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SIGMOD RECORD

SIGMOD RECORD is a quarterly publication of the Special Interest Group on Management of Data (SIGMOD) of the Association for Computing Machinery (ACM).

We solicit contributions of articles, news, reports, book reviews, and letters. Conference announcements and calls for papers are published if relevant to the interests of the group. All contributions are to be sent to the editor for consideration for publication. Materials are not normally returned. Technical papers submitted to the RECORD should be relatively short (5-15 single space pages) and sent to the editor either in camera ready format or via electronic mail. Papers which are sent in camera ready form should be single spaced on 8.5 by 11 inch paper with at least 1 inch margins.

Opinions expressed in signed articles and letters are those of the writer and do not necessarily express the position of the ACM or SIGMOD. Unless otherwise stated, reports and technical papers in the RECORD are un refereed working papers, and the author(s) should be contacted for reprint authorization. Contact the editor for information on the copyright status of all uncredited material.

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Editor's Notes

You may be wondering what happened to the June issue. Due to "circumstances beyond our control", we have had to postpone the distribution of the 1987 SIGMOD Conference Proceedings. Be assured that you will receive yours - hopefully soon (Since I couldn't attend the conference I'm also waiting for my copy.). As addressed in the Chairman's Message, financial problems still persist. We will try to publish the Proceedings in place of a normal December issue.

I have been pleased with the overwhelming interest in the SIGMOD Record in the last few months. The backlog of technical articles from academia (both faculty and students) and industry continues to grow. I am trying to put a mixture of different types of articles in each newsletter, so I don't necessarily publish articles in the order of submission. In this issue we have a review of the recent Principles of Database Systems Symposium. I encourage readers to submit reviews of conferences and books which would be of interest to the readership.

Special thanks go to Dr. Sang Son of the University of Virginia for volunteering to act as a guest editor for an upcoming issue of the newsletter. As you can see on the following page, he will be editing a special issue on real-time database systems. This issue is currently scheduled for the March 1988 SIGMOD Record. Any of you with ideas for upcoming special issues, feel free to contact me. I welcome the assistance and support.

One letter which I recently received addressed the timely distribution of registration information for the SIGMOD Conference and other related database conferences. I do my best to publish all Calls for Papers which I feel are of interest to the readers. However, due to the publication deadlines it is not always possible to print all announcements. Any of you participating on the organizing committees for conferences, please get your announcements to me as soon as possible. There are many Calls for Papers in this issue including the SIGMOD 1988 Conference.

Keep those cards and letters coming.
CALL FOR PAPERS

SPECIAL ISSUE ON
REAL-TIME DATABASE SYSTEMS

SIGMOD RECORD seeks articles and papers on all aspects of real-time database systems for inclusion in the March 1988 issue. Suggested topics include, but are not limited to, the following:

- Distributed Database Operating Systems for Real-Time Applications
- Concurrency Control with Real-Time Constraints
- Performance Analysis and Modeling of Databases for Real-Time Systems
- Fault-Tolerance and Recovery
- Real-Time Database Projects

Submit a complete manuscript by December 1, 1987 to the guest editor:

Sang H. Son
Department of Computer Science
Thornton Hall
University of Virginia
Charlottesville, Virginia 22903

CSNET address: son@cs.virginia.edu
Phone: (804) 979-5644
Chair's Message

First, I am pleased to announce that the current SIGMOD officers (myself, Paula Hawthorn, and Fred Maryanski) have been reelected for another 2 year term (which I can promise you will be our last term). Given the raises in dues that we have passed on, I had fully expected that we would be voted out of office. Thank you for your vote of confidence (wait until you see the bad news below).

On behalf of the SIGMOD membership I would like to thank Mike Stonebraker for organizing an outstanding SIGMOD conference. The conference was extremely successful and well run. Special thanks are due to Irv Traiger and Umesh Dayal (technical program), Won Kim (panels), Nancy Griffiths (tutorials), Larry Rowe (vendor presentations), Sharon Wensel (local arrangements), Paula Hawthorn (registration), and Corky McCord (steering committee). For those of you not at the conference, in addition to missing an exciting and informative conference, you also missed a terrific boat ride out through the Golden Gate Bridge at sunset (with some great views of the windsurfers shredding).

Now for the bad news. While it appears that this year's SIGMOD conference will make almost $20,000, the 1986 SIGMOD conference lost almost $12,000 and the 1987 PODS conference lost $1,000. I realize that this news is fairly late in coming, but the 1986 organizers never called me to say "oh, by the way we lost $12,000" and ACM just recently sent us the accounting sheets for the end of 1986. Since these losses are fairly significant given our precarious financial condition, I thought I would describe how the finances of conferences are handled.

