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BIOSIS CONNECTION:
LINKING ENDUSERS WITH CURRENT AWARENESS INFORMATION

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DATABASE SEARCHER, 4(11):24-30, December 1988

Marketed by the publisher of the printed Biological Abstracts and the BIOSIS Previews database, BIOSIS Connection (BC) debuted in May 1988 as an online databank marketed for the current awareness needs of life scientists. BC vertically integrates life science information; the database producer is also the databank and markets the service directly to the enduser. This aspect alone bears watching as BC grows in the science information marketplace; STN has already moved in this direction and ISI tried. BC offers a constellation of databases and services primarily based on the incomparable coverage of the BIOSIS Previews (BP) database. Some information in BC precedes appearance in the BP database while other information is not suitable for BP like forthcoming meetings, job opportunities, life science dissertations listed by University Microfilms (UMI). BC's primary information content stresses current awareness and is not a retrospective information resource like the BP database. For the same citations, BC does not index or abstract them; BP does. Citations appear in BC first before appearing in BP. BC's databases are not available through any other databank though much of the vital information in BC will appear in BP which is widely available. Thus endusers may pay double for information; a BC user may also have a BRS AfterDark account and search BP on it or a BC user may pay for a BP search run on another databank.

DATABASES

The May 1988 rollout of BC featured six databases. BIOEXPRESS is a rolling database covering the most recent twelve weeks of journal articles; BIOEXPRESS is updated weekly. BIOEXPRESS records are basic citations without abstracts and are not fully indexed like BP records. BIOEXPRESS' items will appear in the printed Biological Abstracts. BIOMEETINGS is a rolling database covering twelve months of meetings, symposia, and conferences published in books and journals; BIOMEETINGS is updated monthly. BIOMEETINGS' items will appear in the printed Biological Abstracts/RRM. BIOBOOKS is a cumulating database covering biological books published; BIOBOOKS is updated monthly. All records have subject descriptors and some have summaries of the book content. BIOPATENTS is a cumulating database of life science patents from the Official Gazette of the US Patent & Trademark Office; BIOPATENTS is updated semimonthly. Patents can be searched by title words, inventor, assignee, and US patent classification number. FORTHCOMING EVENTS is a

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rolling database listing upcoming meetings, symposia, and conferences along with registration information. SERIAL SOURCES FOR BIOSIS DATABASE is a database of the serials monitored by BIOSIS and is updated semiannually.

Recently BC added three more databases. Updated monthly, the BIOTHESES database is a UMI Dissertations Abstracts spinoff and covers life sciences theses and dissertations back to 1984. BIOTHESES' surcharges are 5 cents per hit plus \$5 per hour for menu-mode searches or \$7 per hour for expert-mode searches. Theses can be ordered online with orders being billed by UMI. Updated weekly, the JOBLINE database lists worldwide employment opportunities in all of the life sciences in academic, industrial, and government settings. Jobs are listed for free and remain on BC until the closing date or 30 days. Updated monthly, the AIDS IN FOCUS database is a BP spinoff without abstracts. AIDS IN FOCUS comprises a four-year file of the international AIDS literature published in journals, meetings, books, and US patents.

PRICING

Users search BC databases in a menu mode or by expert commands and pay a familiar litany of charges: telecommunications charges, connect time charges, and hit charges. This pricing approach will hinder the success of BC just as it has hindered widespread acceptance of other similarly structured enduser-oriented services. BC should have a fixed-fee subscription orientation; this offers greater financial comfort to endusers uncertain about what they are getting into. Scientists run their labs based on budgets; BC needs a fixed-fee subscription so that it can be a budgeted lab expense. A pay-as-you-go fee orientation breeds reluctance in endusers; fixed fees have been shown to be a successful marketing approach with compact disk databases.

