



April 1984

PROGRAM-9TH INTERNATIONAL CODATA CONFERENCE

JERUSALEM, ISRAEL, 24-28 JUNE 1984

PLENARY LECTURES

THE OCEANS AND THE WORLD CLIMATE RESEARCH PROGRAM. J. Crease, Institute of Oceanographic Sciences, Brook Road, Wormley, Godalming, Surrey, GU8 5UB, U.K.

SPATIAL ANALYSIS IN THE EARTH SCIENCES. F.P. Agterberg, Geological Survey of Canada, 601 Booth Street, Ottawa K1A 0E8, Canada

ANTIBODY DIVERSITY AND ANTIBODY COMPLEMENTARITY. E.A. Kabat, Columbia University College of Physicians and Surgeons, New York, New York 10032 and the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20205, U.S.A.

PECULIARITIES AND PROBLEMS OF MATERIALS ENGINEERING DATA. G. Dathe, Betriebsforschungsinstitut, VDEh Institut für angewandte Forschung GmbH, Sohnstrasse 65, D-4000 Düsseldorf 1, F.R.G.

OPTIMAL CLASSIFICATION OF FILES AND SITUATIONS. A. Lerner, Academy of Sciences of the U.S.S.R., 117901 Moscow B-71, U.S.S.R.

SYMPOSIUM I - TOWARDS A HUMAN PROTEIN MAP

TOWARDS A HUMAN PROTEIN MAP. M. Kochen, Mental Health Research Institute, University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

PROBLEMS ASSOCIATED WITH THE HUMAN PROTEIN INDEX. N.L. Anderson, Argonne National Laboratory, Division of Biological and Medical Research, Argonne, Illinois 60439, U.S.A.

STUDIES OF THE UTILITY OF 2-D GEL PHENOTYPES TO ESTABLISH THE GENETIC ETIOLOGY OF THE PROTEINS INVOLVED IN HUMAN DISEASE. C.F. Sing and E. Boerwinkle, Department of Human Genetics, University of Michigan, Ann Arbor, Michigan 48109-0010, U.S.A.

A RESOURCE FOR PROTEIN IDENTIFICATION. W.C. Barker, L.T. Hunt, D.G. George and B.C. Orcutt, National Biomedical Research Foundation, Washington, D.C. 20007, U.S.A.

SYMPOSIUM II - NUCLEIC ACID AND PROTEIN SEQUENCE ANALYSIS AND EVALUATION

CONSTRUCTION OF AN ALGORITHM FOR LOCATING SPLICING JUNCTIONS. E.N. Trifonov, The Weizmann Institute of Science, Rehovot, Israel

CONFERENCE PROGRAM - Symposium II (cont'd)

EVALUATION OF tRNA SEQUENCE DATA. M. Sprinzl, Laboratorium für Biochemie der Universität Bayreuth, Postfach 3008, D-858 Bayreuth, F.R.G.

HOW WELL CAN ONE PREDICT THE THREE-DIMENSIONAL STRUCTURE OF A PROTEIN? R.S. Howland, D.R. Davies and J.L. Sussman, Laboratory of Molecular Biology, National Institutes of Health, Bethesda, Maryland 20205, U.S.A.

SYMPOSIUM III - X-RAY STRUCTURE, STORAGE AND RETRIEVAL, AND CORRELATION OF PROTEIN NUCLEIC ACID STRUCTURAL DATA

DATA STRUCTURES FOR CONFORMATIONAL CALCULATIONS ON PROTEINS AND NUCLEIC ACIDS. M. Levitt, Department of Chemical Physics, Weizmann Institute of Science, Rehovot 76100, Israel.

NUCLEIC ACID STRUCTURAL ANALYSES. H. Berman, Institute for Cancer Research, Fox Chase Cancer Center, Philadelphia, Pennsylvania 19111, U.S.A.

SYMPOSIUM IV - ROLE OF SEQUENCE DATA IN PROTEINS DIVERSITY AND BIOSYNTHESIS

ROLE OF SEQUENCE DATA IN PROTEIN DIVERSITY AND BIOSYNTHESIS. A.E. Bussard, Service d'Immunologie Cellulaire, Institut Pasteur, 75015 Paris, France

THE DATA BANK ON AMINO ACID AND NUCLEOTIDE SEQUENCES OF IMMUNOLOGICAL INTEREST. E.A. Kabat, Columbia University College of Physicians and Surgeons, New York, New York 10032, U.S.A. and the National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20205, U.S.A.

RECENT DUPLICATION GERMLINE DIVERSIFICATION AND SOMATIC MUTATIONS OF IMMUNOGLOBULIN GENES. I. Schechter, A. Breiner, and Y. Burnstein, Department of Chemical Immunology and Organic Chemistry, The Weizmann Institute of Science, Rehovot 76100, Israel.

SYMPOSIUM V - DATA NEEDS FOR GENETIC ENGINEERING/BIOTECHNOLOGY

DATA NEEDS FOR BIOTECHNOLOGY FROM THE INDUSTRY PERSPECTIVE. J.E. Brenchley, Genex Corporation, 16020 Industrial Drive, Gaithersburg, Maryland 20853, U.S.A.

BIOTECHNOLOGY DATA IN THE ACADEMIC AND RESEARCH LABORATORY ENVIRONMENT. R.R. Colwell, D. Swartz and E. Russek, University of Maryland, Elkins Building, 3300 Metzerott Road, Adelphia, Maryland 20783, U.S.A.

CAPTURING AND TRANSFERRING BIOTECHNOLOGY DATA. H.E. Kennedy and E.M. Zipf, BioSciences Information Service, 2100 Arch Street, Philadelphia, Pennsylvania 19103, U.S.A.

RESEARCH LIBRARIES AND THE DISSEMINATION OF INFORMATION IN GENETIC ENGINEERING AND BIOTECHNOLOGY. J.K. Lucker, Massachusetts Institute of Technology Libraries, Cambridge, Massachusetts 02139, U.S.A.

SYMPOSIUM VI - EFFORTS AND PROGRESS IN EVALUATION AND COMPILATION OF PHASE DIAGRAMS

PHASE DIAGRAMS IN METALLURGY - GENERATION, EVALUATION, DISTRIBUTION. H.A. Jehn and E.T. Henig, Max-Planck-Institut für Metallforschung, Institut für Werkstoffwissenschaften, Seestr. 92, D-7000 Stuttgart, F.R.G.

APPLICATION OF THERMOCHEMICAL DATA BANK SYSTEM TO THE CALCULATION OF PHASE EQUILIBRIA INVOLVING DILUTE ALLOY SOLUTIONS. P.J. Spencer, Institut für Theoretische Hüttenkunde, Rhein.-Westf. Technische Hochschule, D-5100 Aachen, F.R.G.

THERMODYNAMIC OPTIMIZATION OF PHASE DIAGRAMS. E.T. Henig, H.L. Lukas and G. Petzow, Max-Planck-Institut für Metallforschung, Institut für Werkstoffwissenschaften, Heisenbergstr. 5, D-7000 Stuttgart 80, F.R.G.

RESEARCH ACTIVITIES ON TERNARY Ni-BASE PHASE DIAGRAMS IN JAPAN. Y. Mishima and T. Suzuki, Research Laboratory of Precision Machinery and Electronics, Tokyo Institute of Technology, 4259 Nagatsuta, Midori-ku, Yokohama 227, Japan

THE IUPAC SOLUBILITY DATA PROJECT: METAL SOLUBILITY DATA. L.H. Gevantman, Office of Standard Reference Data, National Bureau of Standards, Physics Building, Room A318, Washington, DC 20234, U.S.A.

