

# SIGMOD RECORD

A Quarterly Publication of SIGMOD  
the Special Interest Group on  
Management of Data

Volume 16, Number 1

March 1987

CONTENTS	<b>EDITOR'S NOTES</b> .....	1
	<b>CHAIR'S MESSAGE</b> .....	2
	<b>TREASURER'S REPORT</b> .....	4
	<b>ANNOUNCEMENTS AND CALLS FOR PAPERS</b>	
	Abstracts of SIGMOD/87 Conference Tutorials .....	9
	X3/SPARC Database Systems Study Group Solicits Members ..	11
	Calls For Papers .....	12
	<b>ARTICLES</b>	
	<b>Human Rights: Some Perspectives</b> .....	18
	Jack Minker	
	<b>The Effect of Join Selectivities on Optimal Nesting Order</b> .....	28
	Akhil Kumar and Michael Stonebraker	
	<b>More Commentary on Missing Information in Relational     Databases (Applicable and Inapplicable Information)</b> .....	42
E. F. Codd		



## 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 unrefereed 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.

### SIGMOD Officers

#### Chairperson

David DeWitt  
Computer Sciences Dept.  
University of Wisconsin  
1210 W. Dayton St.  
Madison, WI 53706

#### Vice-Chair

Paula Hawthorn  
Britton-Lee Inc.  
Suite 304  
1919 Addison St.  
Berkeley, CA 94708

#### Secretary/Treasurer

Fred Maryanski  
University of Connecticut  
EECS Dept, U-57  
260 Glenbrook Road  
Storrs, CT 06268

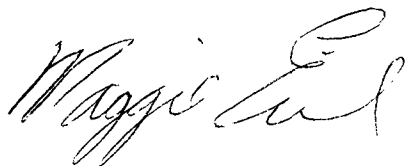
#### Record Editor

Margaret H. Eich  
Department of Computer Science  
and Engineering  
Southern Methodist University  
Dallas, TX 75275  
CSNET: eich@smu

## Editor's Notes

This marks the anniversary of my tenure as SIGMOD Newsletter Editor. I feel that we have made great progress this past year in an effort to make the RECORD a viable and timely newsletter. I'm finally beginning to get a backlog of technical articles, but still need many more. I encourage each of you to contribute to the content of the newsletter. I welcome articles, letters, announcements, or anything of interest to the SIGMOD members as a whole. I would also like to encourage anyone to contact me concerning assisting me as Editor. If you would be interested in either being a Guest Editor for an upcoming issue or would like to help me in putting together future issues please let me know.

This Newsletter contains several interesting technical articles as well as news concerning SIGMOD itself. Please read the Chair's Message to find out what's happening about VLDB and the Treasurer's Report to learn more about the upcoming dues increase. Jack Minker has provided us with a summary of the talk he gave at last years SIGMOD conference. Although not of a technical nature, I'm sure you will find it a very informative and thought provoking paper.

A handwritten signature in cursive script, appearing to read "Maggie E. L.", located below the main text of the editor's notes.

## Chair's Message

Since my last report a number of exciting things have happened (including progress on the VLDB front). First, Mike Stonebraker has arranged what looks to be an outstanding SIGMOD conference for 1987. The conference will be held May 27-29 at the Cathedral Hill Hotel in San Francisco. Mike has radically changed the organization of the conference so that it will appeal to a much broader community of database professionals. For users of database systems, two events will be of special interest. First, Nancy Griffeth has arranged a series of tutorials that will be run in parallel with the other sessions. Abstracts of these tutorials can be found elsewhere in this issue of the Record. Second, Larry Rowe is in the process of organizing a set of vendor exhibits and presentations so that users can peruse the state of database technology. For those involved with the development of database systems, a track of applications-oriented papers has been selected by Irv Traiger of IBM-San Jose. Finally, for database system researchers a more traditional track of papers has been put together by Umesh Dayal of CCA. By all indications the conference will be excellent and should not be missed by anyone interested in any aspect of database systems.

While we are on the topic of conferences, in 1988, the VLDB conference will return to the United States. This will mark the first time the conference has been held in this country since the very first year the conference was run. The conference will be held at the Hyatt in Long Beach, California. The conference is being organized by Arie Shoshoni of Lawrence Berkeley Laboratory. Francois Bancilhon and I will co-chair the program committee.

