Heinz Gerhäuser (Ed.)

5th Workshop
Digital Broadcasting

PROCEEDINGS
September 23 – 24, 2004

Fraunhofer Institute for
Integrated Circuits IIS
Erlangen, Germany
# Table of Contents

**Invited Speaker**

**Building Blocks of a Successful DARS Business**
Andy Ras-Work, WorldSpace Corp., USA

**1. Satellite Digital Broadcasting**

**Satellite Digital Broadcasting in Europe**
Olivier Courseille, Alcatel Space, France; Aymeric de Cardes, WorldSpace, France

**Satellite Digital Multimedia Broadcast (S-DMB) System Presentation**
Christophe Selier, Alcatel Space, France; G. E. Corazza, ARCES/DEIS, University of Bologna, Italy, et al

**First Results of Field Trials in an L-Band Satellite Broadcasting System with Complementary Terrestrial Network in Europe**
Thomas Heyn, Albert Heuberger, Fraunhofer IIS, Germany

**Terrestrial Repeaters for the US-DARS Digital Radio Systems**
Rainer Perthold, Innovation Center for Telecommunication Technology IZT, Germany

**2. Quality of Service in Networks**

**User-Perceived Quality of Service in Hybrid Broadcast and Telecommunication Networks**
Michael Galetzka, Fraunhofer IIS, Germany

**A Methodology for the Determination and Analysis of Digital Multimedia Broadcasting Network Performance**
Les Sabel, RadioScape Ltd., United Kingdom

**RDP Field Trials for a DAB-T SFN 12B Channel**
Antonio Ferreira, Alfredo Oliveira, RDP, Portugal

**3. Next Generation Services and Visions**

**New Business Models for Media Services: Prerequisites for Successful Business Models**
Thomas Wächter, T-Systems International GmbH, Germany

**Next-Generation Interactive Broadcast Services**
Uwe Rauschenbach, Jörg Heuer, Klaus Illgner, Siemens AG, Germany

**Journaline: New Programs with DRM**
Olaf Korte, Fraunhofer IIS, Germany

**Processing DVB Streams in Java – A Performance Evaluation**
Christian Forster, University Erlangen-Nuremberg, Germany

**4. Hardware Technologies**

**Reed-Solomon Codec for Systems of Communication**
Sergey Samoilov, Vladimir State University, Russia
### Invited Speaker

Silicon Technologies and Design Methodologies: Key Factors and Key Decisions to Drive the Transition of Consumer Radio Receivers to the Digital Era  
Riccardo Ferrari, Marco Carbone, STMicroelectronics, Italy

### 5. New Aspects for Audio Coding in Radio Broadcasting

Audio Source Coding in Digital Broadcasting Systems  
Stefan Meltzer, Coding Technologies, Sweden/Germany

Spatial Audio Coding – An Enabling Technology for Bitrate-Efficient and Compatible Multi-Channel Audio Broadcasting  
Stefan Geyersberger, Jürgen Herre, Fraunhofer IIS, Germany; Peter Kroon, Christof Faller, Agere Systems, USA

Multichannel Audio in Radio  
Martin Wöhr, Bayerischer Rundfunk, Germany

### 6. Digital Radio Mondiale

Digital Radio Mondiale: Latest Developments and Market Approach  
Peter Senger, DRM Chairman, Deutsche Welle, Germany

Hard- and Software Architecture for All-Digital DRM Monitoring Receivers  
Gerd Kilian, Albert Heuberger, Fraunhofer IIS, Germany

A New DSP Architecture for Digital Radio Applications  
Carsten Noeske, Micronas GmbH, Germany

DRM Single Channel Simulcast – An Important Element for the Transition from AM to DRM  
Gerd Zimmermann, Andreas Schäfer, T-Systems, Germany

Description and Results of the DRM Long Term Tests  
Jose Maria Matias, University Bilbao, Spain, et al

Is DRM on 26 MHz an Option for Local Digital Broadcasting? Results from a Field Trial in Nuremberg, Germany  
Thomas Lauterbach, Georg-Simon-Ohm-Fachhochschule Nürnberg, Germany, et al

### 7. Which Standards will Prevail?

Digital Broadcasting in Europe – Which Standards Will Prevail?  
Gareth Owen, Eureca Research, UK

### Schedule