



**PROFESSUR
MEDIENINFORMATIK**

This semester in ENGLISH!

00 Introduction

Lecture Media Retrieval

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Information Retrieval

„Information Retrieval (IR) is concerned with the **representation, storage, organization, and accessing** of information items. In principle **no restriction** is placed on the type of item handled in information retrieval.“

Source: Salton&McGill 1983:1

→ search anything anywhere



Terminology

- Data (syntactic level)

Pure data collection, syntactic relations (f.e. in relational databases)

- Knowledge (semantic level)

Meaning of data

- Information (pragmatic level)

„Knowledge in Action“: Part of knowledge needed for a specific problem in a specific situation



Information Retrieval System

„... a set of rules and procedures, as operated by humans and/or machines, for doing some or all of the following operations:

- **Indexing** (or constructing representations of documents);
- **Search formulations** (or constructing representations of information needs);
- **Searching** (or matching representations of documents against representations of needs);
- **Feedback** (or repeating any or all of the above processes, with modifications introduced in response to an assessment of the results of some process);
- **Index language construction** (or the generation of rules of representation).“

Robertson 1981:9



Application Areas

- Web Search
- Enterprise Search
- Data Base Search
- Streaming Portals
 - Netflix, amazon Prime, audible ...
 - Smart TV
- Image Portals
 - Europeana



Contents

- Concepts and Methods of Information Retrieval
- Evaluating Information Retrieval Systems
- Intellectual Generating of Metadata
- Automatical Generation of Metadata
- Special Aspects of Audio Retrieval
- Special Aspects of Video Retrieval

Essential Reading

Jens Kürsten (2012). A Generic Approach to Component-Level Evaluation in Information Retrieval. PhD Thesis, TU Chemnitz.

→ <http://nbn-resolving.de/urn:nbn:de:bsz:ch1-qucosa-96344>

(have a look at our homepage: Research – Dissertations)

Chapter 3: Key Components of IR Systems

Chapter 2: Information Retrieval Evaluation



Exam

- Written exam at the end of term, 60 minutes
- Preparation
 - Come to the lecture, listen
 - Download slides and annotate them – I will tell you more than the slides!
 - Reading 1: overview readings (see OPAL)
 - Reading 2: see slides / OPAL for:
 - Readings on special aspects
 - Web resources



Exercise

- Subscribe in OPAL, check your E-Mail → WE contact YOU
- Exercise varies depending on the topic:
 - Reading
 - Game playing
 - Programming
 - Training of algorithms
- Be available at the time slots in your time table, BUT: We do **not** meet **every** week at these dates.

Slides

- Slides are on OPAL
 - Technische Universität Chemnitz
 - Fakultät für Informatik
 - Medieninformatik
 - 578090 Medienretrieval
- or: Homepage Medieninformatik → Link