

Oceans From a Global Perspective:
Marine Science Information Transfer
(ed) C.P. Winn
IAMS LIC

**Downloading ASFA CD-ROM And Other Online Databases For
Internal Library Purposes And For The Creation Of The
Library Online Catalog**

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Abstract

ASFA CD-ROM was bought as a reference tool. It will undoubtedly become a great asset for reference work once some growing pains are overcome. It has proven also to be a library utility for verifying citations for interlibrary loan. The use of ASFA CD-ROM as a utility for downloading records to assist the Alfred Wegener Institute Library in cataloging, although technically feasible, has been disappointing. A short introduction of the history and nature of the Library and Institute is given in order to better understand the motives behind the decision to try downloading and why it was not a success for the Alfred Wegener Institute Library.

Introduction

The Alfred Wegener Institute for Polar and Marine Research was founded in 1981 and consequently the library is still young and small although well funded for rapid expansion. In January 1986 the Institute for Marine Research in Bremerhaven was merged with the Alfred Wegener Institute and the libraries were then consolidated upon moving into the new institute building when it was finished in April 1986.

The present size of the library after merger is as follows:

Monographs	11,345
Periodicals	27,634
Reprints and	
Tech.Rep.	29,181
Charts	<u>1,000</u>
Bibl.Items	69,160

The yearly budget, beginning in 1987, is 200,000 DM or c. \$100,000 for books, periodical subscriptions, maps and charts, and for binding. At this writing the staff comprises three full-time librarians and one part-time library assistant.

The Institute for Marine Research Library, being older, had the larger collection, albeit, with a stagnant book budget so that few new monograph acquisitions had been made since 1982. The monographs had been classified according to a version of the classification system developed and used by the University of Bremen Library. The Alfred Wegener Institute Library had not classified its monographs at the time of merger since no decision could be reached on the appropriate classification system to use. The cataloging of the collections represented two different systems and two different card formats. After consolidation it was decided to classify the entire monograph collection according to University of Bremen Library Classification requiring that the monographs from the Institute for Marine Research be reclassified and recataloged.

The Computing Center of the Alfred Wegener Institute assisted the library in the selection of computer hardware and installation. Although the choice of software is largely user determined, the Computing Center does have a major voice in granting approval for software acquisitions, which will later be installed and serviced by that department.

The IBM PC-AT with 20-30MByte hard disks was chosen to be the microcomputer of the Institute. At present, the library has three IBM PC-AT3s with hard disks. In addition the Institute has two VAX minicomputers, which also can be utilized by the library. For the printing of catalog cards and bibliographies, the library has one Kyocera F1010 laser printer, and soon will purchase a matrix printer for the printing of particularly long runs of catalog cards.

There are three major software packages now being used in the library: DATAEASE, a relational database management system; SIRE/PERSONAL LIBRARIAN, a retrieval system; and IBM PC Text3, a word processor.

The Computing Center looks toward developing a future library system that will operate on the VAX minicomputer or purchasing a MINI VAX for the Library alone. It is recognized that the present needs of the library can be managed well by the microcomputer technology available.

Since the Alfred Wegener Institute is a new research center in the Federal Republic of Germany, its funding from the federal government is more than sufficient with regards to the procurement of laboratory equipment, computers, books, etc. Unfortunately, the staff size of all service departments is less than adequate, and although we can buy just about anything for the library, we find that it is becoming more and more difficult to manage the ever increasing number of publications and library users with minimal staff.

Major Problems in the Library

There are two card catalogs in the library, one for the Institute for Marine Research collection, which was closed at the end of 1985, and one for the Alfred Wegener Institute. The card sizes are different. Although the Alfred Wegener Institute library did and does use the international library format this was not the case with the Institute for Marine Research. Also, the cataloging of the latter reflects pre RAK (the German Rules for Cataloging adopted in 1979), while the former catalog is RAK cataloging.

At the present, two classification systems coexist; the Institute for Marine Research monographs are being converted to the University of Bremen Library Classification in its accepted version and the Alfred Wegener Institute pre-merger collection is being classified accordingly.

