

Internet Publishing: How We Must Think

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Soon after starting up the Online BookStore a year ago, I got a call from an executive at a major computer magazine and book publisher, who lit into me, asking what on earth I thought I was doing. Who wanted to buy ASCII files? And what's the big idea of doing business on the Internet, anyway? "There's one thing worse," he warned me, "than being five years too late. And that's being five years too early." Of course, he then went on to publish a book on CompuServe a few months later, so it's a good thing I didn't fold the OBS tent after that phone call.

What about being fifty years "too early"? In the mid-forties, Vannevar Bush published an article in "The Atlantic Monthly", the subject of which, memex, serves quite well to introduce today's topic of Internet publishing.

"The human mind...operates by association. With one item in its grasp, it snaps instantly to the next that is suggested by the association of thoughts, in accordance with some intricate web of trails carried by the cells of the brain. It has other characteristics of course; trails that are not frequently followed are prone to fade, items are not fully permanent, memory is transitory. ...Consider a future device for individual use, which is a sort of mechanized private file and library. A memex is a device in which an individual stores his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory...

"The applications of science have built man a well-supplied house and are teaching him to live healthily herein. They have enabled him to throw masses of people against one another with cruel weapons. They may yet allow him truly to encompass the great record and to grow in the wisdom of race experience. He may perish in conflict before he learns to wield that record for his true good."

(From "As We May Think" by Vannevar Bush, July 1945 issue of "The Atlantic Monthly")

Here we are, almost fifty years after Vannevar Bush first introduced the idea of memex, and publishers are only now beginning to create "the great record" he referred to, a digitized record which will serve as a vast electronic supplement to our brains, and which will be accessible as immediately as thought itself. An early, and a working prototype of the distribution mechanism, the Internet, is the stuff of this conference, and creation of "the great record" is what online publishing is all about.

Moving from paper to digitized records, then making those records readily accessible to the millions of online users, has become a necessity for publishers. If you want to survive as a publisher, or better, to thrive, it's essential to explore this new area, because, as Gregory Rawlins, a computer science professor at Indiana University, put it not so gently to a group of university press publishers recently, "If you're not part of the steamroller, you're part of the road."

My own journey down that electronic road started about four years ago. My company, Editorial Inc., had been producing books since 1982, and in 1989 we were producing "The Matrix" by John Quarterman for Digital Press, a professional-level computer book of some 700 pages. The author insisted on communicating by email, a medium new to me, so my assistant would print out his email messages, and she would type in my handwritten replies and email back to him. He sent me messages he picked up on the Net, first-person accounts, sometimes hours old, of what a student had witnessed in Tianamen Square that Spring. That was also the Spring when the Valdez crashed on the Alaskan coast, and soon I was getting immediate eye-witness accounts from that disaster as well. This was different; this was immediate, superior in many ways to what appeared in the next day's newspaper. I wanted to know: what is this free and anarchic network of computers that connects people to people, without time lags and without intermediaries?

At that time, there was no Internet handbook for English majors, so we made one, called "The Internet Companion: A Beginner's Guide to Global Networking." Luck was on our side, because Tracy LaQuey wanted to take a break from her duties at the University of Texas and write the book, and did a splendid job, and then-Senator Al Gore thought the project worthwhile enough to write a Forward for it. Of course, we wanted to see the book instantly after delivering film, but printing takes time, Addison-Wesley reminded us. So, to help get the word out, we started the Online BookStore (OBS) last fall, and started to put the ASCII files up, chapter by chapter, at Software Tool & Die in Brookline. The response was overwhelming—many thousands of people grabbed those files—and continue to do so. Surely, I thought, if all these many thousands of people want to read a book online, there must be a business here.

