One manufacturer firmly committed to the goal of compatibility of products and services is Northern Telecom Ltd. In 1983, the company announced a $1.2 billion program for developing integrated information management systems that would perform a wide variety of functions and accommodate many kinds and brands of equipment and provide users with enhanced communications. Northern Telecom calls this the OPEN (Open Protocol Enhanced Networks) World concept.

The aim of the OPEN World is to enable organizations to develop their information systems over time without having to discard existing equipment or being locked into a single supplier. The system will be designed around the communications function, a digital switch, either in a telephone company's central office, using the DMS 100, or on a user's premises in the form of a private branch exchange or SL-1.

Northern Telecom intends that its OPEN World products and services will meet five criteria: continuity, by evolving to avoid obsolescence; compatibility, to enable diverse components to work together; congeniality, to ensure that equipment and systems are easy to use and attractive; control, to manage optimum performance of the system; and cost-effectiveness. Northern Telecom will use these criteria as a framework for helping organizations plan their information management systems.

Other elements of the OPEN World include:

- New terminals such as sophisticated telephones with display capabilities for a variety of information services. There will also be new versions of Northern Telecom's Displayphone, a combined telephone and data terminal which has a retractable keyboard and video display screen. The company will introduce an even more powerful terminal capable of graphics, image, voice and text communications.

- Additional higher transmission capabilities to accommodate more powerful terminals. The company will substantially increase the bandwidth (range of frequencies) used on twisted pair wire, the same wire which telephones use and which is already installed in most buildings. Under the direction of a digital controller, the existing telephone wiring can become a very powerful local area network, that is, private network.

For the past two decades, Northern Telecom and Bell-Northern Research have been designing computers for increasingly sophisticated and cost-effective telecommunications systems. An advanced computer terminal is used to design complex, multi-layer printed circuit boards for Northern Telecom's digital switching and transmission systems.