

The Broadband Revolution: Telecommunications Loses its Individuality

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Abstract

Telecommunications legacy service providers are squaring-off against providers of Internet-based services. Regulators in Latin America, and the world, are busy calibrating this behaviour in the telecommunications sector. The not-so-gradual blending of legacy services with, media, content, and entertainment offerings is replacing telecommunications as we knew it a decade ago. A new brand of bundled communications, information access, entertainment and telephony is emerging. The future of a company whose sole service is telephony is limited - and this "future" is now.

Introduction

One of the greatest sources of the dynamism of the telecommunications industry is the rapidity and profundity of change - in markets, new and converged technologies, applications and regulation.

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If one looks at the past two decades in the telecommunications industry, one can say for almost any period that it was characterized by "unusual" and dramatic change.

Nevertheless, the boom to bust cycle (and we hope it is a cycle) we experienced recently, together with the convergence of not only technologies, but whole previously separate industries, puts the first two years of the new millennium of telecommunications at least in the running for, if not the hands-down winner of, the most pervasive change award.

It thus presents the greatest challenge in planning for, financing, investing in and regulating telecommunications and related services and products.

This article looks briefly at the legacy services in the telecommunications industry and the corresponding means of calibrating behaviour in the telecommunications sector by regulators around the world of varying maturity.

It compares that to the not so gradual blending of legacy services with growing Internet offerings, and then speculates gingerly on the role of the media, content and entertainment industries in the ultimate mix.

The conclusion is that legacy telecommunications as we knew it a decade ago, will fade into a new brand of bundled communications which includes information access, entertainment and telephony in a single offering.

At least in the industrialized countries, if not soon globally, the future of a company whose sole service is telephony is limited. And the "future" for this adjustment is now.

Legacy Services and Regulation

Historically, regulation of telecommunications services was based upon the criticality of the service to the public and the control over public access to a critical service by an operator (making the operator "dominant" if it exercised requisite levels of control differently defined by different regulators).

"Thus, basic telephony, and later business services like facsimiles, provided over the public switched telephone network were considered critical to public welfare and business growth."

Also, operators of this service in most countries enjoyed varying levels of control of the market from regional dominance to national and international monopoly. The regulator's role, comparatively speaking, was straightforward. It regulated prices and behaviour of dominant operators of basic telephony services in the public interest, and encouraged with little or no regulation all other services denominated as "value-added". This included access to the Internet.

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The Internet, as a means of "equalization" of economic levels of society through the ubiquitous availability of information, was not regulated at all in many countries. In the US indeed, counter-regulatory laws, such as the Internet Tax Freedom Act, were instituted to encourage growth of the Internet and protect it from expensive and deterrent regulation.

With the Telecommunications Act of 1996, amending the Communications Act of 1934, the FCC introduced the platform for competition in all levels of the telecommunications market and acknowledged a distinction between "telecommunications services" (akin to the Title 2 Common Carrier regulations of the 1934 Act), and "information services" (which track value-added services in prior regulation).

By 2000, the debate and FCC Notices of Proposed Rule Makings and Rule Makings themselves began to reflect a maturing of the Internet into an interactive communications medium, rather than solely a passive source of information that could change legacy regulation and services forever.

The Regulatory Battle of the Internet

Simultaneously with the maturation of the Internet into interactive communications of all forms, came the need for traditional telephony providers to shore up market share and average revenue per user (ARPU). This was, and is, required in the face of high-powered competition such as long - distance operators entering local exchange service and vice versa.

The need for higher ARPU caused telephony providers to awaken to Internet-based service. The latter met with regulatory tension created by two core FCC rulings - ILEC unbundling and cable modem Internet access.

The first was the result of a long-standing effort to stimulate local exchange competition invigorated under the prior Administration with UNE (unbundled network elements) and TELRIC (telecommunications long run incremental costs) rulings. The latter require that incumbent local exchange carriers (ILECs) make available to competitors (CLECs) certain UNEs of the ILECs network at TELRIC prices. The ILECs claimed that the TELRIC formula was below their own cost and thus an unconstitutional confiscation by the FCC.

Verizon elevated the issue to the U.S. Supreme Court, which upheld the ruling of the FCC. By the time the Supreme Court ruled, the Administration had changed and Chairman Powell had replaced Chairman Kennard. The combination of the new Chairman's views on local exchange competition, combined with the rapid demise of many service providers under a downward spiralling telecom economy, changed the momentum.

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While the Supreme Court ruling as to TELRIC stands, the FCC has the right and obligation every three years to list the UNEs to which TELRIC shall apply.

