Technological change
is fundamental to
the advancement of
the human condition.
-- Georgia Tech Mission Statement

You can't really understand
what is going on **now**
unless you understand
what came **before**.
-- Steve Jobs

In order to advance the human condition,
we must understand technological change.

We must understand what came before.

retroTECH's vision is to inspire a culture of long-term thinking, ongoing access to technological heritage, peer-to-peer discovery, and individual empowerment. Through retroTECH's services and space, students, faculty, and community partners engage in experiential learning and hands-on research and development related to how our lives shape technology--and how technology shapes our lives--over time. It's also a skunkworks, an R&D arm for the archives.

The inspiration for retroTECH grew out of service design interviews conducted with faculty in 2013, and our temporary pilot lab launched in 2015. When the renovated library opens in January, retroTECH will be in a small permanent lab, co-located with a larger lab for high-end computing and data visualization, underscoring the links between past and future, hardware and software, and the material world and the virtual landscape.

Since our pilot opened, we've been engaged in research to identify how our potential user communities might interact with retroTECH, including how and why they're interested in emulation. At Georgia Tech, hundreds of students each semester use emulators to build programs for Game Boy Advance and Atari and faculty assign their students to use the Internet Archive's Software Collection. The majority of respondents to our 2016 survey reported having used an emulator or virtual machine before. And when prompted to name a software program that made them feel

nostalgic, one respondent said “Jeez...y'all are gonna get me all misty-eyed. America Online (that's AOL for the youngsters).” Perhaps that was the seed of inspiration for our FCoP project, which we’ve nicknamed retroTECH Online.

In 2017, our research assistant built a mobile emulation workstation we call the Emulation Time Machine, which uses RetroArch and LaunchBox to provide access to hundreds of emulated games from the arcade era to the recent past. The Time Machine is dazzling, but its setup was incredibly customized, and it’s just one laptop on a cart -- there are only so many people we can reach using one cart. It became clear that our next aspiration should be online -- to dramatically increase access to retroTECH’s collections and expand our community.

We envision retroTECH Online as an extension of our lab, where community members can utilize emulated software from our collections for teaching and learning and explore the stories surrounding that software. We’re starting to explore possibilities for using retroTECH Online to illuminate the people at the heart (or too often, the undocumented peripheries) of Georgia Tech’s technological pasts. If possible, we hope to enable users to leave personal traces within the retroTECH Online world, building layers of use and reuse, memory and re-memory.

By considering questions of community-building, we hope retroTECH Online might push beyond established virtual reading room concepts, bringing to life the human stories behind software creation, use, and preservation, and inspiring new stories to take shape.

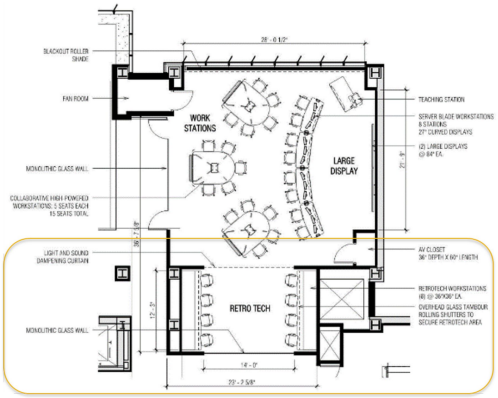
And this brings me to what I think is the real research question at the heart of our FCoP project: how can we transform a small box of a lab space into a dynamic, broadly accessible landscape of memory-making, a virtual reading room into a community concerned with how technological change impacts the human condition, an ongoing celebration of retroTECH’s values? From watching the magical looks on people’s faces as they walk into our lab and from listening to them as, transported, they launch immediately into particular memories of their childhood or their parent’s, I know that software can be an instigator of multigenerational connection, and that emulation can create empathy.

Over the past few months, our team has been engaged in the specific work of preparing for our retroTECH Online pilot, while simultaneously scaffolding the general, overarching strategies that will define our community-building efforts going forward. Our student research assistants have been mining alumni magazines and campus publications for mentions of software projects developed at Georgia Tech that might

be candidates for retroTECH Online. They are learning about oral history best practices, identifying examples of videos that bring cultural and personal stories to life, and reading up on the history of online communities.

