Finished Projects

Project	Title	Grant By	Description	ComNets part
IPonAIR	Nahtlose Verbindung selbstkonfigurierender drahtloser Umgebungen	BMBF	Entwicklungvon Routing- und Mobilitätsprotokollen für die Integrationderexistierenden heterogenen Funkstandards zu einer einzigenSchnittstelle	
VIRTUOUS	Virtual Home UMTS on Satellite	EU IST FP5	The VIRTUOUS project aims at identifying, designing and demonstrating a feasible, pragmatic, smooth migration path towards Terrestrial and Satellite UMTS (T-S-UMTS).	
DRiVE	Dynamic Radio for IP-Services in Vehicular Environments	EU IST FP5	The overall objective of the DRiVE project is: • to enable spectrum efficient high-quality wireless IP in a heterogenous multi-radio environment. • to deliver in-vehicle multimedia-services, which ensure universally available access to information and support for education and entertainment.	
FUTURE	FUnctional Umts Real Emulator	EU	The FUTURE project aims at adopting recent advances in the Internet arena in UMTS by exploring applicability of native internet protocols (in accordance with IETF multimedia data and control architecture) in 3G. Special emphasis is given to core network consolidation towards a general purpose multi service UMTS connectivity network, legacy GSM/UMTS voice service migration to the consolidated packet based UMTS core network domain, and the introduction of a wide range of optimised multimedia communication and information services, based on SIP and Web/WAP techniques. The integration of telephony services with information services is regarded as base for end-user service multiplication and	

			will be combined with inherent capabilities of S-UMTS satellites like wide area coverage, broadcasting, and location determination. Key functions of the envisaged full service IP based target UMTS will be identified, designed, and demonstrated, using the VIRTUOUS Demonstrator as a starting point.
DELTA	DSRC Electronics implementation for Transportation and Automotive applications	EU	Serienmässige Integration von DSRC-Ausrüstung in Fahrzeuge
OverDrive	Spectrum Efficient Uni- and Multicast Services over Dynamic Multi-Radio Networks in Vehicular Environments	EU IST FP5	
MultiFunk		BMBF	Grundlegende Untersuchungen zur Integration von UMTS- und Rundfunkfrequenzbändern für den mobilen zellualaren Internetzugang
MultiHop	self-organising wireless networks with multi-hop ability	BMBF	
Coverage	Cellular OFDM system with Extension Points for increased transmission RAnGE	BMBF	The BMBF (Bundesministerium für Bildung und Forschung, Germany) founded project COVERAGE investigated broadband access to the IP-core-net in public and semi-public hot spot scenarios for mobile users. The basis for the investigations were OFDM-systems (Orthogonal Frequency Division Multiplex) like H/2 (HiperLAN/2) or IEEE802.11a which provide data-rates up to 54 Mbit/s. OFDM (Orthogonal Frequency Division Multiplex) with appropriate coding is seen as a candidate for future broadband mobile systems, as it provides effective means to handle multipath. We investigated the potential of these new systems to supplement mobile networks of the second (2G) and third generation (3G) like GSM, GPRS, EDGE, UMTS etc. in so called hot

			spot scenarios like airports, railway stations, urban places etc.. For this reason we aimed at an inter-working of e.g. H/2 with cellular systems. The user should be connected continuously to the IP-core-net, even if he leaves the H/2 hot spot. We investigated vertical handover mechanisms between different types of radio systems, based on improved MIP (Mobile IP) IETF protocols. One main topic of the project COVERAGE was to investigate multihop networks to increase the coverage area for one AP with only moderate infrastructure effort. The multihop network was build up by so called EPs (Extension Point) which forward data packets to/from the AP (Access Point) to/from the MTs (Mobile Terminal). The focus was on high performance solutions, i.e. with respect to overall throughput, capacity, spectral efficiency, QoS (Quality of Service), delay, etc. as we wanted to serve public users. For this reason the EPs were placed on fixed and planned locations to guarantee optimum coverage for the multihop network. The duration of the project was from 2000-07-01 to 2003-06-30.
STRIKE	SpecTRally Efficient FIxed Wireless NetworK basEd on Dual Standards	EU IST FP6	
NEXWAY	Network of Excellence in Wireless Applications and TechnologY	EU IST FP6	
">WSI	Wireless Strategic Initiative	EU IST FP6	
ANWIRE	Academic Network of Wireless Internet	EU IST	

	Research in Europe	FP6		
INVENT-VMTL	Intelligenter Verkehr und nutzergerechte Technik	BMBF	ComNets entwickelte mobile Lösungen zur Optimierung der Logistikkette auf derletzten Meile der Paketauslieferung und eine mobile Anwendungen zur Unterstützung der Boten. Es wurden dabei verteilte Anwendungen auf XMLWeb Service Basis konzipiert, entickelt und auf mobilen Endgeräten validiert.	
Sailor		EU IST FP6	The SAILOR project aimed at identifying, designing and demonstrating newservices, identified by a proper market analysis, making use ofinnovative functionalities upon an integrated Terrestrial and SatelliteUMTS (T/S UMTS) network. This basic work has be developed incooperation with the major leading European organizations. Inparticular, SAILOR provided inputs and contributions to the AdvancedSatellite Mobile Systems S-UMTS task force (ASMS S-UMTS TF), whose economical and technical groups are now working on the issues mentionedabove. Furthermore, it targets at contributing to the activities of therelevant UMTS ETSI and 3GPP standardization groups, which are involvedin the development of new market scenarios for the 3G satellitessystems and in the adoption of innovative network tools targeted tosupport these proposed scenarios.	RWTH/ComNets is a partner in the "Satellite Integrated UMTS Emulator" SAILOR
TETRA	Scope of the pilot site Aachen		With the Schengener agreement the European states have decided to introduce uniform telecommunication systems for the *Authorities and Organizations with safety functions* (AOS), like police, fire brigades and customs. This is planned to enhance the co-operation between different states and between different AOS organizations after the falling down of the inner European borders.	