The lack of adequate staffing has been a major factor for the increasing backlog in the cataloging of reprints, technical reports, and other gray literature. It has not been possible to do any cataloging of these items at all since the middle of 1986, and not much of any retrospective cataloging. Interlibrary loan borrowing has also increased more than 100% so that staff, once able to devote some time to cataloging, must now consider interlibrary loan a full time job.

Online searching was also introduced to the library this year. This means an additional service, but only temporary staffing was approved, limited to three years. This same staff member does do some of the reclassification in addition to the online duties.

Realities of German Librarianship

To make clear the obstacles facing the catalogers at the Alfred Wegener Institute, it is important to point out the differences with Anglo-American library practices. The German Rules for Cataloging, RAK, is not AACR2, although based on the Paris Principles of 1963, so while there is some compatibility, there are many differences. In the F. R. Germany there are no ready made cards available for purchase. The University of Bremen Library does pre-RAK cataloging and has a COM fiche catalog, so that they also can not supply the library with card sets.

Online union catalogs are still pilot projects in various university libraries and have no readily available access. There is, at this time, one major test project that has no commitment to RAK or for that matter to any one set of cataloging rules so that bibliographic entries input from the various contributing institutions are not uniform. There is nothing in comparison to OCLC within the borders of the F.R. Germany.

Classification systems vary from library to library making difficult adaptation of outside cataloging. This was the major consideration for choosing the University of Bremen Library's Classification System since obtaining the COM fiche catalog updates proved no problem and made some reduction in classification work possible.

Attacking the Problems

It was decided that an online catalog would not only be beneficial to the institute researchers, but could also alleviate some of the cataloging problems facing the library. The retrieval software SIRE (now called Personal Library Software PLS as of August 1987) was chosen because it could handle 60,000 documents, was flexible, easy to use, ran on an IBM PC-AT with MS DOS, and a larger version for over a million documents was available that could be run on the VAX minicomputer. The SIRE Online Catalog means a decentralized system with each department of the institute having its own copy of the online catalog mounted on its IBM PC-AT with monthly updates. This is important especially as the Institute has three outlying buildings, two research vessels, and an Antarctic observatory. Nonetheless, the online catalog is not yet fully operational and there are presently no plans to close the card catalog.

The machine readable records are not captured online with the SIRE software, but rather, the relational database management software, DATAEASE, has been implemented to create menu driven user defined formats for capturing cataloging information. MARC records are not used as they do not conform to German library cataloging standards, and are much too detailed for the purposes of an institute library. The formats used do reflect RAK strictures. DATAEASE was also used to create a circulation system, thereby assisting in retrospective cataloging. Reformatting data for printed card sets, bibliographies, the SIRE online catalog, and for other computer systems is quite easy and flexible with DATAEASE.

ASFA CD-ROM was acquired to minimize the cost and labor of going online to an outside vendor for a frequently requested database. Although still too early to confirm, it is hoped that researchers will use the ASFA CD-ROM themselves. It was only after the installation of ASFA CD-ROM that the possibilities of downloading was considered for cataloging, and in particular, for the cataloging of reprints and technical reports.

ASFA CD-ROM

In November 1986, the library placed its order for ASFA on compact disc after being assured that the special offer of a compact disc player would operate under European conditions. Then began the first of many long waits. After numerous letters, telexes, and phone calls to Compact Cambridge, the CD player was finally delivered at the end of March 1987. Then we waited for the ASFA CD-ROMs and retrieval software, and waited. Once again, after some telexes and phone calls we received our first demonstration version of ASFA CD-ROM in April 1987. Compact Cambridge then informed us that the ASFA CD-ROMs for 1982-1986 were scheduled for delivery on 30 June 1987, and that the 1987 (first half) would be shipped on 15 August 1987. The former backfiles were again received only after telexing a claim in August 1987, and the CD-ROMs for 1987 have, at the time of this writing on 24 September, still not been received despite a telex claim. Compact Cambridge is obviously having problems with their delivery schedule, which they are not being very candid about. It must be regrettably acknowledged that ASFA CD-ROM is not very timely when no files for 1987 can be made available prior to September 1987!

The product itself is easy to use and quite simple to learn in both the menu-assisted version for non-experienced users, limited to only two word combinations, and the .dot command version for experienced users, which make all variations of nested boolean commands possible. The instructions are clearly written and well presented, and most important for busy librarians and preoccupied scientists, they are concise.