SYMPOSIUM VII - PHASE EQUILIBRIA: DATA BANKS AND PROCESS CALCULATIONS

HIGH PRESSURE VLE DATA BANK AND PROCESS CALCULATION PACKAGE. H. Knapp, S. Zeck and R. Langhorst, Institute of Thermodynamics and Plant Design, Technical University of Berlin, Strasse des 17 Juni 135, 1000 Berlin 12, F.R.G.

THE DORTMUND DATA BANK. J. Gmehling and U. Onken, University of Dortmund, Industrial Chemistry B, P.O. Box 500 500, 4600 Dortmund 50, F.R.G.

THE CALCULATION OF THERMOPHYSICAL PROPERTIES - RECENT DEVELOPMENTS AND FUTURE TRENDS. M. Klöffler, DECHEMA, Theodor Heuss Allee 25, D-6000 Frankfurt 97, F.R.G.

SYMPOSIUM VIII - PHASE EQUILIBRIA: CORRELATIONS AND PREDICTIONS

PREDICTIVE EQUATIONS OF STATE. F. Kohler, P. Moritz and P. Svejda, Institut Thermo- und Fluidodynamik, Ruhr-Universität Bochum, P.O. Box 102148, 4630 Bochum 1, F.R.G.

CONFERENCE PROGRAM - Symposium VIII (cont'd)

VIRIAL COEFFICIENTS FROM AN ACCURATE EQUATION OF STATE. K.R. Hall, D. McGregor, G. Iglesias, P.T. Eubank and J.C. Holste, Texas A & M College Station, Texas 77843, U.S.A.

EVALUATION OF GAS SOLUBILITY DATA: THE ARGON + WATER AND THE METHANE + WATER SYSTEMS AS A FUNCTION OF TEMPERATURE AND PRESSURE. H.L. Clever, Chemistry Department, Emory University, Atlanta, Georgia 30322, U.S.A.; R. Battino, Chemistry Department, Wright State University, Dayton, Ohio 45435, U.S.A.

THERMODYNAMIC PROPERTIES OF HEAVY HYDROCARBONS. A. Wilhelm and J.M. Prausnitz, Chemical Engineering Department, University of California, Berkeley, California 94720, U.S.A.

FLUID MIXTURES AT HIGH PRESSURES - PROPERTIES CORRELATIONS AND APPLICATIONS. D. Zudkevitch, Allied Corporation, Morristown, New Jersey, U.S.A.; W.B. Streett, Cornell University, Ithaca, New York, U.S.A.

SYMPOSIUM IX - COMPILATIONS IN ELEMENTARY PARTICLE PHYSICS

COMPILATION PROGRAMS IN ELEMENTARY PARTICLE PHYSICS. F.D. Gault and M.R. Whalley, Particle Data Group, Department of Physics, University of Durham, Durham DH1 3LE, U.K.

DATA ON CROSS SECTIONS IN ELEMENTARY PARTICLE PHYSICS. V. Flaminio, Istituto Nazionale di Fisica Nucleare, S. Piero a Grado, Pisa, Italy

COMPILATION OF DATA ON ELEMENTARY PARTICLES. T.G. Trippe, Particle Data Group, Lawrence Berkeley Laboratory, Berkeley, California 94720, U.S.A.

SYMPOSIUM X - NUMERICAL DATA FOR ENERGY CONVERSION PROJECTS

LITHIUM BATTERIES. M. Salomon, Power Sources Division, U.S. Army ET and DL, Fort Monmouth, New Jersey 07703, U.S.A.

THE CHEMICAL MODEL OF ELECTROLYTE SOLUTIONS AND ITS USE FOR CALCULATING SOLUTION PROPERTIES. J. Barthel, Institut für Physikalische und Theoretische Chemie, Universität Regensburg, Regensburg, F.R.G.

PROPERTIES OF LiAlCl_4 -THIONYL CHLORIDE SOLUTIONS. E. Peled, A. Meitav and A. Golan, Department of Chemistry, Tel-Aviv University, Tel Aviv 69978, Israel

EXTRA THERMODYNAMIC EVALUATION OF INDIVIDUAL IONIC PROPERTIES. B.E. Conway, Department of Chemistry, University of Ottawa, Ottawa, Canada K1N 9B4

SOLID STATE BATTERIES. B. Scrosati, Istituto di Chimica Fisica, University of Rome, P. le A. Moro 5, 00186 Rome, Italy

MOLTEN SALTS: CRITICAL DATA EVALUATIONS. G.J. Janz, Molten Salts Data Center, Department of Chemistry, School of Science, Rensselaer Polytechnic Institute, Troy, New York 12181, U.S.A.

RECHARGEABLE LITHIUM BATTERIES: WHAT CAN WE DO TO ADVANCE THEM? S.B. Brummer, EIC Laboratories, Inc., 111 Chapel Street, Newton, Massachusetts 02158, U.S.A.

SELECTING DATA OBTAINED BY ELECTROANALYTICAL METHODS AND THEIR CORRELATIONS USING EXTRA THERMODYNAMIC TREATMENTS. L. Meites, E. Rupp and P. Zuman, Clarkson College of Technology, Potsdam, New York 13676, U.S.A.

SYMPOSIUM XI - MANAGEMENT AND ANALYSIS OF NUMERICAL DATA IN GEOCHEMICAL EXPLORATION

THE INTEGRATION OF GEOCHEMICAL EXPLORATION DATA. P. Leymarie, INRIA, Centre National de la Recherche Scientifique, Ecole des Mines de Paris, Route des Lucioles, Sophia Antipolis, 06560 Valbonne, France

GEOCHEMICAL DATA - RETROSPECT AND PROSPECT, R.G. Garrett, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario, K1A 0E4 Canada

EXPLORATION GEOCHEMICAL DATA ANALYSIS WITH MICROCOMPUTERS. G.S. Koch, Jr., Geology Department, University of Georgia, Athens, Georgia 30602, U.S.A.

A MULTIVARIATE APPROACH TO GEOCHEMICAL DATA ANALYSIS. R.J. Howarth, Imperial College, Prince Consort Road, London SW7 2BP, U.K.

SYMPOSIUM XII - SELECTION OF PHYSICOCHEMICAL DATA OF ACTINIDE COMPOUNDS

SOURCEBOOK OF ACTINIDE DATA. W.W. Schulz, Rockwell Hanford Operations, P.O. Box 800, 2750E/200 East, Richland, Washington 99352, U.S.A.

CHEMICAL THERMODYNAMIC PROPERTIES OF ACTINIDE COMPOUNDS. J. Fuger, Laboratory of Analytical Chemistry and Radiochemistry, University of Liège, B-4000 Sart Tilman, Liège, Belgium.

PHYSICOCHEMICAL DATA OF ACTINIDE COMPOUNDS. J.D. Navratil, Rockwell International, P.O. Box 464, Golden, Colorado 80401, U.S.A.

SOLUTION EQUILIBRIA OF ACTINIDES. G.R. Choppin, Department of Chemistry, Florida State University, Tallahassee, Florida 32306, U.S.A.

CONFERENCE PROGRAM - Symposium XIII

SYMPOSIUM XIII - SOLID-SEAWATER EQUILIBRIUM DATA

DEVELOPMENT OF A RELIABLE DATA BASE FOR DETERMINATION OF SPECIATION OF METALS IN THE OCEANS AND OTHER NATURAL WATERS. A.E. Martell, R.J. Motekaitis and R.M. Smith, Department of Chemistry, Texas A & M University, College Station, Texas 77843, U.S.A.

THE DATA ON THE GEOGRAPHICAL DISTRIBUTION OF HEAVY METAL LEVELS IN THE OCEANS AND COASTAL WATERS. H.W. Nürnberg and L. Mart, Institute of Applied Physical Chemistry, Nuclear Research Center (KFA), Juelich, F.R.G.