In a month or so you will be receiving a ballot for SIGMOD officers. The current officers (DeWitt, Hawthorn, and Maryanski) are running for re-election. Challenging for these seats of immense power are Dan Fishman (who is running for Chair), Arie Segev (Vice-Chair) and Ami Motro (Secretary/Treasurer).

Concerning dues, we have been forced to raise your dues again. Effective July 1, SIGMOD dues will increase from \$15 to \$18. While I realize that we just raised the dues last year, we underestimated what it would take to get us on an even financial keel. This level of dues is still less than what other SIGs who distribute their conference proceedings to all members charge.

Now for some good news. Last week the ACM council approved the following motion by John White, SIG Board Chair:

”Resolved, that Council grants SIGMOD, SIGBDP, and other SIGs an exception to Council policy to allow cooperation with the VLDB Endowment by being cooperating sponsors of the VLDB ’87 conference and cosponsors of the VLDB ’88 conference. Cosponsorship of VLDB ’88 will be contingent upon the SIGs involved reaching an agreement with the VLDB Endowment consistent with Conferences Board policy and approved by the SIG Board Chair and the Conferences Board Chair.”

What this means is that SIGMOD will be permitted to cooperate with the sponsors of the 1987 Conference and that a path has been opened that will permit us to co-sponsor the 1988 conference. While some important issues need to be resolved before co-sponsorship of the 1988 conference can be approved, the issues do not appear insurmountable. John White is hopeful that resolution of the issues for the 1988 Conference will form the basis of a permanent resolution of the problem. I would like to thank John White for all his help in resolving the VLDB issue. Norm Gibbs and Barbara Wolfe also deserve our thanks for their help.

## EXPLANATION OF BUDGET

Fred Maryanski

### 1. OVERVIEW

This year our final situation is at the state that we projected when the dues were increased a year ago. The \$18.00 annual expense per member was covered by \$15.00 in dues with the remainder coming from our fund balance which is now approaching the permissible minimum. A slight increase of dues to \$18.00 is necessary to keep the SIG solvent while providing you with an active newsletter and the proceedings of the annual SIGMOD conference. Details are contained on the subsequent pages which are the spreadsheets used in the budgeting process. The breakdown of newsletter and proceedings costs are given along with the complete information on the FY88 SIG budget. In addition, projections for the following two fiscal years are included along with the last update from ACM Headquarters. Our plans for the future are to continue to provide a high level of service and maintain the fund balance at a minimum. Dues will be adjusted to keep the equation balanced. Some brief explanations are provided below.

### 2. INCOME

The bulk of the SIG's income continues to be from membership dues with some support from proceedings sales which have not dropped as originally expected.

### 3. EXPENSES

It is perhaps best to present our expenses as per member costs. We will use the approximation of 5000 members to simplify the presentation. The significant costs per member are roughly as follows:

Newsletters ( 3 @ \$2 )	=	\$6.00
Conference Proceedings	=	6.50
Promotion/Advertising	=	.50
Miscellany	=	.50
Headquarters Data Processing	=	.50
Headquarters Allocation	=	4.00

TOTAL \$18.00

Our final fund balance is just over the minimum which is 10% of total expenses.

### 4. SUMMARY

It appears that last year's budget dramatic dues increase was a one-time occurrence. In the future only minor adjustments should be needed to keep the SIG on an even financial keel. Your input on this matter is always welcome.

