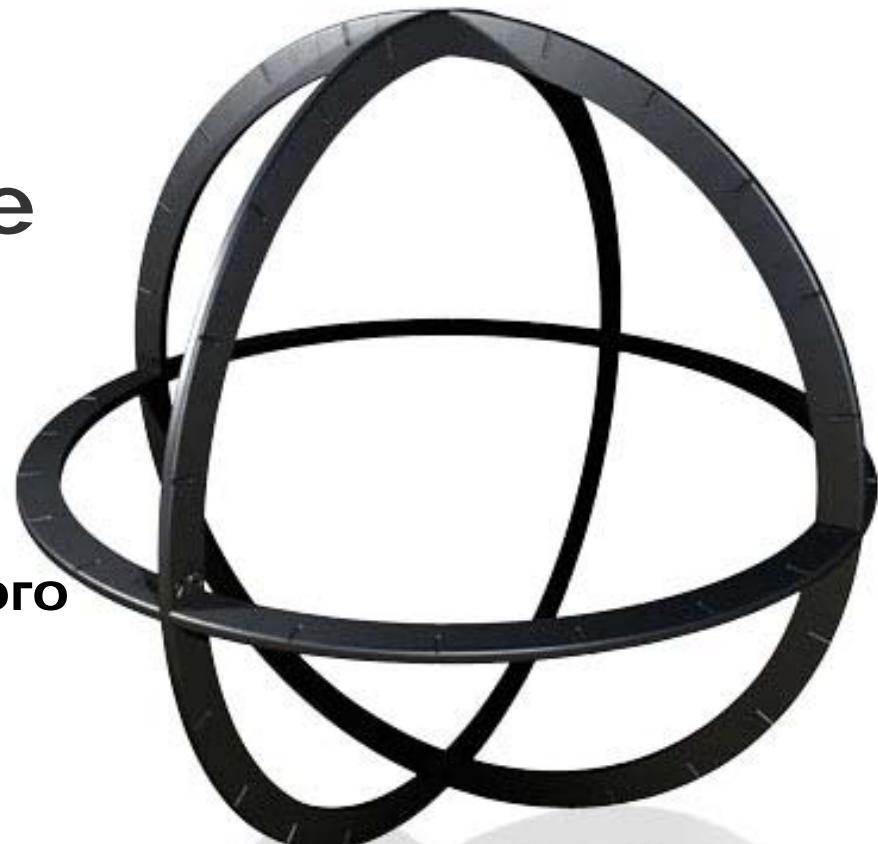


UCD for Interactive Info Access

Тенденции в дизайне
интерфейсов для интерактивного
доступа к информации



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Canada

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Outline

- UI Trends in Desktop Search Strategies
 - Improving search function access
 - Mimicking application UI
 - Actionable Search
 - Search-as-you-type
 - Organizing VS finding information
 - *Unsolved problems*
- User-Centered design for interactive GIS
 - Chicken-and-egg problem

Improving Search Access

The screenshot displays a Windows desktop environment with several open applications:

- Microsoft Word:** Two instances are visible. The top one is titled "Document1 - Microsoft Word" and shows a "Find and Replace" dialog box with the text "X1 controls" highlighted. The bottom one is also titled "Document1 - Microsoft Word" and shows a "Basic File Search" dialog box with the text "X1 controls" highlighted.
- Microsoft Outlook:** Titled "HP Laser - Microsoft Outlook", it shows an inbox with several messages from "customerservice..." and an open email message titled "Tracking Number for your Comp-U-Plus Package" with the text "X1 Controls" highlighted.
- Search Interface:** A separate window titled "Search for:" is open, showing the text "X1 controls" highlighted.

Annotations in red highlight the text "X1 controls" in the "Find and Replace" dialog, the "Basic File Search" dialog, the Outlook inbox, and the search interface.

