

Information Architecture and Search Optimization: Beginning a Beautiful Friendship

by Marianne Sweeny

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When asked whom she wanted to invite to her 100th birthday party Brooke Astor answered without hesitation, “100 librarians.” Librarians are the ultimate information highways. They gently guide us to frame our information need so that we find exactly what we want or need. Librarians don’t know where everything is but have a sense of shared meaning. Search engines know where everything is but know nothing about what it means. Given a choice, who would want to celebrate a birthday with a search engine?

Organic search engine optimization (SEO) is a process of constructing and amending sites to map to the functionality of search engine technology so that sites can appear higher in the results set for client search terms and phrases. Good SEO does not have to interfere with or dictate to IA. It is a composite of actions and best practices that can ensure maximum visibility with peaceful coexistence.

Search engines are attractive technology because they put wayfinding directly into the customer’s hands. Results are immediate, revelatory (showing multiple results at once) and efficient (for known item searches). Google made it all look so easy, so now our clients expect efficient, quick and plentiful results all of the time. Close enough is often good enough. Except that PageRank has nothing to do with the client query. It is a pre-query value calculated at indexing and recalculated periodically.

As the hardware gets cheaper (Google’s index is reputed

to live on cheap PC servers running open source software... many, many cheap PCs are needed to host a 9 billion page inverted index and cache of all pages), the software becomes more sophisticated with asynchronous as well as synchronous query calculations taking place. This brute force computational power seeks to derive contextual meaning through rapid and multiple comparisons.

Search technology now uses computational methods to apply a growing ontology based on a vector space comparison. Examples are found in the Hilltop algorithm that sees the web divided into categories with designated expert or authority pages and in the similar Hypertext Induced Topic Selection (HITS) algorithm. Both of these algorithms are performed on a small subset of the corpus that best represents the nature of the whole web. Results are ranked according to the number of non-affiliated “experts” that point to a particular site through links.

The beauty of Hilltop and HITS is that unlike PageRank, they are query-specific and reinforce the relationship between the authority and the user’s query. You don’t have to be big or have a thousand links from auto parts sites to be an authority. Once designated as an authority, links from these pages are afforded more weight.

So, the good news for wayfinding is that the technology is again looking to a human-mediated classification schema for web content and search results ranking. The not-so-good news is those information architects/interaction

designers/experience designers and others with expertise in human behavior toward information and information spaces are nowhere to be found in these developments.

On the search engine event horizon is a thesaurus-like search engine that has combined its index with human mediated categories. A query is matched to the categories. One search company wants to take the trouble out of selecting a search engine by brokering queries and directing them to the engine with the best results. Both MSN and Google are working on behavior search applications that collect information such as how the client segments information on the hard drive, what they search for, what they click on, how long they stay on a page, what they have in their bookmarks, how those bookmarks are arranged or how they iterate their searches. This information is then synthesized and used to sort web search results.

The future doesn't look so bright for IA/ID/UX involvement unless we engage quickly and directly. We can continue to disengage entirely. We can cooperate by developing best practices based on our knowledge of user needs and our abilities to structure information spaces. We can initiate changes in the direction of search technology to facilitate understanding of spatial relationships through the modeling of information spaces. Obviously, this approach is the most complex requiring changes in thinking and practice.

Navigation blindness, navigational fatigue, Mark Hurst's the Page Paradigm and Danielson's transitional volatility tell us it is time to change our wayfinding strategies and tools. And, if you look at the analytics on your site, we know this also. Considering the sometimes hundreds of sites folks visit in a given session, it is understandable that they get tired of figuring out the

navigation schemas for each one. It is so much easier to go to the search box or pogo back to the search results.

I believe that our path back to full participation in our customer's information is enhanced by the following new tools:

- Page code strategy: ensuring that rich media applications are coded for maximum visibility to search engines – spiders that do not have thumbs to press buttons or eyes to see that beautiful Flash or AJAX.
- Metadata strategy that sees us using all means to describe the content to the spider with keyword rich titles and to our customers with rich description text that disambiguates the destination. Like Jessica Rabbit, keywords are not bad – they were just drawn that way for a bit. In today's topical, categorical, ontological web, keywords may experience a comeback.
- Content strategy that publishes deep, rich topic focused authoritative content and hubs that provide navigation to other authority resources. The fold is dead. Customers no longer pay for web access by the hour. They will scroll, and they will print out when they do not want to read on the screen.
- Linking strategy to make semantic relationship between content items. The new algorithmic sophistication rewards us when we “think about the link” and so we should. A good linking strategy includes requests to similar websites for reciprocal linking to capitalize on vertical search engines, online bookmarking sites, blogs and newsgroups.

I am not suggesting that we do away with all of our traditional tools. Many of them have and will continue to

withstand the test of time. I am suggesting that we acknowledge the prominence of search tools in wayfinding. Only then we can bring the locus of attention back to the person and away from the tool, the processing speed and the complex math required to build predictive engines that will never fully understand meaning.

As I see it, we can either cooperate with the technology

so that we can initiate positive directions for our customers. Or we can capitulate and let the technology develop around and eventually ahead of us. For me, the choice is obvious. We must integrate our human nature into the system design. We can work with search technologists to make our work more visible. It is not too late for us to regain our place at the information finding table. ■