SMOOTH SAILING

Crossing the Boundaries in Aquatic Sciences Information Management

Proceedings of the 10th Biennial Meeting of EURASLIC, 7-9 May 2003
Institut fuer Meereskunde, Kiel, Germany

Edited by
Snejina Bacheva, Joan Baron Varley, Barbara Schmidt and Allen Varley

Institute of Oceanology
STENO Publishing House
Varna, Bulgaria
2003

EURASLIC 2003

Conference Organising Committee

Local Organiser
Barbara Schmidt
Bibliothek
Institut fuer Meereskunde
Duesternbrooker Weg 20
D-24105 Kiel
GERMANY

Sponsorship Coordinators
Joan Baron Varley
c/o 170 Moorings Way
Milton
Southsea PO4 8YN
UNITED KINGDOM

Michelle L'Excellent
7 avenue de l'Ombrie
44300 Nantes
FRANCE

Barbara Schmidt
Bibliothek
Institut fuer Meereskunde
Duesternbrooker Weg 20
D-24105 Kiel
GERMANY

Programme Coordinators
Joan Baron Varley
c/o 170 Moorings Way
Milton
Southsea PO4 8YN
UNITED KINGDOM

Barbara Schmidt
Bibliothek
Institut fuer Meereskunde
Duesternbrooker Weg 20
D-24105 Kiel
GERMANY

EURASLIC Secretary
Snejina Bacheva
Institute of Oceanology
P.O. Box 152
9000 Varna
BULGARIA

Tel: 359 52 37 04 84
Fax: 359 52 37 04 83
Email: library@io-bas.bg

ISBN 954-449-164-3

Preface

It has been my privilege to be the President of Euraslic since May 2000. It has also been my pleasure to be an Editor of two Euraslic *Proceedings*, Athens 1998 and these, the *Proceedings* of our most recent conference in Kiel, May 2003.

The task of editing 44 papers for a volume that comprises 174 pages initially seemed rather onerous, however, whilst it has certainly been a time-consuming task, it has also proved to be a very interesting and rewarding exercise. Reading through each one of the wide-range of papers, presentations and reports has reinforced for me the importance of our Association and our biennial Conferences, and more broadly the benefits to be gained from human networking across borders and in spite of our differing languages.

Euraslic has made a significant difference to the working lives and conditions of many of our members through the support of other members, and through the financial support provided by Euraslic to sponsor participation in Conferences and to fund the purchase of library equipment, as well as through sponsorship received from Iamslic, IOC and our many commercial sponsors. The various country and institution reports bear evidence to the progress these libraries have made.

The papers in these *Proceedings* also illustrate the important advances being made on both a global and regional scale to increase access to scientific information in an affordable and timely manner, as illustrated by the paper by Marie-Pascale Baligand and Anne-Laure Achard. The paper by Enrique Cannessa illustrates the significant progress being made in improving the delivery of scientific information to scientists in developing countries with connectivity constraints.

The keynote paper by Roland Cormier should make us all pause and reflect upon the ad hoc way in which the Internet has developed and especially web-based knowledge. Librarians have been slow to react to this new medium and it is only now that the impact of this lack of involvement is being fully realised and regretted, by the web designers and librarians, but perhaps most of all by the web users. There are many initiatives now that are attempting to `catalogue' the knowledge on the Internet and Euraslic should be taking a leading role in the organisation of aquatic information online, especially where it is of direct relevant to the European region.

I congratulate all those involved in making the 2003 Conference such a successful event, and I hope that those members who were not able to attend will gain value from the papers in these *Proceedings*.

Joan Baron Varley
Euraslic President
2000-2004

Acknowledgements

I wish to thank all those who helped make this 10th Biennial Meeting and Conference of Euraslic such a constructive and enjoyable experience.

Nothing would have been accomplished without the hard work and determination of Barbara Schmidt and her team of staff and student helpers, and without the generous support and involvement of the Director and staff at the Institut für Meereskunde, Kiel.

Sponsorship is essential for these meetings, and the financial support provided by the Intergovernmental Oceanographic Commission (IOC), the International Association of Aquatic and Marine Sciences Libraries and Information Centers (IAMSLIC), and the Institute of Marine Research Norway, and the various persons involved in administering this support, especially the Euraslic Treasurer Michelle L'Excellent, is very much appreciated. I would also like to acknowledge the valuable support of the many and varied commercial sponsors and exhibitors to this 10th Euraslic Conference.

Tremendous thanks must also go to all of the speakers, workshop coordinators, session and discussion chairs, whose contributions made for such an interesting and informative programme. I was very pleased to have the opportunity to meet all attendees and especially those attending a Euraslic Conference for the first time. The effort that many of our members made travelling for several days to reach Kiel fills me with enormous pride that they value the benefits of attending a Euraslic Conference so highly.

Finally, my thanks to Snejina Bacheva, Barbara Schmidt and Allen Varley, co-Editors of these *Proceedings* for their assistance in compiling and editing another excellent Euraslic publication.

Joan Baron Varley
Euraslic President
2000-2004

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. iii-iv

Contents

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. v-vi

Introduction

by

Joan Baron Varley
Euraslic President

The Tenth Euraslic Conference was held in Kiel, Germany, from 7th - 9th May 2003. The venue was the Institut für Meereskunde, a multidisciplinary Institute of Marine Research at the University of Kiel.

The Conference was attended by more than 50 participants from 14 European countries and representatives of four International Organizations, the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC), the United Nations Food and Agriculture Organization (FAO) and FAO-ADRIAMED, the UNEP Mediterranean Action Plan, and the Support unit for Fisheries and Aquatic Research (SIFAR). The local host for this Conference was the Institut für Meereskunde.

The conference programme included special sessions on *"Cataloguing the Internet"*, *"From Print to Electronic Media"* and *"Networks"* as well as the regular *"Country Reports"* and *"Virtual Poster"* sessions that are a feature of all Euraslic Conferences. The keynote paper *"Internet versus Information"* was presented by Roland Cormier, an information systems expert from the Canadian Food Inspection Agency and who is the current Coordinator of the Aquatic Food Products Initiative. The paper took a holistic approach to the impact that the Internet has had on the collection, organization and dissemination of information. Other invited papers included: *"Portals: History, Features and Typology"* by Prof. Hermann Rösch, FH Köln, Germany, and "FishBase - *an Internet Gateway to Information on Fish"* by Dr. Rainer Froese, Institut fuer Meereskunde, Kiel, Germany.

Discussion sessions included: *European Countries in Economic Transition (ECET)*, Chair: Maria Kalenchits, Estonian Marine Institute, Estonia; *Mediterranean Special Interest Group (MedSIG)*, Chair: Jean Collins, Fisheries Library, FAO, Rome, Italy; *Freshwater Libraries,* Chair: Ian McCulloch, Centre for Ecology and Hydrology, Windermere, UK; *Aquatic Sciences and Fisheries Abstracts (ASFA)*, Chair: Diane Hoffman, CSA; and *E-Learning and Libraries*, Chair: Paul Nieuwenhuysen, Vrije Universiteit Brussel, Belgium.

The European Countries in Economic Transition (ECET) Group had a fruitful discussion session focussing on issues pertinent to several new members from Russia. Some members of this Group are already involved in the Black Sea Library Cooperation Project, the Scoping Study of which was funded by IAMSLIC. Plans to establish a Euraslic Mediterranean Special Interest Group were taken forward in a Discussion session chaired by Jean Collins of the FAO, and which included participants representing UNEP Mediterranean Action Plan, FAO-ADRIAMED, National Centre for Marine Research (Greece), Rudjer Boskovic Institute (Croatia) and the Marine Science Institute of Andalucia (Spain). Short reports from all of these Discussion Sessions are included in these *Proceedings*.

A workshop entitled *"Lost in Cyberspace: Raising Your Institute's Profile on the Internet"* was Coordinated by Ian McCulloch of the Centre for Ecology and Hydrology, Windermere, UK.

The workshop explored ways to attract more visitors to an Institute's website, and in doing so, to raise the organization's, and hopefully the librarian's, profile within the organization. Guidelines resulting from this Workshop are included these *Proceedings*.

The country reports session is a regular feature of Euraslic Conferences and provides a valuable opportunity for members to report on developments in their own institutes, countries and regions. Whilst many members reported advances in their access to technology and the Internet and improved staff conditions, Denmark stood out as a very worrying case with three out of the four centres that encompass the aquatic sciences suffering cutbacks in library staffing and services, and the remaining library staff being required to take on extra duties and consultancies. The current cutbacks are attributed to the new government's lower priority of the environmental issues manifesting in reduced appropriations to the Ministry of the Environment, the Ministry of Food, Agriculture and Fisheries. DHI Water and Environment has also been compelled to reduce their staff by approximately 10%, meaning the loss of one library assistant, leaving one person to serve the 300 remaining employees and DHI offices around the world. Euraslic members expressed strong concerns at these cutbacks affecting their colleagues in Denmark, and the wider impact that such policies will have on aquatic and environmental information provision in Denmark at a time when environmental issues are high on the International agenda.

Sponsorship is a very important ingredient for a successful Conference, especially when a significant number of our members come from institutes in countries with poor economies. The Intergovernmental Oceanographic Commission (IOC) of Unesco is a highly valued supporter of Euraslic in this respect and IOC sponsorship was used to fund the attendance of three participants from Russia, as well as one from Bulgaria and a fifth from the Ukraine. The International Association of Aquatic and Marine Sciences Libraries and Information Centers (IAMSLIC) also kindly awarded Euraslic a Grant and this was used to fund a fourth participant from Russia to attend, as well as a member from Spain. Euraslic funding was used to sponsor or partially support the attendance of members from Croatia, France and the United Kingdom. Attendance at this European Regional Conference provided them with the opportunity to establish links and make useful contacts, and they actively contributed to the conference by presenting papers, reports or posters and taking part in the Workshop and Discussion Sessions.

Europe is a large and expanding region, and Euraslic now has more than 110 members from 28 European countries or countries bordering the region. There has been a significant increase in membership over the preceding 18 months which illustrates the importance of networking amongst those involved in aquatic information provision. Even with funding provided, attendance at Euraslic Conference is not an easy endeavour for some of our members who firstly have to ensure that adequate cover is being provided in their institutes during their absence, and secondly have sometimes to travel for several days to reach the Conference location. It is for this latter reason that we try to move the Conference around Europe from North to South and East to West. Plans are now progressing towards holding the next Euraslic Conference in the Southeast of Europe, in Split, Croatia in May 2005. I hope that this choice of location will encourage higher participation from our Mediterranean members, and from those in countries bordering the Black and Azov Seas.

As Europe is growing, so Euraslic is growing - a successful and thriving regional organization - the only organization specifically addressing the needs of aquatic libraries and information centres in Europe.

Session 1

TRANSITION FROM PRINT TO ELECTRONIC MEDIA

Chair

Sabine Teichert
EBSCO Information Services, Germany

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 3-12

Open Archives: A New Challenge for Diffusion of Scientific and Technical Information?

by

M.P. Baligand[1], A.-L. Achard[1] and A. Regolini[2]
[1]Cemagref - Lyon, France
[2]Cemagref Grenoble, Domaine Universitaire, Saint Martin d'Hères cedex, France

ABSTRACT

Nowadays, diffusion of scientific and technical information is still made mostly by journals (on paper or online). It depends also on the conventional publishing process and therefore the publishers. In this context, could Open Archives be an alternative to this model?

Open Archives is a means of self archiving where same metadata are used to become interoperable: all the documents can then be jointly searched and retrieved as if they were all in one global collection. We could wonder: what are the scopes and aims of this new storage method? Which new horizons can Open Archives unfold in the sector of research and diffusion of its results?

This communication deals with:

- *Functionality of Open Archives, application and aims*
- *Technical solutions of their installation and functions*
- *Advantages and limits of this type of storage*
- *We use many French examples to illustrate this talk.*

The Internet and new technologies have improved access to information, however there are still impediments to accessing, in particular,s scientific and technical information. The Internet has not completely opened the access to this type of information. Access to scientific information still depends largely on journals as well as on conventional publishing processes and commercial publishing networks.

Many scientists, librarians, and universities have tried to find an alternative to this model. They have come up with developments from self-archiving, which is a technique allowing authors to deposit their digital document on a publicly accessible website, to metadata and attaching full-text documents. It is from this perspective that Open Archives was created.

Open Archives is a repository of digital information where the same metadata are used to facilitate interoperability, i.e. all the documents can be jointly searched and retrieved as if they were all in one global collection. Users then need not to know which archives exist or where they are located in order to find and make use of their contents.

Open Archives and Open Access' purposes are to establish "common standards whereby articles stored on compliant servers can form a global library allowing searching, data retrieval, cross-linking, and stable long-term archiving".

- *How can Open Archives change the present ways in which information is stored and accessed?*
- *Can Open Archives provide an alternative to the established journal environment?*
- *What are the perspectives, advantages and limits of this new type of storage?*

I. THE FIRST INITIATIVES / HISTORY

1991: The fir t initiati e of `Open access' began this year with the creation of Archives arXi .org (http://arxi .org/) b the physicist Paul Ginsparg: here, the publications are deposited on thi r r at the pre-print stage, archived and freely accessible to anyone at no cost.

1997: te an Harnad created the CogPrints archives (http://cogprints.ecs.soton.ac.uk/), in which article in the fields of psychology, neurosciences, behaviour, etc. could be deposited before publication as pre-prints' and after publication as 'e-prints'.

1999: The Open Archives Initiative" was born during the meeting convened in Santa Fe: this movement promotes and encourages the development of the author self-archiving solution through the development of technical mechanisms and organisational structures to support inter-operability of e-print archives.

1999: SPARC (Scholarly Publishing and Academic Resources Coalition)
(http://www.arl.org/sparc/home/index.asp?page=0) was designed to foster expanded competition in scholarly communication by encouraging the creation of new journals that compete with the prestigious journals of major publishers that have become too costly.

2000-2001: The eprints.org software (http://software.eprints.org/) was developed at the University of Southampton (UK). With this free, open source software, researchers can self-archive their publications on their institutions' servers. Eprints software can be used to create archives that are interoperable with any Open Archives (http://www.openarchives.org/) complying with the OAI protocole
(http://www.openarchives.org/OAI/openarchivesprotocol.htm), which means that, as a result of their interoperability, all archives can be searched as a single 'virtual archive'.

December 2001: The Budapest Open Access Initiative
(http://www.soros.org/openaccess/) was held. The purpose of this meeting was to accelerate progress in the international effort to make research articles in all academic fields freely available on the Internet. The initiative has been signed by the Budapest participants and a growing number of individuals and organizations from around the world (researchers, universities, laboratories, libraries, foundations, journals, publishers, learned societies, etc.).

II. OPEN ARCHIVES: "RAISING THE BARRIERS"

Open Archives' purposes are:
to provide an open and access-free way to research findings. Scientific literature should be considered as a "public good", accessible to all, allowing an optimal development of science and knowledge.

to facilitate the efficient dissemination of digital content in the scholarly community. Open Archives is a good way to give authors and their works new visibility, readership, and impact. The purpose of self-archiving is to make the full text of the peer-reviewed research output of scholars/scientists and their institutions visible, accessible, harvestable, searchable and useable by any potential user with access to the Internet. Most authors do not work for royalty or fees, but only for "research impact" and for peer recognition.
to freely diffuse scientific and technical information of conventional publishing processe (high-priced commercial journals and subscriptions). Thanks to Open Archives, users can access research results without having to pay any subscription to the source electronic journal.

III. THE OAI PROTOCOL

As e-print archives quickly proliferated there was a need to develop a service that permitted searching across papers housed at multiple repositories, but the underlying architecture of

such archives often differed. The Open Archives Initiative was formed to establish the standards to be applied so that archives could be **interoperable**, i.e. simultaneously searchable regardless of their location in the world. This set of interoperability standards is called the OAI protocol for Metadata Harvesting (OAI PHM). It can be used by any networked server to create metadata to describe objects housed on the server and to make the metadata available to service providers or other repositories that wish to collect it. At the root of the technical interoperability lies a distinction between data providers (repositories) and service providers (harvesters). The OAI protocol for harvesting metadata uses a very basic HTTP based request-response transaction framework for communication between the harvester and the repository.

OAI has recommended that the Dublin Core metadata set be taken as the minimum descriptive level. This has been encoded in a special XML syntax developed by the Initiative. Today, OAI protocol for metadata harvesting has been endorsed by a number of organisations from communities with diverse interests. Even more, this protocol is one important step towards achieving a more viable and accessible scholarly publishing model.

IV. HOW DOES IT WORK?

- **Self archiving software choice**

First you need software which is compliant with the Open Archives Initiative (OAI) and which offers a web interface for managing, submitting, discovering, and downloading documents. You have a choice between several free softwares. Most of them require the Linux or a similar operating system, with a standard configuration for supporting the software:

Apache, the web server
MySQL, the relational database
Perl, the scripting language
Various plug-in modules for Perl

- **3 main self-archiving softwares**

➢ Eprint http://software.eprints.org

"Eprints" is a free software from Southampton University. Academics and non-commercial users can download it from the Eprint server. This software comes already OAI compliant: it is automatically ready to generate metadata in a form which can be picked up by OAI harvesters. The scripting language used is Perl. "Eprint", today's most preferred self-archiving software, is used by more than 60 establishments. The latest version is EPrints 2.2.1 (http://software.eprints.org/download.php). Ingenta (http://www.ingenta.com/) and the University of Southampton (http://www.iam.ecs.soton.ac.uk/) have signed a partnership agreement to create open access eprint services. According to the terms of this agreement, Ingenta will develop an enhanced version of the e-prints software to be commercialised.

➢ Dspace http://www.dspace.org

Dspace is a joint project of MIT Libraries and the Hewlett-Packard Company. Dspace is very oriented towards institutional use: it offers an opportunity to provide access to all the research outputs within the institution through one interface. The repository is organized to accommodate the varying policy and workflow issues inherent in a multi-disciplinary environment. Submission workflow and access policies can be customized to adhere closely to each community's needs.

➢ CERN Document Server Software (CDSware) http://cdsware.cern.ch

The CERN Document Server Software (CDSware) is the software developed by, maintained by, and used at CERN (the European Organisation for Nuclear Research, the world's

large t particle ph sic centre, where the web was born at Geneva, Switzerland). It allows you to run our own electronic pre-print server, your own online library catalogue or a document system on the web. It complies with the Open Archives Initiative metadata harvesting protocol (OAI-PMH) and u es MARC 21 as its underlying bibliographic standard.

t CERN, the CD ware manages over 350 collections of data, consisting of over 550,000 bibliographic records, including 220,000 full-text documents, including preprints, articles, books, journals, photographs, and more.

- Configuration

After installing the basic software, one administrator must configure the Eprints system for local use. He decides on:

a maximum set of data fields to be stored about each eprint, e.g. title, authors, etc.
what types of eprints you should deposit, e.g.journal articles, theses, technical reports, etc.
which metadata fields should be stored for eprints of each type.
which fields are mandatory.
which formats will be accepted: Eprints supports any type of document format, including HTML, Adobe PDF, and PostScript. However, repository administrators should carefully consider which formats they are willing to support and maintain.
the set up for the subject hierarchies that will provide meaningful browsing options to users.
which metadata fields to present to the user during a search.

The administrator could also customise the look, feel, language, etc. of the local web site by adapting scripts. These scripts are well separated from the core Eprints code that deals with archiving, database management, and internal workflow.

- **OAI Registration**

Once the software has been installed, the server needs to be registered with the OAI. The OAI maintains a list of OAI compliant archives for OAI service providers to be able to visit. A harvester tests if the server is fully OAI compliant. If it is OK, the archive is added to the public list.

- **Submission of e-print**

Before the author can start uploading items, he needs to fill out some personal details into a form (name, mailing address, etc.). The user needs a login and password to submit a publication in the Open Archives. Next, the author can submit their papers, thanks to an easy web interface. The web-based submission process is intuitive and requires minimal effort on the part of authors.

The author:

- completes metadata fields: title, author, keywords, year, etc.
- goes to the subject categories stage to select the subject or subjects from the list defined by the administrator that best represent the content of the paper.
- uploads papers as files. A table shows the list of formats which are accepted and which can be uploaded.

Software as Eprint can deal with different versions of a paper, i.e. a paper that is just submitted, accepted... and can indicate the stage of the last version.

- **Moderators' role**

Submitted papers go through a moderation process. The papers are placed in a buffer where they can be approved by a moderator, rejected outright, or returned to the author to make the necessary amendments. It is not a moderation about the subject or the contents, it is only a moderation to be sure the subject matter is suitable, the metadata are good (because good metadata enhance discoverability), figures appear correctly, etc. When the paper is OK, it is accepted by the moderator. It then appears in the Open Archive and is accessible all over the world.

- **Alert**

Users can regularly (daily, weekly, monthly) receive an email alert when new publications of interest to them are deposited in the open archive.

- **Search**

You can search:

by the subject hierarchies (themes).

metadata: you can interrogate different fields: author, words of title, to find publications for which you are looking in the archive.

in the full text.

The archive offers two levels of searching, simple and advanced. They are similar, but the advanced form lets you perform a finer-grained search using more fields.

- **Results**

You have a list of results and a bibliographical reference for each document of this list. Next, you can access the full text in PDF or another format.

V. THE STATE OF THE ART

- On a world-wide scale

➢ Arxiv http://arxiv.org/

Field: ArXiv was initially an e-print service in the field of physics, but it now covers mathematics, non-linear science and computer science.
Consultation: Attracting up to 160 000 visitors daily.
Growing: by about 30,000 articles per month.
Financing: US National Science Foundation.

Nearest e-print mirror site is in France http://fr.arXiv.org/

➢ Cogprints Electronic Archive http://cogprints.soton.ac.uk

Field: Repository for papers in the areas of Psychology, Neuroscience, Linguistics, Computer Science, Philosophy, Biology, Medicine, Anthropology…
Coverage: 1,600 articles.
Financing: Joint Information Systems Committee (JISC) of the Higher Education Funding Councils/UK.

➢ Research Index, http://citeseer.nj.nec.com

Field: Computer sciences.
Coverage: 7 million pages.
Financing: NEC.

➢ WoPEc (Working papers in economics) http://netec.mcc.ac.uk/WoPEc.html

Field: Working papers in economics.
Coverage: Contains over 80,000 documents in electronic format. All papers in WoPEc are downloadable, but not necessarily free. When a paper is available only upon subscription it shows a Restriction message stating the conditions to access the document.
Financing: Electronic Libraries Program (eLib/UK).

E-print mirror sites are in USA and Japan.

- On a French scale

➢ CCSD (Centre pour la communication scientifique directe)
http://www.ccsd.cnrs.fr

CC D is dependent on CNRS. It was created in year 2000 and is located in Lyon. What does CCSD propose?

- General servers:
  - HAL: hyper articles on line http://hal.ccsd.cnrs.fr
  - TEL: theses on line http://tel.ccsd.cnrs.fr
- Specifics servers:
  - Jean Nicod (sciences cognitives) http://JeanNicod.ccsd.cnrs.fr
  - ArchiveSIC (information sciences) http://archiveSIC.ccsd.cnrs.fr

CCSD is an Eprint mirror for ArXiv and PhysNet.

➢ The Mathematics Preprint Search System (MPRESS)
http://mathnet.preprints.org/

Field: Mathematics
Coverage: 45,000 documents
Financing: French Research Ministry

➢ Open Archives of research organisations

French Research organisations (CNRS, INSERM and INRA) are beginning to set up Open Archives in their institutions.

VI. ADVANTAGES OF OA

- **For libraries:**

➢ On the graph below we can see that journal prices are increasing more and more. As most institutions cannot afford the access fees to most refereed research journals, most research papers cannot be accessed by most researchers. Libraries cannot provide these tools to researchers any more.

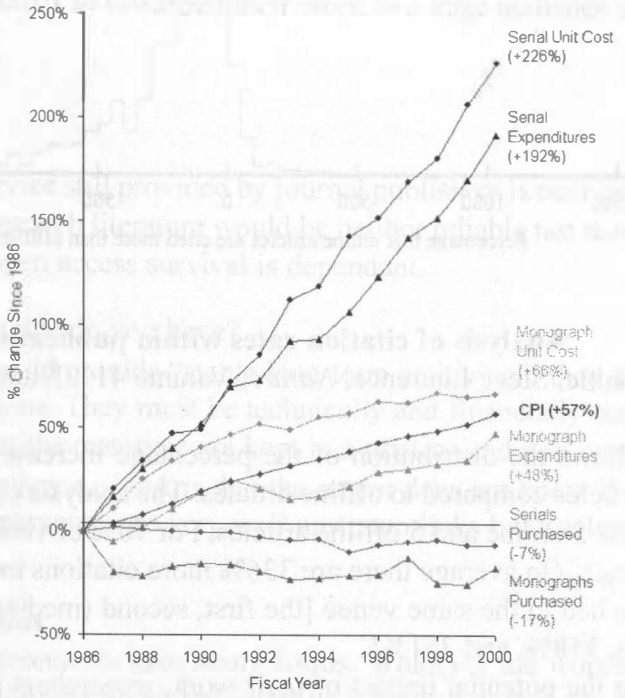
With Open Archives, access to the eprints of refereed research is then immediately free of all subscription barriers, forever. So, we can disassociate the authors from scientific journals' publishers. The traditional chain of scientific publication is radically changed. This new way of publishing is bypassing mediators, i.e. publishers, since authors and readers, belonging to the same group, access the text directly.

➢ Another advantage of open archive is that, contrary to classic databases, links to integral text are systematic. We do not find in these databases only articles but also reports and congress proceedings, etc.

➢ In addition, it is interesting to note that library software is becoming compatible with OAI.

➢ Open Archives are searchable using only one interface and one request. When these archives conform to standards created by the Open Archives Initiative, search engines (such as Scirius) and other tools can treat the separate archives as one.

Graph 2
Monograph and Serial Costs
in ARL Libraries, 1986-2000



➢ Tools such as Cross Archive Searching Service (http://arc.cs.odu.edu/): provide access to all the eprints, across all the Eprint Archives, as if they were all in one global, virtual archive.

➢ Eprint databases can be used as bibliometric tools, thus Eprint software allows you to know how many times an article has been consulted.

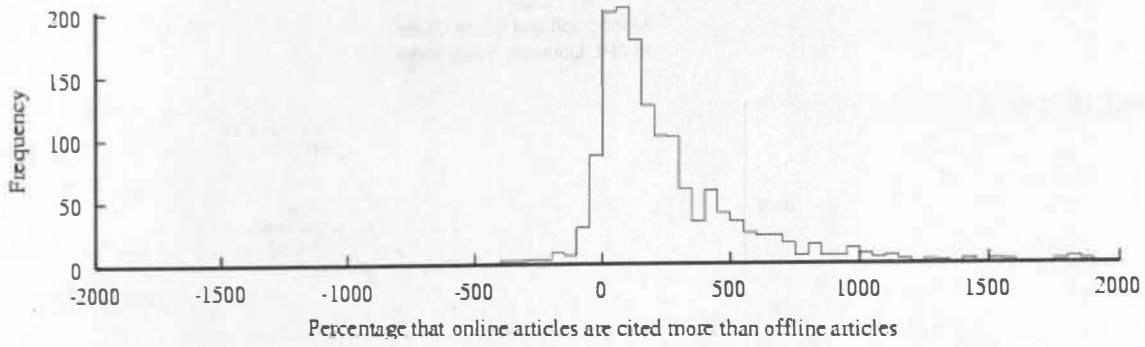
OpCit: http://opcit.eprints.org/
The OpCit project develops solutions for citation impact analysis and reference linking in large-scale OAI open-access archives. Initially the project will hyperlink each of more than 100,000 papers in the Los Alamos physics eprint archive to every other paper in the archive that it cites. The project will extend to link references in papers held in other freely-accessible, distributed archives that conform with the proposal for Open Archives.

Cite- Base http://citebase.eprints.org/cgi-bin/search (citation-ranked search).
Allows researchers to search across free, full text research literature Eprint archives, with results ranked according to select criteria (for example citation impact) and then to navigate to that literature using citation link.

- For researchers:

➢ Researchers never benefitted from the fact that people had to pay access tolls to read their papers (as subscriptions, and for the online version, site-licences or pay-per-view). On the contrary, those access barriers represent impact barriers for researchers, whose careers and standing depend largely on the visibility and uptake of their research.

With traditional journals and offline articles, all research potential impact and uptake are simply lost.



Analysis of citation rates within publication venues.
On line or invisible, Steve Laurence, *Nature*, Volume 411, Number 6837, p. 521, 2001

The graph shows the distribution of the percentage increase for the average number of citations to online articles compared to offline articles. The analysis covers 1,494 publication venues containing at least 5 online and 5 offline articles. For 90% of venues, online articles are more highly cited on average. On average there are 336% more citations to online articles compared to offline articles published in the same venue [the first, second (median), and third quartiles of the distribution are 58%, 158%, and 361%].

To maximize the potential impact of their work, researchers must maximize their potential access. This can be, and is being done by two complementary means:

- by publishing it in open access journals
- by self archiving in open access Eprint Archives of their institutions

➢ Scientists often regret loosing their author copyright. Research is expensive in time, people and money. However, researchers must lend their rights to the publishers. They cannot even publish their full articles in their personal Web pages. Moreover, they have to pay the same publishers to subscribe to increasingly more expensive journals. Researchers look to the open access as a new challenge.

➢ First, research results can be known very fast. This meets the first pre-prints philoso phy: *to make known research advances to the research community by disseminating results quickly.*

Once a critical mass of researchers has self-archived, the refereed research literature is at last free of all access and impact barriers, as it was always destined to be.

- **For scientific community**

All archives are searchable as a single 'virtual archive', regardless country, discipline, domain or locality of the repositories.

Open Archives could support scientific storage for all of the international research community.

Researchers in developing countries and at less affluent universities and research institutions in developed countries will benefit more from barrier-free access to the research literature than will the better off institutions. It is instructive, however, to remind ourselves that even the most affluent institutional libraries cannot afford most of the refereed journals!

OA offers the Developing World the option of making their materials available for all to access and use.

It has often been said that the evolution of electronic publishing will allow the developing world to catch up with the developed, in terms of accessing and using STM and other information.

No longer will poor countries have to purchase large libraries which they cannot afford, rather, they will be able to access central collections at will. "Divides", or barriers to information flow, such as the North/South, South/South, and South/North can all benefit; especially the latter two where the new technologies allow scientists to broadcast their work to a huge audience at little cost.

VII. LIMITS OF OA

- Peer review

The only essential service still provided by journal publishers is peer review itself. Without quality control, the research literature would be neither reliable nor navigable. Assessment is so important that open access survival is dependant.

- What quality guarantee do you have?

➢ Open Archives should provide "stable long term archiving"; they should be available for future generations. They must be technically and financially stable, and they must be managed so that the materials are kept in a pristine and non-corruptible state.

➢ The main inconvenience of OA is that the reader does not know if he reads the final document. Computers manage very well upstream links but are less efficient with downstream links.

- **Publishers' positions**

Copyright transfer agreements take many forms. Whatever the wording is, if it does not explicitly permit online self-archiving, modify it so that it does. S. Harnard proposed a way to word it

"I hereby transfer to (publisher or journal) all rights to sell or lease the text (on paper and online) of my paper (paper title). I retain only the right to distribute it for free for scholarly/scientific purposes, in particular, the right to self-archive it publicly online on the Web."

Some publishers (about 10%) already explicitly allow self-archiving of the refereed post-print. Most other publishers (70%) will also accept this clause, but only if you explicitly propose it yourself.

- **Who must pay afterwards?**

Small services can continue to be free because they are not very expensive. But when a service becomes famous, it expands and no longer remains free. That's the price you have to pay for being famous! Then, don't be under illusions free will become profitable.

CONCLUSION

What can information professionals do for this new model of scientific information exchange?

The institutional library can help researchers to do self-archiving.

- They know how to manage data.
- They can teach researchers how to deal with metadata in order to retrieve information easily.
- They can play a role helping to manage information in order to normalise it and improve interoperability.
- They can maintain the institution's own Eprint archives as an outgoing refereed collection for external use, in place of the old incoming collection via subscription costs for internal use.

In conclusion, they stay near to one of their first professional aims, i.e.: to keep information open to everybody, and to help improve information-sharing across the globe.

In titutional library consortia power can also be used to provide leveraged support for journal publishers ho commit themselves to a timetable of downsizing on the way to becoming pur quality control service providers (SPARC).

REFERENCES

1. Bosc H. *Partager et utiliser des connaissances scientifiques : de la responsabilité individuelle à la responsabilité collective*, I RA mensuel, N°112, décembre 2001-janvier 2002, p. 49-50. [Online]. A ailable: http://www.tours.inra.fr/tours/doc/Ellenroche.htm
2. Bosc H., *La communication scientifique revue et corrigée par Internet*, INRA Tours, septembre 2002. [Online]. Available: http://www.tours.inra.fr/tours/doc/comsci.htm
3. Castelli D., Carpenter L., Dobratz S., Hunter Ph. *Open Archives Forum*, August 2002. [Online]. Available: http://www.oaforum.org/otherfiles/oaf d41 workshop1.pdf
4. Chartron G., *Les archives ouvertes dans la communication scientifique*, URFIST de Paris. [Online]. Available: janvier 2003. http://www.ccr.jussieu.fr/urfist/archives-ouvertes.htm
5. Guédon J.C., *In Oldbourg's Long Shadow: librarians, research scientists, publishers, and the control of scientific publishing*, ARL Proceeding Creating the Digital Future, May 2001. [Online]. Available: http://www.arl.org/arl/proceeding/138/guedon.html
6. Eprints.org - *Self archiving FAQ*. 2002. [Online]. Available: http://www.eprints.org/self-faq
7. Franklin J. *Le libre accès à l'information scientifique et technique: l'état de l'art*, rapport général rédigé pour l'INIST, novembre 2002. [Online]. Available: http://www.inist.fr/openaccess/fr/etat art.php
8. Harnard S., *Skyreading and skywriting for researcher: a post gutenberg anomaly and how to resolve it*. November 2001. [Online]. Available: http://www.texte-e.org
9. Harnad S., *How to fast forward serials to the inevitable and the optimal for scholars and scientist*. Serial Librarian, 1997, No.30, pp. 73-81.
10. Harnad S., The self-archiving initiative: *freeing the refereed research literature online*, Nature 410, 1024-1025, 2001.
11. Harnard S., *For whom the gate tolls? How and why to free the refereed research literature online through author/institution self-archiving, now*, 2001. [Online]. Available: http://cogprints.ecs.soton.ac.uk/archive/00001639/index.html
12. Lawrence S., Giles C.L., Bollacker K. *Digital libraries and autonomous citation indexing*, IEEE Computer, 32(6), pp.67-71, 1999. [Online]. Available: http://www.neci.nec.com/~lawrence/papers/aci-computer98/aci-computer99.html
13. Ministère délégué à la recherche et aux nouvelles technologies, INSERM/CNRS-INIST/ICSTI, *Libre accès à l'information scientifique et technique : état de l'art et perspectives*, Paris 23-24 janvier 2003. [Online]. Available: http://www.inist.fr/openaccess/index fr.php
14. Pinfield S., Gardner M., MacColl J., *Setting up an institutional e-print archive*. April 2002. [Online]. Available: http://www.ariadne.ac.uk/issue31/eprint-archives/
15. Rossi C., *Des logiciels d'auto-archivage: GNU Eprint, Dspace et CDSware*, Formation URFIST, 14 janvier 2003, Lyon.
16. Salaün J. M., *Virtual libraries and the new business model in scholarly publishing*, in "Managing resources in a sea of change", Proceedings of the 27th annual conference of the International association of aquatic and marine science libraries and information centers (IAMSLIC) and the 9th conference of the European Association of Aquatic Sciences Libraries and Information Centres (EURASLIC), 14-19 October 2001, Brest, France.
17. Suber P., *Removing the barriers to research: an introduction to open access for librarians*, College and Research Libraries News, No.64, February 2003, p. 92-94.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 13-16

Equal Opportunities to Retrieve eJournals and eBooks: A Concrete Alternative

by

E. Canessa, C. Onime, C. Fonda and H.A. Cerdeira
The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy

ABSTRACT

Despite the many efforts to help developing countries enter the wired world via the use of new information and communication technologies (ICT), the digital divide continues to expand. This gap is being analyzed using recent real time network monitoring measurements. The benefits of today's ICT are still far from being at the disposal of all due to the lack of adequate infrastructure, lack of awareness, mismanagement and the lack of financial resources. This paper will discuss a concrete example of attempts to bridge this digital divide by applying low-cost open source information technologies to allow developing-world scientists to search and download selected scientific articles using e-mail only. The new e-Journals Delivery Service (eJDS) of the Abdus Salam ICTP/TWAS Donation Programme is introduced (www.ejds.org), which is made possible through agreements with several important scientific publishing companies and societies who provide the eContents for free. This successful model could well be adopted for the alternative delivery of eBooks and expanded to other disciplines beyond physics.

INTRODUCTION

High-bandwidth access to the Internet is not essential for bridging the digital divide. To some extent, the exchange and transfer of knowledge and technology available on the Web is also possible using e-mail only - *still the most popular communication media*. For example, the recent implementation of the eJDS - *eJournals Delivery Service* [1] is geared to facilitate access to current on-line scientific literature based on the www4mail open source software [2] which allows the user to navigate and search the whole Web via e-mail only.

The eJDS is being developed for scientists in institutions of least developed countries, where low bandwidth Internet facilities do not allow the researchers to download scholarly material in a timely manner and/or is cost prohibitive. The implementation of eJDS is a concrete example of using low-cost information technologies to reach a global community.

Scientific competitiveness and presence in a globalised world - especially from rural areas - requires infrastructure, access to the Internet at low cost, and targeted, free services like the eJDS. We believe this successful model could be expanded to other disciplines beyond physics, and could also have a positive impact on the alternative delivery of eBooks.

BROWSING BY E-MAIL

A www4mail server can deliver fully functional Web pages -without graphics or with buttons that link to images/graphics upon e-mail requests [2]. It can return a plain text version of an

HTML page. if a user so requests, but it is best suited when used in conjunction with a Web browser working in off-line mode.

Access to the www4mail servers can be controlled by parameters such as maximum quota per user, maximum file size, and so on. It also provides access control lists (ACL) under which certain file types can be denied. Dynamic content filters can scan Web pages for keywords and phrases associated with inappropriate material before delivery to the end user via e-mail

eJDS is an actual application of www4mail. Within eJDS, subscribers can send e-mails to a dedicated www4mail server in order to retrieve current published scientific literature. Users simply write in the body of the e-mail message a single URL that points to a Web page listing the eJournals from one of the publishers participating in the programme or just write down a simple option like `MYPUBS' if they have direct access to Internet. The eJDS automatically replies with the requested information as an e-mail attachment (as in Fig.1).

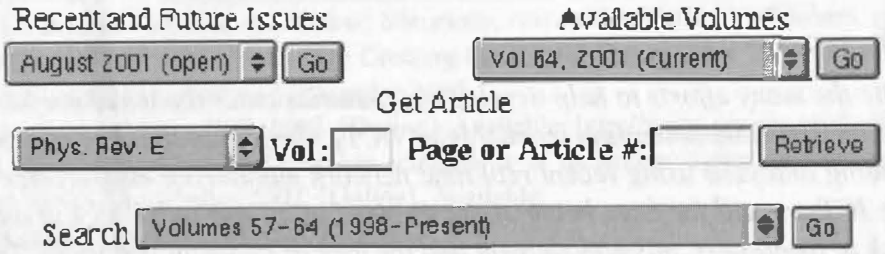


Fig.1: eJDS example reply by e-mail attachment of the search engine of a Physics eJournal

The eJDS procedure to follow is similar to that used when connected in real time to any Web server but the protocol used is SMTP. The user fills in the appropriate search fields within the publishers' search engine and then select their GO search button or simply download any on-line article (usually in PDF format). All sessions are logged by the server.

