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a cura di Serge Noiret

Before the Web: the early development of History on-line

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(Con un mail di Lynn H.Nelson sulla nascita della Biblioteca Virtuale di Risorse Storiche: [WWW VL History Project.](#))

Questo testo costituisce l'originale in inglese di **Prima del Web: gli sviluppi della storia online** pubblicato in "Linguaggi e Siti : la storia on line", n.3, **Memoria e Ricerca**, gennaio-giugno 1999, pp.115-130 e gentilmente concesso dalla rivista stessa. L'indice del fascicolo È disponibile sul web [all'indirizzo della rivista Memoria e Ricerca con anche il riassunto in inglese del saggio di Lynn H. Nelson.](#)

Nota del curatore:

[Oltre al testo che andrete adesso a leggere, ho aggiunto un intervento di Lynn H.Nelson a proposito della nascita del Web e della Biblioteca Virtuale di Risorse Storiche \(World Wide Web Virtual Library, History Project\)](#) presso l'University del Kansas perchÈ questo suo intervento aggiunge luce sulla nascita del Web e di un server di risorse storiche all'università del Kansas come uno dei primi "server" di storia del web come l'intendiamo oggi. Questa nota fa seguito -ed in un certo modo completa- l'intervento di [Lynn H.Nelson: Prima del Web: gli sviluppi della storia online](#), in "Linguaggi e Siti : la Storia on line", n.3, gennaio-giugno 1999, **Memoria e Ricerca**, pp.115-130.

Although most people wait for 1 January 2001 to mark the new millennium, there are many who would argue that the new age was initiated in the Summer of 1993. It was then that the National Center for Supercomputer Applications at Urbana-Champaign released the Mosaic web browser. Mosaic provided thousands and then hundreds of thousands of people full access to the Internet and the relatively new World-Wide Web.⁽¹⁾ Most of these new users marveled at the wealth of materials and facilities the net and web offered: hundreds of discussion lists; thousands of books, poems, plays, and essays; and hundreds of thousands of documents, reports, lists, catalogues,

maps, illustrations, and the like.[\(2\)](#)

Few asked how those materials had gotten there, and fewer still wondered how they could be made freely available to anyone who wanted them. Even now, few historians or scholars in other fields show much interest in the origin of the data bases they regularly employ or the development of the applications they take for granted. These things should not be filed away under the general and impersonal rubric of "technological progress." Human beings created them and many of those same human beings continue shaping the net and web to meet the needs of students and scholars. They continue as they began, working without much recognition or, often, material reward. In a world in which institutions overshadow individuals, the pioneers who help to shape the net and web to scholarly and humanist principles are quite likely to be forgotten. Perhaps this paper will serve to recall some of them to mind.

Sometime in the mid-1980's, someone at the Finnish Technical University at Helsinki established an academic discussion list known as HISTORY@FINNHUTC and dedicated to the discussion of the potential of the computer for historical studies. After its founder has disappeared and the list had continued functioning for over a year without an owner, Thomas Zielke, of the University of Oldenburg, undertook to manage the list and save it from being eliminated.[\(3\)](#) Donald Mabry, a Latin American historian at Mississippi State University, made continued efforts to inform American historians of the utility this medium for communication among scholars.[\(4\)](#)

When I finally found my way to HISTORY@FINNHUTC, I found myself in the midst of a truly remarkable and varied group of people. There was Don Mabry, whom I have already mentioned, who now appeared in another guise as the founder and manager of RA, the only FTP site with materials for historians.[\(5\)](#) There were also George Welling, of the University of Groningen;[\(6\)](#) Christopher Currie, who would become the builder and director of IHR-INFO, the wonderful page of the Institute of Historical Research at London University;[\(7\)](#) Jim Cocks, computer technician at the University of Louisville and the founder and still manager of a remarkable series of discussion lists;[\(8\)](#) "Skip" Knox, an historian/computer technician at the University of Idaho at Boise;[\(9\)](#) and Haines Brown of Central Connecticut State University, valiantly attempting to maintain a growing list of discussion lists of interest to historians.[\(10\)](#) There were many others, too many to be mentioned here, who were also enthusiastically exploring the ways in which the net might be of use to historians. Charles Dell, at the University of Missouri at Kansas City, subscribed to all lists dealing in any way with Eastern Europe and the Soviet Union, archiving relevant postings, and issuing a regular newsletter summarizing the latest additions to his data base. Michael McCarthy, an undergraduate at Marshall University, was building a more-or-less searchable data base of on-line historians together with pertinent information. Richard Jensen, laying the foundations of N-Net, also joined in the discussion.[\(11\)](#) Several members used their spare time to prepare books for the Gutenberg project by typing in the text on a word processor, and still others contributed to the slow but steady accumulation of materials on-line in ways that they did not bother to mention.

