Introducing a Social Backbone to Support Access to Digital Resources

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Supporting Access to Resources with Social Media

Social media systems support the contribution and creation of resources and of metadata about these resources. Metadata can be title, author, abstract, tags, etc.
Combining traditional expert metadata with information about the usage of digital resources and the social metadata that is created explicitly or implicitly allows for new ways
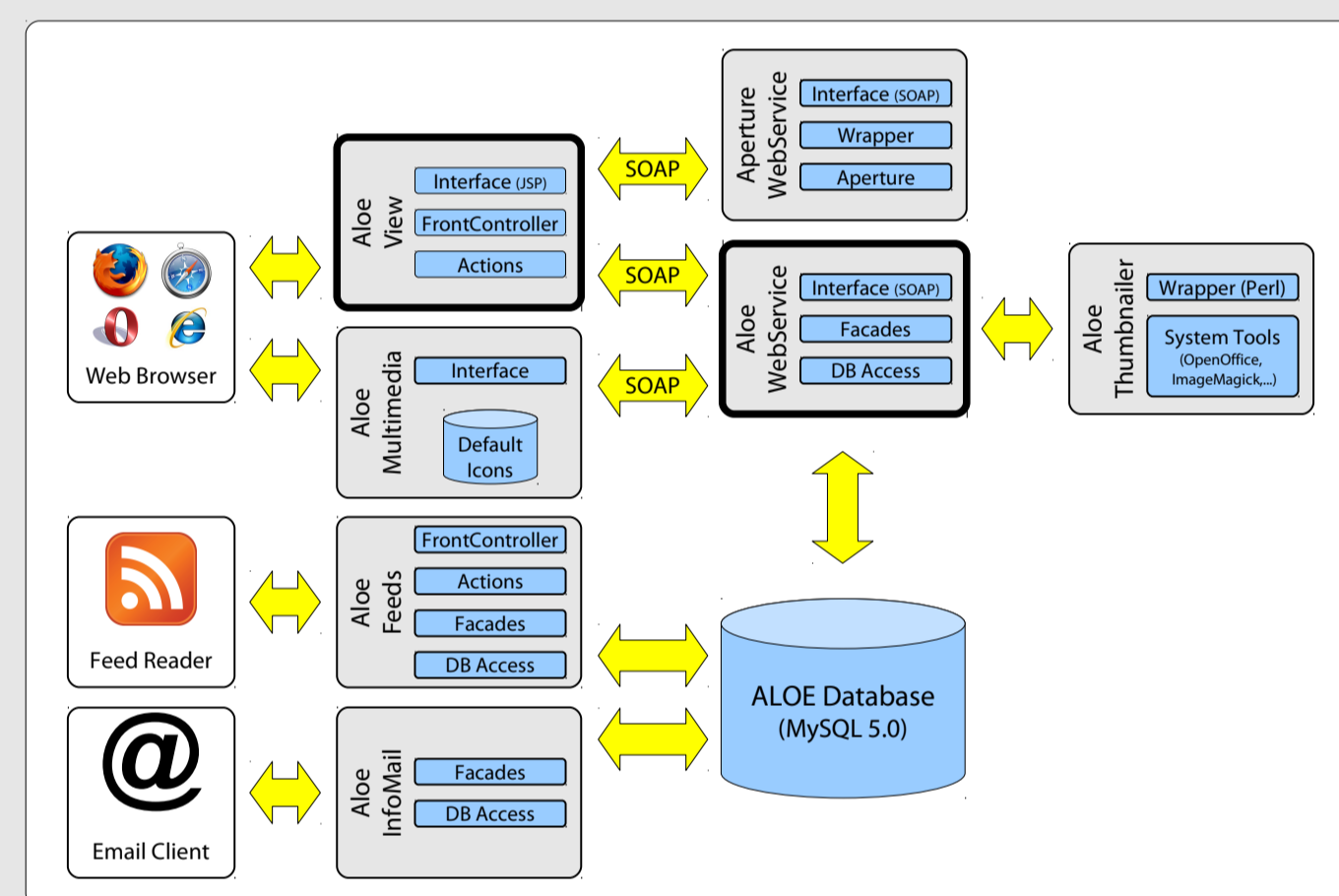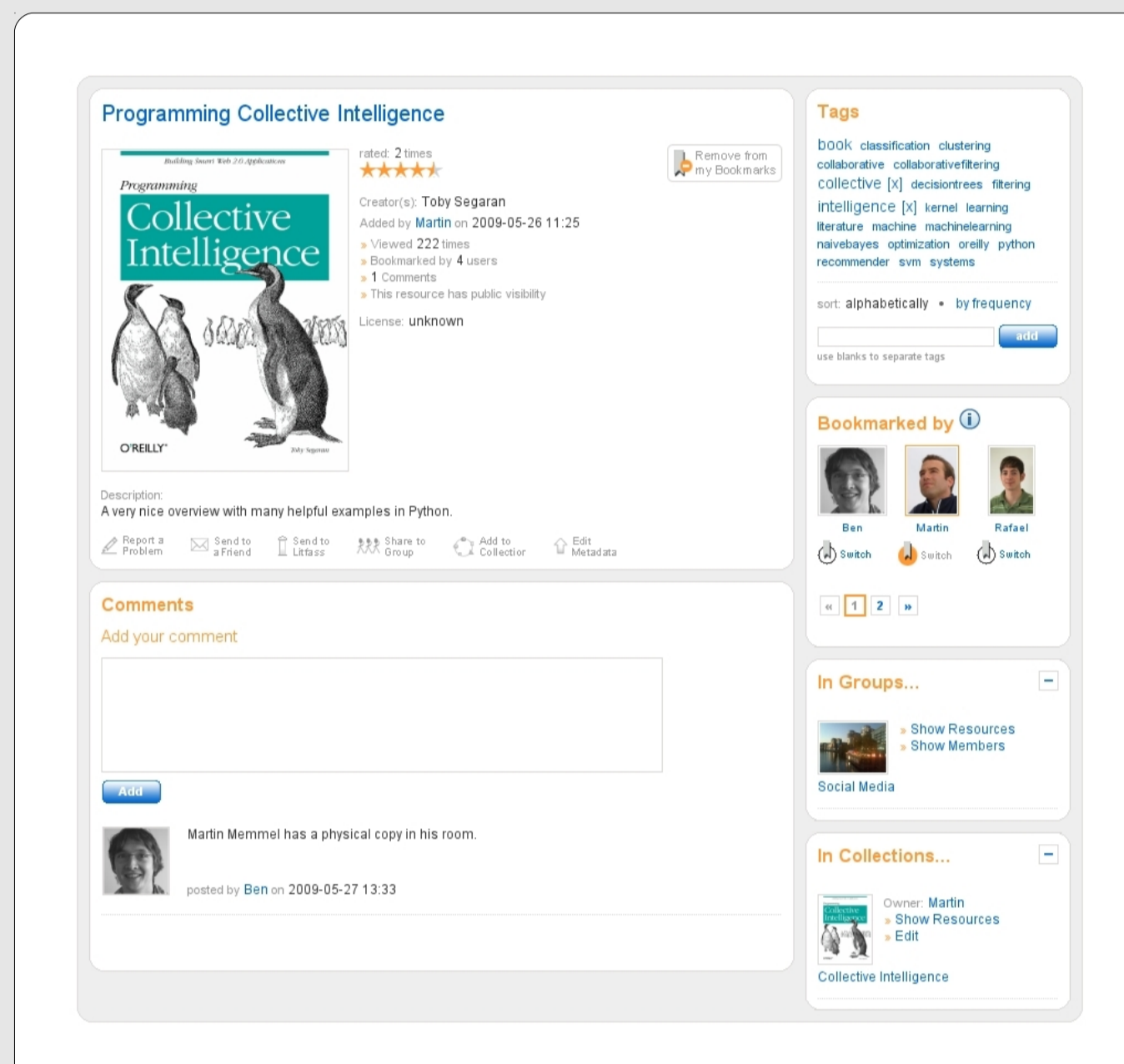
- to **generate views on digital resources** such as ordered by number of views, ordered by rating or ordered by number of times bookmarked,
- to **support users and machines** respectively in **judging the relevance of a digital resource**,
- to **maintain underlying structures** of an information system (e.g., by taking into account end user contributions such as tags to add, remove, or modify elements from a taxonomy), and
- to **navigate the content** – this so-called social browsing allows users to tap into the long tail and to find niches that are relevant for them.

