

### **Computers and Information Systems Newsletter**

Graduate School of Management University of California, Los Angeles

# CHANNEL Fall 1981

### Fifth Annual MIS Career Night Held



The 5th Annual MIS Career Night was held on Wednesday, November 4th, at the UCLA Faculty Center. More than 40 companies were on hand this year to meet the MBA students in several informal round table sessions as well as to hear a panel discussion on trends in the MIS area. The discussions were preceded by a cocktail hour where students and executives could meet in an informal setting.

Addressing the group this year were Joseph E. Izzo, President and Managing Partner of the JIA Management Group, Inc.; Richard Knudtsen, Sales and Marketing Manager for Hewlett-Packard's Manufacturing Systems Program; and Robert Laskey, Vice President of Information Systems for Dart-Kraft, Inc. The presentations were followed by a question-and-answer period.

Joe Izzo discussed the consulting field and the opportunities it holds for individuals who can work within its high pressure atmosphere. He noted that the entire industry is experiencing exponential growth, with new developments coming in three-year cycles rather than the nine years previously experienced. These changing conditions require executives to utilize the help of consultants to keep up with these innovations.

Robert Laskey also talked of the growth of technology in the MIS area. He noted that while the cost of computer hardware has continued to decrease, the cost of software has risen in recent years. He stressed the need for continu-



ous training and retraining of personnel to meet this challenge, noting that MIS is "in the change business." Laskey also pointed out the need for Decision Support Systems (DSS) to assist the manager, in addition to the standard MIS functioning.

The final speaker, Richard Knudtsen, spoke of the "expertise gap" in the MIS area from the perspective of the vendor. He noted that the colleges and universities are not producing nearly enough qualified graduates to meet industry needs. Because of this, he observed, the opportunities for the new graduate in the MIS field are greater than ever before.

The panel discussion concluded with a question-andanswer period and a second opportunity for the MBA students to meet informally with the attending industry executives.

The MIS Career Night was co-chaired by MBA students **Barbara L. Cannon** and **Cynthia D. Pierce**, assisted by the MIS Career Night Committee.

Following the program at the Faculty Center, member firms of the Computers and Information Systems Associates met for dinner at the Bel Air Sands Hotel. The Associates heard briefly from Professor Ephraim R. McLean, Director of the Computers and Information Systems Research Program, concerning the group's current budget and plans for the future.

### **Budapest Conference**

Professors Ephraim R. McLean and E. Burton Swanson were both attendees at the recent Working Conference on Evolutionary Information Systems held in Budapest, Hungary, September 1-3, 1981. The Conference was sponsored by the International Federation for Information Processing (IFIP) Technical Committee on Information Systems (TC 8). Host for the three-day event was the National Bank of Hungary, and the organizational chairman was Dr. Peter Kovacs. The General Chairman on the Conference was Professor A.A. Verrijin Stuart at the University of Leiden. About 50 information systems researchers from around the world were in attendance, which was by invitation only. Proceedings of the Conference will be published by North-Holland early in 1982.

### Second Entity-Relationship Conference

The Second International Conference on the Entity-Relationship Approach was held on October 12-14, 1981, at the Sheraton Inn in Silver Spring, Maryland. The Conference had a truly international flavor as more than 250 managers, specialists, and academics from 14 countries shared their experiences with the E-R Model.

The first day of the Conference was devoted to tutorial sessions given by Professor Peter Chen of UCLA and by Dr. Edgar Sibley, formerly of the University of Maryland and now head of the Alpha Omega Group. Professor Chen gave an overview of the E-R approach and discussed how it may be used in information modeling as well as database design. New rules for designating entities and relationships by using English syntax were also presented. Dr. Sibley discussed current issues in data management centering around policy issues for information systems, resource assignment and regulation, implementation of data systems, tools for information and data management, and economic issues.

The second and third days of the Conference were devoted to paper and panel sessions. These sessions show-cased the advances made with the E-R Model in information modeling, database design, and as the basis for database management systems in the future. Both theoretical and practical sessions were held to allow a complete interchange of ideas.

