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### Open Archives Data Providers Part II: Science and Technology

This is the second of three e-profiles on select open archives initiative data providers. The first in the series focused on general sources, while the third will review those in the social sciences and humanities.

#### Bioline International

Bioline International ([www.bioline.org.br](http://www.bioline.org.br)) "is a not-for-profit electronic publishing service committed to providing access to quality research journals published in developing countries." Its general goal is to reduce "the South to North knowledge gap" to enhance the "global understanding of health . . . biodiversity, the environment, conservation and international development." Founded in 1993, Bioline International is "operated by bioscientists and librarians who believe that scientific information can be distributed more widely, more cheaply and with added scientific value using electronic means." While its "initial content consisted of online versions of mainstream, printed bioscience journals from the developed world" . . . it has expanded its scope to focus on the distribution of less well-known peer-reviewed journals from developing countries, and on the creation of born-digital e-journals ([www.bioline.org.br/info/bioline.about](http://www.bioline.org.br/info/bioline.about)) (see also Chan, 2002; Kirsop, 2000).

In cooperation with publishers and editors, Bioline International is actively involved in promoting open access to select scholarly journals. As of mid-April 2004, it offered access to more than 24 open access journals that include:

- *Acta Botanica Sinica*.
- *African Journal of Biotechnology*.

- *African Journal of Food and Nutritional Security*.
- *African Journal of Reproductive Health*.
- *African Population Studies*.
- *Agricultura Técnica* (Chile).
- *Biofilm Journal*.
- *Biopolicy Journal*.
- *BioSafety Journal*.
- *Biotecnologia Aplicada*.
- *Indian Journal of Cancer*.
- *Indian Journal of Dermatology, Venereology and Leprology*.
- *Indian Journal of Human Genetics*.
- *Indian Journal of Surgery*.
- *Journal of Applied Sciences and Environmental Management*.
- *Journal of Food Technology in Africa*.
- *Journal of Pediatric Neurology*.
- *Journal of Postgraduate Medicine*.
- *Memórias do Instituto Oswaldo Cruz*.
- *Neurology India*.
- *Tropical Journal of Pharmaceutical Research*.
- *Zootecnia Tropical*.

([www.bioline.org.br/journals](http://www.bioline.org.br/journals)).

In addition to these open access titles, Bioline International also provides access to several subscription titles. These, as well as several subscription/pay-per-view titles are available for browsing or can be searched from the Bioline journal directory Web page ([www.bioline.org.br/journals](http://www.bioline.org.br/journals)). Currently, only a basic search option is available ("search all journals for") (see Figure 1).

In addition to a select few articles from late 1994, "documents from 1995 onwards . . . have links to graphics files placed within the body of the text. Earlier files have links to graphics files located at the end of the document." "Bioline [also] exploits the full potential of the Internet by linking terms within papers to established public domain databases. Through the

links, the documents become interactive gateways to a vast volume of associated scientific data. The system also provides access to useful public domain and shareware software as well as links to other biological bibliographic resources on the Internet" ([www.bioline.org.br/info/bioline.about](http://www.bioline.org.br/info/bioline.about)).

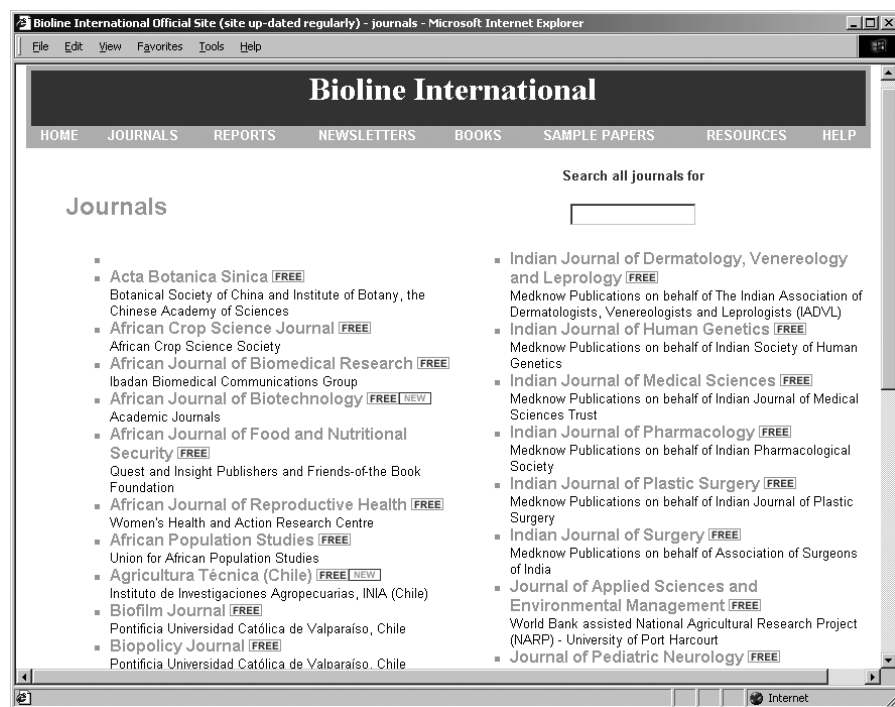
Other than the addition of hyperlinks, papers are published as received, without editorial changes. In Bioline, the copyright of online-only journals remains with the authors; copyright of other journals remains with the publishers and the same restrictions apply for the electronic version as for the printed version ([www.bioline.bdt.org.br/journals](http://www.bioline.bdt.org.br/journals)).

