Research Brief

IP Centrex May Have a Role in Latin America

Abstract: Centrex has not flourished in Latin America, but a case for IP Centrex in the region could be made, starting with a case study of the service by Global Village Telecom in Brazil.

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Recommendations

- Carriers should stress the IP capability of IP Centrex as it will enhance traditional Centrex features.

- As businesses in Latin America prefer an upfront investment, carriers should point out the economic advantage of Centrex over the PBX.

- Carriers should target small and midsize businesses for IP Centrex because it will be attractive to those SMBs, largely ignored today in the region.

- Vendors should be aware that IP Centrex is a "tech trigger" in the hype cycle, and as such it is five years or more from reaching the plateau of productivity.

Publication Date: 26 March 2003
Traditional Centrex Has Not Been Popular in Latin America

Although any appropriate economic analysis will prove the cost savings of Centrex over a PBX with similar features and same size, Centrex has not taken hold in Latin America. The decision by carriers not to offer this service, and the entrenched market for PBXs that pervades Latin America, is due largely to not being fully aware of the benefits of Centrex. The only countries where Centrex is offered are Argentina, Brazil and Chile — and then quietly (not advertised on Web sites, for example) and only to large businesses. In the United States, out of 174 million lines installed, 14 million are Centrex lines (a penetration of 9.2 percent). In Latin America, of 91.3 million lines installed, less than 1 percent are Centrex lines, or about 700,000 lines.

Customers have traditionally and culturally preferred buying to renting. Issues such as speed of deployment of service, lack of procurement process expertise, or tight capital budgets have not deterred customers from buying a PBX. Centrex has played second fiddle.

What Is IP Centrex, and How Will It Play in Latin America?

IP Centrex serves as a multifunctional, carrier-class, IP-based call processing platform. In general, Centrex is a bundle of business solutions primarily for voice services in which the equipment is owned and operated by the carrier rather than the user. Contrast this with PBX solutions, in which the user owns the equipment, the equipment is located in the customer’s premises, and all costs and responsibilities are assumed by the user. In reality, Centrex (over 40 years old) is an outsourced solution. See "Centrex Introduction: Traditional and IP," (DPRO-89912).

In traditional Centrex service (both analog Centrex and ISDN Centrex), all logic, features and call controls reside in a Class 5 switch located in the central office. IP Centrex depends on IP telephony availability. IP Centrex has all the benefits of traditional Centrex plus the benefits of IP telephony. In IP Centrex, a single broadband access is used to carry the packetized voice streams as well as data. The broadband facility is shared by many connections, unlike in traditional Centrex where one copper pair is needed for each station, with the resulting waste of bandwidth.

In Latin America the PBX is an entrenched product, and Centrex is nearly nonexistent. In the countries where it is offered (the aforementioned Argentina, Chile and Brazil) it is offered under different product names and almost exclusively to large businesses. In Mexico, several studies about IP Centrex have died at the drawing board for lack of interest. Nevertheless, there needs to be a growing awareness that IP Centrex is an excellent vehicle for SMBs.

Centrex has been around for a long time, and IP gave it some hype. However, the blush has worn off. Gartner Dataquest considers IP Centrex in Latin America a “tech trigger” in the hype cycle, since it has never really gained steam. As such, it is five years or more from reaching the plateau of
productivity. Of the countries that have deployed significant IP networks (Argentina, Chile, Brazil, Mexico), Gartner Dataquest has seen IP Centrex gain significant deployment traction in two: Chile and Brazil.

**Advantages and Disadvantages of the Centrex Model**

The advantages of Centrex vs. PBX include:

- Centrex provides the most basic features and functions of a PBX.
- Higher upfront costs are associated with a PBX purchase, followed by lower monthly/yearly expenses related to trunkline use, maintenance and upgrades.
- Centrex tends to have more stable costs, with lower initial startup costs except for the initial purchase of the Centrex phones.
- Centrex is a good alternative for clients who want to avoid spending a lot of upfront money, want to maintain their own telephone system, and want fixed monthly expenses.

The disadvantages of Centrex vs. PBX are:

- Centrex does not generally provide the sophisticated features and functions of a PBX.
- Centrex phones tend to be more basic in functionality as compared with advanced PBX phones (with displays, feature keys and soft feature keys).
- Centrex, in comparison with PBX, is less user-friendly.
- Over a multiyear period, perhaps seven to 10 years, a PBX represents a significantly lower cost alternative to Centrex, when all related costs are taken into consideration.

The decision to "rent" Centrex would be based on the conservation of capital, not the acquisition of leading-edge technology. On this basis, carriers could make a case to potential Centrex customers exclusive of technology.

IP Centrex improves on the advantages of Centrex, in that it provides a flexible service that is advantageous to both users and carriers. It simplifies moves, adds and changes (MACs) and provides more features than other services. Centrex and IP Centrex will also offer security to the customer because of stringent business practices by the carrier managing the service as well as any technology upgrades. Upfront costs are low, and the system can easily grow to support more users. Finally, it is reasonably cost-effective.

