

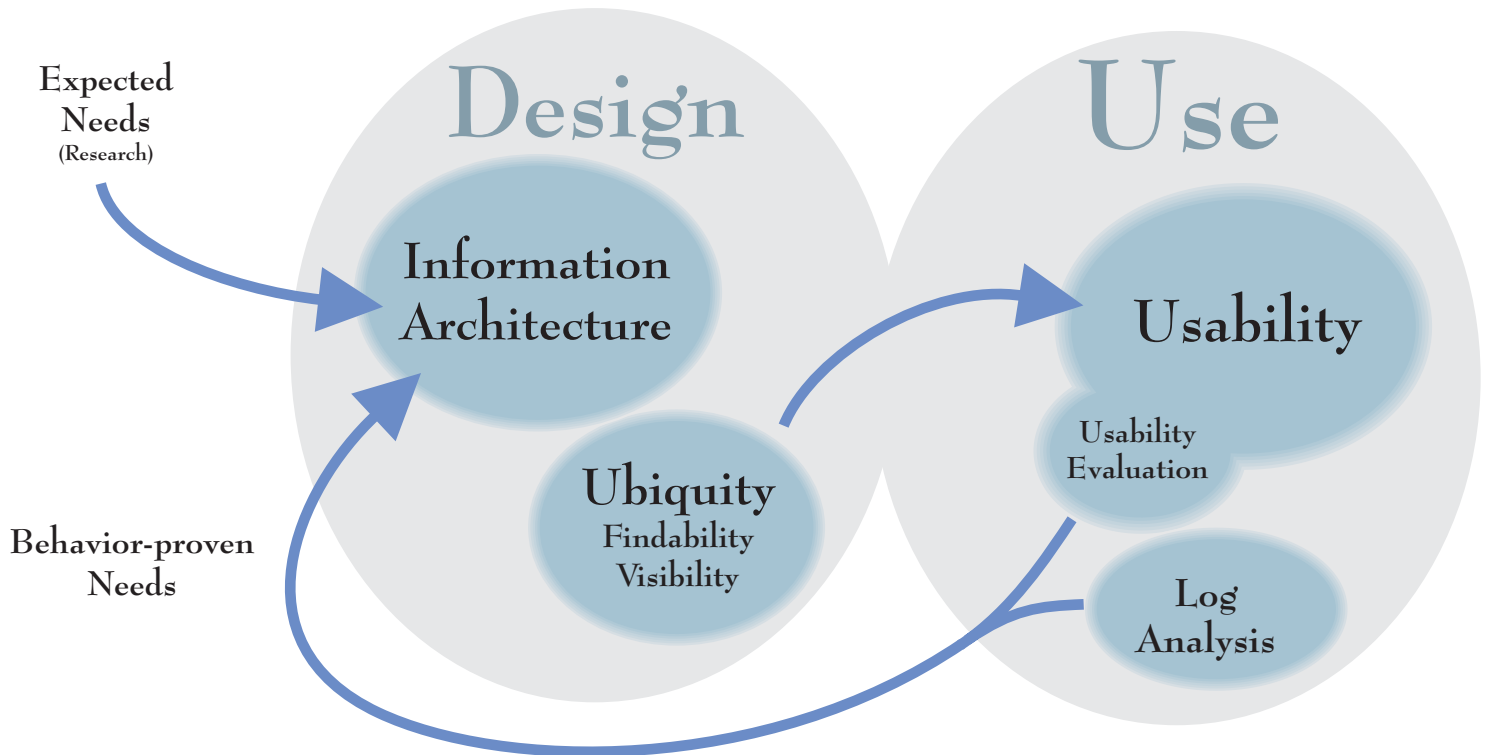
The User Experience from Design to Use, and Back: a Causal Model

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Motivation

Web site design includes many different topics such as Information Architecture, Usability, Ubiquity, Findability, Accessibility, Log Analysis, etc. A model is needed to integrate and to represent the relationship between all of these different fields and how they all fit together in web projects. Here we propose such a model.

One recurrent question and discussion is the difference and the connection between Information Architecture and Usability. Our model depicted in the above diagram, portrays the relationship of all these fields of work as parts of a cyclic process, and how they feed from user research in stages, before and after the design stage, in an iterative process.

For a better understanding of the model we describe our use of the key concepts in the diagram above. The diagram is based on the causality of the iterative cycle of a Web site evolution. First, building the site. Second, finding it. After this we can use it, and only if it is used we have information in the logs to improve the site, closing the cycle.

Design & Use

We design our projects with our minds in the users, in the experience they will have when using the site. But we do not know the actual results of our decisions until real people get to use the system. Then we can exploit this experience as input for tweaking our designs. Thus, the first distinction our model makes is a division between the domains of design and use. Design includes Information Architecture and Ubiquity. There is no ubiquity without IA and only if the site is ubiquitous in the Web, it can be used. Use includes the evaluation of it, Usability, and the analysis of the usage, a particular and important case of Web mining.

Information Architecture

We understand Information Architecture as the discipline that focuses on the design of electronic information spaces and the applications embedded into them. Information Architecture acts as a bridge between organizations, users and technology -considering information (or content) as a technology.

Information Architecture feeds on the expected needs of the users, which are collected from user research and prototype evaluations in the design stage, and from behavior proven needs provided by log analysis and usability evaluations in a permanent fashion.

Ubiquity

For a site (or subset of it) to be used, it needs to be found and seen.

Findability: can the site be found by my users and by search crawlers? The answer is no if the site does not have a link from a known site or is registered in most search engines; or does not allow the crawler to access internal links because uses complicated non-HTML code. Not if the design hides the text or our content does not have the right words that users may and will use to find the site.

Visibility: will my users be able to view the site? The ability of a variety of users to see our website will depend on the way we build the pages, how cross-compatible the code is, if it complies with accessibility guidelines and also how efficiently the pages are structured and images are optimized and used properly (download as well as rendering time).

Usability

If a site is actually found, it can be used. If it is used, its use can take place with different levels of usability.

Usability is a measure of the experience the users get when interacting with a website or system, this measure contains both quantitative and qualitative measures. Usability is an attribute of a unique experience for a particular user in a particular environment with a particular system. Usability can be divided into three variables: effectiveness, efficiency, and satisfaction.

The usability of projects is measured during different stages through prototypes and with the final product.

Log Analysis

Once the system is built and working, the server keeps records of all the activity it supports. By analyzing these logs, we are able to find out how people work with the system under natural conditions; in their regular environments, with a complete system and without the pressure of feeling under scrutiny.

Log Analysis allows us to watch page usage and clicking behavior, we are able to know what content pieces are most recurrent, review user's paths to the pages, some usage patterns. This can permit us to make adjustments to our organization and navigation systems, thus improving the Information Architecture.

Another valuable tool is the analysis of the search logs; this allows us to get statistical measures of the vocabulary that people are using on our search engine. This can allow us to recognize some useful synonyms for relevant terms and help us tweak our labeling systems. It also allows us to discover pieces of content that are relevant to our users but not present in our Websites, improving Ubiquity.