The eJDS has been operational since January 2002. Several publishing companies have joined the eJDS programme, including *Academic Press, Elsevier, the American Physical Society and World Scientific*, with rules defined by each publishing company. Other publishers are being considered for inclusion in the project. Under the present arrangement between eJDS and the participating publishers,

- developing world scientists have access to a much wider range of current scientific information and findings than ever before.
- Publishers are able to reach researchers who would otherwise not have either the technical or financial means to access information from their journals in a timely fashion.

To subscribe to eJDS subscribers need to

- Obtain a copy of the eJDS application form via e–mail (available in different on-line formats) or in printed form included in the eJDS Manual given to scientists upon request.
- Complete and sign such application form (own signature and e-mail address is required). This is a one-time process.
- FAX or post the signed application form to the ICTP/TWAS Donation Programme. After receiving the approval via e-mail and full instructions, the scientist is then invited to use the service freely.

The few IT tools that a subscriber needs include

- Any e-mail client program to handle received file attachments, such as Eudora, MS Outlook Express and Pine.

- Any standard Web Browser, (such as MS Internet Explorer, Netscape, Mozilla, Opera or Lynx) via an e-mail client that pass 'Subject:' and/or body contents to an e-mail program working in off-line mode with the ability to send e-mail in addition to the e-mail address. Alternative options are available for Yahoo-like users.

- A PDF (Portable Document Format) or PS (PostScript) Viewer, such as the free 'Adobe Acrobat Reader' and 'xpdf'. PDF files are usually used for articles, to preserve the original printing appearance on-line. Alternatively, for PostScript versions of an on-line article, a PS viewer such as 'Ghostview' is needed.

RESTRICTIONS AND OPTIONS

Although eJDS is a free service, it will not give access to Web sites or on-line documents that are not in the list of allowed eJournals or to those eJournals in which an eJDS user has not been granted access. The configurable *Access Control Lists* (ACL) consist of 2 levels of control, one to deny/allow access to some particular copyrighted Web sites, and a second to give access to authorized e-mail addresses only (subscribers list).

There is no limit to the number of scientists from a given institution that can apply to eJDS. However, there are limits to the usage per week. The assigned *User Quotas by Publisher* sets limits to the number of articles per e-Journal that can be accessed each day (3), month (12) and year (100).

If a user exceeds the (daily, monthly, yearly) quota, the eJDS server will inform them with a '503 Error Message - Service Unavailable (quota finished)' and will stop answering requests. It is possible to check at any time the given quota via e-mail using, *e.g.*, the 'XMYQUOTA' option.

There are many other specialized options for optimising the use of eJDS via e-mail, e.g., setting the language and character set, allowing links for images, *etc.* A complete list is discussed in the *eJDS - User's Manual* [1]. Main options include: Message Splitting Upon Request, Retrieving Any Part of a Split Message, Uuencode Messages, Graphical Snapshots of Web Pages, Retrieving HTML Sources dealing with Long URLs, *etc.*

Within the first year of the eJDS programme, the number of individual scientists subscribed to the service was over one thousand, from which about 48% access the Internet via free e-mails accounts like Yahoo and Hotmail services. Of this total, the effective users today count for 25%. As an example of usage, in Fig.2 the number of requests from the most active eJDS users are displayed by country.

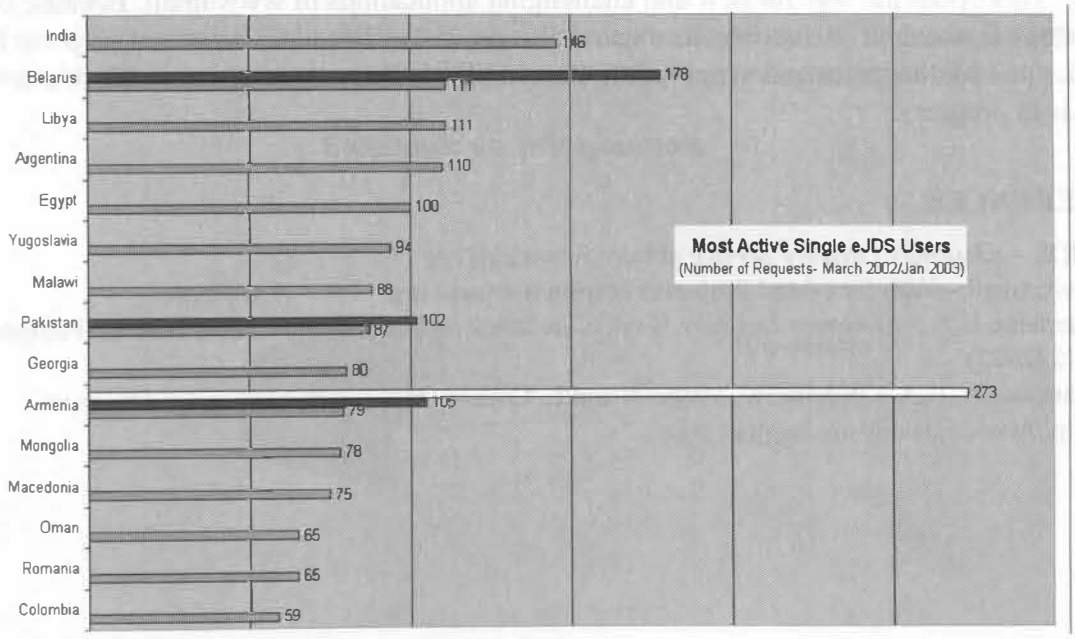


Fig. 2: Most active eJDS users

HELPING TO CLOSE THE DIGITAL GAP

The www4mail software has evolved rapidly thanks largely to extensive user feedback, which has led to many enhancements and new features. Since 1998, the goal of www4mail has been to help bridge the digital divide and transfer knowledge and technologies to remote regions for free. This gap is actually being quantified by the eJDS Team in collaboration with the PingER-SLAC project using recent real time network monitoring measurements [4].

The eJournals, Web pages and articles retrieved or the search results obtained using eJDS (as attachments) can be stored in the computer and re-used at a later time; this includes tables of contents, articles retrieved, or the search results. In this way, both time and bandwidth can be saved by re-using the same Web documents and making selections of articles anew and off-line from anywhere in the Internet.

It is possible to configure a www4mail server to permit or deny access to some pages based on URLs or to entire sites based on domain names and IP addresses. Also, the servers can be configured to answer only to a closed set of users (a private server), which may be used by organizations or to set up private eJDS services. The configuration of a www4mail server is so flexible that it permits the variation of configuration parameters on a user-by-user or resource-by-resource basis.

In addition, www4mail can handle cookies, redirections, refresh, frames and also preserves Web contents, language, and style. Its future success lies in its proven ability to meet the demands of an ever-more complex operating environment –such as dynamic (one-time) content, multimedia elements, secure servers, or XML.

A key idea in implementing www4mail is to preserve as much of the layout of a Web page as possible - as originally written by the Web authors. It is designed to replicate, as closely as possible, the experience of browsing the Web via a full Internet connection - including the search of on-line and secure transactions via https.

Interestingly, www4mail has also options to set file size limits (e.g., of less than 300kB). Hence a user can request to split messages into files of smaller sizes by using the `GETSIZE' command. When the server replies to this command, the requested Web document is sent in different e-mail attachments which can be combined to put back all chunks together (e.g., with Unix `cat' or DOS `copy' commands). This allows the user to retrieve large documents in conjunction with the `GETPART' alternative option for retrieving any single part.

This opens the way for new and challenging applications of www4mail. Because of these important features, it is feasible to expand the present eJDS ideas to other subjects besides Physics and Mathematics and to apply it to the worldwide delivery of eBooks. Work along these lines is in progress.

REFERENCES

1. eJDS – *eJournals Delivery Service* at http://www.ejds.org
   www4mail – Web for e-Mail Project at http://www4mail.org
2. Cerdeira, H.A., *eJournals Delivery Service: an email to Internet experiment*, Learned Publishing 15, 175 (2002).
3. Canessa, E., H.A. Cerdeira, W. Mathews and L. Cottrell, *Monitoring the Digital Divide*, at http://www.ejds.org/smr/lajolla

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 17-19

Croatian Scholary Journals on the Web

by

Sofija Konjeviæ
Rudjer Boskovic Institute Library, Zagreb, Croatia

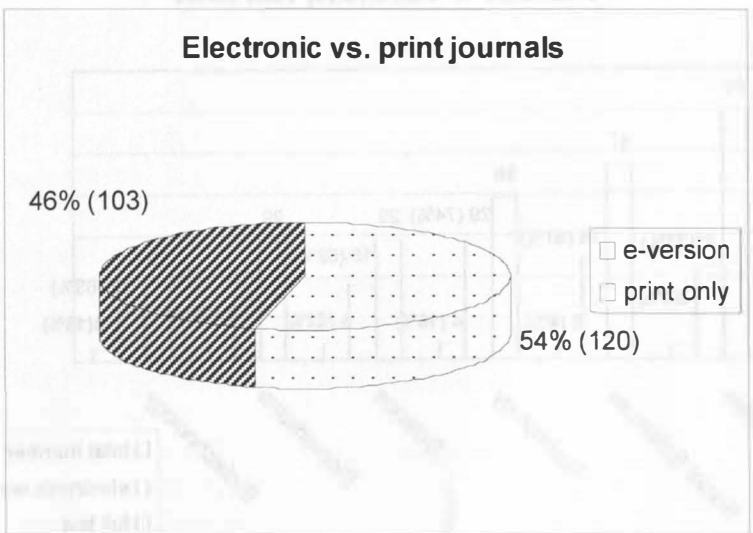
INTRODUCTION

The number of electronic journals is growing daily. All major scholary publishers publish electronic versions of their print journals. Croatian scholary journals do not follow this trend so we wanted to find out what the current state is.

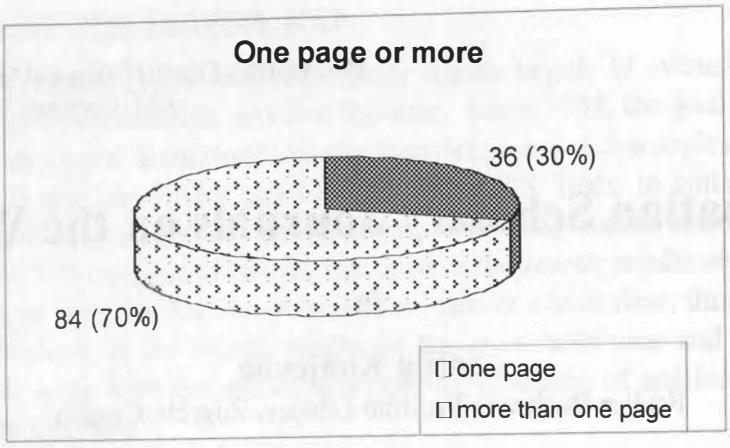
There are several sources that register Croatian journals. Croatian ISSN database registered 1700 journals in 2002[1]. Croatian Bureau of Statistics registered 2003 published journals in 2000, but analysis of Croatian web in 2000 by University and National Library, Zagreb registered only 140 electronic serial publications. Electronic serial publications are catalogued by the National and University Library. These databases register all Croatian journals (newspapers, popular magazines) and not only scholarly journals. As it was difficult to find out exact number of Croatian scholarly journals I used the list of print scholarly journals at Ministry of Science and Technology web site (http://www.mzt.hr/mzt/hrv/informacije/publi/casopisi/casopisi.htm) as a starting point. Analysis was undertaken during June and July 2002. 223 journals were analysed. All journals that have at least one page with some general information on the web were considered as electronic journals.

RESULTS

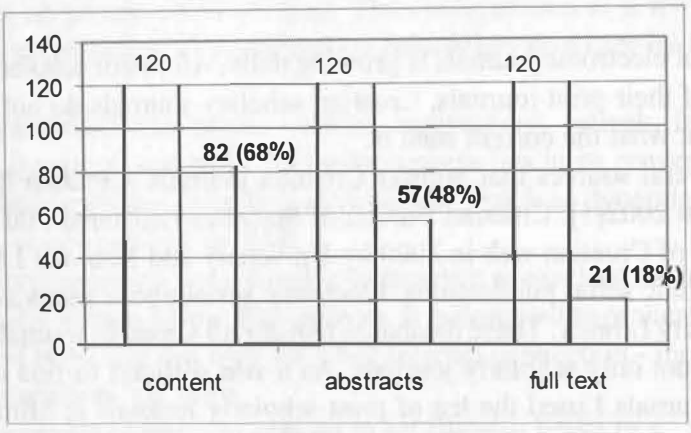
From 223 journals 120 journals (54%) have some electronic version which is more than a half, but in the same time almost a half (103, 46%) don't have any electronic version.



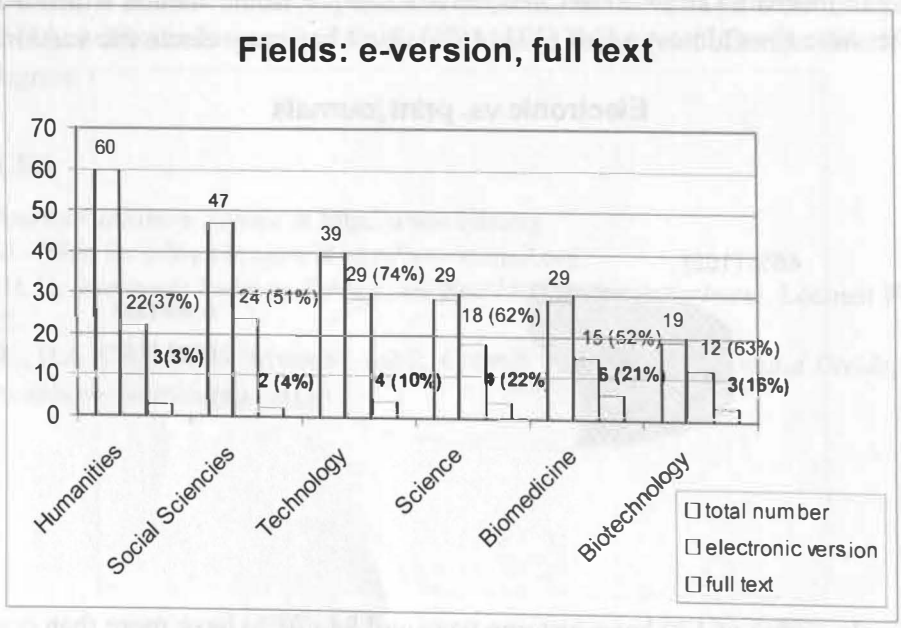
36 journals (30%) of 120 have just one page and 84 (70%) have more than one page.



According to level of accessibility 82 journals (68%) have contents, 57 (48%) abstracts, but only 21 (18%) have full text.



If we compare this number to the total number of analysed journals only 9% have full text. According to the subject fields the most numerous are journals from humanities 60 (27%), and less numerous from biotechnology 19 (9%). Although most numerous humanities journals are less presented on the web, 37% have electronic version and full text just 3% (3 journals of 60). The best presented on the web are technology journals 74% (29 journals of 39). The situation is much the same within biotechnology, science and biomedicine.



CONCLUSION

The analyses showed some tendency toward electronic journals, 54% of printed journals are presented on the web but very few of them are full text journals 9% (21). One reason for the lack of full text journals could be lack of financial support, because those journals are not published by major publishers but mostly by professional associations and scholarly faculties. The other reason could be that Croatian publishers haven't recognized yet the importance of being presented on the web. Croatian scholarly journals are publications with small-circulation and an electronic edition could enlarge their visibility. I expect that Croatian publishers will recognize all the advantages of a presence on the web, so there will be more electronic journals in the near future and full text journals will prevail.

Among full text journals there are some good examples, so I will highlight Croatian Medical Journal (http://www.cmj.hr/), international peer reviewed journal, indexed in CC, Medline and other databases that is presented on the web since 1996, full text is available from 1998. Although it is an abstract only journal I will mention Acta Adriatica as a Croatian marine science journal. The scientific journal Acta Adriatica has been published by the Institute of Oceanography and Fisheries, Split since 1932. The content is available from volume 1, abstracts from 2000. The Journal publishes original scientific papers on the oceanography of the Adriatic and Mediterranean Seas.

REFERENCES

1. Data received from Croatian ISSN office (Mrs Jadranka Zajec)
2. Klarin, S.; Pigac, S. *Croatian remotely accessible serial publications// Vjesnik bibliotekara Hrvatske* 43, 4 (2000), 157-167. (in Croatian)
3. *Report of Croatian Bureau of Statistics*, 38, 8.3.1. (2001) 1-4. (in Croatian)

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 21-22

Digital Subject Collection at the University Library: The Concept and Technological Solutions

by

Olga Yudina

Central Scientific Library, Moscow Agricultural Academy
after K.A.Timiryazev, Moscow, Russia

Moscow Agricultural Academy after K.A.Timiryazeva is the leading agricultural educational institution of Russia. It has seven faculties, 68 departments, and four experimental-research units. In the Academy 5500 students are trained. The Aquaculture Department and Laboratory, conducts scientific development in the areas of: ecology of the fishery water bodies, marine culture and reproduction of hydrobionts, and fish processing. Faculties annually produce about 20-25 experts in the area of aquatic sciences. The students study such subjects as ichthyology, hydrobiology, ecology of the fishery basins, fish diseases, etc (18 educational aquatic disciplines).

The department of aquaculture is the chosen centre for stock-breeding work in fish selection. Since 1994 stock-breeding work in fish selecting has continued under the aegis of the "federal selective-genetic centre of fish-breeding." At present scientific research in the department is carried out by instructors on questions of reproduction, selective stock-breeding work, feeding and perfection of the technology of the cultivation of carp, trout, tilapia and other fishes species. Within the department there is an aquarium laboratory and an experimental-research fish-raising farm (2 GA). The specialists of the department have close connections with the fish-raising farms of the country. In 50 years of its activity the department has produced more than 70 Candidates of Sciences, seven doctors of sciences, including nine Candidates of Sciences from foreign countries (Vietnam, Iraq, Lebanon, Egypt, Cuba, Hungary, Bulgaria).

The Central Scientific Library is a subdivision of the Moscow Agricultural Academy. Library. The Library has available scientific and educational holdings in 2.5m. units of storage. In the structure of the library are 4 landing, 9 reading halls from 1000 landing places. 30 000 readers use the library annually. It is the keeper of the scientific and historical heritage of the academy. For 138 years of its activity Central Scientific Library has collected valuable resources, from the first domestic agricultural books of the 18th Century to contemporary times. Within these resources, all basic branches of agricultural knowledge are widely represented and our library has one of the most extensive collections on Russian fisheries; which comprises more than 200,000 publications.

The integrated information system of our library has two basic components:

- the block of its own information resources, and
- the block of the information input with the external information resources.

Our own electronic resources consist of the following components:

- electronic catalogues
- electronic textbooks and the systematic materials
- encyclopaedias and reference books- complete texts on the main areas of agriculture
- complete texts of fundamental works from the rare book collection
- biobibliographics indicators of the scientists

Each information resource has its own data structure. Documents can contain illustrative materials including graphs, photographs, and in a number of cases fragments of audio and video, and also references to the corresponding pages in the network Internet. The possibilities, provided by HTML have made it possible to connect modules for the call of dynamically changing data from the fundamental databases, into which are introduced information resources. A significant number of the electronic information resources are provide by scanning and recognition of the printed product. ADOBE software permits the conversion of complete texts into pdf format to facilitate the electronic delivery of documents.

The Academy widely uses, in the educational process, electronic versions of training materials. The library works on the creation of the collection of electronic educational methodical textbooks. Within the software IRBIS, the complete texts of these editions are provided on the local networks of the library. Furthermore, the collection of electronic publications and subject databases are provided on CD-ROMs. Using CD-ROM technology has a number of advantages over traditional approaches: a larger range of information, simplicity in the use, possibility of multimedia, the use of hyper-text references and assignment to full-text information, and also clarity and ease of use.

Several words about the external information resources. Access to information resources with the use of interactive technologies and online access to virtual libraries does change the traditional function of the librarian as they become the navigators of the information space. In the adoption of Internet technologies we followed the path from the simple to the complex. At first we selected and systematised the list of IT Internet resources, i.e. they comprised the navigator of the English-language and Russian – language service version of network on the agriculture, ecology and aquaculture. Then we began to fill it with information content: concluded agreements with largest information centres of Russia and foreign countries, for example All Russian Institute of Scientific and Technical Information, Central Scientific Agricultural Library, BEN RAN, FAO, Springer, etc. As a result the library obtained access to full-text data bases and the possibility of obtaining the full-text source with the aid of the electronic delivery of documents. Using CD-ROM technology, we conduct searches of the subject full-text bases of the documents, obtained through Internet. The work with such full-text blocks of information, written down with the compact-disks, is possible only from the reader station in the library. The library strictly complies with the observance of copyright, independent of the carrier of document paper version or electronic version.

In conclusion, and in the words of V.I. Vernadskogo *"...the standard of national and individual wealth/riches must become the spiritual values and the knowledge of man, which lives in accord with nature and with the environment."* And the activity of the library of Agricultural University, first of all, must be directed toward moulding the information culture using both traditional library-bibliographic methods of delivering information, and the new forms of communication and web- technologies.

Session 2

CATALOGUING THE INTERNET

Chair

Jan Haspeslagh
VLIZ, Flanders Marine Institute, Oostende, Belgium

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 25-35

KEYNOTE PAPER
Internet versus Information

by

Roland Cormier
Aquatic Food Product Initiative, Fishery Industries Division,
Food and Agriculture Organization of the United Nations, Rome, Italy

ABSTRACT

Since the early 1990's, Internet based information technologies have evolved to the diverse tools and services available today via World Wide Web technologies. On the Internet today one can find every type of information from current news and events to specialized scientific journals. However, finding valid and usable content can still be a challenge. Information is often incomplete, such as the listing of titles only versus full publication, or the content is of questionable source. Instead of simply indexing any subject specific web site found on the Internet, gateways and portals should strive toward cataloguing valid Internet sources that provide comprehensive information packages. In addition, these types of initiatives should define the scope and the depth of their information content and avoid becoming all encompassing while keeping their target audience in mind.

Copyright and intellectual property right issues of today's electronic media are not that much different from the past paper media environment. The publisher needs to protect the reproduction of a discreet book while the author needs to be properly recognized for the work. Although information piracy is easier in an electronic world, the next generation of users will expect fully downloadable electronic versions of information and web sites that only feature lists of paper documents will quickly become obsolete. This coupled with the need for the latest and up to date information will also have an impact on the sustainability of information gateways and portals where organizations and projects will end up competing for the same available scientific and technical expertise.

In the long term, information or knowledge management projects will have to delimit their specificity and maximize the sharing of information resources to avoid duplication. The focus will have to shift from software development to information management strategies.

INTRODUCTION

Today, we speak of the information age where we have access to infinite amounts of information. Every day new projects or initiatives are launched with a focus on specific thematic areas of information and knowledge. Given the amazing capabilities offered to us, this paper takes a broad look at today's Internet. It takes a pragmatic view of the present situation through the eyes of the person using these systems to seek information while providing some insight for the person thinking of launching a project.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 25-35

KEYNOTE PAPER
Internet versus Information

by

Roland Cormier
Aquatic Food Product Initiative, Fishery Industries Division,
Food and Agriculture Organization of the United Nations, Rome, Italy

ABSTRACT

Since the early 1990's, Internet based information technologies have evolved to the diverse tools and services available today via World Wide Web technologies. On the Internet today one can find every type of information from current news and events to specialized scientific journals. However, finding valid and usable content can still be a challenge. Information is often incomplete, such as the listing of titles only versus full publication, or the content is of questionable source. Instead of simply indexing any subject specific web site found on the Internet, gateways and portals should strive toward cataloguing valid Internet sources that provide comprehensive information packages. In addition, these types of initiatives should define the scope and the depth of their information content and avoid becoming all encompassing while keeping their target audience in mind.

Copyright and intellectual property right issues of today's electronic media are not that much different from the past paper media environment. The publisher needs to protect the reproduction of a discreet book while the author needs to be properly recognized for the work. Although information piracy is easier in an electronic world, the next generation of users will expect fully downloadable electronic versions of information and web sites that only feature lists of paper documents will quickly become obsolete. This coupled with the need for the latest and up to date information will also have an impact on the sustainability of information gateways and portals where organizations and projects will end up competing for the same available scientific and technical expertise.

In the long term, information or knowledge management projects will have to delimit their specificity and maximize the sharing of information resources to avoid duplication. The focus will have to shift from software development to information management strategies.

INTRODUCTION

Today, we speak of the information age where we have access to infinite amounts of information. Every day new projects or initiatives are launched with a focus on specific thematic areas of information and knowledge. Given the amazing capabilities offered to us, this paper takes a broad look at today's Internet. It takes a pragmatic view of the present situation through the eyes of the person using these systems to seek information while providing some insight for the person thinking of launching a project.

THE EVOLUTION OF THE INTERNET AND THE INFORMATION TECHNOLOGIES

Since the early 1990's, information technologies have evolved into amazing tools and capabilities. Although often confused with an information system, the Internet was simply the implementation of the telecommunication infrastructures and protocols that initially enabled people to access database systems located outside their institutions. On the other hand, the World Wide Web with the implementation of HyperText Transfer Protocol (HTTP) and standard hypertext markup language allowed people to store textual information on a computer and offer it to anyone by simply connecting this computer to the Internet. This technology also allowed someone to link a word or a phrase from his or her "page" to another "page" located somewhere on the World Wide Web using the telecommunication capabilities of the Internet.

I remember using the first version of Mosaic in the early 1990's where only a few "sites", as they were then called, were available. For those of us in that technical generation, we had just mastered things like FTP and Gopher. Gopher had been, by the way, in existence since the late 1980's and had been designed to organize Internet resources in the form of simple menus. Gopher was basically an early version of the advanced Internet browser we use today.

By the mid-1990's, the number of WWW sites had exploded to a point that we needed automated ways of cataloguing these web sites and to enhance the searching capabilities. Manually maintaining lists of pages, that were really lists of site addresses for content, was not feasible anymore. Groups of technical experts looking for business ventures started developing search engines, as we know them today.

During the 1990's, Internet telecommunication capabilities also moved from the institutional and government domains to private business ventures making it available to the public at large. The relatively low cost of setting up a web site allowed anyone to offer information using the Internet for distribution. In a way, these technologies effectively allowed the public at large to generate and publish information electronically in the same manner as institutions and governments. Now let us think through this last statement. What actually moved was the capacity to store and mass distribute information outside the classical information paradigm of author, editor, publishers and libraries where, for centuries, information had been edited, validated, published, catalogued and archived.

Suddenly, it is as if we had given the Gutenberg press to everyone in the Middle Ages.

The control and structure that I am talking about is in relation to the professions that deal with the management of documents and their content or, using today's terms, information management. The intention of my point is not to initiate a debate regarding the virtues of free speech via the Internet; but to bring to your attention the importance of information management of which you are the experts in that field.

First of all, let me present a very brief perspective at how or why libraries have come to be.

Without getting into the historical details, someone invented writing as a means to record information. Clay tablets were probably not that practical and someone else invented paper which was then bound together as a means of gathering several pages related to a theme. Books were then produced in limited numbers due to the extensive manual work involved in making copies. Eventually, the press was invented which allows the mass production and distribution of information. Somewhere along the line, a process of author, editor, and publisher evolved as a means of managing the production of information. The most affluent people started to build personal libraries. Now that thousands of books were being produced, we needed libraries to gather and secure them for posterity and to ensure the largest possible dissemination.

Libraries became mass storage sites for documents.

Given the increasing number of documents that were being added to the library, indexing and cataloguing systems were designed to assist in locating documents. As more and more people came to the libraries, a membership system was implemented to manage and track who borrowed books and what the most used material in the library was. With an increasing number of new books being produced, archiving processes were implemented to make more space for the new books while securing older ones that were not consulted frequently, for future consultation when needed.

Although this description is only a caricature of the field of which you are the real experts, it has nonetheless produced the discipline of library sciences you know so well today.

From my perspective, it is evident that the library sciences always had an information or knowledge focus.

Now, let us have a look at how or why information technologies and the Internet came to be.

In the early stages, computerized databases were implemented to store massive amounts of data for analytical or accounting purposes. Eventually, these databases were used to store lists of documents in the form of card indexes, which were used to assist in searching and locating documents. Using technological jargon, the software was code based and not user friendly and required special training to use them. Telecommunication protocols were implemented to allow people to access databases located in another institution. These connections were known as internetwork access or today's Internet.

Subsequently, the personal computer and word processing software allowed people to compose and store text electronically increasing the efficiency of formatting and editing a document. The implementation of electronic mail allowed people to send electronic copies of their documents to colleagues instantly.

Cheaper and larger storage devices allowed people to store electronic copies of documents on their computers effectively building a personal library.

Local area networks were developed to network several personal computers together to share documents in addition to software and printers. To ensure that someone did not delete or change the information accidentally or intentionally, user accounts were created with attached access rights. The World Wide Web technologies were then developed to allow the sharing and linking of textual information from one location to another. Search engines were subsequently implemented to catalogue web sites. Today, thematic web sites or portals are being designed to deal with the indiscriminate indexing of public search engines offering users filtered and controlled content.

Over the last 10 to 20 years, the disciplines related to the computer sciences have mostly focused on technology and perceived needs.

In addition to learning how to use newly available software, most of us have experienced the need to learn why one should use the software in the first place. In some cases, it seems that information technologies are being developed faster than the need or the know-how to use them. One could say that the last few years of the so called information age is almost the reverse of what happened with the printed world of books and libraries where it seems that someone made books and built the shelves before anyone knew what to write in them. However, this statement is not intended to undermine or discredit the creativity and the fantastic job that the information technology experts have been doing.

Although some may say that we have not been proactive enough in embracing new technologies, I think that the real issue is that we have held on to our paper based management practices while leaving the issues of managing electronic information to the computing technologists. Often, we did not try to integrate the new technological tools into existing processes we simply

developed parallel processes that required additional resources to run them. We maintained the process that produced the paper versions of information while we implemented a new process to put the same information on the Internet.

This was fairly apparent during the year 2000 turn over when I was involved in securing the massive amounts of electronic information in my organization. During that period, it became apparent that the paper and electronic processes of information production needed to be integrated. We spent a considerable amount of time re-engineering the processes to integrate and maximize the use of technology to support the business processes of our organization.

A simple example is the production of procedural manuals that are used as reference documents for conducting inspections. These manuals are continuously updated in response to changing needs and new scientific knowledge. Inspectors and industry must always be notified of updates. At that time, there was one group of people that maintained the paper version up to date and that kept the clients advised of new versions. Within the same division, there was another completely different group that did the HTML markup of the same documents for our Internet web site. There was always an issue of not having the web site as up to date as the paper version. To resolve this, we made a policy decision that established the original version as the electronic one stored on the Internet site making the paper version a simple copy. In addition, we implemented automated client notification of updates for those that have electronic mail. This forced a re-alignment of the processes and the people involved in the production and maintenance of the manuals where the electronic version was produced first for the site and then the same electronic version was used for printing. Thus, the web site was always up to date.

This ties into my earlier point regarding information management and integration of technological tools within the processes of information generation and maintenance.

What is the information that we as professionals are looking for?

Now, let's keep this question in mind while we take a look at what a simple user like myself may be looking for when "Surfing the net", as the jargon goes.

Information! Does anyone really knows what this means?

You must be wondering why I would ask this question to an association of librarians.

Lets have a look at the Internet to find out what it says about information.

> "Generally, a fact is something which characterizes a particular situation (e.g. "the sky is gray"). Such a fact can be more or less informative. It seems that the commonsense definition of information is "data in context". This meets the cybernetic definition in which information is a knowledge element brought by a message (e.g. if I know that the sky is gray, the statement above is not informative). The information is measured as a reduction of uncertainty by the sole fact that the message content has been chosen among a particular set of possible contents. This shows that information is not characterized by a signification, but by a modification of the knowledge* of the receptor. The context is that knowledge about the set of possible messages and the place of the present one in this set. In that vision, the measure of information is provided by the context." (http://exmo.inrialpes.fr/gloss.html)

This is simply the first example of what I found with an Internet search engine. I think that it is amazing that today we can't seem to talk about information without the mention of some technology. However, the interesting thing to note is that information is "data in context". Although I am sure that some of you would have better definitions, this one seems fairly logical and of common sense for this particular discussion.

In today's fast paced world, I need comprehensive and coherent information so that I can determine if the researched document is pertinent to the project I am working on. I also need information sources that are valid and traceable to the supporting documentation and that are produced with some form of quality assurance. Increasingly, I need information that is immediately available and accessible since I do not have time to chase down or wait for documents. To you, this probably sounds fairly simple and straightforward.

Searching the Internet with public search engines is not much different to taking a walk down a busy street and picking up any piece of paper with something printed on it. The searches often result in thousands of hits listing bits and pieces of information out of context. From a professional perspective, public search engines often offer no more benefits than finding pertinent organizations or institutions that work in a field of interest. However, if I leave the street and enter a library, I enter a world where I can be assured that someone has more or less consistently sifted and organized information along defined structures and themes. Furthermore, I can always find information elements presented within the context they were written, thus, maintaining the "data in context" paradigm.

How useful would a library be that stores bits and pieces of paragraphs?

Let's come back to my initial statement regarding requirements for information sources.

The information I need has to be comprehensive and coherent.

A book or a document in a library usually contains information that is comprehensive in terms of coverage of a given theme and coherent in terms of the text. The processes between authors, editors and publishers do their best to ensure this. Even though automated search tools can find one paragraph that contains words equal to or related to my search criteria, I still need to know the context within which the paragraph was written to determine if this text is relevant to my manuscript. Instead of being presented a few sentences from the first section of a document, I need the entire document to determine if it is pertinent to the work that I am doing.

In comparison to a library that may organize its documents along collections and themes, I also expect a web site to have a well-defined scope in terms of the themes and fields of disciplines offered. An electronic information source should have clear and defined themes and avoid the trap of trying to grab any information that it can sweep up. I do not consider listing any possible bit of information being either comprehensive or coherent since I will not spend the time trying to sort out information that should have been sorted out by the owner or manager of the site. A specialized site that does this as policy is no different to any public search engines. In addition, a site that presents itself that way does not inspire confidence on the part of the user.

Before using or referencing a given document in my work, I need to be assured that it has been produced under some level of quality assurance and that the information is valid and traceable.

A document either published by a commercial publisher or an institution provides some assurance that the text was generated via some form of quality assurance. Documents available in a library normally have the author, editor and publisher associated to it as well as the year it was published or later re-edited. In addition, any text to be used in the type of work I do needs to have references to the supporting documentation that was used to produce it. Traceability to referenced documentation provides some assurance of validity or, at least, provides the means to determine if the text is soundly based. I need the same level of assurance before I can use a document found on the Internet. More than often, documents presented on the Internet do not have the attached meta data which includes who wrote it and what was the institutional affiliation behind it as well as when it was written or, at least, when it was last updated. After all, I am the one writing the text and I will be the one assuming responsibility for its content.

This is particularly significant when dealing with food safety and human health issues where judgment calls and decisions have to be based on comprehensive and traceable information.

How would you feel if I would assure you that your lunch, today, should be safe to eat because I consulted the Internet and found a paragraph that said so?

Availability and accessibility of information.

A library has processes in place to ensure that a document is available and accessible. They keep track of who borrowed it. They can tell you when it is due to be returned if it is not on the shelf. The library ensures that a document will be available for consultation even if it is not part of the current collection since it is available via the archives. Therefore, I have some assurance that someone reading my manuscript could find the documentation that I referenced when I wrote my text. Moreover, I have some assurance that I will be able to consult that document again if I ever need to in the future. Even though a subsequent edition of a book may have been released, the original edition cited could still be found or located. Although the book or journal may not be on the shelves, it would most likely be found in the archives or obtained via inter-library loan.

How many times have you gone back to a web address to find out it does not exist anymore or that the document is not posted anymore?

Sometimes, the structure of a web site changes and a given document is buried so deep in the web site that it cannot be found. With today's fast changing information available on the Internet, I run the chance that the information cited from an Internet resource is either gone, modified or updated without my knowledge. The vast majority of documentation available on a web site does not often inform you of the versions produced over time. In the type of work I do, I must be assured that an information resource will be available over time for future reference and cross checking. In addition, I must be assured that I am advised if the information resource was modified or updated. In the event that the information has been updated, I need access to the original version via an electronic archive.

HTTP addresses are often used as a reference of a document found on the Internet. I am of the view that technology dependent referencing may not be a wise thing to do.

If there are any changes in the types of technology used in the future, how will we find cited documents?

With technology independent referencing, the web site could change either the address or the physical structure of the files without having an impact on the actual reference.

Can you imagine what would happen if an author only cited the library shelf number of the books and journals that he consulted for his manuscript?

Cataloguing Internet information resources using HTTP addresses is similar to cataloguing these resources with the telephone number of the author that may change tomorrow when the author changes telephone company.

User un-friendly?

If the telephone were as difficult to use as some web sites, there would not be a lot of people using the telephone. If it takes me more that three clicks to find information or extensive reading of help screens to figure out how to use the site, I simply move to the next site for information and will continue until I find one that is simple and intuitive to use. This is the reality of the TV remote control society of today. One may point out to me that I may be missing important information, I would answer that I have better things to do with my time. Although it took a bit of time to learn how to use the catalogue system of a library, once learned, you could assume that the catalogue of another library operated roughly the same way.

How often did you have to learn a completely different way of retrieving information via automated search software?

This is typically called user friendliness when discussing software application design. I would rather call it system intuitiveness. Buttons, menus and capabilities often vary considerably from one system to the next. Although this seems to be the primary issue when designing a web site, let the graphics user interface technical experts figure it out for you. These people are trained in designing screen layouts even colour coordination. Keep the interface function specific with a minimum of option buttons and text.

THE NEED FOR CONTENT LIFE CYCLE MANAGEMENT

You may notice that the issues previously covered have not much to do with the technologies used for information access. I am of the view that we need to better manage the information generation processes and content of these systems.

Librarians have been practicing this for centuries. In the jargon world of technology, this is often referred to as the content life cycle management. Content life cycle management simply means a process (a human one) that manages the generation, validation, dissemination, maintenance and archiving of information or knowledge content. It is probably not that different from what probably occurs in the paper processes of libraries.

Websites, gateways or portals should clearly define the scope and theme of their content. They should then strive to provide the best comprehensive, coherent and valid information in relation to the defined scope and theme instead of trying to be all encompassing and ending up with incomplete information.

When I buy a book on frogs, I expect to have a comprehensive treatise of the subject and not simply a description of two frogs.

Having said this, projects that have as objectives the cataloguing of Internet resources should include sites that have equivalent protocols that ensure adequate content life cycle management. This implies having version tracking and archiving processes to ensure that the original information is always available and accessible over time. This also implies that the cataloguing of electronic or paper information not be technology dependent, avoiding the use of electronic HTTP addresses as the sole reference. This will provide some assurance that the external information sources that you are linking to or integrating within your content base will be available and traceable when your users need to refer to information cited in past manuscripts.

