

Understanding Hierarchical and Associative File Access for Tabletop Collaboration

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ABSTRACT

Interactive tabletops offer new ways to work collaboratively with digital resources. Fundamental to such interaction is the means to access digital information, as part of the collaboration. Although tabletop hardware is becoming increasingly available, there has been little work on interfaces for this fundamental tabletop task of file access. This paper addresses this need in two ways: by studying tabletop collaboration with a conventional interface, Windows Explorer; comparing this against a very different interface, called Focus, designed specifically for tabletop interaction.

We studied pairs of users collaborating on planning tasks, based on resources in both their file systems. We analysed video of the interaction, questionnaires and interviews, in terms of two key aspects: table use and collaboration. We conclude that Windows Explorer was usable at the table but it had shortcomings in addressing particular issues of table use, notably clutter and effective use of space. It also had shortcomings for collaboration in terms of participants making use of each others' files and the amount of interaction. Focus encouraged participants to view more files with less ownership boundaries affecting interaction. This work provides a foundation for future research in creating effective file system interfaces for small group collaboration at tabletops.