

53 CODATA / NEWSLETTER

AUGUST 1990

Columbus CODATA Conference's Final Session

HIGHLIGHTS

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Although the scientific program for the July Columbus meeting offers much by way of scientific enhancement for CODATA-related matters, the last session--only an hour long on Thursday, between 1500 and 1600--should not be overlooked despite the fact that it comes at a time when "departure" may seem to be the order of the moment.

This session is composed of three short presentations:

"A History of Data Recording, Analysis, and Dissemination"

--by Jack Westbrook,

"Perspectives on CODATA"

--by Edgar F. Westrum, Jr., and

"Future Direction from CODATA '90"

--by Margaret E. Courain.

Data before CODATA, during CODATA's 24 years, and ever onward will be revealed from the particular CODATA-experienced view points of three individuals with diverse involvement in the information systems business.

Candid photographs of this Conference and earlier CODATA activities will be shown, so you may find yourself in the *scenario*.

Remember, too, that it immediately precedes the refreshments in the Governor's Foyer.

Plan on hearing it. It can be expected to shed insights into CODATA that will explain much, both to those new to our organization and to the "old timers."

The Committee on Data for Science and Technology (CODATA) was established in 1966 by the International Council of Scientific Unions.

Working on an interdisciplinary basis, CODATA seeks to improve the quality, reliability, processing, management, and accessibility of data of importance to science and technology.

CODATA '90--A Word of Appreciation and Thanks

Those of us fortunate enough to be participants in yet another CODATA Conference need to pause in appreciation for those who have labored mightily to produce so rich a menu of multidisciplinary science for our edification and enhancement.

Of course, there are obviously committees: Scientific Program, Local Organizing, as well as Executive and National.

Some have been working at planning and organizing the varied program on the prediction of global change, materials property data systems, knowledge tools, integration of information across entire disciplines, and the effect of new technological advances on data handling, compilation, and use. Margaret E. Courain, Chairman of the "Data for Discovery" Scientific Program Committee juggled a burgeoning doctoral data dissertation as she cudgeled and cajoled invited speakers in getting cooperation first for titles and later for abstracts on their presentations. The important supporting role of the Paris Secretariat was, in part, in providing a matrix of details from which titles and abstracts could be printed and circulated. And then from time to time, the persuasive talents of CODATA's President, Dr. David Lide, were called up for help when all else failed!

The United States National Committee for CODATA--as the National Host Committee--was very supportive in generating and reviewing program details, in participating generously as session chairmen, and in providing the many necessary communications to speakers.

Of course, although the Chair's responsibility is obvious, the internationally distributed, wide expertise, and considerable prior experience of most other committee members represents a significant involvement. In the end, the task--like scientific research--was far more involved and more time-consuming than anyone realized.

The Columbus Local Organizing Committee for CODATA '90 have had their work which intensifies during the final phase as the opening of the Conference approaches. This essential endeavor is chaired by Gerard O. Platau from Chemical Abstract Services. To acquaint conferees with Columbus' many attractions, including--but not limited to--some of the world's greatest information centers, their work has required much planning and tight scheduling around banquet and nightly gala receptions. Moreover, the facilities for invited speakers, plenary lecturers, contributed papers, and poster sessions, as well as a wealth of exhibits, database demonstrations, and displays of scientific books also needed organization.

The aim of all the organizers is to facilitate opportunities to share approaches, skills, and experiences for scientists from many lands in the quality, reliability, management, and accessibility of data resources for science and technology. The Secretariat--Mmes. Glaeser and Levavasseur--after having already labored on many facets for nearly a year, move their indispensable endeavors from Paris to Columbus and work on in the center of the fray--solving unexpected crises on a routine basis. And after the conferees have packed up and gone home--they will begin the production of the *Proceedings* for the benefit

not alone of the participants, but as well for the non-participants who can share in the highlights of the Conference.

And for those who have never tasted a CODATA Conference, one can only urge to plan ahead for the next. Many data professionals and others have found it a rewarding experience.

CODATA Calendar

1990

September

10-14 2nd CODATA Conference on Geomathematics and Geostatistics. Leeds, U.K.