Finally, the software and menus should present an intuitive interface designed to guide users in finding information. Keep your audience or user like myself in mind. They are as busy as you are and probably of the same demographic group with no patience or time to decipher the logics of a site to find information.

THE NEW INFORMATION AGE GENERATION GAP

Copyright issues are copyright issues, may they be for hard copy books, CD's or electronic information. Plagiarism is as old as mankind's ability to write or simply draw a picture and is really a lack of acknowledgement. Sometimes it is difficult to separate the publisher's copyright regarding the book over the author's copyright regarding the content. I have even seen situations where a publisher considers that a given work is not worth reprinting while the content is still very usable and copies are few and far between.

It is interesting to note that I can go to a library and consult a book even though it is copyright protected. I can even borrow it for a few weeks and return it without apparent infringement to the copyright. If a book is not available at my local library, I can have it delivered to me via inter-library loans or even suggest that it be added to list of acquisitions for the library.

Documents available on a web site are often tied to subscriptions and user fees. In some cases, one needs to buy the software license to run the software to read the document. This is almost like having to buy a license to use the index card system and the shelves of the library. Often, the web site only provides minimum information regarding the document available for a fee.

Would you buy a book in a bookshop without having the chance to look at it first?

I realize that the issues related to copyright laws are much more complicated that I am depicting. I am only pointing this out to bring it to the foreground of discussion. I believe that this complicated situation could actually become an impediment to the use of information technologies as the vehicle for the dissemination of information similar to what libraries have done for years.

With the advent of electronic information dissemination the actual printed book may become irrelevant. Once in electronic format, whole or parts of a document can be printed on demand for convenience sake. However, I think that most would agree that the book is still the preferred medium for lengthy reading. I don't think that sitting with a laptop in a reading chair is quite as comfortable.

Today, some think that books and journals take up space. However, the equivalent electronic version can be lost forever if it is not properly safeguarded as is done for books and documents in most libraries of the world. Our present electronic world, which is based on e-mail and word processing files, is almost the same paradigm as presented in Orwell's book 1984 where yesterday's information is replaced with today's information and where historical records are practically non-existent. As we all delete our e-mail and files off our computers to make space for new stuff, we may be loosing important historical records.

How many times is information lost when diskettes are thrown away and old computers are upgraded or replaced with new ones?

In previous years, people would have noticed filing cabinets full of documents or shelves full of journal series. When a scientist retired, his or her collection of books, journals and even experimental notes would have been donated to a library for safekeeping. Given the lack of preserving information in this ever changing and upgrading technology world, I am really concerned that we may be loosing important historical information. This will also be exacerbated with the great proportion of scientists that will be retiring in the next few years. In the future, we will have the meta-data telling us that a document discussed existed; but we may not have it to consult.

Some say that it will be different with the coming generations because they will know better how to use this technology. I agree that they will be adept in the use of the information technologies. However, they will not be inclined to spend hours in libraries to research paper information or spend time trying to figure out a web site. Being used to the fast pace of automated searches, they will be more inclined to use content found in electronic form via Internet services. Unbeknownst to them, they will be missing or leaving out considerable gaps of knowledge because it is only available in paper format such as books and journals.

We may be facing a similar delete situation on the shelves of libraries that contain old documents. Understandably, reduced funding for our libraries has forced some of them to rationalize their document holdings. In some cases we seem to have adopted the same attitude as with the computer. As we delete files on the computer hard drive to make space for new information, we seem to be disposing of old documents to make space on the shelves for new documents. In people's minds, these old documents are not consulted anymore and occupy too much space. I believe that if we cannot convert our massive paper based content to the electronic medium; these texts will become obsolete by simple omission.

Would there have been a Renaissance after the Middle Ages if someone had not preserved the texts of the Greek Philosophers?

We will have to find creative ways of providing real content via the electronic medium while preserving the right of the author to be acknowledged for the work and of the publisher for providing the process to disseminate it. Although the printed book is still preferred by the reader over the computer monitor for reading, it is nevertheless only the medium to disseminate information.

What counts is the content, the information.

LONG-TERM SUSTAINABILITY OF INFORMATION PROJECTS

Modern science is advancing at great speed when compared to centuries past. Scientists and professionals face a barrage of information that has to be read and digested in order to extract its essence. This translates into the need for information projects that focus on providing a synopsis of the latest up to date information. However, these projects often face a maintenance problem and thus, a sustainability problem.

In striving to subscribe the best minds to their projects, these initiatives often end up competing for the same set of scientists or technical experts. From the expert's perspective that is agreeing to contribute to a project, it is much easier to write a one-time snapshot text than to maintain similar topics up to date on several sites. This is more of an issue when that same scientist or expert is doing this on a voluntary basis. It often takes considerable time and work to simply tweak a text of an existing content written to fit the needs of another information project.

This comes back to content scope where various projects and initiative should avoid duplication and maximize sharing. Sharing may include full content copy in another system with full acknowledgement of the source system. You are better off organizing and relating content into focused and comprehensive knowledge. In reverse, don't forget the user has to consult several sites to put together information.

After all, it is comprehensive content and its relation to other comprehensive content that also counts.

THE SOFTWARE DEVELOPMENT PARADIGM

Over the past few years we have been striving to move from a paper based information paradigm to an electronic one. With the arrival of the information technology age, we have invested tremendously in developing software and technological solutions that offer varying capabilities and functionality. Most organizations and institutions viewed technology as a cheap and modern way to deal with information. Actually, I have to agree that these technologies offer infinite of capabilities and opportunities.

Organizations and institutions also thought that the technology people would figure out how to organize and disseminate this information. Although the technology specialists have extraordinary skills in developing functional software, the user community does not always provide clear and well-defined requirements. The reverse can also be said of the users that often do not grasp the idea that technologies should be integrated within given processes and that the process itself also needs to be adapted in response to the new technology.

Having managed several large-scale software projects over the years I have seen this happen time and again. Non-technical people often focus on the graphical appearance of the software application and not on the functional aspects. I am sure that many of you have seen simple projects turn into complicated and expensive ventures.

What is usually happens? Let us use a simple web site as an example. First, we focus on how the front page should look. Then we realize that the information has to be organized along some pattern to make it easier for users to find. Of course, we need a keyword field so that users can keyword their document. Then suddenly we realize that we need a simple way for users to put information into the system. This requires some form of login security since we need to register users. On the other hand, a colleague has developed a neat application. Maybe we should simply modify that one for our project although the technology people tell us that this approach may be more complicated and expensive than building a system from scratch. Well now, we need another interface so that the contributors can find and edit their information. In the end, we must find information to put into the system or web site and we need lots of it.

In the majority of cases, the technology people will figure out what kind of computer we need as well as what kind of software all of this will function under. Software specialists do their best in trying to get adequate software application requirements when consulting the scientific and technical users or any user.

However, stop and think for a minute in terms of what a library would look like if it were left to the library users to tell the cabinet and shelf builders how information within the library should be catalogued and organized?

Software development projects should start with well-established goals and objectives based on what I call the W5's. Although these could be used for any problem or project, I tend to use them to make a point with any user group that approaches me for an information technology project.

***Why** do we need this tool given the mandate of the organization?*
***What** is the scope of the information that will be contained in this system?*
***Who** will use it and more importantly who will maintain it?*
***Where** are the users located in terms of their access capabilities?*
***When** can this tool be implemented given available resources and framework of existing activities?*

You may have noticed that in my W5's technology is not the major part of the expected answers to the questions. A technological solution should come after one has spent the time answering the questions that keep the institutional mission and mandate in mind.

My simplification of this issue is to illustrate the need to clearly establish the reasons for implementing information technologies and the need to place these technologies within the mandate, programme and activities of an organization. Once the W5's have been answered one should then scope out what version one of this new software application will do while keeping in mind budget and timeframes. Nice to haves can be put aside to a future version two of the application. Avoid starting a software development project without clear boundaries in terms of functional specifications. Without these, the development phase will drag on and the project risk falling into budget and deadline overruns.

How useful would software be if the development phase took so long that it was no longer needed by the organization by the time it was ready for implementation?

CONCLUSION

We often hear negative comments and complaints regarding computer systems. However, I am of the view that we simply neglected the management side of these development projects, and I cannot see how we could possibly blame the technology experts as they basically imple-

mented what we told them to do. Our technology people have the best technical expertise available for the designing of functional and operational software applications. I think that we, the people responsible for the launch and management of information projects, have to assume the responsibility of thinking through the requirements to ensure that the software will actually support objectives and activities. We often naively underestimate the design work that has to be done prior to the development phase of a given software application.

In a science-based organization, I am of the view that one of our most important information managers is the librarian.

When it comes to consistently organizing, cataloguing and preserving scientific and technical documentation, librarians have been applying their discipline since the great Library of Alexandria. I see the need for librarians to assert their role in these projects. I believe that we (the non librarian) could learn a lot from librarians in terms of best practice in content life cycle management. Instead of simply throwing technology to parts of a process, we need to better integrate or inbed information technologies along the entire process involved in the generation, validation, dissemination, maintenance and archiving of information. We need to strategically position these technologies to maximize their usefulness and the substantial investments made into developing them.

I hope you will pardon the metaphor that I am about to make.

In some cases, we seem to be focusing so much on technological solutions that one could get the impression that we have taken the work done by librarians for centuries and given it to the people that build the shelves (even though the shelf builders are the best in their trade).

We already have great information technology to work with. We should now focus on the content.

REFERENCES

1. Tarnas, R. 1991. *The passion of the western mind. Understanding the ideas that have shaped our world view.* Ballantine Books. New York. 544 pp.
2. Rifkin, J. 1995. *The end of work. The decline of the global labor force and the dawn of the post-market era.* G.P. Putnam's Sons. New York. 350 pp.
3. Hammer, M. and J. Champy. 1993. *Reengineering the corporation.* Harper Business. A Division of HarperCollins Publishers. 232 pp.
4. Tapscott, D. and A. Caston. 1993. *The paradigm shift. The new promise of information technology.* McGraw-Hill, New York. 337 pp.
5. VanDoren, C. 1991. *A history of knowledge. Past, present, and future.* Ballantine Books. New York. 422 pp.
6. Orwell, G. 1992. 1984. Alfred A. Knoft. 368 pp.
7. Homer-Dixon, T. 2001. *The ingenuity gap.* Vintage Canada. 384 pp.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 37-38

INVITED PAPER

FishBase - an Internet Gateway to Information on Fish

by

Rainer Froese
Institut für Meereskunde, Kiel, Germany

ABSTRACT

FishBase is a large online database with key information on practically all known species of fish. It contains close to 30,000 references that have been used to extract information which is now shown in standardized tables in FishBase. It also contains the literature collection of Eschmeyer's Catalogue of Fishes, which contains all original descriptions of fish as well as their taxonomic treatments over the last 30 years. In addition, FishBase provides species-level links into a variety of other Internet databases, ranging from bibliographic to ecotoxicological databases or to FAO catch statistics. An introduction on how to make best use of FishBase in the context of an 'aquatic' library will be given.

INTRODUCTION

FishBase (www.fishbase.org) is a large online database with key information on all known fishes. It has been developed since 1990 by a small core team based in the Philippines with the help of currently over 900 partners from all over the world. Funding for FishBase has been provided mainly through subsequent grants from the European Commission, but also from a variety of other donors. Since 2000 FishBase is backed by a Consortium of seven institutions (Africa Museum, Tervuren; FAO, Rome; Fisheries Centre, University of British Columbia; Institute of Marine Research, Kiel; National Museum of Natural History, Paris; Natural History Museum, Stockholm; WorldFish Center, Penang) who have pledged long-term support for FishBase. The FishBase Coordinator (Rainer Froese) is hosted by IfM, Kiel. A concise overview is given in the book 'FishBase 2000: Concepts, Design and Data Sources' (Froese and Pauly, 2000).

CONTENT OF FISHBASE

FishBase contains information on all known marine and freshwater fishes, currently estimated at over 27,000. For these species it contains at least the scientific name and current classification into higher taxa (Family, Order, Class), the distribution, and the reference used to extract this information. For many species it contains additional information such as common names, photos, maps, museum specimens, list of countries, and some basic information about habitats, food, and reproduction. For the few thousand better known species it also contains morphology, identification keys, population dynamics, trophic ecology, reproduction, genetics, ecotoxicology, early life history, physiology, etc. For all topics mentioned FishBase hosts the largest existing databases. All records are traced back to the publication from which the information was extracted, currently close to 30,000, including many rare publications and 'grey literature'. Copies of

these publications are available with the FishBase encoder team and are made available on request. FishBase also contains the literature collection of Eschmeyer's (1998) Catalogue of Fishes, which includes all original descriptions of fish as well as their taxonomic treatments over the last 30 years. In addition, FishBase provides species-level links into a variety of other Internet databases, ranging from bibliographic to ecotoxicological databases or to FAO catch statistics.

USAGE OF FISHBASE

FishBase on the Internet is used very widely by a broad range of users. In March the web site received altogether 6.2 million hits from close to 400,000 user sessions representing about 190,000 unique visitors. Over 4,000 'power users' visited FishBase more than 10 times during that period. About 1/3 of the users are individuals from the general public, 1/4 are from Universities, 1/5 are from the private sector, 1/6 are from Government agencies, and the remainder are smaller user communities such as NGOs or libraries. What people use most are common names, summary information about distribution and biology, and photos. While specialist topics are used relatively less, the numbers are still large when compared to the size of the respective communities (fisheries biologists, fisheries managers, NGO members, librarians, translators, etc.)

FISHBASE FOR LIBRARIANS

FishBase can aid librarians in their assistance to users searching for specific information in many ways:

- Find the scientific name associated with a common name or with an old or misspelled scientific name: enter common name or scientific name and click on 'Search';
- Give a short answer to the question: "I urgently need all information on this fish", the answer being: "Have a look at www.fishbase.org";
- Out of many references for, e.g., 'cod' and 'growth', quickly identify those that have relevant data: enter 'cod', click on search, select 'Atlantic cod', click on 'Growth';
- Find original description as well as all recent taxonomic revisions for any fish species or genus: enter scientific name, select the 'Eschmeyer' button, click 'Search';
- Find correct spelling, author and year, associated with a scientific name: enter scientific name and click on 'Search';
- Find current assignment to higher taxa (= hierarchy) (as above).

LIBRARIANS FOR FISHBASE

FishBase is far from being complete. While the encoder team has easy access to the main stream journals, it has no access to 'grey' literature such as contained in local reports and masters or doctoral theses. Librarians can help by:

- Alerting FishBase staff (contact@fishbase.org) of grey literature with relevant data (growth, diet, reproduction, etc.) entering your library, or send spare copies to Rainer Froese, Düsternbrooker Weg 20, 24105 Kiel, Germany.
- Assist FishBase staff in tracing rare publications;
- Promote FishBase with your users, such as having a desktop icon available on your public computers.

REFERENCES

1. Eschmeyer, W.N., Editor. 1998. *Catalogue of fishes.* Special Publication, California Academy of Sciences, San Francisco, 3 vols. 2905 p.
2. Froese, R. and D. Pauly. 2000. *FishBase 2000: concept, design and data sources.* ICLARM, Los Baños, Laguna, Philippines. 344 p.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 39

Information Products on Aquatic Biological Diversity and Fisheries of the German Centre for Documentation and Information in Agriculture

by

Ursula Monnerjahn
German Centre for Documentation and Information in Agriculture (ZADI), Germany

ABSTRACT

The German Centre for Documentation and Information in Agriculture (ZADI) is the scientific information institute of the Federal Ministry of Consumer Protection, Food and Agriculture (BMVEL). Among its tasks are information services like the development and maintenance of information portals, scientific information systems and databases and related research and development in the field of information sciences. An efficient information and communication technology allows the presentation of all its information services on the Internet as well as to support other institutes, mainly belonging to the BMVEL, with IT or host functions. ZADI has three information centres of which the Information Centre Biological Diversity (IBV) and the Information Centre Consumer Protection and Food (IVE) provide specific information on fisheries. The IBV puts its emphasis on the maintenance and sustainable use of the aquatic biological diversity. The Internet portal "Information System on Genetic Resources"; (GENRES) provides meta information and addresses about aquatic genetic resources in Germany and at the international level (www.genres.de). The database "Aquatische Genetische Ressourcen in Deutschland (AGRDEU)" lists freshwater fish, lampreys, mussels and snails documented by the Fischkataster of the German Laender (www.genres.de/agrdeu). The IVE has its scope on technical, economic, political and biological aspects of fisheries. It produces the Internet portal "Forum Fischerei" which provides meta information and addresses on the subjects above with its focus on Germany (www.dainet.de/forumfischerei/). The IVE provides the IT part in the establishment of the national fishery data collection according to the European Council Regulation (EC) No 1543/2000 and No 1639/2001. The database was established in cooperation with the Federal Research Centre for Fisheries (BFAFi), the Federal Agency for Agriculture and Food (BLE) and the Federal Agricultural Research Centre (FAL). The IVE has the technical responsibility for hosting the database "Aquatic Sciences and Fisheries Abstracts" (ASFA) produced by the FAO and international partners in Germany (www.bfa-fish.de/asfa/index.htm).

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 41-44

Overview of EurOcean

by

Laurent d'Ozouville[1]
EurOcean, Lisbon, Portugal

ABSTRACT

The European Centre for Information on Marine Science and Technology, namely EurOcean, was created in September 2001 as a result of a joint French-Portuguese initiative. The aim of EurOcean is to contribute in an effective manner to the construction of a Marine European Research Area and its main functions are to: 1) facilitate access to the information; 2) promote the development of indicators; 3) promote cooperation between existing European organisations. The implementation of these objectives is designed in collaboration with all interested relevant partners in order to avoid any duplication and to maximise the benefits. The first task of EurOcean is the creation of an Internet portal for marine science and technology in Europe. EurOcean is being established with a legal statute of European Economic Interest Grouping and its membership is open to national marine research institutes and European organisations.

INTRODUCTION

The creation of a European Centre for Marine Sciences and Technology (EurOcean) follows up the recommendations of the report entitled Towards a new marine dimension for Europe through research and technological development prepared by a group of European governmental experts gathered by Portugal in Lisbon in 1999-2000, and presented to the European Council of Research on 15th June 2000 by the Portuguese Minister for Science and Technology, J. M. Gago.

Taking into account the willingness expressed by both Portugal and France to implement the recommendations of the report, Ifremer and Portugal's Foundation for Science and Technology signed a cooperation agreement regarding the setting up of a European Centre for Information on Marine Science and Technology (EurOcean) to be based in Lisbon, with Laurent d'Ozouville assuming the executive responsibility as of 1st September 01.

The main objective of EurOcean is to enhance awareness of and cooperation on ocean affairs in Europe between a large spectrum of governmental and non-governmental stakeholders, to be potential providers and end-users of information in marine science and technology. Accordingly, the functions of EurOcean are to:

- facilitate access to and compile relevant data and information on marine science and technology;
- stimulate the development of quantitative indicators, including socio-economic data;
- initiate the preparation of analyses, reports and other products, as required by the members of EurOcean or under agreement with cooperating organisations;
- encourage communication between the European organisations with activities in marine research.

[1] *As Dr d'Ozouville was unable to attend the Conference this paper was presented by Allen Varley.*

EurOcean is a flexible mechanism of cooperation, which is able to easily adapt to the requirements of its members. EurOcean operates as a network of participating national organisations from European countries, in close cooperation with relevant European organisations and, when appropriate, with other international organisations.

In order to avoid any duplication and to promote synergies, EurOcean activities are designed to collaborate with and maximise the benefits for existing activities in the domain of information for marine science and technology in Europe.

The on-going activities of EurOcean include:

- establishing an Internet portal for marine science and technology in Europe;
- contributing to the development of European marine science and technology indicators;
- organising EurOcean: enlarging the membership, establishing a legal statute and setting up the secretariat.

CREATING AN INTERNET PORTAL (http://www.eurocean.org)

Objective

The objective of the creation of an Internet portal is to provide an interactive electronic platform for information on marine science and technology in Europe. In this respect, the Internet portal aims to facilitate communication, exchange and synergies in Europe between:

- the various science and technology sectors related to the oceans;
- the diverse actors and users of marine research including: academics/scholars, policy-makers, decision-makers, private sector, defence, NGOs, media, educators, and youth;
- the different structures concerned with marine research and its applications, at the national, European and international levels.

CONTENT OF THE INTERNET PORTAL

The Internet portal includes the following categories:

- marine infrastructures: coastal to high seas research vessels and related equipment, satellites, experimental and testing facilities, monitoring and observing networks, large databases and biological collections, facilities for data processing and management;
- national information: national marine science and technology profile; policy documents; directories of research centres, institutions, researchers and research equipment; press releases; web sites; national calls for research proposals, jobs, fellowships.
- European information: FP5 and FP6 funded projects, European organisations;
- industry: living resources, renewable energies, oil and minerals, shipbuilding, maritime transport;
- socio-economic;
- society: decision-makers, media, education (educators, students, public);
- calls: proposals, conferences, jobs, fellowships.

Specific tools are being made available to the users such as a dedicated search engine, management of EurOcean forums, personalised information mailing.

IMPLEMENTATION

The implementation of the Internet Portal is done in close collaboration with all institutions and persons in Europe interested in participating in the development of the portal, and then in supplying information and in controlling its quality. More specifically, EurOcean cooperates with the Intergovernmental Oceanographic Commission (IOC), which is implementing regional portals with wide focus on ocean related issues. In this respect, it was agreed that the IOC region-

al portal for Europe be part of the EurOcean portal. In exchange, IOC provides EurOcean with the appropriate software to operate the functionalities of the EurOcean Internet portal. The Beta version of the Internal portal is now available for testing.

Privileged association has also been established with OCEANIC (Ocean Information Center of the University of Delaware) regarding the database on research vessels, of which the website partly covers the objectives of the EurOcean portal on infrastructures.

MARINE SCIENCE AND TECHNOLOGY INDICATORS

EurOcean aims to stimulate the development of marine indicators in three domains as following:

- indicators on the status and evolution of marine science and technology: funding, human resources, publication citations, patents, etc.;
- socio-economic indicators: status and results of ocean related activities;
- biological, geological and physical indicators characterising the health of the coastal waters and the oceans.

Any initiative in this domain of marine science and technology indicators will be engaged in close consultation with all relevant national and European organisations (EEA, ICES, DG Research, etc.).

Already EurOcean has been engaged in a desk study funded by the Marine Institute of Ireland on the identification and evaluation of appropriate marine science and technology indicators for Ireland. The desk study included:

- literature review and data collection on general and specific science and technology indicators;
- effective and potential use of marine science and technology indicators in Ireland;
- identification of marine science and technology indicators for the marine domains in Ireland.

This desk study was completed by the end of February 2003.

ORGANISING EUROCEAN

Statute

It was recognised that EurOcean should have a legal entity for negotiation, representation and reliability in order to submit proposals for funding and to manage contracts. At the same time, EurOcean is particularly anxious to maintain its flexibility and adaptability for the efficient fulfilment of its objectives, and to avoid any heavy bureaucracy. The simple structure of the European Economic Interest Grouping (EU Council Regulation of 25 July 1985) seems well adapted to the requirements of EurOcean and presents the following advantages:

- uniform legal European framework;
- members: at least two partners from two different Member States of the European Economic Area;
- instrument of synergy: wide diversity of partners from public authorities to private enterprises;
- flexibility and adaptability to organise contractual relationships;
- full and autonomous legal capacity for negotiation and representation of its members and reliability.

Membership

The Portuguese Foundation for Science and Technology (FCT) and Ifremer (French Research Institute for the Exploitation of the Sea) have jointly incepted the European Centre for

Information in Marine Science and Technology, which was officially launched on 28 February 2001. Negotiations have been engaged with several partners having expressed an interest in joining EurOcean and to be founding members of the EurOcean-EEIG. EurOcean is in favour of no more than two members by country to be representatives of major national research institutions and willing to be the EurOcean focal points in their countries. Institutions from the European Union and European organisations could also be members of EurOcean.

Organisations willing to only contribute to some activities of EurOcean will be given the status of cooperating members.

Finances

The members of EurOcean contribute on an equal basis to the general budget of EurOcean. Access to sources of funding such as FP6 is also considered. In-kind contributions, including short-term secondments for specific tasks will be encouraged.

Modus operandi

EurOcean develops its activities in such a way as to favour collaboration between its members and maximise the benefits from existing activities in the field of information for marine science and technology in Europe. EurOcean functions through networks and relies as far as possible on the competent structures existing at national and European levels in order to implement its work programme.

A small and permanent secretariat, jointly funded by FCT and Ifremer, is based in Lisbon and started in September 2001. It is currently staffed with a director and an assistant.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 45-53

Portals: History, Features and Typology

by

Hermann Rösch
Institute for Information Sciences, University of Applied Sciences Cologne, Germany

1. INTRODUCTION

As with all major changes, the information society is marked by a variety of opportunities and as many dangers. The most interesting aspect in this context is the so called "information overload". Digital media and the Internet multiply the possibilities for communication and publication but at the same time the multitude of services on offer also leads to enormous uncertainty and confusion. Portals are part of the instruments and techniques which have been developed and are still being developed to solve or at least lessen this problem.

The precise definition of portals in the library and information sciences context is especially important since the term "portal" is frequently misused. As soon as the development of Internet portals proved to be successful a real "hype" followed. Immediately, simply out of marketing strategic reasons, even sites with meagre collections of links started to be labelled portals. The links in these lists often even included information which advertised a special product or line of business quite openly. These aforementioned examples belong to the portal type largest in numbers: the "portal wannabees".

2. DEVELOPMENTAL HISTORY

But let's have a look at the developmental history of portals first. This history shows that and why portals are more than simple collections of links.

2.1. The beginning: the Internet portal

Internet portals were first developed in the context of web catalogues and search engines in the second half of the nineties. Around the end of 1996 and the beginning of 1997 the web catalogue Yahoo! introduced opportunities to its users to personalise its services. These features were later developed into MyYahoo!. Yahoo! therefore didn't confine its services to the function of navigating the Internet any longer, but instead extended its offers to good quality contents, several application tools (email, calendar, price comparisons for software...), community building services and the filter function individual users could define – the afore mentioned personalisation.

The conceptional development of search engines and web catalogues into portals is based on marketing strategies. Web catalogues and search engines usually offer their services free of charge. Intakes of advertising finance this system. High frequency and the duration of visits determine the prices for banner adverts. Page impressions of a website with advertisements are recorded precisely in logfiles. Other measurements can include "unique users" (number of individual users of one website within a certain time period), "ad clicks" (frequency of clicks onto a specific banner advertisement), "visits" (number of connected usages of a web service), "view time"

(duration of stays on one webpage or of visits) and "clickstream" (number of pages clicked on during one single visit).

Therefore, especially the "traffic" is crucial for the commercial value of a search engine, a web catalogue or an Internet portal. The more often single web pages are visited, the longer each visit takes and the more purchases advertisement banners of search engines initiate, the more expensive the individual advertising spot can be marketed. Every tool and feature of an Internet portal aims to create "stickiness", as it is known to insiders. Marketing strategies show that portals shouldn't only pose as entry pages, but should instead become constant companions to their users. Simply accumulating lots of subject indexed links doesn't make that website a portal; at most it creates a web catalogue which is left once the first orientation period is over.

The development of Internet portals is based on the evolutionary logic of Internet specific search tools. By extending its features the former simple navigation help for beginners is transformed into a constant companion from the users' perspective and into an electronic market with enormously increased marketing potential from the managers' and product sellers' perspective. The extension of the basic search tool by contents, community building services, application tools, personalisation and the expansion of a mere advertising medium to an electronic market has hereby come into view.

At the end of 1996, Yahoo! started its development into an Internet portal ("My Yahoo!") (www.my.yahoo.com). Excite (www.excite.com) and Lycos (www.my.lycos.com) followed suit the subsequent year by enriching their search engines and catalogues with additional services and by integrating first options of personalisation. At the beginning the operators of Internet portals mostly came from four different sectors. After search engines, or web catalogues, as a first type Internet service providers, browser producers and media groups followed. It still needs to be seen to what extend operators from other sectors will set up Internet portals. Predestined for this role are mainly active centres of e-commerce, some of which already act as portals such as amazon.com and other virtual shopping centres. But even trade combines, distribution chains etc. might come to the conclusion that their own malls could gain in attraction if users were lured in by typical features of Internet portals. The traditional hosts as content providers also have to make the decision whether to rise to portal operators or whether to stay in their current positions as mere distributors.

2.2. Corporate portals

Until the middle of 1998 portals were only talked of in the Internet portal context. Then, the term and the concept appeared in a wider community: Plumtree and Sqribe, both providers of various software tools for business information management, used the term corporate portal in their press releases. The initiative to create a new portal type started in November 1998 when a study by the investment bank Merrill Lynch was published. As early as December 1998 the Knowledge Management Magazine published a case study on these products, now called corporate portals. And in February 1999 leading IT magazines published their first articles on the topic. Market research institutes like the International Data Corporation (IDC), Delphi Group, Meta Group and others presented extensive analyses and White Papers on the situation and chances of developing corporate, business or enterprise information portals on the market.

Even with all structural similarities, corporate portals show marked differences in comparison with Internet portals. Businesses don't focus on motivating their users to use the portals as often and as long as possible. Only the instrumental function within the context of traditional information management and up to date knowledge management is of importance.
Therefore, the concept of portals couldn't be transferred one to one into the business sector but had to be preceded by an extension and adjustment to the specific requirements for the surrounding system. Corporate portals have not only been created as a conceptional import but also as a logical development of earlier evolutionary stages. In the business sector these are mainly

Intranets and other software to optimise information management which, according to their features, belong to document management, content management, data mining, data warehouse, reporting or business intelligence systems also known as executive information systems. The elements mentioned above are all integrated in corporate portals and complemented by knowledge management features. Groupware, for example, is of central importance, since it enables subject focussed communication and cooperation within the business to a desirable and efficient extent.

2.3. Academic portals

Following success in the Internet and business sectors portals were also developed for academic and research purposes. Regarding access to and processing of information, selection of and navigation through Internet resources as well as organising cooperatives and communication, the demands on academic portals are similar to the ones made in the business sector. In other words: to make an original Internet portal into one that is of use to the academic and research environment additions and adjustments have to be made, which are typologically similar to the ones made for the business portals. Especially in the USA and Great Britain several prototypes have been developed which are already successfully in use.

American portal concepts for the academic sector are mostly geared to their specific campus culture. These portals are marked by referring pronouncedly to their respective institutions; they aim at specific functional areas ("academic", "administrative" and "community") thus trying to gain advantages over competing universities. The British type of academic portals is more strongly related to and focussed on single subjects or subject areas. Starting points are existing subject gateways. These traditionally are lists of web-based subject sources that are chosen and quality controlled by information specialists; their metadata is catalogued and their users are provided with a unified access point. Structurally they are related to library catalogues and bibliographies. The latest trend is that those subject gateways, those managed collections of resources, incorporate additional services to create an integrated service environment by means of which, typologically, they can be placed closer to academic portals. This extension of the original concept is apparent in the term "subject portal". An outstanding example of an academic portal developed in such a manner is the "Social Science Information Gateway (SOSIG)" which the University of Bristol is in charge of (http://sosig.ac.uk/about_us/What_is.html). Besides offering access to an Internet catalogue and a search engine SOSIG provides two services called Social Science Grapevine and MyAccount, by which means other vital functions of academic portals are realised.

In Germany these American and British developments are, if at all, taken notice of hesitatingly, although some ideas are certainly feasible and sensible and seem to have the potential to be developed into portal like structures. Portals have first been realised and developed in the Internet context as mentioned before. Their typological key structures and features have been picked up and modified immediately to be of use to other social subsystems. The original Internet portal hereby generated the development of corporate and academic portals.

3. TYPOLOGY

The developmental history of portals has already shown that three different basic portal types exist. To create a useful typology of portals though, not only systems related but also functions related basic types have to be distinguished. The two functions related types are horizontal and vertical portals.

3.1. Horizontal Portals

Horizontal portals ("hortals") are aimed at the mass market or unspecific user groups and generally try to be as complete and exhaustive as possible– thematically as well as regarding their user profiles. The classifying of information, presentation of additional contents and the provid-

ed software programs also focus on breadth rather than depth. Internet portals such as MyYahoo!, MyLycos, MyNetscape etc. embody the horizontal portal type. Synonymous terms are consumer portals, public portals, general interest portals or generic portals. But also meta portals of business enterprises and academic institutions that reach the entire user base in totality via various networked sub-portals can be counted as horizontal portals.

3.2. Vertical Portals

In contrast to horizontal portals vertical portals ("vortals") always aim their services at segments or defined subsections. This segmentation is based on topics, focus groups or specific portions of the market. The limitation to specific subjects leads to more in depth classifying of information and services, with the focus on specialisation and therefore quality not quantity, i.e. depth not breadth. Other terms for vertical portals are affinity portals, niche portals or special interest portals. With these additional criteria (horizontal or vertical) our systems related types of portals can now be defined further:

3.3. Internet Portals

Internet portals mostly aim at an amorphous mass of users. Offered contents and services of these horizontal portals consequently also focus on the mass market whereas vertical Internet portals concentrate on a distinct portion of the market defined by demographical and sociological factors or subject based interests. Therefore, vertical Internet portals bring specific topics and users with special interests together. Economically interesting in this context is that not only content and community but also commerce are brought together. Vertical Internet portals are therefore very attractive to advertising companies because of the ability to use their distinct focus groups for precise marketing strategies. The clickthrough percentage of banners on horizontal portals is usually around 0.5 percent while the corresponding value is significantly higher on special interest portals. As a result, prices for banner advertising are much higher on vertical than on horizontal portals.

3.4. Corporate Portals

Corporate portals have been developed from traditional Intranets. Especially striking is the extension of traditional information management functions to knowledge management features. Synonymous terms are business portals, corporate portals, enterprise information portals or business-to-employee-portals (B2E portals). Apart from this business internal type business-to-business-, in short B2B, portals have been developed. These are vertical portals which open up overall business connections, lines of business and product markets, i.e. they combine suppliers, service providers, producers and distributors and are based on the tradition of Extranets. Some businesses offer additional Internet portals to bond with their users and to allow direct purchasing thereby excluding mediators. These business-to-consumer-, in short B2C, portals are developments of previous public Internet appearances of businesses via homepages.

3.5. Academic portals

New media and global networking also invoke apparent changes in the communication culture of the academic sector. Academic portals act as infrastructure for the increased information and communication needs and also as instruments for optimised information management and new knowledge management. Special attention is given to the vertical accumulation of participating members of institutions and institutions themselves which take part in academic communication, discovery and utilisation processes. Academic portals are therefore typologically related to corporate portals, but also show distinct features of B2B portals. Academic portals vary with regard to their focal points on specific institutions of higher education (local academic portals, university portals), specific subject areas (vertical academic portals, academic issues portals, subject portals) and geographically or typologically defined academic environments (national or

international academic portals, scholars' portals). Operators of academic portals can be university libraries as well as consortia headquarters or other service providers, academic societies, interest groups, publishers, hosts and other commercial bodies.

4. FEATURES

Eight core features of portals can be distinguished that constitute the Internet portal type. Corporate and academic portals have an additional feature:

4.1. Unified access point

The main function hereof is to allow access to numerous services via one central entry point and one single login. The metaphor of the "portal" has surely derived from this feature, even though the type of a portal must not be reduced to this function.

Internet portals: this feature simplifies orientation on the Internet and motivates users to always start research and other activities from this website.

Corporate portals: members of staff are given a central access point to all important information within their business context. With this consistent perspective businesses aim to stop internal fragmentation.

Academic portals: instead of businesses the relating items are universities, a specific subject area or a defined academic environment.

4.2. Simplicity

Portals are preferably based on standard Internet browsers, which are not only easy to use but also known to a huge number of users. Additional tools available through those portals such as address books, calendars, programmes for developing private homepages etc. also have to be standardised.

Internet portals: the use of customary standards aims to raise attractiveness and thus create or stabilise user bonds.

Corporate portals: simplicity in this context additionally aims at saving time through rationalising effects.

Academic portals: optimising navigation and improving the searching for and the supply with information is the main function in the academic context.

4.3. Powerful search tools

Users generally expect from their entry points access to search engines as well as subject indexed link lists. To cater for the different search alternatives, search and browse options, i.e. automatic and manual indexing, are combined on one website. Special features include searching for specific formats, e.g. pictures, audio or video files, or search tools for specific document types.

All types of portals combine this feature to similar effects.

4.4. Accumulation of large quantities of information

Compared with simple search engines or web catalogues portals offer additional information services, thus becoming content providers. To this purpose they make strategic alliances with well established partners to secure important and qualitative contents for their services.

Internet portals: content is bought which satisfies their users' interests, such as share prices, business, sport or price information, weather forecasts, timetables, hotel databases etc.

Corporate portals: business and work relevant information of diverse origin and of any format is combined in a master directory. This includes unstructured data from texts, emails, technical drawings, project plans, product handbooks etc. as well as structured data from commercial databases or from business and trade information services.

Academic portals: the traditional library work of taking stock and acquisitioning data is continued here. At the same time, a change of paradigms from ownership to access is realised: besides offering access to physically accumulated stock portals also allow structured access to quality controlled external digital resources.

4.5. Structuring, processing and editing information

Tools and programmes are provided to allow the precise, comprehensive and fast identification, assessment and processing of project relevant information. Data is collected in the master directory and can be combined after different searches therefore allowing their assessment within respective contexts.

Internet portals: generally don't include this feature.

Corporate portals: features such as Data Warehouse or Data Mining are to be expected in this environment.

Academic portals: digital and analogous, web-based and non-Internet resources are classified and processed. In comparison to the classifying of Internet sources in catalogues and bibliographies academic portals also include commercially distributed products.

4.6. Integrating special features

Previously isolated applications, databases and contents are integrated in a unified information environment – the standardised and intuitive browser interface of portals.

Internet portals: on offer are tools which are guaranteed high usage such as address books, calendars, translating software etc.

Corporate portals: by harmonising and synchronising previously isolated applications so called "islands of automation" are to be overcome, redundant and inconsistent data is to be eliminated and synergetic effects are to be created. Thus the change from fragmentised to integrated information management is realised.

Academic portals: heterogeneous sources can be searched simultaneously via one search form. Even expensive databases and services are included. The individual user is identified by his initial login, all caused costs can therefore be traced back and bills can be sent out.

With above mentioned features particularly corporate and academic portals fulfil chiefly information management functions. To reach the full potential of portals, the typical information management feature of object orientation has to be supplemented with subject orientation aspects. The following three features allow corporate portals to additionally fulfil knowledge management functions, hereby combining not only needs and skills but also peers.

4.7. Personalisation

The typologically evident difference between Internet portals and search tools, corporate portals and for example data warehouses or between academic portals and subject gateways or virtual libraries is constituted mainly of options to personalise accounts. Methodically, personalisation is done via registration with individual ID and password, input of personal data such as name, address etc., and definition of the individual interests profile via check boxes or non-reactive procedures. All activities exercised via the portal, such as clickstreams and clickrates, are determined via statistics which are then used for rule-based partitioning and collaborative filtering measures.

Internet portals: personalisation offers the opportunity to users to reduce ballast and to select information according to their interests. Regular information processes can be developed which use personal data assistants or intelligent agents to combine push and pull technologies based on individual user profiles. To portal operators and their business partners, though, personalisation has a different effect. User specific profiles create the ideal basis for one-to-one marketing. Internet portals thus develop into central bridges to e-commerce.