Luncheon addresses were also given on each of these days. **Dr. Robert W. Taylor** of IBM Research spoke on "Trends in Database Research in the 1980s," and **Dr. Max Alford** of TRW spoke on "Entity Relationship Approach in Software Engineering." Dr. Taylor traced the important developments in the data management field and indicated that the Entity-Relationship Model was one of these and that its continued development would probably be very useful in data management schemes of the future. Dr. Alford discussed how TRW has made very good use of the E-R Model in requirements analysis and software production. TRW has developed some prototype tools to assist this process.

As one of the major sponsors, the Computers and Information Systems Research Program helped to ensure the success that the Conference enjoyed. Another factor was the support given by the C.& I.S. faculty and students.

Professor Ephraim McLean served on the Advisory Committee, and Professor Peter Chen presented a paper entitled "Completeness of Query Languages for the Entity-Relationship Model," which provides a way to evaluate the wholeness of a query language. C.& I.S. doctoral students were also very active. Ilchoo Chung presented a paper entitled "A Decomposition of Relations Using the Entity-Relationship Approach," which describes a scheme for designing relational databases. Dennis Perry was a Program Coordinator and the on-site Conference Coordinator. Bryan Hsiao assisted with the program preparation.

The *Proceedings* of the Conference are available through the publisher, The ER Institute, P.O. Box 617, Saugus, CA 91350, for \$25.00.

#### Foster to Succeed Taubert as New C.& I.S. Associates Chairman



Robert F. Foster, Vice President of Marketing for Xerox Computing Services and a long-time member of the Computers and Information Systems Associates Program, has been named to succeed **Dr. William H. Taubert**, the outgoing Chairman of the Associates.

Dr. Taubert, the Vice President of Logistics (including the MIS function) at Hunt-Wesson Foods, Inc., has served as Chairman of the Associates for 1980-81, during which time the membership and the corresponding budget have grown by nearly 25 percent. Additionally, he helped launch the intern and part-time work program for students wishing to work in the computer field prior to graduation.

Bob Foster, like Bill Taubert before him, has a graduate degree from the UCLA Graduate School of Management. Prior to obtaining his MBA from UCLA, Bob received a BS in Mechanical Engineering from Oregon State. He has had a variety of positions of increasing responsibility within Xerox: Los Angeles Branch Manager; Regional Manager, Western U.S.; and Vice President, Development and Operations, leading to his present position as Vice President, Marketing, which he assumed in the Fall of 1980.

Xerox Corporation is one of the three Sustaining Members of the C.& I.S. Associates (along with IBM and Security Pacific Bank), and C.& I.S. is indeed fortunate to now have the services of Bob Foster as the Associates Chairman for the upcoming year.

### Aaron Wildavsky Visits UCLA

On Friday, October 9, 1981, the C.& I.S. and Public/ Not-for-Profit Management areas in the Graduate School of Management co-hosted the visit of Aaron Wildavsky. Wildavsky is currently professor of Political Science at the University of California, Berkeley, and associated with the Survey Research Center there. He spoke on "Information as an Organizational Problem." In his view, the rise of modern management information systems (MIS) has both alleviated and aggravated the organizational dilemma inherent in having too much random data in the world and too little ordered information in the organization. More and more data is being produced, but the task of data reduction and information generation becomes harder. The chance of data being lost or misinterpreted goes up. The organization is thus faced with the problem of managing the increasingly large amounts of data available to it.

### Fall Colloquium

The C.& I.S. area sponsored three colloquia during the Fall 1981 quarter.

The first was held on October 22 and featured **Charles H. Kriebel** of the Graduate School of Industrial Administration at Carnegie-Mellon University. His topic was "Research on the Economics of Information Systems." Professor Kriebel explored some of the theories discussed by Jacob Marschak and Roy Radner in their book *Economic Theory of Teams*. These included three areas: (1) a paradigm of the firm as a marketplace for information; (2) intra-firm resource allocation under asymmetric information; and (3) assessing the value of information.

