1.0 Introduction

The WatMedia Project utilizes the SPIRES software to provide users with access to information about nonprint materials in the collections of 22 members of the Interfilm Group. The WatMedia system is available to authorized users on BITNET and other networks.

2.0 The Need for the WatMedia Project

The WatMedia Project was begun by the Media Library of the University of Waterloo in 1974 in order to improve both patron and staff access to information about non-print resources. A brief analysis of the access problem showed that the prime area of difficulty was in the information retrieval interface, both between user and library and between library staff and source collections. Media resources tend to be invisible in the sense that they have no index or table of contents through which the potential user may browse. The obvious answer was a catalogue of some sort.

A detailed analysis of user statistics revealed that most materials were being used for purposes far different than those for which the materials were originally produced. The wide scope of these uses was such that it persuaded us that any cataloguing system adopted must consider and cater to these uses as well as more traditional uses. The problem of browsing became a prime consideration during our investigations, as the standard bibliographic information was judged to be inadequate by our users and the costs in time and labour for users to view many different titles in order to find the one title applicable to their needs was exorbitant. We decided that the system should, in effect, create a table of contents and an index for each item, in addition to the information found in the standard bibliographic reference.

A cataloguing system needed to be developed to act as an access point to the collection. In deciding on a system there were several factors that need to be considered. These were: (1) ease of use for faculty and students; (2) impact on the organization of the collection; (3) impact on staffing levels in the media library; (4) currency of information and ease of updating; (5) comprehensiveness of entries and indexes; and (6) cost.

Our conclusions were that an analytical catalogue should be
devised and that this new catalogue be based largely on an existing cataloguing system if possible. The system which was finally chosen was the one in use, at that time, by the British National Film Archives. The Waterloo Media Cataloguing System is based on this system, with extensive modifications to permit efficient use in a computerized environment. However, the basic philosophy behind the two systems is the same, only the means of recording the data and the means of accessing it are essentially different.

3.0 Selection of SPIRES

The next step was the choosing of an appropriate method of retrieval of the information from the computer. The existing retrieval methods available on our campus were primarily of the sequential search variety. We did not want to use this method due to the high costs involved when searching large databases. Therefore, we endeavored to find a system using some form of tree-structured indexing. We also determined at an early stage that the primary access point to the system would be online and that hardcopy catalogues would be of secondary importance. We came to this conclusion because of the unusually high availability of computer access at the University of Waterloo.

The results of our search indicated that the best choice was the Stanford Public Information REtrieval System, or SPIRES for short. SPIRES was initially chosen by the University of Waterloo for the WatMedia project because nothing else was available that had the potential to handle our projected requirements. One of the main factors which influenced our decision was the ability of SPIRES to handle large multiple indexes efficiently, something that competing systems could not do. SPIRES also allowed the system designer to modify the file definition for the database without necessarily having to rebuild the whole database.

Despite this "Hobson's Choice" we have never regretted the decision. Only now are some of SPIRES's features being implemented by other systems, and some features, like remote access capability, have yet to be implemented by these systems.

4.0 The WatMedia Database

The original WatMedia database has been expanded to become a union catalogue for the twenty-two universities, colleges and institutes of the Interfilm Group. It also contains extensive listings of the holdings of commercial distributors and libraries.

The catalogue is basically a title main entry format with a number of classed and alphabetical indexes: (1) title catalogue; (2) subject indexes; and (3) biographic index and analytic index. These form the permanent catalogue, but there is also preliminary
catalogue data maintained.

In the preliminary catalogue such information about an item that can be readily obtained--accurate or inaccurate--is immediately entered. As soon as possible the item is viewed, further information is obtained, the existing information verified, and the record is modified and placed in the permanent catalogue.

The rules governing entry are the same for both catalogues. In a sense an entry is never complete. As more information on a particular item or person becomes necessary, it is sometimes required that records which may not have been touched for years need to be updated. This is particularly true when persons who may have been involved in a production in a minor role become important as their careers develop and adjustments must be made to update the indexes to make it possible to retrieve as complete a filmography as possible on that person.

The fundamental difference between most other published rules and the rules we use is the way title entries are handled. Since nonprint materials are most commonly identified by title, we feel that they should be entered under title. The preliminary rules of the Library of Congress and UNESCO recommended that each language version of an item should be entered under the title of the version in hand, which follows the recognized procedure for book cataloguing. However, it is felt that the title and credit frames of nonprint items (film and video in particular) cannot be treated with the respect traditionally accorded to the title page of a book, since they may be in any language and subject to no recognized principles of accuracy. Therefore we enter all materials under the original title of release and, so far as possible, in the language of origin. This principle has also been adopted by the Aslib committee and is recognized by the International Federation of Film Archives (FIAF).

