



ADCIS SIG CBT

NEWSLETTER

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The Newsletter of the Association for the Development of Computer-based Instructional Systems Special Interest Group in Computer-Based Training

CBT RESEARCH IN THE NAVY

Robert Wisher

The classroom has long offered a multi-media experience. Even the old one-room classroom provided pictures to see, slates to draw on, globes to twirl, etc. Modern technology has repackaged many of these experiences in electronic form, and the computer stands ready to regulate their operation. For the classroom of tomorrow, the student will have screens to view, lightpens to point with, and discs to load.

With the availability of a computer to govern the mixing of media, as well as to collect various on-line measures of learning, the instructional designer is limited not so much by materials as by creativity. In order to identify optimal combinations of media, the Navy Personnel Research and Development Center in San Diego developed an on-line, multi-media laboratory for instructional research and development. Connected to a Digital Equipment Corporation PDP-11/70 minicomputer are four multi-media carrels, delivering instruction through video and audio systems and receiving responses by a data-entry system. Each carrel may be run independently of the others.

Robert Wisher is a Research Psychologist in the Performance Measurement and Enhancement Group at NPRDC, San Diego, CA 92152.

The video system consists of a video cartridge recorder and receiver, a video disc recorder, flying spot scanner, graphics generator, scan converter, and a special effects generator. All sources are branched through a video switcher, and are under full computer control. Playback of the video recorder can be synchronized to any other video source in the system. One audio track stores tone bursts for random accessing of selected video segments. The flying spot scanner provides video signals representative of 35 mm color slides. The slides may be changed by a tone-cueing on the control track of an audio cassette tape, by computer control, or by a remote random access selector. The scan converter is a self-contained, highly stable electrical signal storage unit. It accepts and stores externally-originated video information, and allows freeze framing and graphics interaction. The special effects generator is used to combine two synchronous video sources to produce a single video output. The generator can also insert signals at each corner of the picture frame, as well as superimpose alphanumerics and graphics on other video sources.

The audio system consists of an audio cassette player, the audio channel of the video recorder, and a digital voice synthesizer. Again, all sources are branched through an audio switcher and are under full

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The ADCIS CBT Newsletter is published quarterly by the ADCIS Special Interest Group in Computer-Based Training. Its purpose is to encourage the exchange of information on instructional computer applications in business, government, and industry.

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Articles on computer-based training are invited from all members of the training community. Manuscripts should be limited to one or two double-spaced pages and submitted to the editor.

Any opinions, conclusions, or recommendations expressed in this newsletter are those of the authors alone. They do not necessarily reflect the views of ADCIS, the SIG CBT, the editor, or the authors' employers.

Requests for reprints and/or further information should be directed to the authors. Requests for membership in the ADCIS SIG CBT should be directed to the Secretary/Treasurer.

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FROM YOUR EDITOR

Kathleen Adkins

What's happening with computer-based training at your company? Let everyone in on it! Send a paper or description for inclusion in a forthcoming issue of the Newsletter to: Kathleen Adkins, Savin Corporation, 87 Belden Drive, Los Altos, CA 94022.

THE CHAIR'S VIEWPOINT

Jesse M. Heines

The first showing of the SIG CBT at the 1979 Conference was a strong one. Our technical sessions were well-attended, and a great deal of interest was demonstrated at our business meeting. The titles of papers presented at technical sessions, along with their authors' names and affiliations, are printed in this issue.

It is not too early to be thinking of next year's conference, March 31 - April 3, 1980, in Washington, D.C. Information on submitting papers and project reports can be obtained from Dr. James Eisele, 124 Aderhold Hall, University of Georgia, Athens, GA 30602. Our SIG is currently planning to offer an award for the best CBT paper presented at this Conference.

The minutes of the SIG CBT business meeting, which appear in this Newsletter, highlight the establishment of six new committees. As with all organizations of this type, these committees are staffed by volunteers and could use additional help. If you wish to help the SIG further its goals, I encourage you to help us in running the organization and pursuing these worthwhile activities. I personally wish to thank those members who have already volunteered to serve on these committees, congratulate our new officers, and compliment the speakers at our first conference.

