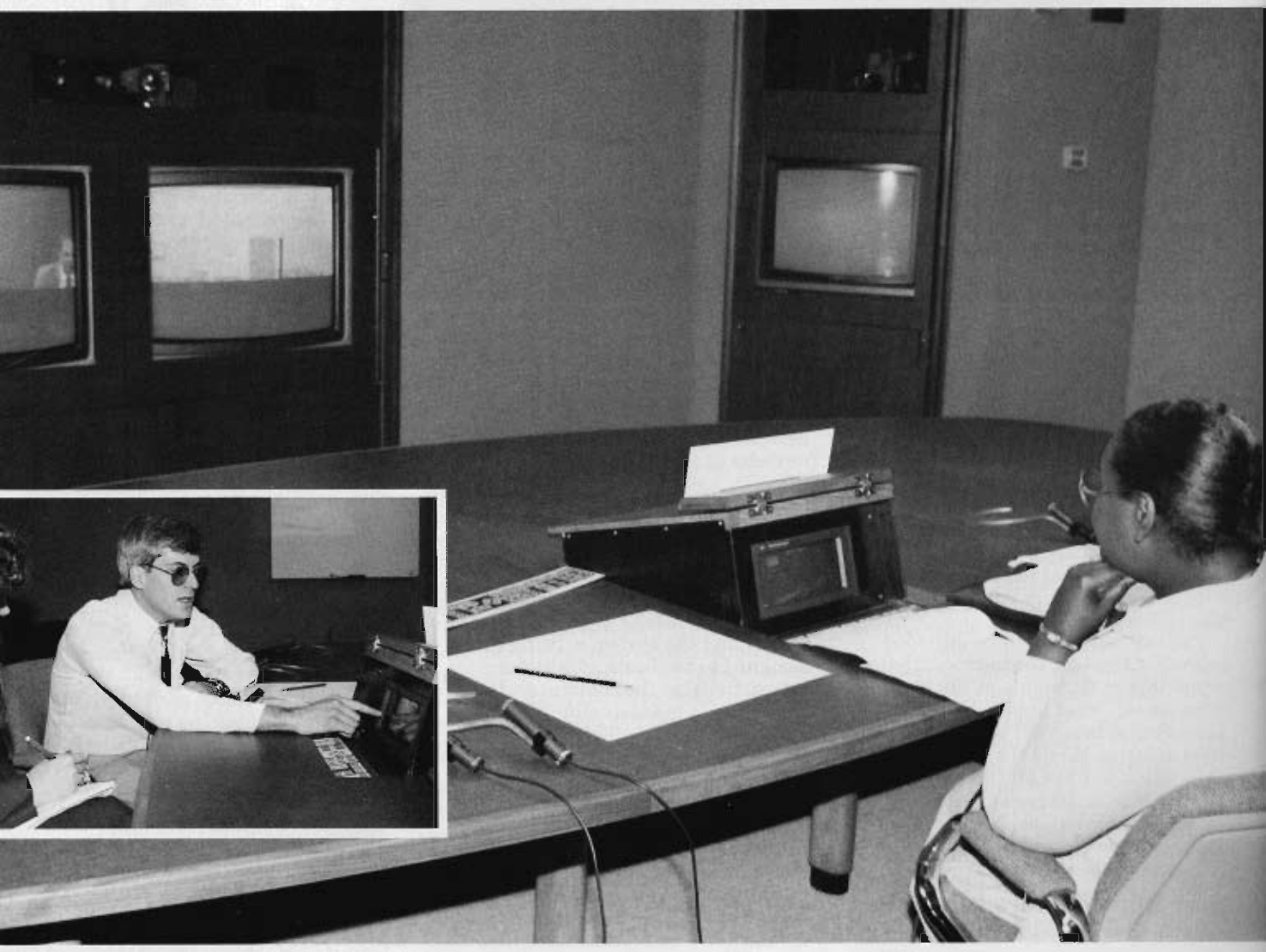
Video teleconferencing: harnessing distant brainpower



Above: Laura Hope participates in a video teleconference with other AMC Civilian Personnel staff members at other posts. Inset: Jeffrey Buskin, acting director of teleconferencing at Aberdeen Proving Ground, demonstrates use of their facility. (U.S. Army photo by Sgt. James Avilla)

by Kara Hugglestone

Shades of startrek! The age of video teleconferencing has come to the Army.

Gen. Richard H. Thompson, commander of the U.S. Army Materiel Command (AMC), is one of the Army's first commanders able to speak to his subeommanders face-to-face without leaving his post or them traveling to his.