Corporate portals: members of staff tune their portal website in such a way as to be only provided with information relating to their work specific needs. Additionally, intelligent agents are used to check other sources regularly and, if needed, to point to relevant information – depending on the individual needs. The business management team governs staff access to information with regard to their internal functions and positions.
Academic portals: users configure their own individual academic portal sites, define which information services of the overall offers are to be included on their entry page, and set their own interests profiles via controlled terms. Portal operators develop user specific, proactive information services and inform their clients via automated routines about news and new acquisitions according to their individual areas of interest.

4.8. Communication and Collaboration

Besides personalisation, the portal specific trait of providing access to communication channels and areas has to be emphasised. In the cases of corporate and academic portals those communicative infrastructures are purpose linked and aim not only to provide but also to optimise collaborative work and discovery processes.
Internet portals: to raise user bonds Internet portals offer so called community building services. These include email accounts, topic specific chat rooms, electronic jumble sales or the opportunity to place one's own information services onto an individual homepage provided by the portals.
Corporate portals: the task of these portals is the provision and perfection of business internal infrastructure for collaborative work processes on the one hand and the stimulation of single members of staff to communicate on the other hand. Portals offer virtual project areas and communication channels to provide a chosen group of people with information, and to allow discussing and assessing information within a defined public group. By means of these infrastructures and instruments it is also intended to publicise, process and integrate individually accumulated, but not documented knowledge (so called "tacit knowledge") into the business wide information pool. Herewith, corporate portals take over several knowledge management functions which can be described as stimulation, synchronisation, standardisation and distribution.
Academic portals: academic portals become central communication channels for academic discussion by giving access to subject, profile or topic specific mailing lists, preprint servers, full text databases, databases for faculties, research centres and infrastructure institutions as well as forthcoming or previous conferences, links to respective, standardised homepages of institutions or individuals etc.

4.9. Validating Information

Information sharing as a result of collaborative tools allows corporate and academic portals to assess and validate information more easily and better.
Internet portals don't provide this feature.
Corporate and academic portals: the actual state of individual information (hypothesis, matter of discussion, degree of verification or acceptance) is laid open and changes are circulated if needed. Members of the respective portals are allowed to take part in verifying and assessing information via corresponding tools installed for this purpose. This allows individual members of staff to generate knowledge from information much easier and to integrate this newly learned knowledge into other information processes. Corporate and academic portals hereby take over functions which are essential in business decision making processes as well as in academic processes.

On the basis of the described core features one can define a term for all three application areas of portals which stand out clearly from the overused fashionable term. Real / proper portals can therefore be distinguished from so called portal wannabes.

Achievements of portals:

- Modernisation of information management
- Features of knowledge management
- Transition from object to subject orientation
- Supplementing the function of information by functions of communication and transaction
- Reducing information overload
- Reducing complexity through personalisation
- Increasing user bonds through increased interaction
- Commercial potential through strategic alliances and business connections

5. AREAS OF FUTURE DEVELOPMENT

Regarding their range of features and services as well as their volumes of performance Internet portals, corporate portals and academic portals are proving to be instruments and techniques which meet their information societies' specific needs within their respective contexts. Internet portals – as electronic markets - are taking over central e-commerce functions. Corporate portals cater for optimised information management and integrated knowledge management within their business environments and bring attention to the potential to rationalise e-business. Academic portals present an adequate environment for academic learning and communication processes either on a local, subject specific or broad sector basis. It shows already that the numbers of horizontal portals on the Internet will stop rising or even start to reduce whereas a variety of specialised, vertical portals or niche portals will evolve.

In the business sector several trends can be noticed. Firstly, in some broad areas, one meta portal combines several vertical internal portals. Secondly, portals within the industry context are becoming more heavily used for the coordination of business-to-business activities. Field specific B2B portals gain visibly of importance. Some businesses don't only use their portal structures for internal purposes and for organising cooperation with other businesses but also for the direct distribution of their goods. This is the area of business-to-consumer relations which is otherwise normally dealt with by Internet portals.

Academic portals are already in use in the USA and Great Britain. Especially because of their personalising options and the integrated infrastructure for communication and collaboration portals will eventually play a leading role within the academic environment. But it still has to be seen whether libraries, new infrastructure institutions, publishers or other commercial bodies will become operators of academic portals as well.

REFERENCES

1. Barry, Jeff, *Delivering the Personalized Library.* In: Library Journal 2000, 13, August, S. 60f.
2. Boss, Richard W., *How to plan and implement a library portal.* Chicago: American Library Association 2002. (Library Technology Reports)
3. Campbell, Jerry D., *The Case for Creating a Scholars Portal to the Web*: A White Paper. In: Portal. Libraries and the academy. 1, 2001, 1, S. 15-21; http://muse.jhu.edu/journals/portal_libraries_and_the_academy/v001/1.1campbell.html.
4. *Enterprise Portals Shape Emerging Business Desktop.* The Delphi Group Inc. 26.1.1999. URL: http://www.delphigroup.com.
5. Gleason, Bernard W., *Boston College University-Wide Information Portal. Concepts and Recommended Course of Action.* January 26, 2000. URL: http://www.mis2.udel.edu/ja-sig/whitepaper.html.
6. Hartmann, Andreas, *Portal Sites als Einflussfaktor auf die Internet-Ökonomie.* In: Information Management & Consulting. 15, 2000, 2, S. 7-14.

7. Ince, John, F., *Portals vie for No 1.* In: Upside Magazine. March 2001. http://www.upside.com/texis/mvm/storv?id=3a6f34921.
8. Janetzko, Dietmar, *Statistische Anwendungen im Internet.* München 1999.
9. Koenemann, Jürgen, Hans-Günter Lindner, Christoph Thomas, *Unternehmensportale. Von der Suchmaschine zum Wissensmanagement.* In: nfd. 51, 2000, 6, S. 325-334.
10. Lakos, Amos, Chris Gray, *Personalized Library Portals as an Organizational culture Change Agent.* In: Information Technology and Libraries. Ed. Libraries and Information Technology Association, a division of the American Library Association. Vol. 19, No. 4, 2000. (Special Issue User-customizable Library Portals).
11. MacLeod, Roddy: EEVL: new profile, new office, and coming soon - a new service. In: Ariadne 26, Dezember 2000. http://www.ariadne.ac.uk/issue26/eevl/.
12. Morgan, Eric Lease, *MyLibrary in Your Library Could Make for Satisfied Patrons.* In: Computers in Libraries. 18, 1998, 5, S. 40-41.
13. *Portal Time: Five Years That Shook the World?* In: Knowledge Management Magazine. July 1999. URL: http://kmmag.com/kmmagn2/km199907/featurea2.htm.
14. Roberts-Witt, Sarah L., *Corporate Portal.* In: Knowledge Management Magazine. December 1998. http://kmmag.com/km199812/home.htm.
15. Rösch, Hermann, *Internetportal, Unternehmensportal, Wissenschaftsportal. Typologie und Funktionalität der wichtigsten Portalkonzeptionen.* In: Informationskompetenz – Basiskompetenz in der Informationsgesellschaft. Proceedings des 7. internationalen Symposiums für Informationswissenschaft. Hrsg. Gerhard Knorz, Rainer Kuhlen. Konstanz 2000, S. 245-264.
16. Rösch, Hermann, *Wissenschaftsportal - bibliothekarische Konzeption in der Informationsgesellschaft.* http://bt2000.univie.ac.at.
17. Rösch, Hermann, *Internetportale – Entwicklung, Funktionalität und Typologie.* In: Password. 2001, 3, S. 18-25, 4, S. 26-35.
18. Rösch, Hermann, *Portale in Internet, Betrieb und Wissenschaft. Marktplatz und Instrument des Kommunikations- und Wissensmanagements.* In: BIT-online. 4, 2001, 3, S. 237-246.
19. Schumacher, Mark, Axel C. Schwickert, *Web-Portale.* Stand und Entwicklungstendenzen. Mainz 1999.
20. Shilakes, Christopher C, Julie Tylman, *Enterprise Information Portals. In-depth Report.* Merrill Lynch Enterprise Software Team. 16 November 1998. http://www.sagemaker.com/company/downloads/ eip_indepth.pdf.
21. Sullivan, Danny, *Paid Inclusion At Search Engines Gains Ground.* In: The Search Engine Report. Nov. 3. 2000. http://searchenginewatch.internet.com/sereport/00/11-inclusion.html.
22. Sullivan, Danny, *Pay For Placement?* In: The Search Engine Report. Feb. 5, 2001. http://searchenginewatch.com/resources/paid-placement.html.

Session 3

Networks

Chair

Angelika Finke
GEOMAR, Kiel, Germany

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 57-62

Black Sea Regional Library Cooperation Project: A Survey of the Literature Resources Relating to the Black Sea

by

Olga Akimova[1], Snejina Bacheva[2], Irakli Goradze[3], Yulia Tyutina[4]
[1]Institute of Biology of the Southern Seas, Sevastopol, Crimea, Ukraine,
[2]Institute of Oceanology, Varna, Bulgaria,
[3]Georgian Marine Ecology and Fisheries Research Institute, Batumi, Georgia ,
[4]Research Institute of the Azov Sea Fishery Problems, Rostov-on-Don, Russia

ABSTRACT

The goal, tasks and advancement of The Black Sea Regional Library Cooperation Project are briefly described. Steps undertaken to implement Phase 1 are reported. The literature resources on the Black Sea available at all involved institutions of the countries participants are surveyed in detail.

THE PROJECT IN BRIEF

The Black Sea is a unique natural ecosystem and an important contributor to the environment of the Mediterranean Sea. The Black Sea is bounded by six countries – Bulgaria, Georgia, Romania, Russia, Turkey and the Ukraine, each with a number of aquatic research institutes focussing on the environmental problems of the Black Sea. The aquatic sciences libraries in each of these countries are rich in literature on the Black Sea, much of which has never been widely disseminated, and which in many cases is not accessible abroad.

It is this state of affairs that gave rise to the idea of launching a project on creating an online cooperative bibliographic information system for literature on the Black Sea.

A group representing the aquatic sciences libraries of Bulgaria, Georgia, Russia and Ukraine applied to the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) for a grant to cover travel expenses for the proposed Scoping Study meeting. Funding allocated by IAMSLIC allowed the group to begin preparations for the Scoping Study which comprised topics such as user's needs/audiences; scope and objectives; intended participants for various stages/services; standards to be adopted; detailed activities and ways to achieve them; and the necessary staging of activities and stage costs, etc.

The Scoping Study meeting was held at the Institute of Biology of the Southern Seas (Sevastopol, Ukraine) from 7th to 9th August 2002. Representatives from the Ukraine, Bulgaria, Georgia and Russia attended the meeting.

The aim of the project is to create an online cooperative bibliographic information system for literature on the Black Sea. The proposed system will unite the electronic catalogues and databases of the Black Sea marine libraries into an efficient information exchange system, accessible

through the Internet, and compliant with the z39.50 standard for distributed library catalogues and provision of access to distributed co-operative resources. Users of this system will retrieve references via online literature searches of the electronic catalogues of the libraries involved in the project, and receive electronic versions of the full-text documents from the library stock.

The project core group currently includes the scientific libraries of the Institute of Oceanology (Varna, Bulgaria), the Georgian Marine Ecology and Fisheries Institute (Batumi, Georgia), the Research Institute of the Azov Sea Fishery Problems (Rostov-on-Don, Russia) and the Institute of Biology of the Southern Seas (Sevastopol, Ukraine). It is anticipated that aquatic research institutes in both Romania and Turkey will also be involved in the implementation of the Project.

The project will be developed in five phases over a three-year period.

- Phase 1: A detailed assessment/survey of the literature resources relating to the Black Sea held in all relevant institutions in countries in the Region.
- Phase 2: Provision of appropriate information and communication technologies (ICTs) and associate software to the participating institute libraries.
- Phase 3: Digitization of individual library catalogues in compliance with z39.50 and made accessible online via the Internet.
- Phase 4: Implementation of linkages between the participating libraries and associated document delivery mechanisms.
- Phase 5: Development of a plan of action for the long-term sustainability of the system.

1ST STAGE OF THE PROJECT

Having carefully studied the 1st stage of the project, the group decided to carry it out without requesting financial support.

Phase 1 in detail was: *An assessment of the literature resources relating to the Black Sea held in all relevant institutions in countries in the Region.*

- Using available resources and local knowledge, compiled a Directory of relevant institutes within each country bordering the Black Sea.
- Designed a simple questionnaire that could be either mailed, faxed or emailed to each of the Institute libraries, or completed over the telephone, to establish:
  - Their holdings of literature resources on the Black Sea.
  - The ICT capabilities of the Library.
  - Their interest in becoming involved in this Project.

Organise and hold the first Project Meeting.

At first printed **bibliographic references books** have been elicited:

The bibliographic reference books prepared by the Library of the Institute of Biology of the Southern Seas:

1. The Biology of the Black and Azov Seas: 1917-1977 was published during 1985-1989. The series included 11 books (9 issues) and totaled 13 368 references. (in Russian).
2. The Biology of the Black and Azov Seas: 1978-1988 was published during 1990-1992 and included six issues covering 5546 references (in Russian).

There are also three world bibliography publications:

1. The Black Sea: Its Geology, Chemistry, Biology: A Bibliography. P. N. Laking. Woods Hole Oceanographic Institution, 1974. 368 p. - **4100 references**. (In English)
2. Black Sea Bibliography. 1974-1994. Eds: V.O. Mamaev, D.G. Aubrey and V. N. Eremeev. New York: United National Publications, 1995. 364 p. (GEF Black Sea Environmental Programme). – **4350 references**. (In English)

3. Turkish Black Sea Bibliography. Ed. B. Oztürk. Turkey, 1998. - 70 p. – **573 ref.** (in English).
4. The Biology of the Black Sea 1929-2000. Georgia, Batumi, 2001. – 99 p. – **521 ref.** (in English).

A **Questionnaire** was compiled and emailed to each of the Institute libraries to assess the status of the collections and equipment in aquatic science institute libraries in the Region.

The Questionnaires were distributed among the participants and libraries which might take an interest in the project. Nine of the Questionnaires were returned and analysed (see Appendix 1 for details).

Based on the completed Questionnaires The Directory of relevant institutes and their libraries was compiled (see Appendix 1) and the availability of equipment, electronic catalogues and software was ascertained. The answers indicated that almost all the libraries possess a computer or computers. However, some of them are old.

It is worth noting that through the annual Equipment Grant allocated by EURASLIC three libraries engaged in performing the project have purchased essential equipment. These libraries are:

Library of the Institute of Oceanology (Bulgaria);

Library of the Georgian Marine Ecology and Fisheries Institute (Georgia), and

Library of the Institute of Biology of the Southern Seas (Ukraine).

THE LITERATURE RESOURCES THE LIBRARIES HOLD ON THE BLACK SEA

The literature on the Black Sea comprises about 8150 books, periodicals, serials and reprints. This number is far from being exact because some of the libraries did not make special collections of literature on the Black Sea, but hold the books as an integral part of their stock.

One of the items of the Questionnaire was about card and online catalogues on the Black Sea. The tentative survey indicates that the number of the cards held in the libraries totals **35528** and the inputs into e-catalogues **7917**. Some of the libraries do not have e-catalogues.

ASFA STUDY

The number of records on the Black Sea in the ASFA (*Aquatic Sciences and Fisheries Abstracts*) database made during 1978-2002 was studied, and totaled **4491** (Table 1). The Table shows that the largest number of the publications on the Black Sea are contributed by the Ukraine and Russia. The explanation may lie in the fact that Russia has been regarded as the former Soviet Union ASFA partner successor since 1971, and Ukraine since 1994.

Bulgaria, Georgia, Romania and Turkey are not ASFA partners. Proceedings and periodicals published in these countries usually do not appear in ASFA. Recent access to articles published in Turkey, Romania and Bulgaria is the result of joint projects on the Black Sea, which have been implemented in co-operation with other Black Sea countries and the EU.

CONCLUSION

Comparison between the literature resources available in the libraries and appearing in ASFA, clearly points out that the libraries enjoy a major numerical preponderance. Making an exact evaluation of the literature separately for the libraries and for ASFA is a difficult task. Inevitably, many of the titles would overlap.

Therefore, the goal of the project is to ensure access to as many national literature resources as possible, primarily the proceedings and serials of the institutions and articles published in Black Sea countries.

APPENDIX 1

DIRECTORY OF LIBRARIES OF THE BLACK SEA REGION

BULGARIA

Library of the Institute of Oceanology
9000 - Varna P.O. box 152 Bulgaria
Library collection comprises **2650** books, bound periodical and serial volumes: **4860.**
Literature on the Black Sea - not available.
Card catalogues on the Black Sea - not available.
Online Catalogues – No
Inputs on the Black Sea – No.

Equipment: **New Computer Equipment purchased with the EURASLIC Grant 2002:**
Processor CPU Intel P4 1.5 G; RAM DDR-266 256MB; HDD 40.0GB Seagate U6, FDD 1.44 MB Sony; LAN Realtec 10/100 MB, PCI; Monitor 17" Sony FD Trinitron; CD-RW Sony 32x10x40

Potential partners:
Library of Institute of Fisheries and Aquaculture (IFA) – Varna, Bulgaria
Library collection comprises more than 30,000 volumes of scientific books, reference books and periodicals.

GEORGIA

Library of the Georgian Marine Ecology and Fisheries Institute,
51, Rustaveli, P.O. 58, Batumi, Adzharia, Georgia
Library collection comprises **7214** books, bound periodical and serial volumes: **11 125.**
Literature on the Black Sea – **713** (**30** books, **176** proceedings of the Institute, **507** reprints).
Card catalogues on the Black Sea - 1028 cards
Online Catalogues – No
Inputs on the Black Sea – No.
"The Biology of the Black Sea 1929-2000". – Georgia, Batumi, 2001. – 99 p. – **521 ref.** (in English).

Equipment: **New Computer Equipment purchased with the EURASLIC Grant 2002:**
Processor CPU Intel P4 1.5 G; RAM DDR-266 256MB; HDD 40.0GB Seagate U6, FDD 1.44 MB Sony; LAN Realtec 10/100 MB, PCI; Monitor 17" Sony FD Trinitron; CD-RW Sony 32x10x40; Scanner and UPS.

RUSSIA

Library of the Research Institute of the Azov Sea Fishery Problems
21/2 Beregovaya, 344007, Rostov on Don, Russia
Library collection comprises **40 000** books, bound periodical and serial volumes: **72 000.**
Literature on the Black Sea – **1500.**
Card catalogues on the Black Sea - not available
Online Catalogues – **Yes**
Inputs on the Black Sea – **500.**

Equipment: PC Celeron 486/16 MBPrinter Epson LX-1050, Scanner PKSA 640 R.

Potential partner:
Russian Scientific Research Institute of Marine Fisheries and Oceanography (VNIRO)
17, V. Krasnoselskaya, 107140, , Moscow, Russia
Library collection comprises **83 000** books, bound periodical and serial volumes: **5000.**
Literature on the Black Sea – **1500.**
Card catalogues on the Black Sea - **2500**
Online Catalogues – **Yes**
Inputs on the Black Sea – 85 (beginnig from 2002).

Equipment: PC – 4 (P111 800 FC-PGA Box/D128Mb(PC-133)/7ns/Seag 30.6Gb/ST21A/3,5"/Mitsumi/48xSamsung – 1; Celeron FC-PGA 633/D128Mb(PC-133)/7ns/Seagate 20.4Gb 13A/S3 Trio 3D/2X AGP4/3,5"/Mitsumi/Socket F/48xSamsung – 3); Scanner –1; Printers – 4.

ROMANIA
Romanian Marine Research Institute, Mamaia 300, RO-8700, Constantza 3, Romania

TURKEY
Library of the Institute of Marine Sciences, Middle East Technical University
P.O. Box 28, Erdemli, Mensin, Turkey.
Library collection comprises **3200** books, bound periodical and serial volumes: **27.**
Literature on the Black Sea – **82** books, **786** reprints.
Card catalogues on the Black Sea - not available
Online Catalogues – **no**
Inputs on the Black Sea – **no.**

Equipment: PC (Intel 1486); Scanner –1; Printer –14.

UKRAINE
Library of the Institute of Biology of the Southern Seas, 2, Nakhimov Avenue, 99011, Sevastopol, Crimea, Ukraine
Library collection comprises **53 382** books, bound periodical and serial volumes: **92 112.**
Literature on the Black Sea – **1674** books, **3480** reprints.
Card catalogues on the Black Sea - **12 000** cards
Online Catalogues – **yes**
Inputs on the Black Sea – **6674** references

Equipment:

1. PC - AMDK5, 40 MHz, RAM-16 Mb, 1,6Gb Monitor Funai 14"
2. PC - AMDK5, 100 MHz, RAM- 32 MB, HDD- 3,2 Gb Monitor 15" SyncMaster 510s
3. **New Computer Equipment purchased with the EURASLIC Grant 2003**:
   MB TYAN S2266A, P4X266, P4-478, DDR, audio, CPU Intel Pentium 4 1.7GHz, 478pin, Cooler Master DI4-7H53D-01, P4-478, up 3GHz, RAM DDR-266 256MB, Micron, HDD 40GB Samsung Maxtor, Seagate WD40 Gb 7200rpm, CD-RW Teac 48x/10x/48x, IDE, LAN Realtec 10/100MB, PCI, Monitor 17" Samsung 757 DF, MPR-II
   Printer LaserJet 6L - 1
   Scanner - 1

Potential partner:
Library of the Marine Hydrophysical Institute
2, Kapitanskaya Street, 99011, Sevastopol, Crimea, Ukraine

Library collection comprises **20 591** books, bound periodical and serial volumes: **85 433**.
Literature on the Black Sea – **200** books, **100** reprints.
Card catalogues on the Black Sea - not available
Online Catalogues – yes
Inputs on the Black Sea – **658**.

Equipment: Processor CPU Intel P4 1.5 G; RAM DDR-266 256MB; HDD 40.0GB Seagate U6, FDD 1.44 MB Sony; LAN Realtec 10/100 MB, PCI; Monitor 17" Sony FD Trinitron; CD-RW Sony 32x10x40

Potential partner:
Library of the Southern Scientific Research Institute of Marine Fisheries and Oceanography
2, Sverdlov Street, 98300, Kerch, Crimea, Ukraine
Library collection comprises **4500** books, bound periodical and serial volumes: **36 489**.
Literature on the Black Sea – **3000** books and reprints.
Card catalogues on the Black Sea - **2000**
Online Catalogues – no
Inputs on the Black Sea – no.

Equipment: No computer equipment

Table 1

The literature resources relating to the Black Sea held in the ASFA database between 1978 and 2002

Country Y	Russian N	English H	French H	Ukrainian n	Bulgarian n	Romanian n	Turkish h	Others languages s	Total l
Ukraine	1296	421	4	8					1729
Russia	794	491	2					2	1289
Bulgaria	16	141	10		88		2	257	
Romania		116	185		11	3	315		
Turkey		211	6			15	2	234	
Georgia	11	14							25
Others		563	27					52	642
Total	2117	1957	234	8	88	11	15	61	**4491**

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 63

AGORA: Access to Global Online Research in Agriculture

by

Jean Collins
Fisheries Library, FAO, Rome, Italy

A brief presentation of the AGORA Programme, which will be launched later in 2003, highlighted the aspects of particular interest to aquatic sciences and fisheries libraries.

AGORA is a global partnership to provide free or reduced-price online journal access to developing countries. It is a Collaborative Programme between FAO, Scientific Publishers, Cornell University, Mann Library (TEEAL: http://www.teeal.org), and the World Health Organization, HINARI (Health Internetwork Access to Research Initiative), which was launched in January 2002 http://www.healthinternetwork.org/

The countries which are likely to be candidates for free access are countries, areas and territories with GNP per capita of less than $1000 (based on Hinari phase I). These include 39 countries in Africa, 18 in Asia, 5 in Oceania, 3 in Europe and 4 in Latin America.

Countries, areas and territories which are likely to be eligible for heavily reduced fees (based on Hinari phase II -GNP per capita $1001-$3000) include 7 countries in Africa, 7 in Asia, 7 in Oceania, 5 in Europe and 15 in Latin America.

FAO and its partners will initially work with a small number of the major commercial publishers to establish a core of several hundred journals in agriculture and related environmental and social sciences. The journals covered by the programme are full-text online commercially available. So far over 800 scientific journals in the broad areas of agriculture and the environment have been identified of which approximately 100 cover the aquatic sciences.

Initial discussions have been held with the following publishers: Elsevier Science, Kluwer Academic, Wiley, CABI, Springer-Verlag, Lippincott, Williams & Wilkins, Blackwell and Oxford University Press. Once the programme is established content will be included from other commercial publishers, learned societies, governmental and international organizations.

For implementation of the first phase over 800 qualifying, not-for-profit institutions have been identified and surveyed. Of these, over 200 are fisheries/aquaculture institutions.

As has been seen with similar internet-based programmes, a major effort will be needed once the journals become available. Library networks such as EURASLIC can play an important role in several areas, such as awareness raising, the identification of further institutions and journals, the sharing of expertise or partnership/twinning arrangements, assisting with grant proposals to obtain the necessary equipment and connectivity.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 65-66

A Brief Introduction to Electronic Sources of Food Safety Information for Aquatic Sciences Librarians

by

Sarah Heath
Marine Laboratory, Aberdeen, Scotland, UK

BACKGROUND

UNITED KINGDOM

Since the early 1990's, perhaps as a result of the bovine spongiform encephalopathy (BSE) outbreak in the UK, consumers have been demanding more information about the food they eat. The UK Government recognised the need to be more open and transparent in the provision of food safety information, and responded in April 2000 by establishing the Food Standards Agency (FSA). The FSA was set up by an Act of Parliament to protect the public's health and consumer interests in relation to food.

THE EUROPEAN PERSPECTIVE

The European Commission identified food safety within Europe as a high priority, stating *"Assuring that the EU has the highest standards of food safety is a key policy priority for the Commission" in the White Paper on Food Safety* (COM (1999) 719 final) published in January 2000. The paper also called for the establishment of the European Food Authority. This has recently been established as the European Food Safety Authority.

WHAT QUESTIONS MIGHT AQUATIC SCIENCES LIBRARIANS BE ASKED ABOUT FOOD SAFETY?

Questions may come from consumers, producers and suppliers, or researchers. Typical questions relating to fish or shellfish could be roughly divided into those relating to specific incidents, for example, environmental contaminants in commercially exploited species such as mercury in swordfish, or on-going issues, such as the uptake of algal toxins in shellfish, and the marine biotoxin monitoring programmes established across EU member states to protect shellfish consumers.

INFORMATION SOURCES FOR GENERAL ENQUIRIES

In this developing area the following websites can provide a useful starting point:

USA

- Food and Drug Administration (FDA) (http://www.fda.gov/)
- FDA Center for Food Safety and Applied Nutrition http://vm.cfsan.fda.gov/list.html

EU

- Health & Consumer Protection Directorate General (http://europa.eu.int/comm/dgs/health_consumer/index_en.htm)
- European Food Safety Authority (http://europa.eu.int/comm/food/fs/efa/index_en.html)

UK

- Food Standards Agency (http://www.foodstandards.gov.uk/)

SOURCES OF LEGISLATION

EU legislation

Eur-lex (portal to European law)
http://europa.eu.int/eur-lex/en/index.html

UK legislation

Her Majesty's Stationery Office (HMSO)
http://www.hmso.gov.uk/acts.htm

EU MARINE BIOTOXIN MONITORING PROGRAMME

Under the provisions of Shellfish Hygiene Directive 91/492/EEC, European member states are required to conduct marine biotoxin monitoring programmes to ensure that shellfish harvested in their waters are safe for human consumption. In the UK, the FSA is the competent authority for this work, and in Scotland, biotoxin and harmful algal monitoring is carried out by staff at the FRS Marine Laboratory Aberdeen. Information about the programme is available from: http://www.frs-scotland.gov.uk/NRLbiotoxin

Other Useful Sources

The Bad Bug Book
U.S. Food & Drug Administration
Center for Food Safety & Applied Nutrition
Foodborne Pathogenic Microorganisms
and Natural Toxins Handbook
http://vm.cfsan.fda.gov/~mow/intro.html

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p.67-70

The AdriaMed Information System: A Tool for Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea

by

Nicoletta Milone
FAO-ADRIAMED, Termoli, Italy

ABSTRACT

The AdriaMed Project (Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea) is an FAO Regional Project. The countries involved are the Republics of Albania, Croatia, Italy and Slovenia. The Project aims to promote scientific cooperation among the participating countries of the Adriatic basin area through research activities, training courses and meetings. The relevant activities and efforts of the Project to establish an integrated standardized communication and information system for both national and regional requirements are described; the Project Information System is considered one of the tools to achieve this purpose. Details of the AdriaMed Information Centre, available on the web site www.faoadriamed.org, *are given, with particular attention to the databank of the libraries in the Adriatic region; steps undertaken to create a network of the Adriatic libraries are reported.*

1. INTRODUCTION

The AdriaMed Project (Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea) is a regional Project of FAO, the Food and Agriculture Organization of the United Nations*. The participating countries are the Republics of Albania, Croatia, Italy and Slovenia. The Project has duration of five years and has been operative since September 1999 (Massa and Mannini, 2000).

The Project aims to promote scientific cooperation among the Adriatic nations. Its goal is to improve the management of fishing activities in conformity with the Code of Conduct for Responsible Fisheries (FAO, 1995). Some of the main objectives of the Project are: a) to develop a common cognitive basis to support international processes aimed at fishery management; b) to reinforce scientific coordination among the different institutions interested in fishing activity; c) to establish a permanent network among the main institutions present in the Adriatic that are involved in fishery management activities.

AdriaMed aims to establish an integrated, standardised communication and information system for both national and regional requirements. From the beginning of its mandate the Project has therefore focused on setting up such a system which would allow internal communication within each participating country, inter-regional communication and also access to international channels. In order to understand the needs of each participating country and to strengthen the

* *Funded by the Italian Ministry of Agriculture and Forestry Policies (MiPAF).*

regional communication a series of activities are being developed (AdriaMed, 2000; 2001; 2002; 2003). All of these activities were aimed at stimulating the cooperative information flow within and between participating countries, in order to standardize and modulate it in a region with different levels of information gathering, following the recommendations of the FAO-GFCM (General Fisheries Commission for the Mediterranean). The end users of the information system are the researchers, scientists and decision makers who can access a unique system of information at regional level. To achieve this, the following activities have been carried out:

- AdriaMed Project Information System (Web pages and Information Centre)
- AdriaMed Network of Libraries
- AdriaMed ASFA partnership

2. ADRIAMED PROJECT INFORMATION SYSTEM

The AdriaMed Project Information System includes several activities carried out by the Project including: website, Project technical documents, mailing list, data banks. The principle vehicle for information dissemination since the Project began has been the web site, for this reason most Project information flows through the AdriaMed portal (www.faoadriamed.org). On the website the Project Information System has been developed to incorporate knowledge that has already been acquired, establishing a unique databank and circulating information that has been collected in the Adriatic area by the Project (GFCM, 2002).

It has been designed with a modular structure: for each topic there is a related database, and a new database or system can be added without interfering with the global structure of the whole system. The AdriaMed Information System was created following the design implemented by ITAFISH which is an information system developed as a series of databanks for fisheries and aquaculture in the Mediterranean context (Coppola and Crosetti, 2001). To reach interested parties more efficiently, in January 2003 AdriaMed activated its Mailing List, which aims to provide information on the activities of the Project and draw direct attention to the AdriaMed web site. At present over 250 people, (researchers, scientists, decision makers) have registered and they receive information regarding documents, events and activities organized by the Project. The results of the AdriaMed Information System are hosted in the AdriaMed web site.

The AdriaMed Website

The AdriaMed website has been available since 2000. It is available in English and Italian and for basic information there are pages in Albanian, Croatian, and Slovenian. The web site is continuously updated and the statistics related to the worldwide access to and use of the Project web pages are available on the Intranet. This system allows for continuous monitoring of the quality of the website, through the direct intervention of users' preferences (the average number if visitors per week since April is 550, the latest report shows 3000 visitors for that month, from a total of 75 countries all over the world).

The web site includes:

1) General information on the AdriaMed structure, objectives, expected results, and research activities realised within the context of the Project.

2) The news section with events, meetings and workshops organised by the Project or with AdriaMed participation; a section is dedicated to relevant topics for the Adriatic region and the documents produced by the Project.

3) Links: over 250 links associated with Project area of interest and fishery information related directly or indirectly to the Adriatic region.

4) The AdriaMed Information Centre

The AdriaMed Information Centre

On the AdriaMed website there is a section called "AdriaMed Information Centre" (AIC)

that represents an information integration system. AIC is a node of an information network, providing various communication interfaces between the relevant sources of information. Functionally speaking it is an interface that permits rapid and easy access to information from various sectors, countries and disciplines. AdriaMed has found that searching for scientific information in the region is often difficult or time consuming and information available on the Internet is rather heterogeneous. The aim of facilitating the gathering of information at regional level is the cornerstone of AIC. The application of this information system aims not only to improve information access but also to lay the foundation for a durable approach to data management. AIC clusters the information of different search engines as follows. The search engines are specialised databases organised according to the type of information.

- √ -Research Institutions: this database contains information on the relevant research institutions in the Adriatic Sea Region (laboratories, location, specialization, equipment, areas of research, etc.). It can be searched by Institution, Country or Expertise. At the moment information on 52 relevant research institutions in the Adriatic region has been included.
- √ -Adriatic Links: as described above.
- √ -AdriaMed Available Documents: this database contains all the documents produced by the Project (Technical Documents, Occasional Papers and Translations). It can be queried by keyword or by author. For each document an information sheet is available. At present 25 documents have been published and can be downloaded in pdf. Moreover for most of the documents an abstract in the 4 languages used in the Adriatic countries is available.
- √ -Virtual Library: this databank contains scientific serials published in the Adriatic Sea Region. At the moment this database includes 48 serials from Albania, Croatia and Slovenia and the 200 institutions (and related libraries) in the whole Adriatic area which hold them. The serials are those covering aquatic science and fisheries topics. It is possible to search by Country, Serial and Institution/Library. For each query an information sheet is available with all the information on the library and the availability of the serials.

3. THE ADRIATIC LIBRARIES NETWORK

The establishment of an Adriatic Libraries Network aims to create a network of the libraries in the Adriatic region in order to build on or support the existing national networks, by encouraging countries without library networks to establish them and to integrate these groups into a wider network. The main functions would be to develop and strengthen links between individuals and institutions, to provide mutual support and to collaborate in a joint project. This will increase the productivity of scientific libraries and their usage, promoting standardised procedures and overall it will provide a high quality library service to users in the Adriatic region. Considering the difference in the participating countries, this system represents a first step towards the standardization of the methodologies in the Adriatic region and in wider vision in the Mediterranean area.

The network will be centrally managed by the AdriaMed Project while contacts and operations between the member libraries are endorsed. Each library will be connected via extranet to the AdriaMed Documentation Service (ADS) system in order to be informed on the existence of scientific references (journal titles, books, etc.). The AdriaMed Documentation Service has been created as an experimental search engine that clusters the results of a general bibliographic search query into a list of reference on the relevant categories. The system collects data from all relevant information sources (databases and libraries), providing a list of references on the topics searched for. Each library could be a user and supplier of the information. Once a library receives a request, it should forward the query to the ADS system. In this way the library will act as user and all the other libraries will provide the requested information. The approach used for this experimental system is a combination of manual and automatic organization that enables great flexibility, comprising:

- An automatic system for the forwarding of queries
- An improved gateway between AdriaMed and Libraries, supporting multi database searching

This system will create an intermediary document supplier network for scientific and technical documents, for the Adriatic coastal countries in which these documents are not available.

4. ASFA COLLABORATION

In 2000, when AdriaMed became an International Partner of ASFA (Aquatic Sciences and Fisheries Abstracts), a network was created of editors in the Adriatic region, who deal with aquatic sciences. The aim of this network is to permit wider dissemination of the scientific publications edited in the Adriatic coastal countries. For most of the Adriatic editors it represented the first opportunity to be hosted in an international database. At present 21 editors have been contacted, 2 from Albania, 9 from Croatia and 11 from Slovenia and these editors actively collaborate with the Project. Since December 2000 more than 300 scientific contributions published in the Adriatic countries have been included in the ASFA database.

The AdriaMed web site hosts an ASFA section with information regarding the AdriaMed monitoring responsibilities. The complete list of the serials monitored by AdriaMed for ASFA purposes is available; each serial has its own web space, thus allowing most of the editors to have a wider distribution (http://www.faoadriamed.org/html/activity/adria_asfa.html).

5. CONCLUSIONS

The activities and efforts carried out by the AdriaMed Project to establish an integrated standardised communication and information system in the Adriatic area can be positively evaluated in its first three years of activities. The AdriaMed website, the partnership with the FAO-ASFA database, the AdriaMed Information System, the AdriaMed Mailing List are all activities finalised to strengthen regional communication and to encourage information flow between the Adriatic coastal countries. The number of visitors to the AdriaMed web site, of users of the AdriaMed Information Centre databanks, of persons subscribing the AdriaMed Mailing List and of documents downloaded from the web site (up to 2000 in a month), all demonstrate the effectiveness and the solidity of the network created by the Project.

REFERENCES

1. AdriaMed. 2000. *AdriaMed seminar on the preparation of the AdriaFISH project component (Adriatic Fishery Information System)*. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/OP-01: 12 pp.
2. AdriaMed. 2001. *Report of the Second Meeting of the AdriaMed Coordination Committee*. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/TD-04. AdriaMed Technical Documents, 4: 41 pp.
3. AdriaMed. 2002. *Report of the Third Meeting of the AdriaMed Coordination Committee*. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/TD-07. AdriaMed Technical Documents, 7: 34 pp.
4. AdriaMed. 2003. *Report of the Fourth Meeting of the AdriaMed Coordination Committee*. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/TD-09. AdriaMed Technical Documents, 9: 41 pp.
5. Coppola, R.; Crosetti, D. 2001. *Decision-support system for fisheries. The ITAFISH case study*. Studies and Reviews. General Fisheries Commission for the Mediterranean. No. 72 Rome, FAO. 50 pp.
6. FAO (Food and Agriculture Organization of the United Nations). 1995. *Code of Conduct for Responsible Fisheries*, FAO, Rome. 41 pp.
7. GFCM (General Fisheries Commission for the Mediterranean). 2002. *Report of the Third Session of the Sub-Committee on Statistics and Information (Barcelona, Spain, 6-9 May 2002)*. In: Report of fifth Session of the Scientific Advisory Committee. Rome, 1-4 July 2002. FAO Fisheries Report/FAO Rapport sur le Pesces. N°684. Rome, FAO. 100 p.
8. Massa, F., Mannini, P. (eds). 2000. *Report of the First Meeting of the AdriaMed Coordination Committee*. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/TD-01: 64 pp.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p.71-73

Bringing it All Together - The Mediterranean Action Plan Library and Documentation Centre Goes Online

by

Margaret Watts
Mediterranean Action Plan, Athens, Greece

The Mediterranean Action Plan (MAP) is an action oriented cooperative effort involving 21 countries bordering the Mediterranean Sea, plus the European Community, that within the framework of the 1976 Barcelona Convention, work together to protect the Mediterranean Sea, while promoting sustainable development. MAP's Library and Documentation Centre, in Athens Greece, has recently carried out an automation project, bringing together a range of documents and materials, making many of them available online, as part of the new MAP web site. This has resulted in widened access to MAP's work, for other libraries, the public, the media, and to scientific and academic communities. This paper gives a brief overview of the project and more importantly the benefits now available to those researching the Mediterranean Sea and its environmental status. It will provide you with information on the networks of organisations concerning the Mediterranean region.

