

# **Agileviews: A Human-Centered Framework for Interfaces to Information Spaces**

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INLS 818

# Information Perspective

- Search is embedded in real life tasks
- Search is both analytical and interactive
- People and needs are diverse
- Vision is both a primary channel and a metaphor

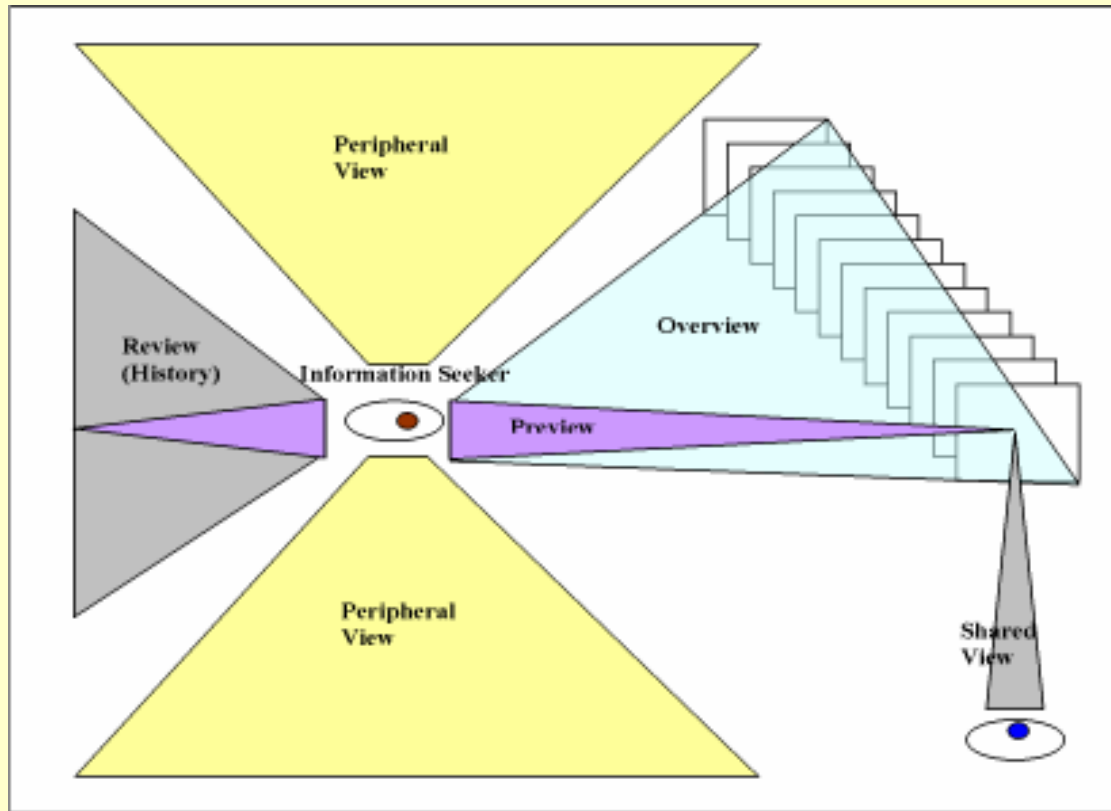
# Design Provenance

- Direct Manipulation (Shneiderman, 1983)
  - Visible objects and actions
  - Rapid, reversible, incremental actions
  - Dynamic queries
- Xerox alto, Apple Lisa, Macintosh & GUIs & WIMP interfaces (1979+)
- Hypertext (Bush, 1945; Nelson, 1974)
  - Links are first class objects
- Games and visualizations (lunar lander 1960s, Atari Pong, 1972); VR (Engelbart--radar; Sutherland—simulations)
  - See <http://www.designboom.com/eng/education/pong.html> for history of games

# Views

- A view is a partition of an information space
  - There are many possible partitions for any space since many attributes may be used to ‘slice and dice’ the space
- People should be able to effortlessly change views
  - Focus can change based on granularity
  - Focus can change based on attribute