September or December

---- CODATA Officers' Meeting. Paris, France

1991

February/March

---- CODATA Task Group on Survey of Asian and Oceanic Databases

March

23-26 CODATA Executive Committee Meeting. Paris, France

1992

April

---- Materials Database Experiences. Moscow, U.S.S.R.

(Notice also the Calendar in *MDN*, pp. 4, 5)

Geomathematics and Geostatistics

The Second CODATA Conference on Geomathematics and Geostatistics will meet 10-14 September at Leeds, England, U.K. Its objectives include such items as:

- to appraise the state of the art of geomathematics and geostatistics with particular reference to geology, soil sciences, and environmental monitoring;
- to provide a forum for the exchange of ideas and research in these fields with particular attention to the participation and needs of developing countries.

The previous conference was held in Poland in 1987. This conference was a particularly successful meeting of scientists from eastern Europe and the west and it is intended that this cooperation will continue with the second conference.

For further information, registration, etc., contact: Dr. P. A. Dowd, The Second CODATA Conference on Geomathematics and Geostatistics, Department of Mining and Mineral Engineering, University of Leeds, Leeds, England, U.K. LS2 9JT

Biological Systems: Thermodynamics

The 8th International Symposium on Thermodynamics Applied to Biological Systems will be held at the Davis campus of the University of California on September 8-11, 1991. This is the first time that a session of this symposium has been held in the United States. Previous meetings have been in Europe.

This series of symposia has brought together workers in broad areas of thermodynamics as it applies to biological systems. Previous symposia have dealt with proteins, nucleic acids, lipids, membranes, bioenergetics, and experimental methods. The 1991 symposium will feature sessions on (a) applications of thermodynamic data and models to biotechnology, (b) thermodynamics of living, cellular systems, and (c) thermodynamics of subcellular components.

For further information contact: Dr. Lee D. Hansen, Program Chairman, Department of Chemistry, Brigham Young University, Provo, UT 84602, USA.

"Building Data Bases for Global Science"

This book records the proceedings of the first meeting (May 1988) of the International Geographical Union's Global Database Planning Project convened in Hampshire, UK. There were fifty participants from North America, Europe, China, and the USSR, representing international agencies, international organizations, governments, and academics.

Review papers covering general principles and problems in the design of global databases--data sources, problems of resolution and accuracy, the integration of remote sensing and Geographic Information Systems, and legal issues--are supplemented by a summary of the current and projected work of the national and international agencies responsible for environmental modelling and monitoring.

Editors: Helen Mounsey and Roger Tomlinson, Taylor & Francis, 1988, 419 pp., £35.

Earth Observations and Global Change Decision Making

In a pivotal decade for the U.S. Global Change Research Program, this unique Fall Conference--October 23-24, 1990--is intended to help build a national partnership for earth observations and global change decision making by:

- facilitating dialogue between the various communities involved in global change research and policy;
- communicating the Federal research strategy (including Mission to Planet Earth);
- identifying and discussing issues not addressed by Federal initiatives; and
- discussing how the national agenda fits into the evolving international program.

The conference proceedings will include records of the panel sessions and contributed papers that address one or more of the session topics. Those interested in contributing papers should contact ERIM for additional information and the author's kit.

ERIM/Global Change Conference, Dr. Robert H. Rogers, P. O. Box 8618, Ann Arbor, MI 48107-8618, USA. Telephone: (313) 994-1200, ext. 3382. Telex: 4940991 ERIMARB. Fax: (313) 994-0944.

"Coordination of Observational Projects in Astronomy"

This volume reviews many aspects of coordination such as the need for coordinated projects, applications to astrometry, photometry, the operation of spacecraft observatories, multi-frequency observations, and very long baseline interferometry. Many case studies of successful campaigns are cited. This collection of papers is based on a meeting held at the Stellar Data Centre of Strasbourg Observatory.

Editors: C. Jaschek and C. Sterken, Cambridge University Press, Cambridge, 280 pp. ISBN 0 521 36157 5, £25.

