

Computers and Information Systems Newsletter

Graduate School of Management University of California, Los Angeles

CHANNEL Winter-Spring 1981

Edelman Addresses Winter Associates Meeting



The Winter C. & I.S. Associates meeting, featuring Dr. Franz Edelman as guest speaker, was held on Friday, March 13th. The day's events began at 12 noon with a luncheon at the Faculty Center at UCLA. This was followed by a working session at 1:30 PM; Franz Edelman's lecture at 3:30 PM; and finally concluded with a 5:00 PM cocktail party back at the Faculty Center.

The working session, held in GSM Room 2343, consi-

ered the topic of opportunities for student/company internships, part-time employment, summer work, and field study projects. Dr. Pat Katsky, Director of the Field Study Programs, spoke to the Associates about the current program and how it operates. She noted that more than a hundred teams of students are placed each year and that the feedback from participating companies has been excellent. She urged the Associates to contact her for more information concerning participation in the program. Gretchen

Thompson, Director of Placement for GSM, discussed the possibilities for recruitment of students by companies for internships, special projects, and part-time jobs, pointing out that these were excellent opportunities for interaction with potential hirees, looking ahead to when they will complete their degree programs. She went on to discuss the Placement Office's role in this process and to other functions they provide to the students.

The work session concluded with a discussion of the issues raised by the speakers, chaired by Professor Eph

McLean. The group decided to pursue the issue of internships further and to try and develop a means of matching up students with available jobs.

Following a short break, the Franz Edelman lecture began at 3:30 PM. Dr. Edelman, President of Edelman Associates, Inc., and former Vice President of Business Systems and Analysis for RCA, spoke about Information Resource Management. He noted that the managing of

> the resources of people, machines, technologies, and the ideas required to deal with business information, has become so large and complex a task that a new perspective is needed for both management and professional communities. Dr. Edelman went on to say that DP managers and others with responsibilities for corporate information systems must take a much broader view of their role in business analysis and give up the "service mindset." He urged them to take active

advocacy positions on the use of informa-

tion resources and said that, "we need to stand up and be counted and take a strong place in the organization."

Edelman suggested a fundamental reorientation of the conventional organizational wisdom; that is, that decision support systems and production control systems cannot cohabit the same integrated information system. Instead, he pointed out, it is just the opposite. Decision support systems must be connected to the real world by live data or they become sterile and useless!



Franz Edelman

Managing the Information Resource

Are we spending the right amount on information services? Are we meeting the organization's information needs? Is our planning and priority setting realistic and effective? Are our operations and development activities being conducted in an effective manner? Are we attracting and retaining the right people?

A program aimed at enhancing managerial ability to answer complex questions such as these was attended by thirty managers at GSM, February 1-6. This second annual conference on *Managing the Information Resource* combined discussions of leading edge techniques for DP managament with program-solving analyses of

real company situations.

Program co-leaders were Richard Nolan and Eph McLean. Dick Nolan is the Chief Executive Officer, Chairman of the Board, and co-founder of Nolan, Norton, and Company, one of the leading consulting firms in the DP management field. Eph McLean is an Associate Professor of Information Systems and Director of the C. & I.S. Research Program at GSM. Other faculty for the program were Eric Flamholtz, Professor of Management at GSM; Ben Lientz, Professor of Computers and Information Systems and, for the last two years, Director of Administrative Information Services at UCLA; Bruce Rogow, Manager with Nolan, Norton, and Company; and Burt Swanson, Associate Professor of Information Systems and Chairman of C. & I.S. at GSM.

Over the course of the six days, the following topics were covered:

- The emerging role of the information services function within organizations.
- · Managing the stages of EDP growth.
- Data bases and advanced stages of growth.
- Strategic planning for MIS.
- Determining the need for computer facilities in the face of rapidly changing technology.
- Managing teleprocessing and communications systems.
- The "Office of the Future" and its relation to the DP function.
- Determining management's information needs.
- The problems of systems maintenance.
- Organizing and managing DP operations.
- Improving the productivity of human resources.
- Key issues in managing DP personnel.
- Successful MIS project management.
- Management control and accounting for DP services.
- · Issues in systems security.
- The use of MIS steering committees.

