

WHITE PAPER

IP Telephony Migrations: Alliances Make Solutions Work

Sponsored by: IBM Corporation, Avaya Systems

Cushing Anderson

Thomas S. Valovic

Paul Strauss

August 2004

INTRODUCTION

IP telephony continues its march toward widespread deployment in critical business environments. Corporate management is increasingly grappling with the complexities of how to make this technology fulfill its destiny as the solution of choice for mission-critical voice requirements and as an enabler of a new phase of business process reengineering. The challenges of planning, designing, installing, managing, and tuning these new systems requires a new type of vendor relationship to fully integrate IP telephony systems into enterprise data networks and applications and to use the technology as a springboard to reinvent fundamental internal and customer-facing business processes.

IDC believes that vendors like IBM and Avaya maximize the benefits of complex technologies like IP telephony through the creation and management of alliance ecosystems. When vendors recognize and exploit the key strengths and capabilities of their ecosystem relationships, their joint customers experience a dramatic improvement in the technology's ability to meet the varied requirements of business and IT decision makers. These relationships ensure vendors focus on the development of business solutions and minimize the inter-vendor conflicts that might otherwise develop.

While some organizations are successfully finding their own way to the advantages of IP telephony, the complexity of this challenge is significant. IP telephony technology and systems have reached a level of maturity where they must be treated in a holistic manner in terms of overall network performance, security and reliability, and the business activities they support.

With IP telephony, network performance is crucial in new installations. In addition, in many cases, such as the contact center environment, the advanced capabilities afforded by IP telephony systems must also be fully integrated into existing telephone systems and the spectrum of business delivery systems to facilitate the full benefits that vertical markets, such as communications, banking, financial services, insurance and other market segments, demand.

The complexity of IP telephony, both technical and operational, requires a multi-dimensional approach to satisfy the needs of enterprise managers and staff in which all facets of the new implementation are taken into account. This is especially true for mission-critical applications where the management of risk factors associated with new technology deployments is crucial. In today's business environment especially,

economic business drivers and intense competition dictate the requirement that such technology transitions take place with a minimum of business disruption and risk. Customer acquisition and retention depend on it.

To fulfill these objectives and manage complexity, large and medium-sized enterprise customers look to create an internal telecommunications environment, which can be easily and cost-effectively migrated to newer solution sets over time. The enterprises must also look for solutions that move beyond traditional vendor-supplier relationship.

This IDC White Paper describes how one particular approach — a solid set of competencies created by a long-standing business partnership between IBM and Avaya — represents a unique approach to tackling the complexities and challenges of IP telephony. It also discusses the role of IP PBXs as the leading-edge devices in IP telephony and in the evolution of voice systems. At the same time, this paper describes the complexity of the solution, including elements of software, hardware, integration services, and vertical domain expertise, and introduces the concept of an alliance ecosystem as a useful metaphor to help customers understand and evaluate the potential value of vendor relationships. Finally, we present the five key criteria that customers should use to understand the strength and value of an alliance in addressing their particular business need.

SITUATION OVERVIEW

IP Telephony and Convergence

Enterprise IP Telephony: Coming on Strong

In 2004, IP telephony began to gain momentum in the enterprise market with more than a 40% growth in worldwide spending on IP PBXs expected in the year. Although enterprise IP telephony solutions involve both IP PBXs and hosted IP telephony services from carriers, so far there has been relatively little of the latter. By far, most IP telephony deployments have been IP PBXs.

IP PBXs represent the next step in the evolution of voice systems. Voice quality has come a long way over the last several years, and the much-vaunted goal of "five 9s" reliability that has been the hallmark of traditional voice systems is now an attainable goal. Other advances have come in other critical areas such as systems management, ease of use, and advanced features. Desktop integration, long the province of CTI technology and for a long time handicapped by proprietary technology issues, is also finally coming into its own. New IP PBXs, in many instances, are lower in total cost, especially in smaller enterprises, where they are sold with more capabilities than traditional PBXs at lower cost. And, they are often easier to manage than traditional systems, especially in larger enterprises with multiple facilities.

While reliability has been the hallmark of traditional voice systems, equally reliable IP telephony provides high-quality VoIP, greater flexibility, and increasingly important higher level services integrated into traditional voice networks for companies that intelligently design, migrate, and implement an integrated IP telephony solution.

