MSU’s MATRIX: INTERFACES FOR A FUTURE HUMANITIES

MATRIX – The Center for Human Arts, Letters, and Social Sciences Online

Appearances can be deceiving. Take MSU’s stone, ivy-strewn auditorium building, just north of the Red Cedar river on the campus’s near-west side. It’s the kind of building one expects to see on a nineteenth-century land grant university campus. The time-honored arts of theatre, dance, and music find an almost organic home in such a place. The unsuspecting theater buff out for a night of Shaw or Brecht might be surprised to learn that this auditorium also houses MATRIX, a cutting-edge digital research and archive initiative linking MSU to the world in unique ways. What do the fine arts have in common with a research center committed to integrating digital technology and the humanities? The answer is creativity, according to Dr. Dean Rehberger, Associate Director of MATRIX. In the same way that creative activity and vision inspire the fine arts, they inspire the people at MATRIX to search for fresh ways of bringing the humanities into a world increasingly driven by information technology (IT).

Also known as The Center for Humane Arts, Letters, and Social Sciences Online, MATRIX is staffed by fifty-eight individuals culled from a variety of intellectual backgrounds and interests inside and outside the MSU community. University professors from the humanities and computer sciences work with graduate students from history, English, and American studies departments. The nuts-and-bolts programming often falls to a basement full of graduate and undergraduate whiz kids. All told, the staff consists of twenty-four graduates and undergraduates, four on-call temps, eighteen full-time academic specialists, directors, and support staff, two part-time assistants, and a Fulbright scholar. Together, the MATRIX staff has fostered a strong research environment in digital technologies that is at once laid-back in its approach and intensive in its aims.

MATRIX is devoted primarily to the development and dissemination of research in “humanities technology.” Humanities technology merges humanist concerns and inquiries—in language, history, social science, philosophy—with cutting-edge developments in IT. The name “MATRIX” is meant to capture the forty-plus years of communication between computer technology development and application and humanities research. It has become such an important part of what humanists do today that it practically unthinkable to separate out tools like the internet and digital technology from humanist research.

The MATRIX staff is committed to advancing traditional disciplines in non-traditional ways through the mediating potential of computers and other forms of technology. They work hard to produce usable technology for public and educational consumption and practice. In addition to designing IT tools for academic users, MATRIX energetically pursues portal technology that will empower teachers and students at all levels to access the ever-increasing resources available online. The folks at MATRIX are above all committed to democratizing digital technology, making its benefits and potential available to as wide an audience as possible, both inside and outside the academy.

Individuals from many disciplines have engaged MATRIX at MSU, from both the IT and the humanities sides of the ledger. Partnerships have been established between faculty in music, speech and audiology, history, education, museum studies, and other disciplines. MATRIX works closely as well with International Studies and Programs and has on-going long-term projects with both the African Studies Center and the Center for Latin American and Caribbean Studies. Faculty associated with MATRIX on various projects include Anita Skeen, Steve Rachman, Ken Harrow, and Olabode Ibironke in English, Jeff Charnley, Leonora Smith, and Nancy Bunge in Writing, Rhetoric, and American Cultures (WRAC), Lewis Siegelbaum, David Bailey, Lisa Fine, David Robinson, Alan Fisher, Roger Rosentreter, and Richard Thomas in History, Marsha McDowell in Art History, Lynette Overby in Theatre, Mark Sullivan in Music, Scott Whitford in Anthropology, Brad Rakerd in Audiology and Speech Sciences, Deo Ngonyani in Linguistics, and David Wiley in Sociology.

MATRIX Beginnings

MATRIX began in 1994 when newly-arrived Assistant Professor Mark Kornbluh and the College of Arts and Letters agreed to host at MSU an online scholarly resource called “H-Net: Humanities and Social Sciences Online” (see the article “MATRIX Projects” in this issue and http://www.h-net.msu.edu). Because H-Net was set up to assist both humanists and social scientists, from the beginning it embodied the spirit of interdisciplinarity and collaboration that defines MATRIX today. MSU provided the space and material support that was to make the university a useful home
for H-Net, and it soon paid dividends: “H-Net Reviews” quickly established itself as a groundbreaking online academic journal.

Less than two years after his arrival, Kornbluh secured two important grants from the National Endowment for the Humanities in support of H-Net. Additional monies came into MATRIX from the Mellon and Ford Foundations, the U.S. State Department, and the U.S. Agency for International Development. In 1997, MSU hosted a major conference, “Envisioning the Future: Humanities Teaching in the Digital Age.” This activity, combined with the rapidly evolving “H-Net Reviews,” made MSU an increasingly appealing permanent location for H-Net. Eventually, the H-Net council thought it would be a good idea to move all of H-Net’s activities to MSU and charge Professor Kornbluh with the responsibility of housing them in a center of some kind. Thus, MATRIX was born.

