Communication facilities on the World Wide Web play a key role in the design and implementation of distributed systems for cooperation purposes. Internet communication facilities allow processes to be spread over the Web to communicate and to access remote resources. Performance of the whole distributed system, in particular a distributed communication system, depends on this facility. It was the development of efficient and cost effective interconnection structures on the one hand and the price performance evolution in microelectronics on the other hand which were prerequisites for the development of distributed communication applications. Since the 1990’s the widespread use of the Internet and other technology on top of it offer the developers of CSCW systems both a great technological basis with various strengths such as location transparency, operating transparency, standardized protocols, standardized data formats, etc.

As local and wide-area networking technologies become more sophisticated, distributed group working is a well-suited scenario for computer use and presents theoretical and practical problems that have not yet been thoroughly addressed in computer science research. This session aims to bring together experts from academia and industry who share an interest in the study and design of effective Web computing solutions as well as approaches and methodologies. It focuses on understanding the impact of Web computing environments in order to facilitate the design of complex cooperation systems. It is open for sharing information about new Web technologies and practices. The papers focus on understanding the impact of Web tools to facilitate the design of complex cooperation systems. They cover the field of cooperative information systems, the designing and implementation of collaborative applications and the construction of collaborative systems with JAVA. Further on virtual communities and community networks are analysed and discussed.

The paper entitled “Web-Based Distributed Computing Using Parasite” is by Remo Suppi, Marc Solsona, and Emilio Luque. The paper introduces the architecture of the Parasite system that has been designed in order to use distributed and networked resources, without disturbing local computation.

“Architectural Concerns in Distributed and Mobile Collaborative Systems” is the title of a paper by Sharam Dustdar and Harald Gall. The paper discusses a three-layer architecture of a collaborative system that integrates process awareness with the groupware/workspace metaphor.

The paper “CYCLADES: A Distributed System for Virtual Community Support Based on Open Archives” by Tom Gross is about support for the exchange of information and knowledge among researchers. It analyses how users exchange information and suggests online communities to complement the functionality of existing digital libraries and open archives.

The paper “Towards a Decentralized Search Engine for P2P-Network Communities” by Herwig Unger and Markus Wulff considers the data search problem in distributed P2P networks. The authors analyse the basic mechanisms for a cooperative, completely decentralized search engine.

“A Multi-tiered Agent-based Architecture for a Cooperative Learning Environment” is the title of a paper by E. Sanchez, M. Lama, R. Amorim, A. Riera, J. Vila and S. Barro. In this paper the problem of educational resource management in a cooperative learning environment is discussed. A multi-tiered agent-based architecture is proposed and a distributed deployment is presented.

The paper “Mecomp.net - Organisational, Sociological and Technological Aspects of a Community Network in the Field of Education and Employment” is by Andreas Billig, Johannes Werner Erdmann, Lutz Rentwig and Kurt Sandkuhl. This paper introduces the basic organizational and sociological aspects of the system, outlines the main concepts of its Web portal and implementation and outlines the lessons learnt.

In this special session on the design and implementation of distributed applications on the Web we will explore current and future trends in group support systems, Web-based cooperation environments, team computing systems and global network based groupware. The session is an opportunity for designers and researchers to discuss their experiences with implementing cooperative systems in large organisations such as industry, government, and academia.