SIGMOD FY'88

SIGMOD FY'88 BUDGET					
INCOME	Q1	Q2	Q3	Q4	TOTAL
SIG MEMBER DUES	\$20083.14	\$20083.14	\$20083.14	\$20083.14	\$80332.56
BACK NEWSLETTERS	\$5.06	\$5.06	\$5.06	\$5.06	\$20.24
PROCEEDINGS SALES	\$2777.50	\$2777.50	\$2777.50	\$2777.50	\$11110.00
CONFERENCE NET INCOME	\$0.00	\$0.00	\$89.33	\$2551.00	\$2640.33
AIR OPTIONS INCOME	\$1032.00	\$1032.00	\$1032.00	\$1032.00	\$4128.00
OTHER					\$0.00
TOTAL INCOME	\$23897.70	\$23897.70	\$23987.03	\$26448.70	98231.13
EXPENSES					
TRAVEL		\$0.00		\$1000.00	\$1000.00
TEMP SECRETARIAL	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TEMP NEWSLETTER	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TELEPHONE	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
MAILING AND HANDLING	\$50.00	\$50.00	\$50.00	\$50.00	\$200.00
SUPPLIES	\$50.00	\$50.00	\$50.00	\$50.00	\$200.00
MINOR PRINTING	\$150.00	\$150.00	\$150.00	\$1050.00	\$1500.00
DUPLICATING	\$25.00	\$25.00	\$25.00	\$25.00	\$100.00
PUB. PRINTING	\$5340.47	\$5340.47	\$19154.56	\$5340.47	\$35175.97
WRAPPING, HANDLING	\$424.76	\$424.76	\$533.60	\$424.76	\$1807.88
SHIPPING AND FREIGHT	\$70.46	\$70.46	\$70.46	\$70.46	\$281.84
PUBLICATION POSTAGE	\$4121.67	\$4121.67	\$12243.89	\$4121.67	\$24608.90
DATA PROCESSING	\$541.18	\$541.18	\$541.18	\$541.18	\$2164.72
PROMOTION/ADVERTISING	\$472.50	\$472.50	\$472.50	\$472.50	\$1890.00
LOCAL SUPPORT	\$50.00	\$50.00	\$50.00	\$50.00	\$200.00

SIGMOD FY'88

MEETINGS								\$0.00					\$0.00
MISC. EXPENSES			\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$200.00
HEADQUARTERS			\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$5156.32	\$20625.28
CONTINGENCY FUND			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL EXPENSES			\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	\$16502.36	89954.59
NET FY'88			\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	8276.54
OUTSIDE FUNDS													0
TRUE FY '88 NET			\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	\$7395.34	8276.54
FUND BALANCE													\$478.21
FUND BALANCE NO INT													\$8754.75
INTEREST INCOME													\$284.91
FUND BALANCE FY'88													\$9039.66
DUES													
REGULAR		\$63840.00											
3800		\$18.00	\$15.00										
ASSOCIATE		\$6888.00											
410		\$18.00	\$15.00										
STUDENT		\$5532.80											
494		\$12.00	\$10.00										
DESIGNEES		\$67.20											
4		\$18.00	\$15.00										
NON-ACM		\$263.20											
14		\$20.00	\$17.00										
SUBS.		\$5380.80											
236		\$24.00	\$21.00										



SIGMOD FY'88

4958	TOTAL MEMBERS								
	TOTAL DUES	\$81972.00							
	COLLECTION	\$1639.44							
	BUDG DUES	\$80332.56	\$20083.14	\$20083.14	\$20083.14	\$20083.14	\$20083.14	\$20083.14	\$80332.56
	PUBLICATION SALES								
	NEWSLETTER	\$20.24	\$5.06	\$5.06	\$5.06	\$5.06	\$5.06	\$5.06	\$20.24
	8	\$2.53							
	PROCS	\$11110.00	\$2777.50	\$2777.50	\$2777.50	\$2777.50	\$2777.50	\$2777.50	\$11110.00
	500	\$22.22							
	CONFERENCE AND SEMINAR INCOME								
	SIGMOD							\$2551.00	
	PODS						\$89.33		
	TOTAL CONFERENCE		\$0.00	\$0.00	\$0.00	\$89.33	\$2551.00		\$2640.33
	AIR OPTIONS INCOME		\$1032.00	\$1032.00	\$1032.00	\$1032.00	\$1032.00	\$1032.00	\$4128.00
	AIR FREIGHT	\$10.00							
	FULL AIR	\$22.00							
	MINOR PRINTING								
	MEMBERSHIP BROCHURES		\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	\$150.00	\$600.00
	2000								
	BALLOTS					\$0.00	\$900.00		
	PUB CAT					\$150.00	\$1050.00		
	TOTAL MINOR PRINT		\$150.00	\$150.00	\$150.00	\$150.00	\$1050.00	\$1050.00	\$1500.00

