Creating a traditional reference tool in the Age of Electronics

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The changing art of bibliography preparation.

Bibliographies are still a convenient, compact format for retrospective information on a topic. Modern technology does not diminish the need for comprehensive bibliographies, although the creation of a bibliography can be made easier by putting some of the technology to work. The intellectual effort remains, and so does the laborious task of verification, but the mechanics of producing such a work can be streamlined. A word processor can replace the beleaguered secretary who must type and retype the effort; a database management program can aid in the restructuring of the bibliography; and the commercial databases can provide access to collections that previously required traveling to a major collection or poring through various bibliographies to find the sources. Such a bibliography was created between 1977 and 1987 and has just been published by Oryx Press.

How it began

The project began as a collection development survey of campus holdings to respond to an accreditation report by the Landscape Architecture Accreditation Board of the American Society of Landscape Architects. The first step was to create a subject list to work from by using the *Library of Congress Subject Headings List*, 8th edition. The term "Landscape Architecture" was found as a legitimate heading, and each reference listed beneath was traced and added to the subject list.

Purely horticultural subjects were excluded and relationships were established among the remaining terms. The list was reviewed by several senior landscape architects and a thesaurus of 121 terms was established that included subjects in the humanities, social sciences and applied sciences.

The thesaurus was used as a basis for searching the union catalog in the main library at the University of Kentucky. Each term was searched and the entries listed were photocopied. Slips were then organized by subject and a brief entry was typed into a rudimentary word processor. The listing was printed out and the *Subject Guide to Books in Print* was checked to see what was available that was not held by the University of Kentucky Libraries. An author and title index was compiled manually, some introductory text was added and the project was submitted to the Occasional Papers Committee of the Library Faculty for review. The manuscript was viewed favorably and *University of Kentucky Libraries Occasional Paper* no. 3, "The Landscape Architecture Book Catalog," was issued in August 1982 and distributed in the Southeastern United States. In 1984 Oryx Press agreed to publish a revised and updated version of this preliminary effort.

How it continued

Oryx Press required that the entries in the bibliography be updated and completed. To make the

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                    COMMONS (direct)
                    NT Mark
                       Mir
                       Pasture, Right of
                       Village communities
                       Zadruga
                    RE Common lands
                    BT Land tenure
                       Public Lands
                       Real property
                       Village communities

NT=Narrower Term        RE=Related term              BT=Broader Term
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Fig. 1.   The Thesaurus.

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851.  Maki, Fumihiko.
            Investigations in collective form, 1964.  Arch 711.4/M2893i

923.  Simonds, John Ormsbee.
            Earthscape: a manual of environmental planning, 1978.  Agr
TD170.S55 also in Arch.
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Fig. 2.   The Book Catalog.

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$H2 AMUSEMENT PARKS--BIBLIOGRAPHY

$1 5. $2  Starbuck, James C.\ $3 Theme parks: a partially annotated
bibliography of articles about modern amusement parks. $4  Council of
Planning Librarians. Exchange Bibliography, no. 953.  Monticello, IL:
The Council, 1976. 20 p.

$1 6. $2 Starbuck, James C.\ $3 Theme park development; 1975@-1980.
$4 Architecture Series; Bibliography A-590. Monticello, IL: Vance
Bibliographies, 1981. 13 p.

$1 7. $2˙ White, Anthony G.\ $3 Amusement parks, a selected
bibliography. $4 Architecture Series; Bibliography A-1052. Monticello,
IL: Vance Bibliographies, 1983.

$H2 AMUSEMENT PARKS--DESIGNS AND PLANS

$1 8. $2  Swanson, Steven A.\ $5 @"Glendale water theme park."  $4
Master's thesis, University of Utah, 1984.
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Fig. 3.   The Electronic File.

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 1   PUBLIC-LANDS.SH. OR PUBLIC-LANDS-BIBL$.SH. OR PUBLIC-LANDS-MANAGE$.SH.
      OR PUBLIC-LANDS-MAPS.SH. OR PUBLIC-LANDS-PROTECTION.SH.
      RESULT   18

 2   PUBLIC-LANDS-RECREATION.SH. OR PUBLIC-LANDS-UNITED$.SH. OR PUBLIC-LAND
      S-VALUATION.SH.
      RESULT   6

 3   PUBLIC-LANDS-RECREATION$.SH.
      RESULT   6

 4   PUBLIC-LANDS-PROTECTION$.SH. OR PUBLIC-LANDS-VALUATION$.SH.
      RESULT   2

 5   RESEARCH-NATURAL-AREAS$.SH. OR RESORTS.SH. OR RESORTS-DESIGN$.SH.

      RESULT   129

 6   RESORTS-DIREC$.SH. OR RESORTS-ENVIRON$.SH. OR RESORTS-MANAGE$.SH. OR R
      ESORTS-UNITED$.SH. OR RESORTS-VALUATION$.SH.
      RESULT   15

 7   ROADS-ACCESSORIES$.SH. OR ROADS-GUARD-FENCES$.SH. OR ROADSIDE-IMPROVEM
      ENT.SH. OR ROADSIDE-IMPROVEMENT-ADD$.SH.
      RESULT   44

 8   ROADSIDE-IMPROVEMENT-DESIGN$.SH. OR ROADSIDE-IMPROVEMENT-ENVIRONM$.SH.
      OR ROADSIDE-IMPROVEMENT-UNITED$.SH. OR ROADSIDE-REST-AREAS$.SH.
      RESULT   16

Fig. 4.   The BRS Search.