The Library's specialized collection that focuses on marine science, maritime law, sustainable development, pollution prevention and monitoring, has been built up over the last 20 years, largely attributed to the valued and professional work of Athena Davaki.

The task of automating the library involved setting objectives, analyzing what needed to be done, consultations with Staff and Regional Activity Centres, evaluating and selecting software, database design and implementation, evaluation and training.

The main goal was to bring together the various formats of MAP's library materials and provide an integrated interface that reached as many levels of users as possible and embellish these references with their corresponding full text links where possible, as well as making links to related documents and organisations.

WHAT DO WE USE TO AUTOMATE?

We carried out an exhaustive evaluation of 7 major software packages, produced both locally and internationally. After exhaustive demonstrations, tests, and consultations with colleagues already using various software packages, we decided on the Inmagic DBTextworks and DBWebPublisher software package. It was able to meet our needs for flexibility and included features that allowed us to design database structures to meet our specialized needs and link together a range of materials and electronic files.

MEETING DOCUMENTS

MAP has a collection of over 3,000 meetings documents, dating back to 1975; the beginnings of the Barcelona Convention (adopted in 1976). It represents a history of the Barcelona Convention, its six Protocols and the achievements of MAP. There are two types of documents.

1) Contracting Parties documents which relate to the Convention and the Protocols and 2) Working Group documents that address specific issues and are meetings of various specialist bodies, for example, the Mediterranean Commission on Sustainable Development (MCSD). Many Working Group documents contain primary data presented at meetings, as part of MED POL, the programme for pollution assessment and control, that had not been published anywhere else, making it highly sought after, current information.

A major part of the project was to convert these into electronic format. Dating back to 1985 we had collected some 70% of documents in electronic format, and converted them into PDF. The remainder and documents dated prior to 1985 were sent to commercial scanners and saved in PDF. The documents' bibliographic records were converted from a database in CDS/ISIS (UNESCO) into Inmagic format. The documents were then individually indexed by keywords (ongoing) and allocated one or more general subjects to form a "web category", for example, sustainable development. This field was vital in linking the meeting documents with books and reports on similar subjects indexed in a separate database.

MTS REPORTS

MAP also publishes a series of technical reports, which are written by specialists and specialist organisations, Regional Activity Centres or taken from technical meetings. They are of great interest to the scientific and technical communities.

Again our task was to reference them and provide access to the full text documents. We took a similar approach here and converted those we could from electronic format and others were sent to commercial scanners, and stored in PDF. They were indexed and linked by the "web category" field.

LIBRARY HOLDINGS

Some 1,000 items in the forms of books and reports have so far been entered into the Library database. The references are fully indexed and also provide links to related web sites, emails and links to full texts where possible.

SEARCHING THE DATABASES

Search screens were designed for each format i.e. meeting documents, MTS reports and library holdings. The user is also provided with screens that have predefined topics to choose from with links between each of the screens. There is a free search screen that searches simultaneously across all formats producing results including books, reports, MTS reports, and meeting documents in similar subject areas.

LINKS AND NETWORKS

Part of the project also included compiling a list of over 500 links to organisations and web sites, for the MAP web site. It is perhaps useful here to say some things about MAP's library networks.

We work closely with our Regional Activity Centres, that are located around the Mediterranean, and who deal with issues such as coastal management, specially protected areas, prevention of oil pollution, cleaner production, remote sensing, historical sites, population, water, tourism, information, industry, urban management in the context of sustainable development.

MAP has a strong partnership relationship with Mediterranean NGOs, who play an integral role in MAP activities providing expertise and awareness raising. A useful source of infor-

mation on Mediterranean NGOs is the relatively new WWF Mediterranean Directory of Environmental Organizations.

Academic and research institutions such as the Greek National Centre for Marine Research, provide substantial access to a great deal of Mediterranean marine research. Universities around the Mediterranean contribute through their programmes and a two-way relationship is established with MAP exchanging publications, and assisting academics and students with research. These include Panteion University in the area of environmental law, and in marine research the Universities of Athens, the Aegean, Crete, National Technical University and the Institute for Marine Biology of Crete and the University of Malta, Marine Laboratory, as well as other Mediterranean universities. The work of government departments as exampled by State of the Environment reports from Morocco, Tunisia, Libya, Lebanon shows the level of work going on also in these countries. We also work closely with other UN Agencies, as part of UNEP, such as WHO, WMO, IMO, FAO, IOC, and with the World Bank.

THE MAP WEBSITE

Simultaneously, MAP began a major redesign of its Website (www.unepmap.org). Its aim was to reach as wide an audience as possible, be very user friendly but also to provide different levels of information, becoming more complex as the user goes deeper into the site. One of the main pillars of the site was the E-Documents, where the library databases are situated. Another feature was the design of the e-shelf now providing links to over 500 related organisations. This can be found under The Kiosk, an innovative feature containing MAP news and publications.

We simultaneously published the databases with the web publisher software onto the site, coordinating with links from other sections on the site. For example, where MAP meetings were mentioned in other pages, a link was also available to the meeting documents database.

At the same time, we developed and trained staff in using an Intranet system, with modified search screens to suit the searching needs of staff in their daily work. Staff were trained individually and it was very useful in gaining feedback about the system and making modifications on that basis.

The system is constantly updated and dynamic, as we are currently updating our MAP website, to reflect feedback, and the needs of our users.

Readers are invited to spend some time looking through the site, and provide feedback.

Special Presentation

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 77

Fishy Things in Murky Waters: Some Penguin Secrets Exposed

by

Rory Wilson
Institut für Meereskunde, Kiel, Germany

ABSTRACT

Penguins lead a double life: on land they are awkward, amusing and vaguely reminiscent of well-dressed waiters with a penchant for detail. These are the penguins that many people know and love. The secret lives of penguins, however, may take them to depths in excess of 500 m, holding their breath for over 20 minutes and pursuing prey at speeds in excess of 25 km/h. Penguins are consummate hunters - aquatic athletes of the bird world that can be the worst possible news for many a desolate fish. The talk by Rory Wilson exposed some of the penguin's most carefully guarded secrets and shed their Charlie Chaplin image forever.

Discussion Sessions

Mediterranean Special Interest Group (MedSIG)

Chair: **Jean Collins**
Fisheries Library, FAO, Rome, Italy

.....

Aquatic Sciences and Fisheries Abstracts (ASFA)

Chair: **Diane Hoffman**
Cambridge Scientific Abstracts (CSA)

.....

European Countries in Economic Transition (ECET)

Chair: **Maria Kalenchits**
Estonian Marine Institute, Tallin, Estonia

.....

Freshwater Libraries

Chair: **Ian McCulloch**
Centre for Ecology and Hydrology, Windermere, UK

.....

E-Learning and Libraries

Chair: **Paul Nieuwenhuysen**
Vrije Universiteit Brussel and University of Antwerp, Belgium

.....

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 81-82

Euraslic Discussion Session
Mediterranean Special Interest Group (MedSIG)

Chair: **Jean Collins**
Fisheries Library, FAO, Rome, Italy

Participants: Enrique Wulff-Barreiro (Spain), Nicoletta Milone (FAO-ADRIAMED), Sofia Goulala (Greece), Margaret Watts (UNEP MAP), Sofija Konjevic (Croatia), Jean Collins (FAO), Jane Barnwell (IAMSLIC).

Outcome of discussions

Some background material on Mediterranean aquatic organizations, programmes and projects had been compiled prior to the meeting to assist the discussion. These covered mainly the programmes and mandate of the UNEP Mediterranean Action Plan and some of the FAO Regional Fishery bodies and projects.

Additional areas of collaboration amongst institutions bordering the Mediterranean included the work of:

- The Intergovernmental Oceanographic Commission. Group of Experts on Marine Information Management (IOC GEMIM) would also support a network of Mediterranean libraries;
- The European Science Foundation, the 6th European Framework Programme and the EU's Euro-Mediterranean Partnership support collaborative research in the Mediterranean Sea;
- The ADRIAMED Project and its existing library / information network.
- The MAMA project

Issues related to library co-operation included:

- The opportunity to benefit from existing scientific and development collaboration between Mediterranean institutions - and possible sources of funding;
- Benefits of sharing Mediterranean information resources and expertise via a sub-regional network;
- Additional benefits for some of the libraries in North Africa and the Eastern Mediterranean.

The above participants were in agreement that an additional effort should be made to contact more Mediterranean libraries and to promote more active collaboration. A proposal was made by Margaret Watts (UNEP MAP) and Sofia Goulala (NCMR, Greece) that they are prepared to initiate and coordinate this effort. The group accepted the following proposal and agreed that it should be put to the EURASLIC Business Meeting for comment.

UNEP/MAP in partnership with the Greek National Marine Research Centre, collaborating with EURASLIC, Italy, Croatia, Spain, ADRIAMED and other related organizations promote a network of Mediterranean Libraries dealing with aquatic environmental issues. Its aims would be, within current resources, to share and exchange information resources, exchange professional advice and keep each other informed on current developments in information management.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 83-84

Euraslic Discussion Session
Aquatic Sciences and Fisheries Abstracts (ASFA)

Chair: **Diane Hoffman**
Cambridge Scientific Abstracts

Participants: Jean Collins (FAO), Linda Noble (UK), Jane Barnwell (IAMSLIC), Margaret Watts (UNEP), Jadwiga Zdanowska (Poland), Nicoletta Milone (FAO-ADRIAMED), Ian McCulloch (UK), Paul Nieuwenhuysen (Belgium).

Several questions regarding the ASFA database, search interface and relationship with indexers were raised.

Interface Observations

IDS version 6.1 was introduced in January. It was expressed that in the advanced search the multitude of parentheses indicating the logic applied to the search were quite cluttered looking. Upon further discussion it was decided that librarians intuitively "neaten" their searches when they use command line searching which is why they look so different to the same search entered using the Advanced Search Feature,

It was also pointed out that the ASFA Serials Source list was hard to read and out of date. This observation will be transmitted to the ASFA editors as they update the list using the version on the FAO website. The Members Directory also needs to be updated.

Full Text Links

Jean Collins asked if CSA could establish links to FAO full text documents. This request will be enthusiastically passed on to the CSA linking team.

ISBN Numbers

The requirement in the ASFA database is for ISBN's to include the hyphens. This causes a problem for linking from OPAC systems using ISBN or ISSN as the link because OPACs eliminate the hyphen. This problem will be investigated and a response sent to Nicoletta Milone.

Download in ASFISIS Format

Jean Collins requested that the CSA systems staff develop an IDS download module that would download data in ASFISIS format. This would be especially useful for users in African nations who have very few resources for saving and reusing references.

Training and Support Materials

Dr. Nieuwenhuysen requested training and support materials for the ASFA database that could be used to introduce new users to the database or encourage occasional users to use it more. Two training and support specialists have recently been added to the European staff and they will work on providing special onsite training in Europe and materials that can be used by ASFA partners venturing into other areas.

Records in the ASFA database that do not have ASFA indexing

Ian McCulloch pointed out that CSA has added additional relevant records from other CSA databases such as Biological Sciences and Environmental Science and Pollution Management that do not carry ASFA indexing and which his users find confusing. This comment will be passed on to the ASFA editors, but the usefulness of the additional records has been demonstrated and the expense of adding ASFA terms to the records may be costly. Nevertheless, the issue will be addressed.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 85-86

Euraslic Discussion Session
European Countries in Economic Transition (ECET)

Chair: **Maria Kalenchits**
Estonian Marine Institute, Tallin, Estionia

Participants: Olga Akimova (Ukraine), Marina Artemova (Russia), Snejina Bacheva (Bulgaria), Alla Belyakova (Russia), Valentina Khazova (Russia), Ludmila Koval (Russia), Lyudmila Kulagina (Russia), Irina Merkina (Russia), Olga Judina (Russia).

Observers: Marie-Pascale Baligand (France), Marcel Brannemann (Germany), Roland Cormier (Italy).

Following a brief introduction of the ECET group objectives and projects, Olga Akimova informed the participants about the present situation with the Black Sea Regional Library Cooperation Project. The members of the ECET group have expressed their support for the aquatic libraries bordering the Black Sea to apply for an IAMSLIC grant in 2004 to be able to continue with the project.

Taking into account that the majority of the participants of the ECET Group Discussion Session were new Euraslic members from Russia, the main emphasis of the discussions was on the present situation in aquatic libraries in Russia. It was stated that an extensive job had been done by Olga Akimova in publicising Euraslic activities as well as recruiting new members from Russia during the International Librarians Conference in Crimea in the Summer of 2002.

Each library representative was given the opportunity to report on the problems their library was currently experiencing. The situation concerning Interlibrary Lending Service possibilities in Russia was discussed briefly. It was noted that the majority of ILL requests received through the Euraslic Discussion List come from Eastern and Central European countries. There are some valid reasons for this. Even if the required publication could be found in their own country, the libraries would prefer to ask for it through the Discussion List, as the mailing time of the copy from the central libraries of their own countries is very often unacceptably long.

One of the main problems seems to be insufficient communication between the aquatic libraries in the region. As a result of the collapse of the Soviet Union many links and contacts were interrupted and they need to be re-established as soon as possible. It was agreed by the participants that the intersessional ECET Group Discussion Forum should continue.

The idea of creating a Union List of Current Serials received by the ECET group aquatic libraries was also discussed. This proposal was distributed about a week before the Euraslic Meeting to enable the participants of the ECET Group Discussion Session to prepare for the discussion. The proposal is aimed at making the collections of periodicals of Central and Eastern European aquatic libraries accessible to other aquatic information community members via the

Euraslic web site. The List should be regularly updated and should be open to all Euraslic members. The information should include: the title, ISSN number, the abbreviated name of the hosting library, and holdings. As a result the aquatic libraries of the ECET group would be able to locate whether the needed publication could be found in another aquatic library in their own country. Simultaneously, other Euraslic libraries would have the possibility of accessing the unique collections of periodicals that Eastern and Central European aquatic libraries have. Maria Kalenchits and Olga Akimova have volunteed to coordinate the project.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 87

Euraslic Discussion Session
Freshwater Libraries

Chair: **Ian McCulloch**
Centre for Ecology and Hydrology, Windermere, UK

Most of the participants felt that freshwater science is less and less being pursued as a discipline in its own right. For example, scientific teams in our organizations are now studying pollution across both terrestrial and freshwater habitats. One institute formerly devoted to freshwater ecology has now been absorbed into a wider environmental organization. The Polish Inland Fisheries Institute is unusual in this respect, being separate even from the Polish Marine Fisheries Institute. Other people have found the focus of their organizations moving away from freshwater. Even in the university sector, freshwater subjects are spread across several different faculties, e.g. biology, agriculture, etc.

Another problem common to all multi-site research organizations is publishers' approaches to the provision of electronic journals. Often, electronic access is restricted to the geographical location where the print copy is received, even though there may only be a handful of staff there. The same approach results in a University being able to offer electronic access to many thousands of students and staff. The group was concerned that a subscription model based on universities was being inflexibly applied, to the detriment of smaller research organizations.

All of the organizations represented use *Aquatic Sciences and Fisheries Abstracts (ASFA)* although it is thought that the staff at one Institute do not make very much use of it, as it is not perceived to be current enough. Given that the majority of the records in the database deal with marine subjects, the Environmental Regime field is of particular value to freshwater scientists, but a large number of records do not have anything in this field. The group was unsure whether there were any German contributors to ASFA at present, although it later transpired that there is one. Within the group, only two people are currently contributing records to ASFA.

The Kluwer journal *Hydrobiologia* was also discussed. For those of us that still buy it, it is the most expensive title in our collection, although the quality of the papers in it was sometimes criticised by the scientists. One Institute cancelled the title this year.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 89-90

Euraslic Discussion Session
E-Learning and Libraries

Chair: **Paul Nieuwenhuysen**
Vrije Universiteit Brussel and University of Antwerp, Belgium

INTRODUCTION

The organizers of the EURASLIC 10th biennial conference felt that there was some interest among conference participants in the relations between libraries and the relatively new phenomenon of virtual, electronic learning environments. So they decided to organize a live discussion session on this topic during the conference. I was asked to guide and stimulate this. First I presented a brief overview of e-learning as follows.

ELECTRONIC LEARNING ENVIRONMENTS

A way of defining an e-learning system is that such a system is based on information and communication technology (computer hardware, software and network), to create, develop, maintain and make available learning/study materials to students, to coach, guide learning/study activities, and to assist evaluation/assessment of the students, all this continuously through time (permanently), and independent of the location of teachers and of students.

Electronic learning environments can be built using computer software. Popular, existing software packages applied for this purpose include the following.

Client-based software that helps a teacher to create web pages and web sites. Famous names here are Macromedia Dreamweaver and Microsoft FrontPage.

Server-based, more specialised software that includes authentication, authorisation and personalization of users, and that offers some didactical modules, for instance for assessment, and a module for group communication. Famous commercially available packages of this kind are BlackBoard and WebCT. An example of a non-commercial, open source system is KEWL.

An electronic learning environment can offer some advantages in comparison with more classical tools to support teaching and learning. It is accessible all the time. It can be used from any location. It can stimulate the teachers to rethink their pedagogical methods; this may lead to pedagogical innovation. The new, exciting learning methods can attract new students; this is important in the increasingly competitive field of education.

However, electronic learning environments also suffer from some limitations. There is still a lack of good learning materials that are well adapted to the new pedagogical methodology. There is a lack of pedagogical innovation, vision and methods that are well adapted to the features of the e-learning environment; such innovation does not come automatically with information technology. Teachers as well as students require at least basic tools and skills in the area of information and communication technology. E-learning system software as well as contents can be expensive, and some extra computer hardware and expensive technical support is required. The ideal e-learning system does not exist of course; for instance: which software package is available free of charge or at least affordable that offers a good integration of a server-based sys-

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 93-95

Euraslic Workshop
Lost in Cyberspace: Raising Your Institute's Profile on the Internet[1]

Coordinator: **Ian McCulloch**
Centre for Ecology and Hydrology, Windermere, UK

INTRODUCTION

This workshop explored ways to attract more visitors to an Institute's website, and in doing so, to raise the organization's profile, and hopefully the librarian's profile within the organization. The workshop began with a discussion of a few general tips, after which the participants broke into smaller groups and looked at some websites. Within the groups, the strengths and the weaknesses of these sites were analysed, and then the participants came together again to discuss their findings. Finally, some guidelines were drawn up for circulation amongst the participants.

MAKING IT USEFUL

From the UK e-envoy's web pages:

An effective website is one of the means for delivering an organisation's business strategy. The management of the site will be more straightforward if there is integration between electronic publishing and the business units whose material is presented through it. Within that strategy, it is essential to ensure that the various management tasks which are necessary for effective use of websites are identified and that responsibility for their completion is clearly allocated and understood.

To put it more simply, are you linked in to the rest of your organization? Does everyone in the organization know that you are in charge of the web pages, and that you need up-to-date information? Getting this sorted out right from the start can save you headaches later on, and also help to knit you more tightly into the organization.

Here is a checklist of the basic things that you need to get right, right from the start:

- Keep it up to date – make sure that the web pages are regularly updated, and that the date of updating is clearly visible (if you need to check the date that a web page was last modified, and it doesn't have a date visible, try typing "javascript:alert(document.lastModified)" into the address bar).
- Are the links working? Check the hyperlinks regularly (your web-editing software will probably be able to help you with this). The web is constantly changing, leading to the phe-

[1] *This workshop was prepared and organized by members of the Britain and Ireland Association of Aquatic Sciences Libraries and Information Centres - BIASLIC.*

nomenon known as "link-rot". It is worth checking periodically that the link goes to the right place. Don't assume that just because the link is active, it is correct. Also, do the links go somewhere useful? A link to another page full of links can be very frustrating.

- If you are preparing a web page offline, watch out for any links to files on your hard disk drive. These will need updating once the files have been moved to the web-server.
- Using anchor tags to direct a hyperlink to a specific place within a web page is often very useful, but you must make sure that it is obvious which part of the page the visitor is being directed to. A hyperlink to an anchor tag will load the new page with the anchor at the top of the screen if it can, but if the anchor is near the bottom of the page, that may not be possible
- If you are using Macromedia's Flashä to produce animated sequences, use it carefully. The person visiting your site must have the opportunity to decide for themselves whether or not to install the Flash plug-in, and if they don't want to, or already have it installed but want to go straight to a particular section, there must be a button or link allowing them to bypass the Flash animation
- Coloured backgrounds should be used with care. Make sure that text is easily readable over them
- Is the information useful? There are some things that you should have as a minimum:
    - The name of your organization.
    - Street address.
    - Contact names and email addresses, detailing who does what, if necessary.
    - The URL – although most web browsers include this automatically when printing, if it is too long it will not appear in full.
- Does the page display properly in all browsers? If you use a Microsoft product for web editing, is it putting in code that doesn't work with Netscape?
- Does it load (relatively) quickly? If it is very slow to load, consider reducing the size of any graphics on the page.
- Use the ALT tag to provide textual information about a graphic. Some people with slow Internet connections set their browsers not to show graphics, in which case this tag will tell them what the picture is. It is also useful for people with visual disabilities.
- Make sure that the information provided is correct!
- Provide consistent navigation tools – can you always find your way back to the start page in a couple of mouse clicks? A navigation bar is useful, and can be applied consistently using Cascading Style Sheets (CSS), but the bar must make it clear when you are already on one of the pages listed, otherwise some visitors may click on what looks like a useful link, only to be returned to the top of the current page. Navigation bars may be worth placing at the top and bottom of pages if some of them are quite long.
- Frames can make it impossible to link to from outside, or if people do, they might end up with the frame, but no accompanying menus etc. They are best avoided.
- How will the page look to people with different screen sizes and resolutions? Another common problem with frames is that the title frame may not display as required when viewed at a lower resolution.
- Are there any "missing" links? Do you refer to something without giving visitors the opportunity to go there themselves?
- Highlight any recent changes or additions to the pages. This can be done either by adding a small but eye-catching graphic to each item, or by maintaining a separate section with links to new items.
- Too much text on a page, without anything to break it up, can be off-putting. Consider breaking it up with graphics, or dividing it up into more than one page. Lists, for exam-

ple, could be broken up alphabetically, with a set of navigation links such as "A-E, F-J," etc. at the top of each page.

- Links that open a new window are best used sparingly. Sometimes there is a good reason for doing so, but in most cases it just causes confusion.
- If you are including a form on a web page, it is worth putting the extra effort into making it fully online, with a "Submit" button, rather than requiring visitors to fill it in, then print it out and post it.

Once you have the basics in place, you can start to refine your web pages. Keep an eye on what other people are doing. When you hear someone talk about a really useful website, have a look at it, and see what marks it out as being useful. Look out for "web awards" – find out why people thought a site was worth awarding a prize to.

A good statistical reporting package on your web server is very important. It can tell you which pages are being used the most, and more importantly which ones are being used the least. Take a look at these pages, and ask yourself why people don't visit them as often. Are they unimportant? Can they be deleted? Do they need updating?

LETTING PEOPLE KNOW ABOUT IT

- Submit the URL to search engines – they generally have a help page that will tell you how to do this. Bear in mind that it can take some weeks before the URL appears.
- Alert your colleagues in other organizations via email lists (e.g. Euraslic) by including the URL in your email signature file. Make sure everyone else in the organization knows about it too.
- Make sure that the URL is included on all Institute stationery.
- Get the most memorable URL you can, e.g. www.euraslic.org. It only costs around €30 per year to register a domain name. For pages within the top-level domain, try to avoid using file and folder names that could be misinterpreted if spoken over the phone.
- Check to see who is linking to your page (look at Google's advanced search page to see how to do this) and contact anyone else that you think should be doing so.

LINKS

- Web page design for designers - http://www.wpdfd.com/
- Writing for the Web: A Primer for Librarians - http://bones.med.ohio-state.edu/eric/papers/primer/
- Guidelines for UK government websites - http://www.e-envoy.gov.uk/webguidelines.htm
- Webby Awards - http://www.webbyawards.com/main/
- Website Awards - http://www.website-awards.net/
- Web Development Tools - a beginners' guide: CSS - http://www.quackit.com/css/css.html
- Prof. Dr. Paul Nieuwenhuysen's pages on web design - http://www.vub.ac.be/BIBLIO/nieuwenhuysen/courses/chapters/www-docs_files/frame.htm

COUNTRY AND INSTITUTION REPORTS

Chair

Olga A. Akimova
Institute of Biology of the Southern Seas, Sevastopol, Ukraine

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 99-100

Ukrainian Country Report

by

Olga A. Akimova
Institute of Biology of the Southern Seas, Sevastopol, Crimea, Ukraine.

During the last 10 years the annual International conferences organized by the State Science and Technology Public Library (Moscow, Russia) has become very popular. Since 1994 these conferences have regularly been held in the Crimea under the motto "Libraries and Associations in the Changeable World: New Technologies and Forms of Cooperation". The usual conference length is nine days and each conference comprises several sessions such as "Worldwide information infrastructure and international cooperation", "Automated library systems and technologies", "Network technologies, multimedia and the internet in the libraries", "Information and linguistic support of library and information systems" and others. Participants present reports, take part in mini training courses and exchange opinions. There has been a continuously growing number of participants indicating the success and popularity of these conferences. In 1994, 230 persons from 15 countries attended, presenting 100 reports, while in 2002 participants were as numerous as 1300, representing 45 European countries, America and republics of Former Soviet Union (FSU), and presented 568 reports.

I try to attend these meetings, especially when they are held in Crimea, and last year I was invited to Chair the Session on: Ecological information. Library as a centre of ecological culture; and I presented the report: *International Information Systems for Aquatic and Sea Studies* and another about EURASLIC and its activities, the latter was illustrated by a special collection of documents and the Euraslic leaflet translated into Russian.

Raising the profile of the Association and encouraging new members to participate were the goals I set when addressing the public. As a result, several Russian participants have joined the Association. The information about EURASLIC had also been distributed among those libraries of the FSU which did not participate in the Conference but which specialize in marine or freshwater research.

The University Library of Hanover and Technical Information Library organized the cooperation with Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan and Ukraine concerning an INTAS project on access to electronic journals Springer and Blackwell Publishing, electronic copies of scientific articles, access to an online contents database of about 15000 journals, access to selected databases for subject search and access to the server GetInfo, where scientists of these countries can place their electronic articles and thus make them accessible for all scientists in the world. Four marine libraries of Ukraine have joined the team implementing this project. The access to full-text articles of electronic journals has been provided since late 2002 and will be available for three years.

Scientific Library of the Institute of Biology of the Southern Seas has also initiated a Black Sea Regional Library Cooperation Project. A group representing the aquatic sciences libraries of

Bulgaria, Georgia, Russia and Ukraine applied to IAMSLIC for a grant to cover travelling expenses for the proposed Scoping Study meeting. Funds allocated by IAMSLIC allowed the group to begin preparations for the Scoping Study which comprises such topics as users needs/audiences; scope and objectives; intended participants for various stages/services; standards to be used; detailed activities and ways to achieve them; the necessary staging of activities and stage costs, etc.

The Scoping Study meeting was held at the Institute of Biology of the Southern Seas (Sevastopol, Ukraine) from 7th to 9th August 2002. Representatives from Ukraine, Bulgaria, Georgia and Russia attended the meeting.

In 2002 Euraslic introduced an annual Equipment Grant. In 2003 the grant for purchasing a computer came to IBSS, which enlarged the possibilities of IBSS to more efficiently cope with many tasks and challenges, including those related to implementation of the project on the Black Sea.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 101-102

Library and Information Work in AzNIIRKH

by

Marina Artemova and Yulia Tyutina
Research Institute of the Azov Sea Fishery Problems Rostov-on-Don, Russia

The Research Institute of the Azov Sea Fishery Problems (AzNIIRKH) is one of the leading scientific institutions in the South of Russia (its staff numbers 223 research workers, among them there are 52 Masters of Science and 7 Doctors of Science). This year AzNIIRKH will celebrate its 75th anniversary.

The Institute conducts fundamental research concerning marine biological resources in the Azov and Black Seas, protection of fishery water bodies from pollution and industrial reproduction of main commercial fish species, including sturgeons. The specialists of the Institute perform ecological and toxicological monitoring of water, sediments and hydrobionts in the Azov and Black Sea basins; regulate and set definite norms, maximum permissible concentrations, to the use of pesticides; develop methods for the estimation of the harm sustained by fishery water bodies as a result of pollution, wastes discharge, dumping, etc.

The Department of Scientific and Technical Information and Intellectual Property (its head is Yulia Tyutina) provides information for the specialists. The department includes the research library, the information, patent and editorial groups, and it also employs a translator.

The library collection is represented by all kinds of books and periodicals and amounts to 112 thousand publications including more than 40 thousand books published in Russia and abroad. The scientific library of AzNIIRKH acquires books for its stock, trying to meet the requirements of all the trends of research work conducted by the Institute. The sections of our library stock are water toxicology, water bodies' pollution; genetics, mutagenesis, genotoxicity; hydrobiology; hydrology, hydrochemistry of inland water bodies; oceanology; industrial ichthyology; fish breeding; fluvial crayfish; ecology, environmental protection; economics of fisheries.

In our library stacks one can find books and booklets, national journals, deposited manuscripts, internal reports on research, translations, full descriptions of inventions contained in RF patents, computerized abstract journals, and electronic patent journals of the all-Russian information centres.

In the library stock there are some unique rare books published in the late XIX – early XX centuries on ichthyofauna and fisheries in the Azov, Black, Caspian Seas and in the other Russian water bodies. These books are not only of historical importance, some still have scientific value.

The retrieval system of our scientific library includes both traditional and up-to-date electronic catalogues, and our own electronic database. The work on this computerized system started in 1998. The electronic catalogues are represented by the catalogue of internal research reports, abstracts and summaries of doctoral and Ph.D. theses; the catalogue of own publications of the institute's researchers and the catalogue of patents. The electronic systematic catalogue of the library collection is being prepared at present, it numbers now more than 4000 entries.

In order to provide the Institute researchers with all necessary information the library conducts active interlibrary exchange work with such bodies as the Library of Natural Sciences of Russian Academy of Sciences (Moscow), Central Agricultural Library (Moscow), State Public Scientific-Technical Library (Moscow), the Lenin State Public Library (Moscow), the Don Public Library (Rostov-on-Don) and the Library of the Rostov State University.

The library regularly issues Bibliographic Bulletins on newly arrived publications and conducts exhibitions of new books and periodicals. We also help our readers select bibliographic information on subjects of their interests, thus, this activity remains one of the principal directions in the library's work.

Bibliographic and information service is run along two directions:

- Providing research workers with regular information on new publications concerning the principal areas of their research and their scientific interests.
- Retrospective searches for literature and documents on themes in which our workers are interested.

For this purpose we use electronic abstract journals registered on CD-ROM by the All-Russian Institute of Scientific and Technical Information (VINITI), Research and Technical Information Centre (VNTITS) and the Information-Publishing Centre "Rospatent". In the near future we shall also be able to use for these purposes the abstract journal ASFA in its electronic version.

Over recent years a great number of bibliographic indices and reference lists have been developed. They cover the main directions of the Institute's activities including studies on the Black and Azov Seas.

In the near future we are going to submit the abstracts of articles of our scientists and some other authors to the ASFA database for their publication. We regularly publish monographs and papers of our workers in different compendiums and professional journals. Every two years collected articles of our research workers are published as one volume. Each volume comprises 60-100 papers all of which are also available in the electronic version.

There are five computers in our department: the library, the information group and the patent group each have one computer, while the editorial group possesses two.

Unfortunately, we cannot so far use the Internet facility due to the lack of budgetary funds, but our administration are aware of this problem and we hope we shall soon possess this service and thereby obtain access to all necessary sources of information.

The library workers maintain reliable traditional methods and develop novel forms and methods of work, so that the specialists of the Institute and other interested readers may be informed about the latest achievements in their respective areas of research.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 103-104

Recent Developments Related to Aquatic Sciences Libraries in Bulgaria

by

Snejina Bacheva
Institute of Oceanology, Varna, Bulgaria

The period between the Euraslic Conferences in Brest and now in Kiel was really beneficial for the library of the Institute of Oceanology of the Bulgarian Academy of Sciences in Varna, Bulgaria.

First, it finally became an institutional member of EURASLIC (paying the membership fee for 2002 by the courtesy of the ongoing Project Centre for Sustainable Development and Management of the Black Sea Region (CESUM-BS). Then, thanks to the support of Euraslic the library was awarded annual equipment grants in 2002 and 2003:

In 2002 the library of IO was awarded 700 euros by EURASLIC to purchase new computing equipment. Thanks to this and the support of the Director of IO, Dr. H. Slabakov and Prof. P. Dimitrov (leader of the Bulgarian – American Noah Project) who helped to supplement the sum needed for the equipment purchase, the library is already furnished with a new, contemporary computer system which provides conditions for more efficient work, international contacts and access to on-line products.

In April, 2003 the library of IO received 648 euros from EURASLIC to purchase a multifunctional FLATBED system (MFC – 9180) consisting of laser fax, printer, copy machine and scanner. This equipment will be used for the needs of the library and information service: to facilitate interlibrary loans, communications, dissemination of information, as well as in connection with the implementation of the duties of the Euraslic Country Representative and Executive Secretary.

The following important activities were carried out:

- Participation in the "Steering Group" meeting to agree a strategic plan for the next phase(s) of the Black Sea Regional Library Co-operation Project, held at the Institute of Biology of the Southern Seas, Sevastopol, Ukraine, 6 – 10 August, 2002. Funded by IAMSLIC.
- Visit to the National Centre for Marine Research Directorate of Research Support & Documentation Library (NCMR), Athens, Greece, 24 November – 1December, 2002. Funded by the CESUM-BS Project. The task of the visit was to get acquainted and study the experience of the National Centre for Marine Research (NCMR) Library and Information staff in order to apply their achievements in the further development of the scientific information, and support for the research projects of the Institute of Oceanology- BAS, Varna.

Since the acquisition of the new computer equipment which ensured better electronic connections, the inter-library loans (requested via the Discussion List) have been very intensive and beneficial for the library - 52 copies (hard copies or PDF files) were provided to meet the needs of the researchers at the institute. Many duplicates were also donated from several Euraslic libraries. Many thanks to all members for the valuable support.

The good news for the Library of the Institute of Fisheries and Aquaculture is that this year the institute has received from the town municipality funding to undertake a general reconstruction of the building where it is housed. Recently, due to financial restrictions the library suffered most, as mentioned in my 2001 report. Now the Institute has a new ambitious director who is willing to restore and develop the activities of its staff.

Finally, I would like to express my gratitude to EURASLIC, its Executive Board and its President, Joan Baron Varley, for awarding 2002 and 2003 Equipment Grants to the Library of Institute of Oceanology, Varna, Bulgaria, and for the assistance in receiving IOC sponsorship to attend the Tenth EURASLIC Biannual Conference in Kiel, Germany, 7-9 May, 2003.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 105-106

Information Support to Aquatic Sciences in Estonia: Recent Developments

by

Maria Kalenchits
Library of Estonian Marine Institute, Tallin, Estonia

The changes in the affiliation and structure of the Estonian Marine Institute (EMI) that took place last year have affected the work of the library. Since the beginning of 2002, the Estonian Marine Institute has been associated with the University of Tartu and is no longer affiliated to the Ministry of the Environment. The University of Tartu is one of the oldest universities in the Baltic countries. It was established in 1632 by King Gustavus II Adolphus of Sweden. The Library of the University of Tartu is the oldest and largest continually working library in Estonia involving the collection of c.4 million items. The library of the EMI joined the network of the libraries, including six libraries of the University (the main library and its five branches) and the libraries of associated institutions.

In May 2002 the Department of Marine Physics of the EMI was restructured into a separate institution – the Institute of Marine Systems at the Tallinn Technical University. Part of the library collection (c.2000 titles of the books and a number of periodical titles) was taken over by the newly created institution. Unfortunately, at present, there is no full-time librarian to manage the library collections at the Institute of Marine Systems.

The library of the Estonian Marine Institute has moved twice within the past five years. The last move of the library (together with the Institute administration) was in November 2002. The present situation in the library is rather unfavourable for its normal work. After the decades of being located in rented premises in different parts of the town the institute is once again going to move at the end of this year, finally to its own house. (I am sure, that the librarians who have experienced a move of their library will agree that this is a very time- and effort-consuming process). The main task at the time of moving is to minimize the inconveniences for the library users. Unfortunately, in our case the inconveniences cannot be avoided because at our present temporary location there is not enough space for all of the library collections and so much will remain packed until the final moving at the end of this year. In these conditions we have done our best to grant access to the Institute scientific reports and other institute publications, some old Estonian periodical editions of high professional interest, reference literature as well as recent library acquisitions, needed for the current work of the scientific personnel. We have been successful in using the Interlibrary Lending Service (both in Estonia and also through the EURASLIC Discussion List). Another important source of information has been via the Internet. A large number of journals are available to library users in electronic format via Estonian Academic Library and the Library of the University of Tartu, and we have on-line access to the

following databases: Science Direct (Elsevier), Springer LINK, Current Contents Connect (ISI), Cambridge Scientific Abstracts (including ASFA), EBSCO Online, Blackwell-Synergy.

The library continues to act as an ASFA input centre providing input to the database (since the beginning of 2003 by using newly introduced software WWW-ASFISIS). The total amount of records the library prepares for the ASFA database is not large, but we try to monitor all the important Estonian publications relevant to the ASFA scope, including articles, books, dissertations etc. During last year a poster describing the Estonian ASFA Centre and the library services was prepared for the Educational Exhibition organized by Tartu University.

As a member of the Consortium of Estonian Libraries Network (ELNET) the Library of the University of Tartu is using the integrated information system INNOPAC, and has developed a unified electronic catalogue. Our library together with other special libraries of the institutions associated with the University of Tartu is making preparations to join this system in the near future. The library will start to prepare bibliographic and/or item records for all the library acquisitions using the special software. We will also study the possibility of transporting the existing records from our local electronic catalogue into the system.

The Estonian version of a new institute web site has recently been made available to users. An. English version will also be added soon.

Estonia is the candidate country to join the European Union in 2004. The information which is of highest priority for Estonia as a candidate member of the European Union, concerns different aspects of the European Union Common Fisheries Policy, as well as the possible influence that the joining the EU may have on Estonian fisheries.

Two important meetings are scheduled to take place in Estonia during this year and next year:

- ICES Annual Meeting, Tallinn, September-October 2003
- IX European Congress of Ichthyology, September 2004.

Websites:

Estonian Marine Institute. Available: http://www.sea.ee
Library of the Estonian Marine Institute (*Estonian version*). Available:
http://www.sea.ee/lehed/raamatukogu.htm
Estonian Libraries' Catalogue ESTER. Available: http://merihobu.utlib.ee/search/

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 107-108

Croatia Country and Institutional Report

by

Sofija Konjeviæ
Rudjer Boskovic Institute Library, Zagreb, Croatia

There are several scientific institutions in Croatia involved in aquatic research:

- Institute of Oceanography and Fisheries, Split
- Rudjer Boskovic Institute, Zagreb
- Hydrographic Institute of the Republic of Croatia, Split
- Faculty of Science - Department of Geophysics

Two of the four institutions libraries are Euraslic members: Institute of Oceanography and Fisheries and Rudjer Boskovic Institute.