DISSOLVED INORGANIC CARBON IN THE DELAWARE ESTUARY. C.H. Culberson, College of Marine Studies, University of Delaware, Newark, Delaware 19711, U.S.A.

CONCENTRATION OF THE IONS RELATED TO THE CARBON DIOXIDE SYSTEM IN THE RED SEA. A. Poisson, Laboratoire de Physique et Chimie Marines, Université Pierre et Marie Curie, Tour 24, 4 Place Jussieu, 75230 Paris Cédex 05

SYMPOSIUM XV - NEW APPROACHES TO THE PRESENTATION OF OCEANOGRAPHIC AND ENVIRONMENTAL DATA

USE OF COMPUTER GRAPHIC CAPABILITIES FOR THE PRESENTATION OF CLIMATIC, OCEANOGRAPHIC, AND GEOPHYSICAL DATA AND RELATIONSHIPS. M.E. Courain, National Environmental Satellite, Data, and Information Service, National Oceanic and Atmospheric Administration, Washington, DC 20235, U.S.A.

AUTOMATED GEOGRAPHY: THE INTEGRATION AND ANALYSIS OF SPATIAL DATA. J. Dobson, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37830, U.S.A.

COMPUTER-ASSISTED MAP ANALYSIS: ACADEMIC EXPERIENCE AND CHALLENGES. J. K. Berry, School of Forestry and Environmental Studies, Yale University, New Haven, Connecticut 06511, U.S.A.

SYMPOSIUM XVI - NUMERICAL DATA FOR ENERGY SYSTEMS

NUMERICAL DATA FOR ENERGY SYSTEMS. S. Iwata, Department of Nuclear Engineering, University of Tokyo, Tokyo, Japan

DEVELOPMENT OF A DATA BASE FOR EVALUATION OF ENERGY TECHNOLOGY. S. Kondo, Department of Nuclear Engineering, University of Tokyo, Tokyo, Japan

RELATIONSHIP OF ENERGY SYSTEMS TO CO₂ CLIMATE ISSUES IS OF GLOBAL CONCERN. B.F. Maskewitz, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, Tennessee 37830, U.S.A.

ENERGY MODELING, TECHNOLOGY ASSESSMENT - THE ROLE OF DATA. W.M. Terhorst, Systems Analysis and Technology Evaluation (STE), Nuclear Research Center, Postfach 1913, D-5170 Jülich, F.R.G.

SYMPOSIUM XVII - NUMERICAL DATA FOR NUCLEAR ENERGY

AN OVERVIEW OF THE NUCLEAR CRITICALITY INFORMATION SYSTEM. B.L. Koponen and A.A. O'Dell, Lawrence Livermore National Laboratory, P.O. Box 808, L-303, Livermore, California 94550, U.S.A.

ADJUSTMENT OF NUCLEAR DATA BY INTEGRAL MEASUREMENTS. J.J. Wagschal and Y. Yeivin, Racah Institute of Physics, The Hebrew University, 91904 Jerusalem, Israel.

ATOMIC AND MOLECULAR DATA FOR FUSION. F.J. Smith, Department of Computer Science, The Queen's University, Belfast BT7 1NN, Northern Ireland

NUCLEAR DATA FOR NUCLEAR MATERIAL SAFEGUARDS. M. Lammer, Nuclear Data Section, International Atomic Energy Agency, Vienna, Austria

BASIC NUCLEAR DATA FOR NUCLEAR FISSION AND FUSION REACTORS. J.J. Schmidt, A. Lorenz and D.E. Cullen, Nuclear Data Section, International Atomic Energy Agency, Vienna, Austria.

NUCLEAR DATA APPLICATIONS IN DEVELOPING COUNTRIES. M.K. Mehta and J.J. Schmidt, Nuclear Data Section, International Atomic Energy Agency, Vienna, Austria.

SYMPOSIUM XVIII - GEOSTATISTICS IN MINING AND PETROLEUM INDUSTRIES

SYMPOSIUM XIX - DATA BASES IN ECOLOGY AND SYSTEMATICS

ISRAEL: ECOLOGICAL PLANT DATA BASE. A. Shmida and S. Ritman, Department of Botany, The Hebrew University, Jerusalem, Israel

A PROPOSAL FOR A COMPUTERIZED GEOGRAPHICAL DATA RETRIEVAL SYSTEM. M. Levinger and R. Sivan, Computer Center, The Hebrew University, Jerusalem, Israel

THE EUROPEAN TAXONOMIC, FLORISTIC AND BIOSYSTEMATIC DOCUMENTATION SYSTEM. R.J. Grayer and V.H. Heywood, ESF-EDS, Department of Botany, University of Reading, Reading, RG6 2AS, U.K.

VICIEAE DATA BASE PROJECT. F.A. Bisby, R. Allkin and R.J. White, Biology Department, Building 44, University of Southampton, Southampton SO9 5NH, U.K.

BOTANICAL GARDEN AND REGIONAL FLORA - A MODEL FOR A COMPUTERIZED CATALOGUE. Dr. J. M. Mascherpa, Conservatoire et Jardin Botanique, 1292 Chambésy/Geneva, Switzerland.

CONFERENCE PROGRAM - Symposium XX

SYMPOSIUM XX - NUMERICAL DATA RETRIEVAL IN SCIENCE AND TECHNOLOGY

TOOLS FOR THE AUTOMATED HANDLING OF EVALUATED DATA. B.B. Molino, Office of Standard Reference Data, National Bureau of Standards, Washington, DC 20234, U.S.A.

THE ROLE OF DESCRIPTION IN THE EVALUATION OF DATA QUALITY. J.L. Dolby, San Jose State University, 885 No. San Antonio Road, Ste G., Los Altos, California 94022, U.S.A.

STRUCTURES OF FACTUAL DATA BASES AT DIMDI AND THEIR IMPACT ON THE DEVELOPMENT OF DIMDI'S DATA BASE SOFTWARE GRIPS. R.G. Fritz, H.D. Paul and H.E. Kurzweily, Deutsches Institut für Medizinische Dokumentation und Information, DIMDI, Postfach 42 05 80, D-5000 Köln 41, F.R.G.

SYMPOSIUM XXI - AUTOMATIC INFORMATION RETRIEVAL IN THE SCIENCES

OVERVIEW OF AUTOMATIC INFORMATION RETRIEVAL. M.J. McGill, OCLC, Inc., Dublin, Ohio, U.S.A.

SOME THEORETICAL ASPECTS OF INFORMATION STORAGE AND RETRIEVAL. A.S. Fraenkel, Department of Applied Mathematics, The Weizmann Institute of Science, Rehovot, Israel

DOCUMENT RETRIEVAL BASED ON COMPUTER-AIDED COMPREHENSION. M. Kochen, Mental Health Research Institute, University of Michigan, Ann Arbor, Michigan 48109, U.S.A.

A GENERALIZED RETRIEVAL SYSTEM: FORMULATION AND ITS IMPLICATIONS FOR THE SCIENCES. V.V. Raghavan, Computer Science, University of Regina, Canada S4S 0A2

AUTOMATIC RETRIEVAL OF BIBLIOGRAPHIC INFORMATION IN THE SCIENCES: A CASE HISTORY OF CHEMICAL ABSTRACTS SERVICE. H.F. Boyle

SYMPOSIUM XXII - INDUSTRIALLY ORIENTED PROCESS AND THERMODYNAMIC DATA PROJECTS IN THE USA

THERMODYNAMIC DATA THROUGH COOPERATIVE RESEARCH. C.B. Sutton and R.E. Cannon, Gas Processors Association, Tulsa, Oklahoma, U.S.A.

