Partnering: A Strategic Element of Globalization

John S. Mayo

During the past ten years, technological progress and political changes have accelerated the development of globally interconnected telecommunications networks. AT&T's active participation in the growth of international telecommunications requires close cooperation among its business units, as well as between the company and its overseas partners—which, in some circumstances, may also be its competitors. This cooperation is an essential element of a globalization strategy that recognizes that no company, by itself, will be able to meet the expanding information movement and management needs of ever-greater numbers of global customers.

Introduction

Soon after AT&T and its Bell Operating Companies went their separate ways in 1984, AT&T's then Chairman and Chief Executive Officer, James E. Olson, announced that the company would move beyond its predominantly domestic market and expand in world markets through a concept and process that has come to be known as "globalization." The concept crystallized under Robert E. Allen, who succeeded Olson after the latter's unexpected death.

This dramatic change in AT&T's orientation from largely domestic to global continues to have significant implications for people and organizations throughout the company. Nowhere are those implications more dramatic than for AT&T's research and development community, which creates the technological foundation for the company's current and future business activities.

This overview examines the evolution of the global communications industry, and provides background on the difficult techno-political challenges it faces. The other papers in this issue of the *AT&T Technical Journal* look at the technical infrastructure for AT&T's globalization—ranging from international products and services to worldwide intelligent network architecture and global partnering. The papers present an integrated perspective, so that the company's many technical programs can be viewed as a coherent mosaic rather than fragmented efforts.

The Challenge of Globalization

One fundamental requirement for success in business—and especially for global success—is customer focus. This refers to both internal customers and external customers. As people apply quality principles throughout their operations, they must seek to get even closer to customers. That's because we have learned to define quality in terms of customer satisfaction. Because of its vital link to customer satisfaction, quality must ultimately be defined by the customer. Moreover, the alignment of development functions with the business units they support is a major factor in getting the required focus on customers.

Achieving customer focus requires not only a clear understanding of the needs of today's customers, but also—and perhaps even more importantly—an understanding of what future customers will want. Satisfying those needs at the right time and with a mixture of features, capabilities, performance, service and price that maximizes perceived value is the key to success. To succeed on a global scale, however, one must serve globally. Customers must have easy access to service; their requirements must be satisfied everywhere and around the clock. It is also true that customers' needs may differ dramatically, depending on size, locations, and types of business. Consequently, their perceptions of quality and value may differ markedly unless solutions have been tailored to

expectations that differ among market segments and geographical regions.

This global view of customers, whether they be telecommunications administrations or end users, has profound implications for the product/service realization process—for the entire process of developing products and services and bringing them to market. This includes planning, design, delivery, operation and maintenance. To delight customers by meeting or exceeding their expectations around the world, we must manage all aspects of the product and service delivery process to take full advantage of the diversity of AT&T's products, services and worldwide presence. Our product/service realization process is increasingly based on the concept of *global platforms with local customization*. That is, we design vehicles that will provide the core capabilities that we are seeking to implement. We then modify those platforms—ideally, in relatively modest ways—in order to meet the specific needs of customers in various parts of the world. Thus, we seek to achieve local customization and not build totally different products for different regions. And we must design technology platforms to sustain that process for the broad range of present and future AT&T businesses. AT&T expects Bell Laboratories to be the leader in global platforms, not only because of its transnational reputation, workforce, and outlook, but also because its mission cuts across the nearly two dozen business units that make up AT&T. Coordinating across the units' boundaries, Bell Laboratories can concentrate on creating new commercial possibilities and on transforming them rapidly and effectively into new, or enhanced, sources of revenue.

Partnering for Global Communications

With the rapidly increasing use of telecommunications throughout the world, we are moving inexorably toward a global community.

Communications services based on technologies such as integrated circuits, computing, photonics and software make it increasingly feasible for domestic businesses to "go global." Conversely, the communications services industry's growth and financial success provide direction and support for the continuing development of revolutionary technologies to help it continue to grow and succeed. Thus, we have a classic model for synergistic relationships: global communications drives global economic growth, which drives technology, which drives global communications. And, superimposed on this pattern, are the increasingly global needs of customers.