On November 19, Kjell Samuelson, a Visiting Professor in the C.& I.S. area of GSM, spoke on the following topic: "InformatiCom with Multiway Video Communication and Teleconferencing: Implications for Organizational Structures and Decision-Making." He described a Swedish system for information communication or "Informati-Com," designed for mixed multimedia and clustered information exchange between 4 to 100 people located in 4 to 16 different sites. InformatiCom has been tested and used operationally in Sweden on a nationwide basis between organizations, individuals, and universities for seminars, education, scenarios, consulting, etc. Informati-Com also has implications for the architecture and design of dedicated telecommunication networks utilizing fiber optics and satellites as well as for command-control systems and computer-support, decision-making, and multidimensional organizational structures.

The third colloquium of the Fall quarter was held on December 3, with Anthony Wasserman, Professor of Medical Information Science at the University of California, San Francisco, as the featured guest. His topic was "Tools for the Design and Development of Interactive Information Systems." Professor Wasserman spoke on the goals of the User Software Engineering (USE) Project at UCSF. The major thrust of the project is to provide an integrated, homogenous programming environment that can be combined with an effective methodology for the design and development of interactive information systems. Achieving this goal involves the development of new software tools, their integration with existing tools, and the creation of an information system development

methodology in which these tools are systematically used. In his talk, Wasserman summarized the goals and provided an overview of some of the tools.

### Visiting C.& I.S. Scholars

The C.& I.S. area is hosting two visiting scholars this year. Anne Bark, a Fulbright scholar, joined the C.& I.S. area in September of 1981. She is a doctoral student, essentially in her first year of studies in organization theory from the Stockholm School of Economics and Business Administration in Sweden. Her field of interest is organizational change — how an organization is affected when new technologies, like computer systems, are implemented. She is taking courses related to this area, and is planning to return to Stockholm to continue her doctoral studies in June 1982.

Dr. Lin Gingras joined the C.& I.S. area as a visiting scholar in August 1981. He received his Ph.D. from UCLA in June 1977 and is currently on sabbatical leave from the Faculté des Sciences de l'Administration at Laval University in Quebec City, Canada. Dr. Gingras is involved in a research project on strategic planning information systems funded by the Social Sciences and Humanities Research Council of Canada. He is also preparing a book on information systems for publication in French in Quebec and in France, as well as working with Professor Ephraim R. McLean on an article on designers' target users in information systems. Dr. Gingras expects to return to Laval University in August 1982.

### Two New Doctoral Students Join C.& I.S.

Yu-Teh Wang received his undergraduate training at National Taiwan University, where he earned a degree in Economics in 1977. Following graduation, he joined the Chinese Marine Corps and served for two years as a second lieutenant in charge of financial planning in regimental headquarters. Wang then came to the United States for the MBA program at UCLA, receiving his degree in June 1981 with a major in Computers and Information Systems. Wang's areas of interest are in logical database designs, mini-micro computers, and data management.

Bryan Hsiao received his undergraduate degree in 1973 from National Cheng Kung University, Taiwan, with a major in Mechanical Engineering. Before coming to the United States in 1976 for advanced studies, he worked for the Chin-Shan Nuclear Powerplant of Taiwan Power Company in Taipei. Between 1976 and 1977, he studied at Long Island University in New York for his master's degree, with a concentration on Management Science. During the same period of time, he also worked as a teaching assistant for the school's Information Management Program. After receiving his M.S. degree, he moved to California and worked for Northrop Corporation in its Data Processing Division at Hawthorne as an information system analyst. In 1980 Hsiao enrolled in the doctoral program at GSM in order to pursue a research and teaching career.

