A Conference on Software Development Tools, Techniques, and Alternatives

Hyatt Regency
Crystal City
(Washington, D.C., Area)
Arlington, Virginia
July 25 – 28, 1983

Co-Sponsored by:
IEEE Computer Society
National Bureau of Standards
ACM SIGSOFT

Featuring three...

PRE-CONFERENCE TUTORIALS
Monday, July 25, 1983—9:00 AM-5:00 PM

Tutorial 1
Tools and Techniques for Life Cycle Software Quality Assurance
Instructor: Alfred R. Sorkowitz

Tutorial 2
A Builder’s Guide to Software Engineering Environments
Instructor: William E. Riddle

Tutorial 3 (Sponsored by DC AdaTEC)
Ada* and the Ada Programming Support Environment (APSE)
Instructor: Grady Booch
**ADVANCE REGISTRATION**

**SOFTFAIR**
Hyatt Regency Crystal City
at Washington National Airport
July 25-28, 1983

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NOTE: STUDENT DISCOUNT available for CONFERENCE ONLY (Fee $25). To receive a discount, students MUST be IEEE or ACM Student Members, not employed full time, and must show membership card at the door.

- Member fee is for members of the IEEE, IEEE Computer Society, or ACM and employees of the Federal Government.
- Requests for refunds must be received in writing NO LATER THAN July 11, 1983.
- TUTORIAL registration fee includes luncheon and notes.
- CONFERENCE registration fee includes one copy of the conference proceedings and the SOFTFAIR-hosted party on Tuesday evening.
- The people who register at the door for tutorials WILL NOT BE GUARANTEED a copy of the tutorial notes.

**LIMITED ATTENDANCE, REGISTER EARLY—AVOID DISAPPOINTMENT**
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**PLEASE CHECK ACCOMMODATIONS DESIRED:** Single $ 68

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ADVANCE PROGRAM SCHEDULE

Monday
July 25, 1983
Tutorials

Tuesday
July 26, 1983

9-10:30 OPENING REMARKS
Leon Stucki, General Chairman
Ray Houghton, Program Chairman

WELCOME
Jim Burrows, Director, Institute for Computer Science and Technology, National Bureau of Standards

KEYNOTE ADDRESS
Captain James A. Lovell, Jr., USN (Ret.), Senior Vice President, Cente
d Business Systems, Former Astronaut, Gemini 7, Gemini 12, Apollo 8, and Apollo 13

11-12:30 SOFTWARE MANUFACTURING
(MINI-TUTORIAL)
Chairperson: F. McCarr, NASA – Goddard
25 Ways to Improve Your Software User Manuals, K. Ad
ams and I. Halasz, Technology Training Systems
Computer Aided Programming Demonstration, P. Bass
t and J. Gibion, Netron, Inc.

11-12:30 VERIFICATION, VALIDATION, and TESTING I
Chairperson: M. Stewart, Booz-Allen & Hamilton
An Integrated Verification and Testing System Demonstra
tion, E. Senn, K. Ames, K. Smith, NASA Langley
Automatic Generation of Test Software, E. Cristofor,
AIS / American Bell
Verification and Validation Systems for Cobol and For
tran Demonstration, C. Andrews and W. DeHaan, Gen
eral Research Corporation

2-3:30 OBJECT ORIENTED PROGRAMMING
(MINI-TUTORIALS)
Chairperson: E. Kruesi, General Electric Co.
The Message/Object Programming Model Demonstra
tion, B. Cox, Schlumberger-Doll Research
Experiences with Smalltalk for Application Develop
dent Demonstration, T. Love, Schlumberger Doll Re
search

2-3:30 VERIFICATION, VALIDATION, and TESTING II
Chairperson: M. Branstad, National Bureau of Standards
The LDRA Software Testbeds: Their Roles and Capabil
ities, M. Hennell, D. Hedley, and I. Ridgell, Liverpool Data Research Associates Ltd., England
Interactive Module Development System (Fortran Test Bed) Demonstration, M. Kurihara, S. Sakurai, Software Research Associates, Inc., Japan

Ovide: A Software Package for Verifying and Validating Petri Nets Demonstration, B. Montei, Groupe Syseca, France, et. al.

4-5:30 TOOLS AND METHODOLOGIES: PERFECT MATCH OR THE ODD COUPLE
Chairperson: L. Tripp, Boeing Computer Services
Panelists: J. Jackson, Michael Jackson Systems, Ltd., England
J. Mashey, Bell Laboratories
S. McMenamin, Yourdon, Inc.
M. Alford, TRW, Inc.

6-7:30 COCKTAIL PARTY

Wednesday
July 27, 1983

9-10:30 SOFTWARE DEVELOPMENT MANAGEMENT
Chairperson: J. Munson, System Development Corpora
tion
SYSPLANR: A Decision-Support Tool for Long Range Sys
tems Planning Demonstration, G. Kolenaty, Informa
tion Systems Consultant, and M. Holland, Montefiore Medical Center
Macro-Estimation of Software Development Parame
ters: The Estimacs System Demonstration, H. Rubin,
City University of New York
Software Must Move! A Description of the Software As
dembly Line, M. McGowan, W. Anderson, Computer Con
soles, Inc.

