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Internet Protocol: No industry left behind

By Arjang Zadeh

Thanks to the rapid penetration of broadband and IP technologies, enterprises with an "always-on" connection are beginning to gain competitive advantage. Here's what you need to do to benefit from this transformative change.

Who should care about the rapid penetration of broadband and Internet Protocol technologies? Everyone.

For some time now, we have been in the midst of a hurricane of hype surrounding broadband and IP. Take-up by consumers worldwide has been extraordinary: a 50 percent growth rate in 2004. It's at the enterprise level, however, where we are beginning to see sweeping change that will leave no industry untouched.

Companies are being drawn to Internet Protocol technologies by three characteristics: lower cost, the capacity to transmit large quantities of data and the "always-on" connection that broadband makes available to every enterprise, regardless of size. An organization that is continuously connected at all levels will begin to achieve competitive advantage because of the constant and more natural flow of information, which leads to the more efficient delivery of products and services to customers.

Obviously, the IP trend consumes most of the waking hours (and some of the sleeping ones) of communications industry executives, as it will reshape the telecom landscape of tomorrow in ways we can only guess at today. The media and entertainment industry, too, will undergo significant change, as access to entertainment will increasingly be provided via IP technologies.

But regardless of industry, no one can afford to ignore the implications of the IP revolution. Why? Four reasons:

- **IP technologies will close the competitive gap between large and small companies.** Before the advent of broadband, only very large enterprises could afford the luxury of continuous connectivity across the organization. Today, with inexpensive access to broadband, capabilities like distributed multimedia decision support are within reach of almost every enterprise.

- **New companies will have fewer barriers to entry.** The pervasive nature of broadband will enable new entrants to compete with incumbents at far lower cost. The new entrants may even have a strategic advantage, because they are not as burdened by a legacy

networking infrastructure. For example, a broadband infrastructure can significantly reduce the costs of office space and improve the productivity of staff by reducing travel time to those offices.

- **Collaborative technologies will fuel innovation.** Significant innovation—the kinds of activities that create new products and services, or managerial and process improvements that result in better ways of running an organization—is extremely difficult without interaction among people, especially interaction that is spontaneous. Always-on IP connectivity will enhance the ability of workers to find the information and expertise they need, or to brainstorm with their colleagues.

- **IP technologies will enable insight to support better decision making.** When it comes to decision making, most executives are constrained by information and data that are often insufficient or untrustworthy, or so copious that they require weeks to analyze. Broadband connectivity, aided by new business insight technologies and applications, will enable the gathering and analysis of data from distributed sources in real time. This will significantly improve the quality of decisions as well as the ability to track how effectively specific actions are contributing to the achievement of strategic goals.

Pervasive impact

Based on these new kinds of capabilities and many others, IP technologies are likely to reshape most industries. Here are just a few examples.

In the electronics and high-tech industries, as well as in retail, always-on broadband connectivity—and rich information flows between companies, products and customers—will redefine supply chain management and enable companies to be more responsive to customer needs in real time. Today, many big retailers already use direct access to the Web and broadband technologies to improve customer service and responsiveness. In the near future, smaller retailers will follow. (For a related article, see "Consuming passions," page 14.)

Immediate access to richer information about customer preferences (enabled by real-time analytics) will let retailers make targeted offers to higher-potential customers. Centralized sales-decision support systems will provide the knowledge necessary for store managers or sales reps to discount specific products on specific dates, and offer the greatest likelihood of improving revenue and maintaining margin.

The ability to integrate available information and knowledge across a multitude of databases will result in new capabilities and services in a number of sectors, from pharmaceuticals to government. The Knowledge Discovery Tool prototype developed by Accenture Technology Labs, for example, probes multiple data repositories and displays knowledge as a single, holistic network connecting researchers with knowledge and experts in real time.

Conceived originally as an aid to pharmaceuticals companies—integrating information along the entire drug development process, from concept through commercialization—this prototype also got one government agency thinking about its implications. Ireland's Office of the Revenue Commissioners is now using a version of the solution to improve the quality and speed of

audit research and debt collection. (For a related article, see "From data to decision," page 72.)

