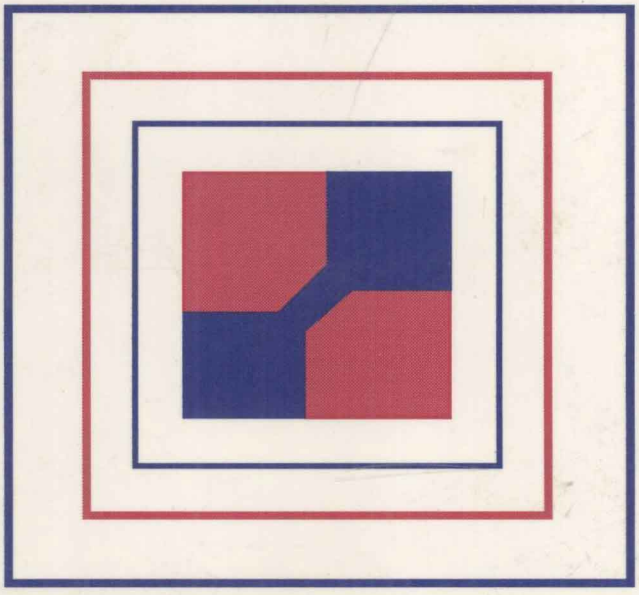
Proceedings of the

Second International Workshop on

Configurable Distributed Systems



March 21 – 23, 1994

Pittsburgh, Pennsylvania

Sponsored by

Software Engineering Institute,
Carnegie Mellon University

The IEEE Computer Society Press

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In cooperation with

IEEE Computer Society

IEEE Computer Society Press
Los Alamitos, California

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Published by the
IEEE Computer Society Press
10662 Los Vaqueros Circle
P.O. Box 3014
Los Alamitos, CA 90720-1264

IEEE Computer Society Press Order Number 5390-02
Library of Congress Number 93-80492
IEEE Catalog Number 94TH0651-0
ISBN 0-8186-5390-6 (paper)
ISBN 0-8186-5391-4 (microfiche)

Additional copies can be ordered from

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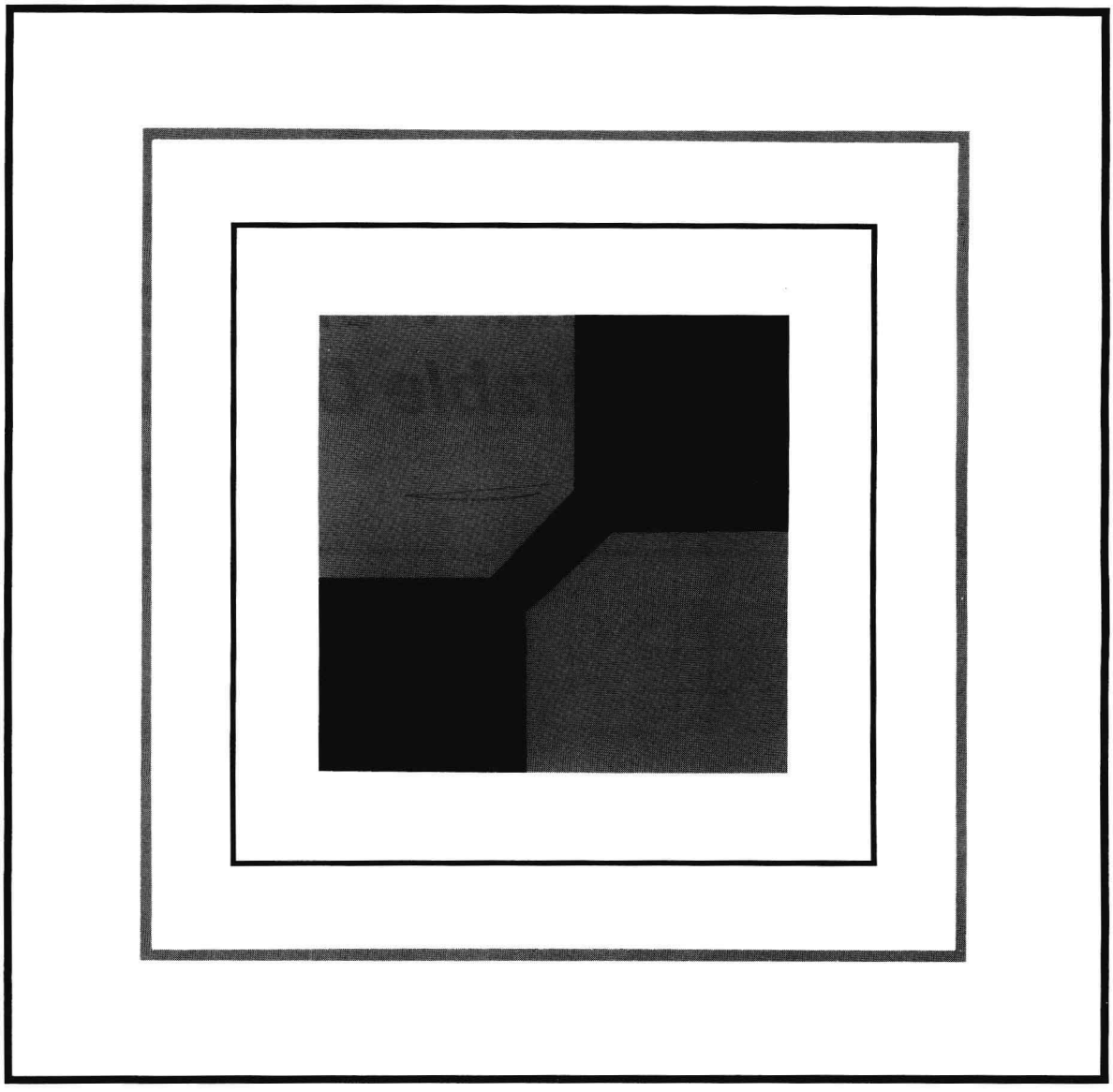
Production Editor: Phyllis Walker and Robert Werner
Cover art design by Mary Kavanaugh
Printed in the United States of America by McNaughton & Gunn, Inc.

