Search goes mobile
Bertinoro Castle, April 28-30

Abstracts

Akselsen, Siegmund
Telenor

Some telco perspectives on mobile search

Carpineto, Claudio
Fondazione Ugo Bordoni

From CREDO to SmartCREDO: clustering search results goes mobile too

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Search results clustering organizes search results by topic, thus providing a complementary view to the flat list returned by document ranking systems. This approach is especially useful for broad or ambiguous queries (where plain search engines typically fail), because it allows direct subtopic access, helps filtering out irrelevant items, and reduces information overlook. We argue that the features of search results clustering, typically used for desktop searches, seem even more suitable in the mobile scenario, where a minimization of user actions (such as scrolling and typing), device resources, and amount of data to be downloaded are primary concerns. Building on CREDO, a Web clustering engine based on concept lattices, we present its mobile versions Credino and SmartCREDO, for PDAs and cellular phones, respectively. These are the first mobile clustering engines freely available on the Internet. We next turn to their retrieval performance. We present the results of two evaluation studies that suggest that mobile clustering engines can be more effective than mobile search engines, not only for strict subtopic retrieval on ambiguous or multi-topic informational queries but also, to a lesser extent, for goal-directed search tasks.

Fjeld, Morten

t2i Lab, Chalmers University of Technology, Sweden.

HCI Outlook: Tangible and Tabletop Interaction

The objective behind Tangible User Interfaces (TUIs) is to allow users to interact with computers through familiar tangible objects, thereby taking advantage of the richness of the tactile world combined with the power of computer-based simulations. TUIs give physical form to digital information, employing physical artifacts both as representations and controls for computational media. They lend themselves well to collaboration around intelligent tables, or what we call tabletop interaction. At the t2i Lab at Chalmers, we are expanding the boundaries of interactive technology. We do this primarily by constructing TUIs and tabletop, large-display User Interfaces (UI). These can be used in creative problem solving, collaborative work, and science education. Fields of knowledge at the t2i Lab include software (SW) for multimodal UIs, sensors and actuators, analogue and digital hardware (HW), vision-based tracking system utilizing infrared (IR), and visible light. Further areas of investigation are six-degrees-of-freedom (6DOF) UIs, automatic user analysis, and cognitive-perceptual issues.

Kacimi, Mouna

Max Planck Institut für Informatik

Social Search and Exploration in P2P Mobile Networks

The advent of online social community platforms has changed the way users interact with the Internet. Participants to such communities can become both information providers and consumers. Additionally, they can share their social experiences, by tagging, rating or commenting their contents, which help exchanging opinions and recommendations. As a matter of fact, it has been shown that (in particular teenage) users today spend the majority of their online time on social platforms. Given that these users cannot be connected to their PCs all the time, many online communities, such as Facebook and MySpace, are making their way to mobiles. The goal is to fulfill users' desire of being in constant contact with their friends while moving.

In the first part of this talk, I describe the P2P mobile aspect which represents a natural way of creating social links between users, and allows searching without the need of potentially compromised infrastructure. In the second part, I discuss the importance of social tagging in offering an opportunity to exploit the "wisdom of the crowds", by identifying valuable content that is recommended by friends. Practically, I present our scoring model that takes into account relationships among users for ranking. The intuition being that you trust the

recommendations of your close friends more than those of your casual acquaintances.

Kent, Mike
JumpTap Inc.

The importance of building a sustainable search and advertising business for a mobile operator

Kurucz, Miklos
Computer and Automation Research Institute, Hungarian Academy of Sciences

Experiments for a mobile news recommender

We describe preliminary experiments for recommending news articles for a mobile user. The key difference compared to "traditional" recommender solutions is time in the cutting edge: news articles age at a topic dependent but in general very fast rate. We require a solution for the restricted mobile UI size that is capable of keeping the user profile wide and recommending from the long tail instead of just the globally popular articles.

