

Sustaining Software Preservation Efforts through Use and Communities of Practice

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Software preservation communities

- ⦿ Keeping software to examine and execute – importance
 - Cultural, historical, legal, business
 - Software in computational research
- ⦿ Many discussions on challenges – technical and human
 - Actually doing it is hard
 - Labor is usually the most expensive part
- ⦿ How can local communities be sustained to further software preservation work?

Who we are

Ken McAllister

Professor of Public & Applied Humanities;
Associate Dean of Research & Program
Innovation, College of Humanities; co-
director LGI



Judd Ruggill

Associate Professor and founding
Head, Dept. of Public and Applied
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Monique Lassere

Digital Preservation Librarian, UA
Libraries; Project PI

Fernando Rios

Research Data Management
Specialist, UA Libraries

Collaboration potential

- LGIRA: One of the world's largest research archives of videogames and their paratexts
- A circulating archive
- Digital preservation
- Data management & research reproducibility
- Connections to the local research & data science community

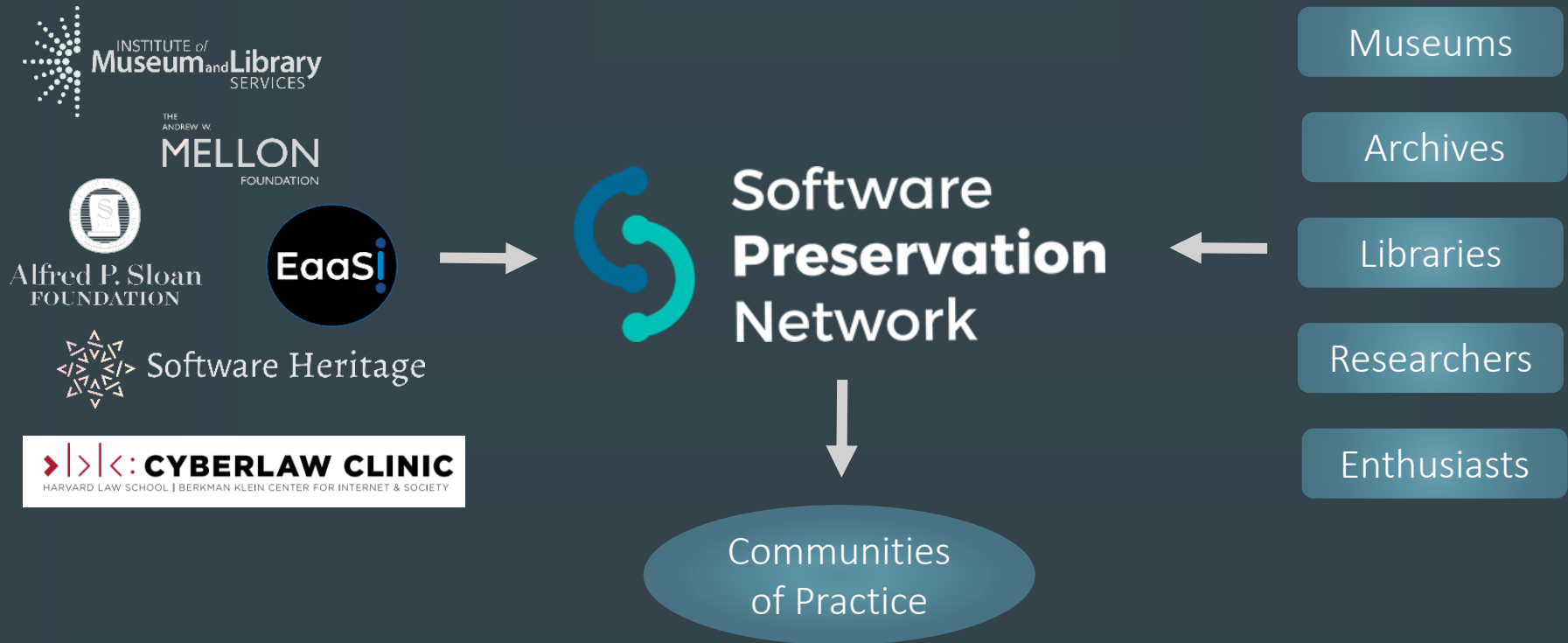


Emulation for
LGIRA?
Skills sharing ?



