



## IMS: Evolving in an Era of Consolidation

*By Brian Wood,  
Director of Marketing*

It's no secret that the playing field for network equipment providers (NEPs) and service providers is uncertain, challenging and treacherous. Pressures from declining profit margins, stepped-up time-to-market demands, the relentless push toward fixed/mobile convergence (FMC), a volatile competitive climate and the promise of emerging technologies make it more difficult to thrive, let alone survive, in the midst of constant change.

As a result, a series of mega-mergers and joint ventures across both NEP and service provider ranks continues to alter the landscape, igniting innovative business strategies while driving the creation of a new telecommunications ecosystem. To level an otherwise bumpy course through this time of uncertainty, NEPs must finally steer away from proprietary hardware platforms and focus on open systems and value-added solutions that ease the adoption of next-generation services based on IP Multimedia Subsystem (IMS).

After all, NEPs and service providers share a common goal—to provide consumers with the IMS-enabled union of wireline, wireless, data and video services on one ubiquitous network accessible anywhere from any number of devices. The race to achieve the so-called “quadruple play” is transforming every aspect of the game as players join forces to make a new imprint on the converging world of communications.

 **TRILLIUM**  
FROM radisys



## A Climate Of Constant Change

As wireless and wireline come ever closer to one unified network, NEPs and service providers are undergoing intensified consolidations. Consolidation among traditional service providers may ease budgetary pressures for awhile, but there are no assurances of long-term prosperity. Stiff competition is mounting from a new breed of mobile virtual network operators (MVNOs), as well as the cable companies. All are focused on gaining market share with intriguing, differentiated services.

Meanwhile, merger mania has spilled over to NEPs as spotlighted by the trans-Atlantic pact between Lucent and Alcatel. The industry giants tried to unite in 2001 but now, after further intensified market pressures and continued faltering balance sheets, the \$13.6 billion merger is seen as an expedient way to compete more aggressively on a global scale while saving \$1.7 billion a year within three years. In hoping to capitalize on the growing global market for next-generation networks, services and applications, the newly combined entity will continue to feel the pinch of price-cutting, especially from Chinese equipment manufacturers Huawei and ZTE. These fast-growing global providers of low-cost equipment and value-added services have been posting 40 percent and 50 percent year-over-year growth, respectively, while gaining substantial traction in emerging markets.

To seek faster routes to next-generation networks, some NEPs are entering into different types of joint ventures. Some industry watchers argue that, over time, they will end up being one and the same as data and telephony converge. Others speculate that consolidations and mergers will create an entirely new telecom ecosystem dominated by a handful of huge service providers as well as intensely competitive cable and satellite players, all supported by highly specialized Tier Two and Tier Three

NEPs with value-added, network service-ready platforms built upon open, standards-based communications servers.

## A New Telecom Ecosystem

Merger and acquisition activity is creating a new telecom ecosystem—one that supports stronger, consolidated carriers competing on a global scale, as well as nimble, up-and-comers vying aggressively for market share. As the ranks of traditional service providers shrink and diversify, there will be increased pressure on Tier One NEPs as they stand a greater chance of being either big winners or big losers—because there will be fewer, but larger, sales opportunities. When assisting emerging and non-traditional players, however, there will be more prospects for gaining rapid traction by reducing costs and accelerating time-to-market with value-added services and end-to-end platform integration.

A decreased number of carriers will reduce customer churn, enabling more stable, sustainable business models. Consolidations also should lead to service improvements, including increased and superior roaming. While fewer traditional service providers could potentially leave consumers with fewer choices, increased competition from non-traditional sources should provide ample incentives for service differentiation.

As the new ecosystem takes shape, it's important to understand the impact of sweeping changes that can alter an industry landscape, leaving it littered with casualties. NEPs need look no further than the brisk buildup and subsequent compression of high-tech markets, including PCs and hard drives, as well as the turbulent tightening of the airline industry, for lessons in corporate survival.

More than ever, NEPs must challenge long-held assumptions about “build vs. buy” platform strategies, and instead embrace standards-based, rapid-delivery product

cycles. In echoing a message from the past, the process needs to be less about building black boxes and more about offering the right mix of applications and product innovations that yield prompt payback periods and increased operating efficiencies.

Case in point: in the late 1990s, Ericsson made bold statements about becoming a “software company.” At the time, it seemed blasphemous to move from proprietary products to a modular, standards-based architecture while focusing more on software and end-to-end integration services. Still, shaking up engineering efforts and changing traditional ways of doing business helped Ericsson weather tumultuous times, including myriad restructurings, four CEOs between 1998 and 2003 and a 60-percent workforce reduction. Over the past three years, Ericsson has moved aggressively into managed networks, content hosting and integration services, taking over management of networks for nearly 30 mobile carriers. In doing so, the company is helping operators reduce support costs while easing the introduction of new value-added services.

