



# CHANNEL

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## Emery Speaks at Associates Meeting



A large group of faculty, students, and MIS executives attended the Winter C.&I.S. Associates Lecture given by Dr. James Emery at the Graduate School of Management on Friday, February 15, 1980. Dr. Emery is currently a Professor of Decision Sciences at the University of Pennsylvania's Wharton School; but for the past five-and-a-half years, he served as the president of EDUCOM, a non-profit consortium of colleges and universities concerned with the sharing of computer-related resources. One of Dr. Emery's areas of expertise and current interest is distributed computer systems; this topic was the focus of his Associates Lecture.

According to Dr. Emery, the two main factors responsible for the growth of distributed systems are user demand for more tailored, accessible systems, and an increasingly "permissive" technology. Dr. Emery defined a distributed system as a hybrid between centralized and decentralized systems.

With proper design, Emery believes that a distributed system can provide many of the advantages of both centralized and decentralized systems, while avoiding some of the disadvantages of each. The concept of distributed systems covers a wide range, including program development as well as computer operations, each with widely differing degrees of centralization or decentralization possible.

Dr. Emery presented a wide variety of distributed systems, including a discussion of some of the applications to which the different systems might be best suited. He stressed the importance of looking at each application and organizational environment with an eye towards tailoring the system to the given situation.

Any system design will involve trade-offs, and Emery cau-

tioned that distributed systems must not be seen as a panacea; rather, the trade-offs should be kept clearly in mind and evaluated for their acceptability in a particular situation.

Distributed computing will be the "primary systems architecture" of the future, according to Emery. Systems are currently evolving in that direction, both in terms of processing and databases. Continuing advances in electronic communications technology will strengthen the advantages of decentralization. For such systems to be successful, users must develop and maintain a strong understanding of the capabilities — and limitations — of information technology, and systems managers must be attuned to user requirements to ensure appropriate system design.

Prior to Dr. Emery's talk, Professor R. Clay Spowls chaired a brief panel, which addressed various areas of future concern to the information systems field. The panel included two C.& I.S. Associates, DuWayne Peterson of Security Pacific Bank, and Jack Gearhart of TRW Systems, as well as Jack Lanahan, a retired Inland Steel Corporation executive and currently a consultant in information systems.

Mr. Lanahan addressed the issue of government regulation and its impact on information systems design. Lanahan sees no immediate end in sight to the accelerated growth of government regulation of business. On the regulatory side, computers are currently being used to evaluate legislation, counsel legislators, monitor compliance, and handle complaint registration. On the business side, computers are taking on increasing importance in providing industry with the ability to prove compliance and to anticipate



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## Focus on C.& I.S. Associates

Pat McNally is a busy man. On any given day, he may be involved in college recruiting, advising staff about career training and development, or meeting on-site with clients and consulting teams. As a partner in Arthur Andersen & Co.'s Administrative Services division, McNally heads the General Professional



Staff group, is in charge of divisional recruiting in the Los Angeles area, and carries ultimate responsibility for the projects being done by consulting teams under his direction.

Renowned in its own right, the Administrative Services division of Arthur Andersen & Co. is one of the largest consulting organizations in the world. In its specialty, information systems consulting, the division dominates the field. A unique characteristic of the consulting projects undertaken by Arthur Andersen is that they are "complete" projects. This means that the company will plan, design, and install information systems in business settings, with one partner responsible for seeing the project through from beginning to end.

Pat McNally has worked for Arthur Andersen & Co. since graduation from GSM some fourteen years ago. Now, as a partner in the firm, he is the firm's main liaison with the campus as a whole as well as for the C.& I.S. Associates program.

A California native from San Diego, McNally attended Occidental College. After graduating with a B.A. in economics, he realized that he still had much to learn about the day-to-day workings of business. "I realized that I still couldn't read a balance sheet," says McNally. A remedy, he decided, was to enter the MBA program at UCLA. Graduating in 1966 as a finance major, McNally joined the audit staff at Arthur Andersen. Within a year, he exercised his option to transfer to the Administrative Services staff. In 1968, however, a two-year Army stint interrupted his career. Unlikely as it seems, the Army provided him with an invaluable experience in general management.

McNally arrived in Southeast Asia in the aftermath of a scandal over the management and bookkeeping practices of a number of officers' clubs in and around Saigon. As newly appointed manager of the group of clubs, McNally was put in charge of developing new administrative and payroll procedures. He developed a new set of books and designed financial controls.

