that the digital environment has set the direction for an ubiquitous provision of convergent services in the very near future.



Luiz Fernando Ferreira Silva, Ph.D.
CMGSA/Anatel

lffs@anatel.gov.br
(55) (61) 312-2393

ANATEL