TRANSPORT PROCESSES AND "PHASE" EQUILIBRIA IN PARTICULATE SOLID SYSTEMS. B.B. Crocker and F.A. Zenz, Particulate Solid Research, Inc., Riverdale, New York, U.S.A.

ACTIVITIES OF FLUID PROPERTIES RESEARCH, INC. J.D. Chase, Celanese Chemical Company, Corpus Christi, Texas, U.S.A.

A THERMOPHYSICAL PROPERTIES PROGRAM FOR THE GAS INDUSTRIES. M. Klein and F.E. Little, Gas Research Institute, Chicago, Illinois, U.S.A.

THE DIPPR PREDICTION MANUAL OF THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS. S.A. Newman, Foster Wheeler Corporation, Livingstone, New Jersey, U.S.A.

SYMPOSIUM XXIII - ENVIRONMENTAL MODELING

DATA FOR ATMOSPHERIC MODELING. G.C. Carter, Numerical Data Advisory Board, National Research Council, Washington, D.C. 20418, U.S.A.

SATELLITE DATA SETS FOR ATMOSPHERIC RESEARCH. J.C. Gille, National Center for Atmospheric Research, Boulder, Colorado 80307, U.S.A.

INTERACTIVE MODELS OF THE ATMOSPHERE AND BIOSPHERE. R.G. Prinn, MIT, Room 54-1824, Cambridge, Massachusetts 02139, U.S.A.

SESSION A - METHODOLOGY OF SCIENTIFIC CONSOLIDATION AND PROCESSING OF DATA

COMPILATION AND CORRELATION OF CRITICALLY EVALUATED DATA FOR NUCLEAR WASTE DISPOSAL. S.L. Phillips, Lawrence Berkeley Laboratory, University of California, Berkeley, California 94720, U.S.A.

A UNIVERSAL REPRESENTATION OF SYSTEM BEHAVIOR BASED ON TOPOENERGETIC PRINCIPLES. G. Dragan, Institute of Chemical Research, ICECHIM-CCF, Spl. Independentei 202, Bucharest 77208, Romania

AN ONLINE RETRIEVAL SERVICE FOR THE LOG P DATA BASE. M. Green, Technical Database Services, Inc., 10 Columbus Circle, New York, New York 10019, U.S.A.

USE OF FACTOR SCORES AS COMPOSITE INDICATORS IN MULTICOLINEAR DATA SETS. B.K. Eres, Interdisciplinary Center for Technological Analysis and Forecasting, Tel Aviv University, Tel Aviv 69978, Israel

REPORT ON THE 1983 CODATA LEAST-SQUARES ADJUSTMENT OF THE FUNDAMENTAL PHYSICAL CONSTANTS. E.R. Cohen, Science Center, Rockwell International, Thousand Oaks, California 91360, U.S.A. and B.N. Taylor, Electricity Division, National Bureau of Standards, Building 220, Room B258, Washington, DC 20234, U.S.A.

METHODS OF IDENTIFYING DATA UNITS FOR RETRIEVAL PURPOSES, AS APPLIED IN AN INTERNATIONAL DATA BANK SYSTEM FOR FEED ANALYSES. H. Haendler, Universität Hohenheim - 603, Postfach 700562, D-7000 Stuttgart 70, F.R.G.

CONFERENCE PROGRAM - Session A (cont'd)

INTERNATIONAL NETWORK OF FOOD DATA SYSTEMS (INFOODS): DESIGNATION OF FOODS AND SUBSTANCES. R.R. Butrum, National Cancer Institute, Blair Building, Room 619, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20205, U.S.A.

THE NBS/NSR STEAM TABLES. L. Haar and J.S. Gallagher, National Bureau of Standards, Washington, DC 20234, U.S.A.; G.S. Kell (deceased 1983), National Research Council, Canada

WHAT IS DATA PREPROCESSING? M.K. Chytil, Center of Biomathematics, Institute of Physiology, Czechoslovak Academy of Sciences, 14220 Prague, Czechoslovakia

REPRESENTATION AND CODING (2D/3D) OF 3D CHEMICAL OBJECTS. A. Panaye and J.E. Dubois, Institut de Topologie et de Dynamique des Systèmes (ITODYS) and Association pour la Recherche et le Développement en Information Chimique (ARDIC), 1 rue Guy de la Brosse, 75005 Paris, France

SESSION B - COMPUTERIZED DATA BASES, TECHNOLOGY AND MANAGEMENT

FLEXIBLE SOFTWARE FOR INFORMATION MANAGEMENT. W. Koch, Institut für Maschinelle Dokumentation, Graz, Austria; and I. Mistrik, Gesellschaft für Information und Dokumentation mbH (GID), Tiergartenstrasse 17, D-6900 Heidelberg 1, F.R.G.

HYDROGEN INFORMATION - HYDROGEN DATA. S. Talbot-Besnard, Ecole Nationale Supérieure de Chimie de Paris, 11 rue Pierre et Marie Curie, 75231 Paris Cedex 05, France

EMERGENCE OF AD HOC USER GROUPS AS ALTERNATIVE MECHANISMS FOR USER FEEDBACK. M.C. Segal, Integrated Data Users Group (IDUG), 13116 Rockville, Maryland 20853, U.S.A. and R.J. Olson, IDUG, Oak Ridge, Tennessee, U.S.A.

A LOGICAL APPROACH TO DATA. J.C.F.M. Neves, Universidade do Minho, Largo do Paço 4719, Braga Codex, Portugal

CONNECTING EXPERT SYSTEMS AND DATA BASES FOR SCIENTIFIC KNOWLEDGE PROCESSING. F. Bouillé, LIST, Boîte 1000, Université Pierre et Marie Curie, 4 Place Jussieu, 75230 Paris Cédex 05, France

LITERATURE SEARCHING WITH MAGNETIC TAPE SERVICES AND ABSTRACT JOURNALS - EXPERIENCES IN THE FIELD OF METAL-GAS AND -CARBON SYSTEMS. G. Hörz and H.A. Jehn, Max-Planck-Institut für Metallforschung, Institut für Werkstoffwissenschaften, Seestrasse 92, 7000 Stuttgart 1, F.R.G.

CONCEPT AND REALIZATION OF A QUERY SYSTEM FOR A HIGH TEMPERATURE MATERIALS DATA BANK. G. Fattori and C. Maurandy, Joint Research Centre (JRC), Dip. A - Ed. 36, CCR, 21020 Ispira (VA), Italy; R. Krefeld and H. Kroeckel, Joint Research Centre (JRC), Petten, Netherlands

AN ACCESS METHOD ADAPTABLE TO IRREGULAR DATA DISTRIBUTIONS FOR RELATIONAL DBMSs. C. Sartori, C.I.O.C.-C.N.R., Bologna, Italy; M.R. Scalas, Dipartimento di Elettronica, Informatica e Sistemistica, Bologna, Italy

INTERDISCIPLINARY EXCHANGE OF COMPUTERIZED DATA FILES AND DATA BASE STRUCTURING: THE CASE OF A DATA BANK FOR WILD PLANT GENETIC RESOURCES. S. Weitz-Inger, The Hebrew University of Jerusalem, Jerusalem, Israel.

THE BELFAST SCIENTIFIC DATABASE SYSTEM. F.J. Smith and J.G. Hughes, Department of Computer Science, The Queen's University, Belfast BT7 INN, Northern Ireland

IMPLICATIONS OF COPYRIGHT ON ACCESSIBILITY AND DISSEMINATION OF NUMERICAL DATA - AN UPDATE. S.P. Fivozinsky, Office of Standard Reference Data, Physics Building A323, National Bureau of Standards, Washington, DC 20234, U.S.A.

