

OPSLA '87

OBJECT-ORIENTED PROGRAMMING SYSTEMS, LANGUAGES AND APPLICATIONS

CONFERENCE PROCEEDINGS

OCTOBER 4 - 8, 1987

ORLANDO, FLORIDA

EDITED BY NORMAN MEYROWITZ
SPECIAL ISSUE OF SIGPLAN NOTICES
VOLUME 22, NUMBER 12, DECEMBER, 1987



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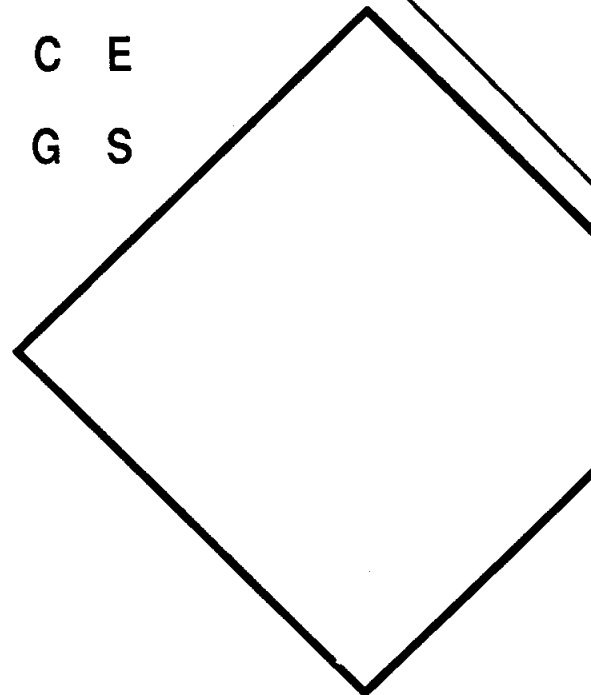
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OOPSLA '87 PROCEEDINGS

Last year, over 1200 individuals came to Portland to explore theory and practice, research and development, experimentation and commercialization in the emerging field of object-oriented programming, systems, languages, and applications. OOPSLA '87, represented by the diverse collection of paper sessions, panel sessions, poster sessions, tutorials, and vendor exhibitions, promises to be as engrossing as 1986's highly-successful first effort.

1987's OOPSLA Proceedings continues the trend of providing a solid integration of the many aspects of object-orientation.

The ongoing controversies of single vs. multiple inheritance, inheritance vs. delegation, types vs. classes vs. metaclasses, strong typing vs. weak typing, are well-represented in this year's papers. These issues are addressed from both a practical point of view, where articles position several programming environments amidst these issues, and from a theoretical point of view, where several papers attempt to define and discuss these approaches in formal terms.

Several papers explore the link between object-oriented implementation techniques and object-oriented user interfaces, approaching the problem in a variety of ways — from formal, logical expression of the user interface to direct manipulation techniques.

Interest in object-oriented, persistent databases continues to increase, as systems begin to leave the research lab and enter the marketplace. Several papers discuss strategies for persistence, while others update OODBMS results from last year's conference. One paper attempts to convey the transition from the relational DBMS world to the object-oriented world. Two papers discuss issues in language design and their influence on object-oriented database management systems.

A research area of increasing current interest — distributed objects — is represented by several papers in the Proceedings. One looks at the notion of distribution in conjunction with the parallel programming of multiprocessor machines, while another looks at the distribution problem in regards to the use of objects in a multi-process, networked UNIX world. A third explores the use of active objects as the approach for implementing concurrency, while another proposes the technique of forwarding to support distribution. Several papers discuss different attempts at creating a concurrent/distributed version of Smalltalk.

The proceedings continues to provide glimpses of real-world, production applications based upon object-oriented techniques. This year, systems for building radar systems, for telecommunications, for building expert systems,

for VLSI design, and for building design front ends are examined.

A handful of papers introduce new languages and new language concepts. Others detail enhancements to existing languages. Several papers discuss experience with existing languages, from CommonLoops to Smalltalk to ObjVLisp. Integration of OOP with traditional languages is covered in papers discussing OOP in Ada, OOP in C and C++, and translation from Smalltalk to Objective C.

Contributions to this year's proceedings fulfill the major objective of the OOPSLA '87 organizers: to provide a forum for the researchers and developers, the "consumers" and purveyors, the designer and the implementors, the theoreticians and the practitioners, to get a glimpse of the state-of-the-art of object oriented programming, systems, languages, and applications.

I speak for Adele Goldberg and Chet Wisinski, Co-Chairs of OOPSLA '87, and Jerry Archibald and Dave Thomas, Program Chair and Technical Program Chair respectively, in acknowledging the hundreds of volunteers who have given their time to arrange the meeting operations, to enlist speakers and participants, to review the over 100 papers that were submitted to publication, and to perform the myriad other tasks necessary to ensure that OOPSLA continues its success. OOPSLA '87 is also grateful to ACM and SIGPLAN, for sponsorship of the 1987 conference. We all hope that you enjoy the conference.

Norman Meyrowitz
Proceedings Editor

Special thanks to Helen DeAndrade, for her cover design, and to Julie Sears and Sindi Terrien, for their contributions to the production of this volume.

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