GEOSCIENCE INFORMATION SOCIETY

NEWSLETTER

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1973 GIS ANNUAL MEETING in DALLAS, Tex.

The 8th Annual Meeting of the Geoscience Information Society will be held in Dallas, Tex., during the annual meetings of the Geological Society of America and its associated societies, 12-14 November 1973. The GIS program chairman is Vice-President Marjorie W. Wheeler (Science-Technology Library, Lamar Univ, Box 10021, Lamar Univ Station, Beaumont, Tex. 77710; phone 713/838-8934).

Marge reports that plans for a half-day technical session and a half-day symposium are "progressing nicely". She writes that "the technical session will be made up of papers on a variety of topics and the symposium will be concerned with government programs and publications on which we felt the membership would like more information". The program committee is attempting "to round up papers on topics which were perhaps not so widely known about".

Present plans do not include a field trip, but "some sort of get-together for cocktails and/or dinner" will accompany the two half-day sessions. Also planned is a luncheon at Brennan's (of New Orleans fame; maximum cost $5.50), followed by the Annual Business Meeting at the same locale.

Anyone wishing to present a paper at the GSA meetings must submit an abstract on a special GSA form available from Mrs. Irene Woodall, Editorial Secretary, GSA, P.O. Box 1719, Boulder, Colo. 80302. The deadline for receiving the forms at GSA headquarters is 15 July 1973.

AGI COMMITTEE ON GEOSCIENCE INFORMATION

(The following is the report of Logan O. Cowgill, GIS Representative to the AGI Committee on Geoscience Information. The report was received 19 April 1973)

Several recent meetings of the Committee have been concerned with the operations of the GEO·REF system. All Committee members are aware of the operational and funding problems involved. At least one entire meeting has been devoted to an analysis of the GEO·REF input and processing systems with associated costs.

Additional discussions included projected income by source for calendar year 1973:

Source	Amount
NSF (Jan-June 1973, actual)	$ 150,000
NSF (July-Dec 1973, projected)	145,000
Geological Society of America	75,000
U.S. Geological Survey	50,000
Colorado State Geological Survey	35,000
American Museum of Natural History	4,500
Primary indexes for 19 journals	10,000
Tape leases at $5000/yr	40,000
Retrospective tapes (190,000 references)	36,000
Royalties	3,600
	$ 549,100

Since 1968, funding support has been largely dependent upon NSF (e.g. $1,946,000 from NSF, $60,000 from GSA, and $543,500 from all other sources). Predicted future suspension of NSF support is the major problem.

Alternative approaches to this problem appear to be: (a) reduction in operating costs; (b) increased income from increased usage; (c) substitute income from other sources; or (d) a combination of these.

The GEO·REF input and output processing line was examined in some detail and the Committee is currently engaged in examining other processing lines in the Washington, D.C. area.

Increased usage has been discussed in terms of identification of users and marketing strategies, including more effective support from the AGI constituent societies and members. Among specific suggestions were input-processing assistance and local publicity and marketing of output.

Identifying the most receptive market audiences and most effective marketing techniques also appeared to be a part of the problem package. A GEO·REF product marketing kit which would include specific information on file content and examples of a variety of output products was proposed.

Conclusions: Among alternative ways in which GIS can assist the GEO·REF system are:

A. Local member publicity using a marketing kit which would include:
   1) File content descriptions, such as the periodical coverage listing, *A list of serials contained in GEO·REF from 1966 to 1973*, published by AGI, March 1973 ($5).
   2) Product samples, such as: one or more bibliographies (e.g. *A reference listing to stratigraphic palynology*), and a sample search with logic statement in a field of concern to the specific audience.
   3) Cost of search information, including a statement with perhaps example of the procedure of establishing user charge.

B. Society project to identify and encourage GIS members to abstract and index the literature for GEO·REF on a continuing basis.

(con't)

C. Society project to develop a network of supporting libraries or document sources which can provide access in hard copy or microform to the documents cited from the GEO·REF file.