By their very nature, providers of global communications operate in a vast multivendor environment, drawing on many worldwide sources for products and services that go far beyond basic telephony. In aggregate, the organizations that produce the products and services used in global communications represent an industry of enormous breadth and size. Moreover, these organizations can have complex relationships, often engaging as partners in one sphere and as competitors in another. The industry includes switched and dedicated services for voice, data and images; switching and transmission equipment; network management software and services; and all kinds of customer premises equipment, ranging from telephones and fax machines to transaction terminals.

Service Partnering. Until recently, telecommunications has been a government function virtually everywhere but in the United States. Increasingly, however, in nations throughout the world, we are seeing changes comparable to those made in the U.S. telecommunications industry—changes that can lead to open markets and free competition. But the Postal, Telephone, and Telegraph administrations (PTTs) were, and in most cases still are, government entities. As a result, their services often must carry the burden of government regulation. The associated administrative burdens can make it difficult for these PTTs to move rapidly. So they are typically driven less by customer needs than by the top-down mandates of government. One result is that they also tend to be impervious to competition and relatively expensive.

Nevertheless, the PTTs, on their own and through consortia, have created, and now maintain and operate, the infrastructure for international communications services. The necessary negotiations to provide this infrastructure have been difficult and expensive. The paradigm for links to the U.S.A. has been for each entity (e.g., AT&T, Deutsche Bundespost Telekom, British Telecom, Kokusai Denshin Denwa, and the Korean Telecom Authority) to provide part of a circuit and meet its complementary service provider either in open ocean or in an orbiting satellite to provide a completed circuit to the customer. Thus, all international service has conceptually involved partnering.

Partnering Through Standards-Setting. There is no question that the national, regional and international standards-setting process is vital to global telecommuni-

cations. The broad goal of standards-setting is connectivity, compatibility and open networking of communications and computer systems from multiple vendors—whether in common carrier public networks, in private networks or on users' premises. AT&T fully supports standards bodies working toward this goal.

Whenever major changes in services or capabilities are desired or needed, the groundwork must often be laid by standards-setting bodies such as the International Telegraph and Telephone Consultative Committee (CCITT), where standards relating to service capabilities and interconnection requirements are hammered out. These forums typically build on detailed technical negotiations carried out by interested service providers, product vendors and telecommunications authorities.

A prime example of a major change is the Integrated Services Digital Network (ISDN), which forms the infrastructure for a broad range of future services. The fact that ISDN will be made available throughout the world is a tribute to the detailed negotiations and partnering that took place among key communications services providers and equipment vendors to define and implement ISDN.

There are several types of standards, with differing levels of priority. Clearly, the most vital and broadest standards are the architectural standards. Examples range from the ISDN interfaces to the Open Systems Interconnection Reference Model. Such standards affect the architecture of systems and services and are vital enablers, benefiting all players. Moreover, these standards should have top priority because they are needed first, before implementing a technology. Failure to do so erects the most serious potential barriers to the progress of interoperability.

Unfortunately, standards can handicap the technological leaders and discount the value of their research. So we are challenged to find ways to get needed standards promptly without penalizing innovators. The vitality of telecommunications depends upon it. The voluntary consensus process is the right standards-setting process. But it must be driven more and more by customer needs, by priorities and by timeliness. It should encourage the flow of innovation, not hamper it.

