



GMD – Forschungszentrum Informationstechnik GmbH



Multimedia and Security Workshop at ACM Multimedia

- [GMD - German National Research Center for Information Technology](#)
- [Patrick Horster](#)
- [ACM Multimedia '98 in Bristol](#)



The workshop is only by invitation! If you are interested please contact [Jana Dittmann](#).

Multimedia and Security Workshop at ACM Multimedia 12 th of September, 9 am - 5 pm

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[PDF-Version of the Proceedings](#)

Recently security has become one of the most significant problems for spreading new information technology. Digital data can easily be copied and multiplied without information loss. This requires security solutions for such fields as distributed production processes and electronic commerce, since the producers seek to provide access control mechanisms to prevent misuse and theft of material.

The workshop analyses specific security problems of multimedia systems and multimedia material in the digital environment. Additionally we address the topic, that existing multimedia security mechanisms are not realized by using multimedia tools applying security. Thus the discussion is extended to the use of multimedia to perform security.

Objectives

The objective is to bring together researchers, developers, and practitioners from academia and industry for a state of the art evaluation and discussions of topics for multimedia security environments for the next century. The workshop intends to reflect on strength and weaknesses of what the multimedia community has to offer to meet the needs of secure multimedia environments.

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A major field of the discussion is the identification of acceptance problems to use distributed multimedia production systems and digital marketplaces.

Solutions for confidential transmission, authentication of original, copyright protection and Try&Buy transactions will be addressed. Though security is recognized as an important issue in multimedia it is, ironically, mostly not presented by the new media. Usually, security algorithms are seen as background processes, invisible to the user. Based on the discussions on security in multimedia environments we analyze interactive multimedia tools which strengthen the producers acceptance to use available security features. As an example we present an approach to an interactive watermarking environment to ensure copyrights. We show the need for a flexible and open watermarking environment for embedding robust watermarks. We will focus on the lack of media support as well as on the definition of new design criteria for multimedia security environments. The intention of the workshop is to provide space for intensive discussions among the addressed problems of security in and with multimedia. We show current solutions and still open problems which must be addressed in the near future.

[More about the ACM Multimedia '98](#)

Suggested session outline

- 1.) 9:00 - 9:30 Jana Dittmann: Introduction of participants: Multimedia and Security
- 2.) 9:30 - 10:00 Petra Wohlmacher, Patrick Horster: Security requirements of IT systems
- 10:00 - 10:30 Anja Miedbrodt: The functions of digital signatures from a legal point of view
- Coffee Break 10:30 - 10:45

3.) Security Solutions for Multimedia Systems:

10:45 - 11:00

- J. Dittmann, GMD-IPSI: Multimedia Tools for Multimedia Security?

11:00 - 12:00 (presentations and questions/discussion)

- U.Kohl, IBM Research Division, San Jose, Secure Container Technology - Basis for Cryptographically Secured Multimedia Communication
- Th. Kunkelmann, Information Technology Transfer Office, Darmstadt, Partial Encryption and Transparent Encryption of Video Data (20 min)
- C. Griwodz, Darmstadt University of Technology, Video Server Security for Multicasting (20 min)

- S.-F. Chang, Columbia University, Content-based Techniques for Image Authentication and Visible Video Watermarking (20 min)

Lunch break: 12:00 - 13:00

13:00 - 14:00 (presentations and questions/discussion)

- E. Delp, Purdue University: Watermarking: Does it work and Who really cares? (20 min)
- F. Petitcolas, University of Cambridge, Computer Laboratory: [Attacks on copyright marking systems](#) (20 min)

[A. H. Tewfik, M. Swanson and B. Zhu](#)

[Univ. of Minnesota, Minneapolis, MN and Cognicity Inc., Eden Prairie, MN](#): Audio

- watermarking and data embedding - Current state of the art, challenges and future directions (20 min)

14:00- 15:45 (presentations and questions/short discussion)

- [F. Hartung, University of Erlangen](#), Digital Watermarking for Compressed Video (20 min)

- Klara Nahrstedt, Assistant Professor, MONET Group (Multimedia Operating and NETWORKing System Group), Department of Computer Science University of Illinois at Urbana-Champaign: Non-invertible Watermarking Methods for MPEG Video and Audio (20 min)

- [I.J.Cox, NEC Research Institute](#), Watermarking in the Real World: An Application to DVD (20 min)

- Fujii, Takashima, Takehito ABE, NTT Multimedia Systems Laboratory Group: Image distribution with scrambling and watermarking (20 min)

- R.Ohbuchi, IBM Japan, Watermarking of 3D models (20 min)

- A. Herrigel: Copyright Architectures (20 min)

Coffee break 15:45 - 16:00

4.) 16:00 - 16:45 Round table wrap-up; discussion amongst the participants: Open Questions - New Visions; Audience interaction, questions to the presenters

5.) 16:45 - 17:00 J. Dittmann, GMD-IPSI: Summary and results

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