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Unexpected $# in title in line  1      Could locate no $4 in line   2
Missing backslash after a $2 in 3      No $3 or $5 before the $4 in line 5
Fixed missing $1 in original line 5    Error after the number in original 6
```

Fig. 5.   The Error Message.

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1MODERN AMUSEMENT PARKS.
2CONSULTANTS TO OUTDOOR AMUSEMENT INDUSTRY.
3STEP RIGHT UP!
4MIDWAY: AN ILLUSTRATED MAGAZINE OF AMUSEMENT RESORTS AND ATTRACTIONS.
5THEME PARKS: A PARTIALLY ANNOTATED BIBLIOGRAPHY OF ARTICLES ABOUT MODERN AMUSEMENT PARKS.
6THEME PARK DEVELOPMENT; 1975-1980.
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Fig. 6.   The ASCII File.

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Record#  NUMBER TITLE
    1        2 CONSULTANTS TO OUTDOOR AMUSEMENT INDUSTRY.
    2        4 MIDWAY: AN ILLUSTRATED MAGAZINE OF AMUSEMENT RESORTS AND ATTRACTIONS.
    3        1 MODERN AMUSEMENT PARKS.
    4        3 STEP RIGHT UP!
    5        6 THEME PARK DEVELOPMENT; 1975-1980.
    6        5 THEME PARKS: A PARTIALLY ANNOTATED BIBLIOGRAPHY OF ARTICLES ABOUT MODERN AMUSEMENT PARKS.
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Fig. 7.   The dBASE File.

bibliography a manageable size, the decision was made to include only English-language monographs and series, the latest edition of each work (with a few exceptions), and no works with a geographical limitation in the subject heading. Entries would appear in the bibliography once under the first applicable heading. The machine file was loaded into an IBM PC from an IMSAI 8080 using the RS232 port. The entire file was contained on three double-sided, double-density floppies.

Updating the bibliography was done electronically using OCLC EASI Reference on BRS and the Carrollton Press MARC Data Base on Dialog. Cost estimates for the searching were based on a count of entries in *Library of Congress Catalog, Books: Subjects* and the final cost estimate on the database searching was $1,000. To contain the cost of the searches, broad subjects were segregated from the thesaurus to be manually searched in *Library of Congress Catalog, Books: Subjects* for 1950–1982, the years for which hard copy of the set was readily available. The thesaurus was then verified against the ninth edition of *Library of Congress Subject Headings* and its supplements, and later the tenth edition of *Library of Congress Subject Headings*, and the changed terms were incorporated into the thesaurus. The thesaurus was divided into groups of five for set creation and the searching began in November 1985.

BRS's OCLC EASI Reference was the first database searched and a serious flaw in the search strategy was discovered. Such narrow subject areas as "amusement parks" were easily searched with truncation retrieving all the relevant citations. Using the same strategy on broader headings retrieved all the entries, including all citations confined to a specific geographic areas. The citations for such subjects as "Cities and Towns" were five times greater than projected, and after consulting with BRS it was determined that the only solution to the problem was to do a root on the terms and print that out, then type in the terms relevant to the bibliography. This doubled the cost of the search, and by the time the searching was finished the cost on OCLC EASI Reference alone was over $1,100. The searching in Dialog's MARC and REMARC databases posed similar problems: subjects such as landscape architecture, landscape gardening, city planning, and regional planning could not be searched using truncation. A list was drawn up based on the LC catalogs and those terms were searched individually. The final bill on the database searching was $2,700.

To enrich the bibliography, the *Library of Congress Catalog, Books: Subjects* from 1950 was consulted and photocopies were made of the pages containing entries for a few subjects, including city and regional planning, landscape architecture, and gardening. The Carrollton Press's REMARC databases for pre-1950 materials were searched and *The National Union Catalog Pre-1956 Imprints* was consulted to verify older entries.

Preparing the bibliography

Compiling the bibliography began with the photocopied slips that formed "The Landscape Architecture Book Catalog." Entries not in scope with the bibliography and duplicate entries were searched for manually and deleted. The remaining entries were checked against the original slip and the imprint information was added along with the typesetting codes. About 700 entries were discarded from the "Book Catalog" and 2,500 entries were completed. The printouts from the database searches and photocopied sheets were reviewed and relevant entries were earmarked for inclusion. A code was devised to indicate the original source of the entry and added where the numbering would eventually go. The entire process took 10 months.

As the file grew so did the number of diskettes, and the logistics of finding entries became a problem. In December 1985 a 20 MB hard disk was added to the PC to allow the bibliography to be loaded as one file. Fatigue became a problem in entering the items in the bibliography, and later a high resolution color graphics monitor was added to aid in the production. Working with the entries out of *LC Catalog, Books: Subjects* also proved to be an obstacle as the type size was extremely small and the photocopies tended to be fuzzy. A lighted magnifying glass was secured to aid in this effort.

The clean-up

Once all the entries were in the database, the clean-up began. Duplicate entries continued to be a problem and the search began for a way for the machine to catch the duplicates. A database manager, dBASE III+, was investigated and put to use. A BASIC program was written to number the bibliographic references, look for coding errors, create an error file, strip off initial articles from the title, strip out the entire title and entry number, and put the entries in a format acceptable to dBASE for alphabetical sorting. The program took about six hours to do the clean-up work.