Returning to Arthur Andersen & Co. in 1970, after his "crash course" in general and financial management, McNally found that his first consulting assignment greatly influenced his future career interests. As part of a project team, McNally designed and implemented a data processing system for a large Southern California manufacturer. He got much satisfaction from seeing the client's operation improve visibly —

and substantially — as a result of the new system, which replaced a first generation UNIVAC computer with a third generation data processing system. Ten years later, that same system is still in place and working smoothly. Information systems design for manufacturing applications has become Pat McNally's specialty at Arthur Andersen, along with mini-computers, and computer auditing and security.

Interest in minicomputers is a logical product of McNally's manufacturing experience, since a large number of the small and growing businesses seeking computer support are in manufacturing or related areas.

In 1976, McNally took the opportunity to spend a year at company headquarters in Chicago, as part of a task force charged with developing a methodology for computer auditing and risk assessment. The team's mission was to develop ways to change the dominant perspective on transaction-flow auditing from "substantiation of balance" to one of "risk assessment." Contrary to popular assumptions, computer systems carry no more inherent risk than non-automated systems, according to McNally. What is crucial, for both computer and non-computer auditors, he insists, is to learn to ask good questions.

Mr. McNally is becoming a familiar face around the Graduate School of Management. In addition to his recruiting activities and participation in C.& I.S. Associate functions, he also finds time to act as guest lecturer for various C.& I.S. courses.

Arthur Anderson & Co.'s membership in the C.& I.S. Associates is the result of an exceptionally strong commitment to the program by McNally and several of his colleagues. It is his company's policy not to initiate memberships in educational programs with the firm's funds, but rather to "match" the personal contributions of its employees.

Arthur Andersen & Co. regards the Graduate School of Management as having one of the "top three or four" management programs in the area of information systems, and therefore, as a prime focus of the firm's recruitment efforts, according to McNally. Pat McNally is certainly more involved in campus activities than an average recruiter. He says that is because he finds both personal and professional satisfaction in his current involvements with GSM.

How does Arthur Andersen assess the future with regard to information systems consulting? According to McNally, by 1985 the firm expects to double the size of its current Administrative Services staff to approximately 6,500 people worldwide. This means a continued and increasing demand for people with both managerial and technical background. Meeting this need, particularly in the area of technical expertise, is what McNally considers one of the firm's main challenges of the next decade.

How does Pat McNally handle the pressures of a position of great responsibility and visibility in such a fast-paced and growing field? Two weeks out of each year, he and his wife and three children go camping, usually in the Sierras. An amateur wildlife photographer, McNally intends to begin backpacking when his youngest child (now two) is old enough to carry a pack. For now, he says, he settles for a place without telephones.

## Colloquium Series

The C. & I.S. Colloquium Series began the new year with a seminar in January entitled "Research in M.I.S.: A Framework and an Example," by **Phillip Ein-Dor**, Adjunct Professor at the Naval Postgraduate School, Monterey, and **Eli Segev**, Visiting Associate Professor here at the Graduate School of Management. Both gentlemen are senior lecturers in Business Administration at Tel-Aviv University. A framework for research in MIS was presented. It consists of several subsystems, each of which encompasses a number of variables and points out relationships between the variables and the success or failure of MIS. The framework was compared to previous models in the field; scientific disciplines relevant to the study of MIS were identified; and an example of the application of the framework to empirical research was presented.

The second colloquium of the winter quarter, entitled "Structure of Planning Discourse" was presented by **Joseph A. Goguen** of UCLA's Computer Science Department. Mr. Goguen spoke of the structure of planning discourse as represented in transcripts of actual planning sessions. His theory suggests that planning is a mode of discourse with an extremely regular structure. Three qualitative generalizations about the relationships between social power and the syntactic form of planning texts was presented. Directions for further research were given.

The third colloquium was presented by **Richard D. Hackathorn**, Associate Professor at the College of Business Administration, University of Colorado. His talk, which was titled "New Research Perspectives Related to Decision Support Systems" presented some new perspectives on research topics related to DSS. These perspectives were organized in terms of "levels of support" — personal, group, and organizational. These levels are directly related to the degree to which the tasks involved with decision making are interdependent with one another. Moreover, each of these levels stimulate research ideas as to how one should support decision-making processes.

The fourth colloquium, "Data Base Allocation in Distributed Computer Networks," was delivered by Professor **Jeffrey Moore** from Standard University. Dr. Moore's talk addressed the problem of optimally allocating data in a distributed computer network. Conventional approaches to the allocation of resources in computer networks have utilized mathematical programming approaches. These approaches require excessive communication of information relative to the payoff improvement thereby obtained. Dr. Moore's talk focused on a decentralized procedure, based upon the decomposition of a mathematical program, for the iterative solution of the allocational problem. The resulting procedure, utilizing Walrasian Tatonnement, is shown to bring about optimal allocation of data with much less information transfer than in the centralized case. The procedure also has interesting implementational aspects, which can be of value in effecting low-cost, approximately optimal data base allocation.