In addition to peer reviewed journals, the Bioline International site provides access to reports, books, technical documents, conference proceedings and newsletters relating to such disciplines as biotechnology, biodiversity, environmental and ecological sciences, food/agriculture/veterinary science, medicine, microbiology and taxonomy ([www.bioline.org.br/info/bioline.about](http://www.bioline.org.br/info/bioline.about)). Among the specific newsletters for which free access is provided are:

- *Acarology Bulletin*.
- *Advisory Committee on Genetic Modification Newsletter*.
- *AgBiotech Bulletin*.
- *Bio/Technology/Diversity News Bulletin*.
- *Biofilm Systems Newsletter*.
- *BioLink*.
- *Commonwealth Science Council News and Press Release*.
- *European Collection of Animal Cell Cultures Newsletter*.
- *European Tropical Forest Research Network (ETFRN) Newsletter*.
- *Information Centre for European Culture Collections Newsletter*.
- *International Council of Scientific Unions Newsletter (ICSU)*.

**Figure 1**

Screen print showing partial listing of open access journals available from Boline International



- Polychaete Research Newsletter.
- UK Federation for Culture Collections Newsletter.
- World Federation for Culture Collections Newsletter.

([www.bioline.org.br/newsletters](http://www.bioline.org.br/newsletters)).

In addition, access is provided to the newsletters of European Biotechnology Information Service, the Federation of European Microbiological Societies, and the Biodiversity Coalition, among others. Free access is also provided to a variety of select reports and technical documents that cover or include biodiversity, biotechnology, biosafety, and "culture collection information" ([www.bioline.org.br/tp](http://www.bioline.org.br/tp)).

The Boline International site also provides access to a range of online resources that include "Directories, news and guides to scientific information on the Web", relevant "Subject-specific Web sites", as well as "Resources for authors" ([www.bioline.org.br/info/bioline.resources](http://www.bioline.org.br/info/bioline.resources)).

The variety of online resources include the following.

#### *Directors, news and guides to scientific information on the Web*

- African Journals Online at INASP ([www.inasp.org.uk/ajol/](http://www.inasp.org.uk/ajol/)). (A comprehensive list of journals from Africa including abstracts and table of contents).
- Directory of Open Access Journals (DOAJ) ([www.doaj.org](http://www.doaj.org)).
- eJDS Web Portal ([www.ejds.org](http://www.ejds.org)). (A service that distributes individual scientific articles via e-mail to scientists affiliated with institutions in Third World countries who do not have access to sufficient bandwidth to download material from the Internet or cannot afford the connection.)
- HINARI (Health Internet) ([www.healthinternet.org](http://www.healthinternet.org)). (A UN/WHO initiative to provide commercial medical journals free to licensed countries in the developing world.)
- Latindex ([www.latindex.org](http://www.latindex.org)). (A portal that provides access to scholarly journals and magazines published in Latin America, the Caribbean, Spain and Portugal.)

- Programme for the Enhancement of Research Information (PERI) ([www.inasp.info/peri/index.html](http://www.inasp.info/peri/index.html)). (A programme to support capacity building in the research sector in developing and transitional countries by strengthening the production, access and dissemination of information and knowledge.)
- SciDev.Net (news, views, and information about science, technology and the developing world).
- SciELO: Scientific Electronic Library Online ([www.scielo.org](http://www.scielo.org)). (A gateway that provides access to academic journals from Brazil and other Latin-American and Caribbean countries, as well as from Spain and Portugal).

#### *Subject-specific Web sites*

- AgriFor ([www.agrifor.ac.uk](http://www.agrifor.ac.uk)). (A gateway to evaluated, quality Internet resources in agriculture, food and forestry, aimed at students, researchers, academics and practitioners in agriculture, food or forestry.)
- Development Gateway Population and Reproductive Health Portal ([www.developmentgateway.org](http://www.developmentgateway.org)). (An interactive portal for information and knowledge sharing on sustainable development and poverty reduction.)
- International Rice Research Institute ([www.irri.org](http://www.irri.org)). (IRRI is a non-profit agricultural research and training center established to improve the well-being of present and future generations of rice farmers and consumers.)
- Microbes.info (The Microbiology Information Portal).
- TEEAL: The Essential Electronic Agricultural Library ([www.teeal.cornell.edu](http://www.teeal.cornell.edu)). (TEEAL is a full-text and bibliographic CD-ROM library of the world's most important scientific journals in the field of agriculture.)

([www.bioline.org.br/info/bioline.resources](http://www.bioline.org.br/info/bioline.resources)).

A "Bulletin board", "News" section, and e-mail newsletter provide information about new material, system upgrades, and other developments of potential interest to users ([www](http://www)).

bioline.org.br/info/bioline.about). In addition, users can subscribe to a Bioline electronic discussion list (Bioline-I), which is intended to “establish closer links between readers” and Bioline International by informing “interested users of new developments” and providing “regular updates on new material added to the system. In addition, it provides a discussion forum for biologists to express opinions on how the system could develop and . . . broaden the range of material available” (www.bioline.org.br/mailman/listinfo/bioline-I).

Bioline International is a collaborative initiative of the University of Toronto Libraries, Canada (www.library.utoronto.ca) Canada (management office); the Centro de Referência em Informação Ambiental (CRIA), Brazil (www.cria.org.br), (host computer and software development); and Bioline/UK (www.bioline.com) (liaison).

### CERN Document Server (CDS)

CERN – the European Organization for Nuclear Research – is the world’s largest particle physics research center. Conceived more than 50 years ago, CERN is headquartered in the environs northwest of Geneva, Switzerland, on the Swiss-French border (http://public.web.cern.ch/public/). In addition to serving as a major location for advanced physics research, CERN is also renowned as the birthplace of the World Wide Web, the hypertext, Internet-based communication system “originally conceived and developed to meet the demand for automatic information sharing between scientists working in different universities and institutes all over the world,” and in particular, “the management of general information about accelerators and experiments at CERN.”