A MODEL OF LINKED FILES FOR ACCESSING THE ORIGINAL FILE USING THE KEY WORDS ADDRESSING TECHNIQUE. M.B. Jockovic, Institute of Nuclear Sciences "B. Kidric", Vojislava Illica 67, 11000 Belgrade, Yugoslavia

IMPROVEMENTS IN DECENTRALIZED VERY LARGE SCIENTIFIC DATA BASES THROUGH TRAVELLING SOFTWARE. Y. Perrot, Centre de Calcul de Physique Nucléaire, Institut de Physique Nucléaire des Particules, 11 Quai Saint Bernard, Tour 32, 75230 Paris Cédex 05, France

THE JICST THERMOPHYSICAL AND THERMOCHEMICAL PROPERTY DATABASE SYSTEM. J. Osugi, Research Institute for Production Development, Thermophysical and Thermochemical Property Database Working Group of the Japan Information Centre of Science and Technology, 15 Morimoto-cho, Shimogamo, Sakyo-ku, Kyoto 606, Japan

THE PERSONAL COMPUTER AND ITS ROLE IN CODATA ACTIVITIES. J. Hilsenrath, National Bureau of Standards, Gaithersburg, Maryland 20901, U.S.A.

BUILDING BETTER DATA BASES FOR SCIENCE AND TECHNOLOGY. J.R. Rumble, Jr., National Bureau of Standards, Room A323, Physics Building, Washington, DC 20234, U.S.A.

FACTUAL DATA BASES IN DEVELOPMENT - THE ROLE OF UNESCO. J.B. Rose, Division of the General Information Programme Section for the Development of Information Infrastructures, Unesco, Paris, France

CONTINUOUS AND CURRENT UPDATING OF NUMERICAL DATA BASES. Y. Wolman and A.S. Kertes, Institute of Chemistry, The Hebrew University, Jerusalem, Israel

CALPHAD/COMPUTER COUPLED PHASE DIAGRAMS AND THERMOCHEMISTRY. L. Kaufman, ManLabs, Inc., 21 Erie Street, Cambridge, Massachusetts 02139, U.S.A.

CONFERENCE PROGRAM - Session B (cont'd)

SPECIFIC FEATURES OF SCIENTIFIC DATA BANKS. Y. Sobel, I. Dagane, M. Carabedian, J.E. Dubois, Institut de Topologie et de Dynamique des Systèmes (ITODYS) and Association pour la Recherche et le Développement en Information Chimique (ARDIC), 1 rue Guy de la Brosse, 75005 Paris, France

SESSION C - COMPUTER TECHNIQUES IN DATA AND SYSTEMS ANALYSIS

DATA BASE TECHNOLOGY IN A WORLD DATA CENTRE. M.A. Hapgood and B.J. Read, SERC Rutherford Appleton Laboratory, Chilton, Didcot, Oxon OX11 0QX, U.K.

AN EXPERT MACHINE FOR A BUSINESS INFORMATION SYSTEM. O. Thiery, CRIN, Campus Scientifique, BP 239, 54506 Vandoeuvre-les-Nancy Cédex, France

COMPUTER-AIDED EVALUATION OF THERMOPHYSICAL AND THERMODYNAMIC PROPERTY DATA FOR PURE ORGANIC COMPOUNDS OF INDUSTRIAL IMPORTANCE. A.M. Szafranski and D. Wyrzykowska-Stankiewicz, Research Institute for Industrial Chemistry, Laboratory NB-6, ul. Rydygiera 8, 01-793 Warsaw, Poland

DESIGNING AN OPTIMAL DATA BASE SYSTEM. A.E. Ledford, Southern University in New Orleans, 6400 Press Drive, New Orleans, Louisiana 70126, U.S.A.

EVALUATING MEASUREMENT PRECISION USING DIVIDED DIFFERENCES. S. Fishkind, B. Hosack and D. Shnidman, ORI, Inc., Silver Spring, Maryland, U.S.A.

METHODOLOGY OF MULTICRITERION RESEARCH AND PROCESSING IN A VLDB CONTEXT. H.H. Quang, Institut de Programmation, Tour 55, Université de Paris VI, 4 Place Jussieu, 75005 Paris, France

A METHOD AND A TOOL FOR GRAPHICAL TRANSCRIPTION. H.H. Quang, Institut de Programmation, Tour 55, Université de Paris VI, 4 Place Jussieu, 75005 Paris, France

DATA STRUCTURATION: FROM COGNITIVE TO BINARY PROCESSING. J. Legrand, L.I.S.T., Boîte 1000, Université Pierre et Marie Curie, 75230 Paris Cédex 05, France

USE OF A KNOWLEDGE BASE IN MODEL ENGINEERING. S. Ohsuga, Institute of Interdisciplinary Research, Faculty of Engineering, The University of Tokyo, 4-6-1 Komaba, Meguro-ku, Tokyo 153, Japan

ESOC: A COMPUTER PROGRAM FOR THE STUDY OF EFFECT OF SOLVENT ON COMPLEX EQUILIBRIA IN AQUO-ORGANIC MIXTURES. R. Sambasiva Rao, A. Satyanarayana, C. Rambabu and P.V. Krishnan Rao, Department of Chemistry, Andhra University, Waltair 530 003, India

DESIGN OF A CODING SYSTEM FOR THE HYBRIDOMA DATA BANK. L. Blaine, E. Krichevsky, CODATA/IUIS Hybridoma Data Bank, 1230 Parklawn Drive, Rockville, Maryland 20852-1776, U.S.A.; M. Krichevsky, Microbial Systematics Section, National Institute of Dental Research, National Institutes of Health, Building 31, Room 3804, Bethesda, Maryland 20205, U.S.A.

DARC SYSTEM: REPRESENTATION, CODING AND HANDLING OF SETS OF STRUCTURED ENTITIES. G. Sicouri, Y. Sobel, R. Picchiottino and J.E. Dubois, Institut de Topologie et de Dynamique des Systèmes (ITODYS) and Association pour la Recherche et le Développement en Information Chimique (ARDIC), 1 rue Guy de la Brosse, 75005 Paris, France

SESSION D - NUMERICAL INFORMATION SYSTEMS IN MATERIALS SCIENCE TECHNOLOGY AND ENGINEERING

CRYSTALLOGRAPHIC DATA BASES AND THE CHEMICAL COMPUTER. I.D. Brown, Institute for Materials Research, McMaster University, Hamilton, Ontario, Canada L8S 4M1.

TECHNIQUES FOR INTEGRATING BIBLIOGRAPHIC WITH NUMERICAL DATA BASES IN ENGINEERING. H.B. Landau, Engineering Information, Inc., 345 East 47th Street, New York, New York 10017, U.S.A.

A COMPUTERIZED THERMOCHEMICAL DATA BASE OF MOLECULES AND FREE RADICALS IN THE GAS PHASE. G.M. Côme, C. Muller, G. Sacchi, L.A. C.N.R.S. 328, 1 rue Grandville, 54000 Nancy, France; J.M. David, L.A. C.N.R.S. 262, Nancy, France; and B. Maigret, E.R.A. C.N.R.S. 828, Nancy, France

A CONTINUOUS LINEAR ASSOCIATION MODEL FOR ALCOHOL-ALCOHOL SOLUTIONS. C. Pando and J.A.R. Renuncio, University of Oviedo, Facultad de Química, Av. Calvo Sotelo s/n, Oviedo, Spain; R.W. Hanks and J.J. Christensen, Brigham Young University, Provo, Utah, U.S.A.

CONDITIONS FOR DEVELOPMENT AND OPERATION OF COMPUTERIZED MATERIALS DATA BASES. G. Oestberg, University of Lund, Lund, Sweden; B. Rydnert, LUTAB Company, Bromma, Sweden; R. Normann, The Service Management Group, Paris, France.