The fifth colloquium was given by **Adele Goldberg**, a member of the Learning Research Group at Xerox Corporation's Palo Alto Research Center (PARC). Her talk on "User

Interface Design in the Smalltalk Programming System" focused on the issue of user interface design. The Research Group's technique has been to build several versions of a programming system called Smalltalk, which includes a programming language in which the user interfaces can be described. She introduced the notion of a "filtering template" as a way to present a complex system in a manageable way. The filtering template idea is used to create a programming environment that has only the power necessary for the task and avoids the confusing aspects of a general purpose programming system. Examples of the uses of the Smalltalk system and the filtering template were given.

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## Four New Firms Join C. & I.S. Associates

The C. & I.S. Associates Program is pleased to welcome four new firms to the Program. Dart Industries will be represented by **Robert Laskey**, Director of Information Systems; Lockheed Corporation, by **Hiroshi H. Hara**, Director of Computing, Lockheed-California Company; Peat, Marwick Mitchell & Company, by **John F. Bernard**, Principal, Management Consulting Department; and SPERRY-UNIVAC, by **Ralph Armstrong**, Director of Marketing.

## Program on "Managing the Information Resource" Well Received by Attendees

On Sunday evening, January 20th, 44 senior MIS managers gathered together for the opening session of the program "Managing the Information Resource."

Co-sponsored by C.&I.S. and the consulting firm of Nolan, Norton & Company, this five-and-a-half-day seminar addressed a number of the key concerns facing the information services manager of today. Such issues as managing the stages of EDP growth, strategic planning for MIS, management and control of EDP services, MIS project management — these and many other topics were covered in the tightly-packed week.

The teaching staff included Professors **Ben Lientz**, **Eph McLean**, and **Burt Swanson** from UCLA; **Chuck Tucker**, Vice President of Planning and Information Services for Twentieth Century Fox Corporation and a member of the C.&I.S. Associates; and **Dick Nolan** and **Bruce Rogow** of

Nolan, Norton & Company. Dick Nolan, formerly a faculty member at Harvard and now the chief executive officer and co-founder of the firm which bears his name, is widely known for his insightful Stage Approach for Analyzing EDP Growth.

Although the pace was demanding and the classroom sessions intensive, the reactions of the attendees was highly favorable and many inquired as to when the next offering of the program would be held so that their colleagues could make plans to attend.

This date has now been set. The second annual "Managing the Information Resource" will be held at GSM on Sunday, February 1, through Friday, February 6, 1981. The complete announcement, including fees, housing arrangements, and other details, will be mailed to all *Channel* readers early in the Fall.

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## Systems Design Conference Addresses Database Problems

A group of internationally-known scholars, analysts, and designers of information systems met December 10-12, 1979, at GSM to exchange ideas on the entity-relationship approach to system analysis and design.

Conference participants came from companies and universities in the United States, Japan, France, Italy, West Germany, Austria, England, Canada, Sweden, and Norway. Professor **Ephraim McLean**, Chairman of the Computers and Information Systems area within GSM, served as Conference Chairman, and GSM and the Association for Computing Machinery co-sponsored the meeting.

The group noted the failure of many information system projects because analysts and designers were unable to understand users' needs. Recent advances in database management technologies worsen this communication gap because users do not understand database terminology.

To deal with the problem, conferees considered the advantages and disadvantages of applying the "entity-relationship (E-R) approach" to systems design. "How to build systems more effectively, and how to model the real world more naturally was the focus of conference discussions," said GSM Professor **Peter Chen**, the Conference Program Chairman and a widely recognized authority in the field.

"The entity-relationship approach expresses user information requirements in a way that users can understand. It thus represents the user's view of the real world in terms of entities (objects) and relationships (relations, associations) between them," he said.

According to Professor Chen, "The E-R approach makes it easier for the system user to access data because an E-R system keeps track of relationships between entities that are of interest to the user."

Copies of the conference proceedings will be available in May, 1980, from North Holland Publishing Company, 335 Jan Van Galenstraat, P.O. Box 103, 1000 AC Amsterdam, The Netherlands.

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difficulties. Since the main use of the computer in this area is to store and access data related to regulated activities, the main question that companies must face is how much, and in what way, data should be stored to provide the best advantage. As in many other areas, the main trade-off here is completeness and detail of information versus the cost of collecting information at a detailed level. For most companies, the issue is not whether or not to keep regulation-related data, but whether individual or summary data is the most efficient way for their particular purposes.