There must be a business here, I've been repeating to myself over and over during these last twelve months. I'm still saying that after a year fully immersed in the culture clash between the computer and the publishing cultures. The past year has been educational in the extreme, raising an extraordinary number of questions. First off, of course: How does the business of publishing translate into online dissemination of information on what's now being called the GII or Global Information Infrastructure? How to find the path through the dizzying array of new technology and figure out what to do next, which horse to back? Granted, all the puzzle pieces are on the table, but how do they fit together? The online chat sessions, the interactive books and journals, the CDs, CD-Is, Expanded Books, multimedia Macs, PCs, or hand-helds. How do these devices and technological advances fit into online? And finally, whom and how do you charge for the resulting publications? By the hour, by the byte, by the book, by site, subscription, or individualized DNA barcode?

In our publishing experiments over the past year, we have tried many different models, and one thing's become clear: publishing is being forever changed by the digitization of recorded culture. What made sense, what worked in paper, doesn't work online, once the text is liberated from the static, linear medium it's printed on—paper. Buying and selling discrete things, books and information as objects, doesn't seem to work online. What publishers are selling online is access to information, a way of thinking about information, and not necessarily the information itself. Going absolutely for the online model doesn't work either: we need stepping stones, hybrids to bridge the gulf between paper and online. One such hybrid we've recently created is the Voyager Expanded Book of The Internet Companion, which includes a CERFnet connection to the Internet (an 800 number).

To test out the per-copy, text-only model of online publishing, we approached the publisher of one of the bestselling authors on the planet, Viking/Penguin, publisher of Stephen King. The Online BookStore did a first serial this Fall from Stephen King's new book, "Nightmares & Dreamscapes", in German and in English, in time for the Frankfurt Book Fair and the Internet Start-Up Booth we organized for the Fair. We formatted the files in many different ways—Voyager Expanded Book, Acrobat, Mosaic, plain old ASCII—and accepted a \$5 per-copy payment by telnet, fax, mail, phone, and even cash from strangers on the streets in Georgia and Norway. But here you are the first ones in on an online publishing secret: the familiar, per-copy, text-only model doesn't seem to be the ticket after all—its real value was to be found in site licenses and in marketing

and pr, and points to some of the things we were not able to try with this publication, such as an interactive chat session with the author. The experiment was a success—we learned something significant.

The sites I'm talking about are network provider services, or even anyone running a network to multiple users who wants to make the files available to the members of their network. In the case of King, EUnet/Germany, and ZiffNet (on CompuServe) for their Paperless Publishing Forum next week (December 13-17) are the sites which will publish the King story online at this point. At Ziff's Paperless Publishing Forum the OBS will announce its Online ShootOut, an open competition for original work created for Adobe Acrobat, Voyager, and Mosaic. Essentially, this contest will pit the "contained" model of publishing against the "distributed" model of publishing, which I'll get into in a minute. We think the results will be quite interesting, and we'll publish the winning submission at the OBS.

The Internet Start-Up Booth at the Frankfurt Book Fair was a collaborative booth, sponsored by publishers, networking companies, and telecommunications companies—a model for the kind of synergistic association that will work for online publishing in general, and an offshoot of the kind of cooperation that built the Internet, itself a collaboration of 16,000+ networks. With our sponsors, ANS, AT&T, Bunyip, EUnet/Germany, The Internet Society, O'Reilly & Associates, Sprint, and associate sponsor Addison-Wesley, we demonstrated two distinct types of online publishing at Frankfurt, what I call the contained and the distributed models of publishing. The contained model is illustrated best by a printed book, complete with its printed self-referencing access tools such as table of contents, glossary, list of illustrations, and index. It becomes distributed if it has a bibliography, pointing to documents outside of itself. In the electronic environment, a contained publication Bernice Chesler's "Bed & Breakfast in the Mid-Atlantic States," which contains links within the electronic Adobe Acrobat document, links which are not possible on paper and which enrich the book by making it interactive and customize-able for the user. For example, one can click on a city on the map of Vermont and pull up text descriptions of a particular B&B. One can click on the table of contents and for a state and pull up a relevant B&B description immediately. The index comes alive. One can sort on things like smoking, pets, and blueberry muffins. But the publication is contained, it has a border around it, it is a thing in itself.