Those, such as Diane Kovacs, who were engaged in assembling annotated catalogues of academic discussions lists often characterized HISTORY@FINNHUTC as a "rowdy bunch," and this was no doubt true. The other three lists of interest to historians, Pat Conner's ANSAX-L at the University of West Virginia, and Willard McCarty's HUMANIST and FICINO, operating from the

University of Toronto, were all moderated. That is, their subscribers were screened and postings were forwarded at the discretion and often with the editing of the owner. Membership in HISTORY, by contrast, was open to all and postings went directly to the listserver for distribution. Although the number of members was relatively small, the great majority were active participants, and the number of daily postings at times reached seventy-five and more. The Internet was not yet sufficiently robust that one could ignore the volume of long-distance traffic the list was generating, and Thomas Zielke asked members to help meet this problem by establishing peers for HISTORY. Nine were quickly set up, and those who established them soon found themselves gaining experience in discussion list management under Zielke's overall direction.[\(12\)](#)

Some of the exuberance of that period was focused in an unusual session of the Midwest Conference on History, held on the Campus of the University of Kansas in September of that year. Amid a large number of traditional sessions, one was held in the auditorium of the Academic Computer Center, which was equipped with a computer projection screen for teaching classes in computer science.[\(13\)](#) The "papers" were delivered by e-mail/"talk" connections, and were delivered by Charles Dell from Kansas City, Donald Mabry from Mississippi, and Thomas Zielke from Oldenburg, Germany.[\(14\)](#) Thomas's offering was visionary in portraying a future in which each field of Historical Study would have its own discussion list and in which each such discussion list would have its own FTP site, without limitations of size, in which the list members would install the materials appropriate for their discipline. He was clearly concerned, however, with how much could be accomplished in the long run by relying upon the enthusiasm and altruism of what was clearly a very small portion of the profession. He was clearly concerned with the question of how long the burst of creativity and initiative he had stimulated could last without greater recognition and support, and announced his plans to establish an international organization to secure this recognition.

Members of the list found their discussion turning time and again to two seemingly contradictory concerns: the difficulty in encouraging members of the profession to come on-line and the problems of managing the numbers who actually did so and swelled HISTORY's membership. Zielke finally addressed both concerns by establishing The History Network,[\(15\)](#) and began the organized effort of the list members by suggesting that those who were able to do so should establish a series of discussion lists each focused upon a different historical period or topic. It was at this time that Richard Jensen's announced his project of establishing an integrated series of discussion lists. Any possible conflict was resolved when the Zielke and Jensen agreed that subscriptions to The History Network's lists would be open and their discussions would be unmoderated. Jensen then proceeded with the establishment of the moderated lists that comprise H-NET. Within three months of the Spring of 1993, members of HISTORY and H-Net established some twenty-five academic discussion lists,[\(16\)](#) and the net had suddenly become a medium for the exchange of views and information that should have been increasingly difficult for scholars to ignore.

Nevertheless, discussion on all of these lists continued to turn to the question of the slow pace with which any concept of the potential of computer telecommunications was penetrating the profession. One comment, that there was little material of direct use to historians available on the net, struck me personally as particularly valid. In early 1992, the only location for storing materials for historians at the time was Donald Mabry's FTP site, RA. I decided to try to establish another at the University of Kansas. It was at this time that I was taken in hand by Herb Harris and Wes Hubert,

two members of the staff of our Academic Computing Center. I had already established the University's first international academic discussion list, and they were pleased to see that at least one member of the faculty was interested in developing the on-line presence of the University of Kansas. With their assistance and with much trial and error, I established a second historians' FTP site, MALIN, named after James C. Malin, one of the most distinguished historians of whom my department could boast. I then began installing whatever digital materials and useful freeware programs I could find.[\(17\)](#)

Many of the materials gathered during those early days proved to be of considerable value. A small English-Latin word list and Latin grammatical endings, for instance, has remained in continuous use until the present days and has been used by thousands of students over the years.[\(18\)](#) But the utility of the materials we installed did not solve the main problem of providing sufficient useful materials to make computer telecommunications a significant aid to historical research. The most obvious obstacle was the limited space that could be made available for such repositories. Individual sites such as RA and MALIN were allowed only ten megabytes of storage. This seemed like a great deal at the time, but Mabry and I, working together, soon exhausted our allotted space. Other members of HISTORY soon began to build additional sites, notably George Welling's GHETA at the University of Groningen and Michael McCarthy's BYRD at the University of West Virginia.

None of us had any idea of how soon and by how much the cost of storage would drop, and were somewhat frustrated by the slow and thoughtful pace at which many European countries, notably Germany and France, were making computers and Internet access available to their scholars so that they and their students could use the facilities we had built and join us in establishing more. It was clear from the steadily growing activity of the Netherlands and Italy that the European effort would be better organized and planned than the individual initiative that provided the driving force for American and Canadian development, but it was difficult not to be frustrated that, given their relative wealth in computer equipment, most American academics could not be persuaded to recognize the potential of what was happening on-line or to use their machines as anything more than word-processors.

At the time, we found that people had been quietly installing materials in all sorts of places on-line, such as the listservers that managed discussion lists, unused e-mail accounts, or even among the system files of university computers.[\(19\)](#) With the increase in the number of sites and quantity of materials available, we began to encounter difficulties. Potential users were frustrated by the increasing number of addresses it was necessary to remember and by their need to check each on a regular basis to see what new materials might have been added. Mabry and I decided that the way to solve both the problem of limited storage and the multiplication of independent sites was to find some method of "seamlessly linking" our two sites. We thought that others developing FTP sites for historians might join us and that other universities might allow us storage to an to a proliferations but integrated network of sites.

