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Menu Discoverability on Digital Tabletops in Public Settings

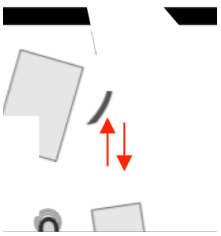
By Mindy Seto, Stacey Scott, and Mark Hancock

A common challenge in the design of digital tabletops for public settings is understanding how to effectively invite passersby into interacting with the surface. Often, members of the public have had no prior experience with such technology and require guidance to familiarize themselves with it. We characterize such enticement and guidance from the system interface as the system's discoverability. A particular challenge for modern surface interfaces is the discoverability of system functionality: Does the system require gestures? Are there system menus? If so, how are they invoked?

In a recent project, University of Waterloo researchers conducted an observational study of menu invocation methods in a children's museum setting in order to examine the discoverability of system menus on digital tabletops designed for public settings. The study presented different menu invocation methods to museum visitors in the context of a media browsing application showing different interpretations of various fables by Aesop (e.g. The Tortoise and the Hare).

Children interacting with the tabletop menus during the museum study

The study findings indicate that discernible and recognizable interface elements, such as buttons, supported by the use of animation, can effectively attract and guide the discovery of menus. The full study results, along with design recommendations for improving menu discoverability, will be presented at the upcoming ACM Conference on Interactive Tabletops and Surfaces 2012 in Cambridge, WA in November.



Pop-up menu animation design concept tested in the study

In This Issue:

The Plague Year: Interactivity, Networking, and Creating Narratives in Games

By Catherine Nygren and Carl Gutwin

The Plague Year is a touch screen game developed at the Human-Computer Interaction Lab at the University of Saskatchewan. Derived from Daniel Defoe's 1722 text Journal of the Plague Year and other historical sources, the game allows players to survive the Great Plague of London in 1665 as an official, labourer, doctor, merchant, or priest. In addition to a library of 17th century texts and information on the locations visited, various minigames take advantage of the table's extensive touch screen capabilities while still contributing to the story arcs of the game.

Played on two large touch screen tables in separate locations with two players to a table, the game allows for investigation of how people play games over networked systems differently than while in the same room. Although playable in single player mode, the game is primarily designed to be interactive among several players.

The Plague Year is also a valuable tool for exploring how players create narratives, and, in particular, how narratives in such a game are experienced and created differently from the more linear narratives typically found in traditional texts such as Defoe's original source material.

In the News:

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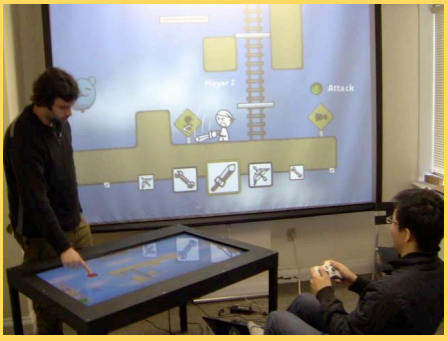
Jugglers rejoice - researchers at the University of Calgary have developed a software technique, Fat Thumb, that makes using a cellphone with one hand easier, allowing the user to hold onto groceries or coffee in the other. As the name implies, it's all based around pressure: a light touch performs the usual commands, while squishing the thumb's wider surface area against the screen allows the equivalent of a multi-touch gesture, such as a pinch to zoom. In addition to the obvious advantages, Fat Thumb may also be faster than other one-handed gestures.



University of Calgary's Fat Thumb Demonstration
http://www.youtube.com/watch?v=E9vGU5R8nsc&feature=player_embedded#!

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