

# IA Research: The Future State of the Art

by D. Grant Campbell

## Information Architecture

The Information Architecture Summit of 2007 has come and gone while preparations for the 2008 Summit have already begun. As we analyze the past to prepare for the future, the research track of the Summit deserves special mention.

The IA Summit research track was instigated two years ago, thanks to the tireless and visionary work of Karl Fast, Don Turnbull, Richard Hill and a host of other academics and working IAs who wanted to bring research and practice into closer and more productive interchange. Papers submitted to the research track of the Summit are scheduled among the other presentations and cover many of the same topics. But the research track submissions are subjected to a full-paper, double-blind peer review process that makes the track and the Summit an enticing venue for researchers who need peer-reviewed publications in their dossiers.

This has been a valuable and exciting venture, and I've been proud to be a part of it. But as the program chair of the research track for the 2008 Summit, I find myself asking several questions:

- What should information architecture research be doing?
- What should the research track be encouraging?
- What should we be asking for in our call for papers?

On the last day of the 2007 Summit, Karl Fast, Don Turnbull and I spoke about the grand challenges for IA research. My contribution was sketchy at best, because I was preoccupied with my own upcoming research presentation, and I opted for being cheerful rather than helpful. But as I confront these questions yet again, the following topics are the answers I glean from Karl, Don and my own thoughts.

### Collaboration in the Building of IA Tools

Information architecture abounds in processes, practices and tools, ranging from wireframes and alignment models

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to interfaces to support faceted browsing. Academics must participate in building these tools – not because we do it better than practitioners, but because we are committed to pushing things out of their safety zones and making them fail. Safe aircraft emerge from wind-tunnel tests and other punishing ordeals that show the designers just how much stress they can take; we should expect no less of tools that support our information activities.

IA research, then, cannot stay isolated in theory; nor can it be satisfied with ponderous empirical studies that prove what the working IA already knows through experience. Academics involved in IA research need to be creating tools: prototypes of new methods, new designs, new interfaces and new procedures that meet the following criteria:

- They are intended to be picked over and analyzed by those who have specific problems to solve.
- They are to be pushed until they fail, so that we can see where things fail.
- They exist in a public domain where they can be shared without problems of violating confidentiality.
- They can be used to evolve consensus on some questions that tend to be posed and discussed each year.

### Defining the Field Boundaries

Information architecture sits at the nexus of many different fields, ranging from library science to graphic design. That's exciting. Nearly every problem encountered in human life can be defined in terms of information, if you work hard enough at it. That's exciting too. But in practical terms, it means that practitioners frequently suffer from inflated expectations and that virtually every problem in our information-rich culture can be traced to a supposed failing of information architects.

That wide reach makes it difficult for us to see our own limits. Only the little guys profess to do everything. IA research needs to develop a sophisticated and useful understanding of how information architecture interacts with other areas of expertise. Manhattan is an exciting place because since it was surrounded by water, it was forced to build up. IA research needs to define similar boundaries, thereby helping the field to build up. >

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### Teaching the Next Generation

Academics may lie awake at nights worrying about their publications, but they divide their days with the equally important task of teaching. IA research needs to use both IA practice and the questions that emerge from Summit attendees to define useful curricula for the growing number of degree programs in information architecture. Are we training graduates to be useful members of the community? Or are we training them in outmoded techniques and long-discarded tools? What theoretical grounding best serves a student in an IA program? What technical infrastructure is required to teach useful courses in information architecture? And,

perhaps most important of all, what are the best pedagogical techniques for teaching this complex field?

If any researcher has work that could contribute to any of these problems and tasks, the research track offers a great venue for that work, and the call for papers will be appearing shortly at [www.iasummit.org](http://www.iasummit.org). Furthermore, the Information Architecture Institute offers a program of grants to support work of this nature (see [www.iainstitute.org/pg/ia\\_progress\\_grants.php](http://www.iainstitute.org/pg/ia_progress_grants.php)). Information architecture research has an exciting chance to evolve in close proximity to field practitioners who are deeply engaged with the intellectual, social and philosophical implications of their own practices.

## FaceTag: Integrating Bottom-up and Top-down Classification in a Social Tagging System

by Emanuele Quintarelli, Andrea Resmini and Luca Rosati

## Information Architecture

Collaborative tagging systems are powerful tools for organizing, browsing and publicly sharing personal collections of resources on the World Wide Web. They have enjoyed widespread adoption by end-users.

Collaborative tagging produces aggregations of user metadata, often referred to as *folksonomies*. These user-generated classifications emerge through bottom-up consensus by users assigning free form keywords to online resources for personal or social benefit. Del.icio.us, Flickr, 43things, Furl and Technorati are examples of web-based collaborative systems for building shared databases of items. The users of these systems create a flat metadata vocabulary that can be used to perform metadata

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driven queries, to monitor change in areas of interest or to discover emergent trends, such as the hottest/most popular topics in the system. In the past, folksonomies have often been seen as orthogonal to taxonomies and controlled vocabularies: the latter being rigid, hierarchical and organically hand-crafted by professionals a priori; the former being flat, inclusive and emerging from bottom-up users' input and consensus [1].

Despite their low cognitive cost, their capability of matching users' real needs and language, and their great value in serendipitous browsing, folksonomies are haunted by a number of important issues related to intrinsic language variability and imprecision and the lack of good tools to enable users to navigate through the mass of tags. As a result of the inherently inconsistent, evolving and quite variable process of associating words and meanings, tagging systems are implicitly plagued by polysemy, homonymy, plurals, synonymy and basic level variation – linguistic issues which do not appear easy to solve [2]. Any of these problems can dramatically reduce the effectiveness and benefits brought on by the use of tagging systems. >