

Preface

This volume of the LNCS series contains the papers accepted for presentation at the Third IFIP international working conference on active networks (IWAN 2001). The workshop was held at the Sheraton University City Hotel, in Philadelphia USA, and was hosted by the University of Pennsylvania.

Active networks aim to ease the introduction of network services by adding dynamic programmability to network devices such as routers, and making aspects of the programmability accessible to users. Active networks research has focused on the development and testing of active techniques, that enable dynamic programmability in a networked environment. These techniques have a wide variety of applications. At IWAN 2001 we aimed to bring together members of the various communities using active and related techniques, and provide a forum for discussion and collaboration, involving researchers, developers, and potential users. Papers presented at IWAN 2001 covered the application of active techniques to many aspects of network based communication, including active multicast, active QoS, active security, active GRIDs, and active management. In addition, there were papers on architectures, language, and API issues. Although there were only 22 submissions, the standard of the 10 accepted papers was very high. This indicated clearly a substantial amount of ongoing high quality research in active networking, despite the current unfavorable economic conditions in the telecommunications industry. The papers also demonstrated that the research is genuinely global, and justifies an international workshop of this type.

We would like to thank all the authors who submitted their work. Without them the workshop could not exist. The workshop is also indebted to the members of the program committee and reviewers who devoted their time and expertise to ensuring the high quality of the program, and who deserve our warm thanks and appreciation. Above all we would like to thank the organizing committee for their tireless efforts providing the administrative and organizational support that is essential for a successful conference.

August 2001

Ian W. Marshall
Scott Nettles
Naoki Wakamiya

IWAN 2001

Message from the Conference General Chair

It is an honor to host the Third Working Conference on Active Networks in Philadelphia. At this third IWAN, we have clearly demonstrated the broad international interest in this exciting area of research and technology, as IWAN will now have been held in Europe, Asia, and North America. It is fitting that we are sited in Philadelphia, as it has been the source of many revolutionary activities, such as the American independence two centuries ago, and the ENIAC fifty years ago (there is an ENIAC "mini-museum" in the University of Pennsylvania's Moore School at 33rd and Walnut Streets - please stop by if you have time). One can only hope that our revolutionary approach to networking will have similar impacts!

This is the proper place to acknowledge the outstanding work of our Program Committee, Chaired by Ian Marshall, Scott Nettles, and Naoki Wakamiya. They have produced a rigorously reviewed set of full papers for this conference, which I think, set a high bar for future IWANs. I hope you enjoy IWAN 2001!

Jonathan M. Smith

Organization

We would like to acknowledge the support of our sponsors, The University of Pennsylvania, IFIP (International Federation for Information Processing), HITACHI of Japan, and GMD FOKUS (Research Institute for Open Communication Systems), and thank them for their contributions. Their support demonstrates international interest in the benefits of active networking. The IWAN International committee would also like to express their gratitude to the United States National Science Foundation for their generous support.

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Active Networks

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