At Frankfurt, the distributed model of publishing was best illustrated by O'Reilly's new Global Network Navigator. Here, O'Reilly is publishing content, but this content is linked to the docuverse (to use Ted Nelson's term for the worldwide web of interlinked documents) of the Internet. This distributed isn't a discrete copy of a single book's files, but rather offers access to the information contained in those files, and, most importantly, a dynamic way of thinking about the content area. These thought links will change and evolve as users and editors access and use the information.

The successful distributed publisher need not physically own or incorporate all the data it points to, but might license access to it. As the Internet becomes more commercialized, this licensing aspect of distributed publishing is increasing greatly in importance. For example, a publisher of an online art history book will have links pointing to servers anywhere in the world containing art files. The publisher is selling not only the content—the art history text—but also a way of thinking about the content—the links from that central content base to relevant sources outside of the book. A successful publisher will do the licensing work ahead of time. This distributed model enables the user to customize the publication for his own needs. For example, he can look at fifty pictures of the Sistine Chapel or he can look at Mayan art—tailoring the "content" to his own interests. Such customization is impossible in the paper medium, or even in the contained medium, where the publisher makes the content decisions, decides what's on or off the disk, in or out of the book. The online publishing medium enables the user to follow his own thought path, his own interest level, within a well defined structure provided by the publisher.

We are trying a new hybrid approach to the distributed publishing model. At present, Mosaic and the World Wide Web are available only to those enjoying a direct (as opposed to dial-up) link to the Internet. There need to be possibilities for dial-up folks sitting behind Macs and PCs. *The Internet Companion*, published this month by the Voyager Company, is being demo'd here today after this talk. This Expanded Book is a true hybrid: it's an Expanded Book, which runs on Hypercard on the Mac, and will also be available for Windows very soon (*The Internet Companion* is Voyager's first Windows title). This Expanded book includes CERFnet connection software to the Internet, so the reader can "punch a hole" right through to the Internet from

anywhere inside the Expanded Book— then retreat back into the relative safety of the Expanded Book again. For example, if you are reading about how to FTP a file from a site in Australia, you leave the Expanded Book, have your modem dial CERFnet's 800 number, do the FTP exercise, and then return to your Expanded Book. The Expanded Book looks like a book onscreen, yet it acts like software—a true hybrid. With the Internet connection, we're adding a kind of fourth dimension of interactivity. The imaginative user and the foresightful publisher will see many ripe opportunities in this hybrid model for enhancing the online interactivity of the Expanded Book, making the distributed publishing model accessible to the dial-up newcomers to the Net.

The work that needs to be done to realize Vannevar Bush's vision of memex is intellectual, imaginative work—the kind of work the people at Voyager have been doing in rendering linear documents interactive and electronic over the past several years. Their work helps show that publishers confident of their editorial and acquisition abilities might best thrive in the online environment not by massive hiring of experts in CD-ROM, new media and internetworking gurus, but by forming synergistic associations for particular projects with complementary companies. Collaboration is the keyword here. Distributed publishing mirrors the engineering model for the Internet itself; so too should the Internet model of collaboration coexisting with competition be adopted by publishers. As so many learned in the DeskTopPublishing era in the mid-eighties, most publishers don't want to be compositors. It is more cost effective to hire entrepreneurial companies or specialists to do the composition, make the CDs, shoot the videos. Publishers need to focus on the hard part—the imaginative, the new and unexplored content issues involved when their reader/users think dynamically online about the books and information they publish— and then respond to those thoughts. It almost doesn't matter what the various enabling technologies are. In creating "the great [interactive] record", publishers need to make that mega-mind-shift into a digitized environment, no longer linear, quantifiable, and easily controllable. Surrender your gills and start to breathe!

