PANEL

“Computer Supported Cooperative Work —
New Challenges or Old Problems?”

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The emergence of Computer Supported Cooperative Work (CSCW) over the last decade has seen the development of applications that combine the properties of distributed systems with interactive computer systems. This diverse collection of groupware applications includes:

- Shared user interface systems capable of supporting multi-user interaction across both local and wide area networks.
- Distributed multimedia information systems which allow collections of information to be shared across disparate communities of users.
- Multimedia conferencing and media spaces that link remote user environments together to promote social interaction.
- Shared multi-user virtual environments that support abstract spaces which can be populated by a collection of users.
- Distributed editors capable of supporting the joint production and amendment of documents.
Multi-user Hypertext applications that allow networks of information to be constructed and maintained by groups of users.

The emergence of novel cooperative applications and the development of new network technologies present a significant opportunity for application developers and the providers of distributed systems. However, the development of CSCW applications does not mesh well with existing support platforms. While these platforms provide many of the facilities necessary to realize cooperative applications, the manner in which they are provided can be problematic.

Many existing computer systems support more than one user. In fact, multi-user operating systems and applications (for example databases, office information systems etc.) are now almost the norm. However, while it is true that these systems support a number of users simultaneously interacting with them, the manner in which this is achieved is problematic for cooperative applications. Existing multi-user systems provide the illusion to each user that they are the only users on the system. The result is that users are unaware of the activities of other users and a “protective wall” is maintained, hiding the activities of other users.

In contrast, cooperative applications wish to be aware of the activities of others and to support and encourage the propagation of these activities among users. A mismatch exists between the needs of cooperative applications and the services provided by existing technology due to the protective model. In fact, what often occurs is that the characteristics of the supporting technology force cooperative application developers to mimic the services provided. This is a problematic solution both in terms of the wasted effort of application developers and the lack of evolution within the supporting technology.

This panel aims to highlight how the assumptions shaping the development of support platforms affect the cooperative application exploiting them, and the impact CSCW will have on computer support. In many ways, CSCW requires a re-examination of the design decisions underpinning existing computer platforms, and many of the assumptions built into existing distributed systems are challenged by CSCW. We will examine the demands placed on supporting infrastructures by the developers of cooperative applications and the limits of the design approaches built into existing distribution mechanisms.