Special purpose terminals

This technical area focuses on the current state of the art in Special Purpose Terminals and provides a forum for discussion of the future trends in Special Purpose Terminals. The sessions are balanced to provide sufficient definition, by contrasting the Special Purpose Terminal with the General Purpose Terminal, along with special aspects of terminal operations such as voice input.

The criteria associated with planning a special purpose terminal for a given marketplace is explored. The major influences exerted by Engineering, Marketing, Manufacturing and competition are examined and placed in perspective. It gains this perspective by examining basic trade-offs on cost, performance, implementation, marketplace, competitiveness and profitability.

The areas of market and product existence, product salability, and administrative analysis are examined with details on decision steps required to complete the product planning. It highlights the decision criteria and planning process by walking through a special purpose terminal that was designed to displace a general purpose terminal.

Making a special purpose terminal work in a general purpose system environment complements the decision to produce a special purpose terminal. Labor costs for factory operation along with the need to reduce inventory costs have been a strong motivator for the special terminal in the factory. Most factory oriented special purpose job oriented terminals need to directly communicate with large scale general purpose data processing systems. This technical area presents the system implementation used to connect an interactive factory data collection system on line to a large scale IBM data processing system operating in an IMS data base environment.

The factory terminal system has many requirements which include both general purpose and special purpose parameters: Time and Attendance (Special Purpose), Last Job Checkout (Special Purpose), Inquiry (General Purpose), and Material Tracking (General and Special Purpose).

The method chosen for interfacing the complete system was to emulate a general purpose network of IBM 3270 type CRT terminals. The emulation technique provides for many on-line different modes of operation including the following: 3270 Emulation in the remote communications mode, 3270 Emulation with direct channel attachment, Transparent mode of operation, Data collection...
mode of operation, and Interaction with both main data base and fast response local files.

The future of Special Purpose Terminals is broadly covered with emphasis on input devices that complement the environment that we find in the special purpose terminal. "The Future of Special Purpose Terminals" examines current trends in computer terminal development and extrapolates these into 1978-1988 time period, with special emphasis on the transition from large scale integration (LSI) to very large-scale integration (VLSI). This session offers projections concerning the demands for special purpose terminals and on the ability of the industry to respond to these demands. Additional explorations are examined in more detail by the panelists who have chosen to concentrate on specific technology areas as well as on the extent in which future advances in technology are likely to affect terminal systems presently in use.

One point of view that will be presented asserts that the single most important attribute of the interactive computer terminal of the future is that it contains a general-purpose computer with the approximate characteristics of a present-day mini-computer. Another point of view points out that voice data entry, long recognized as an ultimate step towards simplifying communications between a human and a machine, is now a reality. Over 200 voice terminals are currently in operation in a variety of industrial and commercial applications in eight countries around the world. New speech input terminals using microcomputers have been introduced which can replace and/or complement intelligent CRT/keyboard stations by enabling the user to enter data by voice.

The potential applications of voice data entry are determined by the economic advantages of voice input as compared to other alternative data entry devices and/or techniques. As the cost of voice data entry terminals decreases, more justifiable applications will arise, particularly when the true costs of data capture are considered. In some cases, voice input offers advantages which far outweigh the direct labor savings and permits certain operations to be achieved which could not easily be accomplished using alternative data input techniques.

A third point of view addresses the impacts of technology advances on current data entry terminals and their use. How long does it take for an incumbent industry or profession to yield to the onslaught of new advances? It observes that keyboard data entry is supposed to have been "dying" for over 20 years, ever since the introduction of optical character recognition (OCR). Each time a new device is developed the cry "keyboard data entry will become obsolete in five years" is heard again. Yet through all of this, there are more data entry keyboards of some type in use today, and more are projected for the future.