Interface Currents: Supporting fluid face-to-face collaboration

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ABSTRACT

As large high resolution horizontal displays are becoming a technological reality, the design requirements for their interfaces need to be considered. The size and the orientation of such tabletop displays allows for a large variety of applications, including tasks that involve large amounts of information and/or co-located collaborative work. However, the physical appearance of large horizontal displays also implicates different interaction problems unknown from common small desktop displays. For instance, information can be hard to reach for a user located at the opposite side of the tabletop display and the clear perception of orientation dependent information also differs depending on the location of the user. Furthermore, intuitive methods for efficient information organization and lightweight techniques for sharing information between a group of people need to be supported.

The concept of Interface Currents [1, 3] provides mechanisms that ease various tabletop interaction problems such as reaching, sharing, and the exploration of large amounts of information. An Interface Current is a flexible and mobile area in the workspace that is dominated by an ongoing flow (see Figure 1). Information that are placed on an Interface Current start, affected by the flow on the Current, to move continuously comparable to leaves drifting in the current of a river [3]. An exploratory user study we conducted has shown that Interface Current can be very helpful for various individual and collaborative tabletop activities such as information exploration and discovery, casual and structured information organization, and information sharing [2].

In our video we first explain the functionality and flexibility aspects of our Interface Current prototype by demonstrating how the visual shape of an Interface Current can be manipulated (resizing, reshaping, changing the width, and manipulating the Current's position in the workspace). We also show how the flow and therefore the movement of information on an Interface Current can be adjusted by the user. In the second part of the video, possible usage scenarios are demonstrated demonstrating how Interface Currents can be used to explore large amounts of visual information, either individually or within a group, how they can help to organize and structure information, and how they support sharing and discussing information within a collaborative task. At the end we demonstrate how Interface Current can be used in combination with folders to help people structure and share information on a tabletop display.

(a) Pool Current. (b) Stream Current.

Figure 1: Different types of Interface Currents.

1. REFERENCES

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