Partners And Competitors. Newly privatized PTTs, coupled with state-run service providers also seeking global markets, have complicated the global communications picture during the past decade. Several of these entities, for example, have been prompted to globalize as a preemptive move. This can involve the entities' getting into the data communications business by buying other companies and by positioning themselves to offer end-to-end global services. Some entities have purchased equity interests in operating telephone companies in other countries around the world, thereby positioning themselves to have a global presence and to support customers in countries other than their own. Thus, it is common to find companies and/or telecommunications authorities partnering in one region or business, and competing in another. As various strategic thrusts begin to overlap geographically, they can, and do, encroach on areas of partnering, thus making this a complex business with dynamically changing relationships. In some instances, a partnering arrangement may be established to plan and implement a modern telephony infrastructure in a country that wants to upgrade its system rapidly. This could take the form of a joint venture to build and install equipment, or it could involve significant equity ownership and participation in planning, building and running the new telephony businesses.

Technical Partnering. There is another, ongoing form of partnership: the partnership that occurs within the global technical community. For example, at conferences and in standards-setting bodies supported by corporations, universities, and telecommunications authorities, the groundwork is laid for the open systems and common interfaces that have propelled the global telecommunications community into an accelerating cycle of innovations and enhancements.

Customer/Supplier Partnering. The relationship between the service provider and end user lies at the heart of the communications business. In an ideal situation, market pull and technology push work synergistically: as partners, the service provider and customer work together to understand and meet the customer's evolving needs. At the same time, the service provider tries to understand to what degree a new or developing technology might provide new capabilities that would stimulate usage and expand the business.

Internal Partnering

Internal AT&T partnering takes advantage of cross-business-unit synergies to satisfy global customers' needs more completely. The premise that drives the internal partnering concept is that global telecom-

munications is a complex, techno-political arena. In that arena, success depends typically on maintaining a strong regional or country-by-country presence, and on making a significant contribution to the economy of every country or region in which one intends to do business—for example, through some form of in-country manufacturing or assembly. In addition, a company must understand and react to changes in customer needs, local standards, the local economy, politics, and, of course, competitive activity.

Consider, for example, what it takes to serve the telecommunications needs of a multinational clothing company that has manufacturing facilities in Mexico, Italy, Spain, Taiwan, Hong Kong and the United States; suppliers in Australia, Singapore and the United Kingdom; and outlets in all these locations, as well as in Korea, Japan, and the rest of Europe. Suppose that company were to issue a Request for Proposal for a global telecommunications arrangement for itself. The information required just to compile a response about equipment requirements for network access in each location is immense.

In many cases, internal partnering facilitates preparation of a detailed customer proposal. More importantly, internal partnering provides a basis for defining and refining AT&T's global program, thus allowing the integrated deployment of products, services, networks and applications to serve unique customer needs around the world.

The new platform-based systems referred to earlier typically will be provided globally with the help of external partners such as other vendors and telecommunications administrations. Because these systems will have core service capabilities that can be customized to specific local applications, they will facilitate the provisioning and enhancement of services, bringing major improvements to network management and performance. As the importance and value of service continue to increase for the customer—as in information transfer in the financial industry—the need for service continuity and general immunity to network and facility problems will become evermore critical. Such continuity and immunity will be greatly facilitated by the standardized structure of these new platform-based systems—and by the disciplined processes used to deploy, operate and maintain the networks and services that we provide. These improvements would, of course, apply to dedicated custom networks, as well as to services provided on the public switched network.

Conclusion

Globalization is both a product of telecommunications and a driver of telecommunications. These inseparably linked forces are directed by the goal of satisfying end users' information needs—needs that are increasingly on a global scale. A successful globalization strategy requires both an awareness of, and a dedication to, the interrelationship among partnering, platforms, processes, and planning. And, of course, AT&T must partner with various telecommunications authorities and other entities to achieve the major upgrades in telecommunications infrastructures that will be required to satisfy the growing global needs of customers.

(Manuscript received May 20, 1992)

John S. Mayo has been President of AT&T Bell Laboratories since July 1, 1991. After he joined the company in 1955, Mr. Mayo participated in many notable projects, including the first transistorized digital computer, the T1 digital carrier system, and the 4ESS digital switching system. Mr. Mayo received his B.S., M.S., and Ph.D. in electrical engineering from North Carolina State University, Raleigh.