BC is accessed via Tymnet and telecommunications costs are \$10 per hour. BC databases cost \$35 per hour in menu mode and \$45 per hour in expert mode; thus BC costs 75 cents per minute or 92 cents per minute respectively. In either mode, the hit charge is 15 cents. By comparison, BRS AfterDark makes the full BP database available at \$25 per hour with hit charges of 13 cents; that translates to 42 cents per minute. Therefore the current awareness orientation and extras of BC had better be worth the premium compared to the lower cost of the full BP database and the extensive database selection of BRS AfterDark. At least BC's regular subscription plan has no initial fee or monthly minimum; BRS AfterDark has both of these (\$75 and \$12 respectively). If BRS AfterDark would just drop its monthly minimum, it would be a stronger product. As an added enticement, BC can also be subscribed with an initial package subscription plan involving a commitment of \$50 usable for \$100 worth of search costs during the following 12 months.

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After the \$100 are consumed, the regular subscription rate applies.

GETTING STARTED

BC is accessed at BIOSIS via Tymnet from 7am to 1am Monday through Friday and 9am to 1am Saturday (Eastern time). Toll-free help is available from 9am to 11pm Monday through Friday (Eastern time). When the searcher logs in, a very long, boring disclaimer statement from BIOSIS displays; then, an initial main menu (figure 1) prompts selection of menu or expert searching mode. An electronic mail option is listed in the opening menu but is currently inoperable. BC databases have to be searched individually and cannot be simultaneously searched like Dialog's OneSearch feature. Boolean operators, adjacency, search term nesting, and right-hand truncation are used. Current awareness searching of BC is facilitated by the capability to create, save, and use saved search strategies. Saved searches incur a nominal charge and are automatically deleted if not used for six consecutive months. BIOEXPRESS journal articles can be ordered while online from UMI Article Clearinghouse. The searcher has to keyboard long BIOEXPRESS accession numbers for orders. Orders can be billed to credit cards and can be cancelled. When a BC database or BC itself is exited, cost accounting information displays.

MENU SEARCHING

The intuitively obvious menu searching mode is so handy that there is little incentive to use the expert commands. For endusers sick and tired of learning new systems and/or software, BC's menu mode will be refreshing, quick, and not overly irritating. Context-sensitive help is available but, in practice, one rarely needs it. After selecting the menu mode from the main menu, two lists of available databases can be viewed (figure 2,3). Pick a database and BC prompts the searcher to make a field-oriented search specification (figure 4). Enter search term(s) and BC will display the number of hits retrieved and then offer display or search options (figure 5). References can be displayed one-by-one or continuously. Searches can be broadened or narrowed using menus (figure 5). However, narrowing is only done with title words in BIOEXPRESS. A menu-driven BIOEXPRESS author search cannot be narrowed to a second author even though the menu displayed after the first author search states that narrowing is an option. Narrow to a second author in BIOEXPRESS and you get zip even though you saw them both listed on an article previously displayed. Menu searching would be improved by being able to back up to previous search results after a zero-result search is executed. This can happen when one narrows a search down too restrictively. Select the menu option to stop searching and a menu (figure 6) displays to start other searches or exit BC.

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A BIOEXPRESS journal reference (figure 7) contains basic citation information plus BIOSIS accession number, serial coden, and language. The familiar BIOSIS accession number indicates that the item is headed for BP and the printed Biological Abstracts. Ten BIOEXPRESS items were checked for their presence in Dialog's BP database and none appeared. BIOSIS is thus reserving its BIOEXPRESS records for first use in BC followed by subsequent leasing of the more complete records to other databanks. BIOEXPRESS records constitute a marketable database if BIOSIS wanted to lease it to databanks. BIOEXPRESS would make money just like ISI's Current Contents does online.

EXPERT SEARCHING

Expert searchers enter BC databases with short database names (figure 8). The expert commands are preceded by double periods to distinguish the commands from terms being searched. Fields can be specified by typing a two letter field tag surrounded by periods after the search term. Search statements are consecutively numbered. Sound familiar? STAIRS/VS AQUARIUS database software supports BC giving it a quasi-BRS feeling. A full range of expert commands is available allowing more precise control than menu-mode searching; nonetheless, menu mode is efficient so the commands will only appeal to the power searchers. Expert mode online help should be avoided at all costs because it is generic help supplied with the search software.