Technology is empty without content; there's a place at the center for publishers who are willing to act collaboratively, willing to experiment. Here are some pointers to consider as you adapt to the online publishing environment:

Acquisitions

Content is King. When acquiring titles, keep an eye on what will sell electronically. Think nonlinear. Think ongoing. Think interactive. Contract with electronically savvy authors, and contract by time, or by topic, sponsoring authors' work on a topic, rather than contracting on the traditional book-by-book basis. Consider an author who might be writing about home finance: her online "book" may include interactive chat sessions, regular updated information, and pointers to online information written or collated by others.

Rights and Permissions

To understand the importance of this area, consider the distributed model just discussed, and the relative superiority of licensing, rather than being licensed. The successful online publisher who begins his journey down the electronic highway today will most likely license access to other people's content to supplement or enhance his own, whether that content is online books, databases, bulletin boards, graphic image repositories, or online advice columns. What's "for sale" might be the interactive links, the thought structure the publisher puts around the distributed content area. To make these links worth something, the publisher needs to make them executable—he needs to license access.

Editorial Functions

Link Editors are one major new discipline in the editorial department—these are specialists in the kind of creative, associative thought Vannevar Bush was talking about. How does one think about, link up many online publications and real-time events, so that they are most accessible to users? Link editors think in subject areas rather than in terms of static, single books. Thinking about content—in both its static and kinetic incarnations—requires training in marketing, and in the cognitive/editorial functions of associative thought—as well as of course, plain old editorial know-how. An example of a project a link editor or a group of link editors would be involved in is a medical bookshelf of broadly accessible information—from the

highly technical book on infectious diseases to the everyday, constantly updated handbook on generic drugs, complete with online advice columnists, chat sessions, and publication of new data. The link editor would put in links pointing to sources outside of the seminal body of "published" information—to a database at the CDC perhaps, or a bulletin board on street drugs somewhere in California. The possibilities are limited only by the imagination.

Indexers assume much more importance in the online environment, and a uniform system of indexing books, making sure that index links are in the text itself to facilitate searching will be necessary. Thinking like indexers, seeing the naked content skeleton beneath the book, will yield up the contents much more readily to the user, and indexers and link editors will work closely together to put together content areas or online bookshelves.

Publishers will ignore SGML—recently adopted by the AAP as a standard form of mark-up—at their peril, as it's simultaneously typemarking and content tagging, pointing to the convergence of the editorial and production disciplines. Editorial and typesetting disciplines merge in a system which encompasses both the thought structure and the typographic structure behind a document. SGML can be developed to supply authentication and billing tags, so that ultimately pieces of the document can be assigned price tags. Hello Xanadu!

Marketing

This is the area offering the biggest boon thus far for publishers, and excellent marketing possibilities have certainly been our experience with *_The Internet Companion_* and Stephen King's fiction. Additionally, online publishing offers customization on a level never before possible. Initial entrants in this field will be able to develop a synergy with their user/readers which is impossible in print. Publish a steady stream of useful, timely information your reader subscribes to, and you will know who's doing the reading—and what else he or she wants to read as well. Online enables you to tailor publishing programs to what users want.

Funding

Think about who else might gain from your online publication. Again, *_The Internet Companion_* serves as an example. We are distributing this title in "Shareword" format on the Internet. The ASCII files for the complete text are available by anonymous FTP from Software Tool & Die and EUnet/Germany. Interested sponsors can purchase coupons to be distributed along with the ASCII files for the book—and satisfied user/readers are encouraged to send \$7.50 per "copy" to pay the author and fund future "Shareword" titles. Surely, sponsored publishing has its predecessor in print; we've seen Mary Kay's beauty book; Kodak's photo book; the Legal Seafood cookbook. Online, the model becomes easy to implement because sponsorship fees can be determined on an escalated scale, depending on how many downloads there are.

Success

Be prepared to succeed. The largest cost and the scarcest commodity in this new field is creative thought, figuring out what team to put together for a particular project, and how to customize it to best exploit the potentialities of online. The task is not simply translating what existed in print into an online retrievable document; that's boring. What can you do online that you can't do on paper? How to make something new?