### Visiting Professors Join C.& I.S. Faculty

Two professors are visiting the C.& I.S. area during the 1981-1982 school year. Visiting Professor Kiell Samuelson is Chairman of Informatics and Systems Science, a joint program between Stockholm University and the Royal Institute of Technology in Sweden. While here as a professor in the C.& I.S. program, he is engaged in research on the design of "InformatiCom" systems. Such systems for information communication comprise multiway, multipoint networks with full-motion video in real-time. Dr. Samuelson designed the first InformatiCom System that has been tested and used nationwide overseas. His research covers methodology, design principles, and alternate structures for InformatiCom-type systems with optimal use of telesatellite transponders as well as terrestrial microwave links and fiber optics. He is also conducting additional studies on computer-support and InformatiCom in multi-dimensional organization structures and corporate environments.

David Dery, Visiting Associate Professor, received his Ph.D. from the University of California, Berkeley, in 1972, with emphasis in Public Policy. Professor Dery has been the head of the Public Administrative Division in the Political Science Department at the Hebrew University of Jerusalem, where he teaches public policy and administration. He has also served as a senior consultant to the Deputy Prime Minister of Israel, primarily working on social policy. Dr. Dery is the author of Computers in Welfare: The MIS Match, published by Sage in 1981. He is now working on a new book entitled *Problem Definition* in Policy Analysis. Problem definition, being one of the most crucial tasks of managers and organizational leaders, is examined as a possible bridge of mutual enrichment for both public policy and business administration. Professor Dery hopes that the new exposure to business students and faculty at GSM will help enhance this bridge.

## Western Educational Computer Conference

The Jack Tar Hotel in San Francisco was the site of the 5th Annual Western Educational Computer Conference and Trade Show held November 19 and 20, 1981. Over 300 educators attended the conference, which was sponsored by the California Educational Computing Consortium, a statewide organization of schools of higher education whose focus is on the educational, administrative, and research use of computers. The C.& I.S. area of GSM was represented at the Conference by Drs. Ephraim R. McLean, a member of the CECC's Board of Directors, and Jason L. Frand. Dr. Frand presented a paper entitled "Survey of Business School Computing Services" and moderated a panel discussing the allocating of computing resources. His paper will soon be issued as a C.& I.S. Working Paper.

One of the key speakers was **Sid Fernback**, former director of the University of California's Lawrence Livermore Laboratory, who spoke on the need for universities to again take the lead in research and technological development. He felt that industry has taken over the lead

mainly because of the lack of adequate funding as well as the pressure to produce application-oriented graduates. Unfortunately, he offered no easy solutions.

There were several papers presented on establishing microcomputer labs and on the use of micros throughout the curriculum — in Women's Studies, Psychology, Sociology, etc., as well as in the more traditional business and science areas. Next year's Conference will be held in San Diego on November 17-19, 1982.

### Second International Conference on Information Systems Held in Boston

In spite of one of the worst snow storms ever to hit Boston in the first part of December, over 200 hardy souls braved the elements to attend the Second International Conference on Information Systems, December 7-9, 1981, at the Hyatt Regency in Cambridge, Massachusetts.

With Logan Airport closed all day Sunday, December 6th, many of the attendees were delayed in arriving, necessitating a late start on Monday morning. Andrew Pettigrew's Keynote Address on "Contextualism and the Politics of Organizational Changing" was deferred until after lunch, by which time most of the people had arrived.

The Conference was co-chaired by UCLA's Eph McLean and MIT's Jack Rockart, with John Henderson of Florida State University as the Program Chairman, Marty Bariff of Case Western Reserve as the Doctoral Consortium Chairman, Jim Wetherbe of the University of Minnesota as Publications Chairman, Chris Bullen of MIT as Arrangements and Publicity Chairwoman, and Tom Dock of the University of Southern California as Finance Chairman.

Among those presenting papers, UCLA was well represented. C.& I.S. doctoral student William DeLone presented his paper, "Firm Size and the Characteristics of Computer Use" (which appears in the December 1981 issue of the MIS Quarterly); masters student Joyce Glasser discussed "PATRIC at the L.A.P.D."; and doctoral student Gail Salaway presented her findings on "Eliciting User Feedback During System Development." Ellis Horowitz and Robert Hollies, also at UCLA, presented "A Study of the Computer Software Products Industry."