Only one flaw has become apparent during our short use of ASFA CD-ROM. When searching for articles from books or proceeding volumes, only the name of the editor is displayed in the AU: Author field and not the author(s) of the article itself. This has been somewhat irritating, and does account for some confusion and problems when making interlibrary loan orders for articles not in the library. Compact Cambridge has acknowledged this problem, and state that they were well aware of it, but that they have no intention of making any correction of it in the backfiles for 1982-1986. What has been done for the 1987 files remains to be seen.

Downloading ASFA files for direct printing or onto a diskette or the hard disk, is easily done with the Compact Cambridge Software. It is simple to keep part of a retrieval or the entire retrieval, and it is no problem to select scattered documents throughout a retrieval to be saved together as one file. A very nice feature is that the user may define what fields are to be displayed, and/or saved for printing or down-loading. It is, however, not possible to alter the order in which the fields, i.e. author, title, source, etc. are to appear. Of course, one can have all fields printed in full as a system default.

DATAEASE

The library was first made aware of DATAEASE at the end of 1985, when the Computing Center informed it that this had been acquired for use in the Biology Department. We were invited to examine DATAEASE for possible utilization by the library. After some initial testing by this author, it appeared that DATAEASE was indeed a well written database software package that could assist the library in numerous ways. It was also clear that DATAEASE was not a retrieval language that could serve as an online catalog. The library used DATAEASE to create a circulation system, a form to capture bibliographic entries for an online catalog, and a reformatting mode which can alter data for printing catalog cards and bibliographies. It is easy to create protocols with DATAEASE to reformat either DATAEASE captured data, or data originating from other computer systems with completely different formats and field tags. In fact, it is necessary to reformat all cataloging entries made into DATAEASE to make them SIRE retrieval capable. It is as simple as pressing a key from the menu and then the reformatting is completed. Within the user defined menus it is possible to string together many different steps, calling in additional programs foreign to DATAEASE if necessary, thereby creating batch jobs for involved reformatting that to the user appears as if only one step is involved.

Downloading with DATAEASE

In order to capture reprint titles from ASFA CD-ROM for entry into our SIRE Online Catalog, the following steps are made. First a form is created within DATAEASE that is compatible to the field tags of user defined ASFA CD-ROM downloads. (fig. 1) Then an outlist protocol is made for this form to restructure and reorder the fields in conformance to the field tags in the form for reprint entries. (fig. 2) Again another outlist protocol is written to alter these latter field tags for the SIRE database definitions. (fig 3) One of DATAEASE's utility functions enable outside data to be uploaded into the "ASFA CD-ROM" form from which it can then be uploaded with the same utility function into the "Sonderdruck" form. (fig. 4) Here it is important to mention that data transfer within DATAEASE can only be done with field tags and document separators of one character length. When completing the DATAEASE protocols menu for data transfer between, or into forms the character "#" has been chosen for field tags and "\$" for end of document markers.

After appropriate documents have been selected from ASFA CD-ROM and downloaded into an ASCII file (fig. 5), they are then read into a word processor so that global changes can be made with all the field tags. The end of each document is also denoted with the "\$". "TI: TITLE" is thus converted to "#", and "SO: SOURCE" is converted to "#" etc, and then "\$" is inserted for "AU: AUTHOR" except for the very first document to be uploaded. (fig. 6) There are some word processors which will

LISTENABFRAGE

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fuer Sonderdrucke
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 Standort ;
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LISTENFORMAT

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-Abst-

Figure 5

Output generated using Compact Cambridge: 82-86 ASFA
 Search Strategy: HALIFAX [CE,SO] AND CANADA [CE,SO]
 Document 5 of 231

AU: AUTHOR

Walker-RS; Swingler-DN

TI: TITLE

Linear prediction for sensor recovery in line array beamforming.

