

1 Highlights

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Research Activities Within the reporting period we started the European projects Virtuous, Future, Drive/Overdrive, IPonAir, STRIKE, SAILOR, WSI, WWRI, the DFG-project Coconet and the BMBF-projects VMTL and IPonAir.

So-called “Networks of Excellence“ (NoE) provide a close cooperation of research centres across Europe. NoE improve the efficiency of European research work. Currently we participate in NoE NexWay and Anwire.

The HERMES Partnership is a virtual center of excellence¹. It is a network of leading independent telecom research centers in Europe. ComNets has recently become a member to HERMES.

In summer 2000 I have been invited to become a member of the “Think Tank” of the IST/Wireless Strategic Initiative Project that defines the research directions towards 4th Generation (4G) mobile radio systems in Europe. The key manufacturers in mobile radio are grouped together in WSI.

One year later, the Wireless World Research Forum² has been formally founded and I have been elected as chair of Working Group 4 (New Technologies) and thereby a member of the WWRF Steering Board. There are three other WGs in WWRF. WWRF is the only world wide forum comprising all major telecommunication companies and mobile radio operators that are represented there by their research departments. The forum also has attracted all the major research institutes and university researchers.

Publications All our published papers are available for download from our paper server accessible via the ComNets homepage. The paper download statistics are shown in Figure 8.1 on page 136. It demonstrates the

¹www.hermes-europe.org

²www.wireless-world-research.org

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high interest on our research results. It is worth noting that an inspection of the top download scores shows that papers with results from actual project activities are the favorite ones and not the revised articles based on conference papers published in international journals. Independently from this the high percentage of conference contributions shown in Figure 8.2 on page 136 represents our expert knowledge that we are generating from our project work and that we are using successfully to apply for new projects. Some of the papers published on conferences so much beyond the daily research business and introduce really new ideas that prepare the ground for a new wave of research projects.

Workshops, Conferences One outstanding event organized by ComNets in 2001 was the “10th Aachen Symposium on Signal Theory”, a periodic conference of our faculty. The symposium focussed “Algorithms and Software for Mobile Communications”. For more information see Section 9.1.1 on page 169.

The *European Wireless 2002* in Florence and the *European Mobile Communication Conference 2001* in Vienna are two other periodic conferences the chair is regularly involved with: at both I am a member of the Steering Committee.

WWRF has three workshops per year where I’m responsible to organize the workshops on New Technologies in Working Group 4.

New Book Editions The books “Mobilfunknetze und ihre Protokolle 1, 2” have been published as revised and improved 3rd edition 2002. The book cover is now in orange. The English book “Mobile Radio Networks” has been substantially revised and published as 2nd edition. The UMTS book “UMTS – Ein Kurs” is an issue of our successful training courses for companies. It will appear in October 2002 in English as “UMTS – A Comprehensive Introduction”. For more details on the books please see Section 8.4 on page 139.

Teaching 505 students started in Winter 2001/2. This is a substantially larger number than in the past years. The new diploma curriculum Computer Science and Engineering of our faculty has contributed much to this development.

Stochastic Simulation 1 and 2 is now being lectured by Prof.(Salzburg) Dr. Rokitansky, a member of our staff, who became associated lecturer at our faculty. Mrs. Prof. Dr. Görg who lectured this course before has

moved from ComNets to University of Bremen where she was awarded a professorship in Communication Networks.

During the reporting time we also improved most of the course manuscripts we offer to our students. Worth mentioning is the introduction of a new laboratory we have developed for our students in mobile communications. Section 4 on page 27 gives an overview of the courses, exercises and labs we each offer every year.

Staff At the end of the year 2001 many working contracts with research assistants have ended. New faces have appeared instead and I sincerely hope their new ideas will substantially contribute to our work. I'm expecting the not yet presented Ph.D. theses will be submitted soon, so that the aim of all the research assistants can be reached: to get their Ph.D. after five years.

Final remarks I hope very much this Annual Report will raise your interest or will give you the information needed to get an insight into the work in progress at ComNets.

Aachen, July 11, 2002

Bernhard Walke