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# Interview with Norm Cox

*Norm Cox is an independent designer and consultant involved in the visual design of interfaces for numerous leading-edge clients. A graduate of Louisiana State University in architecture, he was responsible for the design of the interface graphics on the renowned Xerox Star Professional Workstation. He is named on many design patents, and was the recipient of the 1992 IBM Thomas J. Watson Jr. Award for Design Excellence.*

*What are the problems facing designers today?*

One of the biggest problems is that with anything that has to do with the visual and interactive, like visual or color choices, everyone will have an opinion about how something looks—it either piques their interest, or they don't like it. The hardest part from the designer's standpoint is to make your clients understand that design is not an arbitrary decision, it is not an aesthetic judgment, it is not subjective; it is very much objective, purposeful and reasoned discipline.

The design communicator is really in a quandary, having to educate his/her clients that design can be value-added to a product line. Design is something that is functional and is added to the product line.

*Is there a definition of a designer?*

You can define a designer as a stylist, a babysitter, a teacher, or a mentor, with all sorts of roles, depending upon the people they are dealing with. The designer has to be not only knowledgeable about the business, be a teacher, and be very tactful. There are many hats we wear, and sometimes it has nothing to do with design. You deal with executives saying that there is no way to quantify the results of design with product sales. You know that it is an important part for usability, for product acceptance, for the market perception of how the products works. Because it is not measurable, it is a hard concept to sell.

*Let's go back to the Xerox work that you did when you first started at PARC. How did it all begin in terms of design influence?*

It has to do with having a number of people who recognized the value in having designers be a part of the development from the beginning. The first name that comes to mind is Charles Irby. He managed the group that was developing STAR under David Liddle. Charles has a design background, even though he was a computer scientist. He was very appreciative of good design. At the time, we didn't know how big

to make windows or how to begin to make icons. There was no precedent—we were setting the precedent. We did a lot of testing of user preferences and a lot of human factor type testing. We found out that good design did make a difference, and it helped people perceive the product and how usable it was. The system met with a lot of good press, but unfortunately it didn't sell well; but, it set itself as the benchmark of graphic interface for everyone to follow.

*Were you the only designer in the group, or were there others involved?*

It was very much a collaborative effort. I came into it from a purely design standpoint—we didn't call it interactive design. The terms "user interface" and "user friendly" were the buzz words. Other people had other standpoints.

*Did you feel that having a designer as an equal part of the team was something new in product development?*

Yes, very much so. Designers were traditionally pigeon-holed as industrial designers, graphic designers, or in the print media. Most technology development was being done by computer scientists with no visual background. Now all of sudden the information being presented was extremely visual.

This was not traditional graphic design. You cannot just put any graphic designer onto a project and assume that will help the product. It is not just cosmetics. We as designers are looking for solutions, not just to make something look nice. We are looking for product acceptance and product usability, to see if it is ordered or structured correctly. If we can do something visually, it can help this happen.

*Do you feel that a designer's role is to help plan the functionality and usability of a product?*

Yes I do, very much. Designers do many things and contribute in many ways. We play an important role as interpreters. Visuals can often be misunderstood, opening things up to a variety of interpretations—it is very important to get it right.

What we are trying to do as designers right now is to get involved in the early stages of the product's development cycle and design it with error controls in mind.

*What is your role as a consultant-designer? You have opportunities to talk with different people at different levels of the companies with which you work. Are you a designer, an educator, a innovator? What?*

All of the above. Like I said, we wear many hats. We go around to many facilities and talk about the role of designers and why they are needed in the product development cycle. Often it is to the ex-

ecutive level to get them attuned to this discipline. Other times it to the people doing the coding. We are also at the real design level, influencing the way a product looks and the way it is laid out. I do both specification and actual design.

*What kind of resistance are you getting from the executives?*

For the most part we get very good support from the executive levels. Where we get more resistance is from the lower echelon, from the worker-bees who are more schedule-minded. It is too much work, there is a code freeze in x-number of weeks, it is too difficult to do now.

*Why can't the upper level filter this message down to the lower levels? Is it the middle managers having trouble here?*

That is why we have annual design reviews at IBM, where we present the design directions in which the company should be going and how they should be competitive in the marketplace. It is almost always visually oriented. The intent is to get the upper levels to understand the issues and drive the issues downward.

Unfortunately it is still schedule-driven for the most part. It's a juggling act to have the best visual design. If it takes you three years to get the product out you might miss your window of opportunity.

This is an interesting dilemma. If the companies hired designers in the beginning of the development effort, they would not have to back-peddle to establish the design excellence after a major part of the development had already happened. That would make the project better and less costly to produce. The clear choice is to have the designers from the beginning. Why are they not? With most big companies, it is like jumping on a moving train. They are in the middle of the process and it is difficult to put designers into the product development cycle. Very few people are like Charles Irby and make them an integral part from the beginning. Places where that happens are usually in the smaller companies who call us in the beginning. They want human factors specialists and designers from the start. When you have a large company the size of IBM with so many things going on in so many places it is difficult to get in on the ground floor of many products and continue to work with them on an extended basis. What typically happens is that you become a person who goes in and critiques what is being done, reviews the projects, and tells them what should be done. Unfortunately you wind up telling programmers how to fix things. They don't know the reasoning behind it nor do they have the talent to do it really well. It is particularly frustrating because you know what is wrong with it but you can't fix it in a one-day review. Unless designers get in on the

ground floor, the chances of you having a significant influence are pretty slim. The further it is along in the project cycle the less flexibility you have to make changes and to improve it, and the less people are willing to change because they have a lot invested by that point.

*So how do we change the process to include designers in the product development from the beginning?*

It has to become an awareness that you have to have industrial designers involved and that you have to have designers involved in interaction design. They think that team members need to be marketing people, programmers, and human factors specialists testing it after it is all done. My feeling is that it is all backwards. You really need human factors specialists in the early stages to define functionality and usability. Human factors specialists have also gotten a bad rap as people who test the design once the product is already complete. They can make more of a contribution from the early stages and help define what is functional and possible.

*What about the confusion that human factors is just another term for design? I am sure you have run into that as well.*

Yes I have. Human factors specialists by themselves cannot design a product. Programmers can't do it by themselves and designers cannot do it by themselves either. It is very much a collaborative effort. One of the problems is that interface design is a very new discipline and not very well defined and practiced. You cannot really go to school to learn interaction design. Most design schools are still teaching design in a traditional manner of industrial design and graphic design.

*Closing comments*

The fortunate part of this process is once you get someone on your side, you have them forever. Unfortunately programmers think that what designers do is to put some cosmetics on the product. You have to convince them that the contribution of designers leads to a cohesive and coherent product and product line. From the user point of view they feel it "looks nice, it feels good." Unfortunately, many products look and feel like they were designed by nine different people, and usually they were. Good design leads to a unified look and feel, one that helps the process along and the product to sell.

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