The right opportunity

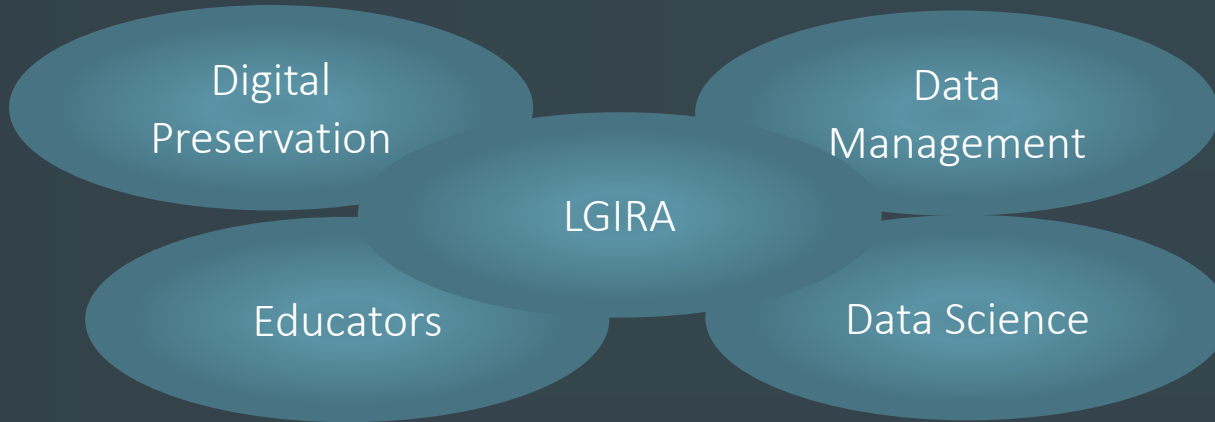
- Software Preservation Communities



Fostering Communities of Practice

- ◎ A concerted effort to foster software pres. Communities
 - “The Fostering a Community of Practice: Software Preservation and Emulation Experts in Libraries and Archives (FCoP) [IMLS grant RE-95-17-0058-17] **project aims to broaden participation in software preservation and to empower librarians, archivists, and curators to address the key challenges to providing long-term access to software-dependent cultural heritage”**
- ◎ Participating organizations
 - University of Virginia, Guggenheim, Georgia Tech, University of Arizona, Living Computers Museums + Labs, University of Illinois

Why?



LGIRA: video games

Research reproducibility

Teaching

Building a digital preservation program

- ⦿ Resource constrained environments
- ⦿ Value of a group effort: collective knowledge

FCoP at UofA

- ⦿ Prototype a workflow for LGIRA involving emulation
- ⦿ Explore collective knowledge gathering at the local level
- ⦿ Initiate an interest group

We envision a community of practice at the University of Arizona that fosters discussions and illuminates challenges related to software preservation—especially as they relate to video games—with a view towards bridging local gaps in knowledge and practice.

The UA Soft. Pres. Interest Group

- ⦿ UA-SPIG initiated in Nov 2018

The UA-SPIG will aggregate relevant and interested stakeholders and act as a local nexus for software preservation interest and activity at UA and in the local community

- ⦿ Invitations sent to broad cross-section of UA and local community
 - Computer Science, Engineering, Architecture, Humanities, Fine Arts, Libraries, LGIRA collaborators, School of Information
 - UA Video Game Developers Club, UA Gaming
- ⦿ Seeded w/ LGIRA's preservation-through-use philosophy