The CDS (http://cdsweb.cern.ch) provides access to articles, preprints, and theses; books; archival materials; conference announcements, academic training lectures, videotapes, and presentations; conference documents; multimedia items, and journals, for staff of the research institute, and other members of the physics community (Le Meur, J.-Y., 2002; Vesely, 2002). As of April 9, 2004, access was provided to nearly 662,000 records, of which there

are more than 320,000 full-text items, and more than 350 accessible collections, which can be searched or browsed.

As a default, users can concurrently search (or browse) all CDS collections that include “Articles and preprints”, “Books and proceedings”, “Presentations and talks”, “Periodicals and progress reports”, “Multimedia and outreach” and “Archives” (see Figure 2). In addition, within a collection, users can also search or browse materials within a category (for example, books and proceedings > books). If preferred, a user can deselect broad categories of materials by unmarking a collection.

The user can search “any field” (default), or limit a search to one of four fields (“title”, “author”, “report number”, “year”) by selecting from a pull-down menu (see Figure 3). After execution, the search will display the results in a brief record format in descending order by date (“latest first”) (default), grouped by collection, in a “HTML brief” format. Using pull-down menus, the user can re-sort the results by title, author, “key title”, or report number (“sort by”); list the results in groups of 25, 50, 100, 250, or 500 instead of 10 (default) (“display results”); display the results as a “single list” instead of being “split by

collection” (default); and/or display the results in “HTML detailed”, “HTML MARC”, “HTML photo captions only”, “HTML portfolio”, “XML Dublin Core”, or “XML MARC” instead of “HTML brief” format (default) (“display results”). Located above the results is a directory of the collections containing the query term(s) (or phrase) and the associated number of relevant records retrieved from each (see Figure 3).

While the specific record details will vary depending on the original search term(s) and selected fields, a brief record in the results display can include the following bibliographic data and information (see Figure 3):

- title in bold (e.g. “spin asymmetries for events with high  $p_T$  hadrons in DIS and an evaluation of the gluon polarization”);
- last name of the first author and initial(s) (e.g. “Adeva, B”);
- beginning excerpt from the item (“We present a measurement of the longitudinal spin cross section asymmetry for deep inelastic muon-nucleon interactions with two high transverse momentum hadrons in the final state. [...]”);
- arXiv.org assigned identifier (e.g. “hep-ex/0402010”);

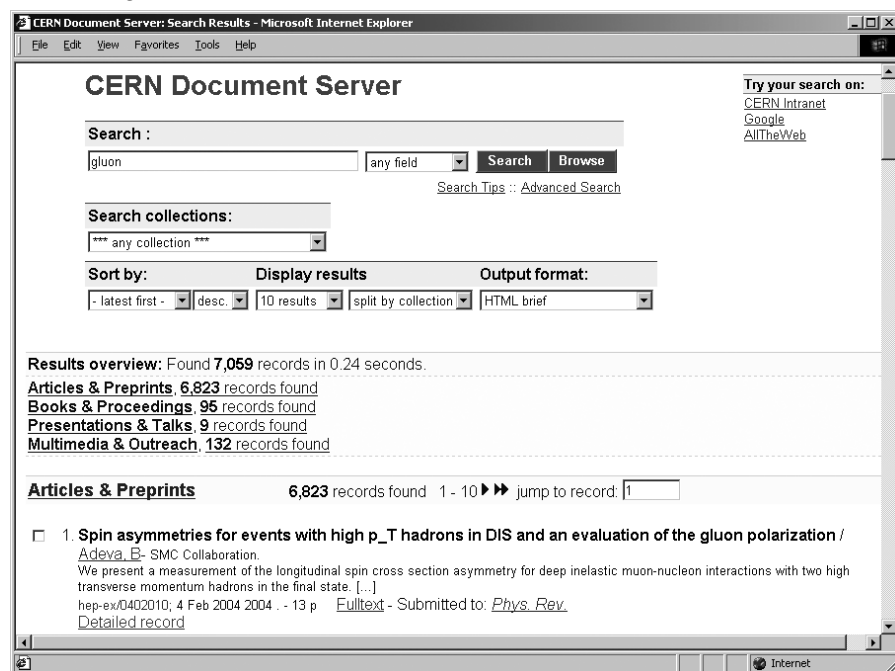
**Figure 2**

*Screen print of CERN Document Server main page showing several major collections, field searching options and other features and functionalities*



**Figure 3**

Search results display for an “any field” search in the CERN Document Server for the term “gluon”



- date (e.g. “4 Feb 2004 2004”);
- pagination (e.g. “13 p.”);
- links to “fulltext”; and
- note on submission journal (“submitted to: Phys. Rev.”) and a link to a “detailed record”.

A “fulltext” link (see Figure 3, bottom center) provides access to a page that includes links to various full-text options (e.g. arXiv.org, PostScript, or “the source file” (generally TeX or LaTeX versions), as well as a separate link to the source abstract page for the item. In addition, the page provides a link that allows users to “try searching other [select] document [preprint] servers” selected and organized by the CERN library ([http://library.cern.ch/preprint\\_servers/hep\\_servers.html](http://library.cern.ch/preprint_servers/hep_servers.html)). The “detailed record” entry from the results page (see Figure 3, bottom, left-hand corner) links to a CDS page that provides the title, abstract, date, and number of pages for the item, as well as the identical full-text links as noted.

From within the original results CDS page, the user can change the base display format from HTML to “HTML MARC”, “XML DC”, or “XML MARC” by selecting the option of interest (“output format”) (see Figure 3). Within this (and other CDS pages) the user can change the language of

field names by selecting from one of nine standard country codes (e.g. “DE” (German), “ES” (Spanish), “RU” (Russian)) by selecting from the options located in the upper right-hand corner of the page. From within this CDS page, users can also “add [the item] to [a] basket”; if a basket does not currently exist, it can be easily created.