DETERM - A SUBSTANCE PROPERTY DATA BANK FOR CHEMICAL ENGINEERING. R. Eckermann and H. Langer, DECHEMA, Theodor-Heuss-Allee 25, D-6000 Frankfurt 97, F.R.G.

SOME CONSIDERATIONS IN THE DESIGN OF PROPERTIES FILES FOR A COMPUTERIZED MATERIALS INFORMATION SYSTEM. J.H. Westbrook, General Electric Research and Development Center, Materials Information Services, 120 Erie Boulevard, Schenectady, New York 12305, U.S.A.

ANALYSIS AND DESCRIPTION OF HIGH TEMPERATURE ALLOY DATA AND THEIR REPRESENTATION IN THE HIGH TEMPERATURE MATERIALS DATA BANK OF THE JOINT RESEARCH CENTRE. G. Fattori and H. Maurandy, Joint Research Centre (JRC), Petten Establishment, P.O. Box 2, 1755 ZG Petten, The Netherlands; R. Krefeld and H. Kröckel, Joint Research Centre (JRC), Ispra, Italy.

CONFERENCE PROGRAM - Session D (cont'd)

BPBP - PROCESS CALCULATION PACKAGE. H. Knapp, H. Wendeler and H. Wogatzki, Institute of Thermodynamics and Plant Design, Technical University of Berlin, Strasse des 17 Juni 135, 1000 Berlin 12, F.R.G.

CALCULATION AND PRESENTATION OF THE TERNARY Fe-Cu-Ni SYSTEM. Y.A. Chang, Y.Y. Chuang and R. Schmid, Department of Metallurgical and Mineral Engineering, University of Wisconsin-Madison, 1509 University Avenue, Madison, Wisconsin 53706, U.S.A.

A BASIC PROGRAM FOR GENERATING TABLES OF THERMODYNAMIC PROPERTIES OF AMMONIA AND STEAM ON MICROCOMPUTERS. J.S. Gallagher, L. Haar and J. Hilsenrath, National Bureau of Standards, Gaithersburg, Maryland, U.S.A.

COMPUTERIZING MATERIALS DATA - A PROGRESS REPORT. J.R. Rumble, Jr., National Bureau of Standards, Room A323, Physics Building, Washington, DC 20234, U.S.A.

QUALIFICATION OF PURE COMPONENT PHYSICAL PROPERTY DATA. D.J. Chase, Celanese Chemical Company, Inc., Corpus Christi, Texas 78469, U.S.A.

ATTENTION TO DATA NEEDS IN A PROFESSIONAL SOCIETY. S.P. Fivozinsky, Office of Standard Reference Data, Physics Building A323, National Bureau of Standards, Washington, DC 20234, U.S.A. and T.N. Padikal, Divine Providence Hospital, Williamsport, Pennsylvania 17701, U.S.A.

MODELING IN A MATERIALS DATA BASE. S. Iwata, Department of Nuclear Engineering, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, Japan

COMPUTER AIDED DESIGN FOR POLYMERIC MATERIALS. Y. Fujiwara, T. Nakayama and N. Obo, Institute of Information Science, Tsukuba University, Sakura, Niihari, Ibaraki, 305 Japan

AN ONLINE DIRECTORY OF DATA BASES FOR MATERIAL PROPERTIES. V.E. Hampel, Lawrence Livermore National Laboratory, Livermore, California 94550, U.S.A.; and J.J. Oldani, Control Data Corporation.

UNIVERSAL BEHAVIOR OF PURE FLUIDS NEAR THEIR CRITICAL POINT. B. Le Neindre, Y. Garrabos and R. Tufeu, L.I.M.H.P., C.N.R.S., Université Paris-Nord, 93430 Villetaneuse, France

INFLUENCE OF THE NET-SAMPLING SYSTEM ON THE RESULTS OF STATISTICAL ANALYSIS OF THE VARIABILITY OF PARAMETERS OF THE COPPER-ORE DEPOSIT. B. Namysłowska-Wilczynska, Instytut Geotechniki, Politechniki Wrocławskiej, St. Wyspińskiego 27, Poland

ESTIMATION OF THERMODYNAMIC PROPERTIES OF ORGANIC COMPOUNDS IN THE CONDENSED PHASE AT 298 K. E.S. Domalski, E.D. Hearing and B.L. Jacobs, Chemical Thermodynamics Division, Center for Chemical Physics, National Bureau of Standards, Washington, D.C. 20234, U.S.A.

SESSION E - NUMERICAL INFORMATION PROCESSING IN BIOSCIENCES

ONLINE AUTOMATIC SLEEP ANALYSIS ACCORDING TO BAYESIAN DECISION THEORY. R. Hanus and B. Lacroix, Service d'Automatique, CP 165, ULB, 50 A. Roosevelt, 1050 Brussels, Belgium

TO THE MODELLING OF INFORMATION PROCESSING BY SEQUENTIAL MACHINE. A. Gammerman, Department of Computer Science, Heriot University, Edinburgh, United Kingdom.

COMPUTER-AIDED MAPPING OF DNA-PROTEIN INTERACTION SITES. V. Brendel and E.N. Trifonov, The Weizmann Institute of Science, Rehovot, Israel

PERIODICITY IN NUCLEOSOMAL DNA SEQUENCES. R. Wartenfeld, G. Mengeritsky, and E.N. Trifonov, The Weizmann Institute of Science, Rehovot, Israel

THE MEDICAL RADIATION DEPTH-DOSE DATA CENTER IN ST. LOUIS, MISSOURI - A STATUS REPORT. S.P. Fivozinsky, Office of Standard Reference Data, Physics Building A323, National Bureau of Standards, Washington, DC 20234, U.S.A. and J.A. Purdy, Mallinckrodt Institute of Radiology, Washington University School of Medicine, St. Louis, Missouri 63110, U.S.A.

COMPUTER-ASSISTED DETERMINATION IN PALEONTOLOGICAL TAXONOMY. A.F. Poignant, Centre d'Etude des Algues Fossiles, Université de Pierre et Marie Curie, 4 Place Jussieu, 75230 Paris Cédex 05, France

NATIONAL INFORMATION SYSTEM OF LABORATORY ORGANISMS (NISLO) - III. H. Sugawara and Y. Tateno, Institute of Physical and Chemical Research (RIKEN), 2-1 Hirosawa, Wako, Saitama 351, Japan

COMPUTER-AIDED COMPARISON OF LABORATORIES AND/OR METHODS CHARACTERIZING THE SAME STRAINS. C.A. Walczak and M.I. Krichevsky, Microbial Systematics Section, National Institute of Dental Research, National Institutes of Health, Bethesda, Maryland 20205, U.S.A.

INTERNATIONAL HEALTH INDICES. B.J. Kaplan, Students' Health Service, Hebrew University, Jerusalem, Israel

SESSION F - NUMERICAL DATA PROCESSING IN GEOSCIENCES

STANDARDIZED GEOLOGICAL MAPPING PROCEDURE WITH MESH DATA COLLECTION. N. Nishiwaki, Department of Geology and Mineralogy, Faculty of Science, Kyoto University, Kyoto 606, Japan

A STRUCTURED EXPERT SYSTEM FOR GEO-DATA HANDLING. F. Bouillé, Laboratoire d'Informatique des Sciences de la Terre, Université Pierre et Marie Curie, 75230 Paris Cédex 05, France

CONFERENCE PROGRAM - Session F (cont'd)

AN ASTRONOMICAL VOCABULARY FOR INDEXATION BY AUTHORS. P. Lantos, Observatoire de Meudon, 92190 Meudon, France

PROJECT OF COMPUTER-ASSISTED ACCESS TO THE INTERNATIONAL STRATIGRAPHIC LEXICON. A.F. Poignant, Université Pierre et Marie Curie, Centre d'Etude des Algues Fossiles, 4 Place Jussieu, 75230 Paris Cédex 05, France

EXOSAT - A SERVICE TO THE ASTRONOMICAL COMMUNITY. J.R. Sternberg, European Space Operations Center, Robert Bosch Strasse 5, 6100 Darmstadt, F.R.G.

