

Not as other media

Earlier this year I attended a forum convened in London to discuss “The Future of Design on the Web”. The varied audience, packed into the Soho office of Realtime Studio, brought together people with a technical background, journalists and writers, print designers, representatives from software companies, advertising professionals and designers working with the Internet. Discussion, lubricated with coffee (and later beer), was heated, sometimes polemical, often eye-opening, and occasionally ground-breaking. I had not come across so many well-considered and deeply held views since my days of student radicalism. Here was a subject about which people were passionate, when so many other design debates excite little interest.

During the discussion it was suggested that the group review some websites and give our reactions to their design. Here things quietened down: opinions were expressed with much less certainty. How were we to criticise and appraise the design of these sites? Could we find words for our instinctive reactions? How could people who spent their time solving design problems reverse this process to analyse others’ work?

There is a lot at stake in developing an approach and a language with which to criticise design on the Internet. Design is a big issue in the world of the Web, and is treated with an interest rarely accorded to print design. Clients commissioning design for Internet projects view it as *strategically* important where in other media it is a known (perhaps less valued) commodity. These should be seen as positive developments, but they also reflect an immaturity: design is seen to be a way of grabbing attention in a medium that still has few products compelling enough to make users log on.

Users themselves will comment on the design of websites with a consideration they would not give to the design of a magazine or newspaper. Often they have come to the Internet not just as users but also as publishers, wanting to share information, and in this role they have – consciously or not – confronted design questions. The lack of an established professional design domain has encouraged them to take ownership of this area. Design also provokes interest: it has an aura of independence and creativity seen to be lacking in other areas of work today.

Developing a language to criticise and understand design in this medium is the basis for moving it forward. This will help designers win clients to good design, and help clients evaluate and brief designers; it will allow a new

self-awareness to emerge within the discipline (incorporating the insights of non-professional designers) and make design a more powerful force in shaping the future of the Internet. Finally, it will lay the basis for educating a new generation of design students.

Critical commentary on website design falls into a number of traps. Some people see the Web in terms of other media with which they are familiar, especially print, but also television and CD-ROM. Yet we are defining a new medium (even an *iber*-medium) and new media never turn out like their predecessors. Nobody would criticise the BBC television programme *Top Gear* for not looking like its magazine sibling, though in some ways they do have a common identity. Those who have engaged with the technological excitement of the Web often criticise designs for their lack of “cool features”, be they Java tickers or elaborate animations, but we do not need what one manager (from an Internet service provider) described as “wazzy” design that “does not help the user perform a function”.

A common complaint – from people who have understood the basic parameters of the medium – is that texts are too long, or that “big” pages are bad. Yet, unlike print or television, what users will experience depends on their “environment”. While it is arguable that extended reading on screen is more difficult than on paper, some users *want* to be able to search an archive for specific references in longer texts. While bandwidth-hogging pages are often unnecessary, a (corporate) user with a fast connection will barely notice their size. Design critics often miss the big picture, and the aspects of the design that might benefit those who will *maintain* the site are not considered. The human element of design is easily forgotten, with users reduced to Internet cannon fodder.

The most important rule in judging Web design is that there are no rules. Design is about problem-solving and communication, and this requires a structured approach that can also be used to judge the outcome. The overview that follows, based on

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Lauralee Alben’s main criteria for judging the ACM *interactions* design awards, indicates how to go about this. The big question, as Alben argues, is: “Does the design provide people with a successful and satisfying experience?”

Understanding the user

Online products are used at many different levels by different users, so there need to be clear routes at all these levels. Users of a “magazine” website, for example, may search the site for specific information, to see what is new on the site since their last visit or to find the editor’s contact details in order to submit proposals. Broader issues to consider are: where and when the users will access the product; shared use (with family or colleagues) and privacy; users’ level of familiarity with computing, the Internet and the type of product being developed; and any physical limitations they may have (for instance, poor eyesight). The people who maintain and develop the product are users as well: the design must be technically manageable and respond to the way the client’s organisation is run. The design must be explained to users and supported appropriately.

Effective design process

Was the design process well thought out? Effective solutions tend to arise from a grounded, rational and thorough-going approach to problems (with some inspiration thrown in) and the involvement, even in a limited way, of a representative group of users. Well-scheduled projects should be properly repeated and tested before being unleashed on users: good interpersonal communications lay a basis for the design to mature with the product.

Is the product needed or desired?

The Internet has spawned more technologies and products looking for a solution than any other medium. Designers need to ask themselves if this medium (the Internet) is the right one for the job, and if the technologies proposed make sense. Does the product make a significant social, economic or environmental contribution?

Learning curve

Another important criterion is whether the product is easy to learn and use. Does it communicate a sense of its purpose, how to begin and how to proceed? Is this learning easy to retain over time? Donald Norman of Hewlett Packard believes that an interface for a product should allow users to see its current state, form a

conceptual model of it, understand the mapping between the interface and the functions and see feedback from the result of their actions.

For most websites this means users being able to see where they are in the site; understand what kind of site they are at, how relevant to them it is, and what their options are (where they can click); to know what the different options will allow them to do; and see when they have succeeded (or failed) to pursue an option.