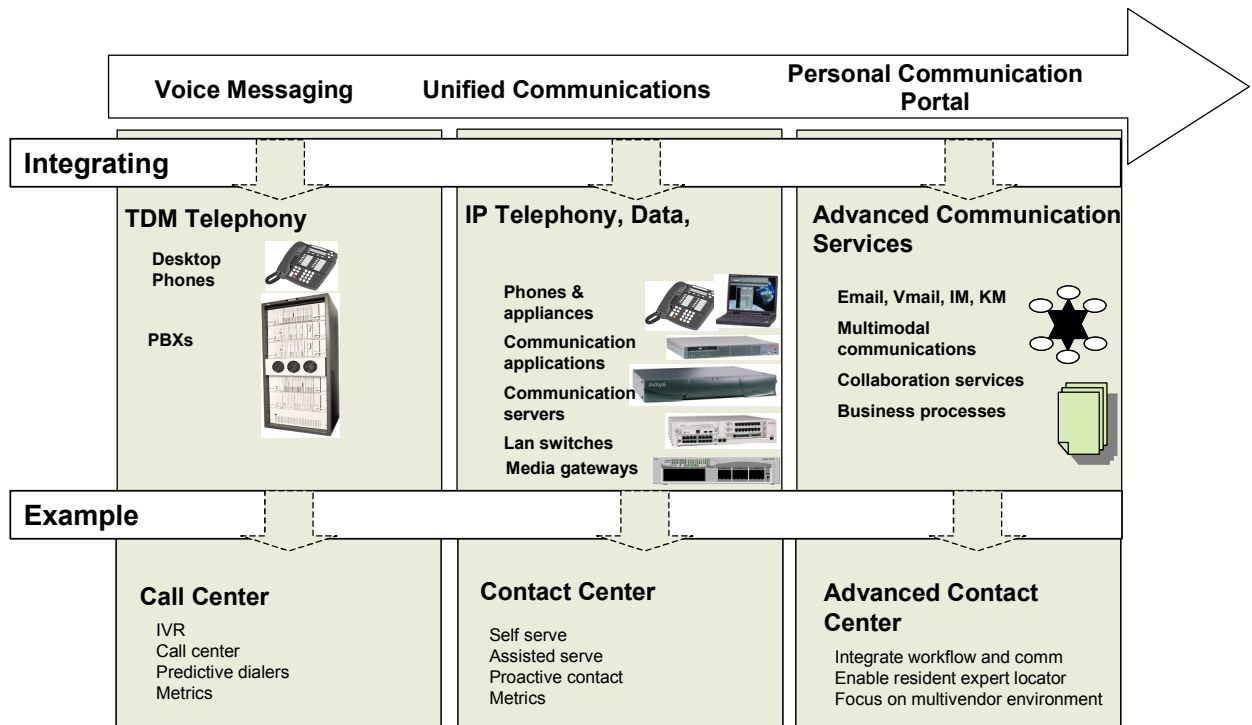
The IP PBX: Beyond Mere Savings

IP PBXs have captured the interest of IT and telecom managers who see the value in the newer technology not merely because it provides voice under a better price/performance model than has been available using traditional TDM-based telephony — but also increasingly in terms of its ability over the longer term to bring significant productivity advantages from the availability of an array of enhanced features. Enhanced features point toward another phase in the market's evolution: the integration of voice communications with business processes and software-driven, customer-facing business tools such as CRM.

All of these enhancements have led to the increased consideration and use of communications portals for advance communications integration with business processes and the creation of personal communications portals for information workers (see Figure 1). An excellent example of this is in the evolution of call centers and, specifically, in the improvement of retail branch banking operations, discussed later.

FIGURE 1

Evolution to Converged Communications

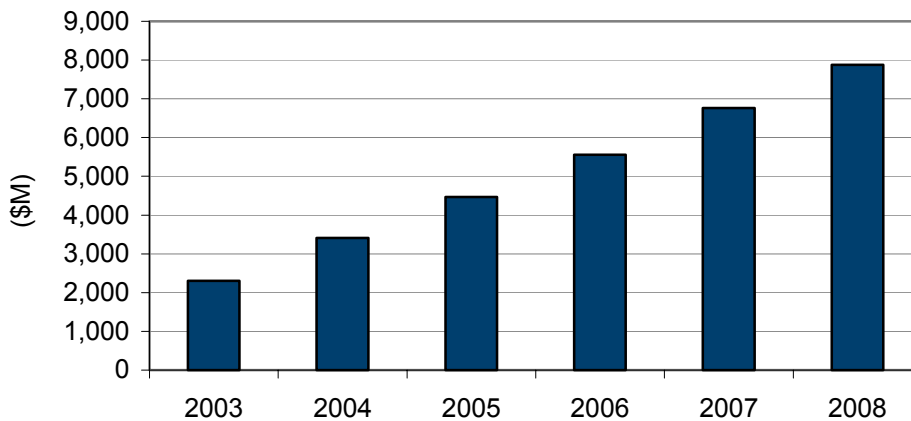


Source: IDC, Avaya Systems, IBM Corporation, 2004

IP PBX sales into the enterprise are robust and gaining momentum. The 2004 survey on enterprise IP telephony showed a penetration level for IP PBX systems at about 31% early in 2004 as compared to 12% for IP carrier solutions, such as IP Centrex. Data shows that in small-, medium-, and large-sized companies, this number is expected to increase to 54% by the end of 2005. This indicates that the speed of deployment for these systems is beginning a significant ramp up. As shown in Figure 2, IDC now projects that the market for IP PBX systems and the IP telephones used with them will grow to \$7.8 billion by 2008.

FIGURE 2

IP PBX Market, 2003–2008 (\$M)



Source: IDC, 2004

What's Driving Adoption? Cost Is Only One Factor

The factors driving corporate businesses toward IP telephony adoption are varied. In many cases, cost savings have emerged as a major driver since IP PBXs can enable the elimination of dedicated voice lines by moving traffic to the corporate data network. Another important aspect of the TCO argument for IP telephony involves cost reduction for moves, adds, and changes. A third economic benefit is the fact that centralized administration of multisite facilities is now possible. This means that upgrades and new features can be added at a central site without the requirement to physically repeat the action at each individual location.