The third annual *Managing the Information Resource Conference* will be held March 21-26, 1982, at GSM. As with the last two programs, this next one is designed for senior executives and managers in medium to large organizations in both the private and public sectors. In particular, the following individuals should find this course of special value:

 The senior executive whose responsibilities include the data processing and/or information services resources.
This might be the controller, financial vice president, or vice president of management services, depending on the organization.

2. The senior manager directly responsible for the data processing function with his or her company or division. This is the DP manager, the director of MIS, or

similar job titles.

3. High-level managers within the data processing department who are interested in preparing for expanded responsibility. This would include deputy directors, operations managers, senior project managers, development directors, and so forth.

Managers interested in attending this next conference

may request further information by writing to:

Managing the Information Resource Computers and Information Systems Graduate School of Management University of California Los Angeles, California 90024

JSD Corporation Hosted

The C. & I.S. Research Program hosted a visit by the Software Maintenance Engineering Facility (SMEF) Project Team of the Joint System Development (JSD) Corporation of Japan on Tuesday afternoon, March 17. About 28 members of the team made up the tour group. Professor Burt Swanson gave a presentation on software maintenance based on the results of the research conducted by him and Professor Bennet Lientz and documented in their book, Software Maintenance Management, Addison-Wesley, 1980. The JSD Corporation is a "joint business entity" of 17 leading Japanese software firms brought into being for the development of national large-scale information systems in Japan and elsewhere.

1981-82 IBM Fellowship Awarded to Ilchoo Chung

Ilchoo Chung has been chosen to receive the Computers and Information Systems IBM Doctoral Fellowship for 1981-82. This award provides tuition, fees, and a quarterly stipend for a C. & I.S. doctoral student who is working on his dissertation.

Mr. Chung earned his M.B.A. degree from the University of Oregon in June 1978 and entered the doctoral program at UCLA in the fall of the same year. Prior to this he worked for four years as a Systems Engineer for IBM in Korea. Chung has successfully completed his major field exams and expects to receive his Ph.D. degree in the Fall of 1982.

DSS Joint Project Undertaken by C. & I. S. and Security Pacific Bank

Recognizing the increased management need for better information, the C. & I.S. area recently received a one-year \$55,000 grant from the Security Pacific National Bank to study means whereby "decision support systems" (DSS) can be improved within the Bank. Sponsored by DuWayne Peterson, Executive Vice President of the Bank (and last year's chairman of the C. & I.S. Associates), the project has two co-principal investigators: Eph McLean for C. & I.S. and Norm Leibson, a Vice President of the Bank and head of its Distributed Systems Group. The study team also includes Ben Lientz and Burt Swanson of the C. & I.S. faculty and Michael Bourke, a C. & I.S. graduate student.

Although this is the first year of the UCLA/SPNB joint study, the Bank has had a long commitment to DSS and end-user, computer-based support. As the second largest bank in California and the tenth largest in the United States, Security Pacific has devoted substantial resources to management-oriented - as opposed to transactionbased - systems; and Norm Leibson's group was established to address this need.

Over the course of the year-long study, the team members will explore the types of semi-structured problems faced by senior Bank management in both the corporate and retail areas. The thrust of the work is two-fold. First, the team wants to provide real systems that will assist managers in solving real problems. In this they will have the close cooperation and assistance of the Distributed Systems Group. Second, they want to identify and explore the more general circumstances and principles that govern the use of decision support systems.

ONR Project

Professor Bennet Lientz has been conducting applied research since 1973 under a contract supported by the Information Systems Program of the Office of Naval Research. The work carried out has focused on computer networks, distributed systems, information systems planning, and the maintenance of applications software. In addition to Professor Lientz, who has served as Principal Investigator, the contract has supported the research of Professor Burt Swanson and a number of doctoral students.

One major area of the research has been application software maintenance. Professors Lientz and Swanson conducted an extensive survey of 2000 organizations. The results of the analysis have been published in several journal articles as well as in the book Software Maintenance Management (Reading, Mass.: Addison-Wesley Publishing Co., 1980). As a result of this research, Professor Lientz was asked to support an assessment of Naval weapons systems. This study was conducted in 1980 with Professor Peter Wegner of Brown University and supported by the Office of the Assistant Secretary of the Navy for Research and Engineering.

Current research is being directed at measuring the effectiveness of computer output and inquiry and management issues surrounding information systems. An approach to assessing the information systems environment has been developed and is now being evaluated.

