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Preface

On November 18 and 19, 1991, 60 researchers participated in the Second International Workshop on Network and Operating System Support for Digital Audio and Video, held in cooperation with ACM SIGCOMM and SIGOPS at the IBM European Networking Center in Heidelberg, Germany. This workshop was the second in a series started in November 1990 at the International Computer Science Institute (ICSI) and the University of California at Berkeley. It brought together again researchers in networks and operating systems to discuss the needs of multimedia applications and how they may be satisfied.

The trend towards powerful workstations and high-speed networks has enabled applications to communicate and manipulate digital audio and video (continuous media). These new media differ from traditional discrete media such as text and graphics in that they have stringent delay and bandwidth requirements. The mechanisms used to transport ordinary data over networks and many of today's communication protocols are insufficient to communicate continuous media. Special operating system support must also be provided to meet the requirements of both discrete and continuous media in future multimedia applications.

The workshop dealt with virtually all system aspects of multimedia support. Among the topics discussed were

- Communication Systems for Multimedia
- Multimedia Endsystem Architectures
- Operating System Extensions for Multimedia
- UNIX and Multimedia
- Resource Management (Workstation and Network)
- Delay Management
- Performance of Multimedia Systems
- Program Models and Structuring Principles
- Application Program Interfaces for Multimedia
- Synchronization Between Media Streams
- Multimedia Applications

Prospective workshop participants had to submit a position paper. Each program committee member refereed all submissions. From the position papers received, the program committee chose the participants of the workshop and determined 34 papers for presentation. Those authors selected to give presentations were asked to submit full versions of their papers for inclusion in these workshop proceedings. These proceedings, however, contain not only the workshop papers, but also summaries of the workshop sessions compiled by the session chairmen.

Many people have contributed to making this workshop a success. First, I would like to thank all the workshop participants for sharing their ideas with us during the two days in Heidelberg and for taking part in the very lively discussions. All program committee members and session chairmen put a lot of effort in selecting papers, presenting, and summarizing them. Our secretaries assisted me with the local arrangements for the workshop in the best possible way.

Finally, I would like to express my personal gratitude to my colleagues Hermann Schmutz and Ralf Steinmetz who established multimedia systems as a research topic at the IBM European Networking Center well before I joined them. Without their work, the ENC would hardly have been chosen to host the workshop. In this context, I would also like to thank Greg Flurry and Wayne Blackard from IBM Austin for their continued support of our multimedia activities.

Ralf Guido Herrtwich

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