GEOLOGICAL DATA BANKS: THE BASIS FOR DETERMINISTIC GEOLOGICAL MODELS. A. Toister, A. Flexer, Dept. of Geophysics and Planetary Sciences, Tel Aviv University, Ramat Aviv, Tel Aviv 69978, Israel; D. Gill, Geological Society of Israel, Jerusalem, Israel.

INTERACTIVE COMPUTER AIDED DESIGN IN THE PROCESSING OF MINING AND GEOLOGICAL DATA. P. Jacquemin and J.J. Royer, CRPG, B.P. 20, 15 rue Notre Dame des Pauvres, 54501 Vandoeuvre, France; J.L. Mallet, ENSG, 94 avenue de Tassigny, 54000 Nancy, France

GEOSTATISTICAL METHODS FOR THE ANALYSIS AND PREDICTION OF FRACTURES. H. Burger and W. Skala, Geological Institute, Freie Universität Berlin, Malteserstr. 74-100, 1000 Berlin 46, F.R.G.; V. Weber, Bergbauforschung, Essen, F.R.G.

MAFIC - ULTRAMAFIC ELEMENT ASSOCIATION IN THE ASHTON NTMS QUADRANGLE. M. Beyth and B. Lang, Geological Survey of Israel, 30 Malkhe Yisrael St., Jerusalem, Israel 95501; N.K. Stablein, Bendix Field Co., Grand Junction, U.S.A.

PROBABILISTIC MINERAL AND ENERGY RESOURCE EVALUATION. F.P. Agterberg, Geological Survey of Canada, 601 Booth Street, Ottawa K1A 0E8, Canada

INTERACTIVE INFORMATION MANAGEMENT AND THEMATIC MAPPING SYSTEM FOR SUBSURFACE STRATIGRAPHIC ANALYSIS. D. Gill, Geological Survey of Israel, 30 Malkhe Street, Jerusalem 95501, Israel; A. Toister, Tel Aviv University, Tel Aviv, Israel

A MODULAR AND USER-CONFIGURABLE SYSTEM FOR ENVIRONMENTAL DATA ACQUISITION AND PROCESSING. G. Neri, F. Numi and T. Salmon, CIOC, Department of Informatics, V. Risorgimento 2, 40136 Bologna, Italy

GROUNDWATER INFORMATION SYSTEM. D. Blanck, Tahal, Water Planning for Israel, Ltd., Tel Aviv, Israel

GEOPHYSICAL DATA BASE FOR ISRAEL. A. Ashkenazi and R. Assael, Institute for Petroleum Research and Geophysics, Holon 58117, Israel

Urgent Advice to Prospective Conferees

Late Abstracts for Poster Presentation should be sent to CODATA Secretariat, 51 Boulevard de Montmorency, 75016 Paris, France, Telephone: 33-1-525-0496, Telex: 630553. (Please indicate appropriate session, A-F.)

For registration and accommodation forms, travel, and general information as well as pre- and post-Conference tours (including Egypt): please contact Kopel Tours - Conventions, P.O. Box 4413, 61044 Tel Aviv, Israel, Telephone: 972-3-653616, Telex: 35562 KTOR IL.

For other related information: please contact Professor A.S. Kertes, Institute of Chemistry, The Hebrew University, 91904 Jerusalem, Israel, Telephone: 972-2-58534, Telex: 25391 HU IL.

CODATA Working Group on Critically Evaluated Phase-Equilibrium Data

The Task Group endeavors to promote essential progress in the full realization of critically evaluated phase-equilibrium data compilations in organic systems under the chairmanship of Prof. A. Bylicki (Warsaw, Poland). Its membership includes Prof. A. Fredenslund (Lyngby, Denmark), Dr. J. Gmehling (Dortmund, F.R.G.), Prof. M. Hirata (Tokyo, Japan), Dr. S. Kemeny (Budapest, Hungary), Dr. D. Lempe (Merseburg, G.D.R.), Dr. A. Maczynski (Warsaw, Poland), Dr. J. Vidal (Paris, France), and Prof. D. Zudkevitch (New York, U.S.A.) and is supplemented by Dr. H. Kehiaian (Paris, France) and Dr. S. Malanowski (Warsaw, Poland) as observers. They hope to achieve Task

Group status at the Jerusalem General Assembly. Their proposed activities include:

- identification of active teams engaged in compilation and critical evaluation of phase-equilibrium data.
- identification and filling of gaps in important phase diagram data. "Important" here refers to industrially significant processes, the potential for establishing bases for extrapolative or interpolative prediction, and relevance to fundamental theoretical principles.
- international cooperation in promoting internationally accepted methodology (evaluation, presentation, etc.) in unified and verified phase-equilibrium data projects. To this end, a Symposium on Critical Evaluation and Prediction of Phase Equilibria in Multi-component Systems is planned for May 1984 (cf. NL 27, p. 1).

- survey and analysis of present practice in recording and storing numerical phase-equilibrium data in cooperation with other Task Groups.

CODATA Task Group on Thermophysical Properties of Solids

At the October 3-5 Task Group meeting in Rapid City, SD, the final phase of the Standard Reference Materials/Experimental Methods project—focused on the low thermal conductivity range where high temperature thermophysical properties are needed by the ceramics industry and where the same properties on petrologic materials are required under mantle conditions—was summarized by Prof. Francois Cabannes for 12 laboratories in seven countries.



Executive Committee deliberates on D.G. Library, Paris, 6-7 February. From left W.W. Hutchison (Pres.), D.R. Lide, Jr. A. Bussard (IUIS), E.R. Cohen (IUPAP), A. Bylicki (Poland), C.N.R. Rao (India). Not visible: H. Haendler (IUNS), E.F. Westrum, Jr. (IUPAC). Absent: W. Schirmer (D.D.R.), V.V. Sytchev (V. Pres., U.S.S.R.).



Watson's (Treasurer's) budget in ICSU to right: J.E. Dubois (V. Pres., France), (Sec. Gen.), Mrs. P. Glaeser (Exec. Sec.),

CODATA Executive Committee Meets at Secretariat

Meeting in Paris 6-7 February, the Executive Committee requested Drs. Watson and Lide to prepare a "final" dues structure for approval by the General Assembly. The scheme will be modified from the version circulated in August 1983 to minimize deviations from the current scale and could be gradually phased in over the 1986-1990 period with a concomitant increment in dues of 10% in 1986 and 1987. Varying inflation rates and fluctuations in dollar exchange rates complicate long-term predictions.

The Republic of South Africa has been admitted as a CODATA National Member. Other prospective countries are being approached.

A draft of the proposed/updated CODATA Constitution was examined and modified by the Executive Committee and was circulated subsequently to Delegates and Executive Committee members for General Assembly consideration at Jerusalem.

Proposals for new Task Groups have been considered for General Assembly action. The Executive Committee concurred with a proposal by the Secretary General that a clearer distinction should be made in structuring Committees (which perform a planning and advisory function) and Task Groups (which carry out specific endeavors). The need to complete the work of Task Groups more promptly to allow initiation of new activities was emphasized.

Conference Abstracts Available

Full abstracts for lectures and posters to be presented at the Jerusalem Conference will be available in CODATA Bulletin No. 54 in mid-April. Send \$15 (U.S.) to Pergamon Press (Headington Hills Hall, Oxford, U.K. OX3 0BW) for a copy.