Experience with the Apple

In the Fall of 1980, the C. & I. S. faculty acquired an APPLE II computer with 64K of main storage, two disk drives, a level monitor, and a printer for experimentation with a micro or personal computer, a world entirely different from the large mainframe environment within which GSM has always operated. Professor Clay Sprowls used the APPLE in the laboratory portion of the Spring Quarter course in data base management systems and is now configuring the computer to become an "executive work station."

DBASE II is a relational data base management system (DBMS) that runs on an APPLE (and other micros). Written by Wayne Ratliff and marketed by Ashton-Tate, it was made available without charge for use in an investigative setting. The system uses the CP/M operating system, a full 24 x 80 screen, and a full-screen, cursor-driven editor. Data are organized in the relational form of two-dimensional tables that are easy to define with a CREATE verb. Data are entered into the relations with an APPEND verb and can be modified with an EDIT verb. DBASE provides a simple but powerful command language to write a series of commands that may then be executed under control of a DO statement to process several files, provide for menudriven data input, format screens, write reports, and do a variety of other functions. The JOIN verb permits the relational operation of "join" to select attributes from two different relations (tables) and construct a third table. One may cascade through several JOINs to provide complex querying of the data base across several different tables or files, one of the powerful and necessary functions in a relational DBMS.

Three enhancements to the APPLE are underway to increase its usefulness in a management setting. A fullblown word processor is being added for the creation of text files with all of the customary editing, formatting, and selection functions. An interface is also being added to make the APPLE into a terminal for access to other computer systems, in particular the central computer facility provided by UCLA to students and faculty. Finally, the new 16-sector version of VISICALC, the popular spreadsheet analyzer, is being studied for its role as a decision support system that would include interaction with the DBMS for both input and output between the two systems. In short, with the various enhancements, the C. & I.S. faculty and advanced students should have an interesting management work station with which to experiment in instruction and research.

This station will be used in the Fall Quarter in the regular offering of the DBMS course, where students will continue the Spring's laboratory exercise of building a relational model of a simulated firm named the Task Manufacturing Company. So far, both the purchasing and sales functions have already been completed. Parts of the overall station, emphasizing word processing, data base management, and DSS with VISICALC (but without the interactions), will be used in an executive education program offered by Professor Sprowls in Monterrey, Mexico, in the first week of August and again in Mexico City in October.

Winter and Spring Colloquia

Ten colloquia were presented during the Winter and Spring quarters in 1981. These covered a wide variety of

topics.

The first colloquium was held on January 8 and featured William G. Ouchi, Professor of Management at the Graduate School of Management. His talk, entitled "Markets, Bureaucracies, and Clans," concerned the evaluation of organizations according to an efficiency criterion, and the attempt to merge organization theory with the realities

of the marketplace.

The second colloquium, on January 15, was presented by **Bohumil Miniberger**, Director of the Computing Center at Charles University, Prague, Czechoslovakia. In his talk, "Management Information Systems at Charles University, Prague," he introduced a model of the management information systems at his university. This particular system is concerned with managing the education processes within the university and involves the evaluation of the enrollment process, the evaluation of final exams, the placement of graduating students, the modeling of the university bureaucracy, and other activities.

On February 5, Thomas P. Gerrity, Jr., President of Index Systems, Inc., spoke on the topic of "Decision Support Systems: New Directions for the '80s." Some of the topics included were approaches to managing DSS proliferation; Critical Success Factor analysis as a tool in DSS planning; the role of end-user programming in DSS; and the role of DSS in the integration of business and informa-

tion systems planning.

The February 19th colloquium featured John Leslie King, from the Department of Information and Computer Science, and the Public Policy Research Organization, of the University of California, Irvine. His topic was "Organizational Cost Considerations in Computing Decentralization." His talk addressed four areas of concern: (1) the economic arguments for and against decentralization; (2) the difficulties of obtaining hard organization-wide cost data related to centralized or decentralized computing use; (3) the research evidence related to use and impact consequences of centralized and decentralized arrangements; and (4) possible explanations for, and policy implications of, the problematical "cost dynamics" of decentralizing computing arrangements.

The final colloquium of the Winter quarter was held on March 12 and featured Ian I. Mitroff of the USC School of Business Administration. He spoke on "Dialectical Information Systems of the Future." The nature of the change in dialectical information systems was reviewed, the current status of research on the subject summarized,

and directions for the future indicated.

