Advance Program

CONFERENCE ON SOFTWARE MAINTENANCE-1987
AUSTIN, TEXAS • SEPTEMBER 21-24, 1987

The Conference on Software Maintenance-1987 (CSM-87) will gather software managers, developers, maintainers, and researchers to discuss new solutions to the continuing challenge of software maintenance and software maintainability. CSM-87 will acquaint managers and practitioners with current advances and researchers with current needs.

SPONSORS:
- Computer Society of the IEEE—Technical Committee on Software Engineering
- The Institute of Electrical and Electronics Engineers, Inc.
- Data Processing Management Association (DPM)
- National Bureau of Standards (NBS)

IN COOPERATION WITH:
- ACM/SIGSOFT—Special Interest Group on Software Engineering
- Association for Women in Computing (AWC)
- Software Maintenance Association (SMA)

CONFERENCE COMMITTEE
GENERAL CHAIR
Roger J. Martin
National Bureau of Standards
1800 Computer Commons
Gaithersburg, MD 20899
301-975-3252

PROGRAM CHAIRS
Dr. Robert S. Arnold
Software Productivity Consortium
1800 Campus Commons
Gaithersburg, MD 20899
301-975-3353

TUTORIAL CHAIR
Dr. Mel Colter
Colter Enterprises
Colorado Springs, CO

PROGRAM COMMITTEE
Prof. David Bellin
Pitt Institute
Mr. Bruce Blum
Johns Hopkins University
Dr. Mel Colter
Colter Enterprises
Mr. Max Daughter
Ballard & Wilcox
Prof. David A. Gustafson
Kansas State University
Dr. Toby B. Marzouk
Marzouk & Parry

TOOL DEMONSTRATIONS CHAIR
Gary Richardson
Sienna, Inc.
Houston, TX
PUBLICITY CHAIR
Mary Anne Overman
DOD
P. Meade, MD
LOCAL ARRANGEMENTS CHAIR
Dr. Brian Fugate
MCC
Austin, TX
IMMEDIATE PAST GENERAL CHAIR
Nicholas Zegveldt
Software Maintenance News
Staten Island, NY

MONDAY, SEPTEMBER 21 • ALL DAY TUTORIALS
7:30 Registration
9:00-5:00 Tutorials
I. Tutorial on Software Reestructuring: Robert Arnold, Software Productivity Consortium (SPC)
II. Advanced Practical Management Methods and Technologies for Controlling Software Maintenance Cost: Dolores Samuelson, Consultant
III. UNIX and Software Portability: Alan Filippak, GTE and Arizona State University

TUESDAY, SEPTEMBER 22 • GENERAL SESSION
7:30 Registration
8:30 Opening Remarks
9:00-10:00 Plenary Keynote Address:
Dr. Barry Boehm, TRW: Improving Software Maintenance Productivity
10:00 BREAK

TRACK A
10:30 Session IA—Panel
Session Chair: Joe McQuilken, AFSC
Panelists: Gene Long—SM-ALC, Major T. Shumakas—AFSC, Joe Cavano—RADC, Norm Schneider—NPGS, Bill Curtis—MCC.

LUNCH
12:00 Session 2A
Empirical Studies on Software Maintenance:
Applying Control-Flow Metrics to COBOL: Linda Spratt, Barry McQuillen, Language Technologies
Evolution with System Sculpture: Some Empirical Results: Bruce Blum, John Hopkins University
A Model for Software Maintenance: Dave Gustafson, Austin Melton, Kansas State University

BREAK
3:00 Session 3A-3B—Plenary Panel Session
Employing Standards to Improve Software Maintenance:
Chair: Jerry Rawling—DOD, Wilma Osbourne—NASA
Leonard Tripp—IEEE/Boeing, Bill Wilson—NASA

THE COMPUTER SOCIETY OF THE IEEE
THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.
WEDNESDAY, SEPTEMBER 23 • GENERAL SESSION

7:30 Registration
8:30 Plenary Panel Session: James McCall, SAC, Chair
Embedded Computer Software Maintenance Environment
Panelists: J. Patterson—SMAC, M. Pirtle—CSCALC, G. Myers—NOSC, D. Cerino—RADC, P. Pierce—SAC

10:00 BREAK

10:30 Session 6A—Mini-Tutorial: Session 6B—Software
Reducing Risks in Software Maintenance
David Peery, BOM
Software Recycling: Harry
Sreed, Gabor Jeonicka,
Software Engineering Service
Maintenance and Reverse—
Engineering—Low Design Documents
Producing and Improvement: P.
Antoniol, P. Benedict, G. Cantone, A.
Cassillo, University of Naples
Portability Issues in Software Maintenance: Richard Head, AMOCO

12:00 LUNCH

1:30 Session 5A—Advanced Techniques for Software Maintenance
Workspaces and Experimental Database—Automated Support
for Software Maintenance:
Dewey Perry—AT&T Bell Labs
Software Maintenance—Using
Meta-Programming: Brian Terry, Robert D. Cameron,
Simon Fraser University
An Expert System Approach to a
Program’s Information/Maintenance Systems: P. Cross,
Rockwell Collins Inc.

3:00 BREAK

3:30 Session 6A—Panel: Status and Problems
in Software Maintenance
Kasey State University, Chair
Panelists: Gary Sackett, Hughes
Aircraft, Martha Wash, AT&T
Communication & Information Systems
David Card, D.W. Cottrell, C.E.
Groomer, CSC
Information Systems
Development Audits and
Software Maintenance: Chung-
Fern Wu, UCLA

7:00 CSM-87 Reception

THURSDAY, SEPTEMBER 24 • GENERAL SESSION

8:30 Session 7A—Formal Studies
A Statistical Rationale for
Evolution Dynamics Concepts:
C.K.S. Chong & K. Yuen, C.M.R.
de SJ
Improved Domain Strategies
for Detecting Path Selection
Errors: Chen-Shing Chou, Min-
Wen Dih, National Chiao Tung
University

9:30 BREAK

10:00 Plenary Panel Session: Norman Schneider, Naval Post-Graduate School—
Chair: Perspectives on Software Maintenance
Panelists: Larry Drutel, SE, Peter Freeman, UC/Irvine, Barry Boehm,
TRW, Les Belady, MCC

11:45 Conclusions

Tool Demonstrations—September 22-24
Continuous Demonstrations of tools by 25 Software Tool vendors.

Conference on Software Maintenance—1987 (CSM-87) Planning Meeting
5:30 p.m., Tuesday, September 22