The Institute of Oceanography and Fisheries, Split is the largest Croatian scientific institution for investigation of the sea. The Institute is concerned with all aspects of sea exploration: physical, chemical, geological, biological and fisheries. Although the Institute has a department in Dubrovnik, there is just one library located in Split. The Library of the Institute of Oceanography and Fisheries was established in 1930. Besides books and journals the library has a collection of old and rare books and a collection of documents about world maritime expeditions.

The Hydrographic Institute of the Republic of Croatia carries out scientific-research concerning the safety of navigation in the Adriatic, hydrographic-geodetics survey of the Adriatic, marine geodesy, oceanographic research, submarine geology research, design and production of charts and nautical publications. The library of the Institute has been functioning since 1947.

The Library of Department of Geophysics (Faculty of Science) was founded in 1861. and it is one of the largest geophysical libraries in this part of Europe The Department of Geophysics carries out research on oceanography, meteorology, and seismology.

The library of the Rudjer Boskovic Insitute was established in 1950. It is the largest scientific library in Croatia. Library holdings cover the fields of physics, chemistry, biology, biomedicine, genetics, mathematics, electrical engineering, environmental and marine science. The Institute has two departments for marine research, one in Zagreb and another in Rovinj. There is also a library department in Rovinj. The library is involved in and leads several projects:

Croatian Scientific Information System - Natural Sciencies (http://prirodo.irb.hr/). The project started in 1995. The purpose of the project is to build a union catalogue and to make it accessible through the network. There are 28 libraries involved in the project including all four libraries (mentioned above) involved in aquatic research.

Centre for Online Databases provides access to commercial and non-commercial databases for the academic and research community in Croatia. At the moment 11 databases are

accessible (Current Contents, WOS, Agricola, Medline, Inspec, Core Biomedical Collection, PsychIfo, ERIC, INIS, Compendex, Evidence Based Medical Review). EBSCO databases are accessible through EIFL Croatia project. ASFA is accessible through National and University Library Zagreb.

Croatian Scientific Bibliography (CROSBI) collects the data about scientific papers and current research projects financed by Ministry of Science and Technology of the Republic of Croatia.

RBI Library has two pilot projects that are not finished yet:

Who is Who in Croatian Science, and

EJOL (Electronic Journals Online Library)

The Library has developed a new interface for interlibrary loans called SEND, which is a Croatian acronym for Electronic Documents Acquiring System. The system allows authorised users to order documents from Croatian libraries or abroad.

This year the library started running short educational seminars (KEKS) on the following topics: Electronic journals usage, SEND - Electronic Documents Acquiring System; How to make a good poster; How to make a Power Point presentation; Database searches.

We also maintain the library web site with 2500 pages in Croatian and English. The web pages Science on the Internet (http://science.irb.hr) offer relevant information sources on specific scientific fields including Oceanography.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 109-110

Library of Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)

by

E.B. Krasnova, L.A Kulagina and A.V. Belyakova
VNIRO, Moscow, Russia

The Library of Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) was created coincidentally with the foundation of the first Marine Institute in 1932. Nowadays it incorporates over 250,000 published units, nearly half of which are foreign literature.

The Library ranks first in Russia and occupies one of the first places in the world both by the complete scope of the world literature on fish biology, fish and seafood processing, fishing oceanography and aquaculture and by the richness of unique publications. Transactions of numerous foreign fishery organizations are represented in the Library as complete series from the outset of their editions:

Bureau of Fisheries (US) – since 1892; American Fishery Society – since 1892; US National Museum – since 1876; Academy of Natural Sciences of Philadelphia – since 1901; Royal Society of Canada – since 1906; Fishery Department of Norway – since 1894; Fishery Department of England – since 1913; German Fishery Union – since 1878; Fishery Department of Holland – since 1861; Fishery Department of Denmark – since 1897; Oceanographic Institute of Monaco – since 1904; and many others.

The Library is widely known not only among fishery organizations, but also among numerous research organizations in Russia and SIC members. Many scientists within the system of the Russian Academy of Sciences, various universities and research institutions come from other cities especially to work on the literature available at the Library.

The Library has developed and continues to extend its activities in establishing and strengthening its relations with international organizations, in order to satisfy more completely the requirements in foreign publications to obtain new ideas necessary for further development of fishery sciences.

The Library possesses a unique stock of rare books in the field of marine biology. The collection contains rare and valuable Russian and foreign publications published from the latter half of the 17th century through the early 20th century.

The international book exchange is an important contributor to the library fund. For the book exchange the library uses the literature published by VNIRO, which is represented by the collected scientific papers, methodical recommendations and manuals, as well as a branch magazine. Book exchange by such literature provides the means for receiving valuable foreign publications. Such publications are in large demand from our partners, as they are not included in to the book stock of trade book organizations.

The international book exchange is usually performed on the basis of the principle as "one to one". Nevertheless, in recent times the cost of the exchanged literature has been taken into consideration, that is the exchange on the basis of cost equivalent, which is difficult to be estimated. Another problem is that the book exchange is carried out within the frames of limited information about the literature published by our partners. That is why the selection of publications is rather restricted. Besides, some of them are too expensive for us. We believe this problem is worth discussing. In spite of financial and information difficulties of our complicated transition period, we haven't reduced the number of our partners and business contacts in the book exchange. At the present time, the library performs an international exchange in publications with 135 institutions from 42 countries around the world, among which there are Academies of Sciences of various countries, fishery international commissions, research institutes, laboratories and other organizations.

Recently, we have started creating electronic copies of scientific literature at our library, which could be a subject of exchange. It requires certain expenditures for purchasing additional computers and other necessary equipment.

Up until now the work with the rare collection has not been complete. Beginning with 2002, we have been creating an electronic catalogue of rare books. At the present moment this work is completed. Now we are going to create a catalogue of most valuable so-called rare publications. Efforts are underway to create bibliographic catalogues of Russian and foreign scientific monographs and periodicals.

Here are some problems we experienced when creating electronic catalogues. Only the newly arrived literature is coded. The coding of already existing traditional card catalogues is a very complicated task. In spite of a very short period of electronic catalogue creation we succeeded in analysing the achieved results. When processing literature of the same type by various librarians, there may take place different description variants. In particular, the librarians are subjective in selecting subject headings, contractions in publication descriptions. As a result, a serious problem originates from the duplication of records. Another difficulty arises in the technical and technological aspects. In refererence to the contracted form of electronic catalogues on electronic carriers. But still the most important problem is coding of catalogue cards. In requires the use of a special expensive program and equipment assemblages.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 111-113

Ecological Enlightenment of Students: The Working Approach of the State Technological University

by

Valentina Markova
Belgorod State Technological University, Russia

ABSTRACT

Belgorod Technological University trains civil engineers and at first sight there is no link with ecological problems of seas and water resources. However, everything on our planet has common origins. Plants pollute rivers, which, in turn, flow into seas causing destruction of the ecological balance in the world. Therefore the experience acquired by the Scientific Library of Belgorod Technological University in the sphere of ecological enlightenment of students is very crucial, and demonstrates once more that only common efforts enable us to save what can still be saved and to rehabilitate what can still be rehabilitated.

Each and every one of us understands and recognises the serious conflict between society and nature in the face of industrial development, transport, and energy brought about by the effect of industrialisation on the environment. This has become a global problem bringing about a drastic imbalance in the biosphere of the planet and resulting in its progressive destruction.

To liquidate and arrest the threat of technological and ecological catastrophe, first of all, it is very necessary to change the general human and industrial activities to make them more secure for nature as well as mankind. However significant changes in the situation can't be achieved without a serious recognition of the threat to life itself on the planet, and therefore state and international ecological bills and programme solutions to the problems should be adopted.

Lately courses in ecology and environmental protection taught in higher and specialized institutions are being given particular attention. Such importance is accorded to this science due to the fact that the ecological situation and the need to "ecologize" all the educational systems, extend ecological knowledge to, and to acquire ecological cognition by future specialists no matter what their specialization will be. The acuteness and actuality of this problem have increased and cannot be underrated.

As a department of the Belgorod State Technological University the library's functions on ecological education are to inform and provide information to support tutorial and scientific activities of professors, researchers and students of the Institution. The library's activities are based on the book-stock created in accordance with the educational programme and themes of scientific research work of professors of the University.

The University has three departments where ecological course orientation has been adopted. They are: labour safety, machines and equipment for industrial ecology, and industrial ecolo-

gy. The library works closely with all the departments. Both the library and the departments fund the book-stock with ecological materials and data. The library constantly organizes seminars and workshops on new scientific directories and publications on ecological issues for the departments.

The library ecological data have become very popular because of the introduction of such courses as Ecology and Environmental development. To meet these requirements the library has actively updated its information data and the book-stock relies on very qualified staff. It engages in wide range of information activities such as:

- regular publication of an information bulletin "New literature" where a column "Nature" is devoted to new ecological materials,
- specific schedules have been devoted to departments teaching ecological subjects,
- special list of new entries on ecological issues is prepared for professors of ecological subjects,
- information about publications on ecological issues can be found on the web-site of the University.

For easy use of the library book-stock the information section prepares bibliographies for users. It has a special "Environmental protection" section of more than two thousand entries consisting of detailed descriptions of Russian and foreign publications on ecology for the past five years.

The library receives its materials in different forms and it subscribes to more than 50 periodicals on ecologic issues such as: geological engineering, labour safety and industrial ecology, labour safety and reproduction of natural resources, and ecology of mankind

Entries on this topic have been accumulating into the electronic catalogue since 1995. In this electronic catalogue there are analytical entries for articles on the problems of environmental protection from local and national periodicals.

The University library considers ecological education as one of its paramount activities. In light of this there is a project called "Man. Society. Nature." The unique aspect of the project is to coordinate all activities of the libraries of higher and specialized technical institutions, university departments of ecological subjects, scientists and students, governmental and social environmental protection organizations. The basic aims are:

- to study the ecological situation of the city and the region
- to analyse the information requirements of higher and specialized technical institutions of the region, and environmental protection organizations of the district concerning ecological matters
- to create a system of ecological education of higher and specialized technical institutions library users
- to propagate massive ecological enlightenment

The period of execution of this programme is 2000-2003 and therefore requires active and maximum effectiveness. The programme has been divided into three stages. The composite approach to ecological education today should be based on combined practical and scientific researches. That is why it was very necessary to form a Coordinating Ecological Enlightenment and Education Centre. The organization centred in the library was to link all activities among the science, practical utilization and environmental society. The main functions of the Centre were:

- the consolidation of efforts of libraries, scientist-ecologists, government, social, and environmental protection organizations
- educational, scientific and informative and methodological activities
- refresher courses for library staff of higher and specialized technical institutions

In the framework of this Centre a "School of Ecological Culture" was created. It is within this "School" that most of the educational activities of the library on ecological education and

enlightenment function. The activities are systematically organized by devoted and qualified personnel and therefore attract the attention of library users.

The form of functioning of the "School of Ecological Culture is varied; from student conferences and seminars, lectures from ecologists, library exhibition, quizes. Departments of ecological specialism often send their students for short excursions to the library exhibition.

However at the end of the completion of the project the work of the University library on ecological issues will continue to function since the Coordinating Ecological Enlightenment and Education Centre has acquired substantial experience and materials on which to work further. In 2001 the library won an exhibition competition among libraries of higher and specialized technical institutions in the city of Belgorod. This proves the necessity of our ecological programme to educate the young generation on ecological matters. Creating the system of ecological education of the population, the library experts on ecology do understand very well that not all the resources have been utilized and not all the problems have been solved. In the light of this, therefore, the library staff considers working systematically to meeting the goals of rescuing what can be saved, and revitalising what can be rehabilitated. In common we can prevent ecological catastrophe and create basic ecological revival and prosperity on the planet for the future generation.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 115-118

Recent Developments Relating to the Aquatic Sciences in the United Kingdom – November 2001 to April 2003

by

Ian McCulloch
Centre for Ecology and Hydrology, Windermere, UK

ABSTRACT

This report attempts to summarize developments both in UK science policy and in the library and information sector, with particular reference to the aquatic sciences. Issues relating to the government sector, the private sector and the academic sector are addressed. Developments in the aquatic research associations and librarians' groups are also covered, and some conclusions drawn.

INTRODUCTION

This report covers the principal developments in this area since the last EURASLIC meeting[1], and is intended to be a guide to the general course of events rather than a comprehensive review. I will start with the overall national picture for library and information services and for science in general.

NATIONAL LEVEL

In January 2002, Britain was finally declared free of foot-and-mouth disease, 11 months after the first outbreaks of the cattle ailment. The outbreak had far-reaching effects, from public confidence in science and scientists down to restrictions on access to rural land, causing the first break in CEH Windermere's long-term monitoring programme of the English Lakes for 50 years.

The UK's Office of Fair Trading (OFT) published a report[2] in September 2002 suggesting that libraries may be paying too high a price for scientific, technical and medical journals because the market lacks normal competitive forces. But the report went on to say that intervention in the market is unnecessary at present, arguing that schemes such as the Public Library of Science, a group of academics who aim to publish free-to-access journals, could be a force for change in the future.

The proposed changes to UK copyright legislation as a result of the EU Copyright Directive of 2001 have been a continuing source of discussion in the library and information sector. The principle impact is that, where provision was previously made for most libraries to photocopy (within certain restrictions) for the purposes of "research or private study", the new legislation is expected to restrict such copying to non-commercial research or private study. It is anticipated that any

research which involves payment, whether for profit or not, will now be seen as commercial, attracting a significantly higher fee for copyright-cleared photocopies from the British Library, or the purchase of expensive licences from the Copyright Licensing Agency. The consultation process is being managed by the UK Patent Office and although legislation was required to be on the statute books by 22nd December 2002, the implementation of the legislation has yet to be finalised. Latest estimates are that it will not be ready for Parliament until autumn 2003.

GOVERNMENT SECTOR

In April 2002 the Natural Environment Research Council (NERC) fell foul of an accounting mix-up which left it with a potential £14 million shortfall. This led to the cancellation of that year's Standard Research Grant round, and many cuts around the Institutes. These were particularly felt at CEH Windermere, where the size of the planned new buildings on Lancaster University's campus was drastically reduced.

The outcome of the Government's 2002 Spending Review was announced on 9 December 2002. Overall the news was good for UK Science – by the end of 2006, investment in research council science will have risen by £1.03 billion, a 10% yearly increase. This reflects an encouraging commitment to science by Government.

All the research councils welcomed the general increase in resources which will help them to get into new areas of science, such as sustainable energy. The funds earmarked for implementing the Roberts Review[3] (*SET for success: The supply of people with science, technology, engineering and mathematics skills*) were particularly welcomed for funding and training the next generation of scientists.

NERC will receive a major uplift to its baseline of £21.5m, and in addition will receive specific allocations for a number of top priority cross-Research Council programmes. It is estimated that the average PhD grant will grow from £10,000 a year to £13,000, while the wage of a postdoctoral research fellow will increase by £4,000 to £21,000 a year. On 23 July, the government released *Investing in Innovation*[4], a document that details changes that will accompany the increase in funding

PRIVATE SECTOR ORGANIZATIONS AND WATER SUPPLY

The Water Industry Librarians' Group met in October 2002. The increase in the cost of the Aqualine database since Cambridge Scientific Abstracts took it over was discussed, and this issue is still generating a lot of traffic on the email discussion list. The increase in British Library charges and the impact of changes in the copyright legislation are also matters of great concern.

UNIVERSITY AND ACADEMIC SECTOR

In December 2001, the results of the Research Assessment Exercise (RAE) were announced[5], used by the higher-education funding councils to distribute £1 billion of government money each year for institutions to spend on salaries, buildings and equipment. Departments with the best grades get the lion's share of the cash, whereas poor scorers get nothing. The 2001 results showed a strong increase in the number of university departments carrying out research rated as internationally excellent: some 55% of researchers now work in such departments, compared with 31% in 1996. Arguments are still going on about whether this exercise still fulfils its original function, with some academics believing that it now serves only to skew research in directions which will increase RAE scores. Many universities have lost all their research funding. In July the funding arguments moved to the UK Parliament[6], and have still not been resolved to everybody's satisfaction.

A report[7] published in March 2002 found that the laboratories of Britain's universities urgently need a £3 billion cash injection. Previous government initiatives such as the Joint Infrastructure Fund and the Science Research Infrastructure Fund had had little impact, mostly going into construction projects. However, given that the present government has noticeably improved science funding in recent years, most lobbyists were reluctant to attack them on this point.

RESEARCH ASSOCIATIONS

The Freshwater Biological Association (FBA), the Marine Biological Association (MBA) and the Scottish Association for Marine Science (SAMS) continue to function as independent aquatic research organizations, with varying degrees of reliance on NERC for funding. The FBA is currently examining options for its future, as the Centre for Ecology and Hydrology is closing its Windermere Laboratory (also the headquarters of the FBA) and moving to a new site at Lancaster University. The library, which is a shared facility of the two organizations, will stay at the Windermere site for the foreseeable future, whilst remaining an active part of CEH's network of nine site libraries. The FBA's Library database, containing 200,000 bibliographic references in freshwater science, is now available for searching via the web. It is a CDS-ISIS database, using WWW-Isis from Poland to make it web-accessible. It currently operates in a somewhat basic way, but it will be tidied up in the near future, and the URL circulated on the Euraslic email list.

The MBA Library is the National Marine Biological Library (NMBL), and is the UK national ASFIS partner, preparing and co-ordinating input to Aquatic Sciences and Fisheries Abstracts.

BIASLIC

The Britain and Ireland Association of Aquatic Science Libraries and Information Centres (BIASLIC) last met on 6th June 2002 at CEH Windermere. The minutes are now available on the BIASLIC website[8]. The meeting was a smaller one than in previous years, and it is hoped that more people can be attracted to the next meeting at Sherkin Island Marine Station, Ireland.

ASFIS

Two new ASFA centres have started since the last report, including the Centre for Environment, Fisheries and Aquaculture Science (CEFAS).

CONCLUSIONS

The outlook for science in the UK continues to be a healthier one than it was ten years ago. The main concerns in the library world are ones that should be familiar to all of us: increases in charges for databases, uncertainty about changes in legislation, reorganization of our parent organizations and the spiralling costs of journals. Forums such as this one enable us to see our common problems in the light of each others' experience, and form a basis for a unified response.

REFERENCES

1. McCulloch, I. (2002). *Recent developments relating to the aquatic sciences in the United Kingdom – May 1998 to April 2000.* In: Managing resources in a sea of change: proceedings of the 27th annual conference of the International Association of Aquatic and Marine Science Libraries and Information Centres (IAMSLIC) and the 9th conference of the European Association of Aquatic Sciences Libraries and Information Centres (EURASLIC), 14-19 October, 2001, Brest, France, edited by J.W. Markham et al., pp.309-312. Fort Pierce, FL: IAMSLIC

2. *The market for scientific technical and medical journals.* London. Office of Fair Trading: OFT396 (2002). Available from the OST website
3. http://www.hm-treasury.gov.uk/documents/enterprise_and_productivity/research_and_enterprise/ent_res_roberts.cfm
4. http://www.ost.gov.uk/policy/invest-innov.htm
5. http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v414/n6866/full/414834a_fs.html
6. http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v418/n6893/full/418006a_fs.html
7. http://www.ost.gov.uk/research/funding/underinvest/
8. http://windermere.ceh.ac.uk/biaslic/minutes/2002.html

LINKS

1. BIASLIC – http://windermere.ceh.ac.uk/biaslic/
2. Cambridge Scientific Abstracts – http://www.csa.com
3. Centre for Ecology and Hydrology – http://www.ceh.ac.uk
4. CEH Windermere – http://windermere.ceh.ac.uk
5. Copyright Licensing Agency – http://www.cla.co.uk/
6. Freshwater Biological Association – http://www.fba.org.uk
7. Marine Biological Association – http://www.mba.ac.uk/
8. Natural Environment Research Council – http://www.nerc.ac.uk
9. Office of Fair Trading – http://www.oft.gov.uk/
10. Office of Science and Technology – http://www.science.gov.uk/
11. Patent Office – http://www.patent.gov.uk
12. Scottish Association for Marine Science – http:// http://www.sams.ac.uk/

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 119-120

PINRO Library – First Steps to the Establishment of the Up-to-date Library

by

Irina Merkina
Polar Research Institute of Marine Fisheries and Oceanography, Murmansk, Russia

The major data on the PINRO library were presented at the ninth conference EURASLIC. Today we can state with a great deal of satisfaction that we have some positive results in the modernization of our library.

At the end of March 2003 we bought at last and installed IRBIS software. This software, created in the Russian National Public Library for Science and Technology, is one of the best known in Russia. At the moment approximately 400 different libraries both in Russia and in the Community of Independent States use it. The IRBIS system is compatible with the international formats UNIMARC and USMARC and with Russian format RUSMARC. Unfortunately, methodical guides to this program are intended for specially trained and educated librarians. The best way is to take a training course at our distributor, and we are going to do it. We have already bought four workstations: Aquisitor, Cataloguer, Administrator, Reader and a Channel WWW-server for access to our future content. Besides we think that our "Bibliographical index of papers by PINRO scientists" will be established on a higher professional level, including the whole complex of the auxiliary indices to it.

PINRO library can work in Internet for four hours a day, and we are very glad of it. There is a large amount accessible bibliographic information in it. Effective Internet usage, quite naturally, demands special training of the librarians, and we are at the very beginning. One of the well-known ways we use Internet is obtaining data on the new books from the sites of publishing houses, and we now buy books directly through Internet. To our regret, there is a clearly expressed contradiction between the unlimited Internet possibilities and the requirements of our accounting documentation. This leads to a decrease in the number of books which are being bought. The only way out from this situation is to buy books through the system of agents; this system in its turn is in the stage of formation in our country.

It is delightful to note that at the moment our readers can work with electronic publications. In Spring 2003 we obtained access to the full texts of electronic versions of three journals through EBSCO and not for one current year. This happened owing to the many years cooperation with IMR library (Bergen, Norway) and the help which it renders. Now we have got a license allowing on-line access to E-library RFFI (Russian Fundamental Fund of Investigation) too. Here we have access to e-journals of Kluwer, Springer, Blackwell, Academic Press and Russian publishers. As for on-line access to ASFA, our library does not have it, though we have several CD-ROMs covering the period 1978-2001 available.

This year we started to use actively BIBSYS – one of the main union digital catalogues in Norway thanks to the IMR (Bergen) library agreement. According to this agreement our library receives copies of the articles asked at the IMR library and the University of Tromso library. We can also ask books too, but we are confronted with difficulties due to customs formalities (in the customs a book can stay for 3-4 weeks). Loans from the PINRO library will be possible when the information on the collections is accessible on our Web page.

CD-ROM "History of PINRO" creation is in our plans. For this purpose a large amount of material is to be scanned, access to the material is difficult at the moment due to their dilapidated state.

Intensive work on radical improvements to the PINRO site, where general short data on our library will be presented is being carried out in PINRO. Having mastered the IRBIS and having mentioned our funds in the electronic version, we shall also establish a complete and good web page of our library, I hope.

As new participants in these processes, as green users of these technologies, we rejoice every day over the possibilities being opened to renew our library.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 121-122

Denmark Country Report 2003

by

Lilian Mex-Jørgensen
National Environmental Research Institute - NERI,
Department of Freshwater Ecology, Silkeborg, Denmark

The Danish Library Authority is handling the library access to electronic journals/licences on a national level. This is a very valuable help for all sizes of libraries. Private institutional libraries cannot participate in these licences.

NERI

As a consequence of the new government's reduced appropriations to the Ministry of the Environment, NERI last year dismissed a colleague librarian in Silkeborg, and a library co-operation agreement for the third NERI library was cancelled. Moreover, the organisational structure for the two remaining librarians placed in, respectively, the departments of Silkeborg and Kalo was changed.

As a consequence of these reductions/changes, some of the library duties have now been moved partly to the scientists and partly to the departmental secretaries. The two remaining librarians now handle all library matters for all three NERI locations, such as journal subscriptions/electronic licences, and are both deeply involved in the formatting/creation of a new integrated library database system. Validation of the decentralised registrations in the databases forms part of the job as well. As the two librarians primarily have to act as "consultants" to the complete NERI staff, the changes mean that "ordinary/traditional" library services have almost disappeared due to lack of time.

DIFRES

As a consequence of the new government's reduced appropriations to the Ministry of Food, Agriculture and Fisheries, DIFRES last year dismissed a library assistant.

A working group is now analysing the library function. The consequences of this are yet to be seen.

The librarians are among other tasks involved in the development and maintenance of the DIFRES publication database and the citation analyses of our researchers literature production.

North Sea Centre Library

Except for some minor reductions, the library continues its services for the research staff of the North Sea Centre (including researchers of DIFRES) - in close cooperation with other

Danish "aquatic" libraries. In addition to traditional library work, the library also carries out consultancy work for both private companies and public institutions in the fields of information surveillance, information dissemination, and library development.

DHI Water and Environment

Due to the governmental lower priorities of the environmental areas, DHI has been compelled to reduce the staff by approximately 10%. The library lost an assistant and is now reduced to one person who will have to serve the 300 remaining employees plus DHI offices around the world.

Details of national regional aquatic library and information networks within the country

The aquatic libraries cooperate - more or less - when necessary because of the willingness to handle orders ASAP.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 123

France Country Report

by

Nicole Momzikoff
Institut oceanographique, Paris, France

Almost 60 aquatic libraries and information centres constitute the group Eaux-Mer = OMER. It was created in 1983 when librarians and documentalists from various French marine stations met for the first time in Brest (at the initiative of the head of documentation of CNEXO, now IFREMER).

In 2002, the annual meeting took place in April in Tatihou (a very small island located off Cotentin, not far from Cherbourg). Beautifully organised by our colleague of INTECHMER (an Institute that prepares students for marine jobs), it enabled 22 people to meet in a small paradise. Among the subjects evoked during the meeting, one can mention a comparative study of Web of Science and Science Direct at CEMAGREF, an access to scientific information and online documents at Crema-L'Houmeau (Ifremer - CNRS), a few examples of documentary networks at the Conservatoire national des arts et metiers, and a presentation of the French net and production for ASFA, and many discussions.

The 20th meeting will take place in Paris (22-23 May 2003). Several topics will be discussed, including open archives, documentary networks, updating of web sites in our institutions, documentary requests of information by e-mail and the various way we answer.

The group has created a discussion list that exists since March 2000, and allows fruitful exchanges of information.

Several people have retired these past few months: Michelle L'Excellent (IFREMER - Nantes) Euraslic treasurer, Monique Margout (Laboratoire d'Ichtyologie au Museum national d'histoire naturelle de Paris) former Euraslic treasurer, Yolande Bentosela (Centre oceanologique de Marseille). They hope to join our meeting in May.

As in other European countries our libraries have been affected by problems with Rowe-Come and Ebsco, and with delays in the delivery of periodicals which are a real trouble.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 125-126

The Library of Atlantic Scientific Research Institute of Marine Fisheries and Oceanography - AtlantNIRO

by

Raisa Torina
AtlantNIRO, Kaliningrad, Russia

Atlantic Research Institute of Marine Fisheries and Oceanography (AtlantNIRO) is a scientific body of the Russian State Committee for Fisheries. It is one of the largest Fisheries Research Centres in Russia. There are more than 260 scientists and engineers working in the Institute: biologists, oceanographers, specialists in fish processing.

The main directions of the Institute?s work are:

- investigation of biological resources of the ocean and environmental conditions for determination of the rational exploitation level;
- elaboration of the new methods of processing of living marine organisms.

Regions of investigations:

Baltic Sea, Atlantic and Southeast Pacific Ocean, Antarctic including Western Indian Ocean.

The Institute takes part in the number of international programmes for ocean investigations, collaborates with international organizations such as FAO, ICES, NAFO, ICCAT, CCAMLR etc. Moreover, it carries out scientific researches according to bilateral agreements between Russia and coastal states.

The Library of AtlantNIRO was established in 1949 as an associated unit of the Institute. In 1949 the Institute was established as the Baltic Branch of the All-Union Research Institute of Marine Fisheries (VNIRO). The stock of books and periodicals of Library was formed with the help of other Institutes of the Ministry of Fisheries. In 1956 the Branch was reorganized and became an independent body - BaltNIRO. In 1962 it was reorganized as AtlantNIRO. Nowadays the stock of the Library includes over 120,000 published units. The structure of the foreign literature stock will be presented in poster.

The books and periodicals were obtained through acquisition, subscription, exchange, and gifts.

Acquisitions - according to orders of scientists - dictionaries, books, etc

Subscription - periodicals in Russian and foreign languages, books according to thematic plan of Russian (Nauka etc.) and foreign publishing houses.

Exchange - interlibrary book exchange with other Institutes in Kaliningrad, in Russia and international book exchange

Gifts - books and periodicals from our scientists, from other Institutes,

In 1995-1999 the Library received periodicals as gifts from International Science Foundation, including Current Contents.

NEW INFORMATION TECHNOLOGIES

1998 - the Library received it's first computer. The Computer Centre of our Institute organized training courses for librarians. In 1998 the Library began receiving the electronic version of the Abstract Journal VINITI.

1999 - the Library took part in a seminar of the Library of Congress USA in Kaliningrad Universal Scientific Library.

2000 - Library participated in the presentation of EBSCO in Kaliningrad (Svetlogorsk). The Library received access to database of EBSCO, and since that time the Library has got access to the Internet through server of our Institute.

2001 - Library acquired DOS-based information search system ASPID/TG in Kaliningrad Universal Scientific Library. This information search system is being developed by the Institute of Mathematics of the Science Academy of Byelorussia. The librarians finished training courses in Kaliningrad Universal Scientific Library and practice. This search system was used for Inventory of literature fund in Russian.

Institutional changes and development during the preceding twelve months that have impacted on Library and information services:

The Library received e-mail address (library@atlant.baltnet.ru). This new opportunity was used to join the Association of Libraries - Euraslic/Iamslic .We received the possibility to exchange copies of documents of interest to our scientists. Access to Internet gives new opportunity to order books in the publishing houses of Russia and other States.

Changes and developments in the Library and information services during the preceding twelve months:

The International organizations CCAMLR, ICES, ICCAT disseminate their documents on CD-ROM.

2002 - Library began to create the catalogue of new literature and computerization of the card catalogue of foreign literature

LIBRARY AND INFORMATION PUBLICATIONS

Computer Centre of the Institute created a database of publications of the Institute for 1950-1995. Library participated in this work as classifier (UDC). The next Bibliographic indicator (1996-2001) is being prepared for publication.

MEMBERSHIP AND INVOLVEMENT IN LIBRARY AND INFORMATION NETWORKS

AtlantNIRO´s Intranet is a result of collaboration between computer specialists, librarians and scientists. During the last five years we have had to liaise with computer specialists. The development of new information and communication technologies is changing the traditional model of scientific communication, information storage and exchange possibilities to researchers, and is blurring the boundaries between professions.

ADDITIONAL RELEVANT INFORMATION

The Mission of the Institute Library is to provide information services to support researchers. Since 1998 our Library has been entering an era of rapid changes in order to meet the needs of our clientele. New possibilities can also help to automate Library routines.

Our Library is a new member of EURASLIC. We want to be useful for this consortium of European Libraries and to keep pace with EURASLIC in Smooth Sailing - Crossing the Boundaries in Aquatic Sciences Information Management.

ACKNOWLEDGEMENT

Thanks to EURASLIC for funding the participation of our Library in the meeting in Kiel.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 127

Norway Country Report

by

Wencke R. Vadseth
Directorate of Fisheries, Institute of Marine Research, Norway

During the two last years, our library has increased its access to electronic journals (in 2003: c.2.500 titles), thanks to the cooperation of National Consortium Agreements. We take part in Consortium Agreements with three publishers: Blackwell (BlackwellSynergy), Elsevier (ScienceDirect), and Springer (SpringerLink); and we also have the JSTOR Archive Licence Agreement (Science I Collection). The preparation and arrangement of these Agreements has been in progress for quite some time. The University libraries were the first to complete this process; while our library is part of phase two. We also subscribe to WebDewey from 2003 - and we are happy to have this useful library tool!

The library is happy with BIBSYS - the Norwegian Union Catalogue - it has been our most important facility since we joined (in 2000) - and still is!

Our library's homepage was opened to all external users in October 2002, and it is now being translated to English (from February 2003). The web address is: http://biblioteket.imr.no

In our country; there are five exclusively aquatic libraries, and 11 other libraries where the aquatic collections are only part of the total library. The other four aquatic libraries are rather small and quite "unlike" our own - that is why we do not have close cooperation. We do though encourage international cooperation, e.g. with the PINRO library in Murmansk.

Norway is now focussing on marine and aquatic research; and is upgrading its research vessels and several marine research stations (i.e. the three stations belonging to the Institute of Marine Research, Bergen). We can only hope that some of these resources will benefit our aquatic libraries and information provision.

Our library is a member of the following library and information networks:

- BIBSYS (Norwegian Union Catalogue consisting of all University Libraries, the National Library, all College Libraries, and a number of Special Research Libraries)
- NFF (Norwegian Association of Special Libraries)
- NOSP (Nordic/Baltic Union Catalogue of Serials)
- EURASLIC
- IAMSLIC

We are sorry about the lack of resources (human) necessary to make some contribution for EURASLIC - but we do hope to "come back" later when there is an increase in our resources. We do try to come to the Annual Meetings - Brit Skotheim, head of our Library, would have liked to join you - but as she is attending several meetings abroad this year, e.g. the ASFA Annual Board Meeting in Cuba in the summer - so she could not participate at the Kiel Meeting. She sends her warmest greetings to all of you in EURASLIC!

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 129-137

Marine Sciences Information Activity Report for Spain 2001/2002

by

Enrique Wulff-Barreiro
Marine Sciences Institute of Andalusia, Spanish Council for Scientific Research, ICMAN (CSIC), Spain

INTRODUCTION

Recent developments in Spanish marine science relate to a "big science" demand bounded between two large, abrupt changes in system behaviour. On April 25, 1998, the Aznalcollar (near Seville) mining spill, and on 13 November 2002 the Prestige Oil spill off the Galician coast. Consistently associated with desirable scientific outcomes a multi-faceted insight through the Spanish Presidency of the European Commission [1], January-June 2002, has been offered by the Innovation Directorate [2][3]. An amount of 3.530 million ? was provided from the Government to promote public and private research in 2001 [4].

What is the marine science information sector from Spain expected to offer during this period (2001-2002)? Without doubt, the concept of leadership has been challenged by the Spanish Presidency. The key action, sustainable marine ecosystems, in the energy, environment and sustainable development programme, of the EU 5th Framework Programme, has been analysed. Both the methodological approach, and the results obtained are included in this report.

Missing data has had substantial relevance for research policy in the area. Organizational competences of top managers facing scale situations, such as Prestige tanker spill, has resulted in knowledge versus opportunism situations. We include a case study of communication between data-providers and data-users.

The more relevant databases examples (elaborated from Spain) are given, marine sciences congresses and conferences in Spain (2001-2002) are detailed, the doctoral dissertations elaborated in Spanish campuses are followed-up, a revision of the Spanish scientific publications from the database ASFA is performed, and the ISI indexed journals Scientia Marina and Ciencias Marinas, are also browsed.

A specific high-level information need is covered: Natural products from the sea in Spain. (Acknowledging that one of the leaders in anti-tumour drugs from the sea is sited in Madrid).

An important metadata question is formulated, as to whether or not it is feasible to maintain the authenticity and integrity of digital objects over time. And so the life of a digital object in marine science for the period is considered through the prism of the metadata programme conducted by the National Antarctic Data Centre.

Special emphasis on the contents of the RedIRIS Virtual community in Marine Sciences, Marinet, is given.

A last point on intellectual property environments for scientific data in marine science, is examined by considering developing markets for the taxpayer, funded information treated by the government agencies as a commodity to be used to generate revenue in the short term (and by e-mailed list).

1. SPANISH LEADERSHIP OF THE FIFTH FRAMEWORK PROGRAMME SUSTAINABLE MARINE ECOSYSTEMS KEY ACTION

Objectives

The aim of this study is to furnish the basic figures on the Spanish R&D policy in marine science, observed through the EU Cordis database and elaborated under the Spanish Council Presidency (Jan.2002-Jun.2002).

Methodology

To measure the Spanish contribution in Marine Science EU R&D and Innovation, a ProCite© database was designed with all the Spanish participants in 34 records found in the 5th Framework Programme Projects Database. Project acronym, Duration, Affiliation of Coordinator or Participant, and Keywords (manually introduced) are the basic fields employed in the database.

Results

Spanish participation in the specific programme key action for Marine Science reflects an amount of 91% (34 of 37 projects). The percentage of projects coordinated by Spanish based organisations over the total number of projects is 21%, and over the projects with at least one Spanish participant reached 23%. The trends for the estimation of the marine science reference data (work programme sub-area), in the total context of the specific programme (EESD), are respectively 31%, 6% and 19%.

Only one URL has been specifically designed for the EU FP5 key action oriented to marine science: http://www.pizzicato.es/humor/, at the University of Granada.

Spain's leadership (8 of 37 projects) concentrates on these thematic areas: Bacteriology, Ocean forecasting, Coastal management and Microalgae. Characterising the general subject participation of Spain into the key action Coastal management (10 participants), Pollution (7 participants), and Data analysis (6 participants).

Screening the organisation type involved in the key action resulted in: 18 research labs, 15 educational centres, and 4 other sectors (harbour authority, ship-yard, industrial park, town council). The CSIC, Institute of Marine Sciences (Barcelona) is the primary institution leading EU projects in the field. CSIC is also individually leading Europe through the Mediterranean Institute for Advanced Studies (Palma de Mallorca). Other lead institutes are the University of Granada Dept. of Civil Engineering, and the University of Elche (Miguel Hernandez University) Dept of Vegetal Production Microbiology. Spain's involvement as leader of the EU marine science research averages 36 months at the 85% level, with 42 months and 3 months as superior and inferior temporal levels of the project.

Discussion

After a comparison between the in-house database and the FP5 Projects Database, Spain scores higher in Marine Science than in the total Energy, Environment and Sustainable Development (EESD) Programme. The target comparison here (key action sustainable marine ecosystems work programme subarea Spanish results versus EESD specific programme Spanish based organisations

commitment) seems largely attributable to the thematic leadership of the Spanish marine science labs, along this period, of a quarter of the total available EU projects in this area.

As to whether "the powers of the EU can do anything?" to assist in the field of Marine Science, the question examined by the conference EurOcean 2000 [11], seems relevant.