In addition to a basic search, the CDS provides a sophisticated “Advanced search” that allows the user to search “Any of the words” (default), “Exact phrase”, “Partial phrase”, or a “Regular expression” in “any field” (default), or the “title”, “author”, “report number”, or “year” field by selecting an option from adjacent pull-down menus. Terms can be combined in a Boolean AND (default) (or Boolean OR) operation by entering a term or phrase in secondary search box and selecting the record field of interest. A search can be further refined by entering a term or phrase in a tertiary search box, which has the identical selection. With the advanced search page, users can also limit the search by date of deposit within the CDS database, as well as sort and/or display and/or change the record format as provided for basic search results.

Users can also browse the CDS database by selecting the “browse” option from the main search page (<http://cdsweb.cern.ch>) or from within a search results page. In the browse mode, users can scan a number of additional fields (e.g. “collaboration”, “experiment”, “media”, etc.) by selecting from available options in a pull-down menu adjacent to the search/browse box. These supplemental fields are also made available for direct searches on the browse page. Browsing (or searching) can be limited to a specific CDS collection by selecting one of interest from an associated pull-down menu (“browse collections”).

From the CDS results and record pages, as well as the from within the CDS home page (<http://cdsweb.cern.ch>), registered CERN personnel are also given access to a variety of features and functionalities that enable them to electronically submit documents (“submit”); convert documents from one standard format (e.g. MS Word) to another (e.g. PDF) (“convert”); and display a categorized full (or partial) listing for CERN-affiliated committees and their meetings (“committees”), browse various “conferences, workshops and events”, as well as “experimental meetings”, “projects”, “seminars and courses” held at CERN (“agenda”). In general, the unaffiliated user is provided access to all but the first function (i.e. “convert”) (see Figure 2, labeled tabs, top center).

The CDSware suite, licensed under the GNU General Public License (GPL) ([www.gnu.org/copyleft/gpl.html](http://www.gnu.org/copyleft/gpl.html)), is available free-of-charge (<http://cdsware.cern.ch/cdsagenda/download/>) and is OAI-PMH-compliant.

### Digital Library for Earth System Education (DLESE)

Digital Library for Earth System Education (DLESE) ([www.dlese.org](http://www.dlese.org)) is “a geoscience community resource that supports teaching and learning about the Earth system ... built by a community of educators, students, and scientists to support Earth system education at all levels and in both formal and informal settings.” Resources in DLESE can include any Web-accessible teaching or learning material, notably “lesson plans,

scientific data, visualizations, interactive computer models, and virtual field trips ... ." DLESE also offers " ... a suite of services that support educators and learners ... that include peer-review systems, workshops and meetings that serve as catalysts for community action, technical training to support future library developments, tools and interfaces to explore Earth data, and online community services that facilitate sharing among the DLESE community" ([www.dlese.org/faq/#what](http://www.dlese.org/faq/#what)) (see also, Sumner *et al.*, 2002; Wright and Marlino, 2002). As of mid-April 2004, there were more than 5,250 resources incorporated within DLESE.

Resources in DLESE are "organized in collections, or groups of related resources that reflect a coherent, focused theme" ([www.dlese.org/faq/#what](http://www.dlese.org/faq/#what)). The collections found within the DLESE library are:

- Alexandria Digital Library (ADL).
- Atmospheric Visualization Collection.
- Community Review System (CRS).
- Cooperative Program for Operational Meteorology, Education and Training (COMET).
- Cutting Edge.
- Digital Water Ed Library.
- Discover Our Earth.
- DLESE Community Collection (DCC).
- DLESE Reviewed Collection (DRC).
- Earth Exploration Toolbook (EET).
- Evaluation Toolkit.
- Journal of Earth System Science Education (JESSE).
- NASA Earth Science Enterprise (ESE) Reviewed Collection.
- Starting Point.

Among these, the DLESE and ESE collections are particularly noteworthy. The DLESE Reviewed Collection (DRC) "provides access to resources that meet seven specific review criteria ... [namely] high scientific accuracy, good pedagogical effectiveness, ease of use, clarity and completeness of documentation, motivating for learners, ... robustness," and [which] illustrate significance of content" ([www.dlese.org/documents/policy/CollectionsScope\\_final.html](http://www.dlese.org/documents/policy/CollectionsScope_final.html)), while the DLESE Community Collection (DCC) focuses

on Earth system science education that has a particular emphasis on interdisciplinary resources which "bring the Earth system into the classroom or learning site, and which demonstrate the application of science to solving real world problems" ([www.dlese.org/Metadata/collections/scopes/dcc-scope.htm](http://www.dlese.org/Metadata/collections/scopes/dcc-scope.htm)). The NASA Earth Science Enterprise (ESE) Reviewed Collection on the other hand "provides educators and students with a direct line of access to quality products ... have been rigorously reviewed by an independent peer review of teachers, curriculum and design specialists, teacher trainers, and Earth system scientists ... based on the scientific accuracy, educational value, documentation, ease of use, ... power to engage or motivate students, ... robustness/sustainability as a digital resource, and ability to foster mastery of significant understandings or skills" of the resource ([www.dlese.org/dds/view\\_resource.do?description\\_all=NASA-ESERevProd038&coll=008](http://www.dlese.org/dds/view_resource.do?description_all=NASA-ESERevProd038&coll=008)).