During its recent growth the Internet has fostered a broader spectrum of applications than any of the media it overlaps (publishing, broadcast, software, communications). This variety of possible tasks and manipulations by the user makes it all the more difficult to develop interfaces that are consistent, and thus easily learned. Users frequently arrive in the middle of a website having

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followed a link from elsewhere, and need orientation. Users' behaviour in a site also varies between individuals, and within a visit. Some search wherever possible, while others will burrow down through the hierarchy of a website, and either group may switch pattern if frustrated or unsuccessful.

Appropriate solutions

Does the product solve the problem at the right level? The technology-driven nature of the medium often leads (sometimes with client pressure) to overdoing the solution to a problem. If information or functions are critical to users with varying levels of technology then the design solutions should be "usable enough" at the most basic level, or available at appropriate levels in parallel – for instance giving the choice of graphical or text-only pages.

Sometimes a solution is simply over-cooked, the classic example being the (Java-enabled) ticker running across the page, where a simple list of stories would be just as appropriate. Often searching services present too many unclear possibilities at once, which confuse and hinder most users, apart from the fact that these "functionalities" often promise more than they can deliver. The best solutions are produced when elements are added *only* when they have been consciously justified.

More and more we will find the Internet integrated into our everyday lives. Designers need to "break out of the Web" – to meet users at the point where they need (and can better understand) the services offered. Designers sometimes forget

that the Web is a global medium, and make inappropriate choices of icons, images and colours (to represent functions and moods) that may mean different things in different cultures. Universalism is an important goal – designers must try to avoid assuming that different cultures are on different orbits and will never overlap.

Aesthetics vs technology

Designers should ask themselves whether using the product is an aesthetically pleasing and sensually satisfying experience. Does it exhibit continuity and excellence across graphic, interaction and information design?

This is all the more important because the Web allows for great diversity in forms and formats. Consistency of design and aesthetics are of prime importance to the experience of the site as a coherent product. Clear organisation of information is critical in a medium that suits the delivery of time-sensitive, malleable and searchable data. It is also important in differentiating types of product, distinguishing "brands" or tying together diverse channels of information from one source. This should not be confused with the simple aesthetics of the printed image. High-quality images and type are desirable, but the standards we know in print are unattainable online. Instead, the qualities of the medium itself will make images and type live in new and different ways.

The technological restrictions of the user's computing environment must also be appreciated. Variables include: type and speed of connection to the Internet; operating system and installed fonts; browser version and plug-ins; monitor size and colour depth; and access to speakers or a printer. It is possible to deal with these constraints in many ways, but a designer who creates a "universal" solution for a product aimed at a homogenous group of users may be doing them a disservice.

Adapting to change

The necessity for a site to be mutable derives from an understanding that there are users with different levels of needs that can be satisfied in a number of ways. Users who find a useful product should have easy ways of returning to it, of which being able to bookmark one page as the entry point to a site is the most basic. Other solutions may involve the user signing up to receive email when the site changes, or subscribing to a "push channel" to receive updates continuously. Mutability extends to the user being able to customise their view of a site or save preferences for searching. There may also be a need for the user to have more "presence" in the site, beyond the two-dimensional pointer and I-beam that is their basic representative. These concepts will be increasingly important as products become more diverse and powerful.

The rate of change of the technologies behind the Internet and the expectations of users put great pressure on designers, who (in the words of Andrew Zolli, senior technologist at Siegel & Gale)

must consciously "design forward", anticipating how developments on the horizon may need to be incorporated into their current work.

Working in context

The design of a product must move beyond understanding "use" merely as functionality, and support the entire context of use. Some activities, such as adding extra software to use the site, registering or giving payment details, setting up preferences, requesting help or giving feedback, will be one-off. Design here is particularly important: though users will do these things infrequently, these activities may be the most complex elements associated with the site. It is important to encourage feedback from users, who are often the first to spot problems in a site. Prompt responses to such feedback create a sense of identification with a product.

Questions of "ownership" and problems of competition also need to be considered. Different people may use the same computer and want to access a site that they have both customised, or for which they have separate accounts. This is a typical family situation but is not uncommon at work, and will become more common as users "hot-desk" around network computers.

Quality of experience

Some of the criteria listed ("Understanding the user" and "Is the product needed or desired?") cannot be discerned from the product itself, although designers evaluating their own work will be privy to this information. To share this information with others may be one of the most positive ways for them to help develop a critical analysis of design on the Web.

Perhaps this level of investigation will be applied to the judging criteria for industry awards.

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Among these overlapping criteria we should not forget the overall judgment of the "quality of experience" associated with using a product. At one level, this represents the instinctive reaction users have to using a product. I hope these judgments, combined with the criteria I have outlined, can be rationalised and debated. **e**

This article draws on Lauralee Alben's article "Defining the criteria for effective interaction design", first published in the ACM journal interactions May+June 1996, volume 1113. Links to resources mentioned in this article, and further detail, can be found at: <http://www.spy.co.uk/writing/eye-26.97.html>