But cost savings alone doesn't tell the whole story. In addition to cost, worker mobility, business collaboration, and virtualization and architectural inevitability are driving adoption of IP telephony in enterprises of all sizes.

Worker Mobility

The distributed architecture inherent in IP telephony allows teleworkers and road warriors to essentially duplicate their desktop functions and capabilities at home or on a mobile laptop. From a software-based telephone in their laptops they can call their home office or anywhere in the world at the bulk long-distance rates negotiated by the company and without the use of a calling card. Software-based telephones are often integrated with portals, which enable increases in productivity since they can screen calls, route calls to cellular telephones, and set up Web-based teleconferences and videoconferences.

Business Collaboration and Virtualization

With increased worker mobility, the coincident trend of increased collaboration and enterprise virtualization is also driving adoption of IP telephony. Enterprises as diverse as small-office/home-office consultancies to global call center operations are formalizing their ability to collaborate with non-local colleagues using the unique capabilities of IP telephony's higher-order services.

For knowledge worker environments and in contact centers, new higher-level communications capabilities enable a level and diversity of communication options that can enhance enterprise capabilities and effectiveness while supporting a more virtualized enterprise. Using IP telephony to simultaneously consolidate and expand the communications options available to all workers helps maintain productivity in spite of increased worker mobility,

IP telephony can consolidate communications capability by aggregating disparate services through a communications portal of messaging (such as voice mail, email and instant messaging (IM)), common communication services (such as audio, video and directory services), convenience services (like wireless options, "follow-me" capability, integration with PDAs, and click-to-dial features).

These features also expand the usability and efficiency of collaboration by enabling these higher-level communications capabilities ubiquitously throughout an organization with maximum effect. This permits greater collaboration by leveraging the enterprise investment in technology while minimizing the additional support required to enable and maintain these services enterprisewide. While many of these features are still emerging, the possibilities rendered by user-defined communications, desktop integration, and business process reengineering using these new tools have provided a level of excitement across the industry as IT and telecom vendors gear up competitively to develop new end-user options.

IDC's 2004 Survey on Enterprise IP Telephony shows that there is already a significant level of IP PBX implementation for these types of features and functions. The survey found that penetration levels for some enhanced features are already significant. For example, unified messaging and audio conferencing were found in 51% of those organizations with IP PBXs surveyed and click-to-dial applications in 33%. In fact, 91% of respondent organizations used higher-level features and capabilities.

TABLE 1**IP PBX Services in Use**

Q: Which of the following enhanced services or features are being used with the IP PBX?

Service	Total (%)
Directory services	53
Unified messaging	51
Audio conferencing	51
Click to dial	33
Wireless options	27
Video conferencing	13
Communications portal	13
PDA integration	11
IM and presence	7
Other	2
None	9
Don't know	4

N = 156

Note: Base= Have IP PBX

Source: IDC IP Telephony Survey, 2004

Enhanced features also have applicability in the contact center space. Although these features are not widely used now, as IP telephony solutions become increasingly widespread, instant messaging and other collaborative capabilities afforded by converged systems will allow agents to better communicate and deal with specific customer issues. IM will also allow customer services representatives to interact with customers in near-immediate, real-time sessions when appropriate.

Architectural Inevitability

Another important driver is what IDC calls "architectural inevitability" — the fact that IP-based systems truly represent the next generation of technology for voice systems while paving the way for voice to take on a new role in the larger world of converged multimedia services. Some buyers sense there are attractive productivity applications available or coming soon, and some want to replace their PBXs with decentralized configurations based on server-based IP PBX software.

Not long ago convergence was a buzzword, a hot concept that many companies regarded with justifiable suspicion. IDC wrote about it, describing its potential benefits, and recommending that enterprises do little more than test the technology because it was not mature.

But much has changed. We now believe that IP PBX technology is mature. And enterprises sense that maturity. Enterprises are diving into IP PBX purchases, moving up from the smaller companies that were the first users of IP PBXs, to medium-sized and some very large companies. The same IDC survey (conducted in March 2004) shows that 32% of technically knowledgeable medium-sized and large U.S. corporations already have at least one IP PBX installed, and another 22% plan to

install one within a year. In companies where IP PBXs are already installed, 20% plan significant increases in installations over the next 12 months.

This surge is partially the result of early products maturing and partly due to legacy telephone system vendors, such as Avaya, vigorously supporting IP telephony with both hybrid and pure-IP models. The hybrid solution is particularly attractive because it allows the use of installed TDM telephones. The "pure" approach is more expensive because it forces change on the entire enterprise, and requires ripping out installed telephone systems and equipment. In addition to allowing enterprises to use installed traditional telephones, the hybrid environment allows enterprise vendors to fully leverage their current infrastructure investments while gaining the benefits of IP telephony infrastructure.