Production

The shift that's necessary in this department has to do with publishing an ongoing data stream, and accommodating production to meet the needs of releasing data regularly. An online sports almanac, for example, will release results as they happen rather than in a once-a-year publication. This involves parallel processing of information: no longer the comfortable sequence from editing through typesetting. Everything is done simultaneously. Part of the book is being written, as another is being formatted, as another is being released online. The publishing tasks remain essentially the same; it's the timing and the intercoordination that make them new and different. And it's the timing, or rather, the timeliness, that will define the online winners. Last winter's sports scores won't lure a large online audience; last night's might

very well do just that.

Hedging Against Obsolescence

At present, there's a definite complementarity between paper and online files, and this makes the transition into online much easier. For example, Addison-Wesley has told us that the availability of our book available for free online has spurred the print sales of *The Internet Companion* — now in its tenth printing in 12 months. The immature state of the screen technology precludes great numbers of people reading a book online and thus not buying a paper book. Books available online serve to boost print sales. But when this changes, as it will, what then? Publishers who have taken steps today, collaborated to ensure their position at the center of this technocultural seachange, and begun to publish online, will be encouraged rather than threatened by online as opposed to paper book readers. They will protect their online content, links, and original thought, perhaps by Knowbots programmed to seek out specific text strings from their publications on the Net, and zapping any nefarious copyright violators.

Surely, as users become more comfortable and conversant in this medium, the desire to have and hold "books" will decline, and plugging into your information source will be much more natural than spending hours downloading discreet titles online—you'll just want to access whatever fits into your day's or moment's thought train, supplementing what's on your hard drive, CD, or in your brain. Just as we shouldn't bemoan the demise of Fed Ex once people cease madly shipping paper packets all over the globe, so we should welcome—and if we're smart, lay the groundwork for—a universally accessible docuverse (to use Ted Nelson's term again), "a great record". While we struggle in our new amphibian incarnations, half fish, swimming in the familiar sea of printed words and pictures, and half land creatures, trying to make sense of the array of new electronic technologies, we are taking the steps today, both imaginative and practical, to insure that today's publishers maintain a decisive position in the ongoing and electronic evolution of our culture. After all, a publisher's real job has to do with the effective generation and dissemination of ideas — not preserving outdated distribution mechanisms such as paper. As the publishing process itself approaches the speed of thought, we are presented with the delicious opportunity to focus more intently than ever before on the ideas themselves and their immediate dissemination to an interested audience. In short, we can get on with the immediate business of creating the "great record" for our culture.

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I think the internet is a fantastic tool and one of the great wonders of the world, if not the greatest. Homo sapiens must just learn to use it properly. Ian Goodyer is professor of psychiatry at the University of Cambridge. Maryanne Wolf, cognitive neuroscientist. For me, the essential question has become: how well will we preserve the critical capacities of the present expert reading brain as we move to the digital reading brain of the next generation? Will the youngest members of our species develop their capacities for the deepest forms of thought while reading or will they become a culture of very different readers – with some children so inured to a surfeit of information that they have neither the time nor the motivation to go beyond superficial decoding? Keywords: Internet Publishing. Scifeed alert for new publications. Never miss any articles matching your research from any publisher. Get alerts for new papers matching your research. Find out the new papers from selected authors. Updated daily for 49'000+ journals and 6000+ publishers. Define your Scifeed now. <https://www.scilit.net/ajax/scifeed/subscribe>. And what people think Internet publishers do, and what we actually do, are REALLY different. I created this image with the inspiration of the "What I really do" meme to describe it: You see, my neighbors think I sit around, drink coffee and surf the Web all day. And in a way, I do. Although... it's not nearly as random as they might think. The world seems to think that publishing Internet blogs is done by people who wear fuzzy bunny slippers and take a lax approach. That is not me. I dress everyday, because I feel more businesslike that way. Then I closely evaluate the metrics to see how we are doing and whether we need to adjust our efforts. For instance, I can tell you exactly how much it costs us to create an article (including our overhead, salaries, etc.).