The first Spring colloquium, on April 16, featured two speakers: Walter M. Carlson, Corporate Marketing Consultant for IBM Corporation, and David W. Kerner, Service Systems Analyst, also with IBM. They spoke on the subject, "Enterprise Analysis — The Prerequisite for Making Applications Effective." Mr. Carlson discussed a technique called Business Information Analysis and Integration Technique (BIAIT), which has resulted from

some research on ways to analyze an "enterprise" in a language common to both the top executive and the DP analyst. Mr. Kerner reviewed his experiences with Business Information Control Study (BICS), a methodology which extends the BIAIT theory into the application

development area.

The second colloquium was held on April 30 with Ephraim R. McLean as the speaker. Professor McLean's topic was, "The Conference on Information Systems." The First International Conference on Information Systems was held in Philadelphia in December of 1980. Professor McLean reviewed the background and reasons that led to organizing this conference. He spoke on the purpose of the conference, the type of attendee, and the topics and themes which emerged. He then addressed the question of what future conferences should look like. The audience was invited to share their ideas on the subject.

On May 14, Michael A. Melkanoff, Professor in the UCLA Computer Science Department, was the featured speaker. His topic was, "CAD/CAM: America's Answer to the Productivity Challenge." CAD (computer-aided design) and CAM (computer-aided manufacturing) are emerging as powerful techniques in America's attempt to regain its leadership in technology and manufacturing. Professor Melkanoff described how CAD/CAM are being used today and developed for future use tomorrow.

Dr. Ira Weiss, from the College of Business Administration at the University of Houston, spoke at the fourth colloquium on May 28. His address was on the subject: "Critical Factors in the Selection and Use of Financial Planning Systems." Professor Weiss included issues such as assistance of DP personnel in selecting a system, awareness issues relating to computer security, and data vulner-

ability by these managers.

The last colloquium was held on June 11 with Izak Benbasat of the Faculty of Commerce and Business Administration from the University of British Columbia as the featured speaker. His talk considered the topic of "Research in Management Information Systems: A Laboratory Experimentation Approach." In his address, Professor Benbasat summarized and integrated the findings of four laboratory studies conducted to analyze the influence of decision-maker, decision environment, and information and decision support system characteristics on decision quality, decision time, and information acquisition behavior. The conceptual and practical problems encountered when conducting these experiments were also discussed.

NewMembers Join C. & I.S. Associates

Three additional firms have joined the C. & I.S. Associates since January of 1981. They include: Bekins Company, Kal Kan Foods, Inc., and Transamerica Corporation. We welcome these new Associates and look forward to a mutually beneficial relationship.

Planning Meeting for Conference on Information Systems Held in Chicago

A planning meeting for the Second Annual International Conference on Information Systems was held in Chicago on March 6th and 7th. Sponsored by the Society for Management Information Systems and held at the Gould Corporation Conference Center in Rolling Meadows, Illinois, this meeting was attended by thirty faculty members from leading information systems programs throughout the United States and Canada. In addition, representatives from the Society for Management Information Systems (SMIS), The Institute of Management Sciences (TIMS), the Association for Systems Management (ASM), and the American Institute for Decision Sciences (AIDS) were present. In attendance from UCLA were faculty members Eph McLean and Burt Swanson.

The Second Conference on Information Systems is scheduled for **December 7-9**, 1981, and will be at the Hyatt Regency in Cambridge, Massachusetts. The theme will be Research in Information Systems; and, as a special inducement to people considering submitting papers, outstanding papers from the Conference will be published in either the Communications of the ACM, the Management Information Systems Quarterly, or Management Science. All other papers accepted for presentation will be published in the Conference Proceedings. Almost 250 people attended the first Conference in Philadelphia in December of 1980, and even more are expected this year.

Chosen as the Conference Committee were the following individuals: Eph McLean (UCLA) and Jack Rockart (MIT), Conference Co-Chairmen; John Henderson (Florida State), Program Chairman; Jim Wetherbe (Minnesota), Publications Chairman; Marty Bariff (Case Western Reserve), Doctoral Consortium Chairman; Chris Bullen (MIT), Arrangements and Publicity Chairwoman; and Tom Dock (Southern California), Finance Chairman. Individuals wishing additional information on the Conference should write to the Conference Co-Chairman, Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139 (617) 253-3372.