**Equipment Vendors Are Trying to Get a Foothold in the Region**

Gartner Dataquest projects that upwards of 2 million IP Centrex lines will exist in some of the major Latin American markets (Argentina, Brazil, Chile, Mexico) by 2007. This constitutes a 50 percent share of total Centrex lines of 4 million in Latin America. For this to be realized it requires
extensive acceptance of the Centrex model by both carriers and users, as well as appropriate IP platforms from which to offer the service. Targeting SMBs and startup companies should represent an advantageous strategy. We expect that service providers will begin bundling voice with Internet access and data services, and features supporting these services need to be offered by the vendors. The direct competitor of IP Centrex, the IP PBX, will remain the high-cost alternative.

Voice over DSL (VoDSL) will create service revenue opportunities if its spread in the region becomes significant. VoDSL can be a significant access scheme for IP Centrex, if vendors can sell it in the region.

Vendors’ architectures are similar. Generally, voice users have either hard phones or soft phones that connect over an Ethernet LAN to a premises-based IP gateway in the form of a router. In addition, a broadband connection connects to an IP Centrex gateway at the edge of the IP network. The IP Centrex portion is controlled by a centralized softswitch that provides all signaling and control functions. Traffic for the PSTN is converted to PCM format and traffic for the IP-based network is routed as needed.

Major vendors in the region include UTStarcom (formerly Commworks), Lucent and Nortel:

- **UTStarcom**—The IP telephony solution of this vendor is based on a three-tier architecture of gateways, signaling and call control. Network administration and back-end servers are interconnected in an open architecture. A softswitch works in conjunction with the platforms. UTStarcom is a vendor that offered a softswitch for wireless applications. Known predominantly in Asia/Pacific, UTStarcom is acquiring a presence in the Latin America region by way of the Commworks product acquisition.

- **Lucent**—The iMerge Centrex Feature Gateway allows a Class 5 central office switch to host business telephony using VoIP IP Centrex. It simplifies global communications by opening new markets as geographic constraints are eliminated.

- **Nortel**—The Succession Centrex IP model uses document management system (DMS) Centrex coupled with VoIP. It allows capturing remote locations and making them a fully integrated part of Centrex service, a next-generation business service. A Succession IP platform was acquired by Global Village Telecom (GVT) in Brazil in 2002.

**IP Centrex Case Study: GVT in Brazil**

Global Village Telecom (GVT) is a "mirror company" in Brazil that competes with incumbents Telefonica and Brasil Telecom in their own territory. GVT is going into the IP Centrex business fully realizing that the service is not mature. IP Centrex will be offered linked to next-generation network (NGN) services, so its evolution depends on NGN acceptance in the Brazilian market. The single network in the works will be able to offer both voice and data services.
GVT arrived at the decision to offer IP Centrex as part of a complete suite of services primarily for its large customers. Surveys, interviews and studies of large customer needs were conducted, which led to this decision.

GVT has acquired equipment from Nortel, in effect the Succession series of equipment for a whole host of services. UTStarcom will provide the necessary equipment for IP Centrex.

There will be no publicity of this service. It will be quietly offered to large companies via specific sales targets by the sales force.

There are no plans to purchase customers’ PBXs. GVT considers that the product has several advantages compared with ownership of a PBX. One is that the customer is able to reduce Opex, a fact that will be used by the sales force.

Gartner Dataquest Perspective

New Opportunities for Equipment Vendors

IP Centrex builds on traditional Centrex services by combining them with the benefits of IP telephony. In IP Centrex, a single broadband connection facility is used to carry many simultaneous calls carrying both voice and data. Equipment suppliers need to emphasize the new features and capabilities that are possible with this platform, especially in Latin America, where Centrex has not really taken hold.

Some issues to consider are:

- Users need new station equipment (IP phones).
- In-building wiring changes need to be made.
- QoS needs to be established and V-LANs need to be installed.

This is a new and profitable business opportunity, but in many cases upfront investments are required. On the other hand, the convergence of voice and data let manufacturers differentiate products.

New Business for Carriers That Offer Centrex Today — and for Those Who Don’t

If the required IP platform is available, IP Centrex is a successful service that can be offered not only to large businesses, but to SMBs as well. Service providers can compete head-on with IP PBXs with minimum investment on their part and on the part of the users. Combined with DSL services and Web-enabled services, IP Centrex can begin to solve real problems. Furthermore, migration from Centrex to IP Centrex can be gradual without rendering legacy telephone sets obsolete.

It would also appeal to cash-strapped SMBs. Only three or four countries offer traditional Centrex today in Latin America. The expectation is that many other carriers in the region will jump into the IP Centrex bandwagon by 2006.
**Recommendations for Users**

For enterprise customers, IP Centrex has a major place in the Latin American marketplace, and users should consider it because:

- It has near-term cost advantages over PBX options.
- It provides significant cost savings over paying costly tariffed access and service rates to the basic telecom service provider(s).
- It combines voice and data network synergies.
- In the future, IP Centrex should be a part of a telephone system’s migration plan, if it is positioned well by the carrier.

The caveats the IP Centrex users should be aware of are:

- It is still dependent on the carrier’s network sophistication.
- Most carriers do not yet offer this service.
- The equipment in the central office (CO) relies on the carrier for upgrades, so the customer is dependent on carrier investment decisions and strategies.
- IP Centrex offerings route traffic away from the public switched telephone network (PSTN), so it is not in the carrier’s best interest to offer the service. Users must be proactive.

**Key Issue**

How will the worldwide public network service market develop, and which forces will drive market growth and future opportunities?

This document has been published to the following Marketplace codes:

TELC-WW-DP-0348