THE MOST SIGNIFICANT COMPUTER/SOFTWARE CONFERENCE OF THE DECADE!

For at least 10 years, the software problem (i.e., software design, acquisition, cost control, reliability and management) has been high on the problem list of all computer users — particularly the DOD and other Government agencies.

For at least 5 years, a number of study groups, task forces and committees have been working towards solving these and other software development problems. During the last year in particular, the DOD has formulated and begun implementing a comprehensive plan which blends policy, practice, procedure, and technology initiatives to solve the key problems underlying Defense system software development.

This conference is a culmination of that effort. Towards this end, officials from OSD, DDR&E and the Military Departments, plus expert contractor personnel — i.e., the major partners in software management — have agreed to use this conference as a forum to define both the state-of-the-art in software management and formulation and implementation of key, new DOD software management initiatives.

Specifically, the forthcoming DOD Software Management Plan covering Defense system software acquisition, management, coordination and control will be defined and detailed. In addition, the upcoming DOD Directive, "Management of Computer Resources in Major Defense Systems," (DOD Directive 5000.XX) will be discussed and explained. Both the DOD Software Management Plan and Directive 5000.XX, plus other relevant material, will be distributed at the conference.

Due to its unusual importance, the AIAA joins hands with the IEEE Computer Society's Technical Committee on Software Engineering and the Association for Computing Machinery (ACM) to provide this forum. Don't miss this singularly important conference.

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FIRST DAY

8:30

REGISTRATION

9:15

KEYNOTE ADDRESS: SOFTWARE MANAGEMENT

MR. JACQUES S. GANSLER, Deputy Assistant Secretary of Defense (Materiel Acquisition)
Office of the Secretary of Defense
- Overview, Status and Current Trends
- Major New Directions
- DOD Milestones, Organization, Planning and Funding
- Objectives.

9:45

DOD DEFENSE SYSTEM SOFTWARE MANAGEMENT PROGRAM

MR. BARRY C. DE ROZE, Office of the Deputy Assistant Secretary of Defense (Materiel Acquisition)
OASD (I&L), DOD
- Program Summary
- DOD Organizational Focus
- Policy Elements
- Practice/Procedure Elements
- Technology Elements
- R&D Thrusts
- Implementation Plans.

10:45

COFFEE BREAK

11:00

SOFTWARE REQUIREMENTS ANALYSIS AND VALIDATION

DR. ALEXANDER KOSSIAKOFF, Director, Applied Physics Laboratory, Johns Hopkins University
DR. THOMAS SLEIGHT, Head, Advanced Computer Systems, Johns Hopkins University
- Impact of Inadequate System Requirements
- Requirements Validation and DSARC Reviews
- Software Requirement Heirarchy
- Iteration of Systems Requirements
- Examples of Tools Under Development
- Requirements Representation and Traceability
- Computer Assistance during Analysis and Validation
- Preliminary Design of Critical Elements.

12:00

LUNCH BREAK

1:00

COMPUTER RESOURCE ACQUISITION PLANNING

MR. LEIGHTON LOMAS, Office of the Deputy Chief of Staff, Research & Development,
Department of the Air Force
- Life Cycles of A System
- Identification of Computer Resources by System Engineering Process
- Categories of Computer Resources
- Planning Considerations and Restraints
- Planning Team
- Planning Documents
- Air Force Organizational Implementation Changes.

2:00

COFFEE BREAK

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THE FORTHCOMING DOD SOFTWARE MANAGEMENT PLAN AND THE NEW SOFTWARE I
2:15 SOFTWARE CONFIGURATION MANAGEMENT AND CONTROL
CDR. JOHN D. COOPER, USN, Assistant to the Director (Software Management), Tactical Digital Systems Office, Headquarters Navy Material Command, Department of the Navy
- Need for Improved Software Management
- Curtailing the Software "Disaster"
- Total System Configuration Management
- Total Life Cycle Configuration Management
- Standardization
- Quality Software Products
- Reduced Software Costs
- Management Techniques and Procedures.

3:15 SOFTWARE ACQUISITION AND THE ACCEPTANCE PROCESS
GEN. WILLIAM HILSMAN, Project Manager, Army Tactical Data Systems, Department of the Army
- Nature of the Problems
- Areas Requiring Particular Management Attention
- Specification
- Testing Acceptance Process
- Specification and Implementation of Common HOL's
- Tools, Aids and Libraries
- Management, Language Control.