New Staff Join C. & I.S.

Two new employees have joined the C. & I.S. staff since the last issue of *Channel* was distributed. They are **Mary Murphy** and **Linda Taeger.**

Mary Murphy, the new C. & I. S. area secretary, has recently moved to California. She was born in Woburn, Massachusetts, and lived there until relocating in Santa Monica. Mary graduated from Lyndon State College in Vermont where she majored in education and received an Associate Degree in Liberal Arts. After graduation she was employed by Environmental Research & Technology in Concord, Mass. Mary hopes to get a degree in Psychology.

Linda Taeger has replaced Susan Corley as Administrative Assistant in the C. & I.S. Research Program. Susan has moved on to be the secretary to the School's Associate Dean, Bill Broesamle. Linda was born in Montreal, Canada, but moved to Massachusetts with her family when she was six. She graduated from Bates College in Lewiston, Maine, with a B.A. in English, and subsequently was employed for three years as Program Director with the YWCA in Newburgh, New York. After moving to California with her husband, Linda earned an elementary teaching credential from California State University, Los Angeles, and spent 8 years with the Los Angeles Unified School District. She then decided to make a career change and came to UCLA, where she was employed in the School of Nursing before transferring to the Computers and Information Systems Research Program.

Janice Durbin Receives C. & I.S. Associates Award



Janice Durbin receives C. & I. S. Associates Award from Dr. William H. Taubert of Hunt-Wesson Foods, Inc. Dr. Taubert is the current chairman of the C. & I. S. Associates.

The C. & I.S. Associates Award was presented this year to Janice Durbin. The Award is given each year to the student graduating from the MBA program with high academic achievement in the C. & I.S. area. The winner's name is engraved on a plaque which remains in the Graduate School of Management, and the recipient is awarded a check for \$250.00. Dr. William Taubert, Vice President of Hunt-Wesson Foods, Inc., and Chairman of the C. & I.S. Associates, made the presentation.

Miss Durbin received her MBA in June and is presently employed by Hewlett-Packard where she is working as a systems analyst for Manufacturing Systems. During her studies at UCLA she was also awarded the Henry Ford Scholar Award; the California State Graduate Fellowship; and, at graduation exercises, was named a Carter Fellow, signifying her distinction of being in the top 2% of her class. Prior to entering the master's program at GSM, Miss Durbin was a student at the University of California, San Diego, where she graduated with a Bachelor of Arts with Honors in Political Science in June, 1978.

Spring Associates Meeting

Professor William G. Ouchi, author of Theory Z: How American Business Can Meet the Japanese Challenge, addressed the Spring C. & I.S. Associates Meeting held at the Graduate School of Management on Friday, June 12th. The program began with a luncheon at the Faculty Center hosted by Ephraim McLean and continued with a work session featuring discussions with C. & I.S. faculty members in the executive classroom at GSM. Following the work session, Professor Ouchi discussed productivity and

its organizational implications through the perspective of Theory Z. Concluding the day's events was a cocktail party for the Associates and the C. & I.S. faculty, staff, and students.

The theme of the work session following the luncheon was, "What does the MIS professional expect from the university, both in teaching and research?"; Dr. William Taubert, Vice President of Hunt-Wesson Foods, Inc., presented a model framework to help define the C. & I.S. market niche and to

suggest possible research topics for students in the C. & I.S. program. Among the topics suggested were research in the areas of data bases, decision support systems, implications of mini/micro computers, and the application of Theory Z for MIS. The faculty and executives present also discussed their needs and thoughts concerning the type of courses and preparation needed by MBA students.

Following the work session, Professor Ouchi presented a talk about productivity as seen through the perspective of Theory Z. Ouchi, whose recent book is topping the best-seller charts, described how he developed the ideas for what he is calling Theory Z and just what he means by it.

Theory Z is used to differentiate his view of workers, as opposed to Theory X bosses who see workers as basically lazy and untrustworthy, and Theory Y bosses who believe

the opposite. Theory Z (as practiced by Japanese business firms) emphasized long-range working goals, mutual decision-making, and strong employer-employee cooperation.