BUSINESS MEETING MINUTES

Robert C. Fratini

The meeting was called to order by Jesse Heines, Acting Chairperson. Discussion began on the subject of several activity committees that Jesse Heines recommended be established. They are listed below, with a brief stated purpose:

1. Workshop Committee - to organize a Novice Pre-session Workshop for the 1980 ADCIS Conference to deal with issues crucial to professionals new to computer-based training.
2. Who's Who Committee - to identify and spotlight major developmental projects in computer-based training.
3. Membership Committee - to undertake actions to increase the visibility of the SIG CBT to increase SIG membership.
4. Standards Committee - to identify broad standards of quality to be recommended for use in the development of CBT projects, for a vote by the membership of the SIG CBT at the 1980 ADCIS Conference.
5. Awards/Publications Committee - (combined at the suggestion of the membership) to develop standards for CBT papers at the 1980 ADCIS Conference, with a goal of presenting a cash award to the best CBT paper presented at the Conference; and organizing a special issue of JCBT on computer-based training.
6. Governance Committee - to draft by-laws for the SIG CBT for the Governance of the SIG in accordance with ADCIS overall charter.

The following members volunteered to work on each committee; (C) indicates a person agreeing to serve as coordinator of the committee:

Workshop

Harold Rahmlow (C), Jim Hutton, Bob Fratini

Standards

Kathleen Adkins (C), Natalie Lowe, Jim Hutton

Who's Who

Natalie Lowe (C), Kathleen Adkins

Membership

Peggy Batson (C), Jesse Heines

Awards/Publications

Donna Hutcheson, Bob Fratini

Governance

Jesse Heines

Brief discussion of committee activities followed. The Workshop Committee was asked to submit an outline of the workshop to be held at the 1980 Conference by July 1; Natalie Lowe requested anyone who had ideas for the Who's Who Committee or knew of exemplary CBT projects to contact her; and the Membership Committee stated its intention to explore low-cost ways to bring attention to the SIG CBT in journals of the training industry.

Nomination and election of officers followed. Acting Chairperson suggested that elections be held for the following offices and terms:

Chairperson (2 years)
Vice-Chairperson (2 years)
Secretary/Treasurer (2 years)
Newsletter Editor (1 year)

Brief discussion was held concerning the idea of replacing the office of Vice-Chairperson with one of Chairperson Elect, to succeed to Chairperson at the end of his or her term. A vote of the membership present was taken, and it was decided to maintain the office as Vice-Chairperson.

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WHO'S WHO COMMITTEE

Natalie Lowe
Kathleen Adkins

One of the major goals of organizations such as ADCIS is to bring together people with similar professional interests and provide a forum for them to share ideas. Toward this end, the SIG CBT Who's Who Committee was formed to compile a list of the major persons and projects related to CBT. We hope to publish our first such list by the 1980 Conference. To participate in this activity, please complete the form below and return it by October 1979.

COMPUTER-BASED TRAINING WHO'S WHO

Please return to:

Natalie Lowe
CDP Consulting, W-0
AETNA Life & Casualty Insurance Company
151 Farmington Avenue
Hartford, CT 10658

Name _____

Title _____

Organization _____

Address _____

City/State/Zip _____

Telephone _____

Specialization _____

Current Major Projects _____

Other Related Activities _____

READER'S INFORMATION COUPON

For further information on ADCIS and/or the SIG CBT, please check the appropriate box(es) below and return this form to:

Robert Fratini, Secretary/Treasurer
ADCIS SIG CBT
Western Electric - 305161
5151 Blazer Memorial Parkway
Dublin, OH 43017

I would like to become a member of ADCIS. Please send me information and a membership form.

I am already a member of ADCIS, and I would like to become a member of the SIG CBT. If I am a member of another SIG, I understand that this will result in an additional \$5 charge.

I am already a member of the SIG CBT. Please send me a membership list. Enclosed is a check for \$2 made payable to ADCIS to cover postage and handling.

Name _____

Title _____

Organization _____

Address _____

City/State/Zip _____

Telephone _____

BUSINESS MEETING (from page 3)

Nominees for offices were as follows:

Chairperson: Jesse Heines
Vice-Chairperson: Chuck Buchanan
Bob Fratini
Secretary/Treasurer: Bob Fratini
Newsletter Editor: Kathleen Adkins

After Bob Fratini withdrew his name from nomination for Vice-Chair-

person, the slate of officers was elected by acclamation as nominated.