SIGMOD FY'88

DATA PROCESSING									
MEMBERSHIP LABELS	\$187.50	\$187.50	\$187.50	\$187.50	\$187.50	\$187.50	\$187.50	\$187.50	\$750.00
NON-ACM MEMBER	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	\$28.00	
SUBSCRIPT	\$325.68	\$325.68	\$325.68	\$325.68	\$325.68	\$325.68	\$325.68	\$325.68	
TOTAL DP	541.18	541.18	541.18	541.18	541.18	541.18	541.18	541.18	\$2164.72
AIR INCOME									
AIR FREIGHT									
ADD COST	\$2.40								
MAX AMOUNT	\$9.43								
SIG RATE	\$10.00								
INCOME	\$1290.00								
FULL AIR									
ADD COST	\$4.05								
MAX AMOUNT	\$21.99								
SIG RATE	\$22.00								
INCOME	\$2838.00								
TOTAL AIR	\$4128.00								
NEWSLETTER WORKSHEET									
QUARTER	PAGES	COPIES	PRINTING	HANDLING	FREIGHT	POSTAGE	TOTAL	TOTAL	TOTAL
Q1	88	5336	\$5340.47	\$424.76	\$70.46	\$4121.67	\$9957.36	\$9957.36	\$9957.36
Q2	88	5336	\$5340.47	\$424.76	\$70.46	\$4121.67	\$9957.36	\$9957.36	\$9957.36
Q3	400	5336	\$19154.56	\$533.60	\$70.46	\$12243.89	\$32002.51	\$32002.51	\$32002.51
Q4	88	5336	\$5340.47	\$424.76	\$70.46	\$4121.67	\$9957.36	\$9957.36	\$9957.36
YEAR TOTAL	664	21344	\$35175.97	\$1807.88	\$281.84	\$24608.90	\$61874.59	\$61874.59	\$61874.59

## ABSTRACTS OF SIGMOD/87 CONFERENCE TUTORIALS

### Transaction Processing Systems

This seminar is an introduction to transaction processing (TP) systems. Examples include automatic teller machines (ATMs), point-of-sale retail systems, and reservation systems. A model of TP applications is presented, describing their requirements for functionality, reliability, performance, and ease-of-use. This sets the stage for a broad-brush survey of the major system components needed to meet those requirements: communications systems, transaction monitors, database systems, and fault-tolerant computers. An example ATM application is used to illustrate system configurations.

#### Philip A. Bernstein

Philip A. Bernstein is Professor of Information Technology at Wang Institute of Graduate Studies. Previously, he was Vice President Software at Sequoia Systems, Associate Professor at Harvard University, and Senior Computer Scientist at Computer Corporation of America, where he co-designed four distributed database systems. Professor Bernstein has published many papers on the theory and implementation of transaction processing systems, and is coauthor of "Concurrency Control and Recovery in Database Systems" (Addison-Wesley, 1987).

### Database Design Tools and Environments:

Only recently has Database Design matured from loose collections of ad hoc techniques to proven, well understood methods. This coming of age has spurred the development of over 50 database design tools. The tutorial outlines basic methods and concepts, describes features of current and future database design tools, and surveys over 50 such tools. The one day demonstration will include over 25 tools/environments.

#### Michael Brodie

Michael Brodie, a Sr. Computer Scientist at CCA, has over 15 years research, practice, and teaching experience in database design methods and tools. With a Ph.D. in Database Systems from the Univ. of Toronto, his current research interests include database design environments and Artificial Intelligence on which he has published extensively including "On Knowledge Base Management Systems" and "On Conceptual Modelling" from Springer-Verlag.

## **Distributed Database Management**

This tutorial will cover such questions as “What is the difference between distributed processing and distributed data management” and “What problems are solved by and what problems are caused by distributed database (DDB) systems”. Important concepts in DDB, such as location transparency, query optimization, fragmentation or partitioning, replication of data, and transaction processing will be presented. Finally, we will take a brief look at today’s systems and where they are headed.