In order to have a system which is largely compatible with a recognized international standard, these rules have been developed from those used by the British Film Institute's National Film Archives, which have been adopted by many other national film archives around the world. Philosophically, our rules remain substantially unaltered from the original British rules, but they still cannot be considered as definitive. Further revision may be necessary as new technical developments appear.

Since the first prototype version was produced in 1975, many procedures that were originally designed for manual systems have been rethought for the computer’s online environment. Discussions with librarians and archivists in some 23 countries have resulted in a major change in the handling of items. Title main entries are still used; however, instead of making separate entries for each copy of each title or version of a title, we make a generic entry covering the original version, with separate
collations for each copy of each version in the same record.

It should be noted that WatMedia was designed for a university academic and research library situation and, as such, is much more elaborate and comprehensive than any such system required by a public library or lower school application.

5.0 Searching WatMedia

To search the WatMedia database, the user sends a "find" command to the system. The basic syntax of this command is:

    find [index name] [value]

For example, to find the film Citizen Kane, the user would enter:

    find title Citizen Kane

Table 1 shows the basic indexes that are available.

Table 1. Some Selected Indexes

<table>
<thead>
<tr>
<th>Index</th>
<th>Valid Index Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>T, TI, TIT, TITL, TITLE</td>
</tr>
<tr>
<td>Subject</td>
<td>SB, SUB, SUBJ, SUBJECT (Synonym)</td>
</tr>
<tr>
<td>Dewey Decimal</td>
<td>DC, DCL, DCLASS</td>
</tr>
<tr>
<td>Person</td>
<td>NAME, PERSON</td>
</tr>
<tr>
<td>Place</td>
<td>COUNTRY, PL, PLACE</td>
</tr>
<tr>
<td>Distributor</td>
<td>D, DIST, DISTR, DISTRIBUTOR</td>
</tr>
<tr>
<td>Sponsor</td>
<td>SP, SPON, SPONSOR</td>
</tr>
<tr>
<td>Audience</td>
<td>AUDIENCE, LEVEL, TARGET</td>
</tr>
<tr>
<td>Language</td>
<td>LANG, LANGUAGE</td>
</tr>
</tbody>
</table>

The system has a rich assortment of other searching capabilities; however, this topic beyond the scope of the current article. Users can send the "manual" command to retrieve WatMedia's user's guide.

6.0 Access to WatMedia via Remote SPIRES

A relatively recent addition to SPIRES is a utility called Remote SPIRES. This tool was originally a set of CMS execs and XEDIT macros; however, once its viability had been demonstrated, it was recoded in SPIRES' own procedural language.

From a developer's perspective, Remote SPIRES is relatively straightforward to implement. Any application can be installed
as a remotely accessible database. The inquiry language used for remote queries is the same as the inquiry language used for local queries, so anyone familiar with SPIRES should be able to use a remote application with little or no training. Those not already familiar with SPIRES should be pleased to see that the inquiry language is not terribly arcane.

Remote SPIRES implementers are encouraged to support at least the two standard views of the data, brief and full. If this suggested standard is adhered to (as WatMedia does), a user familiar with one Remote SPIRES application can easily use a different application.

For a SPIRES application to become remotely accessible, it is necessary that it be installed in a server. WatMedia currently has a dedicated server, named appropriately enough, "WatMedia."

While it is possible for the system administrator to authorize all users at all nodes, we do not do that. Such authorization disables the transaction accounting features of the remote server and, at this point in time, we wish to have these statistics. Using wildcards, everyone at a given network node can be authorized, but this limitation does mean that anyone seeking access must first have their machine made known to the server. Anyone needing Remote SPIRES access to WatMedia can contact the author for authorization.

Authorized users with an account on a computer connected to BITNET can search WatMedia either with interactive messages or e-mail messages. Users on other networks can use e-mail messages.

If the user sends an e-mail message, the message should only contain a one-line command, such as "find title Blade Runner."

It should be noted that the server's default method of returning information to the requester is via an e-mail message.

7.0 Conclusion

The WatMedia system provides its users with dramatically improved access to information about the nonprint holdings of the members of the Interfilm Group. The system was developed using the SPIRES software, and this software has proven itself capable of meeting the evolving software development needs of the WatMedia Project.