The appearance of the University of Minnesota's GOPHER had proven that such a network would work, but it was also clear that GOPHER did not provide the seamless connection for which we were looking nor did it provide a method of embodying the text that we felt was necessary to

identify the links between sites. It was unfortunate that Don was called upon to be Associate Dean of Research Administration at this time, since he missed much of the fun that was to follow. We thought we knew what was needed, and so I continued to search for a way of achieving it.

One evening in the winter of 1992-1993, while printing out a file, it struck me that my word-processing system had placed hidden codes in the text visible on my monitor, and that these hidden codes were directing the processes of my printer, which was, after all, merely another kind of computer. Moreover, the printing stopped and a notice flashed on my screen when my printer happened to run out of paper. Although I did not know the terms with which to describe what I was thinking, it was clear to me that my computer and printer were in interactive communication, the "seamless link" of which Mabry and I had spoken. I had already put together a small program which, added to KERMIT software, allowed me to view the contents of MALIN without actually downloading the files. I began to wonder if all of these things could be combined in a single system that would operate completely on-line and so allow the viewing of larger files than could be accommodated by the limited memory of the personal computers of the time and would be much more rapid than if those files had to be downloaded. I went to the Academic Computer Center after my next morning's lecture and attempted to describe to Herb Harris what I had in mind. Herb listened, and asked me to return that afternoon to discuss the matter with a few of his technical staff.

That afternoon, I made the acquaintance of Michael Grobe, Charles Rezac and Lou Montulli and discovered that they had been developing something very much like that which I had envisaged, (20) the main difference being that they had been given the task of creating a Campus-Wide Information Server (CWIS), while I was wanting to build something that would embrace the entire net.(21) That made little difference, though, since their browser, LYNX , which they defined as "an animal that eats up GOPHERS,"(22) was perfectly capable of doing everything I had thought of and more, and the team were more than happy to have someone apply the full potential of their system. I was also fortunate at this time to enlist the aid of Marc Becker, a brilliant graduate student in Latin American history who did a great deal to help me keep up . We were soon engaged in constructing our lynx site, HNSource, even while LYNX was still being refined. These were personally exciting times, especially since I had informed the members of HISTORY what I was doing and encouraged them to establish and stock FTP sites to increase the amount of materials to which HNSource would link.

We might have pushed ourselves somewhat less if Don Mabry had not proposed a dramatic inauguration for our server -- we had come to call it a server since KU Facts, its archetype was, after all, a Campus-Wide Information Server. Don was being married in March, and he and his bride were planning to spend their honeymoon in London. At Christopher Currie's invitation, Don was scheduled to speak on "Historical Research in the Computer Age," at the Institute of Historical Research at the University of London. He proposed that the point of his presentation should be made by connecting with HNSource. This gave us a deadline of the early morning of Saturday, 20 March 1993, and we continued to work on HNSource and to check its links until the last possible moment. The demonstration was a complete success, and I announced the existence of HNSource in the morning of 21 March.(23) Currie soon had IHR-INFO in operation and was quickly joined by Matthew Ciolek's COOMBSQUEST at Australian National University. When we had securely linked each to the other, the world's historians finally had a global network of resources at their command.

Thomas was hard at work trying to convince his colleagues in Germany to begin on-line development, but suddenly fell silent. His e-mail address at Oldenburg accepted our messages, but issued no replies. It was as if he had fallen off the face of the Earth at a time when we badly needed his leadership. We later found that he had been in a serious accident that completely incapacitated for over a year during which the technology of computer telecommunications developed at a bewildering rate. Nevertheless, the activities he had begun were now being driven by their own momentum.

During the next few months, several new FTP sites were established and GRENET at Grenoble France, began constructing a LYNX site to join to the existing network. Although we encountered problems, the unannounced changes of Internet addresses being among them, members of the HISTORY list as well as others informed their colleagues of the new facilities, and the pace of on-line development of materials and facilities increased perceptibly. People began to contribute materials dredged from their files and desk drawers -- maps, manuscripts, sipping lists, translations, entire books, statistical analyses, articles, software, and virtually everything else imaginable. It was an exciting time during which an immense amount of historical materials began to accumulate.

It was also exciting because this had been brought about by individual academicians and technicians without funding or much in the way of institutional encouragement. The same ideal of providing free public access dominated the thinking of those engaged in these activities, and there was a dream of a universal access that would eliminate many of the accidental inequities of the field of historical research, inequities that allowed some fortunate scholars to enjoy access to the holdings of great libraries and subsidized travel to great archives, while others were isolated from the materials of research by distance or expense. We also had visions of an historical profession the members of which would make their work and resources accessible to the general public and a world in which, though discussion lists, publishing scholars could meet with their readers to discuss their work in a way hitherto impossible. We also envisioned a world in which everyone would have a great library at their fingertips, and, to further this goal, I build another LYNX server, CARRIE,[\(24\)](#) providing connections to the hundreds of newly digitized texts that were coming on-line. This golden age of individual initiative lasted through the summer of 1993 and little more.