### **Robert E. McCord**

Robert McCord was the project manager for the development of INGRES/STAR (a distributed database management system) at Relational Technology, Inc. Previously, he received B. S. and M. S. degrees in Computer Science from Penn State University and a Ph. D. in Computer Science from the University of California, Berkeley, where his dissertation was “A Model of Query Processing and Network Support in a Distributed Database Machine”.

## **Office Information Systems**

This tutorial will outline some of the most important research and development efforts in the area of office information systems. Office automation will directly affect more than half of the working population of the world. Some of the topics that will be presented include new hardware technologies such as WORM and CDROM optical disks, aspects of integrated multimedia data management, distributed office systems, and end user tools and interfaces.

### **Stavros Christodoulakis**

Stavros Christodoulakis is an Associate Professor at the Department of Computer Science of the University of Waterloo. From 1981 to 1985 he was Assistant Professor at the Department of Computer Science at the University of Toronto. He obtained his Ph. D. in Computer Science from the University of Toronto in 1981. His research interests are in the areas of data bases and office information systems. He has published papers on optical and magnetic disk performance, multimedia servers, text access methods, multimedia user interfaces, data base performance, and distributed systems.

X3/SPARC DATABASE SYSTEMS STUDY GROUP  
SOLICITS MEMBERS

The Database Systems Study Group (DBSSG), one of the advisory groups to Accredited Standards Committee X3, Standards Planning and Requirements Committee (SPARC), operating under the procedures of the American National Standards Institute (ANSI), is soliciting members for technical working groups investigating suitable areas for database management system standardization.

Current projects include:

1. Data Analysis and Design Task Group (DADTG) - studying data analysis methodologies and tools in use for data intensive applications.
2. Common Data Model Task Group (CDMTG) - investigating the structure and operations on various data models and representation schemas.
3. Future Advances in Database Task Group (FADTG) - determining the impact of advanced technology, e.g., knowledge-bases and artificial intelligence, as related to database standards.

Interested persons should send a letter of intent and a brief resume to,

Mr. Edward Stull, Chair DBSSG  
GTE Government Systems  
Room 3095  
1700 Research Blvd  
Rockville, MD 20878  
(301) 294-8649

or

Ms. Elizabeth Fong, Executive Secretary, DBSSG  
National Bureau of Standards  
Technology Building A266  
Gaithersburg, MD 20899  
(301) 975-3250

# INFORMATION SCIENCES - AN INTERNATIONAL JOURNAL

## CALL FOR PAPERS

### SPECIAL ISSUE ON DATABASE SYSTEMS

Research papers are solicited on all aspects of database management for a special issue of the "Information Sciences - An International Journal," to be published early in 1988. Topics of interest include, but are not limited to, the following:

- **Distributed Database Operating Systems**
- **Concurrency Control and Deadlock Handling**
- **Performance Analysis and Modeling of Database Systems**
- **Fault-Tolerant Databases**
- **Engineering Databases**
- **Heterogeneous/Federated Databases**
- **Object Oriented Databases**
- **Multi-media Databases**
- **Query Optimization**
- **Knowledge Bases**
- **Database Machines and Main Memory Databases**
- **Database Security**
- **Data Models**

Submit four copies of a complete manuscript by August 1, 1987 to the guest editor:

Ahmed K. Elmagarmid  
Computer Engineering Program  
121 Electrical Engineering East Building  
The Pennsylvania State University  
University Park, PA 16802  
(814) 863-1047

Authors will be notified of the acceptance of their papers by October 30, 1987.

# ER APPROACH

## Preliminary Call for Papers

### 6th International Conference on Entity-Relationship Approach

November 2-4, 1987

New York

Conference Chairmen:

Martin Modell, Merrill Lynch  
Stefano Spaccapietra, University of Dijon  
Salvatore T. March, University of Minnesota  
Peter P. Chen, LSU and MIT

Program Committee Chairman:

Steering Committee Chairman:

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.