ALOE – A Social Resource and Metadata Hub

http://aloe-project.de

ALOE is a system for collaborative sharing and annotation of arbitrary multimedia resources such as text documents, audio and video files, or web pages:

- users can upload resources (using ALOE as a repository),
- existing resources – e.g., from the www or an intranet – can be referenced via bookmarks (using ALOE as a referatory),
- resources can be found by using various filter criteria and search modes,
- users can tag, rate and comment resources, initiate and join groups, organize contact lists, send messages to each other, etc.


To allow the usage of ALOE in as many scenarios as possible, and to foster the adoption of as many users as possible, ALOE was designed as a server-based application where information is exchanged via HTTP. On the one hand, the system's functionalities are offered via a graphical user interface that can be accessed with any common web browser that can connect to the ALOE server. On the other hand, a Web Service API is offered that allows to access the ALOE functionalities.

ALOE – system architecture and components

ALOE realises a *social backbone* that allows to introduce social media paradigms in existing (heterogeneous) infrastructures.

MACE – Metadata for Architectural Contents in Europe

http://www.mace-project.eu

The European initiative MACE aims at improving architectural education by integrating and connecting vast amounts of digital architectural content and buildings (all called resources) from diverse repositories.
The publicly accessible MACE portal enables searching through and finding of appropriate learning resources from a variety of sources in a discovery oriented way. The MACE searching and browsing facilities rely on the metadata associated with the resources. The system offers a *filtered search* where a user is able to qualify the search with several additional facets, to *browse by classification* based on the MACE taxonomy, to *browse by competence* based on a competence catalogue, to *browse by location* allowing to search for contents within a given area, to conduct a *social search* based on tags, and to *browse user portfolios* (*social browsing*) of resources.
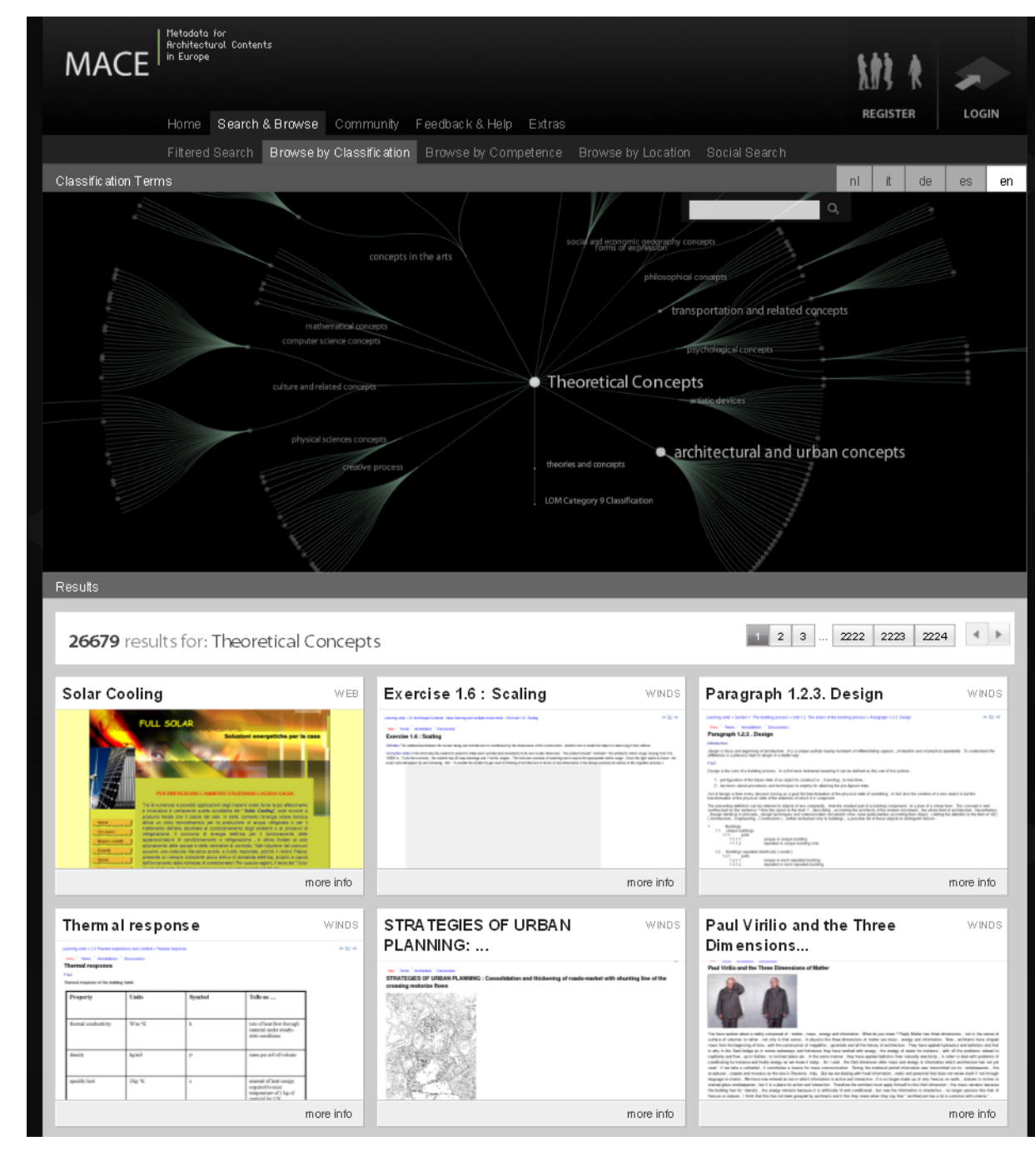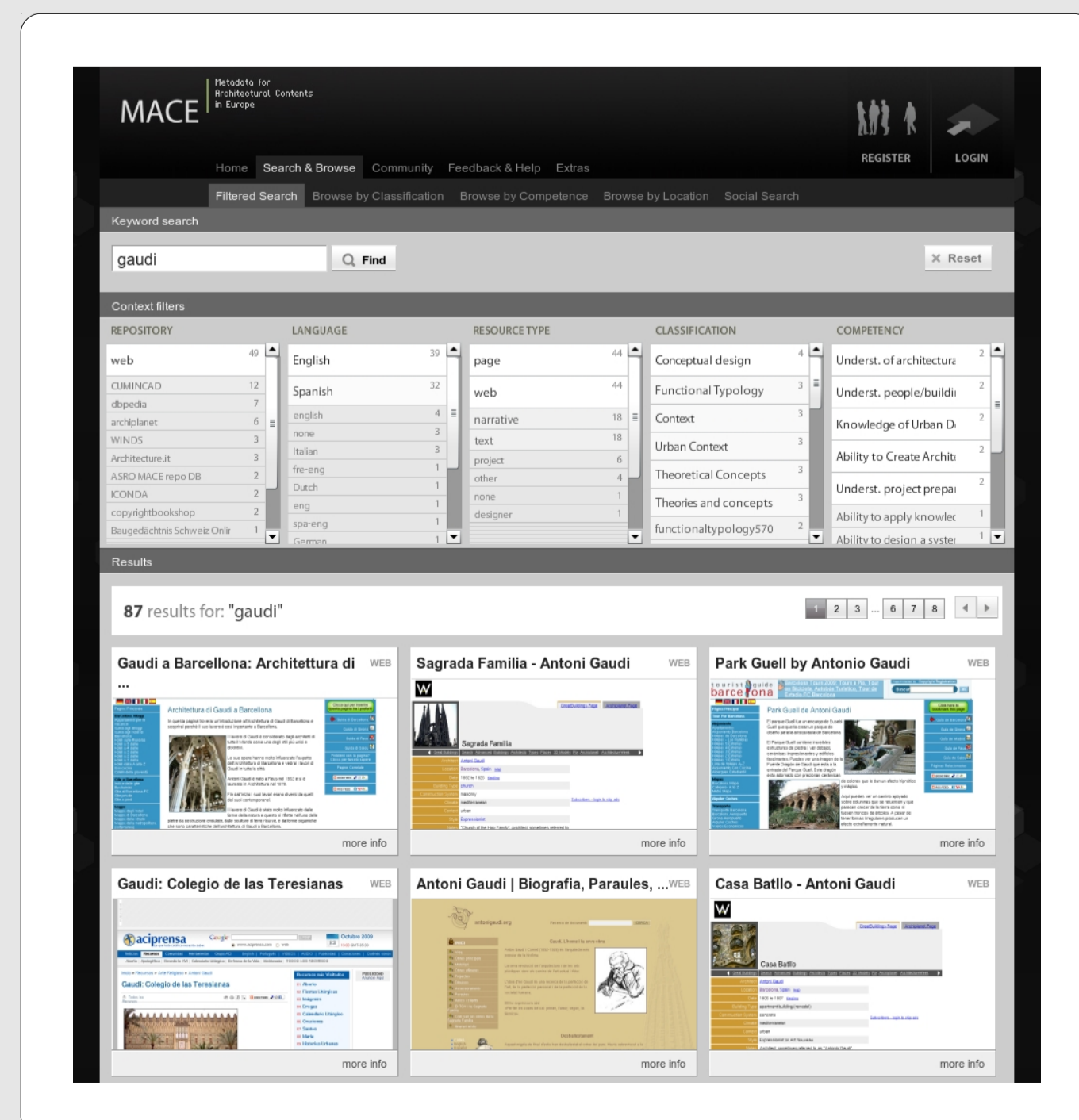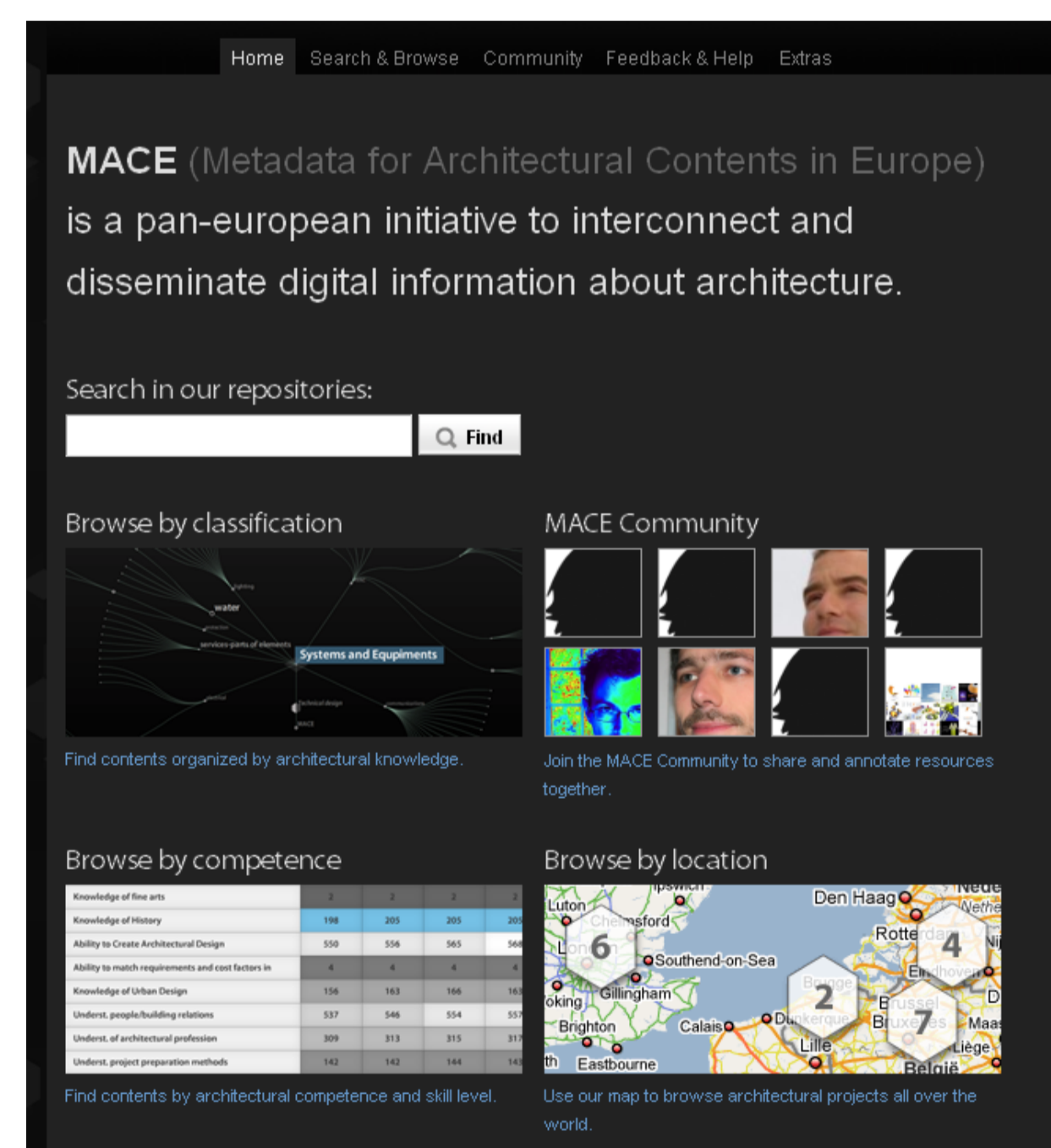
Integration of ALOE in MACE