Document1 Properties (Visible in the Outlook Email Preview):

General	Summary	Statistics	Contents	Custom
Subject:				
Object:				
Author:	Serge Klimoff			
Manager:				
Company:	X1			
Category:				
Keywords:				
Comments:				
Permalink:				
File:				

Custom X1 controls

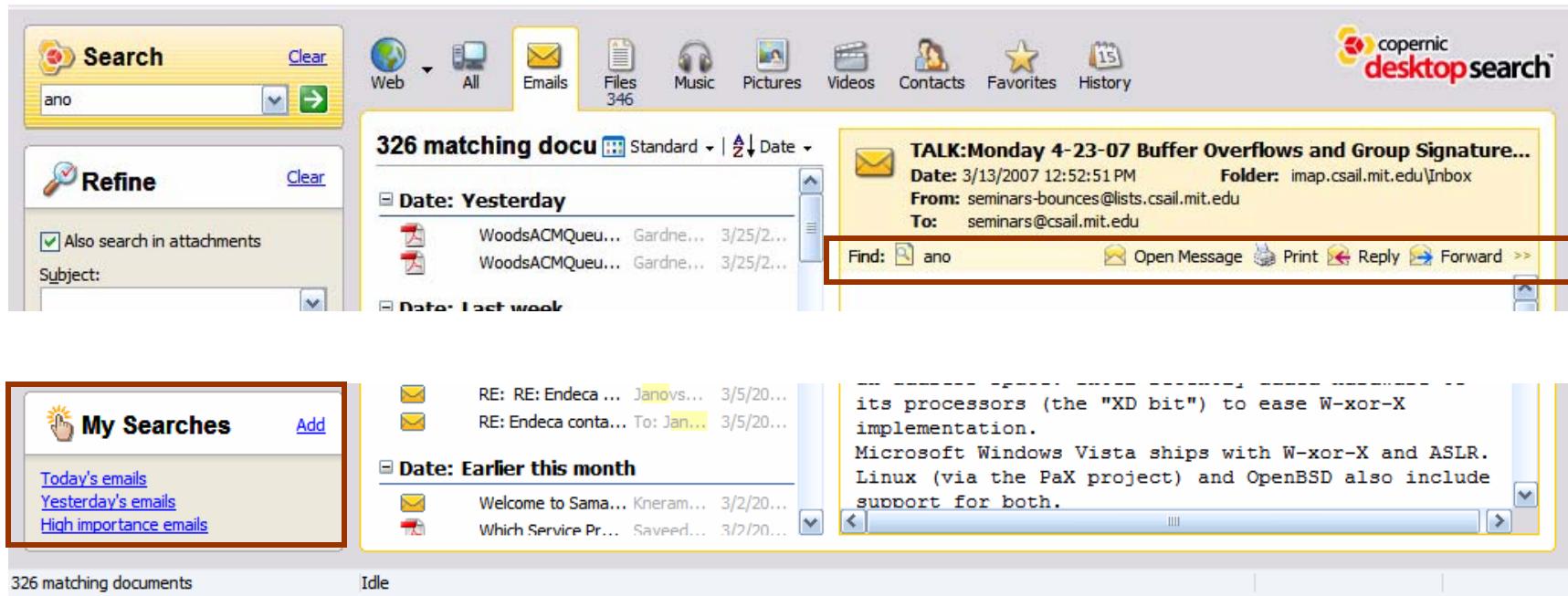
possible to hack into the standard dialogs that are not the Object Model

Page 1 Sec 1 1/1 At 1" Ln 1 Col 1 REC TRK EXT OVR English (U.S.) RUS CHI March 26, 2007 3