Chairperson Jesse Heines and Vice-Chairperson Chuck Buchanan agreed to divide the responsibilities for overseeing the actions of the various committees of the SIG CBT as follows:

Jesse Heines: Workshop, Awards/
Publications
Chuck Buchanan: Standards, Who's Who, Membership, Governance

**ADCIS ANNUAL
1980 CONFERENCE
Washington, D.C.**

**Novice Preession: March 31, 1980
Main Session: April 1-3, 1980**

Stouffer's National Center Hotel
2399 Jefferson Davis Highway
Arlington, Virginia 22202

Conference Host
Mary Broman
The MITRE Corporation
METREK Division
1820 Dolly Madison Blvd.
McLean, Virginia 22101
(703) 827-6677

1979 SIG CBT PAPERS

Following are the titles of technical papers that were presented at the 1979 ADCIS Conference in sessions sponsored by the SIG CBT. Abstracts of these papers will appear in a forthcoming issue of the Journal of Computer-Based Instruction. For copies of the full papers, please write to the individual authors.

Results of One Year Computer Based Instruction at the United Airlines Flight Operations Training Center

Charles C. Buchanan
United Airlines Flt Trng Center
Stapleton International Airport
Denver, CO 80207

The Use of Interactive, Computer-Managed Instruction to Control the Quality of Self-paced Training Without Requiring the Presence of an Instructor

Jesse M. Heines
Digital Equipment Corporation
12 Crosby Drive, BU/D2
Bedford, MA 01730

Analysis of Instructional Delivery Systems in Vocational Education Comparing Computer-Managed Instruction, Teacher-Delivered Module and Lecture-Demonstration for the Same Instructional Module

Edward E. Boas, Jr.
University of Delaware
Newark, DE 19711

Requirements Analysis and Feasibility Study of Computer-Based Instruction for Federal Aviation Administration

John Buck
Duane Bullard
Federal Aviation Administration
Dept of Transportation, APT-310
800 Independence Avenue
Washington, DC 20591

A Computer-based Study Guide for Aviation Certification

Stanley Trollip
University of Illinois

Dynamic Military Engagements Through Computer Supported Graphics

W. M. Darden
S. G. Parrish
U. S. Naval Academy
Annapolis, MD 21402

Computer-Generated Graphics and Individual Differences in Map Reading Training

Zita M. Simutis
Army Research Institute

NAVTAG Simulation (Naval Tactical Action Game)

Ronald E. Ladue
Ronald R. Lambert
United States Naval Academy
Annapolis, MD 21402

Patriot Fire Control Operator Teaching Model Using Computer Directed Instruction

Captain Gary C. Ritter
Mr. Donald C. Johns
U. S. Army Air Defense School
Fort Bliss, TX 79916

CBT RESEARCH (from page 1)

computer control. The cassette player allows random accessing of narrative segments and provides both local and computer-controlled transport functions. There are bidirectional skip modes which fast-wind the cassette directly from play mode and returns it to play mode. Stored on the PDP-11/70 disc is a dictionary of over 8,000 words encoded in phonemic form, giving the voice synthesizer an ample vocabulary.

The data entry system consists of a special-function keyboard, data tablet, touch-sensitive digitizer, and a voice recognition unit. The keyboard has keys for cursor control, system functions, and a separate column for multiple-choice responses. The data tablet is an accessory to the graphics generator, providing high resolution digitization with a

ballpoint pen as the input device. Coupled with the conograph, the tablet can produce graphics independently of computer software. The touch-sensitive digitizer serves as a direct student interface to the computer. By simply touching the surface with a finger or pencil, the user can enter x-y coordinate data. Operation is based on echo-ranging techniques. The voice recognition device can identify a maximum of 96 isolated spoken words or short continuous phrases less than two seconds long. Recognition is limited to a single user's voice.

It is unlikely that one application would use all of these devices. The intention was to provide an all-purpose resource with which to develop, test, and evaluate instructional options. The researcher may then recommend the ideal configuration for a specific training application.

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(Address Correction Requested)