The MACE system builds on a distributed service oriented architecture with a three-tier structure. The front-end with its graphical user interfaces and widgets forms the client tier. The business logic is organised in the application-server tier while the metadata stores form the data-server or back-end tier.

ALOE is integrated in MACE via accessing its Web Service API from the MACE Portal and other components. All community features are realised using ALOE, and ALOE also stores the contributed information.
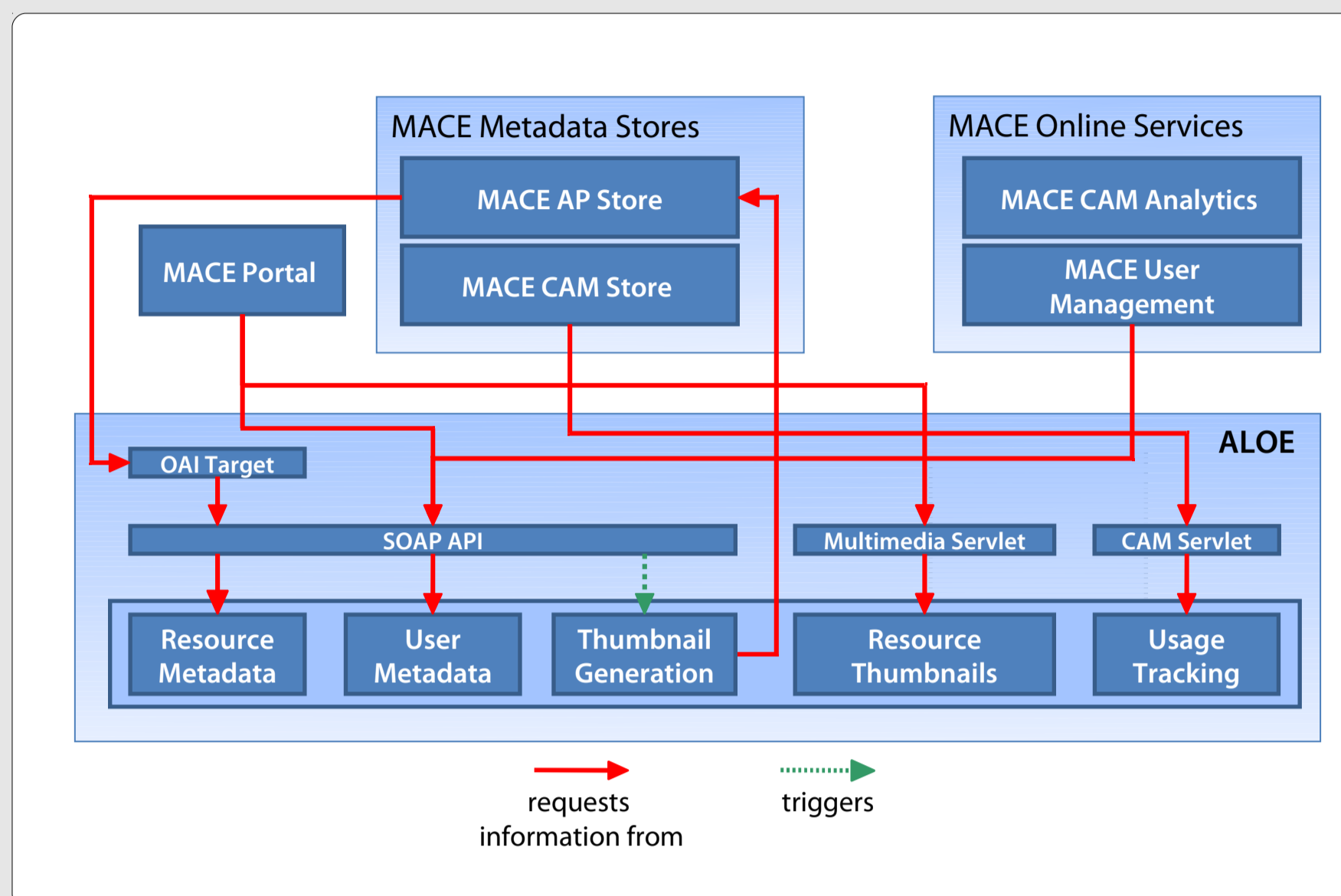
ALOE services and their integration into the MACE infrastructure

