

# Information, Architecture, and Usability

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What is the relationship between information architecture design and usability engineering? This is a loaded question, and I waded into dangerous waters by addressing it, but the answer has significant implications for a variety of audiences. Consider the following questions:

- As a buyer of consulting services for your corporate Web site or intranet, should you retain an IA firm, a UE firm, or both?
- As an employer of information architects, should you recruit people with an education in library and information science or human-computer interaction?

I contend that the challenge involved in designing usable organization and navigation systems for large online information environments is so important and so complex, that it requires information architecture design specialists with backgrounds in both IA and UE.

## **Who Should Design Your House?**

Imagine you've won the lottery and can finally afford to build your dream house. Who do you want to design it? A usability engineer? Probably not. Chances are, you'd like an architect who specializes in the design of architectures for physical buildings. This architect will have a degree in architecture, knowledge of the physical properties of construction materials, an understanding of what people like and don't like, and successful experience designing real buildings for real people.

Why should you ask for anything less in the design of your virtual spaces? You don't want a usability engineer who is equally comfortable designing door handles and information systems. And, you don't want someone with a Ph.D. in information science who knows nothing about users.

Ideally, you want a specialist who has an advanced degree in information architecture, knowledge of information retrieval theory and practice, an understanding of users and usability testing methodologies, and a successful track record in the design of information systems.

Unfortunately, there are not many people or firms who fit this ideal. The field of information architecture design is too embryonic. There is so much to learn, and yet there are no educational programs that really fit the bill. In this uncertain new world, where should we turn for the answers which I posed earlier? Who should design information architectures and how should they do it?

## **Building a Metaphor**

I believe that the answers to these questions lie in the ancient field of real-world architecture. From caves to cottages and from mansions to igloos, we have amassed a tremendous knowledge of what does and does not work in design of the buildings in which we live. That doesn't mean all (or even most) architects leverage this wisdom, but the answers are there all the same.

In his brilliant book, **The Timeless Way of Building**, Christopher Alexander presents a blueprint for the design of physical places that are both beautiful and functional, and in so doing, provides a model for the design of usable virtual spaces as well. Alexander explains:

"Everyone knows how beautiful a room is when it has a bay window in it, or a window seat, or a special ledge next to the window, or a small alcove which is entirely glassed. The feeling that rooms with these kinds of places in them are especially beautiful is not merely whimsy. It has a fundamental organic reason behind it.

"When you are in a living room for any length of time, two of the many forces acting on you are the following:

1. You have a tendency to go towards the light. People are phototropic, biologically, so that it is often comfortable to place yourself where the light

is.

2. If you are in the room for any length of time, you probably want to sit down, and make yourself comfortable.

"In a room which has at least one window that is a 'place' -- you can give in to both forces: you can resolve the conflict for yourself.

*"In short, you can be comfortable."*

He goes on to explain a way of building based on "pattern languages." He believes that over time, through careful observation, we can amass a vocabulary of patterns that work. We can learn what it is about a particular garden or courtyard or room that makes it beautiful and functional, and we can apply that knowledge towards the design of new places.

However, he cautions that application of this expert knowledge must be informed by the unique context of the new place. When building a house, you must study the needs and behaviors of the occupants-to-be. And he notes that "prediction is all guesswork; the real events which happen there are always at least slightly different -- it is therefore necessary to keep changing the buildings, according to the real events which actually happen there."

## **From Bricks to Bytes**

In essence, Christopher Alexander describes an approach to architecture that holds user centered design at its very heart. As an architect, he specializes in the design of physical places. He has expert knowledge of the materials of construction. He understands how to build a house that won't leak or fall down in a storm. And, he also studies and tests the ways in which people really use these spaces, and makes changes accordingly.

In the online world, where we build information spaces, we have so much to learn. Our pattern languages are crude, and yet the importance of doing the job well grows with every new Internet user. Can we really afford to employ people who don't specialize in information architecture design? And can we -- who do specialize in information architecture -- afford to ignore the relevant knowledge currently partitioned in disparate

fields of study? I believe the answer is clearly "No."

We must specialize in and draw from such fields as library and information science, human-computer interaction, computer science, technical communication, psychology, anthropology, linguistics, etc., the list goes on.

We can't get too hung up on educational backgrounds or job titles. There is no one educational field or program that specializes in producing world class information architects, so we must all do our best to learn from each other. There are many people with job titles like "usability engineer" or "interface designer" who actually do specialize in information architecture who are actively seeking the knowledge and experience they need to do their jobs well.

It is an exciting time, for we are not just porting old skills to a new environment, but are in fact witnesses to and participants in the birthing of the new field of information architecture.

### **What Do You Think?**

Please let me know your reactions ([morville@argus-inc.com](mailto:morville@argus-inc.com)) or better yet, share them with the **CHI-Web** community, where people from a variety of disciplines have already engaged in a **fascinating discussion** regarding the relationship of IA and UE. See the **archival version** of the CHI-Web discussion incited by this article.