The third year is now and it is likely that the list will be short.

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The ILECs responded by lobbying the Congress to table legislation to "free" from unbundling requirements the DSL Internet access provided by them, in the same fashion that cable modem access was liberated.

The ILECs (predominantly the Bell Operating Companies or BOCs) also declared a moratorium on construction of broadband infrastructure to support their DSL service, claiming that it was economically unsound to invest in the infrastructure given the regulatory posture. This was the first half of 2002.

The second half of 2002 is witnessing a reversal of this. While no regulatory pronouncement has yet to be made to give the ILECs the comfort they sought during the first half of the year to both bundle their services and build broadband infrastructure to compete with the cable companies, they have done an about-face on both issues and announced both.

The canvas on which this picture is being painted is as follows. Legislation was introduced in Congress to encourage DSL proliferation by the ILECs with lesser burden of regulation than the status quo would require.

"President Bush convened, in the summer of 2002, a meeting at the White House with leaders of the

telecommunications and information industry, and assured them that the Administration would do all necessary to support the unimpeded growth of the Internet."

Shortly thereafter, in a Texas get-together for U.S. industry, the two telecom representatives in attendance were the leaders of Verizon and Cisco.

The former is also the leader of the band for freedom of ILECs to use their market power to compete in the new world of converged products; and the latter is perhaps the provider of choice of software for voice over internet protocol (VOIP) telephony among many other products.

In a Washington, D.C. speech, Michael Powell almost casually announced that he would consider it appropriate for a BOC to buy Worldcom in its bankruptcy proceeding (reversing, of course, the prior 20 years of Judge Green's work, which may be a timely thing to do).

Chairman Powell would not likely have made such a statement unless he was comfortable that it was politically correct, as he is not only a veteran Commissioner of the FCC and an extremely knowledgeable and opinionated telecommunications professional, but also as the son of Secretary of State Powell, of a politically accomplished family. He is both privy and sensitive to the requirement of coordination.

By early Fall 2002, Verizon and SBC announced vigorous build-out campaigns for their broadband networks and the enhancement of their service offerings, while they search the market for a viable business plan in support of bundled services.

Simultaneously, the BOC's began trials with VOIP services to their commercial and residential customer bases, and everyone is eyeing content and entertainment sources.

SBC is also not so quietly rumoured to be the front-runner for the purchase of Worldcom.

As the Commission announced the demise of analogue telephony in the U.S. in 5 years, the ILECs are operating on a 2-year window to master broadband services, Internet- based telephony and interesting content, before the cable companies add telephony to their content edge.

It encouraged also telecommuting by high-speed Internet to boost usage of the broadband networks. On September 25, 2002, a White House advisory group had undertaken to encourage entertainment companies to offer more content over the Internet so as to encourage consumers to more enthusiastically pay higher access prices for the ILECs DSL services, as they build out their new networks.

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It encouraged also telecommuting by high-speed Internet to boost usage of the broadband networks. This is, no doubt, welcome advertising to both the ILECs and the cable modem providers and perhaps a needed boost in both support and encouragement to a stalled telecommunications sector.

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larger order of product and indeed a new sector - the TMT, or telecommunications, media and information technology sector of any national economy.

While the underlying drive of all regulation- the benefit of the consuming public - has not changed since the days of legacy telecommunications services, what most benefits the consuming public in a TMT world has, and so have the patterns of regulation and of investment in the telecommunications sector.

Investment Patterns Blurred by Converged Technologies and Sectors

Different groups of investors have different requirements for investment. Operators invest generally on a long-term basis and, historically most heavily, in legacy services. A 25-year return on investment in the national long- distance system of an industrialized country was, historically, not uncommon. Developing countries, on the other hand, through the late 1980s and 1990s attracted long-term investment in legacy telephony services through the privatization of the national telephone company

. The first to do so in Latin America- Chile (1988), Mexico (1990), Argentina (1990), Venezuela (1991), Peru (1995) did well, attracted hundreds of millions or billions of US dollars for percentages of the shares of the national telephone company and were successful in demanding arduous roll-outs and network expansion for basic telephony during the characteristic 5 to 10 year period of protected markets.

Cellular services were relatively new in the developing, and indeed the industrialized world and had not been considered an ample replacement for fixed- line telephony even as late as 1995.

While Europe disagreed with North America and North America with Asia as to how to regulate international services, particularly as to settlements among national carriers, all agreed that Internet services were "value- added" and did not require substantial, if any, regulation.