EXTRAS

A handy laminated Quick Reference Guide is provided to display the basics on one guidecard. A BIOSIS Connection Search Guide is available for \$15 for regular subscribers and free to package subscribers. The Search Guide contains information on equipment, logging on and off, system commands, and BC databases. BIOSIS will also supply a free interactive demonstration disk.

PROFESSIONAL ORGANIZATION AFFILIATION

BIOSIS offers affiliation with BC to any life-sciences organization. Professional societies and institutions can become a BC affiliate free-of-charge and thereby gain benefits and privileges for its members. Benefits include a 10% discount on the BC package subscription plan, involvement in BC planning, and announcement of publications and meetings on BC. Affiliates include the American Institute of Biological Sciences, American Phytopathological Society, Association of Systematics Collections, International Union of Biological Sciences, American Society of Plant Physiologists, and the British Museum of Natural History. BC benefits from these affiliations much as STN benefits from its affiliation with the American Chemical Society. A ready market is identified and BC uses their input to develop into a

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better service delivering what they need.

ALTERNATIVE CURRENT AWARENESS SOURCES

Before one jumps on the BC bandwagon, BC should be viewed in context with other current awareness services, both print and online, and especially in context with BIOSIS' other current awareness services. BC should also be viewed in context with an enduser-oriented search service offering the retrospective BP database like BRS' AfterDark service. Dialog's after-hours Knowledge Index service does not have BP; Knowledge Index's more enlightened pricing approach involves no hit charges and BIOSIS insists on them. Determination of exactly what the scientist expects from a current awareness service will indicate which option(s) to recommend. What journals or subject areas are of interest? What frequency of current awareness is needed? Does the scientist wish to do-it-yourself or to receive results automatically? Are abstracts desirable? What does the scientist expect to pay and is there a desire for fixed cost? Is an online service really needed? Are results acceptable in printed format? Does the scientist wish to integrate the current awareness results into a local database software? Will there be a recurring need for retrospective information in addition to current awareness?

BC stresses current awareness in its database offerings and in its marketing literature. For financial, contractual or philosophical reasons, BC does not attempt to provide the full information resources represented by BP's backfile. If a scientist places a high priority on being able to access the retrospective BP backfile, then BC will be of reduced interest. The availability of BP on BRS' AfterDark service along with many other databases will be an irresistible attraction to such a scientist. The current awareness orientation of some of BC's databases requires the scientist to search BC regularly in order to see references before they leave BC. Researchers in biomedicine or other fast-moving fields will probably search BC frequently; researchers in slower-moving research fields may be less inclined to check BC frequently. BC's rolling databases will roll references in and then out of the BC system; infrequent searchers thus risk missing references. A good rule would be to look at the time span of the premier database -BIOEXPRESS. BIOEXPRESS contains twelve weeks of citations. If a researcher does not anticipate accessing BIOEXPRESS every two months or less, then BC is not an effective way to keep up with the literature. Similarly if the researcher's field does not generate a significant body of literature quarterly, then BC may not be a cost-effective way to keep up; occasional access to the retrospective BP database would be of greater interest.

B-I-T-S

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BIOSIS offers several other current awareness services that one should compare to BC before making a recommendation. If a scientist's current awareness needs are well met by any of these other services, then BC may not be needed. Look before you leap! Examine the current BIOSIS Catalog; you will be surprised at the variety of printed and electronic current awareness products available. B-I-T-S (BIOSIS Information Transfer System) is a prearranged SDI profile executed monthly on BP. A B-I-T-S SDI is delivered as an ASCII file on disk(s) formatted for DOS or CP/M or on magnetic tape. References from B-I-T-S are full BP records and not the brief records that BC delivers; retrospective searches back to 1976 can be delivered. B-I-T-S charges are based on the cost of the magnetic medium and the number of references delivered; floppy disks cost \$2.70 each and citations cost 24 cents each or 48 cents with abstracts. Profile development is free for do-it-yourselfers or costs \$250 if BIOSIS does it. Minimum subscription is 500 citations per year. A companion database software marketed by BIOSIS entitled BioSuperfile II imports B-I-T-S references; costing \$125, it is a customized version of the FYI database software. If the scientist wishes to build a searchable local retrospective database with abstracts, then B-I-T-S and BioSuperfile II are far better suited for this purpose than the skimpy BC records with no companion software. BioSuperfile II builds a cumulating local database based on importing B-I-T-S records and/or formatted ASCII records. ISI's SCI-MATE MANAGER database software also imports B-I-T-S references.