Ultimately Business Problems Drive Adoption

The critical solutions to specific business problems are what matter to businesses. Each of the drivers above manifests itself in a range of business problems to a greater or lesser degree. It's the ability of a particular solution to address and support the specific set of drivers that make a solution exceptional or simply adequate. Customer relationship management, for instance, has elements of the trends in worker mobility, business collaboration and virtualization, and architectural inevitability to make reengineering and redesigning CRM business process a critical business problem that lends itself to an IP PBX solution. IBM and Avaya have been working together for more than 2 years to support call center and CRM reengineering and have extended their relationship to include the expanded applicability of IP telephony in the face of market demand.

CRM and Business Processes: The New Landscape

Customer relationship management and customer contact centers represent a typically complex yet pervasive business issue for many companies across industries. With nearly 75% of companies in North America investing in CRM, more than half of all companies invested in contact center software and technologies in 2003. CRM spending is up from 2002 and that trend is expected to continue in 2004. This is because companies are increasingly recognizing the business value of

- Developing virtual contact centers
- Effectively connecting stakeholders with subject matter experts
- Leveraging customer contacts to appropriately present cross-sell and up-sell opportunities

To effectively take advantage of these strategies, companies must often consider complex reengineering to existing business practices. While business process reengineering in the IT environment is at least a decade old, integrating and reengineering information and communication platforms with converged systems are relatively new. The convergence of messaging front ends, such as Lotus Notes, with real-time and near-real-time communications methods, such as voice and instant

messaging (IM), via a communications portal is exciting and challenging. The skills needed to successfully implement a quality system requires the widest possible range of experiences and resources — consistently spanning technologies and industries.

But reengineering the contact center process using convergence-based tools and solutions involves more than simple experience with new technologies. As described earlier, CRM and other relatively mature systems must be integrated into this evolving infrastructure. New IP telephony technology presents business with new challenges for CRM integration. Additionally, when improving customer communication, companies are often most concerned with the impact on customer retention and operational costs. These concerns heighten the need for vendors to deliver to customers a complete integrated solution that is pretested, automated, and optimized for performance and business results.

Customer Retention Focus of CRM

In the recent past, the primary driver to use CRM for many companies was a need to acquire new customers. Today, companies are realizing that customer retention is the key ingredient in building and maintaining competitive advantage in a tight market. Companies need to drive efficiency into the management of their customers to both improve customer relations and reduce the cost. Confounding the need to streamline customer management and reduce customer "drain" is the increasing volume of interactions over the multiple channels companies have with their customers. The efficient use of contact centers and related tools is a business strategy that crosses companies' functions from front end to back office and is used to increase customer retention. Companies want a communications solution that takes this importance and complexity into account while reduces the cost, maximizes the ROI, and minimizes risk of customer drain.

Converged Communication Solution for Customer Contact

Nowhere in the business realm is CRM more important than in the contact center space. Contact centers are on the front lines of business mandates to increase customer support and bolster business continuity. Here, a partnership such as the IBM and Avaya alliance can add value both in traditional environments that are gradually migrating to next-generation solutions as well as in pure IPT implementations.

The IPT value proposition for contact centers is fundamental. Worker mobility and the notion of remote worker capability are particularly applicable to contact centers when contact center staff develop unique expertise and have ubiquitous access to voice systems to support colleagues or respond to clients. The IP telephony-based contact center allows the use of a distributed workforce that provides an excellent means of workflow management. It also means that contact center resources can virtually "follow the sun" in order to maintain a smooth flow of accessibility.

In addition, next-generation call centers can also optimize productivity with new approaches to skills-based routing, better business process integration, easier staff management via the ability to "flow chart" the caller experience, and other capabilities.

For instance, with a caller entering simple information, such as an account number or ZIP code (or in some cases just using the phone number), it may be possible for the system to deduce level of priority or customer-specific needs. The call can then be intelligently routed to an agent with the appropriate skills. If the appropriate agent is not available, the call can be forwarded over the Internet to another skilled agent at a different geographic location or even to an agent at a qualified business partner.

Further, enterprises can run their contact center operations virtually. IP telephony permits businesses to have smaller interaction offices scattered around the world yet manage them as a single virtual contact center with the same call routing, roll-over or backup features available in a geographically centralized center. Businesses can link locations across town, across the country, or around the world at minimal cost — transparently to the customer. In addition, agents, engineers, consultants, or other specially skilled employees can work remotely or at home and still be fully connected with no more than a Web browser and an Internet connection.

And of course, the operational advantages enterprise IP telephony brings to other environments applies to contact centers, including reduced cost for adds, moves and changes, and the ability to quickly set up new locations/sites.

When examined holistically, there are three pillars of requirements to fully and effectively establish a converged communications solution for customer contact:

- ☒ **CRM processes and systems:** To facilitate the structured and consistent interactions between company and customer
- ☒ **Unified communications and information infrastructure:** To streamline the multimodal communications options and facilitate equally effective customer contact regardless of the communication channel chosen
- ☒ **IP telephony in either pure or hybrid environments:** To permit the extension and enhancement of traditional support processes with the additional capabilities of high-end services and applications

The successful alignment and integration of these pillars create an environment where customers fully leverage the capabilities of today's technologies while maximizing the solution value and customer retention.

Existing, mature relationships between experienced vendors, such as between IBM and Avaya, can offer an enterprise customer a deeper understanding of the special requirements involved in designing and configuring such systems.