2. MISSING DATA

In the post-Aznalcollar and post-Prestige world, details about missing data are of interest. While all the scientific publications registered in the ASFA database on pollution after the toxic spill of the Aznalcollar mine (Coto de Donana, see http://www.esf.org/esf_pressarea_page.php?section=6&language=0&newsrelease=25) come from Spain (and between 2001 and 2002, half of the data production was from the Cadiz Campus (CSIC and University) labs). The Prestige Oil Spill (see http://rcmarinas.ens.uabc.mx/%7Ecmarinas/Europa-Editor/notas/editorialfinal.pdf) opened a crisis between data-providers and data-users similar to the one faced by the British authority in the case of the mad cow disease (foot and mouth disease, see: Anderson ref. in, http://www.jrc.es/pages/iptsreport/vol72/english/EDI1E726.htm). In the case of the Prestige, this communication gap resulted in the CSIC top manager's resignation, and the letter to the journal Science, authored by a Spanish marine scientist, on the lack of coordination (available at: http://cvu.rediris.es/pub/bscw.cgi/0/347121). The requirement of data quality is general to the Spanish scientific community. [12]

3. DATABASES, CONGRESSES AND CONFERENCES, DOCTORAL DISSERTATIONS, SCIENTIFIC PUBLICATIONS (ASFA), ISI JOURNALS SCIENTIA MARINA AND CIENCIAS MARINAS

Databases

The FAO COPEMED project to directly support the work that the GFCM's (General Fisheries Commission of the Mediterranean) Advisory Scientific Committee is to carry out, has been electronically sited on the University of Alicante server (http://www.ua.es/copemed/redir.htm), these last two years. Ecocen, a visual census software for managing fish counts, output files with prepared data ready for statistical analysis, has been created at the Marine Biology Lab. (University of Alicante), and is part of the COPEMED information system. This database application creates a standard facilitating the exchange of data sets. The universities of Perpignan, La Laguna (Canary Islands), Las Palmas de Gran Canaria, Barcelona, the CSIC (Blanes) and the Spanish Institute of Oceanography (Palma de Mallorca) have been collaborating to this project. It went online early in 2002. http://www.ua.es/ecoCEN/index.htm.

The requirements for developing a useful database on socio-economic indicators for Mediterranean fisheries, have been the subject of a feasibility study involving the Economy of the Sea Cabinet of the University of Barcelona, and the Spanish Institute of Oceanography (Malaga Lab.), (and the Nador (Morocco) Regional Centre, of the Institut National de Recherche Halieutique). FAO, through COPEMED, has been financially involved. [13]

Spanish participation in the Mater database EU research project (http://www.ifremer.fr/sismer/program/mater) completes the existing range of Spain and Marine Sciences databases. The Mater database is a software tool for managing oceanographic data collected in the Mediterranean Sea during 1996-2000. Along with metadata, data relevant to the project is made available to the user community. The Spanish partners come from the University of Malaga, Autonomous University of Barcelona, Polytechnic of Barcelona, University of the Balearic Islands, and ICM (CSIC, Barcelona).

Congresses and conferences

The following list is a RedIRIS (the Spanish academic Internet network) printout of the congresses and conferences offered in 2001/2002

(http://tierra.rediris.es/marinet/index_english.html).

2001

Feria de Medio Ambiente ECOMED-POLLUTEC. Barcelona, 7-10 February, 2001. Internet address: e-mail: in.nova@retemail.es

ICES Working Group on Environmental Interactions of Mariculture. Tenerife, March 12-16. Internet address: http://www.ices.dk/reports/general/2001/2001gen6.htm

ICES Working Group on Pathology and Diseases of Marine Organisms. Santiago de Compostela, March 13-17. Internet address: http://www.ices.dk/reports/general/2001/2001gen6.htm

ICES/IOC/IMO Study Group on Ballast and Other Ship Vectors. Barcelona, March 19-20. Internet address: http://www.ices.dk/reports/general/2001/2001gen6.htm

ICES Working Group on Introductions and Transfers of Marine Organisms. Barcelona, March 21-23. Internet address: http://www.ices.dk/reports/general/2001/2001gen6.htm

I International Congress on Science Marine and Technology, Oceanology and Human Development on the Continental Platform and Margin. Pontevedra, 24-27April, 2001. Internet address: http://wwwA040.infonegocio.com/6/Congreso.html

VII Reunión Ibérica sobre Fitoplancton Toxico y Biotoxinas. Alicante, 16-18, May, 2001. Internet address: e-mail: asuncion.real@ua.es

6th International Workshop on "Physical Processes in Natural Waters", Universidad de Girona, 27-29 June 2001 Internet address: http://copernic.udg.es/gfa/6thIWONA.htm

I International Workshop on Investigation, Management and Remediation of Contaminated Aquifers. Alicante, 17-19 October 2001. Internet address: http://www.igme.es/internet/alicante/default.htm [An event not reported from Marinet.]

I Symposium GLOBEC Espana. El Puerto de Santa Maria (Cadiz), November 28-30, 2001. Internet address: http://www.uca.es/symposium_globec/

2002

3ª Asamblea Hispano-Portuguesa de Geodesia y Geofisica. Valencia, 4-8 February 2002. Internet address: http://www.top.upv.es/3asambleagg/3asamHPGG.htm

IX International Conference in Applied Algology, Roquetas de Mar, Almeria, 26-30 May 2002. http://www.ual.es/Congresos/ISAP02/content.htm

4th International Conference on Molluscan Shellfish Safety. Santiago de Compostela , 4-8 June 2002. Internet address: http://www.atlanticocongresos.com/moluscos/index.html [In English]

NAFO/CSIRO Symposium on Elasmobranch Fisheries: managing for sustainable use and biodiversity conservation. Santiago de Compostela, 11-13 September 2002. Internet address: http://www.nafo.ca/publications/redbook/2002/index.htm

FAO. General Fisheries Commission for the Mediterranean. Third Session of the Committee on Aquaculture. Zaragoza, 25-27 September 2002. Internet address: http://www.fao.org/DOCREP/MEETING/005/Y7445E.HTM [An event not reported from Marinet.]

Jornadas de Cetaceos y Tortugas Marinas en Almeria. Almeria, 25-27 October 2002. Internet address: http://www.nodo50.org/ecoloand/cetaceos.pdf

Doctoral dissertations

The results, for the period 2001-2002, have been retrieved from the TESEO database, the official database designed by the Ministry of Education and Culture (http://www.mcu.es/TESEO/teseo.html). Limited criteria for the retrieval of items were adopted, and oceanography is the only scientific area diagnosed. 48 dissertations appear to have been presented from the Spanish campuses relevant to oceanography. A database was built using ProCite, and the fields employed were: Author, Title, University, Date and Keywords. This academic database allows limited access to the dissertations produced in 2002.

The national account statistics database shows that the Cadiz campus achieved the best results in terms of dissertations produced. 27% of the growth and development of Spanish performed research in oceanography as measured by dissertations come from Cadiz. Other campuses: the Polytechnic University of Catalonia (http://www.upc.es/english/hp_e.htm) 20%, the University of Vigo 14%, the University of Las Palmas de Gran Canaria 10%, the University of the Basque Country (http://www.ehu.es/ingles/paginas/prin_i.htm) 6% and the University of Seville (http://www-en.us.es/) 6%, the University of Oviedo 4% and the University of Santiago de Compostela (http://www.usc.es/intro/benvidai.htm) 4%, the Polytechnic University of Valencia (http://www.upv.es/menui.html) 2%, the University of Gerona 2%, and the Complutense University of Madrid (http://www.ucm.es/info/vicrint/indexe.htm) 2%.

The conceptual discussions included in this general picture of oceanography research on Spanish campuses, as approached through the keywords employed by "Teseo" to index the dissertations (mainly produced in 2001), consider, by decreasing order of importance: Physical oceanography (12 diss.), Biological oceanography (11), Littoral and sub-littoral processes (11), Chemical oceanography (7), Renewable marine resources (6), Marine aquaculture (5), Botanical oceanography (4), Descriptive oceanography (4), Oceanographic zoology (4), Air-Ocean interaction (3) and Marine geology (2).

Marine Science in Spain: 2001-2002. A bibliometric profile of the ASFA database

Objectives

Examining the descriptive and behavioural features of the marine science corpus, produced in Spain between 2001-2002, and recorded in the ASFA database. 822 bibliographic units were analysed. The application of the bibliometric method is descriptive, with a slight information overtone.

Methodology

A ProCite database was designed with all Spanish participants in Marine Science, 2001-2002. The number of contributions have been generated from the ASFA database using the Author Affiliation field (with the value: Spain). The measurements depict purely descriptive characteristics like: number of articles and year distribution, maximum usages per journal title, and percentage value for parts of corpus, and sub-thematic distribution of the articles. Manifestations of social phenomena, as the productivity of the authors (papers according to number of authors), and the dissemination of the scientific results on Marine Science produced from Spain (journal titles according to the number of the published titles), are also considered.

Results and Discussion

The results show that 519 papers were collected by ASFA from 2001, and 297 from 2002, for the marine science scientific literature accessible from Spain. According to this corpus there are 249 available scientific journals for the dissemination of Spanish results. The first ten journal titles (4%) published 188 articles (26% of the total articles), whereas the first 20 journal titles

(8%) published 316 articles (38% of the total articles). Between these journals the first three, publishing best Spanish participants data, are: Aquaculture (34 articles published), Marine Ecology Progress Series (28), and Hydrobiologia (26). Out of the 822 items published, 794 were articles in journals (96%), the percentage published for conference proceedings contributions was 2.7%, for the books 0.3% and for the reports 0.24%. The structure of the corpus regarding the sub-thematic distribution of the articles is: Physiology, biochemistry, biophysics (15%), Algae (12%), Fish culture (10%), Ecology Community Studies (10%), Taxonomy (8%), Phytoplankton (8%), Reproduction and development (7%) and Animal morphology (6%).

The behaviour of the corpus towards the productivity of the 2025 authors, shows that: 39% of the authorship comes from authors with more than 10 articles (13.6% of the total production), 26.5% as regarding authors with between 2 and 9 contributions, 73% of the authors are concerned with minimum productivity (1 article). The International Commission for the Conservation of Atlantic Tuna, the Universita degli Studi del Molize (Campobasso, Italy), the Institut fur Palaeontologie (Wurzburg, Germany), and the University of Stirling (Stirling, UK) are involved in co-authorship with Spanish labs. AZTI (www.azti.es), from the Basque Country, is represented through an article published by the journal "Nature", with labs from UK, South Africa, Canada, USA, Italy, and The Netherlands. Certainly we do not present citation data, it seems nevertheless important to accept a most internationalised research to achieve a particular correct citation rate.

Further results on the structure of the corpus refer to the identification of the main area of informative density. 200 articles seem placed in a comparatively more dense zone, they are published in the journals: Aquaculture (33), Marine Ecology Progress Series (28), Hydrobiologia (26), Journal of Fish Biology (26), Deep-Sea Research (Part II, Topical Studies in Oceanography) (21), Journal of Plankton Research (16), Journal of the Marine Biological Association of the United Kingdom (16), Journal of Experimental Marine Biology and Ecology (15), Limnology and Oceanography (14), Diseases of Aquatic Organisms (13), Journal of Agricultural and Food Chemistry (13), Waterbirds (13). These 12 journals result from the application of Bradford's law.

In forecasting development trends of marine science in Spain, two ISI journals must also be considered, Scientia Marina (www.icm.csic.es/scimar/sci_index.html) and Ciencias Marinas (http://rcmarinas.ens.uabc.mx/). The first one has not been included in the ASFA database for the past two years (it is why we stress the necessity of careful utilisation of the data supplied), Scientia Marina (ISSN 0214-8358, produced at Barcelona), amounts to some 161 scientific articles. Ciencias marinas (ISSN 0185-3880) is a Mexican journal (fully bilingual: English-Spanish) with a European associate editor, sited at the University of Cadiz. Five articles from this journal have been included in ASFA for Spain in the period 2001-2002, two documents entered under Cadiz geographical heading, one each for the campuses of Alicante, Las Palmas de Gran Canaria and Sevilla.

4. NATURAL PRODUCTS FROM THE SEA

The area of data exploitation for marine-derived natural products, in recent years 2001-2002, recounts the activities of the Natural Products and Agrobiology Institute

(http://www.ipna.csic.es/english/index.htm, CSIC), Instituto de Productos Naturales y Agrobiologia (La Laguna, Tenerife). An emphasis must be made, also, on the web page that permits access to the firm PharmaMar; a Spanish producer of anti-tumour compounds from marine organisms (http://www.pharmamar.es/en/about/index.cfm).

Red (Plocamium cartilagineum, Laurencia obtusa) and green (Cymopolia barbata) algae are the source of bioactive compounds from the Tenerife Lab. La Coruna (studying Indonesian Coral) and Cadiz (with the gorgonian Plexaurella grisea from Punta Cana, Dominican Republic) Chemistry Departments display complementary perspectives.

Working in the Spanish pharmaceutical industry from 1986, PharmaMar (http://www.pharmamar.es/en/about/index.cfm) has offered, over the period 2001-2002, some 30 papers in journals such as Nature Medicine, European Journal of Cancer, The Lancet Oncology, Oncogene, British Journal of Cancer and The Journal of Biological Chemistry. The information is displayed in seven categories (ET-743, Aplidine, Kahalalide F, Phase I/Phase II, Soft tissue sarcoma, Anti-tumour, Mechanism of action) (http://www.pharmamar.es/en/prosci/publications.cfm).

Specific advice on clinical trials is available from a fact sheets service (http://www.pharmamar.es/en/prosci/facts.cfm); and a reportable capability (http://www.pharmamar.es/en/congress/) strengthen the overall resource with information on the Congresses PharmaMar expected to assist: namely, clinical oncology and cancer research American associations, and European organisations for the treatment of cancer and medical oncology. This Spanish biotechnology company has adopted a data management policy, offering a Virtual library of videos in interoperable formats, a Virtual Press Office, and an online survey (http://www.pharmamar.es/en/prosci/survey.cfm) and feedback device refining its cookies and copyright policy (http://www.pharmamar.es/en/terms.cfm). A search device, with 'Search Tips' instructions (including commentaries on boolean operators) is also in use.

Through its research to date, PharmaMar has compiled a library of more than 40,000 marine organisms with potential therapeutic benefits. The scientific and professional business information activities of this firm result in its Ibex-35 stock market index listing.

5. METADATA

The National Antarctic Data Centre's new web page has increased the quick and relevant retrieval of marine science information in Spain, with the highest integrity concerns for authenticity in this period (2001-2002). This Internet system is sited at the Spanish Geological and Mining Institute (Madrid) http://www.igme.es/internet/cnda/formulario.htm.

The Antarctic Data Management (http://www.jcadm.scar.org/), in relation to metadata, will assist the Spanish Polar Committee (http://www.mcyt.es/cpe/comitepolar.htm, from the SCAR (ICSU, International Council for Scientific Unions) (SCAR has received the Prince of Asturias Award for International Cooperation 2002, http://www.scar.org/Ast%20Award/prince_of_asturias_award.htm), for reducing duplication of effort, maximizing usage of data, and facilitating better planning by national programmes. The generation of metadata for the Antarctic data adheres to the Directory Interchange Format(DIF), the standard chosen by the Antarctic Data Directory System. The form designed for the data introduction allows the fields: general directory data (required fields), temporal and spatial coverage of the data, personal data of the code aggregator, the typology of the measures represented by the data set (or parameters, a required field), the name of the project, its geographic location and source of the data, the Data Centre as by the identification of the metadata along the expedition (required field), the name of the instrument or hardware used to acquire the data (sensor) and the keywords, a summary (required field) and a description of the URL (into Spanish and English), to what is added a set of 20 examples coming from the expeditions of the research vessel Hesperides.

6. VIRTUAL COMMUNITIES

Embodied in Tierra, the thematic network of earth science in Spain, and mirror of various IGCP-UNESCO projects, MARINET is the Spanish Virtual Community in Marine Sciences (http://tierra.rediris.es/marinet/index_english.html). Tierra is a community that started on March 25 1999, supporting some 3.270.209 accesses (hits for webalizer), which means 217.056 visits (1.800 seconds, times windows), between April 2001 and March 2002). Marinet, operating also since 1999, assumed 12% of the total KBytes sent by the server in last February 2003.

Marinet has thought through its functions for communications: negotiating grants, working at a committee, electronic manuscripts submission, learning a new techniques and people, collaboration in groups and projects, and contacts with home while travelling [5].

From the point of view of the librarian, it is an audiovisual scenario, that has adopted a collaborative work tool, the Basic System for Collaborative Work (BSCW). It is an asyncronous (not simultaneous) and synchronous content management package, entirely Web based, and offering shared workspaces to store, manage, jointly edit and share documents [6][7].

Enforcing work relationships (committees, projects, co-authors, sponsorship), many research questions requiring coordinated data collection across long distances, reap returns from collaboration [8], more, serving as an 'anti brain-drain' device [7]. Although favourite criteria on maintenance of ownership over data seem not challenged (in this sense most oceanographic databases in Marinet are gateways to remote servers where the databases are located), Marinet is allowed to distribute professional data of Ibero-American marine scientists. Keeping a directory of scientists up-to-date shows a positive return associated with knowing more oceanographers and marine scientists, just through browsing. In terms of retrieval of data, observations and technical uncertainty surrounding the acquisition of data, is eventually consistent with Marinet News Service, Electronic Library and b-board. Marinet usage and professional recognition attached to it, lends credence to sending-receiving facilities as producing externalities when the traffic is distributed through the VC [9][10].

Scheme of Devices Associated to Marinet

Apparatus:

Expeditions plans and research vessels schedules (Spain, Peru, Colombia and gateways to any research ship information available in the web. http://tierra.rediris.es/marinet/buques.htm#Buques.

Databases:

Marine datasets on: Coastal Monitoring, global digital bathymetry charts satellite imagery, oceanic currents and temperatures, ozone hole in the Southern Hemisphere, maritime weather forecasts, Online swell and sea level data from buoys, fisheries datasets, coastal hazards (hurricanes, tsunamis), and geophysical data (geoide, global gravimetry). http://tierra.rediris.es/marinet/datos.htm

Mostly links to other servers. Scanning the external environment, raw data, metadata and infrastructure data are available as component elements.

Services:

Online Library: A fee access area for the exchange of marine science papers and publications (English/Spanish, managed by the CSIC librarian at Puerto Real, Cadiz.

http://tierra.rediris.es/marinet/biblioteca_electronica.html

News: With the latest news on marine science in the Ibero-American countries (2002, and 2003. Also available a special web page on the "Prestige" oil spill: http://tierra.rediris.es/marinet/prestige.html)

http://tierra.rediris.es/marinet/noticias.htm

Webdirectory of Marine Researchers in the Ibero-American countries (with an Add to the Webdirectory help tool). http://tierra.rediris.es/marinet/directorio.htm

Schedules of marine congresses in the Ibero-American countries.

http://tierra.rediris.es/marinet/congresos.htm

A Marine Environmental Alert Service (Notices on ecological impacts affecting coastal and ocean environments) specifically designed for the VC. http://tierra.rediris.es/marinet/alert-mar.html

Many other links to Marine Science Institutes and Research Programmes and Institutions all over Ibero-America are available after the VC.

Bulletin Boards:

The Electronic Mailing List: With a help tool on how to subscribe.
http://tierra.rediris.es/marinet/marinet_english.htm

Jobs: Employment and fellowships opportunities (students and postgraduate offers searching for cruisers, projects). http://tierra.rediris.es/marinet/ofertas.htm

http://tierra.rediris.es/marinet/demandas_contactos_voluntariado.html

Books and publications and educational resources (Programmes of marine science studies in Ibero-American universities) on the Net, complete the information Marinet has offered during the period 2001-2002.

7. FINAL NOTE

The efforts to develop markets of electronic information in Marine Science produced in Spain improve the absorption capacity of the users' community through segmentation. In this sense, other institutional initiatives do introduce into the market fitted products, this is the case for Fish Business e-mailed list: http://www.fishroute.com/SPAN/SiteLISTes.htm.

As a final note, a hard landing for data quality has interacted with Spanish marine science information area for the period 2001-2002. Also, the results of the MSStudy projections for 2003, based on 1997/98 figures, seem worthwhile to consult for the end of this year (http://www.asedie.es/msstudy/msstudyeng.htm).

Acknowledgment: Teresa and Hector Herrera are profoundly recognised because of their interest in the particular "go" of this national report.

REFERENCES

1. *Spanish Council Presidency Research and Innovation Information Service.* [http://www.cordis.lu/spain/].
2. *Spain tackles the European paradox.* [ftp://ftp.cordis.lu/pub/euroabstracts/docs/archive2-02.pdf]
3. *Innovation in Spain. Great leap forward.* [ftp://ftp.cordis.lu/pub/itt/docs/itt02-3_en.pdf].
4. *Ministry of Science and Technology. Science and Technology Indicators.* [http://www6.mcyt.es/indicadores/i+d+i/creditos-presupuestarios.htm] [This amount includes loans to the business sector in view of specific project developments].
5. Hesse, Bradford W.; Sproull, Lee S.; Kiesler, Sara B. and Walsh, John P. 1993. *Returns to science: computer networks in oceanography.* Communications of the ACM 36 (8): 90-101.
6. Martinez-Frias, J. and Somoza, L. 2002. TIERRA: *Thematic network on earth sciences. Contents and academic research and science diffusion resources.* Boletin de la red nacional de I+D, RedIRIS 60: 37-43. [http://www.rediris.es/rediris/boletin/60/enfoque3.html].
7. Canessa, E.; Fonda, C.; Radicella, S.M. 2002. *Virtual laboratory strategies for data sharing, communications and development.* Data Science Journal 1(2): 117-125 [http://journals.eecs.qub.ac.uk/codata/Journal/Contents/1_2/1_2pdfs/ds102f.pdf].
8. Wulf, Wm. A. 1993. *The collaboratory opportunity.* Science 261: 854-855.

9. Pau, L.-F. 2002. *The communications and information economy: issues, tariffs and economics research areas.* Journal of Economic Dynamics and Control 26: 1651-1675.
10. Van Alstyne, M. and Brynjolfsson, E. 1997. *Electronic communities: global village or cyberbalkans?* [http://web.mit.edu/marshall/www/InfoAccess.html].
11. *EurOCEAN 2000. The European Conference on Marine Science and Ocean Technology.* Hamburg, Germany. 29 August -2 September 2000. [http://europa.eu.int/comm/research/envsc/eurocean9.html].
12. Valcarcel, M. 2000. *Analytical information needs in the XXI century.* Fresenius J Anal Chem 367:677-678.
13. Franquesa, R.; Malouli Idrisi, M. and Alarcon, J.A. 2001. *Feasibility assessment for a database on socio-economic indicators for Mediterranean fisheries.* Studies and Reviews, N? 71. Rome, FAO. 55p.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 139-145

Report from the Polish Fisheries Institutes Regarding the Preparation of Poland for Incorporation into the European Union

by

Jadwiga Zdanowska[1] and Malgorzata Grabowska-Popow[2]
[1]Inland Fisheries Institue, Olsztyn, Poland, [2]Sea Fisheries Institute, Gdynia, Poland

Poland - a big country, extending across 312 683 square kilometres, and with about 40 millions citizens - is the day before incorporation into the European Union. Polish accession into the European Union was signed through the government representatives on 16th April this year. The time of the national referendum draws nearer and nearer. Many people in Poland hope that integration with the European Union will prove to be a better road to our future than staying outside. They think that only through international co-operation is there a chance for balanced development in Europe. However, some think, that our incorporation into the European Union will bring a worsening of our economic situation, therefore an information campaign regarding settlements of the Polish incorporation to the European Union is now being carried out. In this campaign the European Documentation Centres and the European Information Centres can play a very important role.

The main aim of the network of **the European Documentation Centres** (EDCs) is to help universities and research institutes to promote and develop education and research on European integration. These Centres should help all citizens to learn about the Union's policies. The first EDCs were set up in 1963 and today there are 544 centres in the world, mostly in universities. In the states of the European Union members there are 324 EDCs, in other European states, 84, and in other countries outside Europe there are 136 EDCs.

In Poland the first EDC was probably created in 1988 in Warsaw, the next in 1989 in Lodz University, and today there are 10 such centres in Polish universities (fig.1). Besides Lodz, they are located at universities in following cities: Warsaw, Wroclaw, Gdansk, Torun, Szczecin, Olsztyn, Lublin, Katowice, and Opole. There are five EDCs located at other high schools, three in Economic Academies (Cracow, Poznan, Katowice), one at the Warsaw School of Economics, and one in the Silesian Technical Academy in Katowice. The EDCs have been created in scientific institutes, located in Warszawa, and Poznan, one in European College in Natolin near Warsaw, one in the Ministry of Foreign Affairs in Warsaw, and one in Centre of European Studies in Cracow, and two in the European Academy (Opole, Katowice). Their exact addresses are given in Tab.1.

Many documents are stored in four **central depository libraries**, which are a kind of EDCs too. Such agencies are mainly in Warsaw, and Cracow, as well.

Besides the EDCs, some **European Information Centres** (EIC) have been created especially for small and middle enterprises. Today there are at least 12 such centres in Polish cities: Warszawa, Walbrzych, Kalisz, Bialystok, Katowice, Krakow, Lublin, Kielce, Rzeszow, Gdansk,

Torun, Szczecin (fig.1). All citizens, but especially clerks and businessmen, can get some information about the Union's policy in the EICs. Additionally, regional points of information about the European Union are being created all the time.

Various **printed documents and databases** concerning the Union's policies and legislation are collected in EDCs. It is very important that EDCs have access facilities to different databases: APC, ARCHISPLUS, CELEX, CORDIS, ECAS, ECLAS, EUR-LEX, EUROM, IDEA, INFO92, ISPO, NEW CRONOS, OIL, OJCD, PRELEX, RAPID, REM, SCAD, SESAME; some of them are on CD-ROM, some are on line. The most popular databases are CELEX and CORDIS, the former contains the Union's acts of law, the latter contains programmes of scientific research. The users of the databases and other information are mainly students and scientists, public servants, and businessmen or businesswomen, but not exclusively, because many people are interested in the Union's documents.

Fig. 1. Location of the European Documentation Centres (EDCs) and the European Information Centres (EICs) in Poland

- ● - EDCs at universities
- ▮ - EDCs at other high schools
- ● - EDCs in other institutions
- ▲ - EICs

The EDCs are open for all citizens. Each **information user** has different needs. Students can prepare a thesis about the integration of our country with the European Union (just now a competition has been announced for the best thesis on this subject), scientists are interested in research, fishermen would like to know what they can expect after incorporation into the European Union.

For fishermen there are some documents concerning **the Common Fisheries Policy**, which contain facts and figures, law, financial instruments: "The Common Fisheries Policy", "Facts and Figures on the CFP", "Financial Instrument for Fisheries Guidance", issued in 2001 or 2002 by the European Commission. Furthermore a popular magazine, ***"Fishing in Europe"***, can be found in the EDCs. It is published bi-monthly (from February 2001), "for a better dialogue around a Common Fisheries Policy" - so says Franz Fischler, the European Commissioner responsible for fisheries.

I would like to direct your attention to the article: "Poland: a large fishing nation is about to enter the EU" - *Fishing in Europe*, 2003, 15, p.11.

In the table in this article the following data are presented: Polish catches in the year 2000 amounted to 205 057 tons, while in all 15 countries of European Union - 6 062 318 tons (that is an average of over 400 000 tons fish per one country). Employment in fisheries in Poland amounts to about 28 000 of people, while in the European Union it is 526 034 people, an average of over 35 000 people per country. In the light of this, the Polish fishery does not seem too large.

Table 1. Location of European Documentation Centres (EDCs) in Poland.

No	Name of institutions	Address of EDC (postcode, town, street, nr)
	Universities:	
01.	Lodz University	90-361 Lodz, Piotrowska 262/264
02.	Warsaw University	02-656 Warszawa, Ksawerow 13
03.	Wroclaw University	50-145 Wroclaw, Uniwersytecka 22/26
04.	Gdansk University	81-824 Sopot, Armii Krajowej 119/121
05.	Nicolai Copernici University	87-100 Torun, Gagarina 13a
06.	Warmia and Mazury University	10-957 Olsztyn, Oczapowskiego 4
07.	Szczecin University	70-384 Szczecin, Mickiewicz 16
08.	Silesian University	40-007 Katowice, Bankowa 11
09.	Marie Curie-Sklodowska University	20-080 Lublin, Plac Litewski 3
10.	Opole University	48-081 Opole, Piastowska 17
	Other high schools:	
01.	Warsaw Schools of Economics	02-554 Warszawa, Niepodleglosci 162
02.	Economy Academy	40-226 Katowice, Bogucicka 3
03.	Economy Academy	31-510 Krakow, Rakowicka 27
04.	Economy Academy	61-895 Poznan, Powstancow Wielkopolskich 16
05	Silesian Technical Academy	40-019 Katowice, Krsinskiego 13
	Other institutions:	
01.	Ministry of Foreign Affairs	00-950 Warszawa, Warecka 1a
02.	Center of European Studies	31-010 Krakow, Rynek Glowny 34
03.	European College Natolin	02-766 Warszawa, Nowoursynowska 84
04.	Institute of Western Affairs	61-772 Poznan, Stary Rynek 78/79
05.	Foreign Trade Research Institute	00-483 Warszawa, Frascati 2
06.	European Academy	45-256 Opole, Grota-Roweckiego 6d/8
07.	European Academy	40-021 Katowice, Plac Rady Europy 1

It is widely known that in the Baltic Sea and in other fishing grounds overfishing is observed, pollution is an international problem, and many fish species must be protected. Catch limits are on the one hand a necessity, it brings a compulsion to limit the number of fishermen, but on the other hand - an increase in the number of persons who will control settlements in the common European fisheries policy. In other words, there should be fewer fishermen and more administrative services. Overgrowth of bureaucracy is criticized however, and such tendencies are not popular in Poland either. Fortunately, aquaculture, especially fish culture, can be developed in Poland.

The Polish Inland Fisheries Institute has carried out studies concerning the possibilities of increased fish production in inland waters. The Inland Fisheries Institute belongs to a group of institutes, which are supervised by the Ministry of Agriculture and Rural Development. In this

Institute, the state of Polish inland fisheries is recognized very well and contacts with practitioners are frequent. However, not only fish or crayfish production is interesting to Polish scientists, they give the same attention to fish protection, mainly to the fish threatened with extinction. In 2002, the scientists from the Inland Fisheries Institute got a government reward for the restitution of *Coregonus lavaretus* L. into Puck Bay. Research concerning improvement of artificial reproduction of fish, methods of fish culture, lake fishery, fishery economics, ecological studies, and many others are undertaken in the Institute.

The Department of Scientific Information of the Inland Fisheries Institute is the Polish centre for information about inland fisheries. In its activity is included the management of the fisheries library and documentation of all Polish literature concerning inland fisheries and biological aspects of freshwater environments - to all-Polish and international bibliographic databases. Now, in this Department are databases about researches and reporting, too. The library collection contains almost 15,000 books in a main storage in Olsztyn, and over 6000 in departmental libraries in Zabieniec and Gizycko, and 750 titles of journals (including journals currently not issued). Inter-library exchange is carried on with over 100 institutions, especially *"Archives of Polish Fisheries"*, which is issued in our Institute, is delivered there. It is no wonder that the Inland Fisheries Institute is estimated in all-Polish ranking, as the first class of scientific institute, because of the best results of its activity.

The Inland Fisheries Institute in Olsztyn is one of many Polish institutes which carry out studies concerning fisheries and water environments (Tab.2). What takes place in other Polish scientific institutes? Some of them are described below.

The Sea Fisheries Institute in Gdynia belongs to a group of institutes, which are supervised by the Ministry of Agriculture and Rural Development. The principal areas of research conducted at the institute include: fishery biology and oceanography, marine ecology, fish processing technologies and fishery economics. In 2002 the Sea Fisheries Institute received funds to realize, from 2003, the project within the 5th European Framework Program - a Centre of Excellence called POLMARF (Polish Marine Fishery Science Centre). The mission of the Centre is to develop and provide a scientific foundation for the rational use and exploitation of marine living resources. At present, there are seven Polish State Committees for Scientific Research projects and seven European Union projects are carried out in the Sea Fisheries Institute. The latter deal with technology, oceanography, ecology and fishery economics.

Since 1999 the Scientific Information Centre, Library and the Publishing Department have been joined in one Department: the Centre for Scientific Information and Publishing. *The Bulletin of the Sea Fisheries Institute*, which is abstracted and indexed in some bibliographic databases, is published there. The library houses the only collection in Poland dedicated to sea fisheries research, and it contains over 11,000 volumes of books and over 13,000 volumes of periodicals. The library catalogues are computerized with the Micro CDS ISIS package. Exchange of periodicals is carried out with 200 Polish and foreign centres.

The Scientific Information Office, which is an important part of the Centre, has been a coordinator of the Polish section of the international information system ASFIS since1995, and in this capacity prepares Polish input data. This section consists of five information sub-centres from various institutions: University of Gdansk, the Institute of Oceanology PAS of Sopot, the Inland Fisheries Institute of Olsztyn, the Pomeranian Pedagogical University of Slupsk and the Sea Fisheries Institute of Gdynia. In 2002 the Polish Centre of ASFIS obtained access to ASFA IDS, and in September 2002 a training course for ASFA input in the new software www.-ISIS-ASFA program was held in the Sea Fisheries Institute. Representatives of the SFI Centre for Scientific Information and Publishing and from the Institute of Oceanology PAS took part in ASFA Advisory Board Meetings in 2001 and 2002, and one person from SFI will attend such a meeting in July, in Havana (Cuba) in 2003.

Table 2. Polish institutions which carry out fisheries and aquatic sciences studies.

No.	Name of Institution	Address	tel./fax (+48)	www.
1.	Institute of Inland Fisheries	10-719 Olsztyn, Oczapowskiego 10	089 5240171/ 089 5240505	www.infish.com.pl
2.	Sea Fisheries Institute	81-332 Gdynia, Kollataja 1	058 6201728/ 058 6202831	www.miryb.gdynia.pl
3.	Institute of Oceanology PAS Polish Academy.of Sciences	81-712 Sopot, Powstan.Warszawy 55	058 5517281/ 058 5512130	www.iopan.gda.pl
4.	Institute of Ichthyobiology and Aquaculture PAS	43-520 Chybie, Golysz	033 8561543/ 033 8589292	www.fish.com.pl
5.	Institute of Freshwater Biology PAS	31-016 Krakow, Slawkowska 17	012 4215082/ 012 4222115	www.zbw.pan.krakow.pl
6.	Institute for Meteorology and Water Mana gement	01-673 Warszawa, Podlesna 61	022 8341851/ 022 8341801	www.imgw.pl
7.	Maritime Institute	80-830 Gdansk, Dlugi Targ 41/42	058 3011641/ 058 3013513	www.im.gda.pl
8.	Polish Geological Institute Marine Geology Branch	80-328 Gdansk, Koscierska 5	058 5542909/ 058 5542909	www.pigok.com.pl
9.	Institute of Maritime and Tropical Medicine	81-519 Gdynia, Powst. Styczniowego 9B	0586223011/ 058 6223354	www.immt.gdynia.pl
10.	Institute of Hydroenergineering PAS	80-953 Gdansk, Koscierska 7 P.B.61	058 5523903/ 058 5524211	www.ibwpan.gda.pl
11.	International Centre of Ecology PAS	05-092 Lomianki, Dziekanow Lesny k/Warszawy	022 7513046/ 022 7513100	www.cunpan.waw.pl
12.	Institute of Environmental Protection	00-548 Warszawa, Krucza 5/11d	022 6251005/ 022 6295263	www.ios.edu.pl
13.	University of Warmia and Mazury Faculty of Environmental Sciences and Fisheries	10-718 Olsztyn, Oczapowskiego 5	089 5233421/ 089 5233651	www.uwm.edu.pl
14.	Agricultural University Faculty of Marine Fisheries and Food Technology	71-550 Szczecin, Kazimierza Krolewicza 3	091 4231061 w.65/ 091 4231347	www.fish.ar.szczecin.pl
15.	Gdynia Maritime University	81-225 Gdynia, Morska 83	058 6217041/ 058 6206701	www.wsm.gdynia.pl
16.	Maritime University of Szczecin	70-500 Szczecin, Waly Chrobrego 1	091 4344226/ 091 4338123	www.wsm.szczecin.pl

The Institute of Oceanology PAS (Polish Academy of Sciences) in Sopot conducts scientific research in the shelf seas and coastal regions of the temperate and Arctic zones. The hydrodynamic studies are focused on understanding and modelling of the circulation and structure of the shelf and coastal water that affect marine ecosystems.

The library of the institute houses about 8,000 books and 7,000 journals. There are traditional catalogues as well as one computerized catalogue. The computerized catalogue was created with the MICRO CDS ISIS package. The institute library has access to ASFA IDS, and to the journal bases of Elsevier Science. and Academic Press. The library exchanges periodicals with 120 Polish and foreign centres.

The institute journal *"Oceanologia"* since 2003 has been ranked by impact factor (IF=0,433) within Oceanography category in SCI Journal Citation Reports of the Philadelphia Scientific Information Institute.

The Institute of Ichthyobiology and Aquaculture PAS in Golysz was awarded the status of research institution of the PAS on 1, July 1992. The main directions of its activity include the study of the biological basis of fish breeding, the development of breeding methods in ponds and in controlled conditions, the introduction of new fish species, and the optimisation of links between fish farming and water management. The library of the Institute contains above 15,600 books and 48 journals.

The Karol Starmach Institute of Freshwater Biology PAS in Cracow - Its activity includes complex limnological studies on streams, rivers and reservoirs with special attention to the structure of biocenoses, relations between aquatic organisms and physico-chemical factors of their habitats, and anthropogenic alterations in inland water ecosystems. Investigations are carried out mainly in southern Poland. The library collection of the Institute contains over 30,000 volumes of books and brochures, and over 20,000 issues of journals

Since 2001 the Institute has published together with International Centre for Ecology (Warsaw) the *"International Journal of Ecohydrology & Hydrobiology"*. It originates from two journals: *"Polish Archives of Hydrobiology"* and *"Acta Hydrobiologica"*.

The Institute of Meteorology and Water Management in Warsaw continues its over 80-years tradition of efficient and reliable State service. At the moment it is a research institution which conducts different but linked together (observation and measurements as well as information and expertise) services of nation-wide importance. All services such as: hydro-meteorological, together with oceanographic, water quality monitoring, technical control of dams, on an increasing scale are performing tasks connected with complex environmental monitoring and natural disaster prevention. The IMWM possesses five branches besides the one in Warsaw.

The Maritime Branch in Gdynia carries out research on atmosphere and the Baltic, including meteorology, hydrology and oceanography. Furthermore, it prepares weather forecasts for fishermen and sailors. There is a library in the institute, which houses about 10,000 books. It has some traditional catalogues and exchanges periodicals with Polish and foreign institutes.

The monitoring cruises are carried out on r/v *"Baltica"* - the joint property of the Sea Fisheries Institute and the IMWM. The vessel's construction and equipment enable scientists to conduct various investigations, very often coordinated by leading Baltic Institutions such as ICES and HELCOM.

The Maritime Institute in Gdansk is a scientific institution devoted to maritime research in such areas as: protection and shaping of environment, geoengineering and hydrography, oper

ational oceanography, maritime law, marine electronics, transport management and marine technologies. The institute was created in 1950 and at present is supervised by the Ministry of Transportation and Maritime Economy. There is a library in this institute.

The Polish Geological Institute in Warsaw was founded in 1919 and since then has performed its duties as the national geological service. The prime mission of the institute is to conduct geological research of the country.

One of its six branches is **The Marine Geology Branch** in Gdansk. The fields of its activity are: geological research on the Baltic Sea bed in the Polish Economic Zone, geological research on the Baltic coastal zone and on coastline changes, conducting and coordinating work in the field of geological cartography, and cooperation with Baltic countries in the field of Baltic Sea geology and environmental protection. The institute owns a library.

The Institute of Maritime and Tropical Medicine in Gdynia was established in 1939. Its activities are much expanded, and focus on tropical medicine and the health of travellers and maritime workers. The Institute collaborates with the World Health Organization, the International Labour Office, the International Society of Travel Medicine and with institutes and maritime occupational health centres in many countries. The Institute publishes the journal *"International Maritime Health"* which has been indexed in Medline, and there is a library in this institution.

