

Georgia Tech Sponsored Research

Project	K-10-647
Project director	Horton Beth
Research unit	CRT/REHAB
Title	CD-ROM Training , Development, and Support Project
Project date	10/31/1998

**CD-ROM Training, Development and Support Project
FINAL REPORT
Contract K10-647, Fiscal Year 1998**

This final report covers the period from November 1, 1997 through to June 30, 1998. The original contract was scheduled to end October 31, 1998. The sponsor made the decision to terminate the contract by June 30 and to delete several deliverables. A copy of the letter requesting the deletion of deliverables is attached to this report. This report will summarize the accomplishments under this contract.

HISTORY

The project involved further training and evaluation of the CD-ROM known as the American New Reading Disc (AmNRD). This CD-ROM was originally developed in England by Cambridge Training and Development, Ltd. CRT was heavily involved in developing American text, audio and video to adapt the package for the United States. CRT, Inc. has obtained rights to commercialize the software and has provided funding for further development and evaluation. In addition, CRT, Inc. obtained a grant from the Whitehead Foundation to provide a number of the CDs to Georgia literacy teachers and to train them in its usage. The field evaluation and the grant support for software and training have been arranged with the full knowledge and cooperation of the Georgia Department of Technical and Adult Education.

During the first quarter of 1997, the software was field tested in a number of classrooms in Georgia by two groups, the Psychology Department at Georgia Tech and the Adult Education Department at the University of Georgia. The field evaluation found that teachers and students who used the software enjoyed it and felt it a valuable adult literacy education tool. Its flexibility accommodated a variety of classroom structures and instructional approaches and encouraged independent student work. Its technological features had a positive impact on the learning process and fostered a sense of self-confidence among students.

To further evaluate the AmNRD, CRT, Inc. requested the involvement of CRT staff to distribute the software through statewide training of adult literacy practitioners. The contract also

was intended to provide technical support to those teachers who received AmNRD, give feedback on any software failures or errors, demonstrate the software at professional conferences, and revise/ maintain the software as required or needed.

1.0 CONTRACT DELIVERABLES

1.1 Technical Documentation

There was no activity under this deliverable. The deliverable was deleted by the sponsor. (See Appendix A, letter from the sponsor dated February 17, 1998.)

1.2 User Documentation

A formal review of the AmNRD software began in November 1997. The project personnel (principal investigator, instructor, and technical analyst) reviewed every aspect of the software, from installation through to online documentation. Each menu and exercise was reviewed to determine whether any media flaws or software glitches existed. A list of problem areas was submitted to the sponsor. (See Media and Software Flaws in Appendix B)

A training workbook was revised to include user documentation. The training workbook was given to each participant of the training along with the AmNRD CD.

1.3 Material and Curriculum Development

The previously produced training materials were reviewed and revised to accommodate the two-day training structure outlined by the sponsor. A workbook was created to guide the training participants through the installation, use, and authoring capability of the software. The workbook was given to the participants to assist them with implementation in their classrooms and labs. An electronic copy of the manual was turned over to sponsor for printing and copyrighting.

Other materials such as PowerPoint presentations, participant registration, and training results were also submitted to the sponsor.

1.4 Field Training

The purpose was to provide a training overview for the American New Reading Disc. The

training took place over an 11-week period across the state of Georgia. The maximum number of scheduled participants at each of the sites was eight (because of scheduling there were nine at one site). The training was accomplished by taking nine laptop computers to the training site. In order to replicate a desktop environment as much as possible, external mice were used for each computer. Headphones were used to avoid the confusion that would have resulted had the external speakers been employed. Both traditional headphones and the "earbud" type were available for participant comfort.

An overhead projector was used to display the graphics developed for the training. These graphics were assembled via Power Point technology and in the interest of clarity, each menu item was labeled with its appropriate title. Overheads for all American New Reading Disc icons and graphics were created. It was found that the following listed overheads of the menu items and icons were the most useful.

- Main Menu
- The Basic Reading
- Assessment
- American New Reading Disc Icon Quick Reference Guide

The training staff visited each site prior to the training in order to become familiar with the training facility. Setup for the training sessions required at least one hour. This included arranging seating, setting up each computer, attaching peripherals, connecting the power source, distributing the discs and manuals, and setting up the overhead projector and screen. It was necessary to be both flexible and creative, as each training site was different.

