Telecom providers need to defend service revenues and stimulate growth. Competition demands faster service creation and delivery, and an enhanced user experience. With recent years’ investment in new capacity, the financial markets expect improved returns from the telecom industry. While convergence provides significant revenue opportunities, legacy telecom networks are not equipped to support next generation (NG) services and customers. At the same time, multiple technology developments, including Internet Protocol (IP), have sparked a wave of changes with network implications. Infrastructure transformation enables key business and technology benefits, including new service revenues, improved customer management and capital and operating expense savings.

Implications of convergence
With telecom providers seeking to address more moderate revenue and subscriber growth, convergence represents an important new opportunity area for existing and new players. However, responding to convergence adds new pressures on telecom infrastructures:

- Enterprises demand advanced business solutions to drive improved customer value and efficiency, for example, IP-based services including VoIP, IP-VPNs, IP Centrex and IP PBX, Fixed-Mobile Convergence (FMC) services, Network Management and vertical applications
- Consumers demand rich-content and bundled services, including Push-to-X, MMS (Multimedia Messaging Service), video streaming, IM, online gaming and “triple/quadruple” play
- End users of all types want access to their services anytime, anywhere, on any device
- Multimedia and converged services require improved telecom provider billing capabilities
- With multiple technologies, services and devices, communications is becoming complex; building customer loyalty requires a simple, end-to-end experience, irrespective of technology.

Legacy networks transform to IP
In the legacy, circuit switched voice world, telecom provider value was in infrastructure provision. As legacy networks transform to IP, the telecom network converges with the IT operating environment toward an IT-style infrastructure, providing increased capabilities sourced from multiple software vendors and new service enablement. Value is shifting from transport to services and supporting infrastructure on a common IT hardware/software platform. Proprietary hardware and software are replaced by commercial-off-the-shelf (COTS) components, enabling significant cost savings.

IP and convergence are changing telecom business models. Walled gardens have given way to open standards, to enable customer access to content of their choice. Industry ecosystems are emerging in which telecom providers partner to create value. While virtually anywhere, anytime access is primarily about making different devices work anywhere on different networks, the core is about enabling NG services and applications over those networks. This requires an integrated approach and world-class infrastructure. Industry winners will invest in smart infrastructure and position themselves as the “glue” of the emerging ecosystem that brings the jigsaw pieces together and transforms the complexity thwarting the industry today into a simple user experience.
Open, horizontal platforms
In the simple voice telephony world, new products were deployed in vertically integrated structures, combining products, enablers and the network in a single silo. IP technology enables the deployment of new services on a horizontal, layered infrastructure. Multiple services share a common set of enablers (the service delivery platform), and common Business and Operational Support Systems. Integration and operating costs are paid once and amortized across all new services. This infrastructure is designed to enable multi-service delivery, independent of access. The economics of the software industry show that when a common platform is introduced, it generates significant added value.

IMS addresses key business challenges
- Support for new multimedia services (voice, video, data) intertwined to drive new revenues
- Network simplification; a single data-switched network to support various services to drive capital expense and operating expense savings
- FMC enablement: a single data backbone provides session control with Quality of Service once services plane is deployed across several access networks, such as WiFi/WMiMAX, asymmetric digital subscriber line (ADSL) and Fiber To The Home (FTTH).

Make it happen
Migration to IP will require an evolutionary approach, which begins with optimization of transport for multi-service delivery. The ability to execute rapidly against continually changing user needs is what will differentiate the winners and require an integrated, on demand operating environment.

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