Searcher Usage Patterns for Automated Searching Assistance

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• Jansen, B.J. and McNeese, M. D. (Forthcoming). Evaluating the Effectiveness of and Patterns of Interactions with Automated Assistance in IR Systems. *Journal of the American Society for Information Science and Technology*.

### Pattern Analysis: Directed Assistance

Columns are temporal periods  

Rows are individual searchers  

Cells are interaction  

Aggregate data by period
Middleware to Implement Assistance

Browser Interface

Assistance Modules

- Similar Queries
- Query Terms
- Relevance Feedback
- Reformulation
- Refinement
- Tracking
- Pattern Recognition

(a, o) pairs
Interface With Assistance

The current preset patterns:

• Execute Query – View Results Page (i.e., → quick scan of entire system)

• Implicit Relevance action – Navigation Back (i.e., → other courses of actions)

• Implement automated assistance – View Results Page (i.e., → course correction)

Expand to areas other information searching task
Implications

• Results indicate that automated assistance systems may improve the Web searching experience by aiding in locating a greater number of relevant documents.

• Results also indicate that searchers interact with these systems in predictable ways, which might be utilized to improve the design of future systems.
Questions and Discussion

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