Stitching: Connecting Wireless Mobile Devices
with Pen Gestures

Ken Hinckley[1], Gonzalo Ramos[1,2], Francois Guimbretiere[1,3], Patrick Baudisch[1], and Marc Smith[1]

[1]Microsoft Research	[2]University of Toronto	[3]University of Maryland
One Microsoft Way	40 St. George St.	3267 AV Williams Bldg
Redmond, WA 98052	Toronto, ON M5S 2E4	College Park, MD 20742
+1 425 703 9065	+1 (416) 946-8491	+1 (301) 405 7952
{kenh, baudisch, masmith} @microsoft.com	bonzo@dgp.toronto.edu	francois@cs.umd.edu

ABSTRACT

Stitching is a new interaction technique that allows users to combine pen-operated mobile devices with wireless networking by using pen gestures that span multiple displays. To stitch, a user starts moving the pen on one screen, crosses over the bezel, and finishes the stroke on the screen of a nearby device. Each half of the stroke is observed by a participating device, synchronized via wireless network communication, and recognized as part of a unitary gesture spanning displays, thus binding together the devices. We demonstrate a photo sharing application that uses stitching to allow users to copy images from a tablet or PDA to another device that is nearby, expand an image across multiple screens, establish a persistent shared workspace, or use one device to present images on another device. We also discuss design issues that arise from *proxemics*, that is, the sociological implications of users collaborating in close quarters.

Categories and Subject Descriptors

H.5.2 [**Information Interfaces and Presentation**]: Input Devices and Strategies, Interaction Styles

General Terms

Human Factors, Design

Keywords

pen computing, mobile devices, co-located collaboration, proxemics, synchronous gestures, spontaneous device sharing
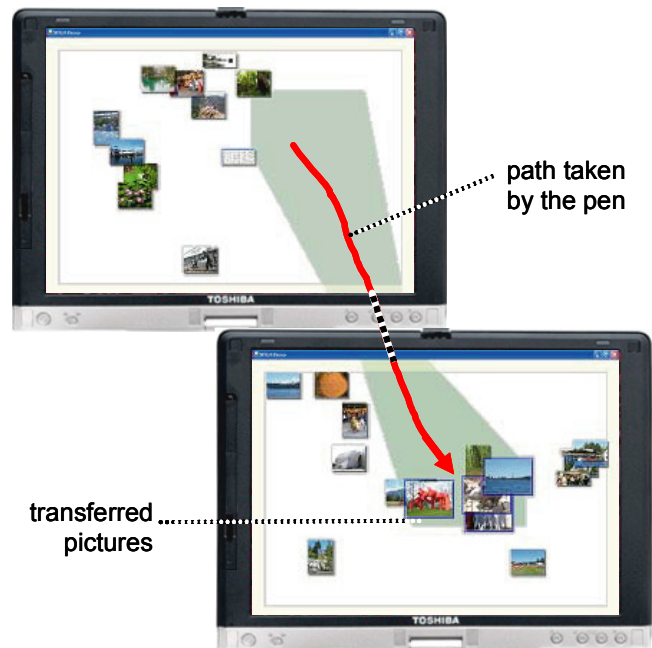

Fig. 1. Copying files by stitching from the top to bottom tablet.