

IEEE/ÖVE International Workshop on

W-CDMA RF Issues and Future Trends

an Ultrasonics Symposium Post Conference Workshop



October, 14th 2002, Hotel Dorint, Salzburg, Austria

Topics:

- UMTS Physical Layer Overview
- UMTS PHY System Simulation
- Impact of RF Related Signal Distortions on the Performance of UMTS
- UMTS RF Modem Chip Sets: Current Status and Future Trends
- RF Passive Components for UMTS
- 4G System Forecast

Speakers:

Ludwig Eichinger

(Agilent Technologies AG,
Oberhaching, Germany)

Georg Fischer

(Lucent Technologies AG,
Nuremberg, Germany)

Christian Lanschützer

(University of Linz, Austria)

Linus Maurer

(Mobile Communications
System Design, Linz, Austria)

Clemens Ruppel

(EPCOS AG, Munich,
Germany)

Andreas Springer

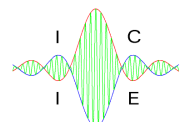
(University of Linz, Austria)

Wolfgang Thomann

(DICE, Linz, Austria)

Robert Weigel

(University of Erlangen-
Nuremberg, Germany)



Workshop Program

- **October 13th, 2002**

Social Event: Starting at Hotel Dorint at 18:00 o'clock we will enjoy a guided walk through the historical places of the city of Salzburg. The stations are the castle of Mirabell, Mozart's birthplace, the theatre of Salzburg, and the birthplace of the genius Loci. At the court yard of St. Peter we will have the chance to listen to Mozarts letters while enjoying a cocktail. The last station is the Salzburg Festival house, from where a bus will bring us back to the hotel at about 20:30 o'clock.

- **October 14th, 2002**

08:30 – 09:00

Registration

09:00 - 09:40

A UMTS Physical Layer Review

Andreas Springer (University of Linz, Austria)

09:40 - 10:20

Impact of RF Related Signal Distortions on the Performance of UMTS

Linus Maurer (Mobile Communications System Design, Austria)

10:20 - 10:45

COFFEE BREAK

10:45 - 11:25

RF Modem Chip Sets: Current Status and Future Trends

Wolfgang Thomann (DICE, Linz, Austria)

11:25 - 12:05

UMTS System Simulation Using ADS (Advanced Design System)

Ludwig Eichinger (Agilent Technologies, Oberhaching, Germany)

12:05 – 12:30

Adaptive LO Leakage Cancellation for W-CDMA Direct Upconversion Transmitter

Christian Lanschützer (University of Linz, Austria)

12:30 - 13:50

LUNCH

13:50 - 14:30

Trends in Front-End Development: Passive Integration for Mobile Communications Applications

Clemens Ruppel (EPCOS AG, Munich)

14:30 – 15:10

RF-MEMS for Base Stations

Georg Fischer (Lucent Technologies AG Nuremberg)

15:10 - 15:35:

COFFEE BREAK

15:35 – 16:10

RF Architecture of Frequency Agile Base Stations

Georg Fischer (Lucent Technologies AG Nuremberg)

16:10 - 16:50

4G System Forecast

Robert Weigel (University of Erlangen-Nuremberg, Germany)

16:50 - 17:15

Panel Discussion: all

IEEE/ÖVE International Workshop on W-CDMA RF Issues and Future Trends

October 14, 2002 in Salzburg (Austria)

REGISTRATION FORM

To register, mail or fax this form to:
(Registration Deadline: 22nd of September 2002)

Johannes Kepler University of Linz
Institut für Nachrichtentechnik
Altenbergerstr. 69
Fax: +43-732-2468-9712
A-4040 Linz, Austria

HOTEL RESERVATION

The workshop special rates are € 80,- for standard rooms and € 90,- for comfort rooms. We request to make the reservation directly with Hotel Dorint Salzburg. To get the special rate please inform them that you are a participant of the IEEE workshop.

Hotel Dorint Salzburg
Sterneckstr. 20
A-5020 Salzburg

Tel.: +43-(0)662-882031-0
Fax: +43-(0)662-882031-9
www: www.dorint.de/salzburg

PARTICIPANT

PLEASE PRINT OR TYPE IN CAPITAL LETTERS

Mr / Ms Last name > _____ First Name > _____

Title (Prof./Dr.) > _____

Institution > _____

Country > _____

P.O.Box/Street > _____ Zip/Postal Code > _____

City > _____

E-Mail > _____ Phone > _____

Fax > _____

Participation: (Please mark for organization purposes): Workshop / Social Event (_____ person(s))

REGISTRATION FEES

The workshop fee is € 220,-. The fee includes the workshop participation at October 14th, (lunch, coffee break snacks, and unlimited drinks during the workshop are included), and the social event at October, 13th.

PAYMENT OF FEES

Payment in Euro (€) is required. Registration without proper payment or credit card authorization will be refused. Delegates may cancel their registration and receive the return of registration fees paid less 10% thereof providing they notify in writing prior to 25th September 2002. Substitution of delegates is permitted. We reserve the right to cancel the workshop, and will, in such an event, make a full refund of any registration fee. No liability is assumed for minor changes in programme content and speakers.

Bank transfer

Bank: *Allgemeine Sparkasse O.Ö.* Bank code: *20320*
Account name: *Institut für Nachrichtentechnik*
Account number: *07506 908762*
Purpose: *W-CDMA, Your Name*

Credit Card

I, the undersigned, authorize the *Institut für Nachrichtentechnik/Informationstechnik* do debit the sum of € 250.- on my credit card:

VISA MASTER / EURO

No > ___ / ___ / ___ / ___ Expiry Date > ___ / ___

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Payment in cash at the workshop

Date > _____

Signature > _____

Workshop Content

About ten years after the rapid start of GSM the evolution of the UMTS network infrastructure is in progress all over the world. The main effort in the development of mobile cellular systems is typically spent for the digital signal processing part. During digital baseband development the radio part of the system is often assumed as a black box which is supposed to filter, amplify and frequency convert the received signal without noticeable degradation. In reality, the radio part with its nonlinear characteristics and its noise sources is often the bottleneck of the overall system. Consequently it has to be introduced into the system design process as early as possible. This workshop comprises a set of consecutive presentations on the UMTS system, the impact of RF related distortions on the performance of UMTS, system simulation, RF chip set architectures and RF passive components for UMTS. A 4G system forecast and proposals for 4G RF architectures finalize the program. Basic know how on communications engineering and radio technology is assumed.

Why should you attend

The workshop gives an overview of state of the art and future development trends in UMTS radio frequency design, from high level UMTS system simulations to radio frequency chip design and discussions on appropriate passive devices. The workshop provides the possibility to discuss these topics with leaders in the UMTS radio frequency arena.



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