Once the dBASE file was created it was scanned for possible duplicates, and entry numbers were recorded to be checked. The entire bibliography was printed on a 700-page printout; the suspected duplicates were checked and marked for deletion, and 622 duplicates were removed from the database. The BASIC program to look for coding errors and to renumber the bibliography was run again, and an error file was created. The error file identified the irregularity for each entry that it found, and a 17-page, single-spaced, double-column printout was generated for entries to be checked.

On October 30, 1986, a total of 8,298 entries were transferred to nine diskettes and sent to Oryx Press.

In December 1986 page proofs were returned from Oryx Press and the onerous task of proofreading began. A list of about 500 questions was sent

from the editor at Oryx Press and another 2,700 were generated during the proofreading. The proofreading required matching each original entry with the page proofs, and the questions were typed into a laptop computer and uploaded to an IBM when the memory was full, then printed out for checking. One hundred pages of corrections were generated. To simplify proofreading, entries for the database searches were cut apart and filed with the core entry slips. The same was done for some of the photocopies from the LC Catalog, but an additional step was added because the entries were so small they had to be stapled onto 3 × 5 slips of paper for filing. In order to check the anomalies, screen prints were obtained for each questionable entry and they were verified either with the original source of the entry or the OCLC record. Many entries from the OCLC EASI Reference search were difficult to interpret because of the format chosen for the printout; others were CIP records and had to be verified in OCLC. Some of the entries had to be verified in the *National Union Catalog Pre-1956 Imprints* and in some cases the book itself had to be obtained to verify the bibliographic information. The proofreading took four months.

After the proofs were sent back with all the answers, the waiting began. In April 1987 the index pages arrived for proofreading and some problems with the program that generated the index were discovered. Several potential problems were also found but were ironed out with little difficulty. In late July the bibliography went to the printer, 20 months after the initially projected completion date.

The aftermath

Technology does not lessen the intellectual effort required to produce a bibliography—but it can reduce the manual effort and speed of the production of it. In the early years, having *The Bibliography of Landscape Architecture, Environmental Design and Planning* in machine-readable form was an oddity, but in the ten years that it was in production, technology had moved swiftly. If such a project were begun today, the entries could be downloaded using such programs as Bibliolink and formatted with something like Procite. The intermediate step of keying into the bibliography would be bypassed as searches could be formatted and then scanned to delete irrelevant entries. The formatting could be checked and rearranged for entries that did not meet the standard, and the remainder could be read into the electronic file and coded. With desktop publishing, localized bibliographies could be printed in-house and distributed at a low cost.

The Bibliography of Landscape Architecture, Environmental Design and Planning depended heavily on technology to become a reality. In the early days the word processor replaced the secretary who was not available to type it. The photocopier played an important role with the copying of the catalog cards, reducing the amount of time needed to begin the work. When it was time to prepare the manuscript for Oryx Press, once again technology was invaluable. The need to transfer the core data to an improved word processing system was filled by basic communications software. Accessing commercial databases brought in a wide range of sources that only several years ago would have required trips to several collections. The decision to code the work for Oryx allowed for local control of the author and title index. Using dBASE III+ to create a local searchable title index, and the error handling program written in-house (literally as it was written by my husband) were invaluable in the clean-up of the manuscript.

Technology can also create its own set of problems, and many times during the work on this bibliography it was cursed. Structuring the database searches to keep the cost down and retrieve relevant information was frustrating. Much of the searching was done early in the morning, and although BRS seems to be up before 6:00 a.m., several times the password stuck and BRS had to be called after 8:00 a.m. to secure credit. On one occasion the corrections disappeared in the uploading from the laptop computer to the IBM and the hard disk crashed on the PC taking all 1.4 MB of information into oblivion. (Fortunately a backup was created on floppies after each editing session so nothing was lost). Occasionally the save feature would not be used after an editing session and all the work for that session would not go into the file.

The bibliography still has its place in the Age of Electronics. Technology can be harnessed to aid in the production but the intellectual effort remains. While the work is still tedious, the finished product is rewarding. The challenge lies in making technology do what you want it to do and not altering the product to conform to the technology. ■■