IBM, Avaya, and Advanced Contact Centers

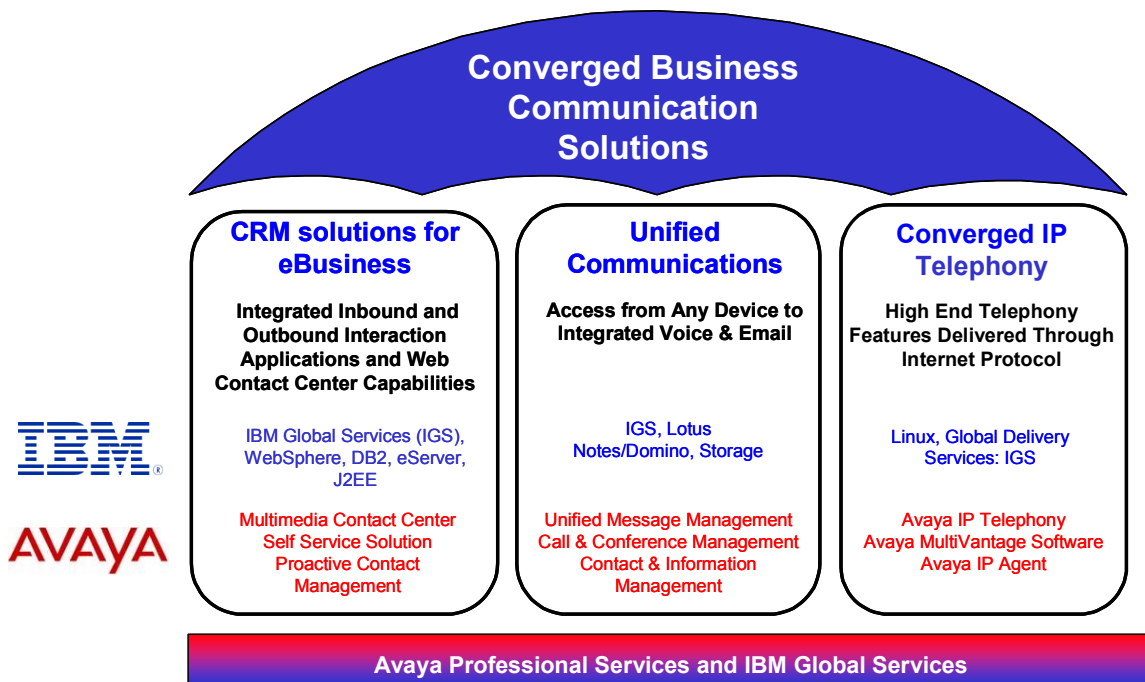
IBM and Avaya are working together to enable organizations to have real-time, personalized interaction with their customers across multiple channels while leveraging existing infrastructure investment. Both companies bring specific capabilities and experience together to support their joint customers' demands for advanced converged communication infrastructure.

The IBM and Avaya alliance leverages Avaya's Enterprise Communication Software Solutions for Converged Communications and IBM's on-demand business technology, hardware, software, services, and global financing capabilities to form an integrated offering. Together, the two companies have invested in the development of intellectual capital in joint CRM solutions that includes more than 5,000 CRM practitioners in more than 160 countries in IBM alone. Each has demonstrated commitment to the alliance through research and development efforts (such onsite benchmarks conducted at IBM's Global e-Business Solution Center in Boca Raton) in a number of key vertical sectors, including communications, banking, financial services, and insurance.

The combined offering of IBM and Avaya can be seen in Figure 3. It combines skills and products across the three key pillars.

FIGURE 3

IBM and Avaya Alliance Solutions



Source: IDC, IBM, Avaya, 2004

The IBM and Avaya alliance provides benefits to customers in both traditional and next-generation contact center deployments. The specific combination of IT and telecom expertise available from the alliance illustrates the power of alliances to solve complex business problems.

MAKING IT HAPPEN: THE CHALLENGE FOR ENTERPRISE CUSTOMERS

Challenges from Working with Too Many Vendors

While IP PBX technology is mature, and we regard the buyer enthusiasm for it justified, IP-based telephone systems are not easy to implement. An IP PBX is considerably more complex than a one-box traditional PBX, since it involves the conjunction of telephone software and hardware, the data equipment of a LAN, the LAN's interface to WANs and the data security (firewalls and VPNs) that protects the data — now voice and data — from outside attacks.

While it may seem that small and simply configured IP PBX is easier to install and manage than a traditional PBX system, large telephone systems are inevitably complex. The challenges of integrating a data network with public carrier voice services, maintained at the highest level of reliability and secured against both data and voice security threats raises the complexity beyond the component parts.

THE IBM AND AVAYA ALLIANCE

A Multidimensional Solution

Business problems and the technologies built to address them are increasingly complex. Customers are trending toward solutions that address the challenges of specific business process issues as opposed to purchasing monolithic applications.

Technology purchasers and their key business stakeholders want business solutions with a solid ROI that leverage existing legacy IT infrastructure while offering "proof points" of solution performance.

And, of course, everyone wants to minimize risk and reduce the time it takes to implement a solution. Customers can't afford to waste time or money on long implementations — it's disruptive to the employees and disruptive to their business. Technology vendors know that profit comes with speed. Reduced product development time, reduced time to market, and reduced time to implementation all reduce time to profit.

