

# **Beyond Bibliography: Advanced Information Technologies, the Humanities, and the Library**

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## **ABSTRACT**

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In keeping with ACRL's theme of "partnerships," this paper explores an evolving partnership between the library and computer-savvy humanities faculty regarding the use of advanced technologies for research and instruction. In many ways, librarians have always had partnerships with humanities faculty. Scholarship in the humanities has traditionally depended upon the printed word, both as the medium in which primary research is conducted and the means by which scholarship is disseminated. With the advent of digital technologies, however, printed text is no longer the only medium in town, and the computer screen increasingly supplants the printed page. Advanced information technologies such as http, digital imaging and multimedia, text encoding, and other computing applications have considerably expanded the scope and potential of humanities research. It is incumbent upon us, therefore, to understand and integrate the advanced information technologies through which humanists are increasingly conducting and disseminating their research.

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## **Introduction**

Following a brief overview of humanities computing, the paper provides a case study of a collaboration in progress between the Library and the Advanced Information Technologies Group or AITG, at the University of Illinois at Urbana-Champaign. The AITG, a loosely assembled, grassroots effort aimed at raising the profile of humanities computing on campus, involves faculty and academic professionals from a number of campus units and supports innovative research and development projects in the humanities and interpretive social sciences. This paper describes the mission and activities of the AITG and the opportunities and challenges inherent in this collaboration.

## **Computing in the Humanities**

For the librarian in the not too distant past, "computing in the humanities" meant little more than an online version of the MLA Bibliography. Meanwhile, at the other end of campus, humanities scholars began utilizing computing tools to analyze texts or data in their fields and became increasingly concerned with a variety of computing techniques and approaches. The earliest humanities projects fell in the domain of literary and textual studies, where the use of computers enabled the preparation of concordances and provided the basis of stylistic analyses, vocabulary studies, authorship verification, and the collation of variants for critical editions. Professional organizations such as the Association for Literary and Linguistic Computing and the Association for Computers and the Humanities (<http://www.ach.org> (<http://www.ach.org/>)) supported and promoted this work. This type of research involved the creation of digital text archives with which many of us are now familiar, such as the Thesaurus Linguae Graecae (<http://www.tlg.uci.edu/~tlg/index> (<http://www.tlg.uci.edu/~tlg/index>)) and the Tresor de la Langue Francaise (<http://humanities.uchicago.edu/ARTFL.html> (<http://humanities.uchicago.edu/ARTFL.html>)).

While some intrepid humanities librarians may have been involved at this point, the scope and audience of such projects was relatively specialized. Nonetheless, pioneering centers such as the Center for Electronic Texts in the Humanities (<http://www.ceth.rutgers.edu>) at Princeton/Rutgers and the University of Virginia's Electronic Text Center (<http://etext.lib.virginia.edu>) were affiliated with libraries, and played an important role in research and development of electronic texts. A number of libraries now host e-text centers, which range from basic collections of commercial full text CD-ROMs, to fully equipped centers involved with creation, training, and use of digital texts. The advent of the web coupled with advances in image and text digitization, multimedia, and hypertext, changed the picture (literally), and computing applications in the humanities expanded beyond textual analyses. Humanities disciplines besides literature and linguistics adopted and adapted these new technologies, and a host of innovative projects were conceived. The American Memory Project (<http://lcweb2.loc.gov>) at the Library of Congress and RLG's Studies in Scarlet (<http://www.rlg.org/strat/projdcp.html>) represent but two ambitious projects involving digitization and dissemination of primary source materials. The number and variety of these projects is growing exponentially and they are increasingly sophisticated in their use of technology.

How do these centers and projects evolve and what is their relationship to the library? The next section offers a case study of a partnership in progress, the Advanced Information Technologies Group (AITG) and the library at the University of Illinois at Urbana Champaign.

## **The Advanced Information Technologies Group**

### **Background**

The Advanced Information Technologies Group (<http://www.grainger.uiuc.edu/aitg/default.htm>) at the University of Illinois was established to support innovative research and instructional projects in the humanities and interpretive social sciences. In the late 1980's, Professor Robert Alun Jones of the Departments of Sociology and Religious Studies created the "Hypermedia Lab," a computing site where interested faculty could explore the applications of hypertext to the humanities and interpretive social sciences. In 1989 he joined forces with interested humanities faculty and academic professionals from the National Center for Supercomputing Applications, the College of Liberal Arts and Sciences, the Krannert Art Museum, and the University Library, and became officially known as the Advanced Information Technologies Group or AITG. Though receiving support from various campus units, the AITG did not have an administrative "home" until 1995, when it became formally affiliated with the University Libraries.

Despite its official title, the Advanced Information Technologies "Group" is just that--a loosely affiliated group of faculty members with an enthusiasm for the growing role played by information technologies in their teaching and research. At present, the AITG is under the directorship of Professor Robert Jones and includes approximately 50 members, with a healthy proportion of librarians and faculty from the GSLIS. An Advisory Board appointed by the University Librarian oversees activities and advises on strategic opportunities and future directions. The budget of \$180,000 (funded by several campus units) is used to support AITG projects, a faculty seminar, and graduate assistants. At this point however, the AITG remains a "virtual" campus unit, having neither an office, nor a computing site.

