

Experience Isn't Only Screen Deep

In the last few years we've heard a lot of buzz about designing systems that have sexy, immersive, or friendly interfaces. Many Web designers talk about the user experience with the system. In fact, in the e-commerce space, designers worry a lot about making sure that a user's experience is good by providing a powerful multimedia environment with friendly navigation tools. Tools and techniques are now available to use touch, sound, graphics, and video effectively to appeal to the human senses.

I'm sure that even before a user reads a single word at *newssite.com*, *buyopia.com*, or *boringacademia.edu*, a distinct feeling is created just in the way these fictional sites use different colors, motion, graphics, and sound. This is hardly surprising. We all know that when we meet a person, his or her physique, clothing styles, make-up, number and places of rings, and style of glasses create a distinct impression on us.

Of course, we know that our first impressions aren't necessarily right or wrong, but they're definitely important. People who we found repulsive in our first meeting might impress us, but there are others who we never want to meet again although they were extremely attractive to us when we first met them. One thing is clear, however—the lasting impression depends more on what a person really is than how she looks.

The Elvis experience

The rock-n-roll singer Elvis is a good example of the importance of packaging quality content. He was a big influence on many people. They still remember him and are crazy about him. In fact, there are many Elvis-look-alike competitions and many people do everything to behave like him. Suppose I do a simple experiment. I get the best possible mask of Elvis that's impossible to detect. I put it on and go to a music performance. Can I perform like Elvis? Can I behave like him? Can I answer questions like he did? Of course not. Obviously, just donning the best possible mask

doesn't make anyone Elvis. What was most important about Elvis wasn't his looks, but his talents. The "Elvis experience" stemmed from his actions that were the result of the content in his head, the content creation engine that he had, and the presentation mechanism that was part of him. The looks and the stage actions were just the outer interface. It's easy to copy the outer interface; it's impossible to come close to what's going on beneath this outer layer.

The magic behind GUIs

So how can we design systems that create a lasting experience?

In computing systems, it's possible to create any kind of GUI, but the performance of the system really comes from the content, data organization, and presentation mechanisms employed. Most of the magic is going on behind the GUI, which is just the face and is only skin deep. To design systems that provide a compelling experience to users, a designer should have quality content, carefully plan data organization and access mechanisms, and develop powerful presentation approaches.

Content is ultimately what's delivered to users and hence its quality is the most important factor. Quality includes its credibility, depth, and timeliness. In some applications, high-quality static content is worthless. We multimedia researchers can't create content, but we can definitely help in finding ways to identify and maintain its quality.

The next two factors for a compelling experience are the domain of multimedia research. Data organization and access determine whether a user receives the experience effortlessly. The process of accessing the experience should be pleasant rather than tedious. There has been a lot of talk about finding ways to easily access and retrieve multimedia content, but the problem is at best in its early infancy. Why? Are we looking

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at the right problem or are we after an elusive goal? It appears to me that much of our efforts are focused on general approaches for one type of medium. Maybe we should consider looking at multimedia systems in the context of specific applications. Once we learn how to solve problems in a well-defined domain, we may then want to generalize our approaches to solve more difficult problems. For more on this, you can visit <http://users.ece.gatech.edu/~jain/thoughts/ICDEpaper4.pdf> and see my current thinking about this issue.

The presentation of multimedia content is another major area where multimedia researchers can help. Authoring tools have received some attention from researchers. However, the current authoring tools have two problems. First, they're quite difficult to use for normal users. Even video editing requires significant learning. We need to bring the usability down to the same level of text-processing tools. Second, in many applica-

tions, the system must author in real time based on the user's choice or preferences. This is a rich area, but I think researchers haven't spent much effort on this. For a good example of a system that has some interesting presentation characteristics, visit the Web site for Muvee Technolgies, a young start-up company. You can download their automatic video application at <http://www.muvee.com>.

Putting it all together

Once we have quality content, powerful data organization and access mechanisms, and efficient presentation techniques, we should provide an attractive interface to go with it. Designers should consider audio and tactile approaches in the interface design. Audio has been playing some role already and tactile approaches have already appeared in video games. We should also bring these in the interface to strengthen the experience. That way, we can create great experience systems by good multimedia system design, not just a screen-deep interface. **MM**

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