At the Doctoral Consortium held in conjunction with the Conference, C.& I.S. doctoral student Ilchoo Chung attended as one of the twenty Ph.D. candidates in information systems who were brought together to discuss their dissertations and research plans. Also in attendance at the Conference from UCLA were Associate Professors Peter Chen and Burt Swanson and Dr. Jason Frand, the Director of GSM's Computing Services and a member of the C.& I.S. faculty.

Copies of the 428-page Conference Proceedings can be obtained for \$25.00 prepaid from Evelyn Bickley, Executive Secretary, The Society for Management Information Systems, 111 E. Wacker Drive, Chicago, IL 60601. A few copies of the First Conference Proceedings (250 pp.) are also available at the same address and for the same price. The Third International Conference on Information Systems will be held in Ann Arbor, Michigan, on December 13-15, 1982. (See page 5 for the Call for Papers for that Conference).

# CALL FOR PAPERS

Third International

# Conference on Information Systems

Ann Arbor, Mich.

The Third International Conference on Information Systems will continue the tradition of providing a forum for research on information systems. Original, high quality research papers on any aspect of information systems are invited. In general, these papers should address one or more of the following broad topics:

 techniques for designing and developing effective information systems;

methods for assuring successful information system implementation;

impacts of information systems on individuals, organizations, and societies;

innovative and transferrable curricula and methods for undergraduate, graduate, or executive education in information systems.

The Program Committee especially encourages submission of papers which consider:

 emerging growth areas for information systems in organizations - e.g., office automation, manufacturing automation, planning systems, decision support systems;

• the impact of information systems on organiza-

tional productivity;

managing, measuring, and improving productivity of the information systems function;

 legal issues in the information systems sphere. Submitted papers may reflect any research methodology which the author believes is appropriate to the problem being investigated. In addition to the "usual" research methodologies - e.g., field study, survey, case history, comparative analysis, theoretical development — papers demonstrating more novel research approaches are encouraged, especially:

 follow-ups or critical analyses of information systems research papers published in the past 2-3 years.

well thought-out research "wish lists," presentations by academics or executives of research that needs to be done.

#### SELECTED PAPERS TO BE PUBLISHED IN LEAD-ING JOURNALS

In order to encourage the submission of extremely high quality papers, the Program Committee has arranged for fast-track refereeing of those papers that appear qualified for direct publication in the leading information systems journals.

The Program Committee will identify papers to be considered for publication in the Communications of the ACM, Management Science, and the MIS Quarterly. Based on the topic covered, orientation, etc., selected papers will be given to the senior editors of these jour-

#### IMPORTANT DATES

SUBMISSION DEADLINE: 15 May 1982 ACCEPTANCE NOTIFICATION: 1 July 1982 1 Sept. 1982 FINAL VERSION DUE: 13-15 Dec. 1982 CONFERENCE:

nals immediately following the Program Committee meeting held at the end of May 1982. The authors of these papers will be notified that their papers have been selected for the Conference and, additionally, are being considered by the editorial staffs of these journals. The Program Committee Chairman will be notified by the senior editors of the journals concerning acceptance. Authors of papers so selected must provide an extended abstract of the paper to appear in the Conference Proceedings and the full text of the paper itself in cameraready form by September 1, 1982.

Authors will be given the right of refusal for publication in the Conference Proceedings and/or a journal.

#### INSTRUCTIONS TO AUTHORS

Full papers must be received by the Program Chairman by 15 May 1982. All papers will be refereed by at least two independent reviewers and notification of acceptance will be made by 1 July 1982. If revisions are necessary, the final version must be received by 1 September 1982.