Although Tim Berners-Lee had announced and demonstrated the HTTP protocol on 17 May 1992, the early browsers were not sufficiently stable nor was data transmission rapid enough to test the true capacities of the new protocol. In August of 1993, however, transmission speeds were greater, machines possessed a robust amount of RAM, and, at this propitious time, Marc Andreessen released the MOSAIC browser. This came at about the same time that the Library of Congress opened its on-line exhibit "1492," and perhaps millions of people hastened to try out the new browser. Berners-Lee asked the crew of University of Kansas technicians if they could work a translation of LYNX to HTTP and HTML, and this challenge was quickly met. KU Facts, the old campus-wide information server, became one of the first web sites outside the WWW development group to become operational,[\(25\)](#) and HNSource was not far behind.

WWW has already encountered the problem of the multiplicity of addresses of its various sites, and,

in 1991, Tim Berners-Lee had developed an automatic catalogue not unlike that of HNSOURCE. (26) Just before the appearance of Mosaic in 1993, he had turned the task of maintaining this catalogue over to Arthur Secret, a young technician working at CERN. (27) The same day that Berners-Lee asked the Kansas technicians to develop a LYNX to WWW conversion, one of the technicians had informed Secret that the University of Kansas already had an interactive LYNX catalogue in operation. Secret contacted me immediately to ask if I would convert HNSource to a web site and try to keep up with the appearance of web sites in History. I agreed and suggested that he enlist the assistance of Matthew Ciolek. (28) IHR-INFO was disabled at this time and, when Christopher Currie was able to transform it into a web site, he concentrated on the remarkable task of organizing and making available the extensive historical activity of the United Kingdom. In this almost accidental way, the World-Wide Web Virtual Library (WWW-VL) was born as a loose federation of independent but interlinked sites run primarily by volunteers. (29)

When, in 1994, Andreesen came out with Netscape and then The Internet in a Box, an era began to pass. The technology began to swing from providing content to developing attractive and interactive presentations, and the improvement of Optical Character Recognition, the key to scanning printed documents to make them available electronically, advanced much more slowly than other fields of development. Despite this, applications were continually automated until it no longer required any real commitment to learn to be able to work on-line. Many universities, just becoming aware of the medium, considered it something that should be done by secretarial staff and so came to discount the effort that many of their faculty had made to contribute to the vast store of accessible materials that had been laboriously collected on-line. Many people and individuals came on-line without the ideals that the early group of historians on BITNET and the Internet had developed, and the concept of a cooperative and coordinated professional service in the interests of free and universal public service became buried in the great mass of self-serving and commercially- oriented sites.

At the same time, computers and Internet connections became increasingly plentiful and inexpensive, until the establishment was within the capabilities of literally millions of people, and the number of web sites, together with the impermanence of some, made the task of effective cataloguing very difficult. Search engines began to take the place of cataloguing, although search technology is still far from being capable of establishing categories of information with any discrimination. At the same time, some commercial site developers have begun to add words to their texts that they intend search engines to index in ways intended to lure viewers. Even apart from this difficulty, the widely varied knowledge, discrimination and seriousness of the builders of web sites has resulted in masses of materials being made available without any practical means by which their users can determine their accuracy or validity.

Meanwhile, the focus of many computer technicians has turned to matters requiring large investments of money, such as supercomputers, Ethernet, I2, cable connections, and the like, and the sense of unity between many computer technicians and committed historians has slowly dissolved. Institutions now pursue great grants to support massive projects that dwarf earlier individual efforts, but which often lack the professional relevance and awareness of the needs of the public that characterized the pioneer projects.

The Internet in those days before the web was like a frontier. Individual efforts and insights counted for a great deal and some people were blazing a trail for others to follow. It was not a failure of their efforts that led many of those who came after chose to follow a different set of markers and goals, and their activities have proven not to have been entirely in vain. Throughout the Internet and web there are individual and small group projects that are relatively unpublicized but the cumulative resources of which are truly impressive and growing. The majority of these sites are unfunded and have been created by people who work for the pure joy of it and out of their love for the subject. Anyone surfing the net might be struck by how many such sites are devoted to aspects of history. The rate at which new sites suggests that this will be a continuing process, and this may be the legacy of those historians and technicians in worked together in the "early days," before the coming of the web.

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(LAST UPDATED 8 OCTOBER 1998)

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[kovacs-1.93] Diane Kovacs, AcadList of academic discussion lists, File no. 3, Geography, History and Journalism.

[mabry-1.92] Donald Mabry, LOGGING IN AS AN ANONYMOUS GUEST, Presented to the Mid-America Conference on History, meeting at the University of Kansas in Lawrence, Kansas, September 17, 1992.

[mabry-2.98] Donald Mabry, Personal communication to Lynn Nelson regarding his early activities on-line, beginning in November 1988. 23 February 1993.

[nelson-1.93] Lynn H. Nelson, ANNOUNCEMENT OF HNSOURCE, 20 March 1993.

