# Visual Information Seeking using the FilmFinder

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## ABSTRACT
The FilmFinder allow users to explore a large film database. By applying the dynamic queries approach to filtering information, a continuous starfield display of the films, and tight coupling among the components of the display, the FilmFinder environment encourages incremental and exploratory search.

## KEYWORDS:
Information Retrieval, Dynamic queries, Video-On-Demand

## INTRODUCTION
Gutenberg's invention of printing 500 years ago changed politics, religion, economics, and daily life. Since that time, the trickle of what we call information has grown into a river, and some say a flood. But now we have begun to create powerful computerized tools to control the flood and harness it to serve our needs.

The key is the combination of the computer's capacity for rapid search coupled with animated visual presentation of results. Human perceptual abilities are truly remarkable, and with proper design, the computer becomes a telescope and microscope for clearly viewing complex data.

## INFORMATION SEEKING TOOLS
Our information seeking design principles start with the dynamic queries approach to filtering information by adjusting sliders and other widgets to produce a complex boolean query [1].

Second is the starfield display in which result sets are continuously visible as points of light [2]. Starfield displays take two carefully selected ordinal variables from a relational database and produce a scattergram of the records. A textual database is converted into a single comprehensible and manipulable display.

The third concept is tight coupling between components of a display. Users can alter the parameters on the input or the output to progressively refine their queries. They start from overviews, zoom in on the desired items and get *details on demand*. Adjusting one widget changes the space of possible queries in an other - which eliminates empty and invalid query results.

## THE FILMFINDER
People usually find films by walking around in a video store, browsing film ads in the paper, looking in film encyclopedias, etc. Video stores organize their films by categories, and although browsing the aisles in a video store can be fun, it is not a good way of finding films by attributes such as titles, actors, years, etc. Our solution, the FilmFinder, depends on the dynamic queries approach [1], a novel starfield display [2] to see the query results, and the principle of tight coupling [2].

The FilmFinder encourages incremental, exploratory, and associative search by allowing users to use query output as input for the next query. By using Alphasliders as query devices, which lets users browse and select only from valid queries, user errors are reduced.
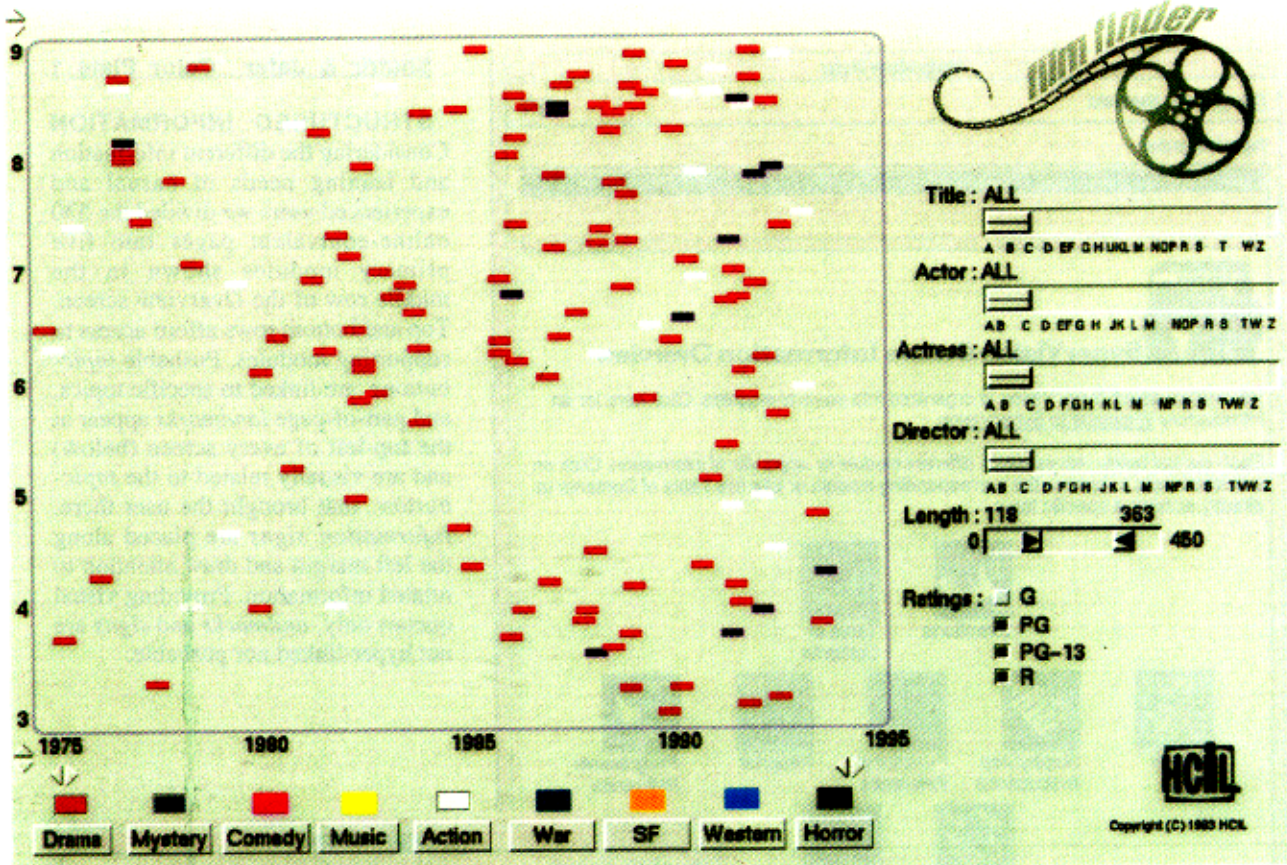
Query results are continuously presented in a starfield, a scatter plot where each film is represented by a point of light of different colors. Each category of films has its own color. The position of the film is determined by when it was produced and a measure of popularity. The starfield displays allow users to rapidly overview query results as queries are formulated - old and unpopular films can easily be discarded [Ahlberg & Shneiderman, Color plate 1 & 2].