Ericsson also is making significant headway in the delivery of IMS-enabled services, with announcements to support 19 commercial IMS contracts and 40 completed or in-progress trials. In May 2006, the company introduced an “IMS ecosystem” as part of its Mobility World developers program. The goal of this initiative is to give network operators access to a portfolio of IMS-based applications while giving Ericsson close access to the latest IMS development efforts.

Taking a page from Ericsson's playbook, NEPs must reshape their businesses to meet ongoing market challenges and business changes while embracing new roles in their customer relationships. They need to move beyond their hardware-focused legacies and take on broader roles, including:



- **Large general contractor** with an in-depth understanding of the business reasons behind technology decisions as well as sufficient resources to support large-scale service deployments – while eliminating finger-pointing between technology partners on the job.
- **Virtual R&D facility** that augments carriers' internal efforts, confirming interoperability before wide-scale deployments and focusing on helping service providers differentiate blended network services.
- **Software developer** with a focus on innovative, value-added applications and services designed to increase average revenue per user (ARPU).
- **Systems integrator** with core expertise in buying, building or striking partnerships to create end-to-end, interoperable network platforms based on best-of-class software and hardware “building blocks.”
- **Solutions innovator** with proven experience in using pre-integrated, network service-ready platforms that are standards-based to lower project risks and costs while expediting time-to-market.

Over time, less attention on “equipment” and more focus on “solutions” could lead to a new moniker for NEPs. The handle “telecom solution provider” may become more apropos as development efforts are pushed up the value chain. At the same time, NEPs' decades-old efforts in creating and assembling individual network elements and platforms will be delegated in increasing degrees to trusted technology partners.

This shift shows promise because as service providers' next-generation networks reach billion-dollar proportions, the scope may be too great for NEPs to meet with traditional single sourcing. By assembling technology partners for precise outsourcing, NEPs greatly improve their odds of winning big bids. Such a transformation requires alterations

to the core, so as NEPs break free of their preoccupation with “it must be built here,” they will need to enter into new partnerships with more flexible business models, achieving improved time- to-market through the adoption of commercial-off-the-shelf (COTS) components, pre-integrated solutions and proven, standards-based software protocols acquired from third-party suppliers.

### Lessons Learned From Industries In Flux

Similar patterns repeat when industries are in flux, no matter if it's hard drives, airlines or personal computers. Through the 1980s, the hard drive market was booming with more than 100 players. Yet by 1996, fewer companies remained than at any time during the past two decades. What happened? As storage became a commodity, prices fell. Once shining stars Quantum and Maxtor merged but continued to falter, only to be swallowed by industry leader Seagate. Today, only a handful of choices remain, despite the exponential rise in digital content continuing to escalate storage needs.

Airlines draw curious comparisons, too. Like telecom service providers, both are “national treasures” and “carriers” that service all parts of the world. While airlines' last major merger-go-round was in the 1980s, such moves are always for the same reason: to stay competitive. As some airlines grow bigger, others join together to keep pace in offering a broader presence; this must also ring true to telcos.

Likewise, IBM started the personal computer revolution in 1981 yet exited the sector recently (by selling to Lenovo) when its business line profitability sagged as greatly as that of another PC veteran, Hewlett-Packard. Today Dell, the high-volume, low-cost leader, is the darling. And while Apple barely makes the top 10, the company's endless focus on innovation and differentiation mesmerizes legions of loyal users and the company could yet be the PC industry's “comeback kid.”

As PC hardware became commoditized and the market constricted, PC software has mushroomed to tens of thousands of vendors. Today, that's where the value is, so survivors have adjusted accordingly. This is a concept that NEPs need to grasp since historically they have had a strong hardware orientation. The shining lessons learned from each of these industries—all of which experienced periods of rapid expansion followed by fast fall-outs—is that embracing new application-focused business models is essential to survival. The other critical ingredient for advancing during market upheavals is to continually move up the value chain to provide highly differentiated, solutions-oriented services while spending less energy on the physical infrastructure of the previous generation.

### Building The IMS-Enabled ‘Telecom PC’

Tomorrow's communications platforms are evolving just like the NEPs building them and the service providers deploying them. In contrast to the non-interoperable “silos” of yesterday, next- generation platforms will resemble a “telecom PC,” delivering multi-functional, interoperable solutions from a seamless blend of best-in-class COTS components, pre-integrated solutions and standards-based software that can introduce new IMS services quickly with exceptional user friendliness.