SO: SOURCE

EXTENDED ABSTRACTS 12th ICA ASSOCIATED SYMPOSIUM ON UNDERWATER ACOUSTICS;
 CHATEAU HALIFAX, HALIFAX, NOVA SCOTIA, CANADA, 16-18 JULY 1986., 1986., pp.
 225-226

SD: SUBJECT DESCRIPTORS

acoustics;acoustic arrays;sensors;underwater technology;fault detection

OD: OTHER DESCRIPTORS

signal recovery

AB: ABSTRACT

A method is proposed for recovering signals from faulty sensors in a linear acoustic array, in order to prevent degradation of beamformer sidelobes. A linear-prediction filter is developed based on the measurements at the working sensors, and subsequently used to interpolate the missing data. Simulations show data are consistently recovered for at least similar to 10% faulty sensors, while the additional computational requirements are small compared to the beamforming load. ABSTRACT.

Output generated using Compact Cambridge: 82-86 ASFA

Search Strategy: HALIFAX [CE,SO] AND CANADA [CE,SO]

Document 6 of 231

AU: AUTHOR

Naess-OE

TI: TITLE

Iterative methods for enhancement of multichannel data.

SO: SOURCE

EXTENDED ABSTRACTS 12th ICA ASSOCIATED SYMPOSIUM ON UNDERWATER ACOUSTICS;
 CHATEAU HALIFAX, HALIFAX, NOVA SCOTIA, CANADA, 16-18 JULY 1986., 1986., pp.
 223-224

SD: SUBJECT DESCRIPTORS

acoustics;seismic reflection profiles;acoustic data;data processing

OD: OTHER DESCRIPTORS

iterative stacking;iterative median stacking

AB: ABSTRACT

Direct summation of multichannel recordings e.g. in beamforming, is not always optimum in terms of detection and signal to noise ratio. This is especially true when the noise is mainly coherent, or when incoherent noise has very large amplitudes compared to the primary signals. In such cases an iterative method may be applied. Two representatives of such methods are the Iterative Stacking (IS) method and the Iterative Median Stacking (IMS) method. The IS method is based on separating positive and negative amplitudes and treat these in an iterative manner. The IMS method is a versatile method which, although based on the median concept, includes the possibility of a sort of differential weighting of the input data. ABSTRACT.

Output generated using Compact Cambridge: 82-86 ASFA

Search Strategy: HALIFAX [CE,SO] AND CANADA [CE,SO]

Document 4 of 231

AU: AUTHOR

Newcomb-J; Wagstaff-RA

AF: AUTHOR AFFILIATION

Nav. Ocean Res. and Dev. Act., Code 245, NSTL, Bay St. Louis, MS 39529, USA

TI: TITLE

An algorithm for high-resolution broadband signal processing.

SO: SOURCE

EXTENDED ABSTRACTS 12th ICA ASSOCIATED SYMPOSIUM ON UNDERWATER ACOUSTICS;
 CHATEAU HALIFAX, HALIFAX, NOVA SCOTIA, CANADA, 16-18 JULY 1986., 1986., pp.
 227-228

TL: TEXT LANGUAGE

ENGLISH

AL: ABSTRACT LANGUAGE

ENGLISH.

SD: SUBJECT DESCRIPTORS

Figure 6

Walker-RS; Swingler-DN

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Linear prediction for sensor recovery in line array beamforming.

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EXTENDED ABSTRACTS 12th ICA ASSOCIATED SYMPOSIUM ON UNDERWATER ACOUSTICS;
CHATEAU HALIFAX, HALIFAX, NOVA SCOTIA, CANADA, 16-18 JULY 1986., 1986., pp.
225-226

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acoustics;acoustic arrays;sensors;underwater technology;fault detection

signal recovery

#

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Naess-OE

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Iterative methods for enhancement of multichannel data.

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EXTENDED ABSTRACTS 12th ICA ASSOCIATED SYMPOSIUM ON UNDERWATER ACOUSTICS;
CHATEAU HALIFAX, HALIFAX, NOVA SCOTIA, CANADA, 16-18 JULY 1986., 1986., pp.
223-224

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acoustics;seismic reflection profiles;acoustic data;data processing

iterative stacking;iterative median stacking

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Direct summation of multichannel recordings e.g. in beamforming, is not always optimum in terms of detection and signal to noise ratio. This is especially true when the noise is mainly coherent, or when incoherent noise has very large amplitudes compared to the primary signals. In such cases an iterative method may be applied. Two representatives of such methods are the Iterative Stacking (IS) method and the Iterative Median Stacking (IMS) method. The IS method is based on separating positive and negative amplitudes and treat these in an iterative manner. The IMS method is a versatile method which, although based on the median concept, includes the possibility of a sort of differential weighting of the input data. ABSTRACT.