# Agile Views Framework



# Theory to Practice

- Design challenge 1: creating views
  - What granularities (collections and items)
  - Which attribute sets?
  - Creating or extracting metadata
- Design challenge 2:  
manipulating/controlling views
  - Perceptual estimation (e.g., look ahead)
  - Physical and conceptual inertia

# Three Examples

- **Relation Browser**
  - Federal statistics, overviews of relationships (several different partitions). Useful for small number of attribute sets, each with small number of attribute values. Backend database of metadata, Java applet interface (Ben Brunk, Junliang Zhang)
- **Enriched Links**
  - Complex web sites, previews, overviews, and reviews of pages. Backend computation and Javascript interface (Gary Geisler)
- **Integrated overviews and previews**
  - Multimedia digital library, backend computation, Java applet interface (Wei Ding, Gary Geisler)

# Relation Browser (2000)

This is an experimental tool that requires Netscape 4.5 (or higher) or Internet Explorer 4.0 (or higher). Please be patient as the tool may take some time to load. After you have used the tool, please take a few minutes to give us some feedback on it.

[Feedback](#)

**FEDSTATS RELATION BROWSER**  
(Highlight topics to see overviews of data types, regions, or dates)

[Help](#)

### Topics (total # of sites)

Select All Topics
Agriculture (10)
Crime (11)
<b>Demographics (37)</b>
Economics (25)
Education (6)
Energy (13)
Environment (14)
Health (18)
Income (4)
Labor (6)
National Accounts (5)
Natural Resources (17)
Safety (7)
Transportation (17)

### Information Attributes

Data Types
Regions
Dates

Region / # of Sites 0 | 150

International	<div style="width: 10%; height: 10px; background-color: blue;"></div>	8
National	<div style="width: 20%; height: 10px; background-color: blue;"></div>	23
Regional	<div style="width: 5%; height: 10px; background-color: blue;"></div>	6
State	<div style="width: 25%; height: 10px; background-color: blue;"></div>	25
Sub-State	<div style="width: 5%; height: 10px; background-color: blue;"></div>	5

Web Site	International	National	Regional	State	Sub-State
Administration on Aging		X			
Administration for Children & Families				X	
Adoption Assistance & Foster Care				X	
Agency for International Development	X				
Aging Population		X		X	
Agriculture Research Service		X			
Child Abuse		X		X	X
Child Care		X		X	
Child Support Enforcement				X	

Relation Browser v. 2.3

# Relation Browser+ 2003

The screenshot shows the 'IDL UNC Movie Collection' application window. At the top, there are three dropdown menus for 'Genre', 'Decade', and 'Format'. The 'Genre' dropdown is set to 'Drama' (308 results), 'Decade' is set to '1950-1959' (308 results), and 'Format' is set to 'VHS' (299 results). Below these filters, a search bar shows '308 result(s)' and buttons for 'Restart', 'Fewer Categories <<', and 'More Categories >>'. The main area displays a table of movie results with columns for 'Title', 'Date', and 'Director'. The table lists various movies from 1952 to 1957, including 'Él [AKA: This Strange Passion | Torments]', 'Grisbi [AKA: Touchez pas au grisbi | Hands Off...', '12 Angry Men [AKA: Twelve Angry Men]', 'Wuthering Heights [AKA: Abismos de pasión]', 'African Queen', 'Capone', 'All About Eve', 'All I Desire [AKA: Stopver | You Belong to Me]', 'Amant de lady Chatterley [AKA: Lady Chatterle...', 'Anastasia', 'Anatomy of a Murder', and 'Androcles and the Lion'. At the bottom of the table, a red text string indicates the search criteria: '(Genre=Drama ) AND ( Decade=1950-1959)'. The window title bar reads 'IDL UNC Movie Collection' and the bottom status bar says 'Java Applet Window'.

