

Preface

While voice communications systems carry the bulk of our casual messages, it remains the task of written communications to convey vital information between organizations. Written messages provide clarity of detail, serve as permanent records, and are readily sorted, prioritized, and routed.

Electronic messaging has proved itself to be extremely useful within organizations in providing the benefits of written communications with the speed and economy of electronic delivery. The implementation of widespread electronic mail service *between* separate companies and organizations—with the notable exception of several academic and research networks—has been hampered by the general need to use systems and formats that are not integrated with the user's desktop workstation.

Situations abound where rapid and convenient electronic messaging to other organizations would be a tremendous advantage. For example, pricing, availability, ordering, and shipping information can be beneficially exchanged daily between firms for effective management of large projects, and for efficient control of manufacturing inventory.

Now new standards are available, based on the work of the International Telegraph and Telephone Consultative Committee (CCITT), for message-handling systems that allow information to be exchanged between computers of different manufacturers. These proposed standards, known as the X.400 series of recommendations, promise to make sending messages *between* organizations as convenient as sending those *within* one's own establishment.

The paper by Schütt, Staton, and Racke describes the X.400 work conducted by the IBM European Networking Center. The authors discuss a X.400 prototype for VM/SP, along with areas for future enhancements and further standardization.

The recommendations of the ISO (International Standards Organization) reference model for Open Systems Interconnection serve as the basis for the CCITT X.400 communications model and protocols. The paper by Fleischmann, Chin, and Effelsberg describes research efforts to generate operational software directly from the layer specifications, thus eliminating the need for traditional coding efforts. This approach provides an accurate and portable implementation, and requires conformance testing to be accomplished only once.

The development of information systems can be viewed as having followed design methodologies drawn from a number of other professional disciplines and work practices. There has been abundant discussion of the various ways used to describe the design of information systems. In his paper, Zachman takes a fresh approach to viewing system design by analogy to the work steps and representations of the classical architect and others who produce complex engineering products.

Certain transaction processing applications demand system designs with continuous processing capabilities. The paper by Harrison and Schmitt provides an introduction to such a system, the IBM System/88. Designed to be fault-tolerant, this system was designed and manufactured by Stratus Computer, Inc. and is marketed by IBM.

The communications capabilities of the System/88 have been greatly enhanced to include comprehensive Systems Network Architecture (SNA) support, thus allowing the System/88 to serve as a full partner in SNA networks.

Gary Gershon
Editor