NEW MEMBERS OF GIS

Christy, Ms. Barbara Mae: Librarian (Geology/Zoology), Univ of North Carolina, Chapel Hill, N.C. 27514

Scott, Mrs. Sally J.: Library Assistant, Cataloging Dept, Library, Univ of California, Irvine, Calif. 92664

Stephens, James G.: Librarian, Science/Engineering Library, Southern Methodist Univ, Dallas, Tex. 75275

Winfield, Miss Carol S.: Research and Library Assistant, Cities Service Oil Co., P.O. Box 50408, Tulsa, Okla. 74150

LITERATURE CITATIONS

(GISers indicated in UPPER CASE)

American Geological Institute (March 1973) *A list of serials contained in GEO·REF from 1966 to 1973.* Washington, D.C.: AGI. 187p. $5.---A "listing of 2926 serial journals whose relevant contents have been abstracted or annotated, indexed in depth, and stored within the GEO·REF system during the period 1966 to 1973". Entries are alphabetical by the full title of the journal. Each reference contains the title in extenso, the abbreviated title as it appears in publications and products derived from the GEO·REF tapes, and the CODEN designation for the journal. Listing excludes special publications, monographs, symposia proceedings, and Festschrifts, although these are contained in the GEO·REF file.

CHRISTY, BARBARA (March 1973) *Map classification: basic considerations and a comparison of systems.* Western Association of Map Libraries. Information bulletin, v.4, no.2, p.29-42.---Discusses basic considerations of classification, comparison of several map classification systems, the question of uniformity in map classification by map libraries, and systems in present use.

Garvey, William D., and Tomita, Kazuo (Aug 1972) *Scientific communication in geophysics.* E⊕S, v. 53, no.8, p.772-777.---"The major dissemination events through which the work of the accomplished research geophysicist evolves, from the time the work is initiated until it is deposited in the archival reservoir of scientific knowledge, typically occur over a 7- to 10-year period. This picture of the long, slow, cautious process of creating, evaluating, re-evaluating, integrating, synthesizing, and transforming scientific information into scientific knowledge, is one that science has developed to convert a simple research result into a scientific finding, which in turn becomes a scientific contribution only if it can aid in the understanding of a previously unexplained phenomenon" (p.777).

Otness, Harold M. (March 1973) *Globes: current offerings.* Western Association of Map Libraries. Information bulletin, v.4, no.2, p.5-9.---Basic information on globes, including a list of suppliers and their addresses.

Taylor, D.R.F. (1972) *Bibliography on computer mapping.* Monticello, Ill. 36p. (Council of Planning Librarians. Exchange bibliography 263).

Thibeau, Charles E., ed. (1972) *1972 directory of environmental information sources.* 2nd ed. Boston: Cahners Books. 457p. $25.---Contains more than 3500 listings of government agencies, professional & trade organizations, and private groups dealing with ecology & conservation and concerned with all aspects of environmental control.

GEOCHEMISTRY TRANSLATIONS

The Translations Program of the American Geological Institute plans a single, bound volume of papers derived from *Geokhimiya* but not published in *Geochemistry international.* This special edition (with table of contents and author index; approx 350p.) can be ordered prior to publication only from the AGI Translations Office as:

> *Geokhimiya translations 1964; a supplement to* Geochemistry international, *Vol. 1*

If any GISer did not receive a copy of the announcement, write Tom Rafter at AGI (2201 M St, N.W., Washington, D.C. 20037) for information and details. A limited number of copies will be printed and the special offer expires 15 May 1973.