Each training session began with introductions of the participants, basic information about computers and an overview of the American New Reading Disc. Each component of the program was introduced in order from the Main Menu through the Assessment Exercises. The participants then installed the program and accessed each component.

Following the introduction of the program, the participants were given the opportunity to explore the writing exercises by performing them, copying them to the clipboard and pasting them into a word processor. Upon completion of the first training day's tasks, the participants were

instructed to uninstall the program and convened for the day.

On the second training day, after reinstalling the program and reviewing the first day's activities, participants were stepped through the function and capability of the Authoring Tool. Emphasis was placed on the "Writing an Article" component of the Authoring Tool. The participants were responsible for authoring an article, debate, and letter. The final task was to again uninstall the program. A workshop registration form and evaluation was completed by each participant at the end of the two-day training.

Table 1: Field Training

FIELD TRAINING DATES	LOCATION OF TRAINING	NUMBER OF PARTICIPANTS
March 11-12, 1998	Valdosta	6
March 17-18, 1998	Albany	6
March 25-26, 1998	Savannah	6
April 1-2, 1998	Columbus	4
April 7-8, 1998	Madison	3
April 15-16, 1998	Rome	9
April 21-22, 1998	Gainesville	7
May 6-7, 1998	Dublin	5
May 12-13, 1998	Jonesboro	5
May 20-21, 1998	Alpharetta	6
May 30, 1998	Atlanta - Literacy Action, Inc.	7

1.5 Customer Support

The project's Help Desk was developed to provide technical assistance to the approximately 100 Georgia teachers installing and using the software. The Help Desk also was responsible for collecting information about problems in the software and to advise sponsor of these problems for correction in a later version.

Support was provided through a Georgia toll-free number to a full-time Technical Analyst who logged calls and assisted as needed during normal business hours. Relief support was provided by another Technical Analyst at 20% time. Support was limited to technical issues on the approved equipment, as stated in the AmNRD training manual.

The project staff installed the American New Reading Disc software and Remedy Help Desk client software on a Windows 95 personal computer provided by the sponsor. The staff installed the Remedy administrator on the CRT network for the project. At project end, the sponsor's Windows 95 PC was upgraded to Windows NT 4.0. The Remedy administrator software and database was transferred to the upgraded PC, and the entire unit, with Remedy software, client databases, software licenses and the toll-free number, was returned to the sponsor. The databases included the names and location particulars of all authorized licensees of the project, their training dates and locations, and logs of all trouble tickets created and their dispositions. Because of the premature ending of the project, the Help Desk support operation ended June 30, 1998

1.6 Product Demonstrations

The project staff presented the AmNRD CD at three professional conferences. Table 2 details the event information.

Table 2: Product Demonstrations

Conference Title	Dates	Audience	Type of demonstration
Georgia's Ninth Annual Literacy Conference, Atlanta, GA	February 1998	Georgia's adult literacy practitioners	•Panel presentation •Exhibit booth
The National Adult Literacy and Technology Conference,	July 1998	National literacy practitioners	Interactive presentation
Interface Conference	October 1998		Presentation

1.7 Product Revisions and Maintenance

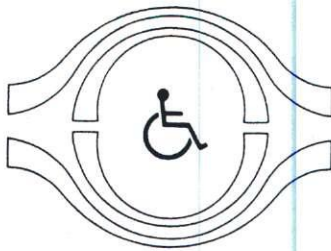
The project personnel compiled a list of recommended revisions to the AmNRD software.

The list is titled Media and Software Flaws and is in Appendix B of this report. The project personnel were not able to make the revisions or revise the documentation. The sponsor removed that responsibility from the list of deliverables. (See Appendix A)

1.8 Evaluation Design

There was no activity under this deliverable. The deliverable was deleted by the sponsor. (See Appendix A, letter from the sponsor dated February 17, 1998.)