Terrestrial Ecosystems: Forests and Woodlands

The Commission of the European Communities, together with the European Science Foundation and the National Research Council (Italy), is organizing a symposium to review available knowledge concerning patterns and processes in European terrestrial ecosystems. Reviews will focus on basic knowledge of forest and woodland. They will also consider the successional development of forest ecosystems from non-forest precursors. The Symposium will be held in Florence, Italy, 20-24 May 1991 (in English, simultaneous interpretation into Italian).

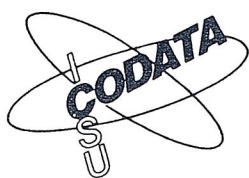
The symposium will consist of a series of plenary sessions with invited speakers only. Experience and expertise from outside Europe will be an important component of the reviews. Poster presentations will provide an opportunity for European scientists to contribute their own work to the themes of the symposium.

There will also be a series of sessions devoted to study cases aiming at describing important European ecosystems and reviewing the most significant patterns and processes which characterize these ecosystems. Field excursions will be organized.

Further information can be obtained from A. Teller, European Science Foundation, c/o C.E.C. DG XII-E, 200, rue de la Loi, 1049 Brussels, Belgium. Tel.: (+32)2-235.84.46. Telex: COMEU B 21877. Fax: (+32)2-236.30.24.

.....Information technology isn't a war-horse that can be ridden to glory..... "It's just a tool--and an increasingly common and inexpensive one at that. The real power comes from the way people analyze information, make decisions and work together to produce products. That's the war-horse information systems specialists should be learning to ride."

*--Robert L. Scheier
Editorial, PC Week*



Task Group on Materials Database Management

Materials Database Newsletter

July 1990 Number 12

NETWORKS

STN International has added new software capability for several numeric databases, notably the calculation of temperature and pressure dependent properties in AIChE's DIPPR, a database containing physical property data for nearly 100 substances and USA NIST's NBSFLUIDS with the MYPROPS package to calculate thermophysical and transport properties. Other numeric databases carried by STN International include: BEILSTEIN--structure and factual data on over 1.6 million substances; HODOC--the CRC Handbook of Data on Organic Substances; ICSD--Gmelin Institute's Inorganic Crystal Structure Database; JANAF--USA NIST's evaluated Tables of Thermodynamic Properties for over 1000 substances; and TRCTHERMO--a new release from the Thermodynamics Research Center covering evaluated data for over 7000 substances. A new directory file, NUMERIGUIDE, provides help to searchers unsure where to locate needed information on STN International.

MPD Network has released the names of the first set of numeric materials properties databases to be included in the October 1, 1990, production version. Among files planned are: MIL-HDBK-5--the aerospace materials handbook design tables; AAASD--the Aluminum Association's typical properties of commercial aluminum alloys (minimum properties available in December 1990); ALFRAC--the first of two releases of validated plane strain fracture toughness data for high-strength aluminum alloys; STEELTUF and MARTUF--two large sources of raw toughness test data for steels for a wide variety of applications; PLASPEC--properties of about 11 000 plastics from the publishers of Plastics Technology Magazine; and METALS DATAFILE--more than 40 000 numerical citations from the materials literature from the Institute of Metals (London) and ASM International. Others already on the schedule include: IPS--International Plastics Selector from D.A.T.A./IHS; CDC--properties of copper and copper base alloys; and POLYMAT--European plastics data from FIZ-Chemie. MPD Network users will also have the support of the new menu-driven interface, with the interactive MPD Thesaurus and an additional directory of computerised sources known as MPDSEARCH.

STANDARDS

The first set of standards from ASTM Committee E-49 - Computerization of Materials Property Data has now been produced and will be published in Volume 14.01 of the ASTM Annual Book of Standards. Topics are: E1313--Generic formats for reporting materials property data; E1314--Guidelines for terminology; E1338--Guidelines for description of metals and alloys; and E1339--Guidelines for description of aluminum alloys.