MULTILINGUAL THESAURUS OF TECTONICS

[The following statement was received from Joel J. Lloyd, director of science information at the American Geological Institute, and chairman of the Working Group for a Multilingual Thesaurus of Tectonics, a joint endeavor of the Committee on Geological Documentation of the International Union of Geological Sciences (IUGS) and of the Abstracting Board of the International Council of Scientific Unions (ICSU/AB). The statement is dated 1 March 1973]

As chairman of the joint ICSU/AB--IUGS Working Group for a Multilingual Thesaurus of Tectonics, I would like to clarify the article that appeared in the February 1973 issue of the *GIS Newsletter.*

This task was originated by ICSU/AB and assigned to the Working Group in Geology with the charge to build a multilingual thesaurus using the vocabulary of geology *as a pilot project for the development of a methodology to be applied for all of the sciences.* As only English and French geologists were involved in the original Working Group we enlisted the aid of a German and a Czech member of the IUGS Committee on Geological Documentation (we extended several invi-

(con't)

tations to the Russians who responded favorably but never sent a representative), and subsequently reconstituted the Working Group as a joint ICSU/AB--IUGS task force.

At our very first meeting we recognized the naiveté of the biologists, chemists, and physicists who selected geology as the subject of the pilot project because we had a "small and non-ambiguous vocabulary", and agreed to work only in the area of tectonics. As the work progressed it also became evident that the original charge, the development of a methodology, could be satisfied by a selection of tectonic terms and could thus be completed in a relatively short time. Our target date became the 1972 meeting of the International Geological Congress in Montreal and we bent our efforts to meet that deadline. We did, with the assistance of the Bureau de Recherche Géologique et Minière (BRGM) who printed the final document.

I think it must be emphasized that this work does not represent a full thesaurus of the vocabulary of tectonics and should not be so advertised or employed. Its omissions will become apparent very quickly to structural geologists, and as chairman of the responsible Working Group, I want to say, "I know it". The selection of terms employed fulfilled our purpose admirably, and no more should be claimed for them than that.

What may be of interest is that the IUGS Committee on Geological Documentation, under the chairmanship of Dr. Leon Delbos, at its meetings in Montreal, agreed to go ahead with a full multilingual thesaurus to cover the total vocabulary of the geosciences. The project will follow the methodology developed by the Working Group, will include as many languages as we can find correspondents for (and certainly the Russian), and will use as its base document, the new AGI *Glossary of geology*.

Work has already started with the distribution of the *Glossary* to the identified participants (contributed by AGI) who have already begun to check the *Glossary* terms to select and translate those considered qualified for use as indexing descriptors. All of the lists will be sent to Dr. Harm Glashof in Hannover, Germany, who will load them in his computer and make the necessary permutations. That step will be followed by a full meeting of the involved participants which has been tentatively set for early June 1973 in Moscow. At that meeting differences in selections will be discussed as well as non-descriptors that must be admitted, and a clarification of disputed meanings and/or translations. This will be a beginning only, as I do not expect that anyone will have gone through the entire *Glossary*.

The finished work will be of seminal importance to international information transfer and bridging, or intercommunication, between systems. An English-language bibliographic system could load the multilingual thesaurus in its computers, mount the Russian, German, French, or any other tapes or discs, and address queries in English that would find the input references from any of the contained language systems. A yet larger significance is contained in making the multilingual thesaurus the base document for a network of international centers. I discussed this in my own presentation in Montreal and I am now preparing it for publication.

GEOSCIENCE INFORMATION: A NEED FOR COOPERATION

(The following, received from Anthony P. Harvey, editor of *Geoscience documentation*, is the editorial for issue no.1-2, volume 5, of that journal, to be published in late April 1973)

"Recommendation: A *regular* professional journal sponsored by GIS should be established, and the frequency of the *GIS Newsletter* should be increased to 6 issues per year" (*GIS Newsletter*, Dec 1972, no.21, p.5).

Research workers, librarians, and everyone who has occasion to use the literature of any field complains about the number of new journals. It is therefore surprising that a responsible and hard-working body such as the Geoscience Information Society should make a recommendation such as the one quoted above.

The field of geological documentation, at least so far as original papers is concerned, is far too small for there to be a need for two journals. Pure bibliography in the field already has a number of outlets, not least among them the *Journal* of the Society for the Bibliography of Natural History, which has been issued since 1936. Added to this, some research workers will always feel the need to support their own professional or national journal whether it be the *Journal of documentation*, the *Journal* of the American Society for Information Science, or *Annals of library science and documentation*.