The conference process begins with the completion of a Technical Meeting Request Form (TMRF). Two forms of sponsorship by SIGMOD can be requested. In the case of sponsorship in cooperation with SIGMOD (e.g. the 1987 VLDB conference), SIGMOD is not assuming any financial liability for the conference. In this case, the chair is not generally shown the budget for the conference, and the decision whether or not to co-sponsor the conference is made strictly on the basis of the technical merit of the conference.

In the second form of sponsorship, SIGMOD assumes financial responsibility for the conference. In the case of the PODS conference, SIGMOD co-sponsors the conference along with SIGACT and SIGART. Each of the SIGs assumes 1/3 of the liability of the conference and receives 1/3 of the surplus (if there is any). In the case of the annual SIGMOD conference, SIGMOD assumes 100% of the financial responsibility.

In this form of sponsorship, the organizers prepare a detailed budget. This budget is based on the actual budget of previous conferences and the organizers' best
estimates" of the anticipated expenses. The big unknown in preparing a budget is estimating how many people will actually attend. For example, while one would expect that San Francisco would draw well (well over 500 paid registrants), who would have predicted how poorly Washington would do (about 300 attendees). Since a number of expenses are either fixed or must be cast in concrete months in advance, a swing of 200 people can mean the difference between a $12,000 loss and a $20,000 surplus. To complicate matters further, once the conference budget has been approved, the SIGMOD chair really has no further control of the financial budget of the conference and it is up to the conference chair to insure that money is not lost.

To minimize our exposure in the future, I am requiring that all conferences for which we are assuming co-sponsorship be extremely conservative in estimating the number of attendees. While doing so will result in raising registration fees somewhat, there is no alternative given our financial situation. In addition, I am going to suggest that the differential between the early and on-site registration fees be raised to encourage people to preregister. Having a more accurate attendance picture 4-6 weeks before the conference, should give the organizers a better handle on their budgets.

Since the final financial report for the 1987 conference is not yet in, ACM will not allow us to print the proceedings of the conference as a newsletter. Once ACM gets this report, we will be back in the black and will be sending the proceedings as the next newsletter issue. I apologize for this delay.

Finally, I would like to encourage all of you to take advantage of the very busy conference schedule for 1988. Details about a number of these conferences can be found elsewhere in this issue.

David DeWitt August 17, 1987
PRELIMINARY PROGRAM

International Conference on Data and Knowledge Systems for Engineering and Manufacturing

October 19-20, 1987

The Hartford Graduate Center
Hartford, Connecticut

THE CONFERENCE

This conference will bring together leading researchers and practicing engineers for an intensive series of presentations and discussions on systems, methods, and techniques for improving the productivity of manufacturing and engineering processes. It will provide a forum for interactions between university researchers and design and manufacturing engineers on intelligent data and knowledge systems for manufacturing automation. It will also offer an opportunity for the discussion and promotion of research and development cooperations in manufacturing automation between universities, industries, and government agencies.

CONFERENCE PROGRAM

The conference program includes paper sessions, panel discussions, and plenary sessions. Paper sessions address:

• Distributed Architectures for Manufacturing and Engineering
• Data Objects and Models
• Case Studies
• CAD/CAM Databases
• Expert and Knowledge-based Systems
• Intelligent User Interface Systems

Panel sessions include:

• The DOD Engineering Information Systems; Chair: Robert Winner, Institute for Defense Analyses
• Heterogeneous Database Support for Manufacturing and Engineering; Chair: Sandra Heiler, Computer Corporation of America
• Joint R&D Between Government, Industry, and University; Chair: Howard Bloom, National Bureau of Standards

The plenary sessions include the keynote address and an invited speaker.

Keynote Address:
Michael J. Wozny, National Science Foundation

Invited Speaker:
Robert Booth, General Motors

ORGANIZATION

The conference will be held at the Hartford Graduate Center, 275 Windsor Street, Hartford, Connecticut. The conference hotel is the Holiday Inn, Hartford - Downtown, 50 Morgan Street, Hartford Connecticut, (203) 549-2400. Reservations should be made by September 30, 1987.

For a copy of the Advance Program contact:
David L. Spooner
Computer Science Department
Rensselaer Polytechnic Institute
Troy, New York 12180
Phone: (518) 276-6890
The Entity-Relationship Approach is the basis for many Database Design and System Development Methodologies. ER Conferences bring together practitioners and researchers to share new developments and issues related to the use of the ER Approach. The conference consists of presented papers addressing the theory and practice of the ER Approach as well as invited papers, tutorials, panel sessions, and demonstrations.