[nelson-2.97] Lynn H. Nelson, E-Mail on the History of LATWORDS.AID, 19 June 1997.

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[nelson-5.98] Lynn Nelson, e-mail to Robert J. O'Hara on his perception of the development of his on-line activities at the University of Kansas, 17 July 1998. NOT OPEN FOR PUBLIC ACCESS

[nelson-6.94] Lynn Nelson, message to MEDIEV-L informing the members of the failure of lynx to support the whole Vulgate search he had set up.

[nelson-7.93] Lynn Nelson, Announcement of the opening of HNSource, 20 March 1993.

[nelson-8.] Lynn Nelson, Greeting to MEDIEV-L when nearing the third anniversary of the operation of the list. 27 May 1995.

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[zielke-2.93] Thomas Zielke, Official Introduction of The History Network, 23 February 1993.

[zielke-3.93] Thomas Zielke, announcement of the opening of GERMHIST list for German history.

[zielke-4.92] Header for HISTORY discussion list after peers had been added.

NOTES

(1) ftp://raven.cc.ukans.edu/pub/history/internet_history/zakon-1.94 Robert H'obbes' Zakon, Hobbes' Internet Timeline v1.4, 05 September 1994, notes that the percentage of Internet traffic devoted to WWW grew at an annual rate of more than 341,000 percent.

(2) See ftp://raven.cc.ukans.edu/pub/history/internet_history/welsch.93. Erwin K. Welsch, ELECTRONIC SOURCES FOR WEST EUROPEAN HISTORY AND CULTURE Version 2.0 Summer 1993 for a partial view of the resources available at the time that Mosaic was released.

(3) ftp://raven.cc.ukans.edu/pub/history/internet_history/zielke-1.92 Thomas Zielke, History at Your Fingertips: Electronic Information and Communication for Historians, presented to the Mid-America Conference on History, The University of Kansas, Lawrence, Kansas, 17-19 September 1992, presents an account of the author's work with the Internet.

(4) See ftp://raven.cc.ukans.edu/pub/history/internet_history/mabry-2.98, Donald Mabry, Personal communication to Lynn Nelson regarding his early activities on-line, beginning in November 1988. 23 February 1993, for an account of Mabry's introduction to the Internet, and ftp://raven.cc.ukans.edu/pub/history/internet_history/mabry-1.92 Donald Mabry, Logging In as an Anonymous Guest, Presented to the Mid-America Conference on History, meeting at the University of Kansas in Lawrence, Kansas, September 17, 1992, for an example of his efforts to encourage wider use of FTP.

(5) RA has since become an award winning web site, The Historical Text Archive, <http://www.msstate.edu/Archive/History/>, which also offers a link to Mabry's home page.

(6) Welling is too well known to need citation. His own contribution to this volume will be significant introduction, but an early interview with him may be found at ftp://raven.cc.ukans.edu/pub/history/internet_history/welling-1.93, Peter Dor, Interview of George Welling, 1993.

(7) <http://ihr.sas.ac.uk/ihr/>

(8) These include ANCIEN-L, HISTLAW, RENAISS-L, AZTLAN-L, ISLAM-L, and others.

(9) Knox has been a leader in on-line instruction with "The Electronic Renaissance," "The Crusades," and other pioneering on-line courses of instruction. See <http://www.idbsu.edu/courses/>

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- (10) Brown's interest in World History led him to found The World History Gateway, http://library.ccsu.ctstateu.edu/~history/world_history/
- (11) For the beginnings of H-Net, see ftp://raven.cc.ukans.edu/pub/history/internet_history/jensen-1.html, Richard Jensen, Wendy Plotkin, and James Mott, HISTORY ON-LINE: The H-Net Planning Document (version 10.0, July 26, 1993).
- (12) See ftp://raven.cc.ukans.edu/pub/history/internet_history/zielke-4.92 for the header information for the HISTORY discussion list after peers had been added in 1992.
- (13) Projection screens were in their initial stages of development at the time and were barely suitable for most purposes, but we had discovered that they could project text quite well.
- (14) See ftp://raven.cc.ukans.edu/pub/history/internet_history/dell-1.92, Charles Dell, Mountains of Materials, Just Minutes Away, ftp://raven.cc.ukans.edu/pub/history/internet_history/mabry-1.92, Donald Mabry, Logging in as an Anonymous Guest, and ftp://raven.cc.ukans.edu/pub/history/internet_history/zielke-1.92, Thomas Zielke, History at Your Fingertips: Electronic Information and Communication for Historians, for the texts of the papers.
- (15) See ftp://raven.cc.ukans.edu/pub/history/internet_history/zielke-2.93 Thomas Zielke, Official Introduction of The History Network, 23 February 1993.
- (16) See ftp://raven.cc.ukans.edu/pub/history/internet_history/kovacs-1.93 Diane Kovacs, AcadList of academic discussion lists, File no. 3, Geography, History and Journalism, for a listing of the discussion lists available in the Autumn of 1993. Kovacs failed to find some new discussion lists, but her tabulation provides a picture of the robust growth of on-line facilities designed for the use of historians.
- (17) ftp://raven.cc.ukans.edu/pub/history/internet_history/nelson-3.92 for the catalogue of MALIN for August 1992.
- (18) See ftp://raven.cc.ukans.edu/pub/history/internet_history/nelson-2.97, Lynn H. Nelson, E-Mail on the History of LATWORDS.AID, 19 June 1997, for a discussion of the origins of this word- list. LATWORDS was first converted into a .html document at the University of Notre Dame, fitted out with a search engine at Hong Kong, and, together with LATGRAMM.AID, has been utilized by William Whitaker in the development of his excellent Latin translation program, WORD.
- (19) I recall receiving a message for a net organization that read "Look in Colorado State. I did so and eventually found, deeply buried within its file system, an impressive collection of English translations of the works of Karl Marx, Friedrich Engels, and other Socialist writers. Shortly afterward, I found in the delivery directory of MALIN the complete text of the Latin Vulgate Bible that appeared to have been deposited there by the listserver at Texas A&M University.
- (20) See ftp://raven.cc.ukans.edu/pub/history/internet_history/grobe-1.html Michael Grobe, Bio of a