The Geoscience Information Society and *Geoscience documentation* should consider some form of cooperation. It would seem from the comments on the organizational affiliation of the GIS, also reported in *GIS Newsletter* no.21, that a number of members feel that they would be better served by being part of a larger organization (a sentiment not shared by the GIS President), while others apparently think that there is a need to keep abreast of the general papers and techniques of librarianship and information science. Information workers in geology are all too often poor informatitions.

Special librarians find themselves in a very difficult situation at the present time. They have a need to keep up with developments in their chosen field, yet often they have to cover the literature of that field from the most elementary to the most technical. Also, they must keep up with all the new techniques and developments in library science and technology. It has been wisely observed that whereas geologists are learning more and more about less and less, librarians are gaining less and less information about more and more.

The essence of the problem is the diffusion of the professional literature that the special librarian needs to consult. For example, the *Drexel library*

quarterly (1972, v.8, no.2) was devoted to recent advances in indexing, and the problems of computerized secondary services are discussed in the *INSPEC reports*. Throughout its history, *Geoscience documentation* has covered not only the literature of pure geoscience documentation and bibliography but has also provided a secondary service to the more important original papers in geology. It has published a number of original papers and reviews in the field of geoscience documentation, together with the only available listing of current geoscience serials. Papers in librarianship and information science have not been neglected, and from this issue we commence a new section entitled "Current papers in library and information science".

There is already good cooperation at the individual level between members of the Geoscience Information Society and *Geoscience documentation*; hopefully this can be formalized.

GEOARCHIVE

(The following was received from Graham Lea, director of Geosystems, a British firm that offers a computerized information service for the geosciences, called *GeoArchive*)

GeoArchive is a computerized bibliography for geologists. At the end of March 1973 it contained over 250,000 references, with over 100,000 current and backlog items being added annually from three sources:

1. Current information is added from *Geotitles weekly*, the airmailed current-awareness service for geologists. Internationally recognized Editorial Advisers review a section of *Geotitles weekly* for errors, and any corrections are applied to *GeoArchive*. *Geotitles weekly* contains between 1,000 and 2,000 items each week.

2. Retrospective literature searches are carried out for clients by experienced Geosystems staff. By agreement with the client, this information is subsequently added to *GeoArchive*. A brochure, "Geological bibliographies", describes this service, and is available on request.

3. References are continually being added to *GeoArchive* from the serial literature, first from the 1960's, and then retrospectively.

GeoArchive can be supplied weekly, monthly, or quarterly, in any format, code, and density. However, because special processing increases costs, a standard format has been developed, and this can be supplied in 200, 556, or 800 bpi density, on 7- or 9-track tape, odd or even parity, with BCD, EBCDIC, ASCII, or ISO code.

The most advantageous way of subscribing to *GeoArchive* is to have a standard format tape every three months. The cost in this case is 4¢ per item, with a maximum of $600 a quarter. Please enquire about monthly or other frequencies, and alternative formats, which should be specified.

The *GeoArchive sampler* consists of:

1. A non-returnable *GeoArchive* test tape in standard format with density, parity, track, and code specified by the user.
2. A listing of the tape from a line printer.
3. Full technical data about fields, record lengths, blocking, tape marks, etc.
4. A corresponding copy of *Geotitles weekly*.

A charge of U.S. $50 (£20) is made towards expenses; this will be credited against a *GeoArchive* subscription.

Geosystems is not at present undertaking retrievals from *GeoArchive*; this can be carried out at greater convenience to the client at regional information centers that may conduct searches from several tape services. A manual, and Geosystems staff support, is provided to facilitate the construction of profiles and retrospective searches. The formats of *GeoArchive* are designed for ease of conversion. Geosystems encourages regional centers to offer searches on the *GeoArchive* file to any users in their region, and will refer potential users to such centers; a royalty is payable on searches conducted by regional centers for other organizations. Potential users may write to GeoArchive, P.O. Box 1024, Westminster, London SW1P 2JL, England (telephone 01/222-7305; cable GEOSCI, LONDON SW1) to find the address of their nearest center.