5:00 ADJOURN

SECOND DAY

9:00 SOFTWARE COST ESTIMATION AND SIZING
MS. JUDITH CLAPP, Associate Department Head, Command Systems, The Mitre Corporation
- Elements of Software Development Cost
- Design and Development Features that Influence Cost
- Problems Encountered in Estimating Software Cost
- Current Cost Estimating Techniques: Strategies and Weaknesses
- Prognosis.

10:00 COFFEE BREAK

10:15 SOFTWARE RELIABILITY/QUALITY ASSURANCE PRACTICES
DR. WILLIAM LIGHT, Chief, Computer Software Staff, Product Assurance Directorate, U.S. Army Electronics Command, Department of the Army
- Need for Software Quality Assurance Program
- Measures of Software Quality
- Mission and Organization of the Product Assurance Department
- Computer Software Group
- Accomplishments to Date
- Program Problem Areas
- Conclusions.

11:15 SOFTWARE RELIABILITY AND MEASUREMENT
DR. BARRY W. BOEHM, Director, Software Research and Technology, TRW Systems, Inc.
- Definition of Software Reliability
- Software Reliability Estimating Problems
- Differences between Software and Hardware Reliability
- Some Software Reliability Data and their Implications
- Key Management Measures of Software Reliability
- Conclusions; A Software Error Budget.

12:15 LUNCHEON BREAK

1:15 SOFTWARE RESEARCH AND DEVELOPMENT – TECHNOLOGY NEEDS
MR. THOMAS NYMAN, Directorate for Electronics & Physical Sciences, Office of the Director, Defense Research & Engineering, DOD
- R&D Leverage on Operation for Cost
- Research Areas and their Urgencies
- Basic Research Needs
- Exploratory Development Needs
- Advanced Development Needs
- Technology Demonstrations
- Technology Transfer.

2:45 COFFEE BREAK

3:00 PROCUREMENT PRACTICES
MR. JEROME FOX, Office of Procurement Policy, OASD (I&L), DOD
- Role of the Contracting Officer in Software Acquisition
- Solicitation: Peculiarities, Practices and Pitfalls
- Contractual Vehicles and their Weaknesses
- Contract Monitoring and Control Practices.

3:30 EMBEDDED COMPUTER SYSTEMS IN PERSONNEL DEVELOPMENT
DR. JOHN H. MANLEY, Director's Staff, Applied Physics Laboratory, Johns Hopkins University
- Acquisition and Support Personnel Requirements
- Inadequacy of Existing Training Programs
- Scientific Discipline Not Yet Established
- Military and Civilian Career Field Incentives
- Personnel Development Actions Underway
- Goals and Prognosis.

4:30 WRAP-UP

5:00 ADJOURN

DIRECTIVE DOD 5000.XX WILL BE EXPLAINED AND DISTRIBUTED AT THE CONFERENCE.
THE AMERICAN INSTITUTE OF AERONAUTICS & ASTRONAUTICS is the principal technical society in the world offering professional society affiliation to scientists and engineers concerned with the aeronautical, astronautical, and hydronautical disciplines. AIAA offers a diversity of programs covering all technical and professional aspects of the aerospace industry.

Rapid change in procurement, design, operation and management of aerospace systems appears to be the hallmark of the future. The Los Angeles section of AIAA is pleased to sponsor these seminars as a continuing program to meet the updating needs of interested professionals.

A portion of your registration fee may be applied to your first year's AIAA membership, if you are not now a member ($20 may be so applied). Ask at the registration desk for membership application and further details.

FEE
The registration fee is $195 per registrant. For AIAA, IEEE Computer Society, and ACM Members (individual membership), the fee is $180. Fee for Federal/Military and University personnel is $160. Please complete and return the registration form below or register by phone. Registration fees are payable in advance. Tuition, handouts, bound proceedings and refreshments are included in the fee.

ACCOMMODATIONS
Hotel accommodations should be arranged directly with the hotel. Be sure to mention the Software Management Conference to qualify for the group rate. Reservations should be made at least 3 weeks in advance.

CANCELLATIONS
Substitutions can be made at any time. Cancellations less than 10 days prior to the conference do not affect the registrant’s financial liability.

TAX DEDUCTION
(Treasury Reg. 1.162.5) An income tax deduction is allowed for expenses of education incurred to (1) maintain or improve skills required in one's employment or other trade or business, or (2) meet express requirements of an employer or a law imposed as a condition to retention of employment, job status, or rate of compensation.

SOFTWARE MANAGEMENT CONFERENCE

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March 22-23, 1976 April 5-6, 1976
Crystal City Marriott South Coast Plaza Hotel

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