### **Mission and Activities**

The overarching goal of the AITG is integrate humanities computing into the research and instructional missions of the University. To accomplish this, the AITG annually offers a week-long seminar intended to introduce interested faculty and academic professionals to a wide variety of computing applications and

successful projects. In addition, the AITG supports humanities-related projects which involve the innovative use of technologies. In this sense, the scope of the AITG is broader than merely the production of high quality electronic texts. Projects might range from high-resolution digital imaging of ancient Ugaritic clay tablets to a multi-disciplinary, multi-media website for the study of Mississippi River culture, to a hypertextual archive of research on the correspondence of Marcel Proust. Moreover, the AITG is interested not only in computing applications, but in learning about new technologies, how they are used, their social and ethical implications. Members meet regularly to discuss ongoing projects and new project proposals, as well as discussing implications of campus initiatives involving technology, such as distance education.

### **AITG Seminar**

Offered annually to interested members of the campus community, the intensive, week-long AITG Seminar raises both the computing skill level and the consciousness of the participants. The seminar features the latest information technologies of potential value in the humanities and social sciences and highlights successful applications. The 1996 seminar focused on the use of the Internet and the World Wide Web for research and instruction, and included topics such as:

- Text encoding for online distribution
- Digitizing, storing, searching, and retrieving online multimedia documents
- Digital libraries, electronic books and journals, hypertext and hypermedia
- Using the Web for creation, communication, and collaboration

Participants were introduced to a variety of software products such as Java, NetWork Place (collaboration software), Adobe Acrobat for electronic text reproduction and distribution, PageMill and SiteMill for text encoding. They received instruction in webpage design and website management; and learned techniques for finding and managing information on the web. Equally important, the seminar served as a forum for discussion of the impact of these new technologies on traditional institutions such as the classroom, the museum, and the library. The seminar also highlighted specific projects by AITG members which reflect diverse, innovative applications which can serve as models or prototypes for similar projects.

### **Project Support**

Sponsored projects lie at the heart of the AITG. Members review individual proposals and provide "seed money" to those which involve the use of particularly innovative applications of computing to humanities research and instruction. The AITG then serves as a forum or think tank through which members can learn about and discuss these initiatives, provide feedback, and adopt or adapt the applications to other projects.

In general, the AITG supports two types of projects: technologically-enhanced projects which depend on the use of high-performance computing to create and disseminate scholarly or artistic works, and technologically-focused projects which look at the ways in which computing alters the production and dissemination of knowledge. Examples of technologically-enhanced projects include an exhaustive web-based resource on the life and works of Emile Durkheim and a hypertextual archive of scholarship on Marcel Proust's letters.

The second category of projects -- usually involving faculty in the social and information sciences -- concerns study of the use of advanced information technologies. The projects in this category are less likely to result in a "product" such as a website or digital archive, but represent a wide spectrum of initiatives ranging from support for a course entitled Literacy in the Information Age to research on how new technologies are used by special interest groups.

Despite its very real activities and members the AITG is a "virtual" center, without benefit of its own computing facilities and support staff. Its role is to support projects by creating an environment where professionals can contribute expertise in their respective areas, and to advise on other avenues of technical and financial support. Actual project development is done by the individual faculty member.

## **AITG and the Library**

Collaboration--bringing together expertise from diverse disciplines and units--results in a creative synergy. It is with high expectations therefore, that the AITG became administratively affiliated with the University Libraries early in 1996. According to Professor Jones, "This decision reflects recognition of the importance of networked information systems, distance learning, multimedia, digital libraries, electronic texts, and other new technologies that factor into the future of the University Library and the services it provides."

Since the AITG's relationship to the library is still in its infancy, the library has yet to clearly establish its responsibility and role. Practically and symbolically, however, the library has much to contribute and to gain. On a practical level, the library serves as a rich repository for potentially digitized resources, from familiar works in the public domain to rare manuscripts and letters. Moreover, through association with the AITG, librarians both contribute and gain expertise in advanced information technologies. Librarians have been directly involved with the Seminar both as presenters and attendees, teaching strategies for finding and utilizing resources on the web, and learning the technologies involved in text digitization. For example, a relationship has developed between the AITG and the Digital Library Initiative, as well as the Library's Digital Imaging Project, which in digitizing some of the library's unique visual resources. Participation in the AITG's ongoing presentations and discussions on topics such as distance learning, visual literacy, and intellectual property rights provides enables the library faculty to develop a high profile on campus within the campus community.

Though the groundwork has been laid, much remains to be done. Plans are underway for providing a physical site for the AITG within the library. A physical presence will facilitate research and development of technologically enhanced humanities projects, and provide for instructional opportunities. The AITG's concern with studying the impact of technologies feeds directly into critically needed research on the impact of an increasingly digital collection on library user needs and behavior.

## **Opportunities and Challenges**

During the fall semester of 1996, Professor Jones spoke at a Library Colloquium entitled "What Humanities Faculty want from the Library of the Future," which provided an opportunity for lively discussion on the role of the library and its traditional services and collections. He challenged library faculty to develop a greater awareness of the rich humanities resources that don't fall between book covers. Librarians, who seek to strike a happy medium between Gutenberg and Gates, voiced concern that technology not obscure centuries of scholarship never destined to be digitized. Librarians are challenged, therefore, to collect, manage, and provide intellectual access to both traditional and digital materials. Librarians are rising to the challenge of providing intellectual access to electronic materials--concepts such as "metadata" or the Dublin Core, or projects such as OCLC's NetFirst, seek to rescue fugitive electronic resources from obscurity and put them into a context familiar to library users. And as libraries commit resources (equipment, staff, training) for the creation of these materials, humanities librarians become increasing literate in their use.

In conclusion, advanced information technologies are opening up a new world for humanists, and librarians have an important role to play as partners in these exciting endeavors. The Advanced Information Technologies Group represents a viable model for bringing librarians, humanists, and computing staff

together to as partners in this endeavor.