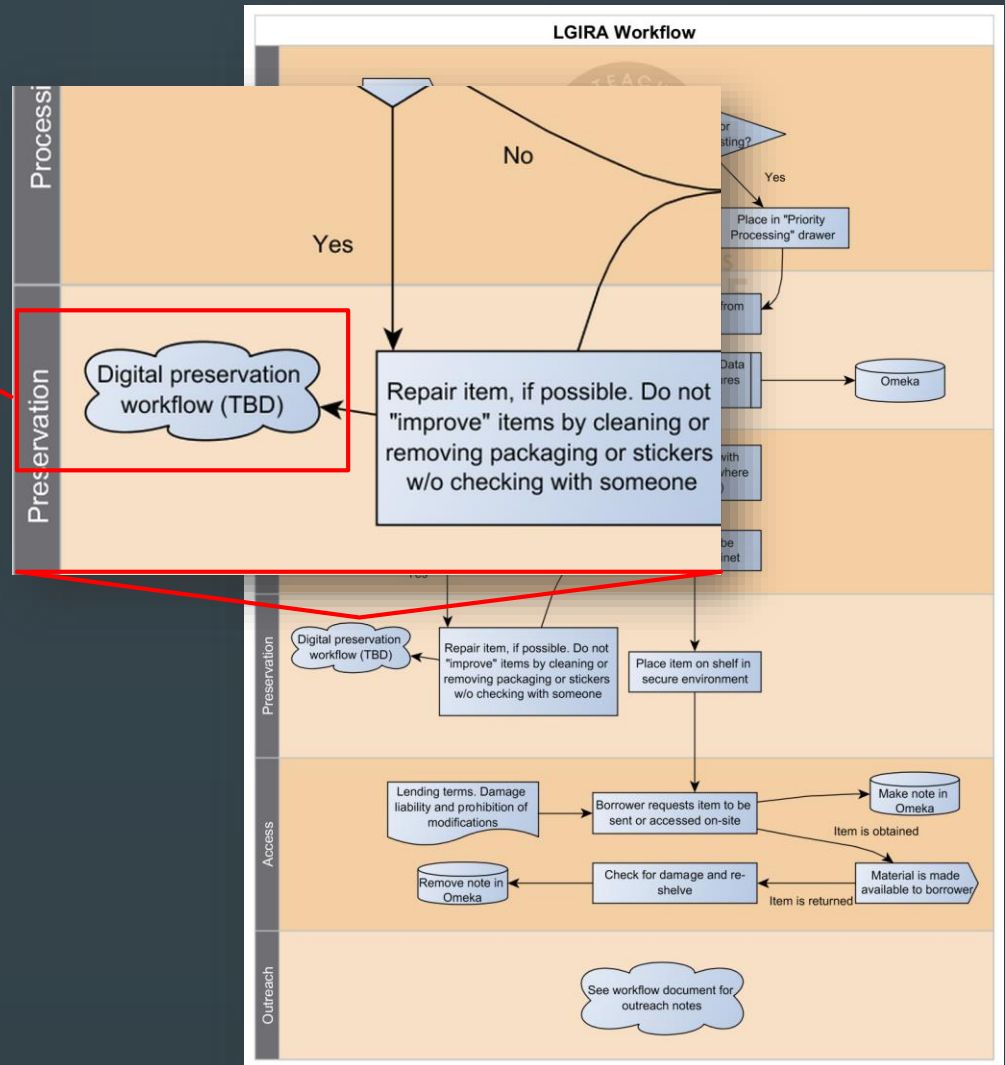
LGIRA and Preservation

- ⦿ “Preservation-through-use”
 - Prioritizes memory-making and sensory experience
- ⦿ All materials are intended to be used/interacted with
 - Items available to nearly everyone – not just the vetted few
- ⦿ Downside: things can break



LGIRA & UA-SPIG

- Initial focus
 - Digital preservation applied to preservation-through-use
- Other prompts
 - Emulation use cases
 - Identifying preservation challenges
- Also skills+outreach