DuWayne Peterson focused on the issue of personnel support for data processing. In general, he reported that it is not uncommon for the turnover rate for data processing personnel to be 30-40 percent a year, indicating that much is lacking in the ability of employers to offer attractive career opportunities to technical and support personnel. He spoke briefly of Security Pacific's attempts to focus on career planning for its data processing personnel. Results have been encouraging; for the last two years, the bank's turnover rate in data processing has averaged only 15 percent.

In addition to personnel issues, Mr. Peterson sees two other important issues for the future: the increasingly thorny question of security and privacy as systems move "on-line," and the difficulties of planning for the future while implementing today's systems (often in a "fire-fighting" mode).

Jack Gearhart addressed the issue of future management personnel needs for the information systems area. He praised UCLA's C. & I.S. curriculum as having a good technical base, and also indicated that he thinks the opportunities for electives and special topics here are well-designed. What is needed in all information systems programs, he said, is an increased "front-end" emphasis. More exposure to "real life" examples of information systems applications and problems while in school is desirable. Future information systems managers must be trained to be both technically well grounded and oriented towards the real world application of theory and technique. It is crucial for systems personnel to be able to "look up from the bits and bytes" and see the users' needs that must be satisfied. Gearhart sees the need for educational institutions and industry to collaborate in producing a curriculum which will prepare future information systems managers for the challenges they will face in the work world.

After the panel presentation, a short but spirited dialogue between panel members and the audience took place. Again, the discussion focused on future challenges to the information systems field. While differing perspectives were presented, there seemed to be general agreement that the 1980's would not see an end to the growing impact of information systems technology on the business world.

Prior to the afternoon sessions, the Associates, faculty, and graduate students braved a heavy, unexpected rainstorm to attend a luncheon at the UCLA Faculty Club. Fortunately, the storm cleared during the afternoon, and attendees were able to stow their raingear before heading to the reception for Dr. Emery, held after his lecture.

Attending the day's events were the following C.&I.S. Associates: Uwe Michel of Atlantic Richfield; William Gailing, Carter Hawley Hale Stores; Dennis Johnson and Lloyd Branin from Edwards Laboratories; Michael Erdei, Tom Blount, and Gary Gilster of Hughes Aircraft; Bill Taubert and Al Colledge from Hunt-Wesson Foods; Lew Leeburg, IBM; DuWayne Peterson and Bill Finkelstein of Security Pacific Bank; Jack Gearhart and Robert Curry of TRW; and Robert Foster and Greg Blanpied from Xerox.



Dr. Emery talks with C.& I.S. Associate Dr. Bill Taubert (left) and Professor Eph McLean (center).



C.& I.S. doctoral students Randy Cooper, Les Porter, and Gail Salaway at the Winter Associates Lecture.



C.& I.S. Associate Uwe Michel (at right) talks with Dr. Emery and guest Jack Lanahan (at left).

# Upcoming Events

## SIGMOD Conference

The International Conference on the Management of Data, sponsored by SIGMOD of ACM, will be held May 14-16, 1980, at the Sheraton-Miramar in Santa Monica, California. Dr. **R. Clay Sprowls** is the Conference Chairman; Dr. **Peter Chen**, the Program Chairman; and **Beatrice Yormark** of Interactive Systems Corporation, the Local Arrangements Chairwoman.

## Conference on Information Systems

C. & I.S. will host the Planning Meeting for next fall's Conference on Information Systems. The May meeting, to be held on May 16-17, 1980, at UCLA, will bring together a number of academics who will be planning for the first annual academic Conference on Information Systems. That conference will be held in Philadelphia on December 8-10, 1980.

## National Computer Conference

The National Computer Conference will be held May

19-22, 1980, at the Anaheim Convention Center in Anaheim, California. Professors **Bennet Lientz**, **Ephraim McLean**, and **Peter Chen** will each be chairing sessions.

## Spring Associates Lecture

The Spring C. & I.S. Associates Lecture will be held June 13, 1980, at UCLA's Graduate School of Management. Mr. **Charles C. Tucker**, Vice President, Planning and Information Services of Twentieth Century Fox, will present an address on "Planning for MIS."

## MIS Firm Night

The Association of Students and Business (ASB) will sponsor the annual MIS Firm Night, to be held on the UCLA campus, on November 5, 1980.

## Managing the Information Resource

The second annual "Managing the Information Resource" program will be held at UCLA's Graduate School of Management on Sunday, February 1, through Friday, February 6, 1981.

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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, *Chairman, Computers and Information Systems*; Susan Corley, *Secretary and Newsletter Editor*; Mary Miller and Julie Simon, *Assistant Newsletter Editors*.

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