

The retroTECH Program at the Georgia Tech Library: Digital Preservation through Access

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ABSTRACT

This poster outlines the retroTECH program at the Georgia Tech Library, an innovative model of digital preservation in which hands-on access and campus community engagement are at the forefront.

General Terms

Institutional opportunities and challenges; Frameworks for digital preservation; Preservation strategies and workflows; Innovative practice; Training and education.

Keywords

Digital preservation; access; personal digital archiving; community engagement; teaching and research; vintage technology; digital archaeology; hardware and software preservation.

1. INTRODUCTION

For decades, archives have often emphasized preservation over access and waited passively for collections to come to them. With digital archives, however, obsolescence and the rapid pace of change have made it increasingly apparent that everyone must be an archivist of their own materials and that access itself can facilitate preservation. Archivists must act and engage our donors and users in the now. These ideas were the impetus for the retroTECH program at the Georgia Tech Library and are the focus of our iPres 2015 poster.

Built on collaboration with a strong multidisciplinary community of campus supporters and designed by a team of librarians and archivists with diverse expertise, retroTECH is a public-facing program in which the Library partners with the Georgia Tech campus community to design the future by hacking the past. With the emerging retroTECH Lab as a home base, students, faculty, staff, and alumni can undertake hands-on research, peer-to-peer personal archiving, curricular activities, and outreach around vintage technologies.

The inspiration for retroTECH grew out of user research interviews conducted with faculty in 2013 in preparation for a

Library building redesign, and since then, has gained significant momentum. The idea takes what archives around the world are doing behind the scenes with digital forensics and born-digital workstations, combines it with a hackerspace ethos, and brings everything out for public-facing access, empowerment, and engagement. With the retroTECH program, we aim to reimagine digital archives by offering our technologically-savvy patrons a chance to use vintage, forensic, and emulation equipment typically restricted to library staff, museums, and specialized collectors. In addition to these models of institutional digital preservation practice, retroTECH has also drawn inspiration from the success of access-focused programs such as the Media Archaeology Lab in the Department of English at the University of Colorado Boulder¹ and the Computer and Video Game Archive at the University of Michigan Library.²

retroTECH has not only become a much-needed new library service; it represents a rich, unusual alignment of the Georgia Tech community's interest in the history and future of technology with Library faculty members' professional interests in digital data, archiving, visualization, and preservation. retroTECH aims to bring archiving to the people--and the people to the archive. Our conference poster outlines the spaces and services we are developing as part of the retroTECH program, including activities to gather requirements, pilot ideas, and design a lab that will open in our renewed Library building in 2018.

2. LAB IDEATION AND DESIGN

As we have envisioned it, the retroTECH Lab will not only serve as a hands-on historical reference point; it will activate new ideas about future technology and preserving innovation. The Library and Archives acquired our seed collection of five vintage workstations from the alum and former faculty member whose interview inspired the idea. Along with two emulation workstations, currently in development, these machines form the core of our pilot retroTECH Lab space, where we are testing programming to be implemented in our future permanent lab in the renewed building.

The vision for the retroTECH Lab entails a highly curated combination of classic, vintage hardware and software and cutting edge modern tools for emulation. Hands-on access, rather than preservation of the materials as museum objects, will be the main driver behind our collecting. We believe the benefits of easy

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¹ <http://mediaarchaeologylab.com/>

² <http://www.lib.umich.edu/computer-video-game-archive>

access and open, experiential learning outweigh the potential risks of damage to the equipment. Our poster delineates the kinds of technologies—both vintage and new—that we envision in the program going forward. We also highlight the objectives of the program, including our belief that retroTECH will foster the kind of hacking that makes connections between the classic and the cutting edge and how we both engineer and are engineered by devices. The retroTECH Lab will share space with the Visualization Lab in our renewed library, further underscoring the links between past and future, between hardware and software, and between the material world and the virtual landscape. The poster presents graphical representations of our lab prototyping and ideation activities to date.