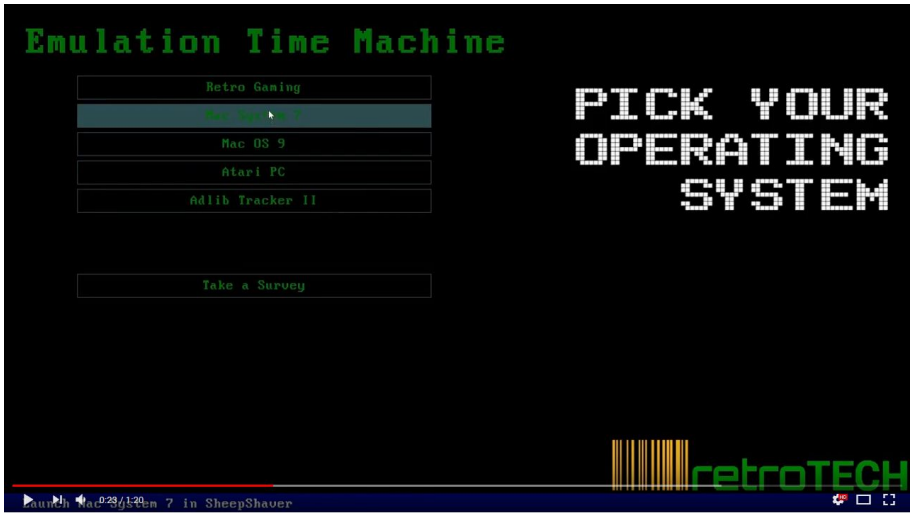
Meanwhile, my colleagues and I have been developing an overarching documentation strategy focused on computing cultures at Georgia Tech. Based on our inventory of existing archival holdings and gaps therein, the first phase of our strategy will likely focus on women, people of color, and student groups involved in Georgia Tech computing cultures, relying on proactive collecting as well post-custodial efforts.

The documentation strategy will be incomplete, however, until we convene our planned Advisory Board in 2019, with representatives from the student body, faculty, alumni, Atlanta's entrepreneurial scene, and the region's computer history enthusiasts. The Board members will serve with us as co-creators and co-enactors of the documentation strategy on an ongoing basis, helping to ensure that our efforts remain grounded in the perspectives of the community we seek to document -- and hopefully, through retroTECH Online, to grow.


BLACKOUT ROLLER SHADE
FAN ROOM
MONOLITHIC GLASS WALL
COLLABORATIVE HIGH POWERED WORKSTATIONS, 1 SEATS EACH 15 SEATS TOTAL
LIGHT AND SOUND DAMPENING CURTAIN
MONOLITHIC GLASS WALL
WORK STATIONS
LARGE DISPLAY
RETRO TECH
TEACHING STATION
SERVER BLADE WORKSTATIONS 6 STATIONS 27" CURVED DISPLAYS
(2) LARGE DISPLAYS @ 84" EA.
AV CLOSET 36" DEPTH X 60" LENGTH
RETROTECH WORKSTATIONS (6) @ 26"X36" EA.
OVERHEAD GLASS TAMBOUR ROLLING SHUTTERS TO SECURE RETROTECH AREA
28' - 0 1/2"
14' - 0"
22' - 2 5/8"


YOUTUBE
HALLOWEEN
HOLA
5K


retroTECH
Online


Emulation Time Machine
Retro Gaming
Mac OS 9
Atari PC
Adlib Tracker II
Take a Survey
PICK YOUR OPERATING SYSTEM
retroTECH
0:23 / 1:20

Core Values

Long-term thinking

Peer-to-peer discovery, **empathy**, and collaborative expertise

Individual **agency** over personal histories, archives, and data

Hands-on experimentation, research, and **discovery**

Voices of Georgia Tech's technological pasts, presents, and futures

How can

a small lab space + a virtual reading room =

a **community**?

retroTECH Team

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Images on slide 9 created by Jerrold Mobley

Other images from the Georgia Tech Photograph Collection