A scientist is not limited to only B-I-T-S and BioSuperfile II for importing BP references into a local database. BP references can be accepted or reformatted for many file management software; the search-and-replace feature of wordprocessing software helps if you need to reformat. Research Information Systems' Reference Manager database software (\$500) explicitly accepts BP references downloaded from Dialog or BRS. AskSam Systems' AskSam text management software (\$300) will accept BP or any references in any format and turn them into a searchable database. With AskSam, you only need an ASCII file of references to have a searchable local database. Thus AskSam, a retrospective search of BP, and a monthly SDI of BP would accomplish the essentials: building and cumulating a searchable local database with abstracts on a scientist's area of research. If the scientists needs extra features from database software (eg reformatting references), then more extensive evaluation is in order.

PRINTED CURRENT AWARENESS OPTIONS

CLASS (Current Literature Alerting Search Service) is a prearranged SDI profile executed four times a month on BP with results delivered on 5X8 inch index cards. CLASS costs \$215 per year after a first year cost of \$285. CLASS advertises that its references are available four to six weeks before their appearance in the printed Biological Abstracts.

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Thus CLASS may overlap with references appearing in BC. BIOSIS/CAS SELECTS are biweekly current awareness journals from BP and Chemical Abstracts on 34 subjects. A year's subscription is \$105. A combination with Chemical Abstracts offers exceptional value for a current awareness service. Some BIOSIS/CAS SELECTS subjects are allergy, antiviral agents, plant genetics, drug interactions, interferon, and nitrogen fixation. BIOSIS publishes six more current awareness services which cover a total of 47 preselected topics! Topics include entomology, mycology, sports medicine, bioengineering, carcinogenesis, anticancer agents, aging, food microbiology, AIDS, prostaglandins, immunosuppressive drugs, animal communication, pesticide residues, and plant growth substances. The costs of these various services range from \$85 per year to \$120 per year. THESE ARE FIXED-FEE CURRENT AWARENESS SERVICES! One year's usage of BC may easily top these costs; it doesn't take a lot of connect time and 15 cent hit charges to reach \$100 in one year. Sure, we all know online information is better for everyone but is it currently best for everyone's budget the way it is being priced? BIOSIS/CAS SELECTS offers exceptional value at \$105 since it combines BIOSIS Previews information with Chemical Abstracts. Check the BIOSIS Catalog; look at the cost and subject coverage of these various products. For a particular scientist's needs and budget, BC may not be a cost- and time-effective choice. If the scientist simply requires that a standard monthly profile be executed automatically, then the search intermediary can always setup an automatic SDI on BP on an online databank.

BC, QUO VADIS?

BC would be enhanced by the obvious: offering full retrospective searching of BP. This could be effected by offering a gateway using BC's menu system to BP on another databank. The backfile coverage of the AIDS IN FOCUS database implicitly acknowledges the value of backfile coverage. The full BP backfile would probably overtax BIOSIS' computing resources but expect to see more retrospective subsets of BP being mounted on BC. BIOSIS is currently soliciting opinions on the usefulness of additional BC databases. Candidate databases include applied agriculture, bioengineering, biomathematics, biophysics, translations, forthcoming publications, technical reports, private databases and datasets, and (my personal favorite) peanuts. Three of these databases are noted in the survey as being retrospective databases; others may be also. In light of BC's affiliation with professional societies and institutions, BC can be expected to add small retrospective databases targeted to their specific information needs. This grass-roots orientation to BC's development delivers targeted products to a converted (or at least, primed) audience and guarantees revenue.