From the DLESE homepage, the user can search its collections of "Educational resources", "News and opportunities", "E-mail discussions", or "Everything else". For the "Educational resources", the user can limit the search by "Grade level" (e.g. "Primary K-2", "Intermediate (3-5)", "Middle 6-8", etc.), and/or "Resource type" (e.g. "For the classroom", "Visual", "Text", etc.) and/or "Collections" (see above), and/or standards (i.e. National Science Education Standards (NSES) and National Geography Standards), by selecting from within these options from a Javascript menu associated with each major limit option (see Figure 4)

On execution of a search query (e.g. "earthquakes"), results will be displayed in a full brief record format that provides the following data elements:

- Resource title (e.g. "earthquakes").
- Web address (e.g. "<http://wings.buffalo.edu/academic/department/geology/gerp/earthquakes.html>").
- Brief summary except (this is a computer-based interactive module on earthquakes that is part of the Interactive Models for Geological Education Online (IMGEO) series. One section covers "technical aspects and exercises", which in-

cludes both informational material and interactive exercises on faults, seismicity, epicenters, and the Earth's interior ... ).

- A hotlinked for "full description" entry.
- A note on associated DLESE collection for the resource (e.g. "This resource is in these collections: DLESE Community Collection (DCC)") with a hotlink from the associated collection(s) to a brief description of the particular collection.
- Fields that respectively note the "Grade level" (e.g., "High (9-12), College (13-14)"), "Resource type" (e.g. "computer activity"), and assigned broad subject descriptors (e.g. "geology, natural hazards").

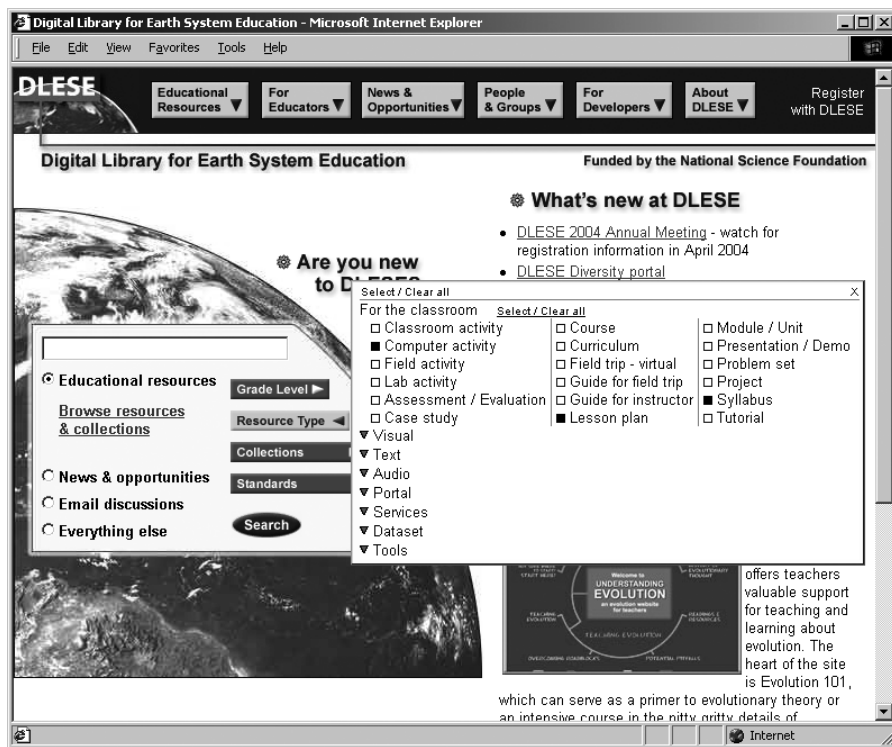
"Resources that are most relevant to your search are displayed first. Those that have high relevance *and* that are in the DLESE Reviewed Collection appear at the top of the list. Those with the search terms in a resource's title are given highest priority" ([www.dlese.org/resources/search\\_tips.html](http://www.dlese.org/resources/search_tips.html)).

Within a brief record, users are invited to "Submit a teaching tip" about the resource by clicking this option found to the far left of the resource title. A "Full description" includes not only the identical data and information found in the brief record format, but also fields relating to "Technical requirements" (e.g. "Macintosh operating system"), "Cost/copyright" (no cost copyright and "other restrictions information is unknown", as well as "Resource contact/creator/publisher" (e.g. "Publisher: State University of New York at Buffalo, Department of Geology"), and a "DLESE Catalog ID" (e.g. "DLESE-000-000-000-07").

The DLESE library can also be browsed from its home page by clicking the browse option ("Browse resources and collections") on the DLESE homepage (see Figure 4, left center). On selecting the browse option, the user is presented with information page about the browse option within the DLESE collection, as well as a series of horizontal bar charts within categorized subject browse options (default) (see Figure 5). Each bar chart is labeled and has an associated number representing the current number of resources within

