PROVOCATION

Should Human Factors Prevent or Impede Access?

BY P. A. HANCOCK

"Just as the strength of the Internet is chaos, so the strength of our liberty depends upon the chaos and cacophony of the unfettered speech the First Amendment protects."

– *Stuart Dalzell, U.S. Federal Judge*

Probably very few people who read this article do not have access to and have not used the World Wide Web. Beneath all the hyperbole and promotion exists a real, evolving system that already has had a substantial impact on the world. The promises of the Web are many, and it is an almost unavoidable conclusion that it will be a major societal force in the coming century and perhaps millennium.

One obvious vision is that an individual will have on-line, real-time access to the sum total of human knowledge, both historical information and contemporary developments via a small, lightweight, wearable device as common as the present-day watch. This will be a supreme educational tool. It will allow our children a dynamic and exciting window on knowledge for learning and exploration.

It is in this latter instantiation that I am concerned with a provocative issue, which is essentially one of access. At some level, we do not want everyone to be able to access all human knowledge. There are many things that we still expect to keep private, such as a bank balance. At present, information about an individual's bank balance is not easily available via the Web (although there appears to be no limit to what hackers can access). However, many sites on the

Web contain information that is inappropriate for children. Already the First Amendment sabers are rattling. But this is not simply an issue for the United States; many Web sites exist in countries with radically different legal restrictions. I can hear others in our society dismiss this with the comment that it is a political or legal issue, and certainly it is. However, in the past, I have claimed that our discipline is politically implicated. Indeed, who has access to what information may very well prove a dividing line of the next millennium and will certainly covary with ownership and control of resources.

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Our discipline is about interaction between humans and machines and largely concerned with the design of ways to facilitate human-machine interaction. When a design is created that, for example, provides an advantage for the young over the old, or the literate over the illiterate, inadvertent or not, it becomes a societal influence beyond the immediate interaction event. We have now spent some decades in advocating "user-friendly" systems. Often ease or facilitation of interaction has related to the degree of effort an individual has to engage in, so that user-friendly often now means "mindless" interaction. My point of provocation is this: Should human factors/ergonom-

ics professionals be using their knowledge of how human-computer interaction fails to provide some regulation of access to Web information?

As this is such a provocative issue, I will bring one example to the fore on which I hope that most of us can agree. Recently I had occasion to decide whether to hook my home computer up to the Web. I have two daughters, both very interested in computers and computer use. My youngest daughter, who is nine years old, is especially enthusiastic, and her search for and creation of interesting pictures is a feature of her activity. I found myself asking whether I wanted her to have access to the whole spectrum of the Web. I could not easily answer. There were a number of sites to which I would have liked to restrict access. I have, of course, surveyed some software packages that seek to eliminate access to files using particular key words, and they might help. But I could not help thinking of the work we have done to provide containers for prescription drugs that can be opened by physically challenged older individuals but not by young children. Should we be engaged in similar research in restricting information access via human factors?

I cannot say that I can provide any simple answer to this issue. However, the thoughts of others would be greatly welcome.

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