The following fields are identified in *GeoArchive* Standard Format:

1. Main subject
2. Subsidiary subjects
3. Descriptors
4. Location, political
5. Location, physiographical
6. Stratigraphic code
7. Language
8. Senior author
9. Junior authors (up to 29, from July 1973)
10. Title, improved or extended if the meaning is not clear (identifiers are specially distinguished)
11. Title extensions for new taxa and mineral names, biographical information, conference details, etc.
12. *International list* abbreviation of the source, if a serial publication
13. Publisher, town, year, pages, and price for non-serials
14. GCODE--a unique five-letter source code for serial publications, or a four-letter form code for non-serial publications
15. Volume, part, and pages for serial publications
16. Abstract, in certain cases

A general description of *GeoArchive* may be found in: Lea, Graham (1972) *GeoArchive--an information retrieval system for geoscience*. International Geological Congress. 24th, Montreal, 1972. Proceedings, section 16, p.204-211. Reprints are available on request from Geosystems, P.O. Box 1024, Westminster, London SW1P 2JL, England.

GEOLOGICAL INFORMATION GROUP

On 10 April 1973, the Geological Information Group (GIG) of the Geological Society of London sponsored a symposium on information in geotechnics for the Society's Engineering Group. There were three presentations:

1. Introduction to information problems in engineering geology, by Graham Lea, director of Geosystems, London.---"The lasting result of geological field and laboratory work is the information that is retrievable by other workers. Such information should be well-presented, be properly stored or published, and be efficiently retrievable. This information is not the narrow concern of librarians, information officers, or data-file builders, but is the essence of decision-making in industry and the raw material for the advancement of knowledge. Private and public information systems in engineering geology need examination to ensure that they satisfy modern conditions and provide systematic access to available information"

2. Experience in the use of data storage for geotechnical projects, by C.R. Cratchley, Institute of Geological Sciences.

3. An examination of bibliographical services for engineering geologists, by James Shearer, editor of *Geotitles weekly*.---"The bibliographical services which are of use to engineering geologists include *Geotechnical abstracts* (including Geodex), *Rock mechanics abstracts, IMM abstracts, Bibliography and index of geology, Bulletin signaletique 214, Engineering index, Referativnyi zhurnal,* and *Geotitles weekly*. A short and restricted bibliography on engineering geology was compiled from the Permuterm Index to *Science citation index* and this was then used as a standard to compare the performances of the various available services in respect of current awareness and coverage of the literature. An assessment was also made of the value of the services for retrospective searching by seeking further entries for the bibliography"

BRITISH GEOLOGICAL LITERATURE

A regional bibliography with abstracts for the geology of the British Isles has been announced with the appearance of a new series of *British geological literature*. The publication will list, in quarterly issues, new papers on the geology and physical geography of the British Isles, including Ireland and surrounding sea areas. Short abstracts will indicate the coverage of papers, which will be indexed by author, general subject, and geographic locality. The 1972 volume includes about 700 citations arranged under regional headings.

British geological literature, in its original series, last appeared in 1968. The present new series, like its predecessor, will list current literature on a regular basis, and will also make good the backlog. The scope, however, is redefined to cover British geology on a regional basis; furthermore, the citations are listed under regional headings, which so far as possible are those used for the Institute of Geological Sciences' handbooks of British regional geology. This subdivision should provide a comprehensive and easily used summary of the current literature on "the most intensely studied area of the planet's surface".

Subscription rates to the new service (which has no formal connection with the old series) will be £4.00 ($9.68) per annum in Europe, or £5.00 ($12.10) by air mail to other countries. All enquiries and correspondence should be addressed to the editor, Dr. N. Edwards, 10 Montague Place, Worthing, Sussex BN11 3BG, England.