3-DAY CONFERENCE FEATURES:
- Internationally Known Experts in Database and Information Management from both the Academic and Commercial Communities
- Tutorials, Technical Presentations, Panel Discussions and Vendor Demonstrations
- Full Banquet at Windows of the World atop the World Trade Center
- Three Luncheons and continuous complimentary Coffee at Sheraton Centre
- Published Conference Proceedings and Spousal Conference Kit
- Discounts up to 40% on Airline and Hotel Arrangements

PROGRAM HIGHLIGHTS
- Papers Presented on Major Database Themes:
  - Database Development and Management
  - Application Systems Design
  - Managing Information Resources
  - Conference Chairmen:
    - Martin Modell—Merrill Lynch
    - Stefano Spaccapietra—University of Dijon
    - Program Committee Chairman:
      - Salvatore T. March—University of Minnesota
    - Steering Committee Chairman:
      - Peter P. Chen—LSU and MIT
    - Vendor Committee Chairman:
      - Cheng Hsu—Rensselaer Polytechnic Institute
    - Publicity Chairman:
      - John Lucas—Depository Trust Company
    - Local Arrangements Chairman:
      - Lionel Brooks—Depository Trust Company
    - Treasurer:
      - Leslie P. Hazleton—IBM Corporation
    - Public Relations Chairman:
      - Marcia Fengold—Cap Gemini America

- Tutorials and Keynote Speakers Include:
  - James Wetherbe—Editor in Chief, Data Base (ACM-SIGBDP)—Professor and Director of MIS Research Center, Univ. of Minnesota
  - The Challenge to do Data Planning
  - Peter Chen—Professor, LSU and MIT (Steering Committee Chairman)
  - ER Approach, Current Status and Future Directions
  - John Zachman—IBM Corporation, LA Scientific Center
  - Framework for an Information Systems Architecture
  - Dan Appleton—President, Dacom
  - Transforming Data Plans into Data Models
  - Francois Bodart—Professor, Institute of Informatique, University of Namur, Belgium
  - European Methodologies for System Development
  - David Reiner—Systems Architect, Lotus Development Corp.
  - Automated Support for Database Design

CONFERENCE COMMITTEE
- Conference Registrar:
  - Professor Kathi Hogheud Davis
  - Department of Computer Sciences
  - University of Northern Illinois
  - Dekalb, Illinois 60115
  - (815) 753-6945

CONFERENCE FEES
- Prior to Sept. 25
  - Regular $375.00
  - Discount 300.00
  - Student 100.00
  - Spouse 200.00
  - Proceedings Only 50.00

- After Sept. 25
  - Regular $425.00
  - Discount 350.00
  - Student 150.00
  - Spouse 250.00
  - Proceedings Only 50.00

- Discounts apply to Government, Academic, Cooperating and Affiliated Organizations
- Student excludes banquet & luncheons
- Spouse covers banquet & luncheons only

REGISTRATION AND GENERAL INFORMATION
- CONFERENCE LOCATION
  - AMERICAN AIRLINES—Meeting Service Desk 1-800-433-1790
  - SHERATON CENTRE AND TOWERS 1-800-223-6550—Outside NY 212-581-1000 in NY

- For Discount Mention E-R Conference. Special Discount for Govt. and Academic Employees.

- CONFERENCE FEES
  - Prior to Sept. 25
    - Regular $375.00
    - Discount 300.00
    - Student 100.00
    - Spouse 200.00
    - Proceedings Only 50.00

  - After Sept. 25
    - Regular $425.00
    - Discount 350.00
    - Student 150.00
    - Spouse 250.00
    - Proceedings Only 50.00

  - Discounts apply to Government, Academic, Cooperating and Affiliated Organizations
  - Student excludes banquet & luncheons
  - Spouse covers banquet & luncheons only

- REGISTRATION AND GENERAL INFORMATION
  - Conference Registrar:
    - Professor Kathi Hogheud Davis
    - Department of Computer Sciences
    - University of Northern Illinois
    - Dekalb, Illinois 60115
    - (815) 753-6945

  - NAME ____________________________
  - ADDRESS ____________________________
  - CITY _______ STATE _____ ZIP _____ COUNTRY _______
  - PHONE _______ AFFILIATION _______
  - TOTAL AMOUNT INCLUDED _______ ACM/IEEE # _______

  - Make Checks Payable To: Sixth International E-R Conference (U.S. Dollars)
  - Bank Transfers: Citibank, N.Y. ABA # 02100089 Account # 04203673
Call for Papers

1988 ACM SIGMETRICS Conference
on Measurement and Modeling of Computer Systems

May 24-27, 1988
Santa Fe, New Mexico, USA

Performance modeling is a fundamental part of designing and understanding the behavior of computer systems. This conference is a forum for presenting state-of-the-art work that studies computer system design and usage through the application of performance measurement and modeling techniques. Contributions advancing the state-of-the-art via new techniques, or furthering our understanding of existing techniques, are welcome. Topics of interest include:

Representing and Evaluating the Performance of
- Parallel processing systems
- Distributed systems
- Communication networks
- Interconnection networks
- Supercomputing
- Computer or chip architecture
- I/O systems
- Software performance engineering
- Database systems
- Reliability & fault tolerance

Techniques & Algorithms for
- Workload characterization
- Model verification/validation
- Queueing theory
- Timed & stochastic Petri nets
- Graph models
- Simulation and statistical analysis
- Software performance predictions
- Solutions of queueing models

Practical, original case studies

Paper publication is very competitive; usually less than 25% of submissions are accepted. We wish to increase participation in 1988 while maintaining the traditional level of quality. Thus, we will provide our referee criteria in advance to prospective authors. We will also accept a limited number of papers for a poster session. We solicit instructors’ proposals for pre-conference tutorials. For more information contact either chairman below.

Proceedings will be published as a special issue of the SIGMETRICS Performance Evaluation Review. Papers of exceptional merit will be submitted for journal publication.

Important Deadlines

<table>
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<tr>
<th>Month</th>
<th>Event</th>
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<tr>
<td>July</td>
<td>Abstract submission</td>
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<tr>
<td>Sept.</td>
<td>Paper submissions/tutorial proposals</td>
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<tr>
<td>Oct.</td>
<td>Poster session extended abstracts</td>
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<tr>
<td>Dec.</td>
<td>Author notification</td>
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<td>Jan.</td>
<td>Camera ready copy due</td>
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Abstracts should be less than 1 page; extended abstracts for the poster session and tutorial proposals should be 3-5 pages; papers should be less than 20 pages. Author identification (including available net addresses) should appear on a separate cover sheet but not within the paper itself. Electronic submissions of abstracts, extended abstracts, and tutorial proposals are acceptable. Six copies are required for materials not electronically submitted. Submit appropriately designated materials to the Program Chairman:

Kenneth C. Sevcik,
Computer Science Department,
University of Toronto,
Toronto, Ontario, CANADA M5S 1A4,
416/978-6219 (kcs%csri.toronto.edu@csnet-relay.arpa).

General Chairman: Connie U. Smith, L&S Computer Technology, 1114 Buckman Rd., Santa Fe, New Mexico 87501, 505/988-3811 (cus@lanl.arpa). The conference committee can be contacted at: sigmetrics@lanl.arpa.
CALL FOR PAPERS

Seventh ACM SIGACT-SIGMOD-SIGART Symposium on
PRINCIPLES OF DATABASE SYSTEMS
Austin, Texas, March 21-23, 1988

The conference will cover new developments in both the theoretical and practical aspects of database and knowledge-base systems. Papers are solicited which describe original and novel research about the theory, design, specification, or implementation of database and knowledge-base systems.

Some suggested, although not exclusive, topics of interest are: architecture, concurrency control, database and expert systems, database machines, data models, data structures for physical implementation, deductive databases, dependency theory, distributed systems, incomplete information, user interfaces, performance evaluation, physical and logical design, query languages, query processing, recursive rules, spatial and temporal data, statistical databases, transaction management.

You are invited to submit ten copies of a detailed abstract (not a complete paper) to the program chairman:

Mihalis Yannakakis
Room 2C-319
AT&T Bell Laboratories
600 Mountain Avenue
Murray Hill, NJ 07974

Submissions will be evaluated on the basis of significance, originality, and overall quality. Each abstract should 1) contain enough information to enable the program committee to identify the main contributions of the work; 2) explain the importance of the work - its novelty and its practical or theoretical relevance to database and knowledge-base systems; and 3) include comparisons with and references to relevant literature. Abstracts should be no longer than ten double-spaced pages. Deviations from these guidelines may affect the program committee's evaluation of the paper.

Program Committee:

Serge Abiteboul | Alberto Mendelzon
Krzysztof Apt | Dale Skeen
Philip Bernstein | Victor Vianu
Paris Kanellakis | Mihalis Yannakakis
David Maier

The deadline for submission of abstracts is October 9, 1987. Authors will be notified of acceptance or rejection by December 8, 1987. The accepted papers, typed on special forms, will be due at the above address by January 8, 1988. All authors of accepted papers will be expected to sign copyright release forms. Proceedings will be distributed at the conference, and will be subsequently available for purchase through ACM.

