

# Analysis of Value Chain Dynamics Driven by IT/Telecom Convergence

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## Abstract

This report examines the impact of value chain dynamics in the telecommunications industry driven by IT/Telecom convergence. IT/Telecom convergence describes a disruptive evolution of the network where control and intelligence is migrating from the core to the edges of the network. The impact is considered from the point of view of the telecom equipment vendors evolving their businesses out of necessity moving up the value chain, and IT application service providers taking advantage of new opportunities by expanding their operations moving down the value chain.

In the telecommunications equipment vendor industry, increased competition from new entrants such as Huawei is driving consolidation in the industry (Alcatel-Lucent, Nokia-Siemens) and forcing vendors to abandon some markets to focus on technologies where they can maintain dominant market share (Nortel).

In the IT Applications and Web Services industry, companies are evolving existing products and services towards a 'software as a service' delivery model. Google is exploring the possibility of entering the market as a mobile access provider.

BT Group Plc. is the first major telecommunications carrier to undertake a project to completely transform its traditional PSTN into an IP based communications network. The 21<sup>st</sup> Century Network project is anticipated to cost \$20 billion and will return a savings of \$2 billion annually on reduced operational costs. The IP network will also provide the foundation for the delivery of new services, such as fixed/mobile converged voice (VoIP) and IPTV.

Cisco is making a move up the value chain through development of software application (RFID management and financial trading applications) that leverage properties of the network and through acquisition. IBM may be moving down the value chain by integrating proprietary hardware that performs content based routing with its SOA strategy.

Content based routing is a potentially disruptive innovation in the routing of data through networks. With content based routing, the path and ultimate destination of data is determined by the network while the content is on route to its destination. Content based routing benefits new software applications like enterprise RFID management, and improves the performance of time-delay critical applications such as financial trading systems. Cisco and IBM each have proprietary content based routing technologies, but they are not positioned as competitive solutions. Cisco's AON is foundational to its SONA strategy, which provides a platform to allow network providers to build and deliver advanced networking services. IBM's DataPower XML appliance is primarily designed as an XML accelerator, and secondly as a legacy application adapter allowing IBM to SOA-enable legacy applications by integrating them on an ESB bus. A third property of the DataPower appliance is its content based routing capability.