HYDROLOGIC DATA

The Hydrologic Information Storage and Retrieval System (HISARS) is a computerized system for the storage, retrieval, and routine processing of hydrologic data. It has been developed by engineers at North Carolina State Univ, and runs on the IBM 370, Model 165 computer at the Triangle Universities Computation Center.

HISARS reportedly can retrieve directly any one of 350,000 records stored on magnetic disk packs, and can be used at remote terminals. The HISARS system makes it possible to determine weather or streamflow characteristics at any location, and at any time, for which data are available. It is also possible to compare different locations at the same time, and to process records through time at a single location.

The 201-page HISARS reference manual (report no.66) is available from the Water Resources Research Institute (of the Univ of North Carolina), 124 Riddick Bldg, North Carolina State Univ, Raleigh, N.C. 27607. It is also available from the National Technical Information Service (Springfield, Va. 22151) for $3.00 (PB-211 620).

MARC BEGINS MAP CATALOG SERVICES

Beginning in the Spring of 1973, the MARC Distribution Service of the Library of Congress will expand its coverage to include machine-readable map catalog records for currently received single- and multi-sheet thematic maps, map sets, and maps treated as serials. MARC map records will be distributed on a monthly basis and the subscription year will cover the period April 1973 through March 1974 inclusive.

The first MARC map tape, to be distributed in April, will contain all map records input beginning with January. Thereafter, subscribers will receive monthly tapes containing approx 350 new or corrected map records input during the previous month. A map test tape, containing approx 200 records, was available for purchase on March 1, for $20. Regular sub-

scription tapes and test tapes will be available in either 7-track (556 cpi) or 9-track (800 cpi) mini-reels. MARC map subscribers and purchasers of test tapes will receive a copy of *Maps: a MARC format*, which describes the record format and data fields, specifications for the tape format and character set (ASCII 6-bit or 8-bit), and code lists for language, country of publication, and publisher.

The cost of the subscription service is $400 a year. Orders for the service must be prepaid, mailed to the MARC Distribution Service, Card Division, Library of Congress, Bldg 159, Navy Yard Annex, Washington, D.C. 20541.

ROCK PROPERTIES INFORMATION CENTER at PURDUE

A program specializing in the properties of geologic substances has been established at the Thermophysical Properties Research Center (TPRC), Purdue University, under a grant from the National Science Foundation. The goal is to develop a center which can provide quick response to technical and bibliographic inquiries, generate recommended reference data, and perform relevant experimental research much in the same pattern as TPRC has performed in its area of specialization.

This new program has 4 major activity areas:

1. Generation of data tables for the mechanical, physical, and thermal properties of minerals and rocks--partic. important is the inclusion of sufficient sample characterization and test conditions to permit correlations;

2. Organizing the unclassified literature on nuclear blast/explosion phenomena for parametric studies--the effort is to identify all information relating to the response of earth media plus rock types associated with nuclear blasts;

3. Organization of the literature on rapid excavation and tunneling--the aim is to provide information on techniques, rock formations, geographic locations, cost, and other pertinent variables in support of research and development in this field;

4. Experimental program to develop or refine theories of heat conduction in rocks and correlating thermal and mechanical properties of rocks which have been petrographically characterized.

For further information, contact Prof. D.P. DeWitt, TPRC, Purdue Univ, Lafayette, Ind. 47901.

INFORMATION REQUIREMENTS in ROCK MECHANICS

The Office for Scientific and Technical Information (OSTI), London, Eng., has awarded a grant of up to £19,400 over a period of two-and-a-half years to the Imperial College of Science and Technology, London, for a study of the information requirements of engineers in the field of rock mechanics. The study team will (1) conduct interviews with engineers in research, practice, and administration, (2) investigate information flow within engineering organizations, and (3) analyze the use made of existing information products. Prof. E. Hoek, Dept of Mining and Mineral Technology, is directing the project.