3. CURRICULAR PARTNERSHIPS, RESEARCH, AND PEER-TO-PEER ARCHIVING

Curricular partnerships are another crucial part of the retroTECH program. In spring 2015, the Library partnered with two instructors in the Writing & Communication Program to develop and implement a retrogaming assignment for six communication classes that were focusing on narrative in videogames. 132 students played computer games from the 1990s and early 2000s on the retroTECH computers and then prepared a blog post reflecting on the experience. Students also completed a post-gaming survey regarding their retroTECH experience and interests. Our poster highlights the feedback and ideas received from students who engaged in the retrogaming experience. We hope to expand our retroTECH curricular engagement moving forward to include working with classes in disciplinary areas such as the College of Computing, and we indicate other planned and potential opportunities for course-integrated use of the retroTECH technology.

We also are expecting to support faculty and researchers at Georgia Tech using the retroTECH equipment, and this section of the poster describes areas of research interest identified through user research. Possible areas of study might include historical hardware and software engineering, media archaeology, the evolution of game creation, emerging software development, and more. Furthermore, we aim for retroTECH to serve as a platform for users to conduct peer-to-peer digital archiving, working together and combining diverse expertise in order to recover, access, emulate, and preserve materials needed for research, for personal digital archiving, or for donating to the Georgia Tech Archives. We hope to create a cultural mindset that emphasizes the importance of archives, digital heritage, and long-term thinking, and to connect with the potential donors of born-digital collections that will fuel the Georgia Tech Archives' collection development strategy and attract researchers from across the country.

4. OUTREACH

In addition to academic and archiving partnerships that strengthen relationships with the teaching and research community on campus, connections with the vintage technology community have

become just as important in our efforts to develop the retroTECH program. Community groups interested in exploring the history and evolution of technology are both potential partners in programming and sustainability and also sources of inspiration for our work moving forward.

In spring 2014, we presented at the Vintage Computer Festival Southeast alongside many vintage technology aficionados on the benefits of vintage computing in a library environment. Our poster will elaborate on our efforts to forge alliances with the regional historical computing groups and organizations behind this event and others, such as Maker Faire Atlanta, many of which are fueled by Georgia Tech alumni. Partnerships with these communities could facilitate volunteer opportunities, collection development and maintenance expertise, donations of equipment or archival collections, workshops, and support for the retroTECH program and the Library.

In fall 2014, we turned our outreach inward, curating a crowdsourced, rotating exhibit in the Library of vintage tech loaned by faculty, staff, students, and alumni. Fans of the exhibit cast over 3,100 online votes for their favorite items. Through the exhibit, we established a retroTECH Interest Group of over 100 people from all six academic units on campus, started a listserv dedicated to vintage technologies at Georgia Tech, and distributed a Community Engagement Survey to generate programming ideas. This section of the poster outlines the survey results to date, along with techniques for building community and sustaining momentum in the early stages of a new initiative, through innovative user-centered participatory programming.

We also detail outreach efforts planned for the pilot phase of the retroTECH Lab, including a partnership with the College of Computing on events for their 25th anniversary, and future outreach ideas, such as collaborating with an academic department to establish a permanent student assistantship for the Lab and partnering with other institutions on grants and events.

5. SIGNIFICANCE FOR THE DIGITAL PRESERVATION COMMUNITY

Through our poster outlining the retroTECH program, we aim to offer a model of digital preservation where access is at the forefront. We hope to illustrate how the traditional activities and expertise of digital preservationists can be enriched through participatory programming, a hands-on hacking mindset, and a peer-to-peer culture defined by long-term thinking. The poster offers the community a chance to learn from the challenges and successes of the retroTECH program to date, invites collaboration with digital curators working on allied projects, and serves as an inspiration to institutions hoping to establish similar programs.

6. REFERENCES

- [1] Media Archaeology Lab, Department of English, University of Colorado Boulder, <http://mediaarchaeologylab.com>.
- [2] Computer and Video Game Archive, University of Michigan Library, <http://www.lib.umich.edu/computer-video-game-archive>.