

Interface Design

Recent behavioral science work at Bell Laboratories and American Bell has focused on a portion of the user-machine interface, best characterized as dialogue design. This work has included the design of dialogues used for human-computer interactions, such as command languages, menu systems, and text editors. All of these are used in systems provided to customers and in the complex operations support systems used by telephone company employees. Dialogue design has also included new methods for interacting with advanced telephone services, such as call forwarding and teleconferencing.

The papers in this section focus on interface design. At best, from a human factors viewpoint, right from the start behavioral scientists were able to influence system design so that the most desirable interface was provided. In other cases, the functioning of machines was already determined, so that the behavioral scientist's job was to provide the best training or instructions to help users with their side of the dialogue.

The papers by Furnas, Landauer, Gomez, and Dumais, and by Streeter, Ackroff, and Taylor, are examples of research that guide the design of user-computer dialogue. The paper by Karhan, Riley, and Schoeffler describes the design of printed instructions to assist users of public telephones. The dialogue between people and telecommunications equipment often includes such interactions with printed material. The paper by Coke and Koether examines the readability of frequently used Bell System documents and the reading abilities of those who use them. Finally, the paper by Holmgren discusses the design of dialogues for users of automatic speech recognition devices.

