Beyond Internet Business-as-Usual: Populating the Electronic Shop

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ABSTRACT
In this position paper I will argue for the consideration of the social nature of the (electronic) shopping process and I will describe a prototype supporting communication and collaboration among providers and consumers.

INTRODUCTION
Since the advent of the WWW only a few years ago, we have faced a tremendous growth in both the amount of information available and the usage of these new technologies. The extraordinary increase in electronic commerce went hand in hand. For instance, a bookstore that opened only three years ago—in July 1995—is now the world's biggest bookstore with 2.5 million titles and about 1.5 million customers world-wide. And the founder and CEO of this company explains: 'Businesses can do things on the Web that simply cannot be done any other way' [2].

Without any doubt, the WWW offers new possibilities for providers as well as for consumers. However, it also has its challenges. In the following I will categorise them into pure technical challenges and socio-technical challenges.

Technical challenges can be identified concerning acquisition and storage of information such as digitising existing media; finding and filtering of information such as matching the right producers and consumers; security of information and access auditing such privacy and secure payment; universal access and particularly interoperability; as well as cost management and financial instruments [1].

Socio-technical challenges result particularly from the change of the nature of the shopping process. In the traditional face-to-face process the customer physically went to the shop, could roam through the shop, have formal or informal conversations with the salesperson, and so forth. Furthermore, the customer could not only go to the shop alone, but also with others. For instance, when looking for a photo camera she could take a friend who is expert for photo cameras with her to get advice during the shopping process.

In this position paper I argue that, besides various technical concerns, the nature of the shopping process—and particularly the communicative and collaborative aspects—have to be considered. In the next section I will briefly describe a prototype that meets these requirements—the *Computer-Supported Cooperative WWW* prototype. Due to restrictions of space, I can only briefly sketch one prototype; an analysis of related systems can be found in Gross [4].

POPULATING ELECTRONIC SHOPS
The CSCW3 prototype constitutes a WWW browser with vast collaborative functionality. The basic metaphor is the room metaphor—each WWW page is treated as a room; the sum of all rooms constitute a house. A room consists of a WWW page and all users, who are logged in on the same CSCW3 server and who visit the respective WWW page at the same time.

In general, the CSCW3 prototype provides support for single-user activities as well as for asynchronous, for synchronous, and for semi-synchronous collaboration. For instance, it supports customers who use the CSCW3 prototype in navigating through the shop together and chat while navigating [3].

CONCLUSIONS
In my opinion e-commerce has a great potential for both sides—providers and consumers. However, as with any socio-technical system, the right balance between inducing consciously changes through technology and maintaining habits of users is to be found.

BIOGRAPHICAL INFORMATION
Tom Gross is on a tenure-track position at the Institute of Applied Computer Science at the Johannes Kepler University of Linz, Austria. His research interests include CSCW, HCI and global Internet-based information systems. In particular, his current research work is concerned with collaborative approaches for information exchange on the Internet. In 1993–7 he did his Ph.D. on 'Supporting Collaboration in Global Information Systems'.

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