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BC would be friendlier if it allowed multiple database searching. Why not make searching several databases easier? Scientists may wish to search the primary current awareness databases simultaneously: BIOEXPRESS, BIOBOOKS, and BIOMEETINGS. A searcher could specify which databases to be searched. BC would also be friendlier if it supported automatic singularization/pluralization. Endusers do not realize the need to include variant word endings because their omissions are not apparent. A mistake is realized only when it can be seen.

BIOSIS needs to streamline the information it gives on its current awareness products; this would create less confusion in the target audience and also those who make recommendations to them. For example, in the 1988 Catalog, BC and B-I-T-S do not appear in the same section in the Catalog; the former is a "computer service" and the latter is a "machine-readable service". This is confusing semantics. A browse through the BIOSIS Catalog displays a wide variety of publications/services that are useful as current awareness tools. They all need to be brought under one "current awareness" umbrella in the Catalog and then split into those that are electronic and those that are print and then into those that are preselected topics or customized. All of the printed "preselected topics" current awareness products should have their topics listed in one alphabetical list or in subgroups of broad topics eg microbiology, plants, biomedicine, etc. The organizational scheme for BIOSIS' current awareness catalog should be from the scientist's viewpoint - the subject of the product. If this reorganization does not suit the purpose of a catalog, then BIOSIS should come out with a separate enduser-oriented publication touting all of its current awareness services/products.

BIOSIS should develop a BioSuperfile database software for BC users that will allow them to build their own local retrospective database from BC records. With BC's rolling databases and their disappearing information, scientists should be able to capture those transitory BC references for local reuse. Current B-I-T-S subscribers should be able to take advantage of BC's unique information assets at greatly reduced cost since they are already paying for some of the information received at a later date. B-I-T-S subscribers should be able to download their monthly B-I-T-S SDI's from a password-entry option on BC.

BIOSIS Connection is an interesting entry on the enduser searching market and worth watching as it develops. If it evolves into a fixed-fee service with no hit charges and also offers a gateway to the retrospective BIOSIS Previews file and other databases, then it would be a sure winner. The author enjoyed hosting a beta test for BIOSIS Connection and interacting with the dedicated BIOSIS staff. Thanks to BIOSIS and Brian Sweet for the generous provision of online time on BIOSIS Connection.

References:

King, Steve. "Ask Sam, Version 3.02, Text Database Manager Gives Quick, Powerful Performance", INFOWORLD, 20 April 1987, pp 59-62.

Kwan, Julie. "Exploring the Biosis Connection", ONLINE, 12(5), Sept 1988, pp 36-42.

Pruett, Nancy Jones. "Using AskSam to Manage Files of Bibliographic References", ONLINE, 11(4), July 1987, pp 46-52.

BQ

AskSam is available from AskSam Systems, PO Box 1428, Perry FL 32347, TELEPHONE 800-3-ASKSAM (in FL, 904-584-6590).

Reference Manager is available from Research Information Systems, 1991 Village Park Way, Suite 205, Encinitas, CA 92024, TELEPHONE 800-722-1227 (in CA, 619-753-3914).

BEGINNING OF FIGURE 1:

MEN01

Time On: 16:44:19 Date: 12/09/88

The BIOSIS Connection works in self-instructing (MENU) or command driven (EXPERT) approaches to retrieval. Press the ENTER key after every selection.

- ENTER TO USE
- 1 MENU System
 - 2 EXPERT System
 - 3 Electronic Mail
 - 4 Modify Your User Record
 - 5 Log off
 - H HELP (explanation of your options)

Make your selection or enter H for details:

!