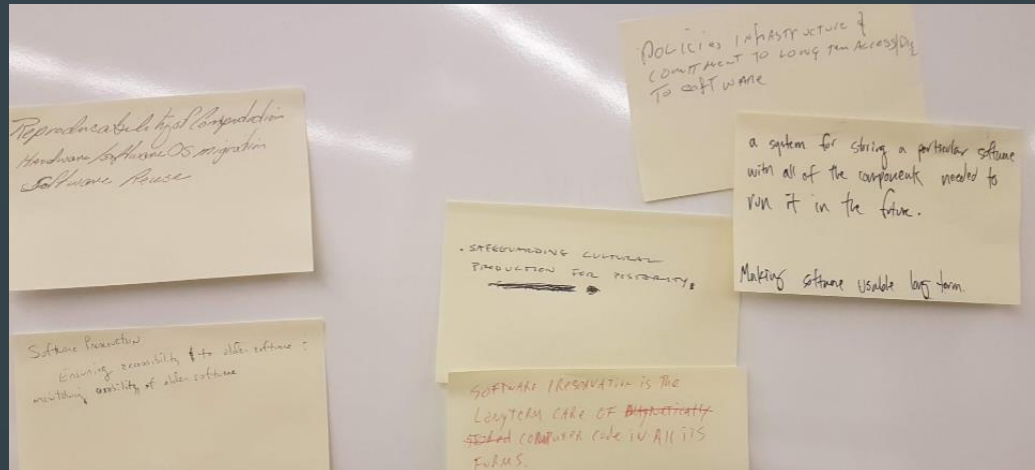


Outcomes from initial meeting

- ⦿ LGIRA's approach to preservation resonated
- ⦿ Educational potential of preservation strongly represented
 - Making software accessible to those in other domains
 - Retaining access to students' digital portfolios
 - Budding game developers
- ⦿ Potential also reflected in participants
 - Lack of shared vocabulary and understanding of Sw. Pres.
- ⦿ Indicated education/info exchange a strong candidate for sustaining momentum

Software Preservation 101

- UA-SPIG reconvened in Jan 2019 to learn more about software preservation
- An introductory session was presented
- Followed by a discussion: “what does software preservation mean to you?”
- Education needs underscored



Research Bazaar

- ⦿ How can we bring more people in to sustain the community?
 - Software preservation 101, preservation-through-use, emulation, show-and tell
- ⦿ Appealing to research scientists – research reproducibility
 - Expertise, interest
 - Video games are relatable to all
- ⦿ Breakout groups
 - Issues? Solutions?
 - Would emulation help
- ⦿ Operational vs methodical
 - Interested in use



Lessons

- ⦿ Interest in soft. Pres \neq knowledge of basic concepts
 - Shared vocabulary critical for group cohesion
 - What the work entails
- ⦿ Archival/Digi. Pres. Think differently vs those w/o that training
 - Conceptual (broad thinking) vs operational (specific cases)
 - E.g., DNA sequencing
 - Security patches in the long term, physical space issues
 - Reliance on a software stack that will eventually be retired
 - NOT Metadata schemas, data/software capture workflows
- ⦿ These are the most salient challenges in sustaining a local soft. pres. community like UA-SPIG

Towards sustaining a community of practice

- ◎ Follow trail of OSS approach
 - Coming together on specific problems
 - Participation is organic
 - Issues, bug reports
 - Similar to informal local dev, hack, tech groups
- ◎ Interfacing with the local tech/hack community
 - “Hacky Hour”, “Coffee and Code” meetups
 - Fertile ground – informal poll revealed interest
 - Sw. Pres. work can ebb and flow w/o a central organizer

Summary

- ◎ Bringing expertise together on Sw. Pres.
 - Resource constrained environment
 - Shared labor & expertise
- ◎ Challenges
 - Continual need for education/common vocabs
 - Framing of SW. Pres. Important to address people's problems
 - Operational vs conceptual thinking
- ◎ Moving forward
 - Emphasizing educational aspects for broad engagement
 - Leverage existing community meetups
 - Focus on operational problem solving to get work done
 - E.g, focus on testing/review of LGIRA workflow & emulation infrastructure