APPENDIX A



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February 17, 1998

Ms. Beth Bryant
LLN, CRT, Georgia Tech
490 Tenth Street
Atlanta, Georgia 30332

Dear Beth:

Please be aware of our intent to modify the scope of contract K10-647 CD-ROM Training, effective immediately:

- Delete deliverable 1.1 Technical Documentation. Cease work on this deliverable, if work has already commenced
- In deliverable 1.7:
 - Delete "Make appropriate revisions", and
 - Delete "Revise technical documentation, user documentation and training manuals to reflect product improvements.
- In deliverable 1.7, we continue to desire the "Recommended product improvements based upon research feedback and future quality assurance surveys" that can be determined from the project. This task, however, should be modified to reflect deletion of deliverable 1.8. A statement of recommendations would result from other project activities such as field training, customer support.
- Delete deliverable 1.8 Evaluation Design

I expect that the above modifications will result in budget modification as follows:

- Deletion of "GRA/multimedia developer (2) for a savings of \$25,760 personal services, and
- Deletion of GRA tuition for a savings of \$4,794.
- In addition some savings from Materials and Supplies, and possibly Equipment.

Please process a formal change to the contract reflecting these deletions. Please coordinate the change order with me prior to routing to Georgia Tech contract administration.

Sincerely,

Tom Morris

Georgia Institute of Technology 490 Tenth Street, NW Suite 120 Atlanta, Georgia 30318

Phone (404) 876-8580 · FAX (404) 875-9409

E-mail: crtinc@src.net

APPENDIX B

Media and Software Flaws

April 27, 1998

American New Reading Disc

Following are the items we have noted to date that could be considered "bugs" in Version 2.0 of the software.

Installation

Using the "Add/Remove Programs" feature in Control Panel, WINDOWS 95, and File Manager in WINDOWS 3.1, the installation program ends with "Setup has finished the installation" and then refers to the README file. This message should be removed from the screen.

In WINDOWS 95, the StartUp Menu also makes reference to the README file and the TUTOR's NOTES file. These references should be removed.

Opening (Copyright) Screen

This screen reflects the old version and should be replaced by a new screen using the graphic that we used on the CD cover, and the copyright information and version numbers should be updated to conform to the CD cover.

Authoring System

When pulling up a subject from the section "Getting the Main Idea," the program may suddenly shut down. An error message is returned, "Object variable not set." We are seeing this where a writer selects his or her own previously created paragraph, rather than one that is embedded in the program. A work-around was developed whereby the user will be cautioned only to select only non-Authored text.

We are occasionally seeing the Authoring System pull up incomprehensible text in "Getting the main idea," but have not yet determined the conditions under which this occurs. Possibly the MMX technology fix is causing this, but we haven't yet ruled out the "Object variable not set cause."

In Main Menu, Block 5, Keywords (Basic Reading Exercises, Block 6,) the following screens lack the blank text boxes for students to fill in:

- (1). Remembering schooldays (screen 17)
school was great
- (2). Buying food (screen 19)
junk food isn't as bad as people say
- (3). Care for elderly (screen 1 / 3)
screen 1 - most nursing homes these days take excellent care of older people
screen 3 - no one looks after older people better than their own children
- (4). Drugs (screen 7)
even young kids take things like crack
- (5). Working women (screen 11)
at day care centers workers take good care of children

- (6). Hobbies (screen 11)
some people like relaxing hobbies like sewing cooking or fishing
- (7). Health and safety (screen 2 / 13)
screen 2 - don't smoke eat or drink near chemicals
Screen 14 - don't horse around at work

In "Building up a sentence," the keyboard will not accept the letter I, standalone. It will accept the letter I (upper or lower case) within a word, but not the capital letter "I" as the nominative pronoun.

In "Creating a debate," some of the pictures will not load into the frame on the first, second or third try. However, they sometimes will load after several tries.

In the "Writing to reading" section, numbers need to be written out as words, rather than using numerals, for the sorting exercises to work correctly. The program sees numbers as preceding letters. A caution in the manual and some attention called to this by the trainer is probably sufficient. It is unlikely that a program fix is practical.

Map reading

A complaint, not a bug that we heard about this section was that there were too many arrows. The learners and trainees found it confusing.

Word invaders

Though this feature was probably the favorite of the learners, the one complaint we heard was that it ran too fast for them. A teacher who very likely did not realize that the speed was controllable made this comment.

Best liked features by students: the word invaders, the alpha sort and the debate activities.

Best liked features by teachers: the multiple ability levels the program addresses and the ability to add words to Word invaders.

Other comments:

The learners appreciated the feature that allowed them to hear the sentences read to them. Most were too shy to actually speak into the microphone.

I am preparing a separate report to you of the results we received from the evaluations from the training sessions. These contain many other interesting comments about the program, some of which you may wish to use for marketing purposes, and some that may be relevant to future versions, but no "bugs" that require editing the code.