The Elements Of Hypertext Design

This version of *The Elements of Hypertext Design* is a beta preprint, in truncated form. The complete version of *The Elements Of Hypertext Design* will be published by SAMS Publishing in October of 1995.

Principles

Communication, Not Self-Expression

Some people argue that hypermedia is (politically) good because, potentially at least, hypermedia frees the author from the tyranny of linear texts, from the demands of the book as a (or othe only) socially-acceptable container, and from the incessant demands of increasingly dependent readers: that, in other words, hypermedia aids in self-expression.

This may be true. But I would argue that good hypermedia design begins with attention to the reader, her needs, her in-built navigational models and her information needs, and, further, that good hypermedia uses an understanding of these issues, combined with a subject matter expert's knowledge of an area, to produce communication: the relatively error-free, high-throughput exchange of precisely (and ideally only) what each reader needs.

Directive, Not Interactive

The essential feature of interaction is a mutually-modifying dialogue between two or more intelligences. Socratic dialogue is in some senses the Western ideal of interaction.

By this definition, hypermedia is not interactive; it cannot respond in thoughtful, creative ways to particular stimuli or events emanating from its readers. Hypermedia is not machine intelligence. All that a hypertext will ever be, it is the moment that the hypertext designer decides the structuring, designing phase of the process is complete, and starts making nodes based on some more-or-less stable model of the hypertextual structure she is assembling.

Although a designer may not walk every path in her hypertext, and may be unaware of some of the particularly serendipitous (or dangerous) paths through her network of nodes, the plain fact is that most hypermedia environments are “canned” -- a reader cannot, in most cases, traverse links that don’t exist, or go to nodes that she needs but which have not yet been constructed. Readers have a difficult time (a) reading against the grain of the hypertext and (b) making the hypertext respond to their needs at any given moment in a unique way.

It is true that hypertexts are not passive like linear print texts. They are active. More precisely, they respond to events, but they do not interact -- there is no give-and-take between two minds.

As such, it is perhaps more appropriate to think of hypertexts as directive: as framing, selecting and choosing nodes and the links between them based on a clearly-thought-out model of (a) what a node-oriented mass of information might be useful for and (b) what readers might want to make of that mass. Selection is a process of interpretation, exclusion and ordering: every selection by an author is a determination, a valuation that some node or link is or is not valuable to some reader.

This raises the question of who directs, and to what ends. See Communication, Not Self-Expression and Reader, Not Writer.

Reader, Not Writer

Writing reader-centered hypertexts requires more than empathy for an idealized but unknown reader whom one presumes will be interested in what one has to say.

Writing reader-centered hypertexts requires more than a willingness to suppress your need to appear smart, funny and sexy in the interest of presenting your subject matter clearly.

To write reader-centered hypertexts, you must understand your reader very clearly and crisply, in at least three dimensions:

- you must understand what your reader wants from the subject matter area you are treating. What does she want to do? Why does she want to do it? How does she feel about this need to begin with?

- you must understand you reader's preferred navigational models. Many readers over 35 will have great difficulty with any hypermedial mechanisms other than simple portals that reproduce the apparatus of the book in e-space: tables of contents, indices, long, fairly flat nodes with traditional header schemes, and so forth.

- you must understand how to deliver what the reader wants, through the preferred (least-resistance) navigational mechanisms, in the least amount of time possible.

But what about browsing? Isn't the essence of hypermedia that one can wander, in an undirected fashion, over a broad expanse of information, looking for something she won't recognize until she finds it? The answer is of course that any reader may conduct any string (that is, self-directed) reading of any text she likes. Good hypertext designers, however, have design motivations more compelling and directed than simply creating a data pasture for intelligent cows.

Content, Not Mechanism

Writers, particularly professional and commercial writers, have a collective sense that they are not sufficiently valued by the cultures in which they write. Give a devalued citizen an elaborate machine to do their work, and they create -- no surprise here -- elaborate work, work that says more about the machine that created it than about the putative subject of the work. Why this is so is easy to understand; if I can make a mystery of my work, if I can cover its simplicity in rituals and machinery, I can protect myself and my discipline from further devaluation, and perhaps even succeed in getting my work revalued as “technical difficult” or “fine art.”

Good hypertext designers focus on content, not on mechanism. Visually, mechanism should be as little seen as possible. Putting in links, or definitions or hot-spotted graphics because you can put them in buys no one -- including you, in your maintenance cycles -- anything.

Let your image of the perfect node be a single picture that explains the central mystery of the universe without a single word of text, a single link or a single hotspot.

Sound And Vision, Not Text

Sound and vision, as David Bowie put it, are where it's at.

Generally, what hypermedia environments do succeed in doing is creating the possibility for a visual vocabulary to come along side of, and perhaps replace, a textual vocabulary. In conventional texts, pictures, tables and the like are treated generically as "exihibits." They serve to illustrate some part of the text; they are adjuncts or subjuncts to written text.

In hypertext design, any node that consists of a single multimedia object (a picture, a video clip, a sound chunk) is presumed to be a more efficient and easily-assimilable chunk of information than a chunk of text treating the same content.

Clearly -- look at this hypertext for instance -- that is not always or even usually possible to do. Nevertheless, every time you create a node, ask yourself how you might represent the information visually before you represent it textually. At minimum, your navigational aids should be visual rather than textual.

Information, Not Ink

Favoring sound and vision does not mean loading 10 gigabytes of 256-color cartoons and clipart into a hypertext on the International Monetary fund. Clipart and 10-color navigational icons are not the bearers of information; they are what Edward Tufte called chartjunk. Chartjunk consumes ink, occupies space on the visual canvas you are using, but conveys no useful information -- or worse, conveys dis- or mis-information.

Raised on slideware designs in PowerPoint and Persuasion, many of us are convinced that people's opinions of us and our intelligent go up with every new color, font and clipart image we insert into our bland, dreary narratives. This ins't the case, period.

Good hypertext design means as few fonts, colors and multimedia objects as necessary to convey all the information in exactly the right way.

Death to clipart. Death to PowerPoint.

Behavior, Not Belief

Clearly, there are rhetorical and propaganda uses for hypermedia. The Internet, come to think of it, is really not much more than a giant rhetorical soup -- my guess is that, for every kbyte of data screaming through the Internet right now, there's a couple of hundred megabytes of opinion, rant and panegyric.

My assumption is that most hypermedia authors are building hypertexts with behavioral objectives, not rhetorical ones, and that real advances in hypermedia design and develoment will come from behaviorally-oriented designers and authors, not from

Writing hypertexts that change people's behavior -- or simply enable them to behave effectively in a way they are already predisposed to -- is a more difficult proposition than using bells, whistles, and Cindy Crawford's midriff to make your (always political) point about something or other.

ReWriting, Not Reading

Reading linear, physical texts is a passive activity in itself. Yet reading produces writing: we scribble notes as we read, we take a juicy quote from someone's book, attach it as the epigram to an essay, or use it in an introductory paragraph to frame a discussion. Life, it turns out, is hypertextual -- or intertextual, as the linguists would say.

We need to remember that producing reader-centered hypertexts means creating hypermedia environments in which the reader can quickly become a writer -- hopefully by drawing links between our nodes in new ways or between our nodes and other nodes from other designers, definitely by annotating our nodes for personal use, and at absolute minimum by being able to get our nodes out of our hypertexts and into their documents electronically, with or without links.

A hypertext that is hermetically sealed is no hypertext at all. It's just a clever commercial bauble.