Besides these institutes, which regularly conduct research on fisheries and/or aquatic sciences, such problems are also studied at some Polish universities, in Olsztyn, Szczecin, and Gdynia (Tab.2). Universities which have faculties in this scope are given, but at some Polish universities there are only departments or laboratories.

Conclusions

The day before the incorporation to the European Union, people in Poland, not only scientists, ask each other, how prepared are we to join the EU, how prepared are the Polish institutions? The Polish institutes have modern research programmes, and interesting research results, and good qualified staff. They have many good points, but have weak points, too. The Polish scientists can use a good library network, and they have access to many databases and to the Internet. Progress in using different kinds of information sources is visible, and the rate of publishing is increasing from year to year. The Polish scientists have many interesting ideas, and they intend to cooperate with colleagues within the European Union. How this cooperation will be realized, we will see in the future. We are hopeful that we will be able to overcome all kind of barriers.

Posters

Chair

Ian McCulloch

Centre for Ecology and Hydrology, Windermere, UK.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 149

The Aquatic Food Product Initiative

by

Roland Cormier
Aquatic Food Product Initiative, Fishery Industries Division,
FAO Fisheries Department, Rome, Italy

ABSTRACT

Given the inherent complexities associated with the safety and quality of aquatic species and their processing practices, a multi-disciplinary approach, from the environmental to the food sciences, is often needed to conduct adequate hazard analysis and risk assessments. Moving from an inspection to a prevention paradigm, a proper understanding of food hazards and their pathways is required to effectively manage their risk of occurrence. In addition, the present trends in processed and value added products also require the collation of information from a broad range of food and processing technologies.

The Aquatic Food Product Initiative was launched with the intent of creating a multi-disciplinary scientific information platform. Effectively combining the environmental and food sciences from a food continuum perspective, FishPort (www.FishPort.org) is designed to collate information related to aquatic species and their use in food products in terms of product attributes, preservation and processing characteristics, as well as emerging hazards and respective control mechanisms and practices. Via the use of secured Internet connectivity, invited institutes will maintain ownership, identity and authority over the information they contribute within an automated peer review process.

The intent of the system is to enable a transparent level playing field where both developing and developed countries have equal access to the latest and up to date scientific information.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 151

G. Forster (1754-1794) and K. van Baer (1792-1876) - Naturalists, Travellers, Librarians

by

Ludmila Koval
AtlantNIRO, Kaliningrad, Russia

ABSTRACT

This poster is devoted to materials and diaries of two expeditions. The first one began from Plymouth 230 years ago. 150 years ago the second expedition initiated the beginning of Fisheries Research in Russia. Nowadays the activities of the Fisheries Research Institutes and Aquatic Sciences Libraries are based on international cooperation and exchange.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 153

Scientific Library of VNIRO

by

E.B. Krasnova, L.A. Kulganina and A.V. Beljakova
VNIRO, Russia

ABSTRACT

This poster is devoted to the Scientific Library of the Russian Federal Institute of Fisheries and Oceanography - VNIRO, which was created with the foundation of the first Marine Institute in 1932. Nowadays it incorporates over 250,000 published units, nearly half of being foreign literature. The Library ranks first in Russia and occupies a major place in the world both by the complete scope of the world literature in fish biology, fish and seafood processing, fishing oceanography and aquaculture, and by the riches of unique publications. At the present time the library conducts international exchange in publications with 135 institutions from 42 countries over the world. The stock of the Library contains rare and valuable Russian and foreign publications published in 1736 to 1917. In recent years a significant transformation of library structure has taken place. Now the Library is forming an information centre with a highly developed network of inter-communications which make it possible to constantly enlarge their stocks both in traditional form and in the up-to-date electronic carriers.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 155-156

Fish Technology Knowledge Base: oneFish Utilization and Technology Worldview

by

P. Nesvadba[1], K.J. Whittle[2], J. Baron Varley[3], M.L. Nunes[4], P. Bykowski[5], S. Arason[6], G. Valdimarsson[7] and A. Johns[8]

[1]The Robert Gordon University, Aberdeen, UK, [2]Torry Research Limited, Aberdeen, UK, [3]Support unit for International Fisheries and Aquatic Research, FAO, Rome, Italy, [4]Instituto de Investigação das Pescas e do Mar, Lisbon, Portugal, [5]Morski Instytut Rybacki w Gdyni (Sea Fisheries Institute Gdynia), Poland, [6]Icelandic Fisheries Laboratory, Reykjavik, Iceland, [7]Food and Agriculture Organisation of the United Nations, Rome, Italy, [8]National Engineering Laboratory, Glasgow, UK

ABSTRACT

Fish Technology is important to optimise the utilisation of fish, a scarce and valuable resource. All maritime countries continually strive to improve fish catching, farming, processing, chilling, freezing, storage and distribution. There is a wealth of knowledge around the world that has accumulated over decades of R&D and industrial applications. In order to harness this knowledge for the benefit of both developed and developing countries, the Support unit for International Fisheries and Aquatic Research (SIFAR), in conjunction with the World Agriculture Information Centre (WAICENT) - both based a the United Nations Food and Agriculture Organisation (FAO) HQ in Rome - have developed a new online participatory information and knowledge management system called oneFish (http://www.onefish.org). This innovative system comprises both a directory of online knowledge objects at remote locations around the world, linked and indexed though logically constructed topic (subject) trees, as well as a repository for references, abstracts and full-text documents and files.

oneFish is currently being used in support of an EU funded project (QLRI-2000-00216) to develop an online open-access knowledge base of fish technology information. This contribution gives details of the contents of the fish technology knowledge base, it organisation in terms of a keyword topic tree, usage by different countries and plans for a network of users and contributors.

BACKGROUND

- 1999 – An FAO funded study was commissioned to assess the need for a Fish Technology Knowledge Base. It undertook a survey of three databases - ASFA, FSTA, TorLib to evaluate their fish technology content.
- TorLib – the in-house database at the Torry Research Station (Aberdeen, UK) containing 38,000 references selected by scientists.

- The results of the study showed that TorLib comprised the best source of information for fish technology.
- 2000 – the decision was taken to develop TorLib on the web and EU funding was sought.

OBJECTIVES

To create a Fish Technology Database that would be:

- Accessible online.
- Open [free] access.
- Supported by a Network of individuals and institutions.
- With Users, Contributors and Editors.

APPROACH

- The bid for EU funding resulted in the EU Fish Tech DB project QLRI-CT2000-00216.
- Project participants came from Iceland, Poland, Portugal, the United Kingdom and the FAO.
- A prototype knowledge base was created using the TorLib references.
- The database was tested, edited and updated.
- The database was nested in the oneFish portal.
- Efforts have now begun on creating a supporting Network.Results
- An online bibliographic database on fish technology and related topics has been created, nested in oneFish, and currently contains 38,000+ references.
- The references are classified by topics, keywords and type of document.
- The database can be searched by keyword(s), author(s), or other criteria, either as a separate database or along with all other knowledge in oneFish.Conclusions
- The database is currently online via oneFish, and is being tested and updated.
- Efforts have begun to enlarge the Network of supporting technologists/institutes beyond the EU project participants.
- New oneFish functionality will facilitate the pooling of knowledge objects from research institute databases.

The question of long-term sustainability is to be addressed by the Project Partners during the remaining months of the Project.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 157-159

Explorations on Senegal in the Cervigón Collection (Museum of Fishes) of the Spanish Scientific Research Council (CSIC) at Cádiz (Spain)

by

Enrique Wulff-Barreiro
Marine Sciences Institute of Andalusia, Spanish Council for Scientific Research.
ICMAN (CSIC), Puerto Real (Cádiz), Spain.

SUMMARY

The Cervigón Collection, from the Fish Museum sited at the Institute of the Spanish Scientific Research Council (Cádiz), where is preserved the holotype for Cottunculus costacanariae, provides the paradigm (Rey Lozano, 1928; Lozano Cabo, 1950) on the transition zone between the Atlanto-Mediterranean and the Tropical faunas. The Banc d'Arguin is the central area of dispersion for the species. Added to the Internet Resource Guide for Zoology of BIOSIS and the Zoological Society of London, the collection exposes 48 fishes from the Senegal coasts. Priacanthus arenatus reveals its northern limit in the zone where it has been fished, 14°26' and 12°51'. Gobius niger L., concerns to the species described by F. De Buen, 1928. Erythrocles monodi, rarely captured far from the south of C. Verde, belongs to an Indopacific genera. Totally from Senegal, and never up to the 17° parallel, Otoperca aurita. Part of the fauna of Casablanca, and fished in April 1958 south of St. Louis, Otolithus senegalensis. Very frequent facing Senegal, but captured at the western Sahara and Mauritania, Parapristipoma mediterraneum and Paracubiceps ledanoisi. The Pagellus erythrinus (L., 1758) in this collection display interesting differences in sizes with the Senegal ones, perhaps due to the prevalent regimes of temperature. For the prediction of community-wide character displacement a Macrorhamphosus scolopax (L., 1758), substituted in Senegal by M. Gracilis, Lowe, could be consulted. Captured in the Banc d'Arguin, Anodontus mauritanicus is nov.gen. nov.sp. and Cottunculus costae-canariae is nov.sp. The collecting work was initiated by Dr.Cervigón, now at the Marine Museum, Isla Margarita (Venezuela).

INTRODUCTION

A computer facility for testing the interaction between tropical and Atlanto-Mediterranean faunas in Senegal coasts has been designed [1]. It electronically manages specimens from the CSIC Fish Museum (Cádiz), the Cervigón Collection. The museum has been involved in Species 2000: CODATA '99 DSAO, Tsukuba, Japan.
(http://www-sp2000ao.nies.go.jp/english/whats_new/year_1999/pos_pre/abstract.html#Enrique Wulff-Barreiro).

This is an "Inadvertent collection". The fish ages have not been determined. The collection catalogue has never been published. A global taxonomic review concerning it should be performed as a policy at higher levels. From its information content, after the properties of a specimen, the collection could be named a "library of life" [5]. The fish museum is seeking to be involved in CODATA Africa activities.

THE FOUR CAMPAIGNS ABOARD THE *"COSTA CANARIA"*, THE YEARS 1958 AND 1959, TO THE SENEGAL RIVER BASIN COASTS

The four Cervigón (CSIC) Spanish expeditions from Cádiz south Bojador Cape (1958-1959) had as their goals [2]:

To study the Senegalese hake.

To explore the abundancy and diversity of species in the zooplankton.

To enrich the distribution data and the systematics of the distinct fish species.

And their reasons were that:

the area between the Juby Cape and Verde Cape offered a bottom fauna of special economic richness,

Spanish and Portuguese intensively fished in it,

Cádiz and Huelva harbours were the main bases for these fleets,

the accidental bottom of the Banc d'Arguin was not enough known.

The campaigns were conducted in February, April, October 1958, and on March 1959.

RESULTS OF CERVIGÓN (1958-1959) EXPEDITIONS

The interpretation provided by the Senegal Fishes, from the Cervigón Collection sited at CSIC (Puerto Real), supports the theory, advanced by Lozano [3], in terms of underlining the distance between the ichthyological fauna from Senegal and the Mediterranean fauna. In fact, the southern limit of the Atlanto-Mediterranean area could be attributed, after the observations of the four CSIC expeditions from the Cádiz labo, to the bottom fauna between Cabo Blanco and the Banc d'Arguin. Nevertheless the species eventually encompass a wide area of dispersion. Gridded data, that are displayed for featuring frontier case studies relevant for Senegal coastal fishes specimens, can be obtained from the computer facility. If considering only the specimens caught off the coasts between 12° and 17° (Senegal), 22% resulted from the Atlanto-Mediterranean, all the other fishes coming from the area Dahomey-Senegal (after Cadenat). [4]

Three animals justify singular attention to this collection. *Anodontus mauritanicus* (caught at 19°N, depth 242 m) then considered as nov.gen. nov.sp., and nowadays assimilated to the Highfin tadpole fish; *Cottunculus costaecanariae* is nov.sp (caught at 20°45'N, depth 450 m), a deep water fish (depth range 318-600 m, without English name, also known as *Ebinania costaecanariae*) specifically named after the ship employed along the campaign, the "Costa Canaria". Another deep-water fish (depth range 200 - 2600 m) available from the museum is *Harriotta Raleighana.*

Looking to improve the data on distribution and systematics of the different fish species, another spatial pattern appears depending on bathymetric distribution. For the specimens off Senegal we range the material in those which were more abundant between tidal flat fauna and 100 m depth fauna, and those which can be considered as mid-water species, between 100-200 metres. Distribution is irregular, beyond this depth. This distribution helps to understand the species distribution after the characteristics of the bottom. As a general statement, size bathymetric distribution means that young exemplars come from the coasts, and that aging fishes appear at increasing depth. Season is also important, e.g. *Johnius regius* adopts shoal behaviour in

Spring, but is dispersed individually in Autumn. Typically, this bathymetric data set should be prepared for further analysis, by checking for errors, and redisplaying it within a geographic information system.

IN SENEGAL COASTS A COMPUTER FACILITY FOR THE INTERACTION BETWEEN TROPICAL AND ATLANTICO-MEDITERRANEAN FAUNAS

This "tool for the job" focuses on computer analysis of an initial sparse data region. The regional biota is described throughout the designed labelling, cataloguing, and field note-taking system employed by those who created the collection. Basic fields employed are: Species, Collecting from, Year, N° of exemplars, Collected by. 48 Species depicts research from Senegal (16°-12°N); 26 were collected from Senegal, 17 from Mauritania (Banc d'Arguin), four from former Spanish Sahara coasts, and one was caught off Guinea Bissau (10°N). Archival samples are all fixed in formaldehyde. External morphological data available refers to size. Growth histories are incomplete, as in the case of many old fishes. Dr. Cervigón collected 93% of the reported cases, half time working alone, half time also having Dr. Durán.

The primary array of the Senegal collection database architecture is composed of boxes representing the Specimens displayed by families. 31 fish families are represented. A second array of data, and a differential development, is the provision of a list of bibliographic references, when available from the database ASFA, on the geographical distribution of the fishes. 78 articles and two web resources are thus linked to the collection. Based on the available material through Species 2000 [6], a variety of links is provided to enrich the data for every matching specimen, in components such as order and class, commercial importance, diagnosis, biology, and eventual inclusion into the IUCN red list.

REFERENCES

[1] Briones, K. and Nieto, J.J. 2002. Digital museum of aquatic organisms of Equator. 28th IAMSLIC Annual Conference. Mazatlan, Mexico, October 6-11. http://132.248.118.15/Volumes/iamslic/Digital+museum+presentation.ppt

[2] Cervigón, F. 1960. [Fishes caught along the campaigns performed aboard the "Costa Canaria" from Cape Bojador to Portuguese Guinea (Western Africa) and some considerations on its distribution.] Peces recogidos en el curso de las campañas realizadas a bordo del "Costa Canaria" desde cabo Bojador a Guinea Portuguesa (Africa occidental) y consideraciones sobre su distribución. Inv. Pesq. Tomo XVII, 33-107. (See: http://www.fishbase.com/Eschmeyer/EschPiscesSummary.cfm?ID=10182)

[3] Lozano Rey, Luis. 1934. [Fisheries of the spanish Sahara.] Las pesquerías del Sahara español. Madrid: España. Dirección General de Marruecos y Colonias.

[4] Cadenat, J. 1950. [Sea fishes from Senegal.] Poisson de mer du Sénégal. Dakar, I.F.A.N.

[5] Wulff-Barreiro, E. 2002. Pushing forward the library of the marine sciences institute of Andalusia (CSIC, Puerto Real). Managing information, Vol.9, N° 2, 32-37, March. http://www.managinginformation.com/contentsmarch2002

[6] Froese, R. and Brisby, F.A. 2000. Species 2000 Catalogue of Life: Indexing the world's known species. CD-ROM, Species 2000:Los Baños, Philippines. www.sp2000.org. (See: Paul, D; Froese R. and Palomares, M.L. 2002. Fish on line. A draft guide to learning and teaching ichthyology using the FishBase information [http://www.fishbase.org/fish_on_line.htm].)

Commercial Presentations

Chair

Sarah Heath

FRS Marine Laboratory, Aberdeen, UK

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 163-164

SWETS: Solutions to get Access to Electronic Journals

by

Karen Heyden-Nakhal
Swet Blackwell, Germany

Swets Blackwell is one of the leading agencies worldwide and offers a range of services for libraries for print and electronic journals. This presentation focuses on our service for electronic journals.

SwetsWise online content is a single point of access for electronic journals. It has been created for both experienced users as well beginners. It offers 3 levels of access: to Tables of Contents (>17.700), Abstracts and Full-text (>7.000 from over 240 publishers). This means more than 11m articles of which 5m are full-text.

Our search facilities are one of the most interesting parts for end users. The advanced usage statistics gives you statistical information per publisher, publication, on searches, ordered documents and sessions on a more detailed level.

SwetsWise is an open system. The library can link from OPAC records to article abstracts and full-text, depending on the level of cataloguing used. There are therefore many options and permutations available for librarians and information professionals. They can choose, for example, to catalogue most journal titles with the MARC 856 field, but to catalogue a "core collection" of frequently used articles (e.g. articles on undergraduate core reading lists) so that students and researchers can link straight from their PCs to the full text of such articles. Thus, the facility could be used to replace collections of photocopied articles in short-loan collections. SwetsWise uses a standard format of linking URL, meaning that if the library chooses to construct their OPAC links via SwetsWise, they will not have to worry about dead or broken links. If the library does not want to use SwetsWise's own interface, they can use their own.

However, linking from Web OPACs is not the only possibility. If the libraries do not have a full Web OPAC, but do have an intranet, they can simply create intranet pages for their users which link to journal issue lists, or tables of contents, or abstracts and full-text. All that is needed is a linking URL, and IP address registration. Article URLs in SwetsWise are taken care of by Swets. The libraries can also link from "Secondary databases" to full-text within SwetsWise (from more than 300).

Our developments go beyond interfaces and gateways. We are also working with publishers to streamline our procedures for ordering, renewals, invoicing and payments -using EDI with publishers as soon as they will accept it, and email etc. where the publisher isn't geared up for EDI. We are encouraging publishers to "grant" access during the renewal season rather than cut-off access because of delays or queries in processing our renewal instructions.

We will also be providing you with fuller information about what we are doing on your behalf. FYI bulletins will contain full access and authentication information for each title, and we will also be able to provide the libraries with ready-made linking URLs.

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 165

ANTARES Detect: From Print to Electronic Media – A Full-Text Searchable Database

by

Ingo List
ANTARES Project, Kiel, Germany

Antares Detect is a program for getting printed material on to the Internet. It covers all steps from scanning, OCR (for an automatic full-text-index) and entering metadata up to commercial distribution. The major advantage is its low price and simple approach: If you do not need metadata, you only have to scan the pages. Everything else is done by Antares Detect. You can have a closer look at it at www.yachtsportarchiv.de where you can search in all 100,000 pages of the German magazine "Yacht".

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 167

MetaLib – Virtual Library Services

by

Christine Stohn
Ex Libris, Hamburg, Germany

The scholarly information arena offers researchers an ever-increasing array of resources. Researchers are likely to find material relevant to their subject in a variety of Web-based resources: their own library's catalogue; catalogues outside their own library, such as a national or union catalogues, or a catalogue of another institution that specializes in similar subjects; reference databases, such as an abstracting and indexing database or citation database; full-text resources; digital repositories; and Web pages.

Serving as a portal for information resources selected by the institution, MetaLib is a gateway to virtually any type of resource, locally hosted or offsite, free or licensed.

For the user it provides easy access to the resources of their choice. The user can browse through the alphabetical resource list, list resources by subject area or search for a specific resource. They can then be accessed by a common search interface and/or the user jumps directly to the native interface. Personalized services allow the user to create his own environment by choosing and saving his preferred resource list. Once the user has found appropriate documents, SFX – a context sensitive Linking technology integrated in MetaLib - allows for Links directly into the electronic full-text, Document Delivery Services or other web related Services as provided by the institution.

For the library or the institution MetaLib is a tool managing access to today's diverse and ever-increasing resources.

Built as a generic program, MetaLib does not depend on any specific resource. The repository - the MetaLib KnowledgeBase - provides the necessary information about the entire interaction with the target resource and enables the Universal Gateway to follow the rules and understand the structures that were set by that specific resource.

Author Index

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 171-174

List of Participants

ACHARD, Anne-Laure
CEMAGREF
3 Bis Quai Chauveau
69366 LYON Cedex 09
FRANCE

Tel.: 33 4 72 20 86 00
Fax: 33 4-78-47-78-75
Email: anne-laure.achard@cemagref.fr

AKIMOVA, Olga
Institute of Biology of the Southern Seas
2 Nakhimov Avenue
99011 SEVASTOPOL CRIMEA
UKRAINE

Tel.: 380 692 54 55 50
Fax: 380 692 55 78 13
Email: akimova@ibss.iuf.net

ARTEMOVA, Marina
Research Institute of the Azov Seas Fishery Problems
Beregovaya 21/2
ROSTOV-ON- DON 344007
RUSSIA

Tel.: 8632-623739
Fax: 8632-620505
Email: tue@aaanet.ru

BACHEVA, Snejina
Institute of Oceanology
P.O. Box 152
9000 VARNA
BULGARIA

Tel.: 359 52 37 04 84
Fax: 359 52 37 04 83
Email: library@io-bas.bg

BALIGAND, Marie-Pascale
CEMAGREF
3 Bis Quai Chauveau
69336 LYON Cedex 09
FRANCE

Tel.: 33 4 72 20 87 91
Fax: 33 4 78477875
Email: marie-pascal.baligand@cemagref.fr

BARNWELL, Jane
Hamilton Library
University of Hawaii at Manoa
2550 McCarthy Mall
HONOLULU, HI 96822
U.S.A

Tel.: (808) 956-9779
Fax : (808) 956-5968
Email: barnwell@hawaii.edu

BARON VARLEY, Joan
170 Moorings Way
Milton
Southsea PO4 8YN
United Kingdom

Tel.: (+44) (0) 23 9286 4093
Fax: (+44) (0) 23 9286 4093
Email: joanbaronvarley@btopenworld.com

BELYAKOVA, Alla
Library of Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)
MOSCOW
RUSSIA

Tel.: 095 264 90 87
Fax: 095 264 91 87
Email: library@vniro.ru

BERTIOLI, Gabriele
CSA
4640 Kingsgate Cascade Way
Oxford Business Park South
OXFORD
UNITED KINGDOM

Tel.: (+44) 1932 230219
Fax: (+44) 1932 230219
Email: gbertioli@csa.com

BRANNEMANN, Marcel
Alfred-Wegener Institut für Polar - und Meeresforschung
Postfach 12 01 61
D - 27568 BREMERHAVEN
GERMANY

Tel.: (+49) 47 148311587
Fax: (+49) 47 148311149
Email 1: library@awi-bremerhaven.de
Email 2: mbrannemann@awi-bremerhaven.de

BREUER, Rüdiger
EBSCO Information Services GmbH
Sachsendamm 2 - 7
10829 BERLIN
GERMANY

Tel.: (+49) (0) 30 34005-258
Fax: (+49) (0) 30 34005-290
Email: rbreuer@ebsco.com

CANESSA, Enrique
The Abdus Salam International Centre for Theoretical Physics (ICTP)
TRIESTE
ITALY

Tel.: (+39) 040 2240358
Fax: (+39) 040 224163
Email: ejds@ictp.trieste.it

CAUSELY, Dagmar
Lib-It GmbH Bibilotheks EDV-Systeme
Riedbachstr. 5
D-71385 PLEIDELSHEIM
GERMANY

Tel.: (+49) (0) 7144 / 8041-0
Fax: (+49) (0) 7144 / 8041- 108
Email: dcauselv@libr.de

COLLINS, Jean
FAO - Fisheries Branch Library
Via delle Terme di Caracalla
I - 00100 ROME
ITALY

Tel.: (+39) 6 57052174
Fax: (+39) 6 57052476
Email: fi-librarv@fao.org

CORMIER, Roland
Aquatic Food Product Initiative
Fishery Industries Division, FAO
ROME
ITALY

Tel.: (+39) (32) 9495-4278 (Europe)
(506) 381-2459 (North America)
Fax: (+39) (06) 5705-5188
Email I: r.cormier@ecoport.org
Email 2: roland.cormier@fao.org

DUPOW, Raine
Forschungsanstalt der Bundeswehr für Wasserschall und Geophysik
Klausdorfer Weg 2 - 24
D - 24 148 KIEL
GERMANY

Tel.: (+49) 43 16074113
Fax: (+49) 43 16074150
Email: rainerduepow@bwb.org

FINKE, Angelika
GEOMAR
Wischhofstrasse 1-3
D - 24148 KIEL
GERMANY

Tel.: (+49) (0) 431 600 2505
Fax: (+49) (0) 431 600 2926
Email: afinke@geomar.de

FROESE, Rainer
Institute of Marine Research
Dusternbrooker Weg 20
D - 24105 KIEL
GERMANY

Fax: (+49) 431 600-1699
Email: rfroese@ifm.uni-Kiel.de

GOULALA, Sofia
National Center for Marine Research
P.O.Box 712
19013 Anavyssos Attikis
GREECE

Tel.: 302910 76 320
Fax: 302910 76 321
Email: sgoulala@ncmr.gr

HASPESLAGH, Jan
Flanders Marine Institute
Vismijn Pakhuizen 45-52
B-8400 OOSTENDE
BELGIUM

Tel.: 32 59 32 10 45
Fax: 32 59 32 18 13
Email: janh@vliz.be

HEATH, Sarah
FRS Marine Laboratory
PO.Box 101 375 Victoria Rd, Torry
ABERDEEN AB11 9DB
UNITED KINGDOM

Tel.: (+44) (0) 1224 295391
Fax: (+44) (0) 1224 295309
Email: heaths@marlab.ac.uk

HEYDEN-NAKHAL, Karen
Electronic Products Manager
Swets Blackwell GmbH
Mainzer Landstr. 625-629
65933 FRANKFURT AM MAIN
GERMANY

Tel.: (069) 633 988-0 / (069) 633 988-34
Fax: (069) 633 988-39
Email: kheyden@de.swetsblackwell.com

HOFFMAN, Diane
CSA
4640 Kingsgate Cascade Way
Oxford Business Park South
OXFORD
UNITED KINGDOM

Tel.: (+44) (0) 065 336 250
Fax: (+44) (0) 065 336 258
Email: dhoffman@csa.com

HOLLER-GRONOW, Birgit
Landesamt für Natur und Umwelt des Landes Schleswig-Holstein
FLINTBEK
GERMANY

Tel.: (+49) 43 47704132
Fax: (+49) 43 17704112
Email: bhollerg@lanu.landsh.de
biblio@lanu.landsh.de

KALENCHITS, Maria
Library
Estonian Marine Institute
Maealuse 10a
12618 TALLIN
ESTONIA

Tel.: 372 6 281561
Fax: 372 6 281563
Email: maria@phvs.sea.ee

KAUHS, Carola
Max-Planck-Institute for Meteorology
Bundesstr. 55
D-20146 HAMBURG
GERMANY

Tel.: (+ 49) 40 41173 267/+49 40 42838-5076
Fax: (+ 49) 40 41173-407
Email: kauhs@dkrz.de

KHAZOVA, Valentina
Polar Research Institute Marine Fisheries & Oceanography
6 Knipovich
183763 MURMANSK
RUSSIA

Tel.: 7 95 2649367
Fax: 7 95 2649187
Email 1: library@pinro.murmansk.ru
Email 2: hazova@pinro.murmansk.ru

KONJEVIC, Sofija
Institut Rudjer Boskovic
Bijenicka c. 54
10000 ZAGREB
CROATIA

Tel.: 00 385 I 4680 086
Fax: 00 385 I 4561 095
Email: sofija@rudjer.irb.hr

KOVAL, Ludmila
AtlantNIRO
KALININGRAD
RUSSIA

Tel.: +7 (0112) 225-540
Fax: +7 (0112) 219-997
Email: library@atlant.baltnet.ru

KULAGINA, Lyudmila
Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), MOSCOW
RUSSIA

Tel.: (+7-095) 264-9387
Fax: (+7-095) 264-9187
Email: library@vniro.ru

LECHNER, Brigitte
Max Planck Institut für Limnologie
Postfach 165
D - 24302 PLOEN
GERMANY

Tel.: 49 45 22763263
Fax: 19 45 22763310
Email: bibl@mpil-ploen.mpg.de

LEIDING, Karin
Alfred-Wegener-Insitute
POB 120161
D-27515 BREMERHAVEN
GERMANY

Tel.: ++ 49 471 4831 1157
Fax: ++49 471 4831 1149
Email: kleiding@awi-bremerhaven.de

L'EXCELLENT, Michelle
7 avenue de l'Ombrie
44300 NANTES
FRANCE

Tel.: (+33) (0) 2 40 76 88 27
Email: elexce@aol.com

LIST, Ingo
ANTARES Project
Institute of Marine Research
Dusternbrooker Weg 20
D - 24105 KIEL
GERMANY

Fax: (+49) 431 61649
Email: ingo@antaers.net

McCULLOCH, Ian
Centre for Ecology and Hydrology CEH Windermere
Ferry House, Ambleside
CUMBRIA LA22 0LP
UNITED KINGDOM

Tel.: (+44) (0) 1539442468
Fax: (+44) (0) 1539446914
Email: idm@ceh.ac.uk

MERKINA, Irina
Polar Research Institute Marine Fisheries & Oceanography
6 Knipovich
183763 MURMANSK
RUSSIA

Tel.: (+47) 78 910518
Fax: (+47) 78 910518
Email: library@pinro.murmansk.ru

MILONE, Nicoletta
FAO-ADRIAMED
Corso Umberto I, 30
86039 TERMOLI (CB)
ITALY

Tel.: (+39) 0875 708252
Fax: (+39) 0875 708252
Email: nicoletta.milone@fao.org

MONNERJAHN, Ursula
ZADI
BONN
GERMANY

Tel.: (+49) 0228 9548 126
Fax: (+49) 0228 9548 220
Email: monnerjahn@ZADI.de

NIEUWENHUYSEN, Paul
Vrije Universitet Brussel
Pleinlaan 2
B - 1050 BRUXELLES
BELGIUM

Tel.: 32 2 6292436
Fax: 32 2 629 2693
Email: pnieuwen@vub.ac.be

NOBLE, Linda
National Marine Biological Library
Citadel Hill
PLYMOUTH PL1 2PB
UNITED KINGDOM

Tel.: (+44) (0) 17 52 633266
Fax: (+44) (0) 17 52 636102
Email: lno@pml.ac.uk

RÖSCH, Hermann
Fachhochschule Köln
Fachbereich Informationswissenschaft Claudiusstr. 1
50678 KÖLN
GERMANY

Tel.: (0221) 8275 - 3376
Fax: (0221) 3318583
Email: br284@vz.fh-koeln.de

SCHMIDT, Barbara
Institute of Marine Research
Dusternbrooker Weg 20
D - 24105 KIEL
GERMANY

Tel.: (+49) 431 600 1559
Fax: (+49) 431 600 1665 / 1515
Email: bschmidt@ifm.uni-kiel.de

SCHROEDER, Annemarie
Institut für Ostseeforschung
Seestrasse 15
D - 18119 - ROSTOCK-WARNEMUNDE
GERMANY

Tel.: (+49) 38 15197460
Fax: (+49) 38 5197440
Email: bibliothek@io-warnemuende.de

STOHN, Christine
Ex Libris (Deutschland) GmbH
D-22761 HAMBURG
GERMANY

Tel.: (+49) 040/89 809-0
Fax: (+49) 040/89 809-250
Email: info@exl.de

TEICHERT, Sabine
EBSCO Subscription Services
EBSCO Information Services GmbH
Sachsendamm 2 - 7
10829 BERLIN
GERMANY

Tel.: (+49) 30 34005 223
Fax: (+49) 30 342 0611
Email: steichert@ebsco.com

VADSETH, Wencke
Fiskeridirectoratet
P.O. Box 1870 Nordnes
N - 5817 BERGEN
NORWAY

Tel.: (+47) 55 238547
Fax: (+47) 55 238585
Email: wencke.vadseth@imr.no

VARLEY, Allen
170 Moorings Way
Milton
SOUTHSEA P04 8YN
UNITED KINGDOM

Tel.: (+44) (0) 23 92 864093
Fax: (+44) (0) 23 92 864093
Email: ajvarley@btinternet.com

WASSEN, Bernd
Sales and Marketing
Swets Blackwell GmbH
Mainzer Landstr. 625-629
65933 FRANKFURT AM MAIN
GERMANY

Tel.: (+49) (0221) 376 215 1
Fax: (+49) 69- 633 988-39
Email: bwassen@de.swetsblackwell.com

WATTS, Margaret
UNEP Mediterranean Action Plan
48 Vas Konstantinou Ave
ATHENS GR 116 35
GREECE

Tel.: 30 10 7273118
Fax: 30 10 7253196-7
Email: mwatts@unepmap.gr

WULFF-BARREIRO, Enrique
Marine Science Institute of Andalousia
Poligono Rio San Pedro s/n
11510 CADIZ
SPAIN

Tel.: 34 56 832612
Fax: 34 56 834701
Email: enrique.wulff@icman.csic.es

YUDINA, Olga
K.A.Timiryazev Agricultural Academy
MOSCOW
RUSSIA

Tel.: (095) 977 13 47
Fax: (095) 976-24-81
Email: library@timacad.ru

ZDANOWSKA, Jadwiga
Instytut Rybactwa Sridkadiwego
Ul. Oczapo 10
10-179 OLSTYN - KORTOWO
POLAND

Tel.: 48 89 524076
Fax: 48 89 5240505
Email: iga.zdan@infish.com.pl

Proceedings of the 10th Biennial Meeting of EURASLIC,
Kiel, Germany, 7-9 May 2003, p. 175-176

List of Sponsors

The support of the following companies, institutes and organisations is gratefully acknowledged:

ANTARES Project

Antares Project GmbH is a German software company that specialises in products for media centres and libraries. Their newest product "Antares Detect" is an application for scanning and searching documents, including books, magazines, dissertations and index cards.

Contact: **Ingo List**
ANTARES Project GmbH
Knooper Weg 107
D-24116 Kiel
Germany
Tel.: (+49) (0)431-616-43
Fax: (+49) (0)431-616-49
Email: antares@antares.net
URL: http://lxki.antares.net/

J. Bornhoeft, Industriegeraete GmbH - Partners in Marine Technology

Specializes in the representation of foreign manufacturers of underwater equipment

Contact: **Thorsten Bornhoeft**
J. Bornhoeft Industriegeraete GmbH
Alte Eichen 1
D- 24113 Kiel
GERMANY
Tel.: (+49)-(0)431- 68 16 16
Fax: (+49)-(0)431- 68 71 71
Email: info@bornhoeft.de
URL: http://www.bornhoeft.de/index.en.html

CSA - Cambridge Scientific Abstracts

Publisher of abstracts and indexes to scientific and technical research literature

Contact: **Gabriele Bertioli**
Cambridge Scientific Abstracts
4640 Kingsgate
Cascade Way
Oxford Business Park South
Oxford, OX4 2ST
United Kingdom
Tel.: (+44) (0)1932 230 219
Fax: (+44) (0)1932 230 211
Email: gbertioli@csa.com
URL: http://www.csa.com

Directorate of Fisheries, Bergen, Norway

Contact: **Brit Skotheim**
Directorate of Fisheries
The library
Postboks 185 Sentrum
5804 Bergen
NORWAY
Tel.: 55 23 68 85
Fax: 55 23 85 85
Email: Brit.Skotheim@imr.no
URL: http://biblioteket.imr.no/index_eng.htm

EBSCO Information Services

Provider of information access and management solutions through print and electronic journal subscription services, research database development and production, online access to more than 100 databases and thousands of e-journals, and e-commerce book procurement.

Contact: **Wim Luijendijk**, General Manager
EBSCO European Division Headquarters
P.O. Box 204
1430 AE Aalsmeer
The Netherlands
Tel.: (+31) 297-386-386
Fax: (+31) 297-386-387
Email: maileu@ebsco.com
URL: http://ebsco.com/home/

Gesellschaft zur Foerderung des Instituts für Meereskunde e.V.

Contact: **Prof. Dr. Schnack**
Institute of Marine Research
Duesternbrooker Weg 20
24105 Kiel
GERMANY
Email: dschnack@ifm.uni-kiel.de

IAMSLIC – International Association of Aquatic and Marine Science Libraries and Information Centers

Contact: **Kristen L. Metzger**, Librarian
Harbor Branch Oceanographic Institution
5600 U.S. 1 North
Ft. Pierce, Florida 34946
USA
Tel.: (+1) 561 465-2400, Ext. 201
Fax: (+1) 561 465-2446
Email: iamslic@ucdavis.edu
URL: http://www.iamslic.org

Institut für Meereskunde Kiel

Contact: **Barbara Schmidt**, Head Librarian
Duesternbrooker Weg 20
24105 Kiel
Germany
Tel.: (+49) (431) 600-1559
Fax: (+49) (431) 600-1665 or -1515
Email: bschmidt@ifm.uni-kiel.de
URL: http://www.ifm.uni-kiel.de/ze/zb/biblio.html

IOC - Intergovernmental Oceanographic Commission

The work of the IOC, over the three decades since its inception, has focused on promoting marine scientific investigations and related ocean services, with a view to learning more about the nature and resources of the oceans.
Contact: **Peter Pissierssens**
Intergovernmental Oceanographic Commission (IOC)
1 rue Miollis
75732 PARIS Cedex 15
FRANCE
Tel.: (+33) 1 45 68 40 46
Fax: (+33) 1 45 68 58 12
Email: p.pissierssens@unesco.org
URL: http://ioc.unesco.org/iocweb/

LIB-IT GmbH

LIB-IT GmbH is exclusively concerned with automating libraries of all kinds and sizes
Contact: **Dagmar Causley**
LIB-IT GmbH
Bibliotheks EDV-Systeme
Riedbachstraße 5
D-74385 Pleidelsheim
GERMANY
Tel.: (+49) (0) 7144 80 41 - 111
Fax: (+49) (0) 7144 80 41 - 108
Email: info@libit.de

Massmann Internationale Buchhandlung

International Library Suppliers
Contact: **Kay Massmann**
MASSMANN INTERNATIONALE BUCHHANDLUNG GMBH
Luruper Chaussee 125
D-22761 Hamburg
GERMANY
Tel.: (+49) (0) 40 76 700 40
Fax (+49) (0) 40 76 700 410
Email: kay.massmann@massmann.de
URL: http://www.massmann.de/

NISC International Inc.

National Information Services Corporation (NISC USA) publishes information products for access through BiblioLine, our Web search service, or on CD-ROM.

Contact: **Margaret Crampton**, Managing Director
NISC SA
22 Somerset Street
Grahamstown, 6140
SOUTH AFRICA
Tel.: (+27) 46 6229698
Fax: (+27) 46 6229550
Email: sales@nisc.co.za
URL: http://www.nisc.com/

SWETS Blackwell

Information and serials management for academic, medical, corporate and government libraries and information centres worldwide.
Swets Blackwell
Heereweg 347 B
2161 CA Lisse
P.O. Box 830
2160 SZ Lisse
Tel.: (+31) 252 435 111
Fax: (+31) 252 415 888
Email: infoho@nl.swetsblackwell.com
URL: http://www.swetsblackwell.com/