IMS is the platform for the “telecom PC,” enabling a vast assortment of application specialists and software companies to build applications on top, which service providers then can deploy. Long term, it will be a software and services market. As more of the traditional enterprise IT philosophy enters central offices, increased emphasis will be on a layered architecture, and less on the installation of boards and boxes.

As the lines between the central office and data center blur, it may not matter much



where some IP-based applications reside, as long as they support telecom's high-availability requirements. Whether innovation is born in the central office or data center, the key is to understand that COTS and Advanced Telecom Computing Architecture (ATCA) will play pivotal roles in helping Tier One NEPs expand capabilities to meet large-scale network projects while providing aggressive Tier Two and Tier Three NEPs with the opportunity to specialize in niche markets. There is opportunity in both places.

ATCA promises lowered hardware and maintenance costs with the opportunity to use a standardized operating system, open source middleware and readily available third-party chassis and boards. NEPs are showing increasing interest in ATCA-based network service-ready platforms, especially those that meet their needs for network equipment building standards (NEBS) compliance and 99.999 percent uptime.

According to IDC, continued consolidation throughout the telecom space should be a catalyst for ATCA growth. In the early going, though, ATCA is competing on price with embedded solutions and commercial server solutions. This is a difficult task, but the path blazed by CompactPCI, now a mature standard, should help. ATCA's full potential will be unlocked when volume shipments reach levels where NEPs see cost savings clearly visible over their decades-old proprietary methods of internal sourcing. Leveraging large economies of scale then will help reduce the cost of next-generation, IMS-enabled networks, thus securing ATCA's future worthiness. NEPs embracing new ways of doing business are being rewarded. Research from the Yankee Group reveals

that Tier One NEPs can recognize as much as a 30 percent improvement by switching from "in-house builds" to standards-based network elements. The research house also reports NEPs shifting to a standards-based approach to building some core infrastructure elements can recognize a 31.5 percent savings in total costs.

Even so, widespread ATCA adoption will not happen overnight. According to a recent IDC report, NEPs are split on ATCA. While 40 percent of those surveyed said they currently had strong support for ATCA—and those ranks include Alcatel, Huawei, Motorola and Siemens—20 percent (including Cisco, Ericsson, Juniper and Nokia) stated they were not likely to implement ATCA in the next three to five years. Despite this division, IDC reports 55 percent of respondents saw strong potential for cost savings and about half will have adopted ATCA in parts of their product lines by next year.

## Future Forecast

Most market watchers agree that ATCA and IMS should achieve critical mass in the next three years. The majority of NEPs have pilot ATCA programs underway and IDC expects by the end of 2008 that 80 percent of NEPs will be migrating their IMS products to ATCA—a 100 percent rise over the current level. The consensus is that NEPs will start seeing undeniable benefits from ATCA by 2010, when Informa Telecoms & Media estimates IMS gear should reach \$4.5 billion.

Which statement best characterizes your views on ATCA?	% of Respondents
We strongly support ATCA and are implementing ATCA in products now.	40
We strongly support ATCA and are evaluating ATCA for future use.	20
We are interested in ATCA, but not ready to commit to product development.	20
We are unlikely to implement ATCA in the next 3-5 years.	20

Source: IDC, 2008

ATCA should gain general acceptance the following year when the research firm reports some 39 million users will have adopted IMS-based services in the fixed market.

While concentrating on ATCA and IMS in the near term, NEPs also must demonstrate new core competencies in content and application ecosystem management, application development and both systems and final solution-level integration, along with worldwide services reach and managed services. These will be accelerated times for NEPs because by 2010, many of the current consolidations should be realizing huge cost savings. For example, the anticipated AT&T-BellSouth union is expected to eliminate \$3 billion in costs a year.

The next two years will be crucial for NEPs and service providers as consolidations and shake-ups continue. There is much to be optimistic—and opportunistic—about, since during this time there should be about 50 IMS contracts and more than 100 trials in progress. The time is now for NEPs to free themselves from reliance on proprietary platforms. Embracing open systems and value-added solutions with network service-ready platforms will lead the way to full-scale adoption of next-generation services based on IMS.

radisys®

## Corporate Headquarters

5435 NE Dawson Creek Drive  
Hillsboro, OR 97124 USA  
503-615-1100 | Fax 503-615-1121  
Toll-Free 800-950-0044  
www.radisys.com | info@radisys.com