## CONCLUSION
The FilmFinder is just a start. It needs development to handle larger databases and more varied information. However, we feel that it does provide an attractive example of how new technologies can help harness the flood of information.

## REFERENCES:
1. Ahlberg, C., Williamson, C., Shneiderman, B., Dynamic Queries for Information Exploration: An Implementation and Evaluation, *Proceedings ACM CHI'92 Conference*, 619-626, 1992

2. Ahlberg, C., Shneiderman, B. Visual Information Seeking: Tight Coupling of Dynamic Query Filters with Starfield Displays, ACM CHI'94 Conference, 1994

3. Ahlberg, C., Shneiderman, B., The Alphaslider - a Rapid and Compact Selector, ACM CHI'94 Conference, 1994

film finder

**Title : ALL**

A B C D E F G H IJKL M NOP R S   T  WZ

**Actor : ALL**

AB  C  D EFG H  JKL M  NOP R S  TW Z

**Actress : ALL**

AB  C  D FGH  KL M  NP R S  TVW Z

**Director : ALL**

AB  C  D FGH  JKL M  NP R S  TVW Z

**Length : 118        363**

0                               450

**Ratings :**  G
PG
PG-13
R

9

8

7

6

5

4

3

1975        1980        1985        1990        1995

| Drama | Mystery | Comedy | Music | Action | War | SF | Western | Horror |

Ahlberg & Shneiderman, Color plate 1. The FilmFinder presents films in a
starfield display and uses Alphasliders as query devices.

film finder

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6          Magician, The

5                                          Autumn Sonata

4    A Lesson in Love

3

**Autumn Sonata**
Director: Bergman, Ingmar  Year:        1978
Country: USA              Language: English
2   Actors:                  Actresses:
     Björk, Halva             Bergman, Ingrid
1    Löldkaberg, Georg        Ullmann, Liv
     Wigert, Knut             Nyman, Lena
     Josephson, Erland        Hanno, Eva Von
     Bang-Hansen, Arne
0

**Title : ALL**

A  B C  D EFG H UL M  NP R S  T  W Z

**Actor : Bjornstrand, Gunnar**

AB  C  D FG H  JKL M  NOP R S  TW Z

**Actress : ALL**

AB  C  D FGH  JKL M  NP R S  TW Z

**Director : Bergman, Ingmar**

AB  C  D FGH  JKL M  NP R S  TVW Z

**Length : 63          323**

0                               450

**Ratings :**  G
PG
PG-13
R