

Carrie: A Full-Text Online Library

by

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I was sitting at my computer one evening several years ago, waiting for the printer to finish plodding through the last few pages when a message from the printer appeared on the screen, telling me that it was out of paper. Or maybe the message was from my fancy new WordPerfect 4.2, telling me that the printer had told my computer to have it tell me that the printer said that it was out of paper. I don't really know. I never have understood these things very well. Anyway, as I was getting the paper and preparing to put it in the printer, I suddenly understood what had just happened and had to sit down to think about it. You're probably asking why I had to think about it at all, and you'll need a bit of background to understand.

The World-Wide Web is a relatively recent application on the net, and a lot had gone on before September of 1993, when Marc Andreessen released Mosaic, the browser that made it possible for the average person with a net-connected computer to access the Web. I had more or less stumbled onto BITNET, the humanists' alternative to an Internet that was at the time still monopolized by the military and scientific researchers. I had fallen in with a group of True Believers in the potential of computer telecommunications who were chatting about everything under the sun (and moon) by means of a discussion list known as HISTORY@FINNHUTC, Computers and History. The discussion list had been established at the Technical University of Helsinki, Finland, by a high school student by the name of Joni Makavirta, but was now under the gentle and urbane leadership of Thomas Zielke, a professor at the Karl von Ossietzki University of Oldenburg, Germany.

Although HISTORY@FINNHUTC was known in net circles as a rowdy bunch, some of their rowdiness had a more serious purpose than most people imagined. During the break-up of the Soviet Union, members of the list collected commentary and documents from all over the net, the most important of which made their way to Estonia, Latvia and Lithuania, countries that were, at the time, trying to establish their independence of Russia. During the Gulf war, journals of American scholars in Israel were e-mailed to the list to be compiled and archived, while French members acquired and translated the daily journal of an Iranian lieutenant stationed at the front. Reports from Tienanmen Square reached HISTORY@FINNHUTC through devious net channels, as well as information from Pinochet's Chile, the Ayatollah Khomeini's Iran, and other hidden places of the Earth arrived from time to time and were stored in various nooks and crannies of the net. There were so many places in which to store information and so many forms in which to store it, that the denizens of the net used to hold monthly treasure hunts in which the magister ludorum would, from time to time, send out clues as to the nature of the data and where it was located until, at least most of the time, someone discovered it.

Not all data were hidden, of course. Ever since FTP (File Transfer Protocol) had made it possible to fetch

copies of files from remote hosts, people had been industriously making files to be fetched. Probably the most visionary and idealistic were the people associated with the Gutenberg Project. Some of you may remember the closing scenes of the motion picture *Fahrenheit 451* which the lovers of literature escaped from a society dedicated to the destruction of all books into a wilderness beyond the reaches of authority and were busily passing on to the young the works of literature that they had memorized. The Gutenberg folk were much like that except that they were dedicated to making literature freely available to everyone through the computer.

The scanners of the time were very expensive and quite ineffective, and the accompanying Optical Character Recognition (OCR) programs were still in their infancy. So it was that many, if not most of the works donated by volunteers to the Gutenberg Archives were digitized manually. The little old lady who typed in all of the Sherlock Holmes novels and short stories, and the blind man who contributed a mass of works of Edgar Rice Burroughs (*Tarzan of the Apes*, *John Carter of Mars*) became legends of the net, much like the alligators infesting the sewers of New York City. But it was not legend, and a number of otherwise sane people devoted their time to the tedious tasks of digitizing their favorite books for posterity. By 1990, Gutenberg's goal of "10,000 by 2000," of offering the public ten thousand e-texts by the year 2000 had begun to seem attainable.

Of course, there were other repositories. internet.spies.com held a sizable collection of documents of American history and the like. But HISTORY@FINNHUTC was trying to find new places to store the data that it was accumulating. One of the members of the list, Don Mabry at Mississippi State University, had set up RA, a "public FTP" site, from which anyone who knew the net address could fetch copies of any of the files stored there. It was the only such site devoted to the storage of materials for historians. For some reason or another, I was seized by a passionate desire to construct a second site for historical materials, went to the Academic Computer Center here at the University of Kansas, and impetuously asked for the facilities to do so as well as someone to teach me how such a thing was done.

It may have been because I was a fat, old, bespectacled, and grey-bearded medieval historian. The technicians could always point to me whenever someone told them that he or she was too old to be learning something like computer telecommunications. Or it might have been that I was the first faculty member to ask to learn how to build something on-line. Whatever the reason, the technical staff took me under their wing, and we soon had KU's first public FTP site, MALIN, named after perhaps the finest historian ever to serve at the University of Kansas.

Don Mabry and I soon got together - virtually - and decided on which materials we would store so that our holdings did not overlap. It was something like that early nineteenth-century cartoon that showed Napoleon and John Bull carving up the world, and bore the caption of "Jack Sprat could eat no fat . . ." Don took the Americas and Africa, while Europe and Asia fell to my portion. I must confess that we forgot Australia, at least for a time. We then began filling our virtual bookshelves.

Don and I thought that we were doing something really great, but, as is always the case, there was someone who complained. His complaint was that it was a pile of trouble to connect to one FTP site (which was quite correct) and more than twice as much trouble to connect to two different sites to try to find something worthwhile. Don and I considered that and realized that, as more such sites came on-line, having to keep a list of addresses and wander around looking for things was not the way to make the net a useful

resource for historians. We decided that there had to be some way of having a central catalog that would allow the user to browse through it, decide on what materials he or she wanted, press a key, and be connected to whichever of our sites held that particular file. The problem, naturally was to figure out some way of making this happen. When Don was suddenly shanghaied into the administrative ranks of his institution, I was left alone with the problem.

