

MiniMedia Surfer:

An interface for exploring segment-based videos on a PDA

Problem

There is a growing amount of digital video in archives, and the HCI community still struggles with an effective means of presenting this media. The problem is compounded when the interface has strict size constraints, such as those on portable devices.

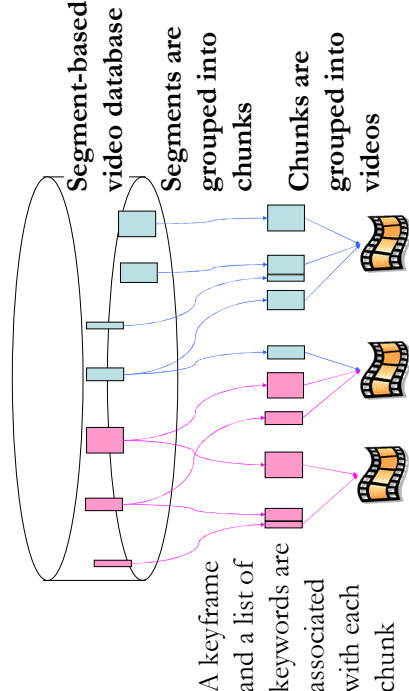
MiniMedia Surfer is an application for exploring FXPAL's segment-based video database on a PDA.

User Tasks

- User queries**
Titles of videos which are relevant to the keyword query are displayed
- User explores search results**
Keyframe layer is added to the display – user can navigate among videos and frames within videos
- User selects a result to playback**
Video playback begins in an opaque layer



Data Set

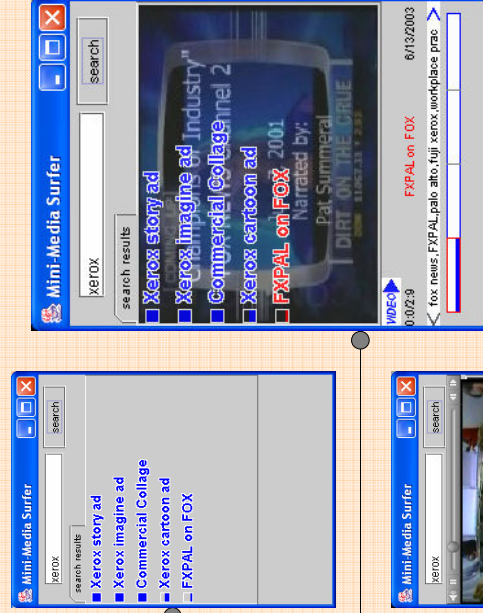


Meta-data (such as a title) is associated with each video.

Solution

Layered interface

We use a layered, semi-transparent interface to encourage the exploration of search results. Layering also provides a space-efficient window management scheme for small devices



- Two variably transparent content layers
 - 1) Search results layer
 - 2) Keyframe layer
- An optional transparent gradient widget
- An opaque video layer

Validation

- Five users were trained on this system, and their interaction with the interface was observed over three usage scenarios.
- The average transparency values for both layers during the exploration stage were consistently greater than 50%.
 - Presented with the option of using gestures or standard widgets, all users preferred gesture-based input.

Future

Research and interface development for visual perception beyond two layers

Maryam Kamvar

Columbia University
mkamvar@alumini.princeton.edu

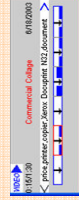
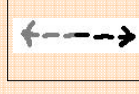
Hosts: Patrick Chiu, Lynn Wilcox and the members of the Integrated Media Group

Stylus Gestures

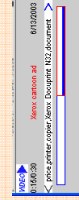
Gesture-based input minimizes the screen real estate which is dedicated to static widgets. This interaction style also facilitates physical interaction with interface



- Dragging in any direction on the top panel dynamically adjusts transparency of the two layers



- Dragging vertically on the bottom panel views/hides source movies



- Dragging horizontally on bottom panel scrolls through keywords