Competitive Analysis

IP Centrex and IP Telephony Offer Different Capabilities

Abstract: As IP Centrex and hosted IP telephony services become more mainstream, organizations must assess which solution is best. IP telephony provides greater functionality. IP Centrex lowers the total cost of ownership.

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Strategic Planning Assumptions

Vendors will make risk-based investments, continue to form partnerships to enhance application servers to develop full-featured IP Centrex and hosted PBX solutions (0.9 probability).

Small, less-successful vendors offering IP Centrex and hosted IP services platforms will be devoured by large vendors beginning in 2004 (0.8 probability).

Service providers will deploy enterprise-grade equipment to small and midsize business (SMB) and vertical markets rather than carrier-grade equipment (0.9 probability).

Through 2007 hosted enterprise IP Telephony will be a compelling competitor to IP Centrex (0.8 Probability).

Competition for hosted voice solutions among network service providers (NSPs), application service providers (ASPs) and external service providers (ESPs) will intensify through 2007 (0.8 Probability).
Introduction

With the commoditization of bandwidth, NSPs need to generate additional revenue from value-added services consistent with the needs of companies. The migration of enterprise telephony to IP presents opportunities for service providers to extend managed network services such as Internet Protocol virtual private network (IP-VPN) to include IP Telephony as a service. Improvements in quality of service in the wide area network and scalable applications-oriented infrastructure enable voice over IP (VoIP) to be provided as a hosted service. Businesses have always been first to adopt new technology. Enterprises built feature-rich private voice networks years before service providers launched voice VPN services in the mid-1990s. More recently, Multiprotocol Label Switching (MPLS) was deployed and managed first by enterprises before service providers launched MPLS-based IP-VPN services. As IP Telephony matures, companies can expect carrier-grade IP Centrex solutions to become a core component of a service provider’s portfolio.

IP Centrex or "softswitch" service is a pure IP-based carrier grade alternative to traditional Centrex served from Class 5 central office exchanges. Both have similar capabilities in terms of multitenancy, call control and service intelligence. However, the softswitch is not involved in transport or switching of the packetized voice stream, unlike the Class 5 platform, but is involved in the data network, which is why softswitch technology came into play.

Enterprise IP Telephony platforms are typically deployed in office locations but are also extended to the edge of an enterprise IP network. Service providers have recognized the opportunities for hosting enterprise IP Telephony in a central office in much the same way as both traditional and IP Centrex platforms. Hosted Enterprise IP Telephony can be partitioned or designed to host single-enterprise customers. Early examples of managed IP voice services from carriers, such as Equant, Sprint, AT&T and BT, have been constructed using enterprise-oriented platforms, such as Cisco’s Call Manager and Nortel’s CSE 1000M. By comparison, Pingtone is a partitioned solution typically co-located in incumbent local exchange carrier (ILEC) facilities.

The benefits of deploying hosted enterprise IP Telephony solutions are as follows:

- Companies can upgrade to new software releases individually at their own pace, not that of the service provider as with traditional Centrex solutions.
Enterprise IP Telephony is more advanced than IP Centrex in terms of functionality and is more readily able to meet enterprise requirements as a hosted solution today. This is because traditional Centrex service providers have to make decisions that extend the life of their legacy infrastructures, which compromises their functionality. One example is in the call center space, where an IP-based solution would require additional investment.

Benefits for IP Centrex are:

- Low total cost of ownership for the SMB. The equipment/software resides in the central office where it is maintained, upgraded and paid for by the service provider.
- Partnerships between softswitch vendors and IP Centrex platform vendors allow the enterprise to take advantage of converged IP-based voice and data services, such as unified communications (managing voice, data, and so forth via Web interface), IP-VPN and mobile applications to business users.
- Current analog or ISDN Centrex customers can continue to use existing Centrex management tools for many administrative functions on IP Centrex lines.