The Institute of Electrical and Electronics Engineers, Inc.

Proceedings

Second International Workshop on Configurable Distributed Systems



Program Co-Chairs' Message

Welcome to the Second International Workshop on Configurable Distributed Systems (IWCDS-2).

The first workshop was held on March 25-27, 1992, at Imperial College, London. Its intention was to bring together work from the distributed systems, software engineering, and fault tolerance communities to discuss the languages, methods, tools, and techniques used for configuring (or structuring) and managing the software for distributed applications.

Special-purpose configuration languages and their associated environments were the focus of that workshop. Dynamic reconfiguration techniques were discussed, together with related issues of application consistency, interference, and integrity. Reconfiguration, combined with the use of server teams, checkpointing, and standby servers, was also discussed as a means of masking failures and providing high availability. Other sessions at the workshop included presentations on application design and decomposition techniques; performance, load-sharing and process-allocation issues; and distributed systems management. Examples of topics covered are heterogeneity, scale, and the relationship between trading in open systems and configuration.

The first workshop provided an excellent opportunity for presenting and discussing current work in the focused area of configurable distributed systems. Approximately 100 people attended, with participants from Europe, the United States, Canada, Brazil, Israel, Japan, and South Africa. The success of the workshop is indicated by the attendance rate, which never fell below 90 percent at all the sessions! Delegates indicated that they had greatly enjoyed and benefited from the workshop and that they would very much like to have another in this research area. At that time, we undertook the commitment to produce this second workshop, being held on the American continent.

We received excellent submissions of papers from experts throughout the world. After a strict refereeing process, we selected 18 full papers for presentation at this workshop. These papers, whose topics span the full spectrum of CDS, will act as a focus for the workshop. We have organized this workshop to encourage discussion and to foster exchange of ideas and problems among practitioners, users, and researchers alike. Active involvement by all attendees is our goal.

As before, there are sessions on configuration languages and environments, reconfiguration, configuration management, and availability management that report on current work and progress in these fields since the last workshop. Other topics that receive particular attention in this workshop are support for object management — arising out of the importance and applicability of object-oriented approaches — and configurable applications and their needs. Panel sessions on industrial problems and on languages and formalisms provide further opportunities for discussing industrial requirements and assessing the ability of current and research technology to provide solutions.

Many people contributed to the preparation of this workshop. As program co-chairs, we would like to thank the program committee for their time and energy in soliciting and reviewing papers and for their support and advice in putting together this workshop. In addition, our warm thanks are offered to our general chair, Mario Barbacci, and to our local arrangements chair, Chuck Weinstock, for their efforts and support. Their contributions have been enormous. Finally, we would like to thank all the referees and all those who submitted papers. Those papers selected for presentation and publication in these proceedings provide an excellent guide to current work in the field of configurable distributed systems.

On behalf of Mario, Chuck, and the rest of the IWCDS-2 program committee, we hope that you will find this workshop informative, interesting, and, above all, enjoyable.

Jeff Kramer
Program Co-Chair

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Special Acknowledgments

The program committee acknowledges with gratitude
the help of the individuals named below,
who contributed time to helping with tasks such as
making arrangements and reviewing papers.

Naranker Dulay
Paul Ezhilchelvan
Mark Little
Keng Ng
Graham Parrington
Stuart Wheater

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edited by John A. Stankovic and Krithi Ramamritham

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CO-PUBLISHED WITH IEEE PRESS

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