AMC's new system is of speeial interest to the U.S. Army Information Systems Command community because—according to Charles Stefanic, communications management specialist at Fort Ritchie—USAISC also has requested a video teleconferencing system. Stefanic added that USAISC's system can be expected sometime in fiscal year 1989. AMC reeeived the conferencing system first because they identified a need four or five years ago, while USAISC's request has been relatively recent. The conferencing operation at AMC is also important because it will serve as a testing block for an Armywide video teleconferencing link-up.

One of the principal ideas behind Army video teleconferencing is the elimination of costly and time-consuming temporary duty (TDY). Based on 4,400 TDY trips that would have been scheduled, Thompson estimates that the new facilities have saved the government over $800,000 in TDY expenses. Other reasons for building the centers were to stop travel avoidance, to speed up and involve more people in the decision-making process, and to minimize the personnel hardships frequently created by TDY travel.

The AMC system consists of 10 video teleconferencing rooms. One is designed especially for the AMC commander and his aide-de-camp and seats just two. The others are located at seven major subcommand and two other locations at AMC headquarters in Alexandria. These nine rooms, identically designed, seat six, with extra room and chairs for more participants. Three cameras are posted close to the ceiling above two large 30-inch screens. To the participants' left is a chalkboard, and on the right side wall is another camera, able to pick up the chalkboard and table top documents. This camera eliminates the need for a chalkless chalkboard, which has recently come into vogue with video conferencing services. (The chalkless board transfers writing, while it is being written, to receiving rooms.)

Beside the camera is another screen, used for additional information, said Jeffrey Bushkin, acting director of teleconferencing at APG. The two front screens are usually used to view written material as well as participants at other locations.

Close to the screen is a video cassette recorder. Currently, AMC can only record one side of the communication, either the side transmitting or receiving. However, according to Bushkin, they hope eventually to be able to record both sides of the conversation simultaneously.

Located in the middle of the conference table is a control panel that performs many functions, such as turning on the video recorder, giving face-to-face close ups, freezing images, printing images, using the zoom lens, controlling the slide advance, and adjusting the volume. The teleconferencing rooms are surrounded by a one-inch metal shield enclosure, which protects the transmission of secure information.

The television cameras transmit a "near full motion" picture. This means the action appears just a little slower and may jerk a bit, but the picture is very clear. Bushkin said that this type of transmission was chosen because high quality phone lines can be used to ensure high quality communications and to save money.

David Leapley, AMC Video Conferencing program manager, said that all 10 AMC facilities were built at a one-time cost of $4.2 million. This figure excludes the future leasing agreement for AT&T conferencing equipment. The cost of building the different centers varied from $254,000 for the small room at AMC headquarters to $506,000 for the center at Aberdeen Proving Ground. All of the centers were built in existing buildings, with the exception of the ones at Aberdeen and Letterkenny Army Depot in Chambersburg, Pa., which were built from the ground up.

Larry Ross, chief of Optical Engineering at Aberdeen Proving Ground, claimed that choosing to lease the equipment from AT&T instead of purchasing it right away was "good financial management." AMC has rented the equipment for 10 years with an option to buy. At that time, with the rapid growth of conferencing technology, AMC may decide to purchase the equipment or buy a more sophisticated system.

Bushkin said that the teleconferencing rooms are available 360 days a year and that to accommodate the demand conferences have to be scheduled on weekends or after normal duty hours. Video conferences are scheduled on an average of 40 hours a week at Aberdeen.

Laura Hope of the Civilian Personnel Office at APG uses the facility frequently, and her reaction pretty well sums up the advantages of the new system: "I think it's terrific. I don't have to go TDY, and when I'm not involved in what they are discussing, I can return to my office and get more work done."

A capsule history of video teleconferencing

The idea of video teleconferencing began in 1964, with the introduction of AT&T's Picturephone Meeting Service. This public "business meeting" video teleconferencing is a network of public rooms, available for rent by the hour.

In the past few years, investments in interactive video conferencing systems have also been made by major corporations such as Etna and Xerox. According to an article in *Satellite Business Systems*, a good number of the original systems were installed for a special purpose. For example, Ford Motor Company uses a system to discuss the aerodynamic tests by automotive engineers hundreds of miles away from a wind tunnel. IBM Corp., Deere and Co., and Hughes Aircraft Co. use the video conferences to manage new product development among design centers and manufacturing facilities in distant areas.

Today, the Picturephone Meeting Service is still the predominant public room video teleconferencing system. However, Intelnet, which is a joint venture of Intercontinental Hotels and COMSAT General, also offers public room video conferencing, with rooms in New York and London.

Growth in this field has been so significant that, measured by the number of rooms, video conferencing has shown an annual growth rate exceeding 100 percent since 1982.

Ms. Hugglestone is a writer in the 7th Signal Command Public Affairs Office at Fort Ritchie, Md.