P26: CORITEL (Italy)

Description of expertise & activities

CoRiTeL is a Research Consortium founded in 1994 and currently composed of two industrial partners - Marconi S.p.A. (Ericsson R&D company in Italy) and ITS S.p.A., and four universities - University of Rome "La Sapienza", University of Bologna, University of Salerno and Politecnico di Milano. The purpose of the consortium is to realize scientific researches in the areas of Electronics, Telecommunications, and Computer Science, and in related technologies in view of possible industrial exploitations. In addition, the development of competencies of young researchers is cared. The research activities carried on within the CoRiTeL consortium basically relate to the following main areas of interest:

- Evolution of core network architecture – Participation and WP Leading in FP6 NoE Euro-NGI and Euro-FGI - Design and Engineering of the N; organization of Euro-NGI Conference in Rome in 2005.
- Transmission and transport networks - Participation in FP6 IP-BROADWAN - Next generation wireless access solutions for broadband services to everyone
- Microwave Technologies – Participation in FP6 NoE TARGET – Amplifier and microwave research
- Security in Next Generation Networks – Study of security solutions for all-IP based networks

Tasks within BONE

WP11	TE , congestion resolution, protection and restoration for metro Ethernet and MPLS scenarios
WP13	Optical access network evolution including architectural and technology issues
WP14	New switching paradigms, node and network architecture
WP15	Optical high speed transmission systems and impact on components/subsystem design
WP22	Primary and backup path computation and set up, multi-domain routing for different network scenarios

Key personnel

Roberto Sabella received the degree in Electronic Engineering in 1987. He then joined Ericsson, Rome, working on hardware design and on fiber optic communication systems. His research interests include optical device technology, high-speed optical communication systems, WDM networks and next generation Internet networks. In 1997 he was the technical coordinator of CoRiTeL. Since 1999 he was the manager of the Research and Innovation Unit. He holds six patents on optical networks and traffic engineering strategies, is co-author of a book on high-speed optical communications, and published about 100 papers in international scientific journals or conferences. He has been lecturer at several Italian Universities, and adjunct professor at the University of Rome “La Sapienza”. He is IEEE senior member. He was guest editor for special issues on optical networks, next generation networks and traffic engineering, published by Computer Network (Elsevier), IEEE Communication Magazine, IEEE Network, IEEE JSAC Photonic Network Communications (Kluwer Academic). He was the Chairman of the conference NGI 2005, organized on behalf of the NoE EURO-NGI.

Marina Settembre: received the degree in Physics from the University of Rome “La Sapienza” in 1985. She was granted a fellowship from the Fondazione Ugo Bordoni (FUB), working on new materials for optical devices. From 1986 to 2000 she worked at FUB on optical devices for signal routing/processing and on high capacity optical transmission systems. Since 2000 she joined Ericsson-Rome as system manager in the Research & Innovation Unit on network architectures, traffic engineering strategies and algorithms and control plane definition for MPLS/GMPLS based networks and on MAC Protocols and QoS issues for broadband wireless systems. Her current research interests include system aspects of protocol, architecture and traffic engineering for optical and Ethernet based networks. She is also the technical coordinator in CoRiTeL. She was involved in European COST, ACTS and IST projects (ACTS-Upgrade, ACTS- Esther, Cost 245, Cost 266, IST Atlas, IST Embrace, IST FP6 IP-BROADWAN). She holds one patent on TE system for GMPLS-based networks, published more than 90 papers on international scientific journals or conferences and a book for "Non-linear Optical Communication Networks" (Wiley & Sons,1998).

Francesco Testa received the degree in Electronic Engineering, in 1980. In 1982 he was granted a fellowship from Fondazione Ugo Bordoni working on Integrated Optics. In 1985 he joined ALCATEL-FACE in Pomezia (Rome) working on Coherent Optical Communication Systems. He participated in some European research projects (ESPRIT UCOL: Ultra wideband Coherent Optical LAN, and RACE). In 1991 he joined Ericsson where he was team leader in the research and design of WDM Optical Communication Systems. He participated to RACE 2028 MWTN (Multi Wavelength Transport Network) Project that received the RACE Award, and ACTS METON). From 1997 he was technical coordinator in the development of the Radio Communication Systems (DECT, GSM and LMDS). He is currently working in the development of access systems. He is coauthor of technical publications in the international literature and owns 5 US patents.