Software vendors are increasingly working more closely with each other to build formal, integrated "alliances." Alliances help individual companies focus on their strengths and build solutions that are more comprehensive, faster to implement, and more cost effective for their customers. The bottom line: Alliances are popular because they are beneficial to customers.

IDC has noted a distinct shift in the overall importance of alliances in the achievement of corporate goals and objectives — from the perspectives of both the vendors that build the alliances to deliver solutions and the customers that buy those solutions.

Some technology vendors play a central role in many solutions and consequently develop relationships and alliances with other critical vendors. As these relationships become more beneficial to their joint customers, they can be characterized as an "alliance ecosystem."

Ecosystem: A Definition

In the technology industry, *ecosystem* is a term used by vendors to refer to a community of partners that has been developed to address market demand.

Like the natural ecosystem, an ecosystem in the technology market represents interdependencies but, in this case, among vendors. Alliance ecosystems refer to a structured yet flexible network of companies characterized by the interdependent nature of the defined roles and responsibilities in solving particular business problems for their customers. Each alliance ecosystem revolves around solving a particular problem, like IP telephony or IPT migration.

Because technology solutions often involve the interrelationship of many critical processes, the results are often a complex problem with no simple solution. Predictably, the capabilities to address most problems will likely not reside in a single application, vendor, or consultant. A problem with the magnitude of IP telephony or converged voice and data networks requires the establishment and maintenance of an alliance ecosystem to bring to bear the appropriate technical competence, application experience, business skills, and industry knowledge to form a durable solution.

Solutions for IPT or converged networks, typically involve hardware, software, and services to intelligently migrate from the existing telephone infrastructure and insight into the numerous opportunities to leverage and maximize the benefit of the new technology for each company. Alliance relationships between vendors that can effectively combine multiple elements like hardware, software and services represent a solution for customers that is more valuable than working with each vendor separately.

IBM and Avaya bring together a wide range of competencies, such as IP convergence, and call center optimization, vertical market experience and a willingness to work in a multivendor voice and data network. This alignment of skills seems to naturally become an alliance ecosystem focused on IPT and converged voice and data networks.

From the customer's perspective, the benefit of a strong alliance ecosystem can be seen immediately. IDC research has shown that the key benefits of strong alliances for customers include:

- A reduction in the frequency of intervendedor issues
- An increased focus on the development of a solution rather than the technology component(s) required to make it work
- An improved ability to meet the varied requirements of business users and IT decision makers

Ultimately, these benefits speak to the increased emphasis on solution ROI and the overall minimization of risk for the customer. The emphasis on customer ROI means that the customer will be looking for evidence that the team that provides the solution works well together.

IBM-Avaya: Business Frameworks and Compatible Visions

Customers who are engaged in complex migrations, especially involving a pervasive technology such as IP telephony, must be continually vigilant when engaging vendors to ensure that the vendor's approach to the market is both compatible with the customer's existing infrastructure and holistic in its approach to the problem. Regardless of the underlying business problem (IP telephony migration, call center automation, business transformation, or something else) customers demand solutions that have several common characteristics. In addition to solving the basic business problem, all technical solutions must also

- ☒ Protect existing assets from migration obsolesces
- ☒ Assure security, redundancy, and business continuity
- ☒ Support interoperability with existing installed technology and applications
- ☒ Support business transformation through services and solutions

Vigilant customers attempt to uncover the underlying approach that alliance partners use to solve complex problems and to meet these critical business needs. The approaches vendors use are often published and present the vendors' vision or framework for how its products relate to each other and how alliance partners will engage.

By examining these frameworks, customers can begin to determine how much the vendor partners have considered the critical success factors.

Both IBM and Avaya are experienced enough to understand that a simple parts list or product catalogue is neither sufficient nor compelling when attempting to address complex functions and critical business processes. Successful vendors develop a solution platform and reference architecture that forms the foundation for technically complex, yet functionally elegant infrastructure solutions for major market opportunities.

IBM and Avaya have jointly developed frameworks for the markets they serve and tested and refined those frameworks in multiple environments. Expanding on their underlying competencies of business and technical integration, voice and data convergence, and large-scale telecommunications management, these frameworks have been developed to articulate a joint vision of a technical solution for banking, finance, retail, telecommunications, and other industries. Their joint customers will attest to the value these frameworks and the alliance provides in protecting existing investments, building secure business systems and enabling significant business transformation. In the retail banking environment, for instance, IBM and Avaya have developed complementary solutions that permit the consistent delivery of

enterprisewide communication services across all channels used by customers. Bank branch automation must be understood in the context of a comprehensive, multichannel solution. Branch banking operations improvements focus on removing redundant processes, driving transactions to lower cost channels, employing common front-line tools and desktops to minimize support costs ultimately to create a more responsive organization.

As mentioned above, banks, too, can link locations across the country, or around the world at a minimal cost and invisibly to the customer. Specialized financial advisors, loan officers, and other service employees can be identified instantly and brought to the aid of a customer.