Ouchi stated that Japanese employees are more productive than their American counterparts because of the atmosphere of mutual trust and cooperation which is found in the structure of Japanese society as a whole. Japanese companies create an extremely strong attach-

ment between themselves and their workers through several methods. The concept of lifetime employment is one of these. This practice guarantees almost 35% of Japan's work force will be able to remain with their firm despite any economic setbacks. A second method to strengthen the sense of commitment to an employer is the slow rate of evaluation and promotion (sometimes not occurring for ten years). This reduces the competitiveness found in American firms and also the fast turnover where people

leave if they are not promoted within a year or two of being with a company. A third method is that of nonspecialized careers, where an employee becomes familiar with many phases of a company's operation rather than concentrating on one area. The final area which strengthens the workers' commitment to the company is that of collective decision-making where workers have a say in major decisions.

Ouchi admitted that not all these techniques could easily be transferred to American companies; but he also pointed out that a number of U.S. firms which have implemented some of the suggested methods have met with considerable success. These include Intel Corporation, Hewlett-Packard, Procter & Gamble, and the Buick Assembly Plant in Flint, Michigan.











- (1) Victor Janulaitis (left) of Index Systems and Charles Emley of Touche Ross & Co. relax between sessions.
- (2) Pat McNally (left) and Larry Hall (center) of Arthur Andersen & Co. discuss mutual concerns with Bob Foster of Xerox Computer Services.
- (3) C. & I.S. Associates Chairman Bill Taubert (center) greets new members from Kal Kan Foods: Henry Haskell (left), Vice President of Finance, and Robin Gould (right), Information Systems Director.
- (4) Professor Ben Lientz of the C. & I.S. faculty chats with Larry Dorf of Security Pacific National Bank during a break.

Working Papers (July 1980-June 1981)

Number	Author	Title	Date
1-81	E. Burton Swanson	Measuring User Attitudes in M.I.S. Research: A Review	July 1980
2-81	Fumio Nakamura Peter Chen	Semantic Considerations on Multivalued Dependencies in Relational Databases	July 1980
3-81	Peter P. Chen Jacob Akoka	Optimal Design of Distributed Information Systems	July 1980
4-81	Randolph Cooper	An Attitudinal Model for the Evaluation of Management Information Systems and Their Requirements	July 1980
5-81	Peter P. Chen Ilchoo Chung Fumio Nakamura	Entity-Relationship Normal Forms	July 1980
6-81	Fred Thompson	Information Systems for State-Level Decisions and the Budget: or California Gets its Just DSIRts	July 1980
7-81	E. Burton Swanson	Remarks on User Requirements and Software Specifications	August 1980
8-81	E. Burton Swanson	A View of Information System Evolution	December 1980
9-81	Asuman Dogac Peter Chen	Automating Update Propagation in a Database	March 1981

Ordering Instructions:

Copies of available working papers may be ordered by sending your request to:

Computers & Information Systems Research Program

Graduate School of Management

University of California

Los Angeles, CA 90024

The papers will be mailed to you along with a \$3.00 charge for postage and handling.

Publications (July 1980-June 1981)

- Lientz, Bennet P. and Swanson, E. Burton. Software Maintenance Management: A Study of the Maintenance of Computer Application Software in 487 Data Processing Organizations, Addison-Wesley, 1980.
- 2. McLean, Ephraim R. and Neale, Gary L. "Computer-based Planning Models Come of Age," *Harvard Business Review*, Vol. 58, No. 4, July-August 1980, pp. 46-48. (Reprint available)
- 3. McLean, E.R. Book Review of *The Computer Age: A Twenty-Year View*, Dertouzos, M.L. and Moses, J. (Editors), Los Angeles Business and Economics, Vol. 5, No. 4, pp. 45-46, Fall 1980.
- 4. Chen, Peter P. and Akoka, Jacob. "Optimal Design of Distributed Information Systems," *IEEE Transactions on Computers*, Vol. C-29, No. 12, December 1980, pp. 1068-1080. (Reprints available)
- 5. Mason, R.O. and Swanson, E.B. "Measurement as an MIS Foundation," *Proceedings of the First International Conference on Information Systems*, December 8-10, 1980, Philadelphia, Pa., pp. 65-68.
- 6. McLean, E.R. (Editor). Proceedings of the First International Conference on Information Systems, Philadelphia, Pa., December 1980.
- 7. Mason, R.O. and Swanson, E.B. (Editors). Measurement for Management Decision, Addison-Wesley, 1981.
- 8. Lientz, Bennet P. An Introduction to Distributed Systems, Addison-Wesley, 1981.
- 9. McLean, E.R. and Schenck, J.W. (Editors), Management Applications in APL, Graduate School of Management, University of California, Los Angeles, January 1981.
- McLean, E.R. and T.F. Riesing. "Installing a Decision Support System: Implications for Research," *Decision Support Systems: Issues and Challenges*, International Institute for Applied Systems Analysis Proceedings, Pergamon Press, Oxford, pp. 127-142, 1981.
- 11. Frand, Jason. Introduction to Structured Programming Using PL/1 and PL/C, Academic Publishing Service (ASUCLA), March 1981.
- 12. Dickson, G.W., Bariff, M.L., and McLean, E.R. "The First International Conference on Information Systems," Communications of the Association for Computing Machinery, Vol. 24, No. 5, pp. 333-334, May 1981.