CODATA General Assembly Dates Adjusted

The Executive Committee rescheduled the General Assembly in Jerusalem to Friday and Saturday, 29-30 June 1984 (instead of holding the second day of the meeting on Sunday, 1 July).



Executive Committee refuels at lunch. Left to right: Westrum, Watson, Rao, Glaeser, Dubois, Haendler, Bylicki, Levavasseur, Kotani, Bussard, Hutchison, Lide.

International CODATA Conference 1986-Canada

The Executive Committee accepted the proposal that the tenth Conference and the 15th General Assembly be held at the University of Ottawa in Ottawa, Canada, in the summer of 1986, probably 14-19 July.

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

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

CODATA Involvement in a Study of Legal and Copyright Issues

Discussion at the La Gaillarde Planning Conference centered on the wisdom of CODATA's potential involvement with legal and copyright issues that might affect the access to and dissemination of scientific data, especially in computer-readable form. In an effort to learn more about the way these issues are being approached by other organizations, I have met recently with several people actively concerned with the subject of copyright. A particularly useful discussion was arranged by the U.S. National Committee for CODATA.

CODATA has considered this subject several times, at least as early as 1975. The rationale for CODATA attention to legal and copyright issues is based on the influence of these issues on the ability of the scientific community to access needed data. Excessively restrictive rules on use of data obtained



Directory Editors reminisce at Secretariat party. M. Louis, Geodesy Chapter Editor (at left), and G. Emptoz, former Directory Editor.

from one or more data bases, combined with new software to manipulate the data, and then offered for sale, the copyright considerations are much less clear. In the United States, at least,

My recommendation is. . . . that we monitor developments as they affect numerical data dissemination

from data banks would have an undesirable effect on data dissemination. On the other hand, some protection of the proprietary rights of those who produce data banks is needed to justify the investment, both financial and intellectual, that is required to realize the full benefits of modern information technology. Presumably some middle ground would optimize conditions for the development of effective dissemination systems. The question before CODATA is whether we can contribute to the process of finding this middle ground.

There have been several recent studies of legal problems related to the dissemination of machine-readable data files, although these studies have emphasized bibliographic files. For example, King Research, Inc., has done a study in international exchange of data bases for the International Federation of Library Associations, and Cuadra Associates, Inc. has studied downloading policies (cf. *CODATA NL* #27, Jan. 1984, p.4) for a group of private clients. Such issues have been discussed at many conferences (including the CODATA Conference in Kyoto).

My own perception is that most people knowledgeable on this subject feel that copyright per se will not be a very effective way to control the use of data from data banks. An exact duplication of a data base without authorization would probably provide a basis for a copyright infringement action. However, if selected data are extracted

the current copyright law does not give specific guidelines to decide what is permissible in this regard. Legal actions resulting in court decisions or out-of-court settlements are expected to produce such guidelines over a period of time; however, this may be a slow process.

The most effective protection for data banks appears to lie in contractual agreements between the supplier and users. Everyone agrees that these should be stated as clearly as possible so that both parties understand what uses are permitted and what are prohibited. Also, data bank suppliers need to monitor the pattern of use very carefully so that changes can be made in the agreements when conditions change.

I have found little support for the idea of CODATA's carrying out of a study of these issues. It seems unlikely that we could add anything that has not already been covered by other groups. It also seems unproductive to attempt to develop ethical guidelines for "fair use" of data in data banks. Experience has shown that few individual users pay attention to such guidelines; the notices attached to copying machines, for example, do not appear to inhibit individuals from reproducing copyrighted publications.

My recommendation is that CODATA do nothing at the present time in a formal way, but that we monitor developments as they affect numerical

data dissemination. If situations arise where we can make useful input regarding special considerations applying to scientific numerical data bases, we should be prepared to do so on an ad hoc basis. I am able to follow developments in the United States fairly well, but the ADD Task Group may want to designate someone to monitor the situation in other countries. We plan a session on economic and legal issues at the 1986 (Ottawa) CODATA Conference.

Finally most of my information has come from U.S. sources, and the situation in other parts of the world may differ. I should appreciate receiving pertinent information from other countries as well as comments on the conclusions I have reached.

— D.R. Lide
Secretary General, CODATA

Thermodynamic Data Prediction and Evaluation

A summer school on thermodynamic data prediction/evaluation for organic reactions and for binary and multi-component phase equilibria will be held in Rzeszow (or alternatively, Warsaw), Poland, August 19-26, 1985. Both topics will involve lectures, seminars, tutorials, and computer experiments based on specialized software.

Specialists identified by CODATA and by the Polish National CODATA Committee will provide direction and a lecture-workshop presentation.

About 50-60 participants can be accommodated in student hostels near the lecture hall and computer center. The \$40 (U.S.) daily fee covers meals, double-occupancy rooms, a social evening, and a half-day excursion.

European DB Searches Cheaper than U.S. Searches

A Dansk DIANE Center study claims access prices for 24 data bases available from both European and U.S. hosts are between 16% (ENVIRONLINE) and 235% (CHEMNAME) dearer on American hosts (telecommunication charges included) than on European hosts. Another survey published by Martin Woodrow showed a similar 7 to 185% price differential based on costs for a "standard" 15 minute search on bibliographic data bases.

Further information is available from: Dansk DIANE Center, Danmarks Tekniske Højskole, Byg 101, DK-2800, Lyngby, Denmark.

Books/Journals *

Multi-National Information Systems Journal (M-NIS)
Gary A. Henderson, Editor.^a

Directory of International and Regional Organizations Conducting Standards-Related Activities. NBS Special Publication 649. Maureen A. Breitenberg, Editor.^b

Future Information Processing Technology. NBS Special Publication 500-103. Peg Kay and Patricia Powell, Editors.^c

Materials Properties Data Management—Approaches to a Critical National Need. Committee on Materials Information Used in Computerized Design and Manufacturing Processes of National Materials Advisory Board.^d

* Further details on content, identification, price, source, etc. for above items (if available) are referenced below.

a. The purpose of this journal is to foster international discourse and debate around developing and existent national policies relating to the transfer of technical, military, and personal information across international boundaries. Rockefeller Center, P.O.B. 3651, New York, N.Y. 10185.

b. The 272 organizations listed conduct standardization, certification, laboratory accreditation, or other standards-related activities. (April 1983). US \$9.50 (add 25% for other than U.S. mailing). Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

c. Institute for Computer Sciences and Technology, N.B.S. (August 1983). US \$6.50 (add 25% for other than U.S. mailing). Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

d. Report No. NMAB-405. This report outlines some of the problems associated with the development of materials properties data bases and describes the essential features and advantages of a National Computerized Materials Properties Data Bank Network cooperatively established by the U.S. Federal Government and the private sector. Such a system would be a positive factor in increasing product reliability and improving the competitive position of the United States in a world market environment where maximum use of advanced technology is decisive for success. (Sept. 1983). 112 pp. National Academy Press, Washington, D.C. For sale by Defense Technical Information Center, Cameron Station, Alexandria, Va. 22312.



Accessibility and Dissemination of Data Task Group Chairpersons: (left to right) M. Kotani (1971-1978), A. David (1980-1984), and D. Watson (1978-1980).

Editor pro tempore: Edgar F. Westrum, Jr.
Department of Chemistry, University of Michigan, Ann Arbor, MI 48109
Telephone: (313) 764-7357; Telex: 8102236056

Associate Editor: Phyllis Glaeser
CODATA Secretariat, 51 Boulevard de Montmorency, 75016 Paris, France
Telephone: 525-04-96; Cables: ICSU Paris 016; Telex: 630553 F

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