Now, at long last, we can return to me sitting and thinking about my computer, my text, and my printer. It was clear that my text had normally invisible formatting codes that it sent to the computer and on the basis of which the computer was operating. The word for such hidden codes is, of course, "hypertext," but I didn't know that at the time. I also knew that the printer would send back messages if it couldn't execute the commands. This is called "interactivity," but I didn't know that either. I also knew that I could press a couple of keys to make the printer stop printing at whatever place my cursor was resting. Finally, I knew that one could set formatting commands such as "italics on" and "italics off" that would make the printer to behave in a certain way independently of whatever the text between the commands might be.

After completing the next day's lectures, I went to the Academic Computer Center and tried to explain my idea to the Director of Networking. Since I was trying to talk about things for which I had no words, my explanation included much waving of arms and trying to draw pictures in the air with my index finger. Fortunately, Herb Harris, the Director, had studied philosophy as an undergraduate and was accustomed to understanding incoherent expressions of thought. Later that day, he introduced me to Michael Grobe, Charles Rezak, and Lou Montulli, the team of technicians who were engaged in developing the on-line text browser known as "Lynx." Since I seemed to have stumbled on the basic principles on which Lynx was based, I was adopted more or less as a mascot. While they perfected the campus browser KUfacts, I followed as best I could in building HNSource.

In a talk he was giving at London University on 3 March 1993, Don Mabry clicked on the monitor of the computer at the front of the room to reveal HNSource, with automatic links to every source of historical materials I could find on the net. After demonstrating that HNSource could fetch any of the files in the sites to which it could connect, and could display them on the screen instantly and without downloading, his audience carried him away to a gala lunch at Simpson's on the Strand.

Not long afterwards, I fell to thinking about the Gutenberg Project. The Gutenberg folks were planning on distributing the ten thousand books they hoped to have by the year 2000 on a set of CD-ROM's. With the Lynx text browser, that was clearly unnecessary, and I began to build another information server designed to point to electronic texts, to fetch them with the pressing of a key, and to display them on-screen without further ado. By early June, the site was ready with pointers to more than two thousand texts, and had been given the name of CARRIE, in honor of Carrie Watson, the first professional librarian at the University of Kansas and the true founder of its library system and collections.

As soon as CARRIE was announced and people began using it, I began to receive messages telling me where I might find texts. For well over a month, I spent my "spare" time pursuing my own Treasure Hunt. It was, quite frankly, a lot of fun. I got an anonymous note in the mail telling me "Look deep in Colorado State. I did so and, after making my way through a maze of directories and sub-directories, I found one with the name, if I recall correctly, of "stuff." Within it were about three megabytes of Socialist texts, including the entire English version of Marx's *Capital* and *The Communist Manifesto*, as well as writings of Engels, Lenin,

Emma Goodman, DeLeon, speeches of Eugene V. Debs, and much else, including a tiny file that said, simply, ARCHIVES OF THE LEAGUE OF RADICAL ECONOMISTS. I found the Latin Vulgate among the directories at Texas A and M, the inaugural speeches of the Presidents of the United States at Case Western Reserve, and a host of other things. By the end of the month, CARRIE was pointing to more than three thousand works, including all of Shakespeare, Plato, Aristotle, and other classics, as well as the entire corpus of e-texts at Gutenberg.

It was only two months until a new day dawned and colleges and universities throughout the country were scrambling to put up World-Wide Web sites, and HNSource and CARRIE lost their uniqueness and were overshadowed by the well-funded and professionally-staffed projects that began appearing. But there was time enough for me to see the sort of effect that computer telecommunications would have.

It was in August of 1993 that a friend came back from a business trip/vacation spent traveling in western Kansas, far off the main roads. After he had returned, we were having a cup of coffee downtown so that he could tell me of his adventures. One of these adventures was particularly striking. He had come to a wide spot in the road, you know the sort of place - a gas station with tractor tires and propane tanks stacked alongside it, a couple of farm houses some distance away from the road, an abandoned and decaying old schoolhouse, and the inevitable cafe. Since it was close to lunch time, he stopped and entered the cafe. It was pretty much like a hundred of other such establishments - a counter along one wall, booths along the other, and a few tables in the middle. There was a blackboard with the day's specials, a sign that said "In God We Trust, All Others Pay Cash," a stack of glasses half-filled with tea waiting to be filled with ice and set before the lunch crowd, the usual friendly and smiling waitress, and the equally usual cook scowling out through the serving window in the side wall.

The unusual thing about this cafe, however, was that there was a piece of cardboard tacked on the hatrack by the rear booth, and someone had printed on it with a black felt pen the words PUBLIC LIBRARY. My friend was curious about what he considered must be a considerable overstatement, and went back to see the Public Library. As he neared the booth, he heard a strange clacking sound coming from it. The booth contained an old computer and an even older dot matrix printer that was chattering away to itself a line at a time. It had already printed out most of a roll of paper, which had curled under the table and come to rest on a mare's nest of tangled paper sedges. He looked at the screen and saw the opening words "Call me Ishmael . . .," and, on a piece of paper pasted to the computer, he read "CARRIE: A FULL-TEXT ON-LINE LIBRARY," followed by some words that he didn't understand and couldn't remember. I recall saying, more to myself than to him, "telnet http.cc.ukans.edu login=carrie pw=press [enter]."

Of course, all of that was a long time ago, as time goes on the net. CARRIE is still there, but has a new address, "telnet raven.cc.ukans.edu login=carrie pw=press [enter]." The lady herself is put a bit in the shade by the face she shows to web surfers who pause a moment at <http://web.archive.org/web/20040603192159/http://www.ukans.edu/carrie/>. She has a new manager and boasts a number of web projects and several awards. I still remember the early days, though, and I feel myself fortunate to have been there when the world was just beginning to change.



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