General Chairman:
Avi Silberschatz
Dept. of Computer Sciences
Univ. of Texas at Austin
Austin, Texas 78712

Local Arrangements:
Chris Edmondson-Yurkanan
Dept. of Computer Sciences
Univ. of Texas at Austin
Austin, Texas 78712
Call for Papers and Participation

Second International Conference on Expert Database Systems

April 25-27, 1988
The Sheraton Premiere at Tysons Corner
Tysons Corner, Virginia

Sponsored by:
George Mason University

In Cooperation With:
American Association for Artificial Intelligence
Association for Computing Machinery -- SIGART and SIGMOD
IEEE Computer Society -- T. C. on Data Base Engineering

Conference Objectives

The International Conference on Expert Database Systems has established itself as a leading edge forum that explores the theoretical and practical issues in making database systems more intelligent and supportive of Artificial Intelligence (AI) applications. Expert Database Systems represent the confluence of R&D activities in Artificial Intelligence, Database Management, Logic, Information Retrieval, and Fuzzy Systems Theory. It is precisely this synergism among disciplines which makes the Conference both stimulating and unique.

Topics of Interest

The Program Committee invites original theoretical and application papers (of approximately 5000 words) addressing (but not limited to) the following areas:

Theory of Knowledge Bases (including knowledge representation, knowledge models, knowledge indexing and transformation, knowledge servers, and formal semantics of knowledge/data bases).

Object-Oriented Systems (including object-oriented data models, query languages, transaction management, version control, and modeling applications for enterprises, CAD/CAM, VLSI, material properties databases, knowledge-based software engineering environments, etc.).

Reasoning on Knowledge/Data Bases (including reasoning under uncertainty, sensor fusion, non-monotonic reasoning, analogical reasoning, deductive databases, logic-based query languages, semantic query optimization and constraint-directed reasoning).

Knowledge Management (including methodologies for knowledge acquisition, the knowledge engineering process, constraint and rule management, knowledge-based requirements gathering and specification, and knowledge administration).

Distributed Knowledge/Data Bases (including loosely- and tightly-coupled architectures, intelligent query decomposition and processing, federated architectures, distributed problem-solving, and blackboard techniques for distributed control).

Intelligent Database Interfaces (including expert system -- database communication, knowledge gateways, knowledgeable user agents and browsers).

Natural Language Interaction (including question-answering, extended responses, cooperative behavior, explanation and justification).

Please send five copies of papers by October 14, 1987 to

Professor Larry Kerschberg
Dept. of Information Systems and Systems Eng.
George Mason University
4400 University Drive
Fairfax, Virginia 22030, USA

Important Dates

Submission Deadline: October 14, 1987
Acceptance Notification: December 15, 1987
Camera-Ready Version: February 1, 1988
Conference Dates: April 25-27, 1988
CALL FOR PAPERS
4th International Working Conference on Statistical and Scientific Database Management
ROMA, ITALY June 27-30, 1988

THE CONFERENCE
The 4th International Working Conference on Statistical and Scientific Data Base Management (SSDBM) will be held in Rome on June 27-30, 1988 and will continue the series of conferences started in California six years ago. Purpose of this conference is to bring together database researchers, users and system builders working in the area of Statistical and Scientific Database Management and to present papers on theoretical and experimental issues and work in progress. We are eager for papers on new concepts, new ideas and new research results having to do with databases and knowledge bases. Major topics of interest are, but are not limited to: modelling and semantics, query languages and user interfaces, physical organization and security, systems, scientific databases, data analysis and performance evaluation, temporal data, applications.

SUBMISSION OF PAPERS:
Authors should submit five copies full papers, not exceeding 20 pages, before December 1, 1987 to the Chairman of the Program Committee: MAURIZIO RAFANELLI

IASI-CNR
Viale Manzoni, 30
00185 ROMA, Italy (Telex no. 610072-CNR-RM-I)

Authors will be notified of the program committee decision on their papers by April 10, 1988. Proceedings will be available at the Conference in the form of preprints and will be published in book form by a major publisher few months later.

PROGRAM COMMITTEE (partial listing)
R.A. Becker (U.S.A), R.Cubitt (Luxembourg), H.Hinterberger (Switzerland), J.Klensin (U.S.A.), F.M.Malvestuto (Italy), M.McLeish (Canada), Z.Michalewicz (New Zealand), S.Nordbotten (Norway), F.Oiken (U.S.A.), M.Rafanelli (Italy) chairman, F.L.Ricci (Italy), H.Sato (Japan), A.Shoshani (U.S.A.), B.Sundgren (Sweden), P.Svensson (Sweden) Y.Vassiliou (Greece), K.M. Wittkowski (F.R.G.)