WWW Fanatic for his home page.

(21) Another difference was that the matter was much more complicated than I had conceived it to be and required that I begin learning a new vocabulary and doing more than merely skimming the surface of the technology of computer telecommunications.

(22) The pun between "lynx" and "links" was obvious and painful. See ftp://raven.cc.ukans.edu/pub/history/internet_history/grobe-3.htm, Michael Grobe, An Early History of Lynx, 10 April 1997. Grobe here mentions the further careers of Charles Rezac and Lou Montulli, the latter of whom played an important role in the development of the Netscape browser and in developing .html expressions later accepted by WWW-ORG.

(23) ftp://raven.cc.ukans.edu/pub/history/internet_history/nelson-1.93 Lynn H. Nelson, Announcement of HNSource, 20 March 1993. HNSource is still functional, since LYNX is still used for its superiority in text-to-speech and text-to-braille applications. See [telnet raven.cc.ukans.edu](telnet:raven.cc.ukans.edu) login=history

(24) <telnet://raven.cc.ukans.edu> login=carrie, and http://www.ukans.edu/carrie/carrie_main.html

(25) <http://www.ukans.edu/kufacts/>

(26) For whom, see <http://www.w3.org/pub/WWW/People/Berners-Lee/>

(27) See ftp://raven.cc.ukans.edu/pub/history/internet_history/secret-1.html, Brief note by Arthur Secret on the origins of the World Wide Web Virtual Library (WWW-VL).

(28) The History Index, http://www.ukans.edu/history/WWW_history_main.html went into operation on 23 September 1993, and Mathew Ciolek's web version of COOMESQUEST followed shortly after. Ciolek undertook to develop a multitude of catalogues covering the Social Sciences and the various Asian nations, thus providing the initial impetus for web development in Asia and the Pacific. See ftp://raven.cc.ukans.edu/pub/history/internet_history/ciolek-1.98 Matthew Ciolek, Asian Studies and the WWW: A Quick Stocktaking at the Cusp of Two Millenia, presented at the Pacific Neighborhood Consortium (PNC) Annual Meeting, Academia Sinica, Taipei, Taiwan, 15-18 May 1998, for an excellent assessment of the growth of that Activity.

(29) WWW-VL now consists of over two hundred sites, each run by a professional in the field it covers, and is currently undergoing a reorganization aimed at developing some methods of more effective cataloguing and of evaluating the materials of the sites catalogued.

(*)The editor of this volume has asked me to add some information of my personal activities to this account of the group of historians who pioneered BITNET and the Internet. I do so with the realization that each of us contributed in a manner that depended on our individual circumstances and that there is historical value in recording those circumstances and how they influenced our contributions.

The dominant circumstance in my own situation was that neither the administration nor all but a very few of the faculty were interested in the potential of the new medium. Consequently, the institution did not provide individuals, especially individuals in the humanities, with computers or connections to the net. Nor did it offer any encouragement or recognition for accomplishments in the field. Time and energy spent in computer telecommunications was time and energy taken away from the traditional pursuits for which one was rewarded in salary, leaves, and respect. In fact, my interest in this field was regarded by many of those who paid any attention to it at all as pointless and somewhat silly. Under these circumstances, I would never have been able to pursue my interest had it not been for the fact that I was already well-advanced in age, being fifty-eight when I sent my first electronic message in 1989. I was well-established in my field of history, experienced in University governance, and a full professor for whom publication was relatively easy.

These factors led to a situation in which I was given almost unlimited access to the largely unused capacities of the University's computer system, in which I could pursue my interests in the field without suffering any great personal loss, and in which it was almost impossible to interest my colleagues in joining me in developing ways to apply this new technology. Since the University of Kansas is a great distance -- some two thousand kilometers from the major centers of historical studies on the East Coast of the United States, my first interest was in establishing academic discussion lists that would lessen that isolation, particularly for our students. After establishing four international lists in Medieval History, Early Military History, Modern Military History, and Spanish and Portuguese Historical Studies and two "local" lists one for students, faculty, and alumni of my own department, and the other for the conduct of our research seminars in Medieval History I became aware that the management of these facilities would consume so much time that I would not be able to undertake the work on the project that resulted in the HNSource lynx browser for historians.