Beyond back-office and routing improvements, banking customers can see the impact of IP telephony as well. Tying IP telephony into the bank's Web site (or ATM) by inserting a "click to talk" button can simplify communication for the customers by allowing them to speak to a knowledgeable, live agent without logging off the site. This timely, context-based communication can have a dramatic effect on banking services close rates (which have been notoriously poor online) and create opportunities for cross selling, up selling, or right selling.

Banks that implement IP telephony to centralize enterprise communications benefit from greater fiscal and operational efficiencies than individual branch-by-branch communications solutions would otherwise provide. Often more important, though, is the ability to differentiate the customer experience and be able to provide advanced service capability made possible by converged communications.

Banking is illustrative of the opportunities and benefits most industries will see with systems like these. The goals are to create a more seamless, customer-facing experience and increase service delivery. This includes the technical requirements of being able to support remote and mobile workers, securely integrate into heterogeneous environments, and facilitate the rapid development and deployment of new applications. This necessitates technical as well as operational and vertical market experiences that an alliance like IBM and Avaya can bring to bear.

IP telephony is both complex and demanding and represents a core competency for both companies. IBM and Avaya each offer solution frameworks that support their individual company's fields of expertise, but that also integrate with each other.

Element of Services

In spite of the best efforts of all technology vendors, complex solutions always require integration into the specific enterprise operating environment and often require customized approaches and processes to ensure the tightest and most appropriate fit for a specific company. Therefore, even though discussion of IPT tends to focus on applications and infrastructure hardware, a third element must also be brought to bear to solve a complex problem effectively: solution services.

Solution services include the consulting, design, implementation, support, operations, and training services delivered around the software applications and related hardware platforms. In other words, the labor that makes the technology work. Combined, IBM and Avaya offer the critical services capabilities ranging from needs assessment to

advanced technical support and spare parts services. These capabilities cover the breadth of hardware necessary for the most complex IPT installation and migrations projects, including traditional TDMA PBX, IP PBX, and data network equipment. This demonstrates a significant strength of vendors that participate in well-conceived alliance ecosystems: the ability to offer a complete solution. The IBM-Avaya solution helps companies address strategic needs to control costs, maintain business continuity, and build multichannel delivery capability. The alliance combines leading networking, integrated telephony, contact center and application services expertise of Avaya with the technology, software, and systems integration expertise of IBM.

No single company can provide the range of services, hardware, software, and expertise necessary to effectively and completely plan, design, implement, and manage a complex solution like IP telephony. At the same time, a well formed and managed alliance between vendors can streamline solution development and delivery and provide customers with a proven, viable solution quickly and efficiently.

Effective partnerships can be evaluated on many levels. Obviously, companies must have access to technology and service capabilities that are most appropriate for the solutions they wish to deliver, and each partner must properly manage and support the relationship to maximize its effectiveness.

CHALLENGES/OPPORTUNITIES

Evaluating Partnerships

Vendors that point to an established track record in alliances and demonstrate an ability to make technology work are evidence of a strong alliance relationship. The question remains, however, of how can customers evaluate the alliances partners that present solutions to address business challenges.

IDC believes customers should focus on five key areas when evaluating the benefits of the alliance skills a vendor may bring to a particular solution:

- ☒ **Solution performance.** As a solution increases in complexity and importance to an organization, the overall system performance becomes increasingly critical. With an IP PBX, there is an end-to-end network of voice and data products that must work together efficiently. With the wide variety of system components typically installed in an enterprise, maintaining performance requires continuous management. The ability of alliance members to develop and deploy the critical components of a solution and their joint ability to provide the services necessary for its successful integration into an existing, possibly heterogeneous environment should be considered paramount in every evaluation.

- ☒ **Shared history and experience.** The customer references and the length of time that partners have worked together are relatively common relationship proof points throughout the industry. As IP telephony becomes more pervasive, the voice system as a whole will be running for many years, possibly decades. The longevity of both the equipment vendor and the service provider will be critical to the future growth of an enterprise's IP telephony system.

In this era of minimizing risk and maximizing success, it is not surprising that the most important attribute customers use when selecting a services supplier is the supplier's track record. Thus, a services supplier's experience is important when customers are choosing a services supplier. Customers value a services firm's experience with similar projects. In a 2003 IDC survey, 96% of respondents rated the attribute "track record" as important or very important when considering a potential services supplier.

Also rated as very important were the technical expertise of the team members and the ability to work with the customer's employees. These factors each relate to the need to minimize risk and maximize the likelihood of long-term success.

- ☒ **Investment.** There are different kinds of investment to look for when evaluating the commitment and, by extension, strength and stability of an alliance. Notable examples of commitment include joint investment in testing, integration and demonstration activities, and dedicated technical or engineering resources onsite in each other's companies. Also important is whether a vendor has invested in technological and services certification and sales training.
- ☒ **Alliance management.** IDC research indicates the high correlation between senior executives involved and accountability and the success (or failure) of an alliance. Other areas to assess include dedicated management infrastructure, such as people, processes, and tools. Not every alliance will have a dedicated project team, but clearly determined lines of accountability and escalation should be evident.
- ☒ **Strategy and reputation.** This category is a catchall that captures overall corporate commitment to the alliance in question, partnering in general, and the long-term financial viability of the companies involved. The onus is on the partners to demonstrate their long-term commitment to partnering to solve a particular business problem.

