

Designing Search Half-day Tutorial

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ABSTRACT

Search is not just a box and ten blue links. Search is a journey: an exploration where what we encounter along the way changes what we seek. But in order to guide people along this journey, we must understand both the art and science of user experience design.

The aim of this tutorial is to deliver a learning experience grounded in good scholarship, integrating the latest research findings with insights derived from the practical experience of designing and optimizing dozens of commercial search applications. It focuses on the development of transferable, practical skills that can be learnt and practiced within a half-day session.

Categories and Subject Descriptors

H.3.3 [Information Search and Retrieval]: Search process;

H.3.5 [Online Information Services]: Web-based services

General Terms

Human Factors.

Keywords

Site search, enterprise search, information seeking, user behaviour, information discovery, user experience design, usability.

1. TARGET AUDIENCE

This intermediate tutorial is aimed at IR researchers and practitioners, information architects and search specialists interested in the designing more effective user experiences and interfaces for information retrieval and discovery. An awareness of the basic principles of user-centered design is useful (but not essential).

2. EXTENDED ABSTRACT

2.1 Learning Outcomes

The aim of this tutorial is to deliver a learning experience

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grounded in good scholarship, integrating the latest research findings with insights derived from the practical experience of designing and optimizing an extensive range of commercial search applications. It focuses on the development of transferable, practical skills that can be learnt and practiced within a half-day session.

Participants in this tutorial will:

- Explore the fundamental concepts and principles of Human-Centred Design for information search and discovery
- Study models of human information-seeking behavior and learn how to apply interaction design principles based on those models
- Learn how to differentiate between various types of search behaviour: known-item, exploratory, lookup, learning, investigation, etc. and understand how they combine to form composite search strategies and patterns
- Develop an understanding of the key dimensions of the search experience, and how to apply these dimensions when designing for different user contexts
- Understand the role of design patterns, and how to apply UI design principles and patterns from various libraries in designing search user interfaces
- Gain an awareness of the key design resources available within the HCIR community and how to apply these to practical design challenges

2.2 Outline of Tutorial

This half-day tutorial is structured as follows:

00:00	Introductions and objectives
00:10	Understanding information-seeking behaviour
00:50	Formulating the query
01:30	BREAK
02:00	Displaying and interacting with results
03:00	Faceted search

03:20 Conclusions & Wrap-up

03:30 CLOSE

2.3 Tutorial Description

The course comprises the following sections:

1. **Introductions and objectives:** Group introductions & ice-breaker. A brief summary of what each participant hopes to gain from the session, and what experiences they bring.
2. **Understanding search & discovery behaviour:** An overview of the key theories and models of human-information seeking behaviour, focusing on the work of Bates, Belkin, Jarvelin & Ingwersen, Marchionini, etc. and their relationship to more practitioner-oriented insights, e.g. Morville, Tunkelang, Nudelman etc.
3. **Varied solutions for varied contexts:** An exploration of the universal dimensions that define information-seeking behaviour, and how these translate into principles for the design of search and discovery experiences.
4. **Formulating the query:** A detailed examination of the various methods by which information needs can be elicited, disambiguated and refined, and how design interventions can support this process.
5. **Displaying results:** The counterpart to (4): an exploration of the key issues and principles underpinning the display and manipulation of search results, and how they can be used to facilitate productive user journeys.
6. **Faceted Navigation & Search:** A review of the key principles of faceted classification and their practical implications for the design of effective faceted search applications.
7. **Conclusions & Wrap-up:** A review of the overall session, including the shared experiences of the group exercises and the contrasting findings of each. A summary of the follow-on resources and takeaways from the course and the wider HCIR community.

2.4 Tutorial Logistics

Attendees will be supplied with a full set of tutorial notes (presented as PowerPoint slides plus annotations). In addition, they will also receive related materials for any practical exercises.

3. INSTRUCTOR BIOGRAPHY

Tony Russell-Rose is founder and director of UX Labs, a research and design consultancy specializing in complex search and information access applications. Before founding UX Labs he was Manager of User Experience at Endeca and editor of the Endeca Design Pattern Library, an online resource dedicated to best practice in the design of search and discovery experiences. Prior to this he was technical lead at Reuters, specializing in advanced user interfaces for information access and search. And before Reuters he was R&D manager at Canon Research Centre Europe, where he led a team developing next generation information access products and services. Earlier professional experience includes a Royal Academy of Engineering fellowship at HP Labs working on speech interfaces for mobile devices, and a Short-term Research Fellowship at BT Labs working on intelligent agents for information retrieval.

His academic qualifications include a PhD in artificial intelligence, an MSc in cognitive psychology and a first degree in engineering, majoring in human factors. He has published 70+ scientific papers on search, user experience and text analytics, and is co-author of “Designing the Search Experience: the Information Architecture of Discovery”, published by Elsevier in 2012. He is currently vice-chair of the BCS Information Retrieval group and chair of the IEHF Human-Computer Interaction group. He also holds the position of Honorary Visiting Fellow at the Centre for Interactive Systems Research, City University, London.

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