With the support of the Provost’s office and the College of Arts and Letters, MATRIX was installed in the more spacious auditorium building. This new space, combined with the continued influx of grants and other resources, encouraged Kornbluh to expand the breadth and depth of MATRIX’s projects. The challenge now became how to develop the understanding of mission, the research portfolio, and the professional staff necessary to become a more visible institutional presence on and off campus.

The MATRIX Portfolio

The mission of MATRIX, according to Kornbluh, is “to serve as a catalyst for and incubator of the emerging fields and disciplines resulting from the integration of the humanities with information technologies.” MATRIX has positioned itself at the cutting edge of this integration through innovative professional web design and software development. Three areas of concentration support this mission: research, education, and outreach.

MATRIX researchers constantly seek new ways for academics, teachers, and students to access information. Built into this notion of “access” are four additional conditions for a successful program: equity, or the technical availability of resources for as much of the general population as possible; usability, or the user-friendliness of the resource; context, or the manner in which information is translated from the source to the user; interactivity, or the extent to which users can be both consumers and producers of information. Together, these conditions help create highly functional digital products available to a user-audience with IT skills ranging from rudimentary to advanced.

At the foundation of MATRIX’s software development is “REPOS(itory): A Modular Approach to Resource Building and Cross Collection Searching.” REPOS is a database-driven, online digital repository whose unique structure allows institutions tremendous flexibility as to what kinds of digital information they can include in their online projects. Currently, fourteen national and international institutions use REPOS for the digital library collections. REPOS allows clients more autonomy in making design decisions, thus making them less dependent on design “experts” to make decisions for them. This is a good example of how MATRIX works to “seamlessly” integrate academics and technology. Scholars and others can use the technology without being particularly computer savvy, and the technical programming remains, so to speak, in the background, behind the scenes.

MATRIX staff is also researching a number of “testbeds,” or experimental digital platforms, in audio sampling and digital preservation. The “Historical Voices” testbed, for example, is dedicated to spoken word recordings and the development of audio sampling techniques and digital preservation (see the article “Inside the Matrix” in the current Post). Testbeds like this will be useful in preserving and indexing a wide range of socially significant audio materials, such as recordings by scientists, artists, politicians, athletes, religious leaders, oral histories, academic lectures, and so forth. Once a testbed becomes fully functional and accessible, it provides invaluable support for scholars and laypeople who seek digital audio resources for teaching, research, and learning.

Once testbeds make the grade, they graduate to the status of “project.” MATRIX is currently supporting a host of interesting projects. In addition to the “Historical Voices” project, MATRIX is also hard at work testing and updating “African Online Digital Library,” “The Quilt Index,” “American Black Journal,” the “Flint Sit-Down Strike Audio Gallery,” to name only a few.

MATRIX researchers devote substantial energy to IT’s educational potential and development. MATRIX researches and evaluates the effectiveness of current IT training methods and materials for online education. Much of its research focuses on development for “end users” such as elementary and high school teachers and students. Part of the research challenge for MATRIX in the arena of education is to figure out how to effectively empower end users, including cultural heritage workers, to proactively use the technology at their disposal. For MATRIX, the intersection of education and IT comes down to putting good tools in the hands of capable students so that they can make competent, useful decisions in respect to their research interests.

The ongoing digital preservation of multimedia and cultural heritage, combined with the explosive growth of online resources for humanities teaching and research, has created a need for well-trained educators, cultural heritage workers, and community activists fluent in digital media. MATRIX has worked as both a partner with educational institutions as well as a training resource for educators. Projects like the Humanities Computing Certificate Program, Civics Online, and Exploring Africa, serve to enhance IT training at the graduate, undergraduate, and secondary levels of education. Through partnerships and international foundations, MATRIX has provided training in the form of several programs, including the Internet and Women’s Democratic Organizing (IWDO) program and the South African National Cultural Heritage (SANCH) program.

Libraries have increasingly digitized their holdings and made them available online. As the sheer volume of digital material on the Internet reaches unprecedented levels, users of all sorts will continue to search for ways to integrate this material into their own research and educational practices. A central focus of MATRIX’s research program is to develop the means by which students may interact with online media and integrate digital resources into their own projects.

The research and educational projects of MATRIX will continue to rely on the humanities for the creative edge necessary to make IT live and breathe. As the humanities continue to integrate IT into its research methodologies, IT will, in turn, change in new and unexpected ways. This is, perhaps, the single most important aspect of MATRIX’s research endeavor and evolution. As Dr. Rehberger has pointed out, computer technology by itself is of very limited interest. What is interesting, Rehberger says, is “the creative aspect of IT”.
The technology really isn’t that interesting in terms of use, it’s the creativity. It’s not the fact that you can get the webpage, it’s what’s on the webpage. It’s the writing, the music, the video, the animation. So the humanities are key for developing the creative aspect of IT. It’s really important for the humanities to capitalize on that. But to do that effectively, people need to have an understanding of what computers can and can’t do, their limitations. And what’s always been true in movie making and theater is especially true of the world of technology—it’s collaborative in nature.