9-10:30 SOFTWARE DEVELOPMENT ENVIRONMENTS II
Chairperson: W. Adion, National Science Foundation
What About CAD / CAM for Software? Demonstration, L. Stucki, Boeing Computer Services Company
The Unified Support Environment: Tool Support for the User Software Engineering Methodology Demonstra
tion, A. Wasserman, University of California, San Fran
cisco

11-12:30 CONFIGURATION MANAGEMENT AND MAINTENANCE
Chairperson: J. Tippett, DoD Computer Security Center
A Tool for Software Maintenance Management, M.
Herndon, J. McCall, Science Applications, Inc.
Automating the Configuration Management Process, S.
Zucker, General Electric Space Systems
Benchmark and Conversion Tool: Test Data Reduction Programs, F. Kaziausk, Naval Data Automation Com
mand
11-12:30 SOFTWARE DEVELOPMENT ENVIRONMENTS II
Chairperson: J.-C. Rault, Agencie de l’Informatique, France

PLATINE: A Software Engineering Environment Demonstration, A. Onisiotrowski, CIAD, and J. Metzger, TRT, France

The DAISY Workbench Development Automation for Integrated Systems Demonstration, B. Rubenstein, R. Carpenter, Index Systems Inc.

Critical Event Modeling: A Step Beyond System Level Testing, R. Marion, Defense Communication Agency

2-3:30 RAPID PROTOTYPING AND APPLICATION GENERATORS
Chairperson: TBD


Experience with a Tool-Kit Approach in SMEF Prototyping, Y. Mishima, S. Murali, and M. Okada, Joint System Development Corporation, Japan

PARSLEY: A New Compiler-Compiler, M. Barber, Summit Software

2-3:30 SYNTAX-DIRECTED EDITING
Chairperson: M. Zelkowitz, University of Maryland

An Introduction to Editor Allan Poe Demonstration, C. Fischer, University of Wisconsin-Madison, et al.

A FORTH Word Editor Based on Calling Relationships—Proposal and Implications, A. Filipski, Motorola Microsystems

Generation of Syntax-Directed Editors with Text Oriented Features, B. Bottos, Carnegie-Mellon University, and C. Kintala, Bell Laboratories

4-5:30 IMPACT OF FUTURE TECHNOLOGY

J. Ring, Director of Special Programs, Honeywell Large Information Systems
I. Cermak, Vice President for Advance Technology, ITT
C. Fields, Office of Cybernetics Technology, DARPA
R. Stults, Zerox PARC "Shop Talk" Project
H. Feinieh, President, Non-Procedural Systems

4-5:30 DEBUGGING
Chairperson: TBD

VAX DEBUG: An Interactive, Symbolic, Multilingual Debugger Demonstration, B. Beander, Digital Equipment Corporation

High-Level Debugging by Interactive Direct-Execution Demonstration, Y. Chu, University of Maryland

Knowledge-Based Program Debugging: A Heuristic Model, M. Harandi, University of Illinois at Urbana-Champaign

Thursday
July 28, 1983

9-10:30 SOFTWARE DESIGN
Chairperson: G. Estrin, UCLA

The Software Designer Workbench (DWB) Demonstration, P. Scheffer, Martin Marietta Aerospace

An Integrated Interactive Design Environment for TAXI, P. O'Brien, University of Toronto, Canada


9-10:30 SOFTWARE DEVELOPMENT ENVIRONMENTS III
Chairperson: L. Druffel, Special Assistant to the Deputy Undersecretary of Defense for Research and Advanced Technology

The Evolutionary Approach to Building the Joseph Software Development Environment, W. Riddle, Software Design & Analysis, Inc.

The Toolpack Programming Environment Demonstration, W. Cowell, Argonne National Laboratory, L. Osterweil, University of Colorado

11-12:30 SOFTWARE DEVELOPMENT DATA MANAGEMENT
Chairperson: S. Redwine, Mitr Corp.

A Software Development Database, J. Watson, Dana-Farber Cancer Institute

Software Tools Archive (STAR), K. Yamabuchi, K. Yoshioka, M. Mima, Information-Technology Promotion Agency, Japan

The PRIDE Automated Systems Design Methodology, M. Bryce, M. Bryce & Associates, Inc.

11-12:30 SOFTWARE DEVELOPMENT ENVIRONMENTS IV
Chairperson: K. Kishida, Software Research Associates, Japan

An Adaptable Software Environment to Support Methodologies Demonstration, J. Kuo, J. Ramanathan, D. Soni, M. Suni, Ohio State University

The SEA/I Application Software Productivity System Demonstration, M. Matsumoto, NEC Software Product Engineering Laboratory, Japan

The CUE Project, T. Kaczmarek, W. Mark, and D. Wilczynski, ASC/Information Sciences Institute

2-4:00 COMPUTERS AND HUMAN SAFETY
Chairperson: M. Bianchi, Bell Laboratories

Panelists: J. Garman, Manager for Space Station Data Systems and Analysis Directorate, NASA—Houston

A. Zellweger, Manager of the Systems Engineering Division, Advanced Automation Program, Federal Aviation Administration

L. Beitracchi, Division of Human Factors Safety, Nuclear Regulatory Commission

W. G. Hefron, Jr., Head of the Teleconferencing Dept, American Bell, Inc.

P. Neumann, Assistant Director of the Computer Security Laboratory, SRI International