When examined objectively, IBM and Avaya demonstrate the criteria of a successful alliance for IP telephony and contact center solutions. Specifically, the alliance has:

- ☒ Technologies and skills to meet the demand for future IPT deployments
- ☒ Demonstrated technical expertise and the practical client experience, with more than 100 joint customers, that make this alliance a relationship of peers
- ☒ Significant consulting and services experience with complex, multivendor environments
- ☒ Investments in joint solutions development, mutual technical training and certification, as well as continued development of solution frameworks in a wide variety of industries
- ☒ Strong, longstanding relationships at the highest levels to sponsor and monitor the performance of this alliance. While the companies are drastically different in size, their mutual respect is witnessed by the oversight applied by both management teams.

- ☒ Proven technological and business vision through their use of alliances. Both vendors recognize the value the other brings to their joint customers. Their consistent and long-term relationship across their portfolio of offerings makes this a great example of the total being greater than the sum of its parts.

The existing, interdependent relationships of IBM and Avaya form the basis of a strong alliance ecosystem. By working within their alliance, IBM and Avaya can work through the complex issues related to IPT and offer their joint customers a stronger value proposition and increased benefit at a reduced risk. By further expanding their relationships with other services suppliers, the two vendors also better serve clients that are considering the implications and opportunities associated with implementing IP telephony solutions.

When compared to the drivers of growth in IP telephony, IBM and Avaya offer an unequalled alliance of skills and experience.

- ☒ **Worker mobility.** IBM has proved its ability to facilitate worker mobility with nearly one-third of IBM's worldwide workforce operating from a mobile office. That experience has led to processes and technologies that make knowledge sharing, collaboration, and effective voice and data communications the building blocks of a mobile business culture.
- ☒ **Business collaboration and virtualization.** Avaya contact center solutions are used to improve customer service, enhance productivity, and reduce costs while handling hundreds of thousands of calls a day. Avaya has worked to integrate previously scattered contact centers. Now, customers can use email, Web or phone to access information and receive consistent and personalized service. IBM uses business and infrastructure virtualization to simplify deployment and improve effectiveness by hiding unnecessary operating details from customers.
- ☒ **Architectural inevitability.** IBM and Avaya invest heavily in understanding and discovering the new and effective uses for emerging technologies. This includes methods and processes to ensure legacy investments are fully utilized while appropriately applying new technologies where they can be most effective. This investment supports customer requirements through "test bed" deployments in IBM's Business Centers and pilot implementations throughout the world.

CONCLUSION

It is becoming almost trite to claim that technologies are growing more complex. Customers are more focused on buying solutions that address the challenges of specific business process issues than on buying monolithic applications. They can't afford to waste time or money on long or risky implementations. Software vendors are increasingly working closely with each other to build solutions to complex problems that span an individual vendor's core capability and to develop alliance ecosystems and alliances. As these relationships become integrated and formalized, they help individual vendors focus on their strengths, and participating vendors build solutions that are more comprehensive, faster to implement, and more cost effective for their customers.

Taking advantage of strong alliance ecosystems is an opportunity for customers that demand demonstrable results to complex problems under tight financial or time constraints. Additionally, IDC believes:

- ☒ IBM and Avaya's alliance relationship represents a long common history, shared investment in advancing IPT and traditional voice network solutions, and a common vision for approaching IPT solutions for their common clients.
- ☒ IP PBXs represent the leading edge of enterprise IP telephony deployments and the next step in the evolution of voice systems based on a wide range of advances in both technology and applications.
- ☒ IP telephony will increasingly be selected for enterprise voice systems both as a higher-order replacement solution as well as the ability to offer an array of enhanced features that will offer significant productivity advantages. These productivity advantages will center on several key areas: desktop integration, user-defined communications, and business process reengineering.
- ☒ While business process reengineering in the IT environment is at least a decade old, the application of converged systems and technology to this environment is a relatively new phenomenon. Trends in convergence that lead toward new capabilities, such as multimodal communications portals, is exciting new territory.
- ☒ The skills needed to successfully implement a quality system requires the widest possible range of experiences and resources — often spanning technologies and industries. A strong relationship between experienced vendors, such as represented by IBM and Avaya, can reduce the implementation risk an enterprise customer faces when developing and deploying an IPT solution.
- ☒ Companies should rigorously evaluate alliance relationships between potential vendors to ensure compatible vision, experience, and capability before selecting an IPT solution.

As in the natural world, each element of an alliance ecosystem benefits from the strength and success of the other elements. With these elements in place, enterprise customers are better positioned to take advantage of the existing tools to solve complex problems.

GLOSSARY

- ☒ **CTI** = Computer telephony integration
- ☒ **IM** = Instant messaging
- ☒ **LAN** = Local area network
- ☒ **IP** = Internet Protocol
- ☒ **IPT** = Internet Protocol telephony
- ☒ **ROI** = Return on investment

- ☒ **TCO** = Total cost of ownership
- ☒ **TDM** = Time division multiplexing
- ☒ **TDMA** = Time division multiple access
- ☒ **VoIP** = Voice over Internet Protocol
- ☒ **VPN** = Virtual private network
- ☒ **WAN** = Wide area network

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