#### Major Themes:

##### Database Development and Management

- \* database design
- \* database management systems
- \* languages for data description and manipulation
- \* data models and modelling
- \* database dynamics
- \* database constraints

##### Application Systems

- \* CAD/CAM and engineering databases
- \* knowledge-based systems
- \* object-oriented systems
- \* multi-media databases
- \* user interfaces
- \* business systems

##### Managing Organizational Information Resources

- \* data planning
- \* information architectures
- \* translating data plans into application systems
- \* data dictionaries
- \* information centers
- \* end user computing

#### Submission of Papers:

Papers are solicited on the above topics or on any other topic relevant to the ER Approach. Five copies of completed papers must be received by the program committee chairman by April 15, 1987. Papers must be written in English and may not exceed 25 double spaced pages. Selected papers will be published in *Data and Knowledge Engineering* (North-Holland).

#### Important Dates:

Papers due: April 15, 1987  
Notification of acceptance: June 20, 1987  
Camera ready copies due: August 15, 1987

All requests and submissions related to the program should be sent to the program committee chairman:

Professor Salvatore T. March  
Department of Management Sciences  
University of Minnesota  
271 19th Avenue South  
Minneapolis, MN 55455 USA

Tel: (612) 624-2017  
bitnet: march@umnacvx  
csnet: march@umn-cs

# CALL FOR PAPERS

## Conference on Data and Knowledge Systems for Engineering and Manufacturing

October 19-20, 1987

Hartford, Connecticut

There is an exploding concern about the ability of manufacturers to compete and survive. Many recent research and development efforts have been aimed at an increase in engineering and manufacturing efficiencies. The heart of these efforts involves automation by computers.

This conference provides a forum for interactions between university researchers and design and manufacturing engineers. It is intended to motivate researchers in focusing their efforts on current issues and to accelerate the dissemination of their findings to industry for improving products and increasing productivity. Scientific curiosity has motivated academicians to create machines and systems that can sense, think, and act. The present crisis in manufacturing and engineering information systems offers a rich vein of real world problems for which new kinds of intelligent data and knowledge systems may provide solutions.

An engineering and manufacturing process consists of the conceptualization, design, development, testing, fabrication, distribution, and maintenance of engineering products. The management of complex engineering and manufacturing systems involves the development and use of intelligent processors, large scale databases, and knowledge and information systems. This conference addresses concepts, theories, and applications of data and knowledge systems particularly relevant to engineering and manufacturing problems. Papers concerning specific intelligent machines for a particular engineering process or applications of large data and information systems to the support of systems integration and control are welcome. Of special interest is research in the area of engineering information systems.

Papers should be no longer than 5000 words. Each paper will be reviewed by the program committee, assisted by outside referees. Selected papers will also be published in a special issue of **Data and Knowledge Engineering Journal** in addition to the conference proceedings. Please send four copies of your paper to:

**Prof. Fred Maryanski, Chairman**  
Department of Computer Science and Engineering, U-155  
University of Connecticut  
260 Glenbrook Rd.  
Storrs, CT 06268

<b>Paper Submission Deadline:</b>	<b>April 22, 1987</b>
<b>Proposal for topics of panels:</b>	<b>May 22, 1987</b>
<b>Acceptance Notification:</b>	<b>June 22, 1987</b>
<b>Final Camera-ready Paper Due:</b>	<b>July 22, 1987</b>

**Sponsored by:**  
University of Connecticut  
The Hartford Graduate Center  
Rensselaer Polytechnic Institute



# CALL FOR PARTICIPATION

*IFIP WG8.4 Workshop on*

## Office Knowledge: Representation, Management and Utilization

17-19 August 1987  
University of Toronto  
Toronto, Canada

### WORKSHOP CHAIRMAN

Prof. Dr. Alex A. Verrijn-Stuart  
University of Leiden

### PROGRAM CHAIRMAN

Dr. Winfried Lamersdorf  
IBM European Networking Center

### ORGANIZING CHAIRMAN

Prof. Fred H. Lochovsky  
University of Toronto

This workshop is intended as a forum and focus for research in the representation, management and utilization of knowledge in the office. This research area draws from and extends techniques in the areas of artificial intelligence, data base management systems, programming languages, and communication systems. The workshop program will consist of one day of invited presentations from key researchers in the area plus one and one half days of contributed presentations. Extended abstracts, in English, of 4-8 *double-spaced* pages (1,000-2,000 words) are invited. Each submission will be screened for relevance and potential to stimulate discussion. There will be no formal workshop proceedings. However, accepted submissions will appear *as submitted* in a special issue of the WG8.4 newsletter and will be made available to workshop participants.