Anticipate the challenges

Always-on, enterprise-level connectivity via IP technology will take some time to become pervasive. But because of its inevitability, executives are wise to take a proactive approach for planning their IP future. Here are several challenges they will face, as well as actions they can take now to drive the changes in their organizations required to adopt an effective IP strategy.

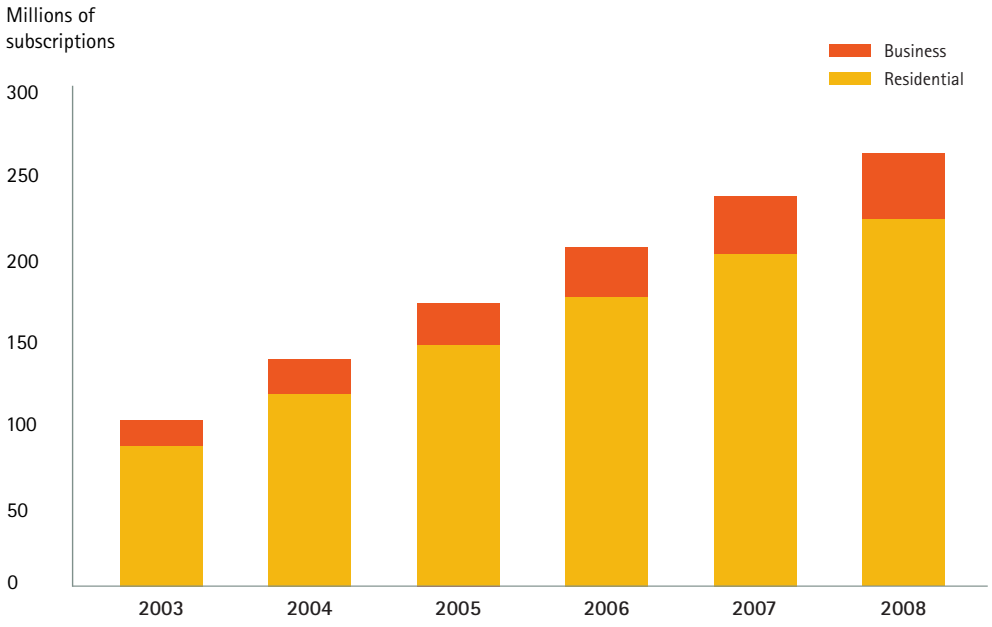
Integrating the technologies

Given the heightened coverage of IP technologies in the business and technology press, it is not surprising that some people confuse ubiquitous with simple. In fact, the ability of any system or device to "speak IP" doesn't automatically mean that information can be exchanged in a useful way. By analogy, if all participants in a global meeting suddenly are able to speak the same language, that doesn't mean they are automatically saying reasonable things.

A host of architecture and integration issues must be addressed, and the sooner the better. The deployment of IP-based services must be built around a unified architecture, with a single data model to support the creation of services. By having just one data model, the entire spectrum of service creation, provisioning, billing and other factors can be

A worldwide base

The worldwide installed base of broadband subscribers is forecast to increase dramatically during the next three years. Service providers will emphasize penetrating the business sector of the market through services and bundled offerings targeted at the typically more lucrative business user.



SOURCE: IDC, JULY 2004

integrated seamlessly. Once this has been achieved, companies will be able to match a customer to a particular service, without having to integrate data from different models and different sources.

A unified approach is also imperative when executives look at all the different network components. From the access layer (the edge of the network, where consumers "jack in") to the backbone of the network, from operations to the applications themselves (voice, video, data), it will be impossible to treat components in the traditional way—that is, separately. IP doesn't work with that approach.