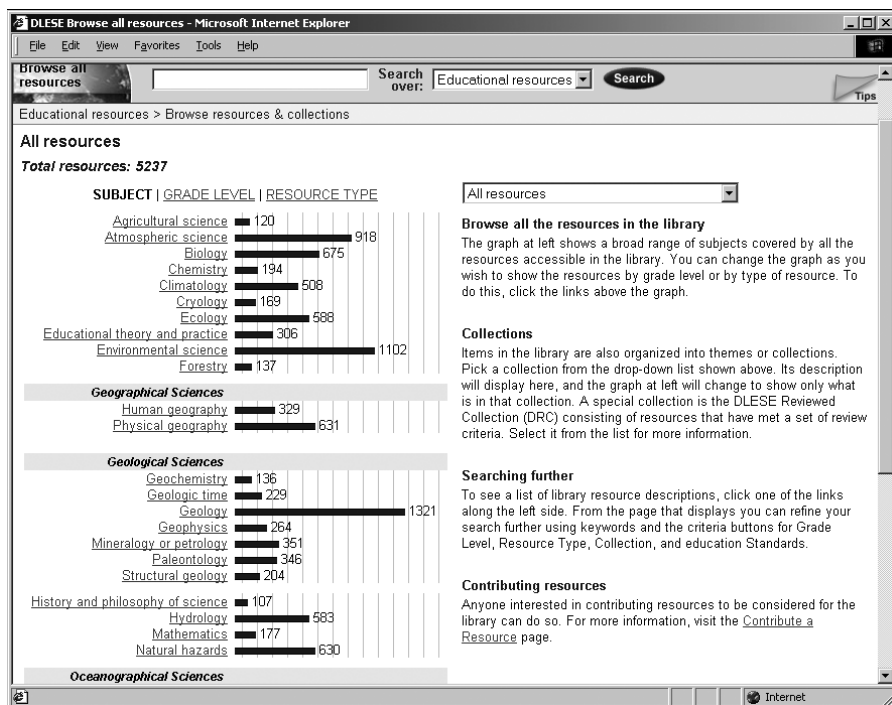
**Figure 4**

Users can readily limit a search to one or more “resource types” in the Digital Library for Earth Systems Education (DLESE) library by selecting from options displayed in a pop-up window



**Figure 5**

Within the DLESE default browse, resources are grouped by subject; users, however, can also display bar charts of the DLESE content “GRADE LEVEL” or by “RESOURCE TYPE”



the associated category (e.g. “Climatology”; “486”). On clicking a topic of interest, the associated resources will be displayed in the same window, in brief format, in relevancy order.

Within the default browse (www.dlese.org/dds/browse.htm), resources are grouped by subject; users, however, can also display bar charts of the DLESE content by “Grade level” or by “Resource type” by clicking either of these options found to the right of the default subject option (see Figure 5, left). Users can also display only those resources that have been incorporated within a particular DLESE collection (e.g. Alexandria Digital Library (ADL), DLESE Community Collection (DCC), NASA Earth Science Enterprise (ESE) Reviewed Collection) (see above) by selecting the one of interest from a drop-down menu found to the right of the bar chart display (“All resources”) (default).

The DLESE Web site and the Digital Library for Earth System Education are based upon work supported by the National Science Foundation under Grants – A Geoscience Digital Library (No. 9978338), Implementing the DLESE Community Plan (No. 0085600) and The DLESE Program Center: Infrastructure for a Distributed Digital Library (No. 0215640) – awarded to the University Corporation for Atmospheric Research (UCAR) located in Boulder, Colorado, and its associated grant partners, while the DLESE Community Review System Web site is supported by the National Science Foundation under two additional grants (DUE 00-85827) and (DUE 02-26292) (www.dlese.org/documents/acknowledge.html). DLESE serves as the geoscience node of the National Science Digital Library (NSDL) (www.nsd.org), a comprehensive digital “educational resource for science, technology, engineering and mathematics” also funded by the NSF.

### Organic Eprints

Established in September 2002, Organic Eprints (http://orgprints.org) is “an international open access archive for papers related to research in organic agriculture. The archive contains full-text papers in electronic form together

with bibliographic information, abstracts and other metadata.” As of mid-April 2004, there were more than 1,500 records in Organic Eprints (<http://orgprints.org/view/year/>). Authors are encouraged to archive all types of scholarly documents that include:

- eprints, postprints, and off-prints of scientific papers;
- conference papers and posters;
- theses and dissertations; reports;
- books and other monographic works, book chapters;
- magazine articles;
- Web products;
- project descriptions; and
- other types of published or unpublished documents.

Submissions to the repository should be related to organic agricultural research, be sufficiently complete, and include appropriate and accurate metadata. Although Organic Eprints supports all languages, an English-language abstract should be provided for all non-English submissions (<http://orgprints.org/about.html#policy>).

Within Organic Eprints, contributions can be browsed by “Subject area”, “Affiliation (county/organization/projects)”, or “Year”. In addition, the collection can be browsed with the results “ordered otherwise” instead of “sorted by author name”. These secondary browse options include:

- “Affiliation (country/organization/project) – ordered by peer review and language”;
- “Peer review status – ordered by eprint type and document language”;
- “Document language – ordered by peer review status and eprint type”; and
- “Year – ordered by eprint type”.

In the standard mode, users can browse a variety of broad and subordinate subject areas that include (<http://orgprints.org/browse.html>), for example:

(1) *Farming systems:*

- buildings and machinery;
- farm economics;
- social aspects.

(2) *Animal husbandry:*

- breeding and genetics;
- health and welfare; and
- production systems.

(3) *Crop husbandry:*

- crop combinations and interactions;
- soil tillage; and
- weed management.

(4) *Soil and nature:*

- air and water emissions;
- nutrient turnover; and
- soil quality.

(5) *Food systems:*

- community development;
- education, extension and communication; and
- markets and trade.

(6) *Research methodology and philosophy:*

- systems research and participatory research;
- research communication and quality; and
- specific methods.

Users can also browse records by “affiliation (county/organization/projects) (e.g. country/organization/project > Denmark > KVL – The Royal Veterinary and Agricultural University > Brandt, (2002) Økologisk kost og sundhed [organic food and human health] [oral]. Presentation at LMC “Food congress”, KVL, Copenhagen, 17-18 January 2002), as well as by “year”. The user can also “see the latest additions” to Organic Eprints by selecting the hotlinked entry in the browse section of the home page (<http://orgprints.org/perl/latest>).

