



**OPINION:Surviving the Inertia**

*By Mark Nicholson, CTO and Senior VP PLM, Syndesis*

Change is difficult but clearly necessary for the communications industry. Communications services are rapidly shifting away from circuits, bandwidth and connectivity towards personalized content and applications. The old walls that once separated telecommunications, television, software, the Internet, media and entertainment are crumbling. These once distinct industries are being driven together by demand for instant access to digital information and ubiquitous communications. Headlines tout new and exciting IP-based technology and services – some of which are already here, many more still to come. But one crucial area that garners far less attention is the “people equation” and how convergence will impact two groups with differing perspectives: Service Provider employees and Service Provider customers.

For Service Provider employees, the blending of TDM networks carrying traditional voice and data services with next-generation converged IP networks is much more than a technological issue. These worlds have traditionally been completely separate within Service Providers. They have maintained different networks, different management methodologies, and different organizational structures, with traditional network technicians often being unionized while IP/data technicians typically were not. The converged network carrying all-digital content will necessitate an eventual merging of roles and organizations within the Service Provider. Data networks will invariably drive this transition, but Service Providers will still need to retain voice expertise in order to properly understand demand loads and patterns, emergency services interfaces, QoS, security and other considerations in a carrier-grade network and organization. Ultimately, retraining will become a huge preoccupation for Service Providers transitioning to the software-intensive world of IP convergence.

From the customer perspective, things have changed considerably over the last 10 to

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15 years. The move to converged IP networks and Ethernet as an underlying technology has significantly empowered both enterprise and residential customers. In the traditional communications world, enterprise customers bought complex communications pipes about which they had limited understanding, and were to a large extent, unable to migrate to alternative providers without significant disruption. Decision makers (either non-technology business people or technologists who were not business oriented) were impaired by a lack of complete information from Service Providers and burdened by contractual constraints and potentially severe penalties. Still, these decision makers were responsible for ensuring continuity of service. With today's move toward converged IP networks and Ethernet infrastructures, the tide has turned. Enterprise customers have been deploying IP for the last 20 years and, as such, have an inherent understanding of the technology. In the new communications world, enlightened enterprise customers know exactly what they want, in some cases better than the Service Providers themselves.

The same applies to the residential consumer. Just 10 years ago, users who were brave enough to dabble in the arcane world of "dial-up" BBS and Internet access were faced with utter complexity: modems that had to be purchased and set up to augment their personal computers, numerous network configuration settings and next to impossible trouble-shooting. Today, residential users are benefiting from the move to new generation broadband networks, which offer simple access to a wide range of network-based content and services, such as music downloads from Apple's iTunes, customized streaming Internet radio from Real, and online gaming from Microsoft's Xbox Live service. The detailed communications infrastructure that underlies access to these services is virtually hidden by the now ubiquitous Microsoft Windows operating system, allowing users to focus on content and applications instead of communications complexities. Quite simply, the Service Provider that supplies the best IP pipe (price, speed and reliability) enabling best access to these services will win their business.

An approach to help smooth the potentially rocky transition to converged IP

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networks, for both sides of the people equation, is automation - comprehensive, holistic automation. Today, back-office “automation” is achieved via OSS. However, many of these OSS are not suitable to the new communications world and will not provide a solution for the “human factors.”

The new communications world demands a third generation of Operations Systems (3GOS) that will completely automate the management of new generation networks and the fulfilment of customers’ requests. These systems are not about supporting human operators; they are about allowing a drastically reduced set of operators to monitor and control the new self-adapting, converged, intelligent network based on advanced control planes such as IMS. In other words, the term “operations” in a third generation OS environment means telling the network *what you want*, not *what it needs to do*.

There’s one view of the industry that says the current telcos “are dinosaurs”, that they will “cease to exist”, and that “the time of national operators is over.” This notion simply does not make any sense. Such claims are akin to saying that other national infrastructures – such as energy distribution, rail, road and air transportation – will cease to exist. Yes, there will be mergers, bankruptcies, emergencies, and perhaps vertical disintegration. The global communications network is the largest, most sophisticated man-made machine ever built. We are only just getting into third gear, i.e. the evolution to the all-IP network transporting all-digital content. We should welcome change and third generation Operations Systems, which will play a crucial role in enabling this transition for Service Provider employees and their enlightened customers alike.

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