Managing relationships

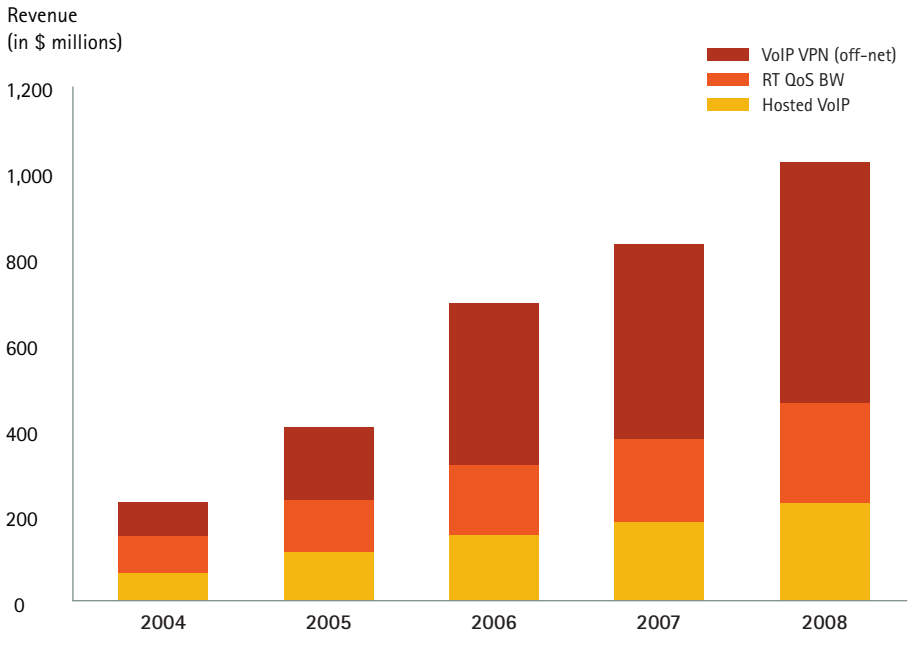
It is no exaggeration to say that success in the IP world will be based on who can form the best alliances the fastest. Incumbents have an advantage . . . for now. In most industries, they have the brand, the trust and the customer base. Ironically, however, these players are often the ones that are not adept at the interorganizational skills needed to marry content, services and the wireless/wireline "pipes" to reach customers, employees and business partners. If a company's capabilities in forming external alliances and outsourcing relationships are still in their infancy, they need to grow up, fast. Organizations that figure out how to leverage an ecosystem of partners will be most successful in the IP transformation.

Overcoming functional silos

Companies that want to take advantage of IP in their quest for high

Explosive growth

Communications service providers will pursue three sources of network revenue as customers adopt Voice over Internet Protocol: real-time quality-of-service bandwidth, VoIP private network and hosted IP telephony. This will lead to explosive growth in broadband-related revenue, as indicated below by the projections for the US market.



SOURCE: THE YANKEE GROUP, 2004

performance will need to coordinate all relevant business functions and bring them along together. IP implications ripple through the so-called BSS/OSS areas: the business support systems and operations support systems. Billing, customer service, sales and marketing, service creation and rollout—these must be addressed now.

Thinking like a consumer
Many first attempts at IP-based services falter because those services are just plain hard to use: They require complex codes and sequences to activate and manage features. Make sure everyone involved in planning and delivering services (especially the more technology-focused players) knows how to think like an average consumer. Focus significant attention and resources on ensuring that new services are easily configured and managed through simple Web interfaces to drive adoption and enhance customer satisfaction.

Taking a phased approach
It's critical to approach the migration to IP as a major change program. Put your best program manager in charge; assemble a team that includes experts in change management, leadership, learning and development, organizational design and culture change. IP implementations cause reverberations throughout a company's entire human performance system. A successful IP strategy will go beyond the technology issues and address the human dimension as well.

Today, we are seeing a major transformation at both the consumer and enterprise levels because of the increased take-up of both wireline and wireless forms of broadband. The migration to lower-cost IP networks; the convergence of voice, video and data onto a single IP network; pervasive mobility; the seamless integration of services—add up these trends (and many others) and you get the potential for disruptive effects on every industry. Organizations that can get in front of these trends will stand a much better chance of using the vast potential of IP technologies to achieve high performance.

About the author

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