Title:	Date:	Director:
Title	Date	Director
Él [AKA: This Strange Passion   Torments]	1952	Buñuel, Luis
Grisbi [AKA: Touchez pas au grisbi   Hands Off...	1953	Becker, Jacques
12 Angry Men [AKA: Twelve Angry Men]	1957	Lumet, Sidney
Wuthering Heights [AKA: Abismos de pasión]	1953	Buñuel, Luis
African Queen	1951	Huston, John
Capone	1959	Wilson, Richard (I)
All About Eve	1950	Mankiewicz, Joseph L.
All I Desire [AKA: Stopver   You Belong to Me]	1953	Sirk, Douglas
Amant de lady Chatterley [AKA: Lady Chatterle...	1955	Allégret, Marc
Anastasia	1956	Litvak, Anatole
Anatomy of a Murder	1959	Preminger, Otto
Androcles and the Lion	1957	Ray, Nicholas

(Genre=Drama ) AND ( Decade=1950-1959)

# Enriched Links:Preview

The image shows a screenshot of a web page with a central preview window. The preview window title is "Preview of 'ACM SIGIR - General Information'". The preview content shows a table with columns for "Name" and "Description". The table lists several items, including "SIGIR", "SIGIR News", "SIGIR Digital Library", and "SIGIR Forum". The preview window also shows a "Size: 5709 bytes" label at the bottom. The background page has a light blue background with text and navigation links.

**General Information**

How to [Preview | Overview | History]

**Preview of "ACM SIGIR - General Information"**

**Size: 5709 bytes**

**WEL**

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**SIGIR News**

Digital Libra  
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Recent notes

# Enriched Links: Overview

The screenshot shows a web browser interface with a popup menu open over a link. The popup menu is titled "Overview of 'ACN SIGIR - General Information'" and contains the following information:

- Navigation: [Preview | Overview | History]
- Section: **Contents of page**
- Links: 18 (15 Internal, 3 External)
- Dead links: 2
- Images: 10
- Other media: 2

A legend at the bottom of the popup indicates that green squares represent Internal links and yellow squares represent External links.

The background page includes a "General Information" section with a "How to" link, a "Welcome" message, and a "SIGIR News" section with a "Digital Library" link.

# Enriched Links: Shared View

**General Information** Wel

[Preview | Overview | History]

History of "ACM SIGIR General Information"

Last modified: Friday, October 02, 1999 12:12:49 AM

Page access by top domains

Yesterday:		247
2 days ago:		356
This month:		2289
This year:		789321

Legend: .com .edu .gov .jp

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distribution o

**GIR News**

Digital Libra  
changed to I  
Recent notes













# Overviews and Previews: One Screen



# Open Video Agile Views

- Overviews
  - Collections, Indexes
  - Collages?
- Previews
  - Keyframes, Storyboards, fast forwards, clips
  - Key segments?
- Review/History
  - Back, browser favorites
  - Explicit recommendations
- Shared views
  - Implicit recommendations
  - Contributions

# Overview: Open Video

Search Results						
Preview	Video Title	Video Segment	Download	Details	File Size (MB)	Duration (secs)
	Women Scientists	Segment 1			63.104	323.19
	Women Scientists	Segment 2			22.272	113.88
	Women Scientists	Segment 3			25.6	130.96
	Women Scientists	Segment 4			116.736	598.5

# One of many previews: Open Video

The screenshot displays a video search interface. At the top, there are three tabs: 'FACES', 'BRIGHTNESS', and 'SUPER', with 'FACES' selected. To the right is a 'SORT BY:' dropdown menu. Below the tabs is the title '— Segment Storyboard - Index By Faces —'. The main area contains a grid of 12 video thumbnails arranged in two rows and six columns. The first row shows: a man in a dark jacket, three men in hats, a woman looking up, a man in a white jacket, a woman in a yellow jacket, and a man in a suit. The second row shows: a woman smiling, a man and woman, a woman in profile, two women standing, a man in a cap, and a woman in a car. On the left side, there is a vertical sidebar with 'Search' and 'Preview' buttons, and four small thumbnail icons. On the right side, there is a vertical sidebar with the text '(cs)', '9', '8', '6', and '5'. At the bottom left of the main area, the text 'Britton, South Dakota, Segment 4' is visible. At the bottom right, it says '1 to 12 of 43 shown' with two arrow icons.

# Give People Flexibility!

- Multiple views require rich and accessible metadata
- Control mechanisms are kludges in today's WWW environment
- A click is a terrible thing to waste!