All that has changed. The protected periods of operation are over. Mobile services have, through need, efficiency and economy of network construction, if not in acknowledged functionality and pricing, replaced basic telephony in whole countries. Zimbabwe and Uganda, for example, report greater cellular than fixed- line subscriber bases and Uganda's Second National Operator deployed a fully GSM cellular network infrastructure for its "basic telephony" offering.

"The need for increase in ARPU has spurred a new industry of products and services designed to get cell phone subscribers to consume increasingly more minutes of service per subscriber and thus stabilize or enhance a business plan."

Companies such as Cisco, Telrad, Nortel and Comverse on the equipment and software side, and IDT Media on the services side, are focused on innovative, user-friendly and time saving applications for consumers that increase volume of usage. Because regulation is a significant cost of any regulated business, and especially in a depressed telecommunications economy, service and equipment providers have gravitated towards and exploited the many possibilities of unregulated services.

Internet Protocol networks are the beneficiary of this phenomenon, as well as such wireless offerings as the so-called "Wi-Fi" or wireless local area network, the spectrum for which in the US is not regulated.

Simultaneously, technological adaptations, such as Motorola's iDEN technology digital mobile trunk radio, catapulted into feared competition with the GSM cellular service providers in Latin America.

Regulatory challenges to this technology have been brought largely by the incumbent cellular operators, most prominently BellSouth, in Latin America.

Such challenges have been successfully rebuffed by Nextel in Chile and Peru and are pending under challenge by Tricom S.A. of the Dominican Republic.

In Panama, where the regulator has announced in laudable and modern fashion that Panama does not regulate technology and will not, as a matter of law, stop technological innovation, political issues keep the case from a speedy resolution consistent with Panama's Latin American neighbours.

In Peru and Colombia, similar regulatory challenges, based on converged technologies involving the Internet, resulted in opposite results within the past two years.

A challenge by Telefonica of Peru to the provision of long- distance service over an IP network by a Peruvian Internet Service Provider (ISP) in Peru met with a regulatory scolding.

The Peruvian regulator, OSIPTEL, enforced its policy to depart from legacy regulation in favour of innovative competition by using a "temporary" legal handle and declaring the voice over internet protocol, (VOIP) service of an ISP to not require long- distance licensing because it did not fit the "real time" voice definition of Peruvian law on long- distance service

e. The temporary legalistic solution announced the permanent state of Peruvian policy on Internet and competitive services.

On the other hand, a similar case in Colombia resulted in the Colombian regulator's nullifying the long- distance service of a licensed cellular carrier using VOIP over the cellular network.

They ruled that, while a long- distance licence using any technology may be obtained in Colombia by the payment of the legally required \$150 million to the Government, service providers who do not make the same licence investment as other long- distance providers may not compete with the others regardless of technology.

While there is logic in each approach, the Peruvian approach seems to be the preferred result, according to a survey done by the telecommunications regulator of India.

In April of 2002, India's regulator ruled that upon the expiry of the monopoly of the nation's international carrier as of April 1, 2002, ISPs could provide international service without paying for a long- distance licence. It ruled, however, that to the extent the service was functionally equivalent to legacy telephony services, it would be regulated in the same manner.

Similarly, Morocco's ANRT has taken the position that to the extent VOIP is intended to be functionally

equivalent to legacy telephony, it will be treated as legacy telephony for regulatory purposes.

Therefore, in Morocco, VOIP may not be provided by anyone but Maroc Telecom until December 31, 2002, when the latter's exclusivity on domestic and international telephony ends.

The USA Resoundingly Affects Change by Not Ruling

As noted above, the FCC is among the world's most experienced telecom regulators.

It has been examining and in some fashion discussing the role of the Internet in telephony since the inception of the Internet.

However, it has yet to regulate the Internet, access to the Internet or any service provided over an Internet protocol network, which, for most purposes, means packetized transmissions in asynchronous mode.

Toward the end of the chairmanship of the FCC by William Kennard, the Commission indicated that while VOIP was not yet sufficiently developed to be a seamless substitute for basic telephony, to the extent that it developed to be and to the extent it was used as the functional equivalent, the Commission would consider regulating it as telephony. That did not occur before the change in Administrations.

Chairman Powell is differently inclined, as may be the reality of the market place of the future.

There are those who believe that the proliferation of telecommunications companies of the 80's and 90's will recede, leaving 3 TMT (cellular mobile) companies globally in the near future.

There is Cable & Wireless copiously pursuing its strategy to replace its legacy services with IP network offerings. And there are the cable modem providers and the big ILECs competing to finish in each other's markets first. It would seem logical to conclude that "smart" money will march to a broadband.