AuthorBase: A Database of Authoring Systems Software

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Abstract

A working prototype database of authoring system software was developed as part of a study of authoring software conducted by the National Library of Medicine. The database and development issues ranging from the scope of the database to what information to document are described. The prototype demonstrates that records of reasonable integrity can be derived from vendor supplied information as long as users understand the database is only an initial starting point in searching for authoring software and a resource for becoming generally familiar with the technology.

Introduction

AuthorBase was developed in conjunction with a review of authoring system software[1] that was conducted to update an earlier study[2]. It was created in anticipation of future reviews, and as a sharable resource.

Development

Rapid prototyping techniques were used to construct the working retrieval system and to refine data collection and record keeping methods. A data gathering checklist and specifications for database records was generated after consulting literature[3,4,5,6] and closely examining several systems. Concurrently, search parameters were specified and code for a searching program was written. The user interface and search algorithms were reevaluated, and search aids such as online instruction, a glossary, and a browse feature added. The Clipper compiler for dBase III+ was used to produce a distributable runtime program.

Features

AuthorBase currently contains information on over 80 products that use microcomputers common to most medical schools. These systems can be used to author both traditional computer based instruction or hypertext/hypermedia programs. Some support videodisc, digital video interactive, and compact disc interactive platforms. AuthorBase is readily updatable; records are created with word processing software, converted to ASCII format, and added to the database using dBase III+. A Clipper compiled program is used to retrieve records. Users can access instructions, consult a glossary, or search and browse from the main menu. In search mode, fields can be selected related to hardware, instruction, graphics, record keeping, and cost requirements. Selecting a field evokes submenus where actual parameters are specified. Selections made and the number of systems meeting specified parameters are displayed. When a search is completed, the user can display or print the records retrieved.

Records

AuthorBase records provide detailed information about each system, such as: amount of working memory needed to use the software; peripheral devices supported; and whether systems have text, graphic, and/or other editors. Costs and terms, branching, record keeping, and other capabilities are given. Most systems are described as either authoring hypertext/hypermedia or traditional computer based instruction. The latter includes drill and practice, tutorials and simulations. The ability to incorporate external files or use a built-in authoring language, which increases system flexibility, is indicated. A brief general description provides an overview of the authoring process and information about a system's special features.

Some records were derived from viewing software demonstrations and acquiring hands-on authoring experience. However, for practical reasons, most were created from vendor literature and demonstration videotapes or floppy disks. Each record was verified with a representative from the software company.
Issues

Several issues were confronted in constructing the database. Determining the scope of the database was a special problem due to the varied number and types of systems available. Over 170 potentially relevant software tools were identified initially, but many were omitted because they required hardware not common in medical schools or did not truly author instruction. On the other hand, some systems not usually reported in instructional journals are included because they author clinical simulations of specific relevance to medicine. Systems for authoring digital video interactive and compact disc interactive were included because their use is expected to increase.

Other developmental issues concerned the level of detail to include in each record, search parameters of most interest to potential users, record consistency, and record integrity. Existing literature helped to resolve many of the issues. A standard system documentation form was developed to insure record consistency that helped translate varied vendor terminology to a base vocabulary for the database. Record integrity was addressed through vendor verification and indicating whether the record was derived through first hand experience or vendor supplied data. AuthorBase is intended to be one of the several resources users might consult. Users should further research and screen systems before finally deciding which products are appropriate.

References


