Organisation and Exportation of Media between Tabletop and External Storage Devices

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MOTIVATION

As technology progresses we increasingly see the value in methods that allow multiple users to collaborate effectively. In the area of collocated collaboration, the tabletop interfaces have been the subject of an increasing amount of research due to their inherent nature to inspire users to collaborate. As tabletop research matures, the need for organising and exporting digital media from the tabletop increases. We have developed new novel tools which enable users to synchronise their files into the cloud and send emails with media as attachments from the tabletop. Both of these tools give users more control over their files and enhances the value to work done at the tabletop as they can access it at a later date.

AIMS

Goals

There are two main goals for this research:

• Create an effective means for users to manage and organise media files once they are placed onto the tabletop
• Create novel techniques for allowing the exportation of one or numerous media files to a variety of output destinations.

BACKGROUND

Tabletop

Tabletops are single display group-ware devices which encourage collaboration in a collocated environment. A tabletop consists of a single touch-enabled horizontal display which multiple people can interact with.

The tabletop shown in picture A is a projected image from above onto a touch enabled surface.

Cruiser

We have developed our tabletop applications on the Cruiser framework, which has been developed over the last several years by the CHAI Research Group. Cruiser(Picture B) gives support for rotating, resizing, copying in conjunction with a multitude of other features enabling rapid development of tabletop applications.

CONTRIBUTIONS

The resulting contributions that this research has made for the tabletop community include a conceptual framework and tools to both organise and export media from the tabletop. We have explored the concepts of both organising and exporting and how they can add value to the work done on tabletop. We present the tools MyCloud and Emailer which can be used for both the organisation and export of media from the tabletop.

CONCEPTUAL FRAMEWORK

In the development of our novel tabletop tools we have constructed a conceptual framework for organising and exporting media from tabletop devices. The framework outlines various contexts (public, restricted or private) in which tabletops can be used, key user tasks as well as various interface elements and their advantages and disadvantages for tabletop usage.

INTERFACE DESIGNS

MyCloud (see diagram 3)

MyCloud is a tabletop interface which enables users to store their files in the cloud. Any files placed in the MyCloud folder is uploaded to a webserver for storage. This folder can then be synced with any other computer. This allows the ability to organise and export media to any other location. Users can simply drag media to the MyCloud tool to add files to the folder which is then automatically synced to the server.
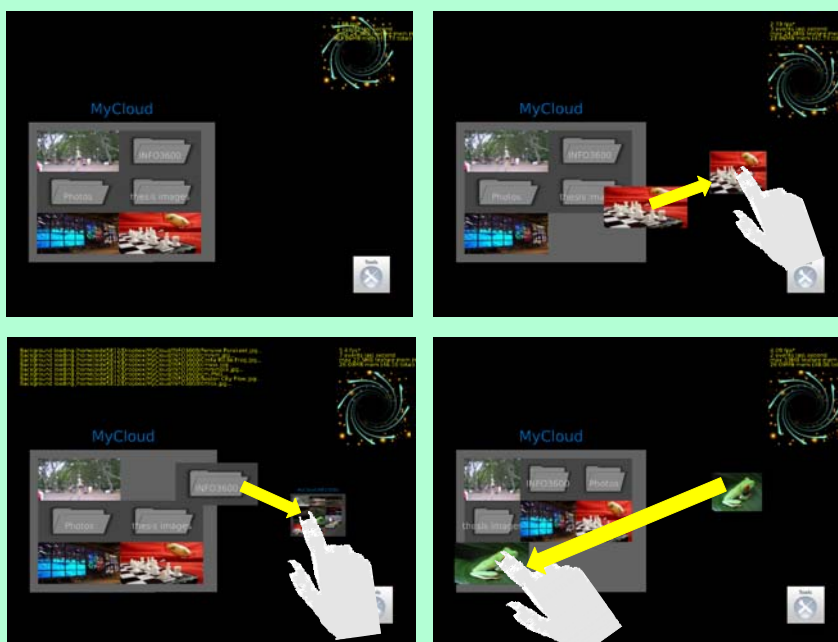
Emailer(see diagram 2)

Emailer is a novel tabletop interface which allows users to send emails with attached media directly from the tabletop. Users can simply drag media from the tabletop into the Emailer object. Once all the attachments have been added users flip over the Emailer select the recipients and hit send.

FUTURE WORK

In the presented work we have demonstrated ways to email and use cloud storage of organise and export digital media from a tabletop. Further work in this area would include introducing new channels of exportation such as Bluetooth, printers and USB drives. In addition further ways to organise and display the digital media could be explored.

Emailer

Top: A variety of media with an Email object
Middle: A variety of media attached to an Email
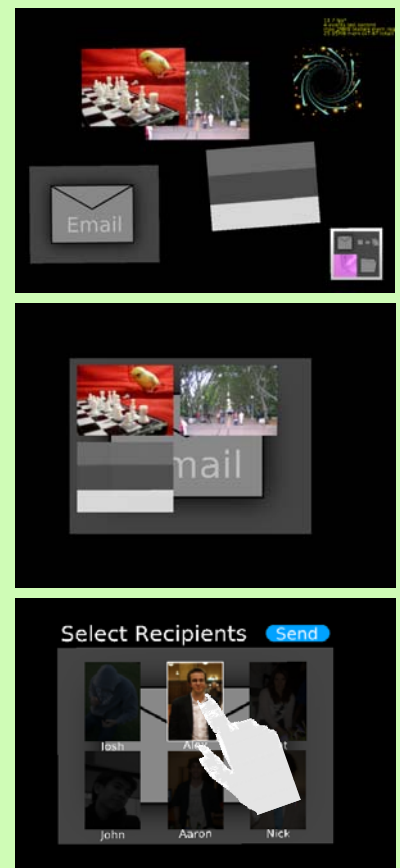Bottom: (A flipped over Email object) Selecting recipients

MyCloud

Top Left: The MyCloud browser
Bottom left: Dragging a subCloud onto the tabletop;

Top Right: Dragging a picture from MyCloud onto the tabletop;
Bottomr right: adding a picture to the MyCloud folder