Users can search Organic Eprints using a basic “search” (“keywords” and/or “authors”), or a “simple search” (<http://orgprints.org/perl/search>) which permits a search of the “title/translation of title/abstract/additional abstract/keywords” fields and/or a search of “authors/editors/project leaders” and/or “publication/series/conference/publisher/institute/department/additional information/fundingagency/

research programme”, and/or “year” (or range of years). By default, search results are displayed in order “by author’s name”. If preferred, search results in a “simple search” can be presorted by other fields (e.g. “by title”; “by eprint type”; “by publication [type]”) or other criteria (e.g. “by year (most recent first)”; “by year (oldest first)”, “by peer review status”), by selecting the option of interest from a pull-down menu.

In addition, Organic Eprints offers an “advanced search” that allows users to search not only fields offered in a “simple search”, but additional individual fields, alone or in combination (<http://orgprints.org/perl/advsearch>). The available fields include:

- “Title/translation of title”.
- “Authors”.
- “Editors”.
- “Abstract/additional abstract”.
- “Keywords”.
- “Document language”.
- “Subject areas”.
- “Country/organization/project”.
- “Funding part”.
- “Peer review status”.
- “Eprint type”.
- “Thesis type”.
- Publication status (i.e. “unpublished”, “in press”, “published”).

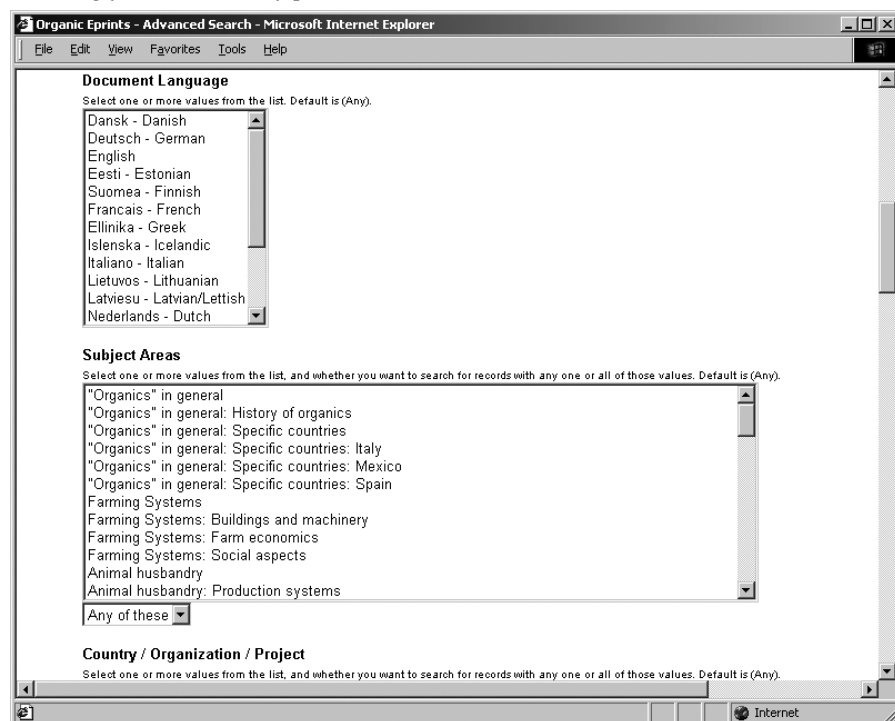
Users can also search or limit a query by year, publication title, series, publisher, conference name, institute name, department name, citation/reference, project leader name, “project start year”, “project end year”, project identification code, project budget amount, funding agency, and/or research program. For many search fields, users can select entries from pull-down menus (see Figure 6 and 7).

After a search is executed or a browse initiated, results are displayed in a brief format which provides key bibliographic (or descriptive) data that includes the original title, the title in English (if necessary), author(s) (or project leader(s)), year of publication, publisher (or associated corporate body), and publication type (e.g. “report”), among other elements. The original title is linked to a full record that typically provides:

- title;
- full citation;

**Figure 6**

*In Organic ePrints, users can select query terms or phrases for field searching by selecting from a series of pull-down menus*

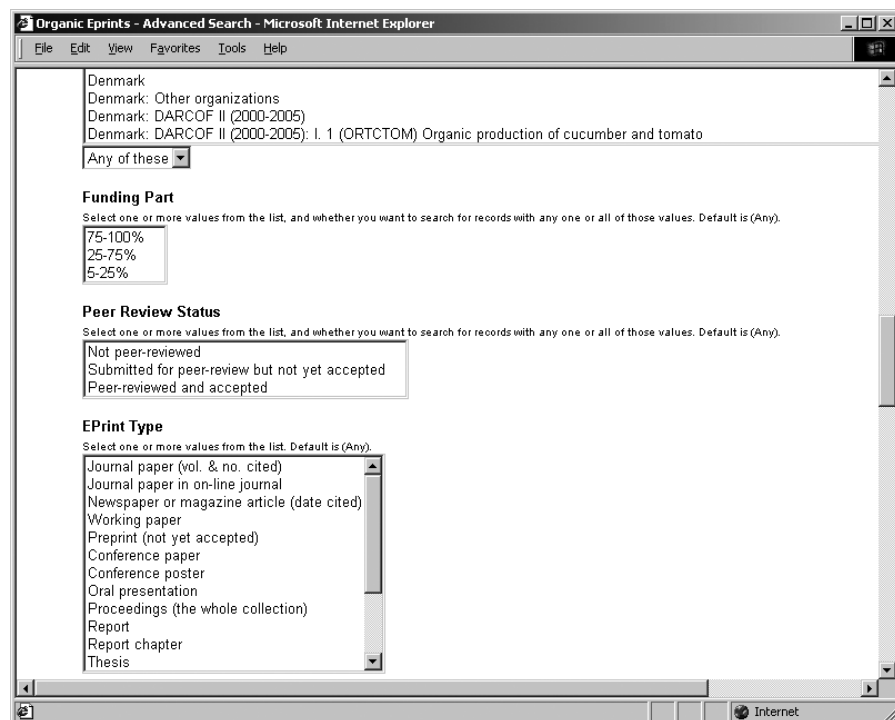


- full text availability;
- “abstract”;
- “document language”;
- “keywords”;
- “subject areas”;
- “country/organization/project”;
- “funding part”;
- “Orprints ID number”;
- name of document depositor;
- date of deposit;
- “Eprint type”;
- publication status;
- “peer review status”;
- and “online context”.