According to the *OSTI newsletter* (Dec 1972, no.4, p.4): "The small interdisciplinary field of rock mechanics is considered to be a useful one for the study of the information requirements of engineers in general, particularly those whose work involves practical day-to-day problems for which cheap and rapid solutions are needed. The information services traditionally available to the research worker may be inappropriate in such situations. The objectives of the study are to monitor via a variety of techniques the use made of information by engineers, to determine the reasons why this behaviour pattern exists, and to establish criteria for designing systems related to user needs".

NEWS NOTES

STANFORD'S GEOLOGY LIBRARY

The Branner Geological Library of Stanford Univ's School of Earth Sciences is described (p.46-55) in *Library buildings: innovation for changing needs* (edited by A.F. Trezza, published 1972 by the American Library Association; 293p.), the edited transcript of the proceedings of a Library Buildings Institute held June 1967 in San Francisco. The Branner librarian is Kay Cutler, former GIS Secretary (1972).

ENVIRONMENTAL INFORMATION SOURCES

The Special Libraries Association has announced the publication of *Environmental information sources: engineering and industrial applications*, compiled by Carole Schildhauer of MIT. This 50-page, selected annotated bibliography lists and describes nearly 150 indexes, bibliographies, directories, encyclopedias, handbooks, journals, newsletters, symposia, and other sources on this topic. An appendix lists and explains the services of nearly 60 institutions and agencies providing information sources and services on various aspects of the environment. The bibliography was prepared for a continuing education seminar on the environment and ecological literature held during SLA's 1972 Annual Conference. Available from SLA, Order Dept, 235 Park Ave South, New York, N.Y. 10003. Price: $3.80.

ENVIRONMENTAL INFORMATION REFERRAL SERVICE

As part of the preparatory work for the U.N. Conference on the Human Environment, held in Stockholm in June 1972, the Secretary-General of the Conference received help from the U.K. through the Office for Scientific and Technical Information in developing specifications for an International Referral Service for Sources of Environmental Information. A recommendation to set up such a service was adopted by the Conference, and in consultation with the Secretary-General, the U.K. agreed to convene a meeting of experts to consider further the technical implications of the recommendation. The Dept

of the Environment organized this meeting in London in Sept 1972: 38 experts from 16 countries and a number of representatives from U.N. bodies attended, and jointly agreed on a set of notes which were submitted to the Secretary-General for his guidance in organizing the service.

LAND USE DATA

The Land Use and Natural Resources (LUNR) User Service is a computerized service for the retrieval of information on land use, available through the Cornell Water Resources and Marine Sciences Center. It is the result of a 4-year inventory completed by Cornell Univ in 1971. Users have access to 15,000 aerial photographs, 1000 base maps, 3000 thematic map overlays, 2000 coding books, 500,000 punched cards, and computer programs for the selective retrieval of information on the entire 50,000 square-mile area of New York State. The data also include information on resource facilities, soil types and depths, streams and rivers, and geologic features. The aerial photographs are supplemented by information collected from published reports, existing maps, and personal interviews. For further information, contact LUNR User Service, Hollister Hall, Cornell Univ, Ithaca, N.Y. 14850.

THESAURUS OF SHORE AND COAST MORPHOLOGY

The Service de Documentation et de Cartographie Géographiques of the Centre National de la Recherche Scientifique (CNRS), 191 rue Saint Jacques, Paris 5e, France, has published another thesaurus in its series of geographical thesauri: *Thesaurus de morphologie littorale*. It is an extract of the *Thesaurus de géomorphologie*, also elaborated by CNRS. Like others in the series, the *Thesaurus de morphologie littorale* is arranged in three parts: (1) hierarchical listing of terms; (2) structured thesaurus (with the usual cross-references); and (3) alphabetical list of subject terms (including also the synonyms deleted from the main part). This edition of the thesaurus is a preliminary version, which may be revised after receipt of sufficient substantial comments from experts.

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GIS NEWSLETTER

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