

An American Arts and Letters Network:

A Proposal

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"It is of greatest import that those eventually responsible for the programs, projects, and general development of the network outlined in this paper never lose sight of the spirit, exuberance, and transcendent quality of the humanities and arts, but rather use technology to promote in every way possible these salient characteristics of the human condition."

I. Basic Assumptions

'Humanities and arts' can be defined as the study and interpretation of human culture and its creative artifacts. This document exists in response to the circumstance that humanities and arts have only a marginal existence in the planning and development of the National Information Infrastructure. There is great urgency for the coordination, planning, and thoughtful assessment of technology in these fields, as well as a great need to wisely integrate the new computer tools into arts and humanities teaching and research.

One of the founding principles of the United States was the belief that a democracy could not succeed without an informed and educated citizenry. This remains a basic assumption of this Proposal, as does the belief that humanities and arts computing is the key to preserving a cultural heritage of documents and artifacts that alone can give future generations an understanding of themselves.

Only this understanding can insure the continuing quality of American life and efficacy of its democratic institutions.

II. The National Scene

II.A. Recent Policy Statements

As noted above, it is unfortunate, in light of the magnitude of potential contribution, that comparably little notice is given to arts and humanities

computing at the national policy level. On 22 February 1993, in Silicon Valley, President Clinton presented a comprehensive vision for future development of what was previously referred to as the NREN, which was re-cast as the National Information Infrastructure (NII). The term 'NII' has since then been universally adopted as the name of the proposed electronic superhighway. While admittedly a drastic leap ahead from the previous administration's virtually ignoring of the NREN bill, the current description of the NII also differs at times from the original legislation. Some points that bear directly on this proposal:

- The terms 'research' and 'education' are rarely mentioned in the February 22 document.
- 'Education' for the most part refers to skills and training; the focus is on training a future workforce for American industry.
- The humanities, or liberal arts, are never mentioned; science and engineering, and mathematics are cited throughout.
- Libraries, the primary repositories of human learning, are mentioned fleetingly, and museums, the primary repositories of human material culture, are not mentioned at all.

This was a formative and defining speech, rationalizing an expensive, high speed computer network in the U.S. While its basic premise is to be lauded, there is actually more discussion in the document about using computers to make federal buildings more energy efficient than there is about supporting learning and research.

During the intervening months, the Department of Commerce has emerged as the central cabinet office responsible for the planning and management of NII funding and development. At a public meeting in September, 1993, and in Vice President Gore's speech on NII policy made in Los Angeles in January, 1994, the focus of the earlier policy statements from the White House was confirmed: the fact that Commerce would be the driving force behind the NII itself was significant and honestly defined the focus of the new electronic superhighway. A team within the Department has been formed of technical and policy experts and representatives from the National Science Foundation to proceed with the NII initiative. Its chief directions remain to improve the skills of the American labor force, to streamline and make more efficient American industry, and to buttress American science research with the most sophisticated technology available.

Also in September 1993 the National Science Foundation announced new funding for competitive projects that involve the large scale digitizing of library holdings and the creation of tools to better access and manipulate this data. The new funding (up to \$1.2 M a year for three or four years per project) is consonant with the previously stated NII goals.

The paradigm for a national digital library that is accessible by sophisticated tools of inquiry and manipulation, is an admirable national objective. Funding for the

digital library project, however, is unlikely to exceed \$25 million and may give only passing notice to humanities and arts materials. A five year program to construct a computer network and files for background checking required by a five day wait for the purchase of handguns is budgeted at \$100 million.

Without questioning the necessity of this program, a similar amount would address many of the needs in the humanities and arts.