TIME SCHEDULE
December 1, 1987 Submission of papers
April 10, 1988 Notification of acceptance
June 15, 1988 Final paper to be included in the proceedings

SPONSORS
Italian National Research Council, Swedish National Defence Research Institute, IASC-GSF, IASI, ENEA, IEEE Middle and South Italian Section, CEPS/INSTEAD, Commission of the European Communities Statistics Office (EUROSTAT). With the COOPERATION of ACM-SIGMOD.
PRELIMINARY CALL FOR PAPERS
1988 ACM-SIGMOD
International Conference on Management of Data
June 1-3, 1988               Chicago, Illinois

Organizing Committee
General Chairpersons:
Dina Bitton
University of Illinois at Chicago
Peter Scheuermann
Northwestern University

Tutorials: Clement Yu, University of Illinois at Chicago
Panels: Meral Ozsoyoglu, Case Western Reserve University
Treasurer: Uday Gupta, AT&T, Naperville
Local Arrangements: Leszek Lilien, University of Illinois at Chicago
Registration: Michael Carey, University of Wisconsin, Madison
Publicity: Edward Omiecinski, Georgia Institute of Technology
European Coordinator: Witold Litwin, INRIA, France

The 1988 ACM-SIGMOD Conference will feature two concurrent tracks: Concepts & Techniques and Applications & Implementations, each representing a vertical slice of Database Technology. Concepts & Techniques will focus on theoretical and algorithmic aspects of data and knowledge management encompassing data models, query languages, deductive databases, database design, access methods, query optimization, concurrency control and recovery. Applications & Implementations will focus on characterization of application profiles, requirement analysis, tools for logical and physical design, architectures for parallel and distributed database systems, and experimental performance studies.

Our goal is to have a balanced conference representing both the real users's needs, problems and experiences and possible solutions at the algorithm and system level.

Papers are solicited for both tracks. Four copies of each paper should be mailed to the appropriate Program Committee chairman.

Program Committee Chairpersons:

Concepts & Techniques Track
Per-Ake Larson
Department of Computer Sciences
University of Waterloo
Waterloo, Ontario
Canada N2L 3G1
palarson%waterloo@relay.cs.net

Applications & Implementations Track
Haran Boral
MCC
3500 West Balcones Center Drive
Austin, Texas 78759
oral@mcc.com

Important Dates
Papers and Panels Submission Deadlines: December 4, 1987
Notification of Acceptance: February 12, 1988
CALL FOR PAPERS

Third International Conference on Data and Knowledge Bases:
Improving Usability and Responsiveness


The conference follows the two previous conferences on databases held in Israel in 1978 and 1982. The emphasis of the conference will be on significant new concepts and ideas, leading to a better understanding of the structure of data/knowledge base systems, and on their practical application. Both theoretical and systems oriented papers will be accepted. Topics of interest include, but are not limited to:

- **Data and Knowledge**: Logic Programming languages and interfaces for databases, intelligent (deductive) database systems, data and knowledge intensive applications, data management for expert systems.
- **Object oriented database systems**: advanced database applications, database support for CAD/CAM and engineering, models and languages for complex objects, Object Oriented database languages and interfaces, integration of Object Oriented and Logic Programming approaches.
- **New concepts for database system architectures**: transaction management for advanced applications, interfaces between databases and operating systems, modular architectures for data management systems, performance evaluation and measurement, database machines and special hardware architectures, tradeoffs between hardware and software.

Send five copies of the paper (or an extended abstract of 8-10 pages) to one of the two program chairpersons. Papers should be double spaced.

From Europe, the Middle East and Africa: From the American Continent and the Far East:

Professor Joachim W. Schmidt  
Fachbereich Informatik  
J.W.Goethe - Universitaet  
Postfach 11 19 32  
D-6000 Frankfurt/Main 11.  
W. Germany

Dr. Umeshwar Dayal  
Computer Corporation of America  
Four Cambridge Center  
Cambridge, Mass 02142  
U.S.A

Papers and extended abstracts should contain a clear statement of the objectives of the work, an explanation of the significance of the problem, and a review of relevant work. All papers will be reviewed by members of the respective program committee. The conference proceedings will be published by a major publishing house. Copies will be available at the conference.

The deadline for submission is: December 20th, 1987.  
Authors will be notified of acceptance of papers by March 30th, 1988.  
Final copies of papers should arrive by May 15 1988.

Conference chairperson: E. Gudes, Ben Gurion University, Beer Sheva (Israel)  
American Vice Chairperson: Mario Schkolnick, IBM Research, Yorktown Heights (USA)  
European Vice Chairperson: W. Litwin, INRIA (France)

Program committee: C. Beeri The Hebrew University (Israel) - Coordinator  
USA:  
Umesh dayal (CCA) - chairman  
Barbara Blaustein (CCA)  
Dave Dewitt (U. of Wisconsin)  
Paris Kanellakis (Brown U.)  
Peter Scheurmann (Northwestern)  
Avi Silberschatz (U. of Texas)  
Irv Traiger (IBM Almaden)  
Shalom Tsur (MCC)  
Jeffrey D. Ullman (Stanford U.)
CALL FOR PAPERS
14th International Conference on Very Large Data Bases
Los Angeles, California, USA
August 29 - September 1 1988

THE CONFERENCE

VLDB Conferences are a forum for identifying and encouraging research, development, and novel applications of database management systems and techniques. The Fourteenth VLDB Conference will bring together researchers, developers, and users of database management systems from academia and industry to share information and explore new ideas.

