

## Beyond Transport: What VoIP Really Means to Enterprises

By Tere Bracco  
Vice President, Global Solutions  
Current Analysis, Inc.  
October 11, 2004

### Issue

Voice and data convergence has finally achieved nearly universal acceptance, and voice over packet technology is now being implemented at an ever-increasing pace. For the most part, the lure of low transmission and switching costs has caused both enterprises and service providers to embrace convergence technologies such as voice over IP (VoIP). But the real value of VoIP lies not so much in the transport savings, but rather in the application convergence that it enables. Service providers, however, don't seem prepared or even fully aware of the implications of this VoIP-powered application convergence, and that could cause them to miss their best growth opportunity in a decade.

### Analytical Summary

Enterprise adopters have realized that convergence is about more than using VoIP to save on long-distance rates or to reduce maintenance costs. By integrating their voice and information technology (IT) infrastructures, the enterprise can save labor costs, improve customer service, streamline business processes, and increase both revenue and profit. While IT and voice communications integration was possible before IP telephony (IPT), by using the IPT approach, communications portals offer an order of magnitude improvement over traditional solutions that are not only faster and better, but cheaper as well.

### PERSPECTIVE

Finally, voice and data convergence technologies are receiving the respect they deserve. The hard-won popularity of convergence technologies has largely been based on the cost savings they make possible. Few in the industry will now dispute that businesses can reduce their costs for voice systems management when they shift to a VoIP-based implementation. Multi-site businesses especially can save on transmission and switching costs by converting to VoIP. But while network cost savings are always welcome, applications convergence improves productivity and customer service -- offering an even bigger contribution to the bottom line. Enterprises must acquaint themselves with the mechanics as well as the implications of applications convergence, and prepare their business models to take advantage of the revenue opportunities it makes possible.

In its simplest form, applications convergence happens when computer-based applications such as word processing, e-mail, and customer relationship management converge with communications-system applications such as telephone calls and voice mail. Converged applications, such as automatic call direction, skills-based routing, and interactive voice response, have been around for a decade. However, VoIP makes it possible to add more features to familiar converged applications, as well as making them easier and less expensive to implement. And VoIP makes possible new kinds of converged applications such as unified messaging, unified communications portals (UCP), and also voice system access to data applications such as CRM. This makes it possible to provide important customer information, such as account balance and order status, through a UCP.

Two dimensions are key to creating a UCP -- standards and technology evolution. In the first dimension, four primary standards make rapid integration possible: extensible mark-up language (XML), voice XML (VXML), session initiation protocol (SIP), and IP multimedia subsystem (IMS). These standards are in the process of reshaping the enterprise application

model. Today, most enterprises rely on server-based applications to keep their data in independent databases. While redundant data can be costly, providing these multiple applications with access to common data would be even more costly with systems integration based on traditional protocols.

But in the emerging applications convergence model, Web-based protocols such as XML and VXML create common data formats so that multiple applications can easily access common data. SIP offers multimedia, concurrent user-to-user and user-to-application sessions. And IMS (using SIP signaling) provides simplified integration of wireless and wireline systems, giving both a wireless and wireline users a common way to access data and applications.

In the second key dimension, four primary technologies contribute to the unified communication portal: speech-to-text and text-to-speech, IVR systems, intelligent routing, and stand-alone communications applications. Speech conversion technologies allow humans to interact with machines pleasantly, and for machines to generate audible communications. Combined with today's IVR systems, speech technology can improve customer service while reducing costs. Intelligent routing can match customer requests with employee skills. Furthermore, intelligent routing can be based on information about caller presence provided by SIP or based on pre-set user profiles. Finally, communications applications (e.g., voice mail and e-mail) can be disaggregated from a given site, providing increased flexibility and easier integration.

Together, the broad adoption of standards and advances in communications technology present the enterprise with the opportunity to create converged IT applications and communications solutions. Applications convergence is the next step for businesses that have embraced network convergence. The evolution of application convergence and its component parts have already provided substantial savings in employee time and have improved customer service levels. As businesses move to further integrate their data applications and information with unified communications portals and business process, the effect on business efficiency and customer service will be profound.

### RECOMMENDED ACTIONS

#### Vendor Actions

- Premise-based IT and communication systems solutions must include support for and integration with the two key dimensions discussed. UCPs should be created first with unified messaging and user-to-user real-time communications in mind, and be designed for the eventual reality of users talking to applications and applications talking to users.
- Service providers must examine their core network architecture, their market positioning, and their operational management if they intend to participate as more than "pipe suppliers" in this evolution.

#### User Actions

- Enterprise customers should investigate the increased revenue and profitability opportunities made possible by applications convergence. Customers should read case studies and technical

literature, and review their own business processes and models to uncover ways that applications convergence can increase their profitability.

- Enterprise customers should investigate the costs of developing their own converged applications. The costs of study, planning, design, system integration, and ongoing staff training and development are all part of the overall cost of converged applications.
- Enterprise customers should query their service providers to determine the service providers' understanding of and readiness to provide services based on applications convergence. When determining whether to "make or buy" these services, users should consider type and features of the offerings, delivery time, service level assurance, maintenance and upgrade options, as well as price.

*All materials Copyright 1997-2004 Current Analysis, Inc. Reproduction prohibited without express written consent. Current Analysis logos are trademarks of Current Analysis, Inc. The information and opinions contained herein have been based on information obtained from sources believed to be reliable, but such accuracy cannot be guaranteed. All views and analysis expressed are the opinions of Current Analysis and all opinions expressed are subject to change without notice. Current Analysis does not make any financial or legal recommendations associated with any of its services, information, or analysis and reserves the right to change its opinions, analysis, and recommendations at any time based on new information or revised analysis.*

*For more information about Current Analysis and Competitive Response, please call +1 703 404-9200  
or visit us at [www.currentanalysis.com](http://www.currentanalysis.com).*