Papers should be no longer than 25 pages, including the abstract and all illustrations, tables, and references. All illustrations must be in camera-ready form. Papers should be double-spaced, typewritten (in English), and on one side of the page only. Be sure to include all authors' names, addresses, and telephone numbers. Three (3) copies of the paper should be sent to the Program Chairman:

Professor Michael J. Ginzberg Graduate School of Business Administration New York University

90 Trinity Place

New York, New York 10006

(212) 285-6085

For additional information on any aspect of the conference, contact the Conference Chairman:

Professor Alan G. Merten

Graduate School of Business Administration

The University of Michigan Ann Arbor, Michigan 48109

(313) 763-1179



Sponsored by The Society for Management Information Systems



The Institute of Management Sciences (College on Information Systems)

in cooperation with

Association for Computing Machinery (Special Interest Group on Business Data Processing) and

Association for System Management

### Managing the Information Resource

In recognition of the growing importance of the information services function, the UCLA Graduate School of Management once again joins with the firm of Nolan, Norton & Co. to offer the third annual program on *Managing the Information Resource*, March 21-26, 1982.

The program will be an intensive five-and-a-half-day residential conference designed to prepare senior MIS managers for dealing successfully with the information services challenge of the '80s. The program will combine discussions of leading-edge techniques for DP management with problem-solving analyses of real company situations. Active classroom discussions of these and other issues will be stressed, with the exchange of professional experience by participants and faculty alike being a vital part of the conduct of the course.

The program is aimed at aiding managers in their search for answers to questions such as:

- Are we spending the right amount on information services? And for the right things?
- Is our planning and priority setting realistic and effective?
- Are our operations and development activity being conducted in an effective manner?
- Are we attracting and retaining the type of people needed to function effectively in these expanded areas?
- Are we meeting the information needs of the organization?

The program will be led by **Dr. Richard Nolan**, author of the *Stage Approach to EDP Growth* and president of Nolan, Norton & Co. **Dr. Ephraim McLean**, a member of the Computers and Information Systems area at UCLA and a long-time consultant in the information systems field, will be the co-leader. They will be assisted by **Bruce Rogow** of Nolan Norton & Co. and Professors **Eric Flamholtz**, **Bennet Lientz**, and **Burton Swanson** of the Graduate School of Management faculty.

More information and registration forms may be obtained by contacting the following:

Joan Healy
Office of Executive Education
Graduate School of Management
University of California
Los Angeles, CA 90024
(213) 825-1560

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

### **Upcoming Events**

March 5

C.& I.S. Associates Lecture. The C.& I.S. Associates will sponsor its Winter Meeting at UCLA. Chuck Gibson of Index Systems (Cambridge office) will speak on "Information Technology and Organizational Change."

March 21-26

Managing the Information Resource. (See adjacent article for more information).

April 18-21

TIMS/ORSA '82. TIMS/ORSA will sponsor the Spring Joint National Meeting in Detroit, Michigan.

June 14-16

DSS-82. The Second International Conference on Decision Support Systems will be held in San Francisco, California.

June 23-26

International Conference on Management of Distributed Data Processing. This conference is co-organized by l'Ecole Supérieure des Sciences Économiques et Commerciales (ESSEC) and the Institut National de Recherch en Informatique et en Automatique (INRIA) and will be held in Paris, France.

September 20-22

**SMIS.** The Society for Management Information Systems will hold its annual conference in Chicago at the Marriott Hotel.

October 25-27

ORSA/TIMS '82. ORSA/TIMS will sponsor the Fall Joint National Meeting in San Diego, California. The special emphasis of this program will be on the area of productivity.

November 18-19

**WEEC.** The Western Educational Computing Consortium will be held in San Francisco, California.

December 13-15

Conference on Information Systems. The Third International Conference on Information Systems will be held in Ann Arbor, Michigan.

and Information Systems Associates: American Edwards Laboratories, American Management Systems, Arthur Andersen & Company, Atlantic Richfield Company, Bekins Company, Carter Hawley Hale Stores, Inc., Ernst & Whinney, Hughes Aircraft Company, Hunt-Wesson Foods, Inc., IBM Corporation, Index Systems, Inc., Informatics, Inc., IIA Management Group, Kal Kan Foods, Inc., Lockheed Corporation, Peat, Marwick, Mitchell & Company, Security Pacific National Bank, System Development Corporation, Touche Ross & Company, Transamerica Corporation, TRW Systems Group, Twentieth Century Fox Film Corporation, Xerox Corporation.

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