TOPICS OF INTEREST

Object-Oriented and Extensible Database Systems, User Interfaces, Database Programming Languages, Logic and Databases, Access Methods, Temporal Databases and Data Models, Distributed Database Systems, and New Applications of Database Technology

TO SUBMIT PAPERS, PANEL OR TUTORIAL PROPOSALS

Original papers of up to 5000 words in length are invited on topics including but not limited to those listed. All submitted papers will be read and carefully evaluated by the Program Committee. To submit papers, send five (5) copies of double-spaced manuscript in English to one of the Program Co-Chairs by February 15, 1988:

Program Committee Co-Chairs
Francois Bancilhon
ALTAIR/INRIA
B. P. 105
78153 Le Chesnay
France
bdblues.inria.fr!francois@seismo.css.gov

David J. DeWitt
Computer Science Department
1210 W. Dayton St.
Madison, WI 53706
USA
dewitt@wisc.edu

Proposals for panels and tutorials are also sought and should be sent to the appropriate Chair (listed below) by March 15, 1988.

Panel Chair
Carlo Zaniolo
MCC
3500 West Balcones Center Drive
Austin, Texas 78759
carlo@mcc.com

Tutorial Chair
Randy Katz
Computer Science Division
523 Evans Hall
University of California, Berkeley
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IMPORTANT DATES

Papers Due: February 15, 1988
Panel and Tutorial Proposals Due: March 15, 1988
Notification of Paper Acceptance: May 2, 1988
Camera Ready Copies of Papers Due: June 1, 1988

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CALL FOR PAPERS

ICDT 1988
International Conference on Database Theory
August 31 - September 2, 1988
Bruges, BELGIUM

The conference is intended to provide a European forum for the international research community working on theoretical issues related to database systems. It is organized by the University of Antwerp and will be held in the Novotel in Bruges, Belgium.

TOPICS

Major themes to be covered are (this is not meant to be an exclusive list): artificial intelligence, complexity and optimization, concurrency control, data models, deductive databases, dependencies and constraints, distribution and parallelism in DBS, incomplete information, logic in DBS, query languages, updates and transactions.

PAPERS

Authors should submit six copies of a full draft paper before March 1, 1988 to one of the following addresses:

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Authors will be notified of the program committee decision on their papers by May 8, 1988. Final versions are due June 15, 1988. Proceedings are published by Springer-Verlag and will be available at the conference.

PROGRAM COMMITTEE

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FURTHER INFORMATION

For further information please contact J. Paredaens or D. Van Gucht.

The 6th Symposium on Principles of Database Systems (PODS) met on March 23-25, 1987, in San Diego, California. Database theory has been the main theme of this annual conference and this year's program, with its emphasis on new directions and many high quality papers, was particularly exciting. The conference was well attended, by both senior and starting researchers in the field. It was held at a beautiful resort, the Bahia Hotel on San Diego's Mission Bay, and all the participants were pleased by the fine arrangements made by Victor Vianu.

For the first time in its six years (and most successfully) PODS featured three invited speakers: Jeff Ullman, Jack Minker and Pat Selinger. Jeff Ullman spoke on the past and future of database theory. He stressed the central role of query optimization in the development of the field and made the fundamental distinction between value-oriented and object-oriented database systems, both natural extensions of past research and active areas of current interest. Jack Minker reviewed the early developments of deductive databases and their intimate relationship with programming in logic. This historical perspective was fascinating, given the emphasis of this PODS on logic and databases. Pat Selinger highlighted the vital link between theory and practice in databases. In three cases studies from query optimization, distributed deadlock detection and recovery, she offered a true practitioner's perspective of how theory can contribute to real problems. She also stressed the many interesting open questions in distributed database control.

In addition to the 3 invited papers, the program contained 34 contributed papers, which were selected from 132 submissions (interestingly 34 is the mean of the number of papers from the previous five PODS). The number of submissions increased more than 30% over last year's PODS. Perhaps the increase was due to the fact that this year SIGART joined SIGACT and SIGMOD as a sponsor of the meeting. Moshe Vardi, the program chairman, gave a very nice overview at the business meeting and set particularly high presentation and organizational standards.