In our preliminary experiments we show the importance of time and popularity in a recommender. We compare baseline and time enhanced recommender methods over traditional data such as Netflix and a news portal usage data. We see significant improvement in precision and recall for news recommendations by user profiles exploting time differences and the hit rate at the time of reading the article.

Licciardi, Carlo Alberto
Telecom Italia Lab

Sharing Content and Context in Mobile Users Communities

In this talk we illustrate the importance of context-awareness in future mobile services for service personalization and mobile content sharing, identifying new research and business opportunities in the area of Sharing Content and Context in Mobile Users Communities.

In particular we describe how to design a system for sharing context-enabled User Generated Content, iluustrating how mushup technologies and WEB 2.0

philosophy can "marry" the mobile world and highlighting the most promising service scenarios for Mobile User Generated Content, Social Networking services and context aware information consumption (the so called context aware search).

Mizzaro, Stefano
Department of Computer Science & Mathematics, University of Udine

Context Aware Browser: The Web on the Move

Paredes-Frigolett, Harold
The User Personalization Company, Inc.

How I Learned To Leverage Mobile Broadband Connectivity To Deploy Content and Services to Audiences of One

Advertising today is targeted based on very thin, low-quality assessments of user interest, generally confined to keywords supplied by users during search operations. Results are unsurprisingly poor, leaving money on the table, and dissatisfied users as well as advertisers. Users today are inundated with the irrelevant, and advertisers are not maximizing consummated transactions. User intent, the purpose in the first place behind the search activity, is the commodity best suited to targeting content to users. With a novel combination of user adaptive technology, intelligent agents and user modeling software, we discuss the role of user-adapted mobile applications to enable the syndication of more targeted content, services, and ad placements to audiences of one.

Pellegrini, Marco
ITC CNR, Pisa

VISTO: VIsual STOryboard for Web Video Browsing

Web video browsing is rapidly becoming a very popular activity in the Web scenario, causing the production of a concise video content representation a real need. Currently, static video summary techniques can be used to this aim. Unfortunately, they require long processing time and hence all the summaries are produced in advance without any users customization. With an increasing

number of videos and with a large heterogeneous audience of users, this is a burden. In this talk we describe VISTO, a summarization technique that produces customized on-the-fly video storyboards. The mechanism uses a fast clustering algorithm that selects the most representative frames using their HSV color distribution and allows users to select: storyboard length, quality and processing time. This tool is well suited to support video browsing in a mobile environment where bandwidth is a precious resource. An objective and subjective evaluation trial shows that the produced storyboards are of good quality and the production time is such to allow on-the-fly usage.

Reuther, Phyllis
mcn, Inc.

Real time search in the Mobile World: what does a mobile site need to do to be available for federation?

Search technology has become pervasive as the means of accessing globally distributed content. Mobile search requires indexing and retrieval to be able to perform with even greater discrimination and at greater levels of precision. In this talk, I will discuss our experience from using the MCN Search Management Platform to federate for longtail and vertical search to over 200 global content providers.

Salz, Peggy Anne
MSearchGroove

There Can Be Only One: The Business Imperative For A Comprehensive Mobile Search Solution

Tryfonopoulos, Christos
Max Planck Institut für Informatik

Information Alerting Services in Mobile Enviroments

Zezula, Pavel
Faculty of Informatics, Masaryk University of Brno

Similarity Searching in Image Collections through MUFIN

Multi-Feature Indexing Network (MAFIN) is a general purpose system for similarity searching in large collections of digital data. The main objectives of MUFIN are: Extensibility – capability of performing (combined) similarity queries for arbitrary metric distance measures; Scalability – by application of structured P2P networks the search is able to scale up to the web dimension; Performance tuning – by a suitable mapping of the logical peer structure to specific computer network infrastructure, the query response time and throughput can be adjusted. After explaining the main principles and underlying technology of MUFIN, capabilities of experimental prototype are to be demonstrated by an image content-based retrieval over a dataset of 10 million images.