Second Entity-Relationship Conference

The Second International Conference on the Entity-Relationship Approach is scheduled to be held on October 12-14, 1981, in the Sheraton Inn in Silver Spring, Maryland. This is a follow-up of the first conference held in December of 1979 at UCLA. The first conference attracted over 250 managers and specialists from 11 countries, and the same caliber of audience is expected at this conference.

The conference is divided into two parts: (1) tutorial sessions on the first day, and (2) paper and panel sessions on the second and third days. The tutorial sessions are dedicated to those who are not familiar with the literature in the field or those who just want to get an overview. The tutorials will be given by Professor Peter Chen of UCLA and Dr. Edgar Sibley, formerly at the University of Maryland and now head of the Alpha Omega Group. The paper sessions consists of papers written by leading experts from around the world. Some of the topics covered in the paper and panel sessions are information systems analysis and planning, languages and database systems based on the concepts of entities and relationships, new theories, database design methodology, design tools, case studies, applications, and standardization issues.

The Computers and Information Systems Research Program is one of the major sponsors of this conference and C. & I.S. faculty and students are heavily involved in its organization. Professor Peter Chen is the Program Chairman, and Professor Ephraim McLean is on the Advisory Committee of the conference. Doctoral student Dennis Perry is a Program Coordinator and doctoral student Ilchoo Chung will present a paper entitled, "Decomposition of Relations Using the Entity-Relationship Approach." Doctoral student Bryan Hsiao is also assisting in the organization of the conference.

For further information on the conference, contact Professor Peter Chen at (213) 825-1428. The conference proceedings will be available for \$25.00 through the publisher, the ER Institute, P.O. Box 617, Saugus, CA 91350.

Upcoming Events

SMIS Conference

The Society for Management Information Systems will sponsor its 1981 Annual Conference, September 13-16, in Denver, Colorado. The theme for this year's conference is "People, Performance, Productivity — The New MIS Agenda."

Entity-Relationship Conference

The Second International Conference on the Entity-Relationship Approach will be held in Washington, D.C. on October 12-14, 1981. (See this page for more details on this conference.)

APL 81

The Special Interest Group on APL (SIGAPL) of the Association for Computing Machinery (ACM) will sponsor its biannual conference in San Francisco, California, to be held October 21-23, 1981.

MIS Firm Night

The annual MIS Firm Night sponsored by GSM's Associated Students in Business and the Computers and Information Systems area, will be held on November 4, 1981.

WECC Conference

The Western Educational Computing Conference, sponsored by the California Educational Computing Consortium, will be held in San Francisco at the Jack Tar Hotel on November 19-20, 1981.

Conference on Information Systems

The Second International Conference on Information Systems will be held in Cambridge, Mass., on **December 7-9**, 1981. (See p. 5 for more information.)

Managing the Information Resource

The third annual Management Information Resource program will be held on March 21-26, 1982, at the Graduate School of Management. Co-sponsoring this event will be Nolan, Norton & Co., of Lexington, Mass.

This newsletter represents our continuing effort to disseminate information about Computers and Information Systems (C. & I.S.) activities within the Graduate School of Management to interested individuals and organizations. As before, comments and suggestions will be welcomed

Ephraim R. McLean, Director, Computers and Information Systems Research Program; Linda Taeger, Administrative Assistant and Newsletter Editor.

This newsletter is made possible through the support of the Computers and Information Systems Associates: American Edwards Laboratories,

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