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Grundy-RL; Ford-RT(eds)

AP: AUTHOR AFFILIATION

4823 N. 15th St., Arlington, VA 22205, USA

CE: CORPORATE ENTRY

International Assoc. of Marine Science Libraries and Information Centers

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Spencer Fullerton Baird and the foundations of American marine science.

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YEAR OF THE OCEANS: SCIENCE OF INFORMATION HANDLING., IAMSLIC CONF. SER., no.
1, 1985., pp. 233-251

TL: TEXT LANGUAGE

ENGLISH.

#

marine scientists;research institutions

USA, Massachusetts, Woods Hole

enable this entire process to be automated with one function key, as is the case with IBM PC Text3. This greatly simplifies and speeds up the entire process of making the downloaded file ready for DATAEASE to read in and reformat.

The DATAEASE created "ASFA CD-ROM" download function will now input the data, reformat it, and proof it for duplicates before adding it to the final "Sonderdruck" form that is used for the circulation system, and for downloading into the SIRE online catalog.

There are limits within DATAEASE which do cause some problems. Each field size is limited to 255 characters, more than adequate except, unfortunately, for abstracts. For the latter, it is then necessary to make arrangements for many different fields of 255 characters each to contain abstract information. Another problem is that all out-listings producing lines longer than 80 characters will break words up with hyphens at nonsyllabic places. This often makes additional editing necessary for printing catalog cards and entries to the online catalog.

Downloading: The Solution?

The Alfred Wegener Institute Library maintains a collection of reprints from periodicals that are not part of the library's holding. Since our current periodicals are most comprehensive, and comprise all serials devoted exclusively to marine or polar research, the reprints tend to originate from periodicals not necessarily well covered by ASFA. Although our studies are not yet conclusive, less than 80% of the 1985 titles we looked for could be found in the most recent ASFA CD-ROM available to us. The book records found in ASFA CD-ROM are not suitable for RAK cataloging purposes, and again, most of the many non-marine science books acquired by the library are not listed anyway. Searching for items in ASFA does take time, and a 20% hit rate does not seem to merit the effort involved.

The same procedure for downloading ASFA CD-ROM has been tried with positive results for OCEANIC, which is available online. This costs more to use and has not proven to be any more effective in finding the reprint titles we need than ASFA. Searching other online databases for reprint titles to download would only be more time consuming and costly.

Is downloading legal? We can not hope to answer this question here, or take the responsibility for downloads used to build library online catalogs or personal databases. This has been an issue widely discussed and to our knowledge not yet challenged in any court case. It would seem highly questionable whether the copying of complete abstracts and subject cataloging might not be a copyright violation. It seems highly questionable, however, how reformatted, altered downloads of citations alone can be claimed to be a violation of copyright law.

Downloading titles from ASFA CD-ROM does require time despite all the features of automation available. A data typist is still necessary to do much of the work, especially for titles not found. Searching for the required titles to match the reprints we wish to put in our collection, is one major time consuming factor.

Conclusions

More time is needed to do further testing of ASFA CD-ROM in order to determine whether or not downloading is a useful utility for cataloging. The lack of having the most recent 1987 files hampered our study.

A cost analysis is necessary to ascertain whether downloading from other online databases is feasible. It may be that search strategies based on subject entries rather than author names would be more efficient for creating large files from which to download documents and to search offline later at leisure for author names.

Certainly a time study should be made comparing input rates from typing titles into DATAEASE with searching and downloading ASFA CD-ROM for input into DATAEASE. Such a study can only be undertaken when the recent ASFA files become available.

We conclude that downloading databases and reformatting the documents for other computer systems, or for printing catalog cards is, with the assistance of DATAEASE, easy to perform. DATAEASE makes almost all manipulations of data elements practicable, simple to execute, and possible to save for future use. Downloading does not appear, however, to be practical for cataloging the Alfred Wegener Institute Library's backlog of reprints and technical reports. In this study new technology does not solve the problem of a greatly understaffed library. A good typist is still a valuable asset in the modern electronic library.

Readings

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