It is encouraging to note that in September 1994 the National Institute of Standards and Technology of the U.S. Department of Commerce published the second volume of "Putting the Information Infrastructure to Work." A chapter, written chiefly by members of the National Endowment of the Arts, the National Endowment for the Humanities, the President's Committee on the Humanities and Arts, is devoted to humanities and arts, and argues convincingly that the preservation and access of the nation's cultural legacy contributes to the enrichment of our society. The influence of current congressional discussions can be discerned in the chapter's economic emphasis: museums and other key cultural institutions generate jobs and add billions of dollars to local economies annually.

This document will undoubtedly invigorate the debate concerning the purpose and utility of the NII. Another document published as a correlative to this, "Humanities and Arts on the Information Highways: A Profile," underscores the intellectual, social, and educational benefits of a networked cultural heritage. The "Profile" also contains a valuable index of current computer-based projects and programs in the United States relating to the humanities and arts.

II.B. Historical Alignments

It was not surprising that initial discussion of the NII did not involve humanities and arts. The strong associations of research universities, technology, physical science, and defense forms a complex web over a 50 year period, beginning with World War II and accentuated by the successful launch of Sputnik. Technology has rarely, if ever, during this time been even remotely associated with the humanities and arts.

It is only relatively recently that a number of powerful and compelling programs have emerged that entail the potential to enhance scholarly communication while suggesting significant contributions to a shared, nationally accessible electronic library for the United States. These include large networked resources, multi-media programs, collections of electronic texts in dozens of languages, electronic editions of single authors, [descriptive standards for visual materials](#), as well as online journals that allow iterative knowledge development without a fixed text. Examples include the Center for Electronic Texts in the Humanities (CETH); Adobe; the Art and Architecture Thesaurus; The Perseus Project; the Thesaurus Linguae Graecae; the Dartmouth Dante Project; American and French Research

on the Treasury of the French Language (ARTFL); the C.S. Peirce Telecommunity; the Einstein Papers; the Helios Project; the American Memory Project; the International Visual Arts Information Network (IVAIN); the Canadian Heritage Information Network (CHIN) the Oxford Text Archive; Psycholiquy; Project Open Book; the Text Encoding Initiative (TEI); and [CIMI](#). Many of these incorporate networking as an essential aspect of their design.

One of the major goals of this Proposal is to bring these programs and projects like them to a national level of awareness, to make them accessible through the network, and to ensure future standards of excellence based on their proven success.

III. The Structure of An American Arts and Letters Network

One possible way of structuring this Network is to establish a Task Force of a small, manageable group of high level administrators, scholars, visionaries, and members of the information technology fields that would guide the planning and development of the three-tiered program outlined below.

The Task Force would convene an advisory committee, a larger standing body composed of nationally prominent figures in relevant fields, including the sciences. It may be prudent to convene more than one advisory committee to gain insight on a variety of experiences and aspirations.

The Task Force might seek funding and means by which to continue to:

- a. identify computer based programs and tools that have the potential to transform current means of scholarly communication and methodologies
- b. bring these projects to the attention of university administrators, directors of professional societies, funding agencies, colleagues within specific disciplines, and the creators of other projects to increase the visibility of and appreciation for these projects
- c. identify the aspects of these projects that distinguish them as excellent examples of their genre
- d. ensure responsive and productive interaction of the perspectives, plans, proposals, and experiences of the constituencies of these projects
- e. promote as wide accessibility as possible of these projects using the NII or other related networks
- f. promote the development of international standards for networked access to the results of these projects
- g. foster intellectual collaboration among a variety of constituencies
- h. study and promulgate the implications and transformational potential of these projects

Conceptually, the Task Force and advisory committee(s) might emphasize distributed information. Its resources would not reside on an immense machine

with huge amounts of data, but would be accessed by a variety of machines, from individual workstations to medium sized computers to supercomputer centers.