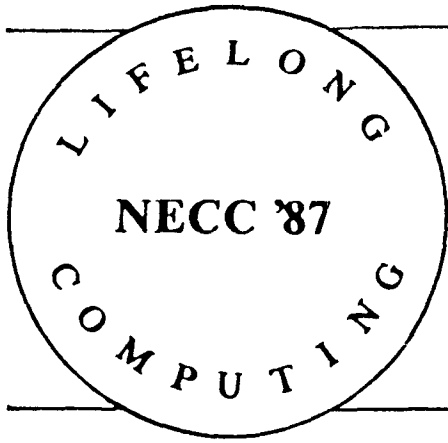
### How to submit

Four copies of *double-spaced* extended abstracts in English of 1,000-2,000 words (4-8 pages) should be submitted by **15 April 1987** to the Program Chairman:

Dr. Winfried Lamersdorf  
IBM European Networking Center  
Tiergartenstrasse 15  
Postfach 10 30 68  
D-6900 Heidelberg  
West Germany

### Important Dates

<b>Extended abstracts due:</b>	<b>15 April 1987</b>
<b>Notification of acceptance for presentation:</b>	<b>1 June 1987</b>
<b>Workshop:</b>	<b>17-19 August 1987</b>



---

**8th NATIONAL EDUCATIONAL  
COMPUTING CONFERENCE**  
PHILADELPHIA, PA • JUNE 24-26, 1987

---

*The National Educational Computing Conference*

*Papers, Panels, Projects, Exhibits,  
Full Day Pre-Conference Workshops*

*For an Advance Program and  
Registration Information, contact:*

*NECC '87-Box A4  
Office of Computing and Information  
Services  
Temple University 038-22  
Philadelphia, PA 19122  
(215) 787-6864*

*For Information on Exhibits, contact:*

*Paul Katz  
NECC '87-Box A4  
University of Oregon  
Continuation Center  
1553 Moss Street  
Eugene, Oregon 97403  
(503) 686-3537*

**PARTICIPATING SOCIETIES**

American Educational Research Association (AERA)  
American Society for Engineering Education/  
Computers in Education Division (ASEE/CoED)  
Association for Computers and the Humanities (ACH)  
Association for Computing Machinery/Special Interest  
Groups on:  
Computer Science Education (SIGCSE)  
Computer Uses in Education (SIGCUE)  
University & College Computing Services  
(SIGUCCS)

Association for Educational Data Systems (AEDS)  
Association for Small Computer Users in Education  
(ASCUE)  
Educational Computing at Minority Institutions  
(ECMI)  
EDUCOM/EDUNET  
International Council for Computers in Education  
(ICCE)  
IEEE Computer Society  
Society for Computer Simulation (SCS)

# CALL FOR PAPERS

ASSOCIATION FOR COMPUTING MACHINERY  
**SPECIAL INTEREST GROUP FOR SECURITY, AUDIT & CONTROL  
(SIGSAC)**

is sponsoring a one day conference on  
Security, Audit & Control in Distributed Systems & Local Networks  
on **November 14, 1987**  
at UCLA

Subject areas under consideration include:

- Cryptography;
- Electromagnetic Interference (EMI);
  - PC Security;
- Auditing the Communications Network;
  - File Protection;
- Legal Aspects of Damage Prevention;
  - Prosecuting the Criminal;
  - Civil Recovery of Damages;
    - Risk Analysis;
  - Monitoring and Control;
  - Performance vs. Security;
- Interesting Case Studies; and
  - Managerial Factors.

All submitted papers must be no more than twelve pages in length and designed for a ten (10) to twelve (12) minute presentation. Topics must fall into the category of new research or never-before-reported case studies. All accepted papers will be included in the published proceedings and carry the ACM copyright.

To be considered the papers must be received at the following address on or before May 15, 1987:

John Walter  
ACM SIGSAC '87 Conference  
P.O. Box 368  
Manhattan Beach, CA 90266

You will be notified of our decision no later than June 15, 1987.