END OF FIGURE 1:

BEGINNING OF FIGURE 2:

MEN02

MENU SYSTEM - DATABASES & PROFESSIONAL SERVICES CATALOG

Page 1 of 2

ENTER TO LOOK AT

- 1 BioExpress - 12 weeks of references to journal articles
- 2 BioPatents - recent U.S. Patents in the life sciences
- 3 BioBooks - recent books in the life sciences
- 4 BioMeetings - 12 months of references to papers presented at meetings
in the life sciences
- 5 Forthcoming Events - upcoming events in the life sciences
- 6 BioTheses - references to life sciences dissertations and theses
granted by accredited North American institutions
- 7 AIDS in Focus - references to journal articles, meeting papers, books
and patents about AIDS
- 8 More databases
- H HELP

You may use the following commands at any point in the Menu System:

B = Go Back 1 menu M = Return to Main Menu H = Help

Enter a number or letter:

!

END OF FIGURE 2

BEGINNING OF FIGURE 3

MEN03

MENU SYSTEM - DATABASES & PROFESSIONAL SERVICES CATALOG

Page 2 of 2

ENTER TO LOOK AT

- 1 Serial Sources for the BIOSIS Data Base(tm) - list of journals, CODENS
and publishers in some of the BIOSIS Connection databases
- 2 Jobline - announcements of jobs available in the life sciences
- 3 Leave the BIOSIS Connection
- B BACK to previous page of the Database Catalog
- H HELP

Enter a number or a letter:

!

END OF FIGURE 3

BEGINNING OF FIGURE 4

BXP01

BIOEXPRESS (BEXP)

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BioExpress contains 12 weeks of references to journal articles appearing in the life science literature.

ENTER TO SEARCH
1 All Fields
2 Title Words
3 Author Name
4 Journal Name
5 CODEN
6 Create or Use a Saved Search Strategy
7 Leave BioExpress

b = back 1 menu m = main menu h = help

!

END OF FIGURE 4

BEGINNING OF FIGURE 5

BXP05

BIOEXPRESS (BEXP) SEARCH RESULTS

167 DOCUMENTS

ENTER TO
1 Browse/Print a Range of Documents
2 Browse/Print Documents One at a Time
3 Broaden the Scope of Your Search
4 Narrow the Scope of Your Search
5 Begin a New Search in BioExpress
6 Create or Use a Saved Search Strategy
7 Leave BioExpress
8 Order Documents
H HELP

!

END OF FIGURE 5

BEGINNING OF FIGURE 6

BXP18

BIOEXPRESS (BEXP) EXIT

ENTER TO
1 Return to DATABASE CATALOG
2 Return to MAIN MENU
3 Continue Search in BioExpress

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4 Log off from the BIOSIS Connection
H HELP

!

END OF FIGURE 6

BEGINNING OF FIGURE 7

BXP06

BROWSE/PRINT DOCUMENTS - DOCUMENT 1 OF 2

AN A88314542 8848

TI Cafeteria roenbergensis, new genus new species, a heterotrophic
microflagellate from marine plankton.

AU FENCHEL-T; PATTERSON-D-J

CS Marine Biol. Lab., DK-3000 Helsingor, Denmark

CO MMFWE7

JN MARINE MICROBIAL FOOD WEBS 3(1): 9-20

PY 1988

LA English

END OF FIGURE 7

BEGINNING OF FIGURE 8

MEN04

EXPERT SYSTEM

The following databases and professional services are available on the
EXPERT system.

ENTER TO LOOK AT

BEXP BioExpress - 12 weeks of references to journal articles

BPAT BioPatents - recent U.S. Patents in the life sciences

BBKS BioBooks - recent books in the life sciences

BMET BioMeetings - 12 months of references to papers presented at
meetings in the life sciences

FEVT Forthcoming Events - upcoming events in the life sciences

SRSC Serial Sources for the BIOSIS Data Base (tm) - list of journals, CODENs
and publishers in some of the BIOSIS Connection databases

BTHS BioTheses - references to life sciences dissertations and masters
theses granted by accredited North American institutions

AIDS AIDS in Focus - references to journal articles, meeting papers, books
and patents about AIDS

JBLN Jobline - announcements of jobs available in the life sciences

MENU Return to the MENU system

Enter a database name or press ENTER to continue:

!

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END OF FIGURE 8