A key goal of an American Arts and Letters Network would be thus to ensure nation-wide accessibility of literary works, historical documents, hypertexts, catalogue records of works of art and other objects, images, sound, video, and related materials of critical value to humanities study in all types of schools, libraries, museums, and archives [or: "other resource centers"], with the appropriate tools to engage this information for the creation of new knowledge. To use President Clinton's terms, "Throughout history, the arts and humanities have been the cultural signature of this great nation. They have enabled Americans of all backgrounds and walks of life to gain a deeper appreciation of who they are as individuals and who we all are as a society...the arts and humanities teach us in ways that nothing else can about the vastness and depth of human experience." *

Heeding the eloquent words of the President, it is time to incorporate the creative vision, the cultural memory, and the instructive wisdom of the humanities and arts into the National Information Infrastructure.

The Three Tiers of Responsibility

In support of this primary mission three distinct aspects of an American Arts and Letters Network seem the most critical: establishing and maintaining a directory of resources; developing and promoting activities with a physical location as a base of operation; and policy formation and promulgation concerning technology in the humanities and arts.

III.A. The American Arts and Letters Network

The American Arts and Letters Network (AALN) would be composed of directories, programs (including multi-media), tools, databases of texts and images, announcements, and discussion groups available over the NII, which members of the AALN will maintain and update. These directories will include descriptions and methods of access to:

1. Full text databases in the U.S. and overseas Examples include ARTFL, The Dante Project, The Einstein Papers; numerous single author and multiple author databases such as those for Wittgenstein; Schiller; Chaucer; Goethe; C.S. Peirce; the British National Corpus.
2. Centers for full text operations

A list of centers, a directory of key personnel, and a description of the mission and goals of each center, as well as a listing of its resources.

3. A list and description of image databases in the United States and overseas, to include:
 - o a. museums
 - o b. schools
 - o c. libraries
4. Catalogue records of objects, standardized for universal retrieval, access, and manipulation
5. Software applicable for teaching at many levels pertinent to the arts and humanities

This would be an expanded version of plans like the Software Exchange Initiative (SEI) to make available titles and descriptions of software applicable to arts and humanities computing, as well as the programs themselves

6. Centers that specialize in computer aided humanities instruction

For example, the Center for Electronic Texts in the Humanities (CETH) at Rutgers/Princeton; CCAT at Pennsylvania; the Centre for Humanities Computing at Bergen, Norway; the Oxford University Computing Service; the Getty Art History Information Program; the Humanities Computing Facility at UC Santa Barbara; The Academical Village, Univ. of Virginia.

To include a list of recent and future course offerings, information about enrollment, etc.

7. Projects ongoing that utilize information technology in humanities and arts

This is a critically important directory of the thousands of current projects worldwide that apply to arts and letters studies. Many of these remain generally unknown.

8. Electronic journals A list of titles, descriptions, and selected indexes of articles
9. Locations of full text out of print books Titles, contacts, and prices of these online books. This feature will grow into a major component of the AALN in the next 20 years.
10. Multimedia programs that support humanities and arts
11. Hypertext programs in the humanities and arts

Including instructional programs as well as hypertext novels

12. Funding agencies, with descriptions of grants, for projects utilizing technologies in the arts and letters
13. Alliances, coalitions, scholarly societies, organizations, etc. that support technology in the arts and humanities

14. Video databases
15. Databases or locations of online courses (remote learning)
16. Online conference proceedings in applicable areas (education, pedagogy, humanities computing, architectural design with technological components, music, art history, etc)
17. Funding agencies, organizations, scholarly societies, government bodies in support of arts and letters computing outside the United States

III.B. Physical Center

An actual physical location, able to support seminars and small conferences, with some space for a network technician, a project director and supporting staff, might be a longer term goal. It could perform the following functions:

1. Offer seminars and workshops on technologies and teaching methods related to the arts and humanities
2. Offer a visiting scholar fund for in-house residencies
3. Support an exchange program between the U.S. and abroad: exchanges between centers devoted to the production of databases, projects, programs, etc in the arts and letters
4. Issue an annual report on technology in the arts and letters
5. Sponsor television or produce multimedia online productions utilizing, exploring, and demonstrating arts and letters technologies
6. Host small conferences on these issues, as well as conferences that encourage the cross over between humanities and other disciplines
7. Offer laboratory classrooms for teachers to inculcate the use of technologies in their own teaching and research
8. Offer and provide technical expertise for networking projects and programs and databases throughout the U.S.