Through the integration of ALOE into the MACE infrastructure, a variety of social media functionalities are provided. Users can

- add new contents to MACE,
- maintain personal resource portfolios,
- contribute information about resources (e.g., tags, comments, and ratings),
- search within social data,
- maintain contact lists, and
- send messages to other users.

Exploiting Social Media in MACE

• Contributions by MACE Users

Bookmarks	Comments
8121 unique bookmarks have been contributed	387 comments have been contributed
12501 bookmarks have been added to user portfolios	285 bookmarks have been commented
333 users contributed at least once	65 users commented at least once
Tags	**Ratings**
49751 tags have been contributed (9882 unique tags)	912 ratings have been contributed
6802 bookmarks have been tagged	834 bookmarks have been rated
280 users tagged at least once	106 users rated at least once

929 registered users, reference date: September, 10, 2010

• Usefulness of Social Metadata from an End User Perspective
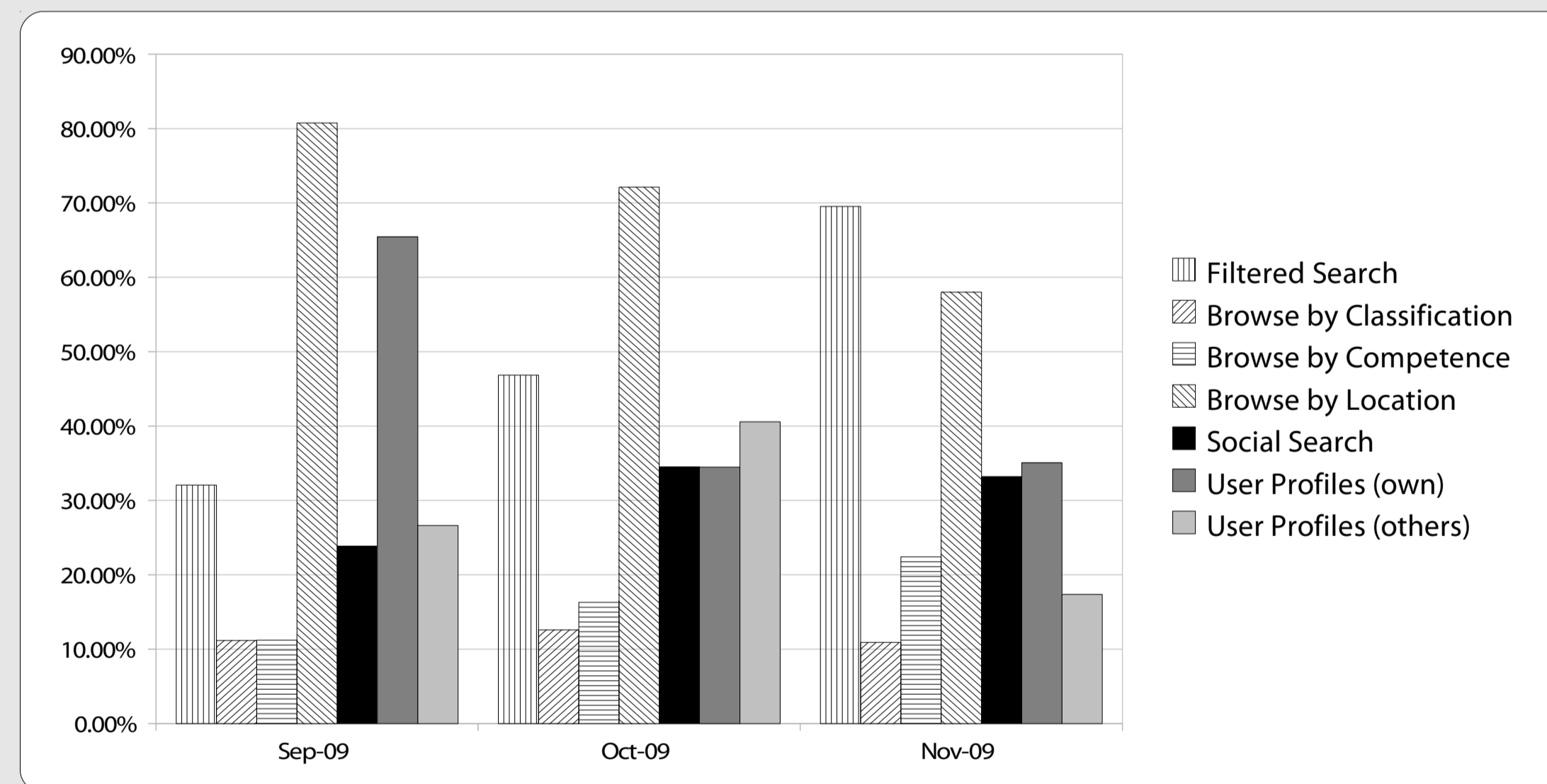
Shares of search and browse types in MACE
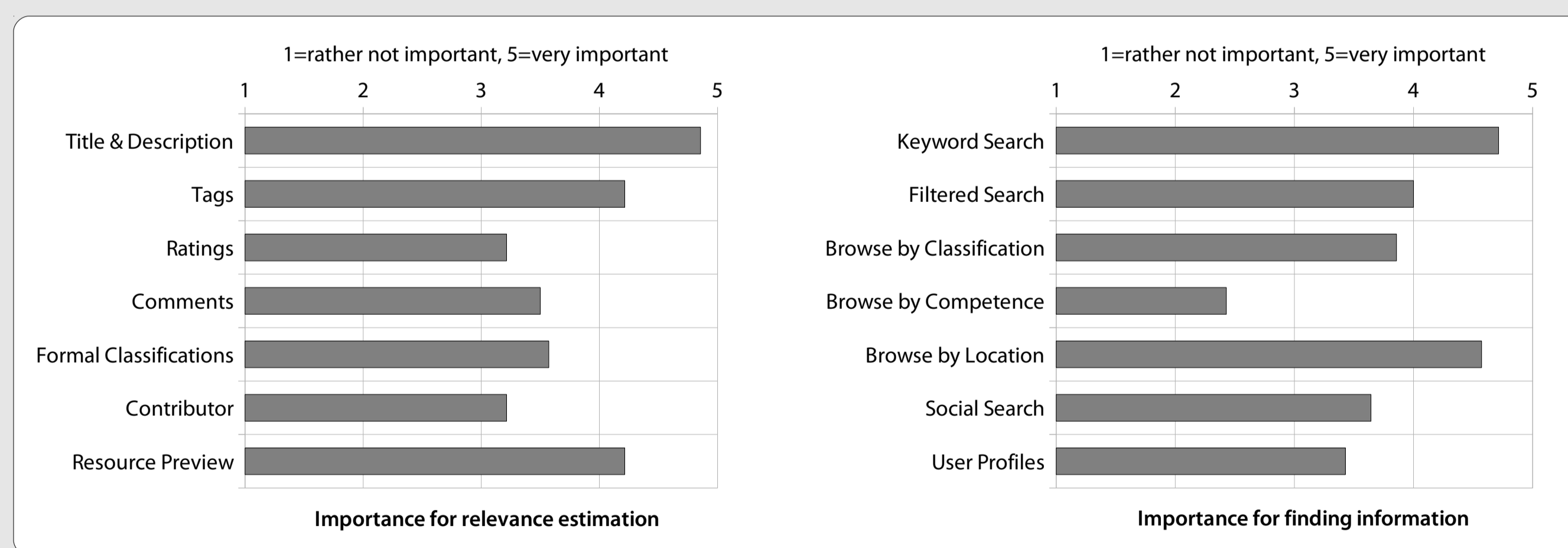
Importance of social metadata - survey results

• Maintenance of the MACE taxonomy

Acknowledgements

For further information

ALOE Project: aloe@dfki.uni-kl.de, http://aloe-project.de
MACE Project: info@mace-project.eu, http://www.mace-project.eu

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ALOE

MACE — Metadata for Architectural Contents in Europe

DFKI German Research Center for Artificial Intelligence GmbH

Fraunhofer FIT

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