With the tacit permission of the director of the University's Academic Computer Center, I contacted acquaintances who were interested in computer telecommunications but lacked access to the facilities necessary to pursue that interest. I invited them to take over management of most of my discussion lists, gave them the necessary pass-words and was then able to turn my attention to HNSource. After I converted HNSource into the web site History, I decided that I would not allow official indifference to keep the University and the State of Kansas from lagging behind in the development of the medium. I gathered a group of enthusiastic undergraduate students and some members of the general public for the purpose of learning through experience and developing worth-while projects.

This was the origin of The Heritage Group, a very loosely organized body of volunteers who devote themselves to developing "a corner of the web built by ordinary people for the enjoyment of ordinary people." The Heritage Group is itself composed a several different project groups. The Early Kansas Imprint Scanners scan old books on Kansas history and life, books that are rare and that many members of the public would otherwise have no chance to read. KanColl is the group who develop The Electronic Kansas Collection, designing formats and presenting the works scanned by the Early Kansas Imprint Scanners, as well as the original works that a number of accomplished authors, historians, and antiquarians submit, and published an electronic magazine, _Voices_ , devoted to things about Kansas, every two months. The Kansas Heritage Group

maintains and develops the Kansas Center for Family and Local History, and is itself comprised of several groups. The One-Room School-House Group gathers and presents materials relating to the one-room school-houses that were a significant educational, social and economic institution in the state until the 1950's. The Kansas State History Association was begun by members of the Heritage Group and has stayed with it even after the Association had its own team of trained web-developers. The members of the Kansas Community Network have built and maintain community sites for every county in Kansas, and recruit members from those counties to be trained to take over management of the web page devoted to their local community. The Kansas Pioneers Group and The Kansas Settlers Group devote themselves to the individual and family histories of the early resident of the state, while The Wyandot Nation and The Pottawatomie Language Center concentrate on two of the early Native American groups of settlers.

This list could be extended, but not all of The Heritage Group deals specifically with Kansas. The First World War Documentary Center, an immense collection of materials located both at the University of Kansas and Brigham Young University concerns itself with placing on the web primary materials dealing with the First World War and doing so with the highest possible standards of accuracy. Inaki Lopez Martin, whose work appears in this volume, maintains the rich and colorful Lopez Martin Collection, another group scans and collects documents important in the history of the United States. And one cannot forget the managers of the twelve discussion lists we maintain.

There are still other project groups within The Heritage Group, as well as a number of individual working on specific topics. Rather than trying to recount them in this limited space, I might suggest that the reader access <http://www.ukans.edu/heritage/thgindex>, which is a collection of pointers to most of The Heritage Group's pages.

It may be that the variety of The Heritage Group's activities and its apparent lack of organization are simply a reflection of the nature of the web itself, but The Heritage Group is sufficiently well unified by its members' adherence of a common set of principles. The first and to many the least comprehensible is that it neither seeks nor accepts funding or any other financial support, either public or private. The Group does not have to invest much time in organizational matters because it owns nothing and needs nothing except the computer facilities to support its work. The second principle is that there are no membership qualifications other than a willingness to participate in the common effort. There are presently about a hundred and fifty active members, not counting the school children (mainly working with the Early Kansas Imprint Scanners) who are represented by their teacher. Among that hundred and fifty, there are priests, doctors, attorneys, factory workers, farmers, invalids, retirees, librarians, computer technicians, writers, photographers, housewives, government workers, military personnel, and even a small but growing number of faculty and staff of the University of Kansas. None of them are paid in any way, and all accept the principle that we do not own the product of our work, but that everything we produce is freely available to the public. The Group does not seek any credit or recognition, although it has nevertheless attracted some. It also accepts the role of facilitating and supporting the efforts of others. The Group has helped to train people in several institutions and organizations that wished to enter what some call "the world of cyberspace." It has even provided them with a good start by transferring a developed site to them. Individual members have drawn on the accumulated knowledge of the entire group to serve as unpaid consultants on web matters to a number of organizations businesses, government agencies, military organizations, public service organizations, universities, and even foreign

governments. Finally, the members of The Heritage Group consider themselves serving the public and rejoice in the opportunity to contribute to the common good.

A web magazine once called The Heritage Group "electronic Franciscans," but in fact we are well aware of economic matters and concerned with how we might contribute in this area. We have done so by offering individuals opportunities to learn new skills and perfect old ones. There are well over a hundred "alumni" members of the Group, members whose skills have taken them into jobs and careers where they can no longer participate actively in our work but still adhere to the Group's principles. The Heritage Group has in fact generated a good deal of economic growth and much of its success in doing so has come from the fact that it has, insofar as possible, kept itself free from any concern with finances in general.

The Heritage Group is, I believe, an example of what can be accomplished by providing people the opportunity to develop their individual talents and to serve the public by doing so. There is so much unused creativity and sense of service in the public at large that we are foolish if we do not try and not only in the field of computer telecommunications - to free it for the public good.