Mimicking UI

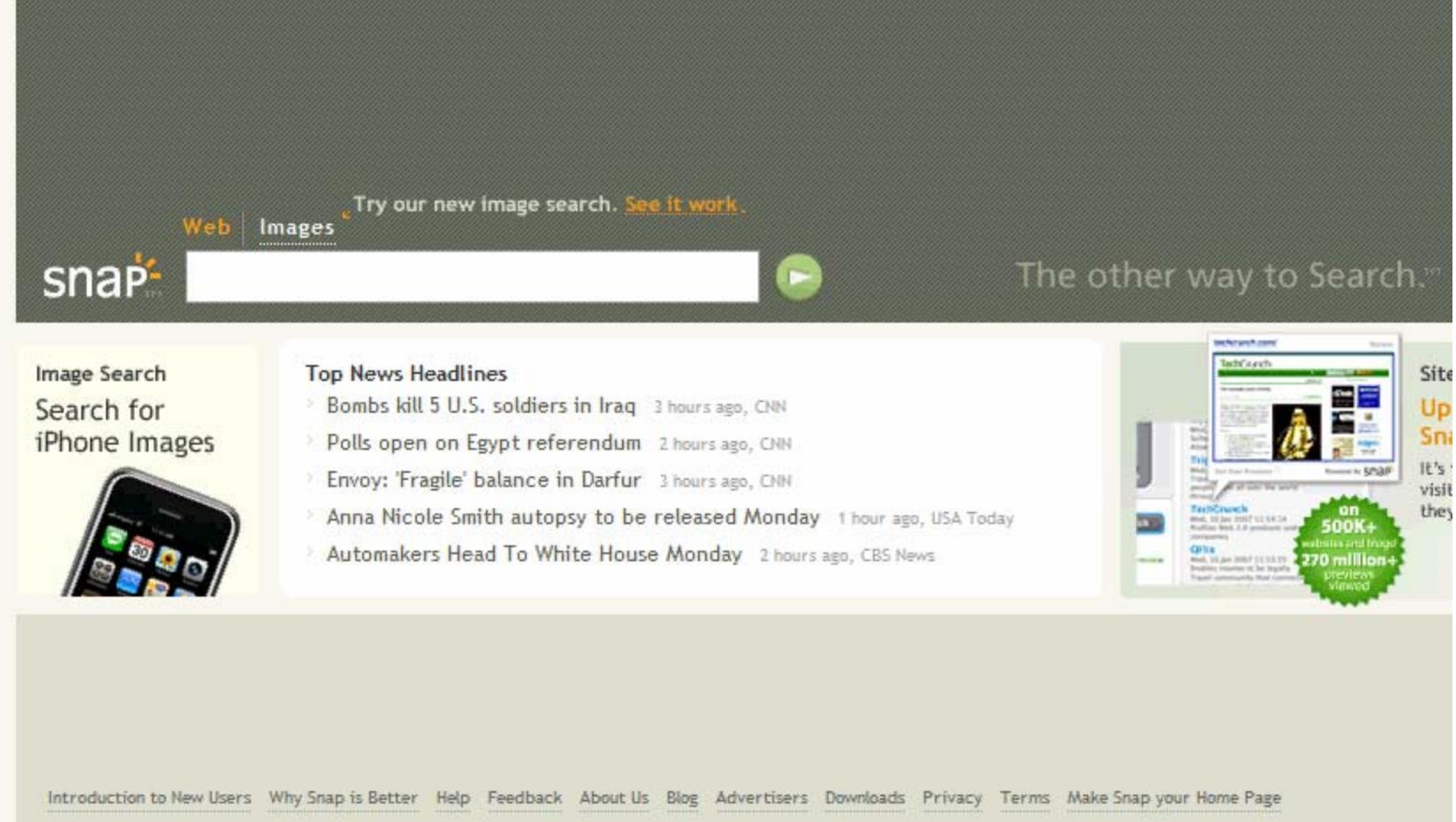
The screenshot shows the Copernic Desktop Search interface. The top bar includes a search field with 'ano', a 'Refine' section with various filters, and a 'My Searches' section with links to 'Today's emails', 'Yesterday's emails', and 'High importance emails'. The main area displays 326 matching documents, categorized by date: 'Yesterday', 'Last week', 'Two weeks ago', 'Three weeks ago', and 'Earlier this month'. Each category shows a list of emails with subject lines and dates. The 'Date: Yesterday' section is expanded, showing two emails from 'WoodsACMQueue' to 'Gardne...' on 3/25/2007. The 'Date: Two weeks ago' section is also expanded, showing a list of emails from 'UIE Tips' and 'CHI-CONSULTA...' dated from 3/12/2007 to 3/15/2007. The right side of the interface shows a detailed view of the selected email from 'seminars-bounces@lists.csail.mit.edu' to 'seminars@csail.mit.edu' on 3/13/2007, titled 'TALK:Monday 4-23-07 Buffer Overflows and Group Signature...'. The message content discusses a special seminar at the Weizmann Institute of Science on April 23, 2007, at 4:00 PM, featuring Dr. Hovav Shacham. It also mentions 'Buffer Overflows and Group Signatures: Recent Results in Security and Cryptography'. The bottom status bar indicates '326 matching documents' and 'Idle'.

