

1st International Workshop on Collaborative Information Retrieval

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1. INTRODUCTION

Explicit support for collaboration is becoming increasingly important for certain kinds of collection-building activities in digital libraries. In the last few years, several research groups have also pursued various issues related to collaboration during search [4][5][6]. We can represent collaboration in search on two dimensions – synchrony and intent. Asynchronous collaboration means that people are not working on the same problem simultaneously; implicit collaboration occurs when the system uses information from others’ use of the system to inform new searches, but does not guarantee consistency of search goals. In this workshop, we are concerned with the top-left quadrant of Figure 1 that represents small groups of people working toward a common goal at the same time. These synchronous, explicit collaborations could occur amongst remotely situated users, each with their own computers, or amongst a co-located group sharing devices; these spatial configurations add yet another dimension to be considered when designing collaborative search systems.

SYNCHRONOUS	COLLABORATIVE EXPLORATORY SEARCH [4][5][6]	REAL-TIME AWARENESS AND CONTINUAL CONTEXT UPDATE [3]
	GROUP ASYNCHRONOUS BROWSING [8]	COLLABORATIVE FILTERING SOCIAL SEARCH WEB 2.0 WISDOM OF CROWDS [7][9]
	EXPLICIT	IMPLICIT

Figure 1. Taxonomy of collaborative search

Synchronous, explicit search has some interesting characteristics that distinguish it from other types of interaction shown in Figure 1. There is much more emphasis on interaction, as the system has to not only communicate search results to the user, but also

mediate some forms of communication and data sharing among its users. There are new algorithms that need to be invented that use inputs from multiple people to produce search results, and new evaluation metrics need to be invented that reflect the collaborative and interactive nature of the task. Finally, we need to integrate the expertise of library and information science researchers and practitioners by revisiting real-world information seeking situations with an eye for explicit, synchronous collaborative search.

2. OBJECTIVES

The goal of the workshop is to bring together researchers interested in various aspects of small-team collaborative search to share ideas, to stimulate research in the area, and to increase the visibility of this emerging area. We expect to identify promising directions for further exploration and to establish collaborative links among research groups.

The workshop will address issues of user interfaces, algorithms, and evaluation specific to collaborative search. UI issues will include shared awareness, coordination, communication, interaction design, and choice of input and display devices. Algorithmic aspects include the coordination of input from multiple people, fusion and distribution of search results, and modifications to ranking algorithms based on group-specific information. Evaluation will consist of discussions of how to evaluate the user experience and performance of such systems, how to compare collaborative system performance with traditional retrieval systems, what new metrics may be appropriate to assess the effectiveness and utility of collaborative search, and what user groups would be interesting populations for empirical study of collaboration.

3. OUTLINE

Collaborative search is a multi-faceted research area that combines interests in retrieval algorithms, user interface design, user studies, and system evaluation. Thus we propose to divide the workshop into three parts: interfaces, algorithms, and evaluation (including user studies). We will focus on interactive discussion rather than on canned presentations. The workshop will alternate between joint discussion and smaller breakout groups. Our experience with past workshops has shown this to be an effective strategy for eliciting a breadth of ideas and for enabling contributions from all participants.

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The proposed schedule for the workshop is as follows:

08:30-09:00	Breakfast, introductions
09:00-10:00	Overview, general discussion, planning
10:00-10:15	Break
10:15-11:15	Breakout sessions: UI and Algorithms
11:15-12:00	General session: discussion
12:00-13:00	Lunch break
13:00-13:15	General session on evaluation
13:15-14:30	Breakout sessions: Evaluation, metrics, studies
14:30-15:15	General session: discussion
15:15-15:30	Break
15:30-17:00	Discussion, wrap-up, planning
18:00-	Optional workshop dinner

4. AUDIENCE

We expect to gather a group of researchers from academia and industry that have begun to explore various aspects of collaborative search. Recent papers from Microsoft [1], [4], UNC [2], Dublin City University [6] and FXPAL [5] suggest an emerging community of interest. We expect participation from people with backgrounds in computer science, library and information science, and HCI, with expertise in system development, evaluation, and applications to real use.

Prospective participants will be required to submit a two to four page position paper describing their interest in and contribution to the field, with emphasis on user interfaces, algorithms, or evaluation, if possible. Submissions will be reviewed by the workshop program committee within a week of the submission deadline. Criteria for selection include novelty of design, quality of evaluation, and quality of presentation. We will also strive for a balance among the areas of UI, algorithms, and evaluation to explore the breadth of ideas unified by this area. Participants will be notified of acceptance before the early registration deadline of the conference.

5. ORGANIZERS

Jeremy Pickens is a Research Scientist at FX Palo Alto Laboratory, where he is a member of the Multimedia Documents group. Jeremy received his PhD in Computer Science in 2004 for the University of Massachusetts (Amherst). His interests include algorithms for information retrieval, collaborative search, and music indexing and retrieval.

Gene Golovchinsky is a Senior Research Scientist at FX Palo Alto Laboratory, where he leads the Usable Smart Environments group. Gene received a Ph.D. from the University of Toronto in 1996 in Human Factors (Department of Mechanical and Industrial Engineering). His interests include user interfaces for information

seeking, dynamic hypertext, and pen-based computing. He has co-organized workshops at CSCW, SIGIR, and CHI.

Meredith Ringel Morris is a researcher in the Adaptive Systems and Interaction Group at Microsoft Research. She received her PhD in Computer Science from Stanford University in 2006. Her research interests include human-computer interaction, computer-supported cooperative work, and ubiquitous computing.

6. PROGRAM COMMITTEE

Colum Foley, Dublin City University

Gene Golovchinsky, FX Palo Alto Laboratory, Inc.

Diane Kelly, UNC Chapel Hill

Gary Marchionini, UNC Chapel Hill

Meredith Ringel Morris, Microsoft Research

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