I am now sixty-seven years of age and have retired from active teaching, but I still have more projects than I can possibly achieve in the time remaining to me. That has been my situation since I first logged on, and I have responded by constantly attempting to draw in others to complete the things that I have only been able to begin before leaping to something else that I felt ought to be tried. Looking back on it all, I see myself as a small boy throwing stones into a pond for the pure pleasure of watching the ripples spread, bigger than I could ever be and reaching places where I could never go.

Una nota storica di Lynn H.Nelson a proposito della nascita del Web e della Biblioteca Virtuale di Risorse Storiche WWW VL History Project, presso l'Università del Kansas.

"My idea of what we are doing", E-mail del 17 Giugno 1999 di "Lynn H. Nelson" [lhnelson@raven.cc.ukans.edu] alla lista [histops-l@raven.cc.ukans.edu] dei responsabili di singole categorie a soggetto del WWW-VL-History Main Index [<http://www.ukans.edu/history/VL/index.html>].

"When Tim Berners-Lee was developing the early web sites at CERN and Champaign-Urbana (where Andreesen and others were working on a stable http browser), he set up a page of clickable

links so that the various teams would have easy communication with each other.

When Andreesen's group released Mosaic (html and http had already been released) and it was clear that the number of web sites would proliferate without any central means of registering them, Berners-Lee turned the problem over to Arthur Secret, to whom he had given the responsibility of keeping up the CERN directory. Berners-Lee was in contact with the lynx team here at KU and, when he asked them if they could work up a means of translating a lynx site into an html web site, he also mentioned the impending difficulty of maintaining any sort of directory for users.

By that time, there were two lynx sites operating - KUFacts, the campus-wide information server (CWIS) that the lynx team had been authorized to devise, and HNSource, a directory for historians that I had constructed. I had been working with the lynx team in part because, although their charge was to construct an information server of limited scope, the technology they were using was based on telnet and had no restrictions. I wanted to build an information server with a world-wide reach, and so my interests provided them the opportunity to have an application of their work that would operate beyond the limits that had set for them. This was early September of 1993, and HNSource had been operating since March of that year and was at the time linked with two other sites, Matthew Ciolek's COOMESQUEST at Canberra and Christopher Currie's IHR-INFO at London.

Lou Montulli told Berners-Lee to look at HNSource as a possible start toward a solution of the problem of a web directory, Berners-Lee told Arthur Secret, and Arthur Secret asked me if I would be willing to convert HNSource to a web index to cover sites dealing with History. I agreed, and, on 21 September 1993, WWW History went into operation.

I had also suggested that Arthur get in contact with Matthew, Christopher, and some others who were upgrading their old FTP sites. Arthur did so, and began recruiting other volunteers to handle other topics. Soon people wishing to set up an index contacted Arthur, and he entered their site on the central catalogue that he was maintaining and to which all of the index sites were pointing. The number of index sites grew without much planning since Arthur was inclined to accept and include anyone who applied.

It was not long before Yahoo! began operations, and began by capturing as many links from what Arthur had now named WWW-VL. There was some confusion as to whether or not Yahoo! was not replacing WWW-VL's volunteer effort with a commercially funded enterprise. It was settled amicably. Yahoo! would not raid WWW-VL's links and WWW-VL would continue on the basis that it was fundamentally different from Yahoo! in that its sites were each managed by someone who was more or less of an expert in the field he or she covered and so could more effectively screen out sub-standard web sites as well as those operating primarily with material copied from other sites. Each maintainer understood that he or she was creating an index for professionals or people with an interest in high-quality materials.

When WWW re-organized as W3.org and moved its operations to MIT in the United States, it was funded for the purpose of developing web standards. Berners-Lee decided that W3.org could not continue to have WWW-VL as an integral part of its new organization since its purpose was too different from the new function of W3.org. I suppose that the basic problem was that W3.org was

not being funded to maintain a distributed index to web sites. At the same time, Arthur Secret was looking for a site on which to keep the main catalogue as well as searching for new employment.

WWW-VL drifted for a considerable time, with new sites being added when Arthur had the time to do so, but little being done to eliminate moribund, abandoned, and sub-standard sites or reviewing who was using the name and logo of WWW-VL. It was at this time that I grew frustrated with the stagnation of WWW-VL, and particularly with its failure to include non-English-speaking sites. Matthias Melcher and I got together on this matter. Matthias designed a new History index page for an International Index for History and worked with the History section of WWW-DE to integrate its listings with those of the History Index.

While this was going on, the membership of WWW-VL, joined as they were by a discussion list, more or less rebelled against Arthur Secret's leadership, or lack of it, and appointed a committee to draft bylaws for a central organization of WWW-VL. They have been at it for well over a year now and finally appear as if they will be able to present some articles or organization upon which a sufficient number of members may agree. In the process, however, many of the points of contact between WWW-VL as it operated under the management of Arthur Secret have been lost, and Arthur himself no longer participates in WWW-VLÖ".

Lynn H.Nelson.

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