Actionable Search



- Affinity to mimic the functionality UI of an application
- Saved searches
 - Alerting mechanism
 - Portal-like functions

Search-as-you-type



The screenshot shows the homepage of the Snap search engine. At the top, there is a navigation bar with 'Web' and 'Images' tabs, and a search bar with a green play button icon. A promotional message 'Try our new image search. See it work.' is displayed above the search bar. To the right, a banner says 'The other way to Search.' Below the search bar, there are two main sections: 'Image Search' (with a thumbnail of an iPhone) and 'Search for iPhone Images' (with a larger thumbnail of an iPhone). To the right of these, a 'Top News Headlines' section lists five news items. Further right is a 'Site Up Snap' section showing a screenshot of a search results page and some statistics: 'on 500K+ websites and blogs' and '230 million+ previous views'. At the bottom, there is a navigation bar with links: 'Introduction to New Users', 'Why Snap is Better', 'Help', 'Feedback', 'About Us', 'Blog', 'Advertisers', 'Downloads', 'Privacy', 'Terms', and 'Make Snap your Home Page'.

- New UX: interactive narrow-down of results
- Challenges: advanced search queries

Organizing VS Finding

Firefox :: Welcome To WebSoft :: - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://salesdemo1.siderean.com/websoft/home.jsp?sm=fr7%3Bproduct37%3B01ia%2Fdata%2Fenterprisedemo%2F

Search Entire Collection for in

SEAMARK NAVIGATOR

Software Services Solutions Customers Company Support

947 items

The partner is interested in finding BPM technical notes from last year. Seemark provides the partner a "Bird's Eye" view of all the items that are related to Business Process Management.

Sort results by: ▾ < Previous Results 1-5 of 947 Next >

Tag All All 947 matching items using:

Business Article for our OEM Program product line in Austin, as of 11 May 2006
Click to view
Location: Austin
Product: OEM Program
Organization: Channel Partners
This resource is available for your view. It is a business article about our OEM Program product line. It is produced by our Channel Partners organization for, in particular, our customers located in Austin. This latest version was published on 11 May 2006.
[Tag it](#)

Users Guide for our Business Optimization product line in Germany, as of 11 May 2006
Click to view
Location: Germany

by Publish Date

This Month	766
This Year	112
Last Year	69

by Location

Americas	313
EMEA	537
Asian-Pacific	97

by Product

Business Optimization	188
Business Process Management	211

Latest Trends and Unsolved Problems

- Search is not limited to a desktop
 - Federated search – remote file shares & internet
 - Collaboration platforms
- Tighter integration with the OS and applications
 - Search as an attribute functionality
- Organizing semi-structured data
 - Automated tagging according to what users do
 - Search term expansion
 - Custom ranking
 - Facet navigation
- Using social/distributed intelligence
 - “others have also looked at this”
 - Documenting best practices
 - Retention of corporate knowledge
 - Enabling information sharing
- Data management
 - Eliminating redundant data

