ISDN as an Information Resource for Strategic Management of Multinational Firms*

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The global connectivity promised by the development of the Integrated Services Digital Network (ISDN) will have a major impact on the management of multinational firms in the 21st century. This paper explores this impact from two perspectives: using ISDN capabilities as an information resource to support strategic planning processes in multinational firms, and planning for the use of ISDN as the technological infrastructure for international joint ventures and strategic networks. The information systems (IS) profession can play a key role in achieving the promise of this emerging information resource technology by (1) actively supporting the link between the organization’s business strategy and its information resource strategy, and (2) anticipating how the integration of voice, data, text and video provided by ISDN can best be utilized to deliver improved information to managers.

Introduction

In today’s fast-moving, competitive business environment, many business organizations are becoming aware of the potential of digital telecommunications (Gavish, 1986; Keen, 1986a). Planning and coordination for the use of available voice, data, text and video services to provide an array of information resources (Khosrowpour, 1988) should help reduce communications costs (Kriebel & Strong, 1984) as well as improve information resource management (Guimares, 1988). Moreover, many companies are in a position to realize the potential of using telecommunications as a tool to improve organizational management through the provision of valuable information resources. At a more practical level, there is also the savings of travel costs and travel time in the case of an organization whose managers are significantly separated by geography as well as the potential for increased productivity which might be lost due to travel inconvenience.

The scramble to develop global telecommunications networks has been joined by phone companies and computer makers alike, spawning a business of moving and managing infor-
Information estimated to grow to $560 billion by 1991 (Business Week, March 21, 1988, 140-148). The use of fiber optics technology as the basis of communications paths makes interconnect technology a major management challenge. Companies cannot afford to allocate resources for the management of networks in the 21st century as though they were the networks of the 1980s (Lorin, Ball & Elory, 1987).

Over a decade ago, as part of its long-term vision for global telecommunications in the 21st century, AT&T originated the development of an Integrated Services Digital Network (ISDN) that would provide global access for voice, data, text and video devices. Commenting on this vision Brancheau & Naumann (1987, p. 21) observed that ISDN

... has tremendous strategic potential for farsighted businesses. Telecommunications-based information systems will dramatically change the way many existing products and services are sold and distributed. Products which are prohibitively expensive today, or sold to a very limited market, may be cost-effective and in high demand. New products, perhaps new industries, will emerge. ISDN promises to be the infrastructure upon which most of our communication will be based in the future.

The ISDN thrust is international. The governmental Postal, Telegraph, and Telephone agencies of many of the world’s developed countries — Canada, France, West Germany, Italy, Great Britain, Japan — and the various telecommunications companies in the United States are currently working together through international standards organizations (such as the International Telegraph and Telephone Consultative Committee (CCITT)) to ensure the gradual successful implementation of ISDN.

It is generally recognized that the ultimate success of ISDN will depend on how closely it meets the information resource requirements of users, especially large corporate users. Today’s information systems (IS) professional has a key role in realizing the potential of ISDN. The IS professional must begin to anticipate the range of information services that will be available for integration in ISDN, so as to provide senior management with technical recommendations to support the realization of the strategic potential identified by Brancheau & Naumann (1987). In turn, senior management must establish a corporate policy which allows "telecommunications managers to be able to break out of the frustrating straightjacket that binds them into cost displacement, short-term planning horizons, and technical tactics" (Keen, 1986b, p. 131.) Although selling ISDN to senior management is not necessarily the responsibility of the IS professional, he/she must begin today to envision how ISDN can be harnessed to deliver improved information in support of organizational work in the future.

Though many areas of organizational management can be addressed in relation to ISDN, the area of strategic management is perhaps the most important from the perspective of the IS professional concerned with the derivation of an information resources and IS strategy from an organizational business strategy (King, 1988). After discussing ISDN and global telecommunications, we will address two broad areas of relevance for ISDN and strategic management: (1) the role of ISDN in the support of group-based strategic management processes in an international setting, and (2) strategic planning for ISDN identifying potentially useful changes in business strategy, including using ISDN to gain and maintain a strategic advantage in the global economy. The key role of the IS professional will be addressed throughout the discussion. Finally, some suggestions are offered as to how IS professionals may begin
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