ADCIS SIG CBT

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CBT RESEARCH IN THE NAVY

Susan G. Gardner

The advent of small, independent computer terminals provides certain features which appear to be especially advantageous to military training. The use of low-cost, stand-alone terminals is being investigated as a means of providing more effective technical training. A Navy research and development project will examine the use of a computer graphics system to train radar operators.

Training radar operators to be highly proficient at detecting, recognizing, and responding rapidly and accurately to incoming signals is a critical requirement. Researchers at the Navy Personnel Research and Development Center have developed a configuration of independent audio-visual components to serve as an inexpensive multi-media training system.

The basic component, a graphics computer system, includes the following features: a Digital Equipment Corporation LSI-11 microcomputer with a 56K byte memory, a video controller/display unit, and an ASCII keyboard. This system was selected in view of the specific features provid-

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ed to the user, such as the extensive graphics capability. The processor is a self-contained microcomputer system having 28K words of 16-bit MOS RAM and a floppy disc. The microcomputer and video unit each occupy less than one cubic foot and weigh approximately 40 pounds. The display unit is a 12-inch black and white monitor mounted in a free-standing pedestal base cabinet which places the horizontal center line of the display at a comfortable viewing height. Contained in the display unit is a 2-inch speaker for use with the programmable frequency amplitude audio feature. This unique feature permits supplementary simulation capabilities in that the recognition of frequency tones is a prime characteristic for rapid and accurate signal recognition. The graphics display unit provides a 320 dot wide x 240 dot high raster scan display. User programs can simultaneously display both graphics and a 24 x 80 alphanumeric character array. The entire system as described above is currently available for approximately $10,000.

This computer system, which is programmable through a variety of standard languages, and has the added capability of producing medium resolution raster scan graphics, appears to have the needed capabilities for training in radar signal analysis. A random access slide projector interfaced with the microcomputer enables concurrent viewing of slides repre-

CBT GAINS VISIBILITY

Kathleen Adkins, Editor

Computer-based training is getting more attention in the larger world of training and development these days. The September issue of "Training", a widely circulated magazine for professionals, features an article on the capabilities and potential of micros in training applications. The article mentions the United Airlines application that we're familiar with from the San Diego ADCIS convention, as well as several others that have proven cost-effective.

It also discusses efforts to coordinate video playback and computerized instruction, a development which, when successful, will add a powerful new tool to the trainer's box of technical aids.

Sessions on CBT are becoming a standard feature of training conventions. An upcoming national conference (Training '79, December 3-6, New York City) offers three sessions on computer applications in training, and regional conventions are getting into the act as well. The American Society for Training and Development's western-region fall convention includes a workshop on CBT, for instance.

These and other developments make it clear that we're on the verge of seeing interest in CBT spread from a small group concerned with a new technology's means -- languages, hardware, configurations -- to a larger group of trainers whose chief concern is the end result: producing an effective training program for those new hires in field service or inventory control. Once they have a developed, workable product, they'll make computers a universal training tool like the slide projector or flip chart.

THE CHAIR'S VIEWPOINT

Jesse M. Heines

There has recently been a flurry of activity in preparation for the 1980 ADCIS conference on March 31 to April 3 in Washington, D.C. Harold Rahmlow of the American College has put together both the general presession and a presession sponsored by the SIG CBT. The general presession will include presentations on systematic CBE development, instructional designs, graphics, adaptive testing, evaluation, and management and documentation. The SIG CBT presession will include presentations on when CBT makes sense and developing and reviewing CBT materials.

Even though these presessions are ostensibly targeted for the CBE novice, I believe that they will prove interesting to experienced practitioners as well. I encourgae you to attend. (Arriving early at the Conference also helps assure you of getting a room at the hotell)

I have recently received drafts of 8 papers submitted for presentation at technical sessions of the SIG CBT. These appear at first reading to be of wide-ranging interest, and should provide us with a springboard for stimulating discussion. These papers will now be sent to our review committee for judging. I have proposed to the SIG officers that we offer honorariums for both the best paper in printed form and the best paper presentation at the Conference.

I am also happy to announce that membership in our interest group has passed the 100 mark—we are now 112 members strong. I attribute some of this successful growth to the quality of our Newsletter, because this is the single most visible activity that our SIG conducts (outside of Conference activities). Kathleen Adkins has done an excellent job of picking up the Newsletter Editor responsibilities and beating the bushes for contributions. The basic raison d'etre for the SIG CBT is to foster communication between CBT professionals. I therefore strongly encourage members of the CBT community to share information about their work with their colleagues through the medium of this Newsletter.

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senting actual radar scope presentations along with simulated versions to which the student can respond and receive individualized feedback. By covering specific keypads with labels corresponding to actual radar switches, a simulated version of equipment is created. Simulated versions of various radar scopes, scans, beams, and readouts displayed on the graphics unit combined with the keyboard mock-up permit the student to engage in practical exercises at a comparatively low cost.

Maximum use of computer graphics in conjunction with individualized lessons are employed to teach basic concepts, present drill and practice, and to test student performance. A variety of simulated presentations of radar analysis scopes, pulse repetition frequency, audio, etc., which would be encountered during training and job performance, are emphasized. Recording of student performance will include time latencies from display presentation to response time and overall lesson times. In addition, student data trails through each lesson by frame number, including responses to criterion-referenced practice and test questions, are recorded.

Uses of such a training system range from initial training and performance testing, prerequisite skill assessment for costly, large-scale simulator-based training devices, remediation and refresher training,

to shipboard applications such as on-the-job training.

Advantages of stand-alone terminals include the following: 1) minimum impact on space, established larger computer installations, and on-going training systems; 2) portability enabling transport to other schools, ships, and remote sites with minimal transportation and installation difficulties; and 3) versatility which facilitates conversion from one application to another through substitution of floppy discs and other media cassettes, at reasonable cost.

In addition to providing lower cost simulation and reduced hardware associated with computer-based training, future uses include small gaming scenarios and opposing-player tactical games by interconnecting two systems. Follow-up plans to interface random access video tape and video disc players should provide an even more efficient training delivery system.

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