

Long Distance 101

A Basic Introduction to How
Long Distance Service is
Delivered in North
America—
and Opportunities for
Network Providers in the
Long Distance Arena

Introduction

With the heated debate in the U.S. House of Representatives and U.S. Senate in recent years over telecommunications industry regulation, it is clear that the long-standing Modified Final Judgment was anything but final. Telecommunication reform allows local and long distance telephone companies and cable companies into each others' businesses—a move that is expected to expand consumer choices for all types of communication services. This regulatory upheaval opens up new opportunity for shares of the \$74 billion long distance market.

Regional Bell Operating Companies, the “Baby Bells,” are particularly well positioned to profit from this change. In the turmoil of competition, consumers are likely to find the familiar and trusted name of the local exchange carrier to be a comfortable choice. Industry watchers believe that the RBOCs will gain 10 to 30 percent of the long-distance pot—\$7 to \$21 *billion*.

But RBOCs aren't the only ones positioned to benefit. Independent operating companies, competitive access providers, cable companies, utilities, and on-line computer services, for example— will be entering the telecommunications game now that the rules are changed.

Into this chaos, toss a fast-growing portfolio of new technology choices—voice recognition, Intelligent Networking, customer-defined operator services, interactive services, bandwidth-hungry data applications, and more. These services are deployed on networks more sophisticated than ever, requiring more specialized operations, administration, and maintenance expertise than ever.

On top of this, as newcomers enter the long-distance free-for-all, they have to balance these technology choices with a host of business choices. Do they own their own facilities or resell long-distance services on others' circuits, or both? Manage or outsource the administration of their networks? Deploy advanced services on a switch, Advanced Intelligent Network (AIN) platform, or workstation LAN? Provide what level of operator services, and on what platform?

RETHINKING THE BUSINESS. There are rewards to entering the long-distance market, to be sure. MCI, Sprint, and many others have proven that it can be done successfully. However, with the heightened competition that comes with deregulation, network providers will have to steer a carefully considered course.

The convergence of regulatory, technology, and market forces is completely redefining the business of providing long distance service. Network providers cannot be driven by the bright light of technology; they need to provide the *services* that will gain them market share and strategic advantage. And they know that consumers are not concerned *how* the company implements a service; they just want to know that they can get it when they need it, and that it works.

AN EXPERIENCED PARTNER. Northern Telecom (Nortel) has been building competitive long distance networks since 1983. Today more than 50 carriers in North America use Nortel equipment and services. We've provided 75% of the market share of public network systems in North America (excluding AT&T)—more than 270 switches providing 4 million ports in service globally.

Serving as an ally and not a competitor in any long distance market, Nortel has established itself as the preferred supplier of long distance switch solutions. The company is unique in its ability to provide end-to-end long distance networks—including access systems, switching and transmission systems, operator services, network management, intelligent network services, even turnkey implementation and network operation expertises.

In fact, much of North America's telecommunications infrastructure was designed and built by Nortel. We deployed the first fully digital switches more than two decades ago, and we have teamed with network providers worldwide to deliver more than 110 million lines of digital switching in 90 countries. Nortel SONET and microwave radio transmission systems provide premier quality for more than 10 million DS-1 lines of SONET and two million DS-1 lines of microwave capacity. We have helped build long distance networks for the largest carriers, some of the world's largest corporations, to the smallest independent telephone service provider. These experiences have given us an understanding of telephony issues from the perspective of both the established provider and the new entrant to the market.

Long Distance 101 shares some of this experience, providing a basic understanding of the services, technologies, and business issues behind long distance service. First, it provides a concise overview of the impressive list of revenue-producing services that make the market so inviting to begin with. It then provides a basic look at the access, switching, transmission and operator services infrastructures that are used to deliver these services. Finally, it profiles the key business and service organizations that today's long distance subscribers expect to have and use when they do business with a long distance provider.

We hope *Long Distance 101* translates this broad experience into a short and useful introduction to services and technologies that drive the long distance market.

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