

Theo Mandel: GUI Guru



The software industry has slowly evolved from the bare-bones world of "feature and function" to the user-friendly era of the '80s and '90s to today's environment of personalized, dynamic applications and websites. Products must now be designed and developed at "Web speed" to meet business and user needs. And to boot, they must be intuitive, easy-to-learn, and easy-to-use.

Theo Mandel has helped individuals and companies migrate smoothly along this path toward user-centered software design for over 15 years. Armed with a doctorate degree in cognitive psychology and an 11-year career at IBM as a user-interface architect, he founded Interface Design and Development in Austin.

In addition to his interface cogitations, Mandel is also an avid outdoorsman (the Rocky Mountains in Colorado are his favorite getaway) and a nationally ranked tennis player.

TSN editor Jack Burlingame discussed training issues and directions in interface design with Dr. Mandel.

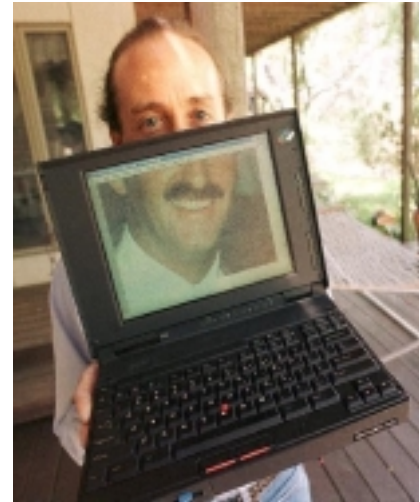


Photo by Sung Park, courtesy of Austin American-Statesman Statesman

TSN: What's the first step in training an effective Web designer?

TM: Step one is getting designers to focus on users, not technology, tools, or functions. Developers are so comfortable with computers and technology that they can't understand how a "regular" person might have a problem with their software. My training focuses on helping developers understand users and their tasks.

TSN: When you left the nest at IBM, what difficulties did you encounter in setting up your own consulting and training firm?

TM: People think it is so wonderful to work from home, but then I ask them how they would like living in their office! Murphy's law of consulting is that your major clients are never in your hometown: too much travel is always a problem for consultants and educators. Handling the peaks and valleys of consulting on your own is also very stress-producing.

TSN: What are the guiding principles for designing an "intuitive" graphical user interface?

TM: There are basic user-centered design principles I call the "Golden Rules." These principles are based on

physical, physiological, perceptual, and psychological aspects of human-computer interaction. People (and developers, too) don't fully realize that to make better software you need to know more about people, not necessarily more about computers or software design.

TSN: Should every software design company have a cognitive psychologist on staff?

TM: That would be great, but I don't think there are enough of us to go around! Much of my work involves mentoring company employees to establish in-house expertise in the area of human factors, interface design, and usability testing. As a consultant, my long-term goal is to make the client's dependence on me go away.

TSN: What is the most common mistake made by Web designers?

TM: Too much stuff! Users are frustrated by too many graphics, too much visual activity, and too much information. It is better to follow the basic KISS philosophy - Keep It Simple, Stupid. It is healthier to approach Web design as if color and graphics actually cost money to publish, as it is with printed materials. Instead, many designers approach

Web design as if they had a big box of crayons at their disposal.

TSN: Is enough attention paid to accessibility issues by software and Web designers?

TM: No. One of the golden rules is, "Let users be in control." We can't even make the keyboard and mouse easy to use for "average" users, never mind users with accessibility problems. If you don't believe me, just try unplugging your mouse for a day and see how easy it is to use your computer to do even the most common tasks.

TSN: The website design process brings together programmers, designers, clients, and managers, all of whom may have countervailing objectives. What's the best way to manage this disparate group?

TM: It is absolutely critical to work as a cohesive team. First, strong personalities and egos must be put aside to focus as a team. Second, understand and rely on the skills and expertise of each team member. Third, bring users in as part of the design team - that way, users have some "skin" in the game. Finally, create an iterative, dynamic design and development process and stick to it.

TSN: What type of training have you found to be most effective?

TM: I've done one-on-one training, team workshops, seminars, retreats, and mentoring, in addition to traditional classroom education. The most important thing is to be flexible for each client's needs. Overall, I try to focus on interface design and usability skills and issues, not tools and technologies.

TSN: In terms of their ease of use, what are the best mass-market software programs?

TM: Many people point to the Microsoft Office suite of products as the interface model they should be designing toward. However, just because a product has market share does not mean it is as usable as it could be. Quicken is a good example of easy-to-use software. It follows a real-world, practical metaphor that people can understand. Quicken takes basic paper-and-pencil financial tasks and makes them easier to do on a computer by automating repetitive transactions.

TSN: In your experience as a trainer and educator, what programs have been the most difficult for people to learn?

TM: People are incredibly adaptable, yet at the same time, they are incredibly resistant to change. You have to be careful when you ask users what they want. You get what I call WYKIWYL - What You Know Is What You Like. There is usually a "paradigm shift" you have to help users overcome when migrating from older character-based or mainframe programs to newer windowed interface styles.

TSN: What's your advice for older people who've never owned a computer but are itching to get on the Net?

TM: Have patience, lots of patience! Also, don't assume that you are dumb if you can't figure something out. If something is confusing, it's usually the designer's fault, not the user's.

TSN: What's the most interesting things you've discovered during hours and hours of observing people while they're using computers?

TM: One, people usually overrate their own computing skills. Two, there is no "average" user. Three, there is no such thing as a "fool proof" interface. And four, every software developer should be forced to watch "real people" use the products he or she develops.

TSN: In your opinion, what's the best use of modern technology?

TM: To develop things that make our lives simpler and better, not to add more functionality or complexity. For example, I recently began using a mobile phone. I love that I can always pick up a phone or get calls wherever I am. However, I am frustrated that I have to manually enter all the phone numbers I want to store - I can't import my contacts and phone numbers from my address book on my computer. Many new gadgets make part of our lives easier and other parts more difficult.

TSN: What's your favorite electronic gadget?

TM: As I experienced with my new mobile phone, most gadgets are great in some areas, but don't quite do it all. I have a REX PC-card sized organizer and a PalmPilot, but I don't use them as much as I thought I would. After the initial excitement wears off, these electronic gadgets must provide real benefits for users to keep using them.

TSN: In what areas do tennis and computer/human interaction intersect?

TM: It's true - I admit it! I would rather play or teach tennis than do software design. Although tennis is a social and physical game, logic and patterns are involved, as with software design.

TSN: If you could play a game of tennis with any high-profile high-tech exec, who would you choose and why?

TM: I think I'd like to play a doubles match with Bill Gates, Nicholas Negroponte, and Ted Nelson. Of course, I'd want Bill Gates on the opposite side of the net.

TSN: How do you deal with the problem of information overload?

TM: Turn off the *&\$* computer! It is too easy to get sucked into the information vortex on the Web. Every once in a while, just turn off the computer and go outside and do something. Get a life!



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