Touch-free GeoCollaborative HCI



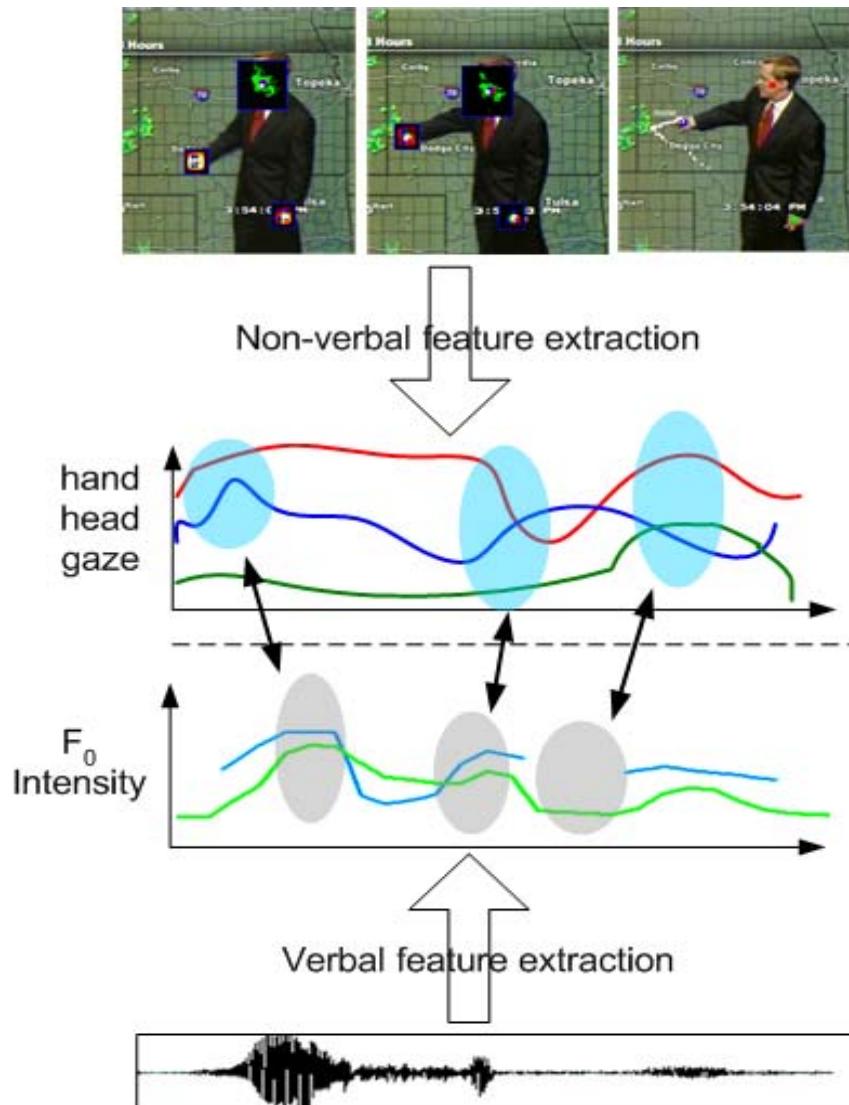
- Gesture primitives combined with speech grammar
- Adoptive multimodal scheme
- Dialogue management
- Collaborative interaction

Bootstrapping HCI



- Understanding natural communication
 - Unconstrained by interactive feedback
 - Trained individuals: less random hand movement, uninterrupted narration
 - Virtually unlimited data
- ⇒ Improving recognition technologies
 - Redundancy of multimodal expressions

Multimodal Analysis



Extract meaningful correlation between multiple modalities

- More difficult than closely coupled modalities- audio-visual speech recognition

Prosody-based framework

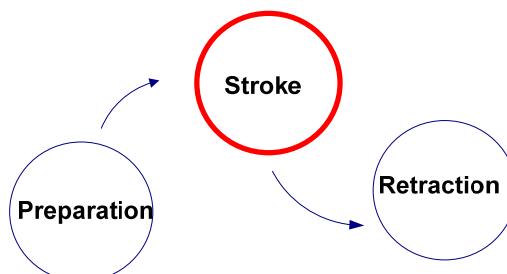
- Find meaningful prosodic events
 - Velocity of movement
 - Intonational and loudness variations, pauses
- Time between the events

Deictic Gesture Recognition

Improving recognition:

- Preparation – Point
- Retraction- Contour

- ➲ Strokes aligned with intonational accents
- ➲ Auxiliary gestures do not exhibit such pattern
- ➲ 12% improvement HMM



Scaling Interaction Models



▪ Interface constraints

- Language patterns
 - Simplified
- Gesture patterns
 - No compounded gestures
 - Easier to recognize
- Multimodal Patterns
 - Lose synchronization – no reliable time-based synchronization
 - Sequential patterns (before, after)
- Mental load
 - High
- Affordances considerations
 - Cumbersome pen interface
 - Graphical resolution
- Collaboration
 - Less synchronous



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