CALENDAR

A Symposium/Workshop/Exhibition on **MATERIALS DATABASE EXPERIENCE - Opportunities for International Exchange** will be held in Moscow, USSR, in 1992. Sponsored by CODATA, Academy of Sciences of the USSR and Gosstandart, the meeting will address and following subjects: motivations of users and database builders in promoting the international development of activity on materials information systems; local, national, and international materials information systems--present state, problems, and opportunities for further development, including hardware problems, standardization of terminology, formats and descriptions of materials, and database applications to CAD, CAM, CAE, expert systems, knowledge systems, and materials modelling; problems of data and database quality; users expectations and needs; database economics and marketing; and networking of materials databases.

Materials Database Management Newsletter (continued)

CALENDAR

(continued)

15-19 July 1990, Columbus, OH, USA

12th International CODATA Conference **DATA FOR DISCOVERY**. CONTACT: CODATA '90, P. O. Box 23, Amlin, OH 43002, USA.

14-17 August 1990, Darmstadt, FRG

First International ISKO Conference on **TOOLS FOR KNOWLEDGE ORGANIZATION AND THE HUMAN INTERFACE**. CONTACT: ISKO General Secretariat, Woogstr. 36a, D-6000 Frankfurt 50, FRG.

28-31 August 1990, Tokyo, JAPAN

COMPUTER AIDED INNOVATION OF NEW MATERIALS, International Conference and Exhibition on Computer Applications to Materials Science and Engineering. CONTACT: Professor M. Doyama, CAMSE '90, c/o Nikkan Kogyo Shimbun Ltd., Business Bureau, 8-10 Kudan Kita, 1-chome, Chiyoda-ku, Tokyo 102, Japan.

November 1990, Petten, NETHERLANDS

CEC/CODATA Workshop on **MATERIALS DATA FOR COMPUTER AIDED ENGINEERING**. CONTACT: Mr. H. Kröckel, JRC Petten, P. O. Box 2, 1755 ZG, Petten, The Netherlands.

12-14 November 1990, San Antonio, TX, USA

Fall Meeting of ASTM Committee E49 on **COMPUTERIZATION OF MATERIALS PROPERTY DATA**.

7-9 May 1991, Atlantic City, NJ, USA

Meeting of ASTM Committee E49 on **COMPUTERIZATION OF MATERIALS PROPERTY DATA**.

9-11 September 1991, Cambridge, UK

Third International Symposium on **COMPUTERIZATION OF MATERIALS PROPERTY DATA**

3-5 November, 1991, San Diego, CA, USA

Meeting of ASTM Committee E49 on **COMPUTERIZATION OF MATERIALS PROPERTY DATA**.

April 1992, Moscow, USSR

Symposium/Workshop/Exhibition on **MATERIALS DATABASE EXPERIENCE--OPPORTUNITIES FOR INTERNATIONAL EXCHANGE**. CONTACT: CODATA Secretariat, 51 Boulevard de Montmorency, 75016 Paris, France.

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Designs for a Global Plant Species Information System

An international symposium for the exposition of a range of designs for a global species diversity information system for plants. Such a design should enable scientists in all countries to access information on the names, classification, and geographical distribution of all of the world's plants. The designs would involve technical aspects both of biological computer information systems and decision-making among taxonomists. Assessments of the type of demand from conservation, agroforestry, natural products research and other research applications will be set in scenarios for implementing such a system.

The symposium will be held in Delphi, Greece on 11-16 October 1990 by the IUBS COMMISSION FOR TAXONOMIC DATABASES in partnership with the Systematics Association, the Linnean Society, and the European Cultural Centre of Delphi. It is sponsored by Commission of the European Communities and by CODATA.

Each session will involve formal presentations as well as organized group discussions. There will also be demonstrations and poster sessions during the symposium.

PROGRAM

- Session 1: The demand for a global plant species information system
- Session 2: Botanical decision-making and data collection strategies.
- Session 3: Data structures and logical designs.
- Session 4: System configuration--machines and communications
- Session 5: Management, ownership, and funding

For further details contact: George F. Russell, Botany Department, NHB-166, Smithsonian Institution, Washington, D.C. 20560, U.S.A., Phone: 1-202-357-4362, FAX 1-202-788-2563; or Frank A. Bisby, Biology Department, Building 44, University of Southampton, Southampton SO9 5NH U.K., Phone: 44-703-581910, FAX 44-703-558163.

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