The somewhat unconventional classification of papers followed in this report is intended to highlight the new topics featured. Traditional areas of research, such as data-structures for external searching (2 papers), database concurrency control (2 papers), nested relations (1 paper), safety in relational calculus (1 paper), relational query processing (3 papers), and design theory (3 papers) were well represented, despite Jeff Ullman's tongue-in-cheek comment of "last gasps of dying swans". The quality of papers in these areas was very good. Unlike previous years, they did not form the majority or the focus of interest of the
conference. Among these papers, "Logical Design of Relational Database Schemes" by L.Y. Yuan and Z.M. Ozsoyoglu, was a particularly elegant answer to a longstanding open problem on MVDs and normal form design. "A New Basis for the Weak Instance Model", by P. Atzeni and M.C. Bernardis, refined the understanding of null values in the weak instance model.

The dominating topic in this year's PODS was logic and databases (12 papers). The contributions ranged from: incorporating sets into logic programming formalisms, to identifying potential parallelism in logic programs, to optimization of logical queries using database theory techniques, and to (the most popular) recursive query evaluation. Combining sets and logic-based computing paradigms is a central, practical concern in the design of new query languages. "Logic Programming with Sets", by G.M. Kuper and "Sets and Negation in a Logic Database Language, LDL1", by C.Beeri, S. Naqvi, R. Ramakrishnan, O.Shmueli and D. Tsur represent important first steps in this new area. The paper by F. Afrati and C.H. Papadimitriou on "The Parallel Complexity of Simple Chain Queries" has an elegant, syntactic and complete characterization of all single rule, chain programs that are parallelizable. Classical query problems involving expressibility, safety, and bounded recursion detection are investigated in the context of Datalog, the favored toy-language in logic and databases.

"Optimizing Datalog Programs", by Y. Sagiv clearly and convincingly illustrates the many uses of conventional database theory (dependencies, chase, etc.) to logic program optimization. Algorithms for recursive query evaluation, a strong theme also in last year's PODS, SIGMOD and VLDB, reached a definite degree of maturity. Five papers out of the twelve were exclusively devoted to the subject. "On the Power of Magic", by C. Beeri and R. Ramakrishnan, is an attempt at a truly general framework for the many methods proposed to date. On the other hand, "One-sided Recursions", by J.F. Naughton, tries to identify the analog of language regularity in Datalog programs and their evaluation. The importance of regularity in the context of processing recursion is highlighted in "Bounds on the Propagation of Selection into Logic Programs", by C. Beeri, P. Kanellakis, F. Bancilhon and R. Ramakrishnan.

The problem of updating, as opposed to querying, databases received a fair amount of original attention (4 papers). "A Transaction Language Complete for Database Update and Specification", by S. Abiteboul and V. Vianou, places the problem on an interesting, novel language setting. "Maintenance of Stratified Databases Viewed as a Belief Revision System", by K. Apt and J.M. Pugin, investigates algorithmic solutions in the framework of Datalog with negation.

New directions were also emphasized in algorithms for transaction processing (3 papers). "Nested Transactions and Read-Write Locking", by A. Fekete, N. Lynch, M. Merrit and W. Weihl, has a complete proof of the Moss algorithm for nested transactions with read-write locks. Here, the new formalism of I/O
automata is used, which also is a major theme in this year's Symposium on the Principles of Distributed Computing. Commitment protocols and their knowledge-theoretic analysis were examined in a paper by V. Hadzilacos titled "A Knowledge-Theoretic Analysis of Atomic Commitment Protocols".

As mentioned earlier, this year's symposium is the first PODS to be jointly sponsored by SIGART. The volume of research on logic programming applications to databases illustrates a truly fruitful connection between the database and artificial intelligence communities. In addition, there were 3 papers motivated from artificial intelligence applications. For example, "Relative Knowledge in a Distributed Database", by T. Imielinski and "Decomposing an N-ary Relation into a Tree of Binary Relations", by R. Dechter, represent new problems and approaches.

Many of the final, refereed versions of the papers that are in the Proceedings will appear in special issues of the Journal of Computer and System Sciences and the Journal of Logic Programming edited by Moshe Vardi.

The high technical quality was complemented by a pleasant and friendly atmosphere. This is the second PODS to take place in Southern California, (the 1st PODS, also a very exciting and enjoyable conference, was in LA). The weather, despite the non-zero probability of rain, is a definite positive contribution, particularly at that time of year. The dinner cruise was excellent, but that great extra touch of Victor was the Wednesday picnic lunch. The pool was a most useful feature as well and should be a requirement in all future PODS.

In the business meeting, the participants wisely refrained from any discussion of knowledge versus data. They devoted their precious wisdom to the fine distinction between principles and concepts and they prudently refused to increase the media-hype by endorsing best talk prizes.

In summary, it was the general consensus that this was one of the best of the six symposia to date. The PODS will have a home for both coming years: in 1988 in Austin Texas, hosted by the University of Texas, and in 1989 in the Bay Area hosted by the IBM Almaden Research Center. The attendants from those areas with unfavorable March weather can look forward to longer but more rewarding flights.

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