**IP Centrex/Hosted PBX Platforms**

Most IP Centrex feature sets offer a broad range of PBX replacement and new services. These products typically work with a variety of end-user devices and interfaces, including analog and digital phones, IP desktop phones, PDAs and mobile phones, all of which are widely used.

Primary vendors in the softswitch space include VocalData, Broadsoft, Sylantro, LongBoard and NetCentrex. Each offers a wide range of enhanced features on the platforms, and few features distinguish one from the other. For example, while each offers IP Centrex and Enhanced PBX applications, mobility differentiates Sylantro, Longboard and VocalData. Basic features include the following:

- Unified messaging, including visual voicemail
- Click to talk
- Enhanced find-me/follow-me capabilities
- Outlook integration, with "click to call" features
- Returning calls and voice mail from a browser
- Web-based call management to monitor and control service features and capabilities
- Automatic call distribution capabilities
- Selective call acceptance
- Collaborative applications
- Presence management
- Instant messaging.
While the aforementioned vendors have viable products and a good customer base, the likelihood of survival of all is nil. Rather, survival by acquisition is more likely. The foundation of their business is one that will be a good match for larger vendors such as Lucent and Nortel, which do not have such solutions. Lucent and Nortel have more of a Centrex IP solution, meaning they provide an adjunct to a PBX or CO switch that adds IP Telephony functionality the existing Centrex capability.

**Target Market**

The location-independent nature of IP Telephony, combined with the propensity for organizations to consider outsourcing technologies and functions not central to their respective businesses, is leading companies to consider IP-based voice communication sourcing options from service providers. Candidates typically have multiple sites with fewer than 300 employees per location that are already utilizing a LAN/WAN infrastructure. Centrex users are not automatically prospects for IP-based telephony offers from service providers. This is because, in the past, conservation of capital typically drove the decision to employ Centrex as a voice communication option, not a regard for the underlying technology. Today's converged IP offers support mobile workers, point-and-click directory dialing and unified messaging.

Vertical markets include:

- Real estate, accounting and financial services
- Retail stores
- Advertising agencies
- Apparel manufacturers with regional sales offices linked via a datacom network but not a comparable enterprise voice network

Service providers include:

- Verizon
- GoBeam
- PingTone

Enterprises most suited for hosted voice services are the same ones that are using Centrex today: government, healthcare, higher education and financial institutions. As a result, enterprises in these vertical market segments should try the IP versions of Centrex along with current Centrex services. Others should consider these new offerings for their small or branch office locations. Because the leaders in the market are relatively small startups, contracts should be limited in term and should not include migration of all your services.
Capabilities and Benefits
Capabilities and benefits of hosted voice services include the following:

- No capital expenditure
- Service provider assumes most of the risk for an organization’s migration to IP
- Broadband Internet access
- Voice mail
- E-mail
- Unified Messaging
- Single flat rate monthly bill that includes local and long distance calling
- Add and delete users as required
- IP technology benefits telecommuters and road warriors
- Single telephone number access anytime, anywhere for incoming and outgoing calling.

Gartner Dataquest Perspective
To take full advantage of a converged IP network, organizations need to assess how hosted IP-based solutions compare with IP Centrex offers. For example, to what extent are services such as point-and-click directory dialing, unified messaging and Internet access available? In addition, what is the potential for a service provider to support applications based on computer telephony integration (CTI) and Extensible Markup Language (XML)? In short, organizations must evaluate how to derive a wide range of applications from converged voice and data technology that satisfy their requirements without the need to lay out excessive startup costs. In addition, it’s important that a service provider’s road map offers the option to implement a fully featured hosted or IP Centrex contact center that can deliver benefits in a converged environment.

Other considerations include the fact that traditional PBXs deployed in corporate offices are linked using T1/E1 public or private connections to create a corporate private voice network, while the edge of an enterprise network is typically supported with a stand-alone small PBX or key telephone system with simple public switched telephone network connections not connected to the private network. Use of service providers’ offers can transcend this limitation.

Client Issue

Which enterprise communications equipment vendors will be most successful in the next five years?