Within a full record, the assigned “subject areas” and “country/organization/project” are hotlinked, permitting the user to readily retrieve and display all records in the Organic Eprints database for a specific subject category and/or national or corporate entity. In addition, the depositor name is hotlinked to a “user record” that generally provides the name of the individual, his/her affiliation and postal address, and a hotlinked entry for his/her e-mail address and/or personal Web site. In addition, the “Number of records user has in archive” is indicated and is hotlinked to a brief record display of such records.

**Figure 7**

*A wide variety of document types (“eprint type”) can be deposited in the Organic Eprints collection*



Organic Eprints has been established as a community service by the Danish Research Centre for Organic Farming (DARCOF) (Denmark). DARCOF ([www.darcof.dk](http://www.darcof.dk)) plans “to make its full research production available on Organic Eprints, and encourages other institutes, organizations and individual researchers involved in organic research to utilize and contribute to this service” (<http://orgprints.org/about.html>). In 2003, the Forschungsinstitut für biologischen Landbau (FiBL) (Germany) ([www.fibl.org](http://www.fibl.org)) joined the project as its first international partner with editorial responsibilities for the German language version of Organic Eprints ([orgprints.org/supporters.html](http://orgprints.org/supporters.html)). Hugo F. Alrøe, a Postdoctoral Scientist with DARCOF, currently also serves as the Organic EPrints site administrator and editor (<http://orgprints.org/contact.html>). Organic Eprints has been created using the GNU EPrints software (v. 2.2.1) (<http://software.eprints.org>) developed at the Department of Electronics and Computer Science at the University of Southampton, England.

#### ACKNOWLEDGEMENTS

The author is most grateful to the following individuals for granting permission to use screen images from their respective projects:

- Figure 1: Leslie Chan, University of Toronto at Scarborough.
- Figures 2 and 3: Jean-Yves Le Meur, CERN, Geneva, Switzerland.
- Figures 4 and 5: John Weatherley, Digital Library for Earth System Education.
- Figures 6 and 7: Hugo F. Alrøe, Danish Research Centre for Organic Farming.

#### REFERENCES

Alrøe, H.F. (2004), "Organic Eprints: an open archive for papers related to research in organic agriculture", PowerPoint presentation given at Open Archives Seminar: Facilitating Free and Efficient Scientific Communication, Technical University of Denmark, February 18, 2004, available at: [www.cvt.dk/oaisem/docs/Hugo/Alroe\\_2004\\_Open\\_Archives.ppt](http://www.cvt.dk/oaisem/docs/Hugo/Alroe_2004_Open_Archives.ppt) (accessed 12 April).

Chan, L. (2002), "Bioline International: a model of collaborative publishing and distribution of scientific research from developing countries", PowerPoint presentation given at Research Innovation and Scholarship: The Role of Open Access Publishing, Ottawa, November 21-22, available at: [www.carl-abrc.ca/meetings/other/Chan,%20Bioline.ppt](http://www.carl-abrc.ca/meetings/other/Chan,%20Bioline.ppt) (accessed 12 April 2004).

Kirsop, B. (2000), "Missing links: the Internet can close the knowledge gap", PowerPoint presentation given at Science Communication Today: The 10th International Conference of Science Editors, Glória Hotel, Rio de Janeiro, August 27-30, available at: [www.bireme.br/ifse-rio/ppts/Barbara\\_Kirsop.ppt](http://www.bireme.br/ifse-rio/ppts/Barbara_Kirsop.ppt) (accessed 12 April 2004).

Le Meur, J.-Y., (2002), "CERN document server: an OAI-based solution for managing data collections", PowerPoint presentation given at Gaining Independence with e-Prints Archives and OAI: The 2nd Workshop on the Open Archives Initiative (OAI), CERN, Geneva, October 17-19, available at: <http://agenda.cern.ch/askArchive.php?base=agenda&categ=a02333&id=a02333s1t1%2Ftransparencies%2Foai%40cern2002.ppt> (accessed 12 April 2004).

Sumner, T., Dawe, M. and Devaul, H. (2002), "Creating reusable educational components: lessons from DLESE", *Journal of Geoscience Education*, Vol. 50 No. 1, January, pp. 25-30. Abstract available at: [www.nagt.org/Jan02/jan02-3.html](http://www.nagt.org/Jan02/jan02-3.html) (accessed 12 April 2004).

Vesely, M. (2002), "CERN document server software", PowerPoint presentation given at Creating a European Forum of Open Archives Activities: The 1st Open Archives Forum Workshop, May 13-14, 2000, Pisa, available at: [www.oaforum.org/otherfiles/pisa\\_cern.ppt](http://www.oaforum.org/otherfiles/pisa_cern.ppt) (accessed 12 April 2004).

Wright, M. and Marlino, M. (2002), "Meta-design of a community digital library", *D-Lib Magazine*, Vol. 8 No. 5, May, available at: [www.dlib.org/dlib/may02/wright/05wright.html](http://www.dlib.org/dlib/may02/wright/05wright.html) (accessed 12 April 2004).

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