

## Faster than a speeding bullet - broadband growth in Latin America

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Broadband of all sorts - but especially mobile - and converged broadband-based, services such as triple and quadruple play have been the force behind telecom growth in Latin America. The demand for next-generation high data-rate services is not only coming from customers, but from Government initiatives such as national broadband build-out projects and local versions of One Laptop per Child. The high cost of cable capacity, mostly due to lack of competition, still holds back truly affordable international broadband service.



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It is no secret that the world of telecommunications in Latin America has seen staggering growth in the past few years. Five years ago carriers were dealing with STM-1 or STM-4 based networks, today they are trying to meet demand with 10GigE solutions. The pre-YouTube, pre-Twitter, pre-3G and even (gasp...) pre-iPhone days now seem like a walk in the park. Not even the global economic crisis has put a damper on this growth. In Mexico, for example, Cofotel, Mexico's telecom regulatory agency, reported that Mexico's telecom sector has been averaging a ten per cent quarterly growth despite the huge hit the country has taken during the financial crisis.

The case of Mexico is not unique in the region. According to Point Topic's Global Broadband Statistics report, Latin America's broadband subscription growth rate is second in the world behind only Eastern Europe. Since the average broadband penetration rate is just above five per cent, we can easily understand that growth and expansion will continue strongly in the foreseeable future.

### Drivers of growth

On a recent trip to South America, I attended two very interesting industry events. Although both events had a different focus, a common thread was discernible throughout - broadband is king. Its growth in the region

is driven by mobile broadband, converged services over broadband (triple and quadruple play) and Government initiatives that encompass elements of both mobile and fixed broadband.

In Latin America, the demand for next-generation services that require high data-rate connections is not only coming from customers, but is also being pushed by Governments throughout the region with initiatives such as Un Computador por Niño (UCPN), the region's version of One Laptop Per Child. These Governments are opening new blocks of spectrum so operators can deploy 3G services, WiMAX and, down the road, technologies such as LTE/4G.

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Given the geographic characteristics of the region, mobile technology is an excellent way to expand coverage with minimal capital investment and provide users with affordable services. That is true for both urban and rural areas throughout Latin America. Companies like UNE in Colombia have been able to connect urban centres, leveraging WiMAX technology in a way that is both efficient and affordable to the user. Countries like Chile make use of WiMAX technology in vast stretches of remote territories, while Brazil sees mobile broadband as a key addition to its Government’s National Broadband Plan that aims to bring broadband to 75 per cent of Brazilian households by 2014.

Not all broadband growth in the region is mobile. Latin America is seeing some very interesting projects develop in different areas. Regional companies in Brazil, Chile and Mexico are diving directly into the world of Fibre-to-the-Home (FTTH) in a way only seen in countries like Japan. In Brazil, Curitiba-based GVT has built a fibre network in multiple cities and is growing by leaps and bounds adding new localities to its network every month. Through such infrastructure the company can deliver voice, Internet and television, which should help GVT deliver content produced by its new owner, the French media behemoth Vivendi. Chile has similar examples; companies like GTD and VTR are now offering triple play over FTTH.

Needless to say, the biggest players in the region, such as Telmex and Telefonica, offer their own flavours of mobile and fixed broadband. However, it is the smaller players in the region that showcase the true potential of these markets and the ability of non-traditional companies to bring new and creative solutions to the table to challenge the status quo. Innovation finds a perfect ally in these companies.

#### IP leads the way

Latin America is quickly developing its telecommunications sector, largely fuelled by aggressive broadband adoption rates and endless potential. Customers want their iPhones, YouTube access, and integrated communications, and this forces ISPs and carriers to stretch their network resources to accommodate these requirements.

In Latin America today, according to TeleGeography, domestic IP traffic accounts for about 35 per cent of total traffic, while international IP traffic accounts for the remaining 65 per cent. International traffic is either passed to an upstream provider or peer within the region, which then carries the traffic on its own network to the US or Europe, or it can be carried on the local operator’s own network to the US or Europe. Either solution is valid and effective. However, when dealing with the region’s high growth rates, scalability is the name of the game. Scalability is easier to achieve by connecting to upstream providers for part or all of a network’s traffic.

The first issue we find in dealing with this situation is the lack of choice in the cable systems connecting the US and Europe to Latin America. The small number of competitive offerings has kept cable capacity pricing, by basic law of supply and demand, significantly higher in Latin America than in other regions of the world. This limitation has had a deep impact on the quality and cost of services in the region and, therefore, upon the future of regional initiatives for broadband.

The high cost of cable capacity makes connecting to upstream providers in the US and Europe a losing proposition for local providers. It has also kept some international carriers and ISPs from establishing a regional presence in Latin America. The combination of these two factors reduces competition in the region, keeps IP transit prices high and potentially reduces the quality of the customer experience. Therefore, an important contributor to both regional development and the success of Government initiatives will be in the region. This will foster healthy competition and increase the choices available to local carriers, which, in turn, will encourage foreign investment. Overall, an increase in competitive cable offerings will benefit the region as a whole.

#### IPv6 now

Local markets can also benefit from the adoption of new technologies such as IPv6, the next generation Internet. IPv4, the protocol used on the Internet for over 20 years, can no longer meet the long-term requirements of industry or Government. The next version of the Internet Protocol,

IPv6, offers a variety of benefits including a vastly expanded address space, scalability, better security, lower capital and operational expense and a number of enhancements for multicast and quality of service support.

According to ARIN (the *American Registry for Internet Numbers*) and LACNIC (the *Latin American and Caribbean Internet Addresses Registry*), the supply of new IPv4 addresses will run out in less than 18 months. This raises a number of issues for network planners, the first and most important being: What will we do when there are no more new addresses? Some ISPs, carriers and content providers in the region are not waiting for the answer; they are tackling the issue head-on. Companies like Telconet in Ecuador, UOL in Brazil and Entel in Bolivia are either in the process of making their networks fully IPv6 compatible, or have already done so. Putting off the transition today will only cause issues in the near future.

#### Exciting future

Latin America is one of the most exciting marketplaces today. Technologies that didn’t quite catch on in other areas have taken flight in this region. Throughout the most recent global crisis, Latin America has shown its resiliency. The LA telecommunications sector has shown the sort of growth needed to encourage investors. In a relatively short time, Latin America’s telecommunications sector has taken off ‘faster than a speeding bullet’ and shows no signs of slowing down.

The continued healthy growth of Latin America depends upon understanding and learning from the mistakes made in other countries when implementing new technology and business concepts in the region. In addition, further opening up from a commercial and regulatory perspective will guarantee Latin America’s position as a true player in the world market. The more inviting the region becomes to foreign investment, the more the region will grow as a result. Beyond that, the sky is the limit. ●