In general, the physical center will promote the continuation of existing centers and the establishment of other, new centers throughout the United States to replicate the model.

III.C. Policies, Planning and Research

The Task Force, in consultation with its advisory committee(s), might:

1. support the concept of networking and its benefits nationwide
2. promote a national dependence on this network for pedagogical and intellectual enhancement in the teaching and study of the humanities and arts
3. monitor, evaluate, and report on the transformational potential of networking in the arts and letters
4. involve students and teachers, rather than just teachers, as often as possible in its programs

5. publish guidelines and considerations regarding specs. and goals concerning funding proposals for technology in the arts and letters
6. explore, monitor, and promulgate technological transfer from one discipline to another (sciences, arts, anthropology, cognitive studies, etc)
7. promote projects that will take advantage of networks, such as digitizing rural museum holdings, American craft museums and galleries, folklore compilations, etc that are not often promoted

IV. The Transformational Potential

While always a matter of prediction, and in this case prediction hampered by an absence of data regarding the true number of projects currently available, accessible, or in development for humanities and arts computing, the transforming effects of a nationally coordinated effort on behalf of the humanities and arts is not difficult to intuit. The extant results of humanities and arts computing raise the possibilities of: implementing universal standards for text encoding (TEI); a new electronic knowledge base for humanities research (CETH; OTA; ARTFL); a new electronically accessible database for out of print and rare materials (Project Open Book); greatly increased interdisciplinarity in research and teaching (IVAIN; Perseus; Oppenheimer Papers), which is of special concern in light of the traditional discipline-based organization of most colleges and universities; a transformation in disciplines where individuals working in isolation become far more collaborative (access to the Internet has already begun to effect this change); and a metamorphosis to iterative, incremental knowledge in a 'floating' electronic environment in areas where more discrete blocks of knowledge existed before (C. S. Peirce Telecommunity, Psycholoquy).

Looking to the future, these projects and those that follow have the potential to eliminate current disciplinary boundaries; effect profound changes in the tenure process; merge methodologies more typical of the sciences into humanities research; transcend the demarcation between word and image and sound; transform scholarly publication processes; redefine the terms 'text', 'author', and 'ownership;' eliminate the centuries-old concept of a fixed source of information and the accrual of clearly defined scholarly interpretation; contribute to the reorganization of academic institutions; render printed matter obsolescent; introduce research methodologies more directly into classroom teaching; and blur the distinction between graduate and undergraduate education.

In light of this alone it is a responsibility of highest value and return to increase overall awareness of these projects, frame ways and means for supporting them, and to help improve the climate in which these and similar initiatives are conceived and implemented.

It should also be stressed that these methodological changes are not viewed as necessarily good or bad, but probable. Concomitant with new methodologies

may come significant changes in the kinds of questions posed as part of teaching and research in the humanities and arts. No one can ascertain what those questions might be; this Network is thus an experiment, an attempt to take hold of the computer revolution and help steer with as much efficacy and efficiency as possible the development and integration of electronic tools in the humanities.

This Proposal takes exploration and analysis as its guiding methodologies in order to assist others in prediction and decision making. Its main goal, as stated throughout, is to monitor and assist in the development of the National Information Infrastructure in order to give voice to those who will be the immediate inheritors of networked information in support of the humanities and arts.

Afterword

It is of greatest import that those eventually responsible for the programs, projects, and general development of the network outlined in this paper never lose sight of the spirit, exuberance, and transcendent quality of the humanities and arts, but rather use technology to promote in every way possible these salient characteristics of the human condition.

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* from Remarks by the President in White House Presidential Arts Ceremony. October 7, 1993.