FCoP Scenarios for Software (Re)Use and Access - Guggenheim

Jan - Feb 2019

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Timeline:

- (January 7 - January 11) Brainstorm Scenarios for Use & Access
- (January 14 - January 25) Gather User Data
- (January 28 - February 1) Data Analysis and Preliminary Observations
- (February 4) Cohort Monthly Call - Scenarios for Use & Access Reports

Purpose:

The purposes of this exercise are to:

- Articulate potential software (re)use and access scenarios
- Inform/Verify your assumptions regarding (re)use and access scenarios by surveying a designated user

Instructions:

1. Complete 1-5 scenarios for use and access using the prompt below.
2. Identify 1-3 users whose use cases you believe may correspond with the scenarios for use and access that you articulated.
3. Ask participants to share 15-20 minutes of their time to reflect on their different needs related to software curation and preservation by completing the questionnaire.
4. Participants complete questionnaire
5. Analyze participant responses to determine the distance between your participant reflections and the scenarios for use and access driving your interest in software curation, preservation and emulation. Reflect on your findings.

Detailing your scenarios for use and access:

Actors	**Goals**	**Resources**	**Challenges**	**Anecdotes for this use case**
Type of stakeholder or user involved in the use case.	What does the actor want to do with software or software-dependent data?	What resources are available to this actor or these actors to achieve their goals - what resources do they need?	What challenges could your users face in attempting to accomplish their software reuse goals?	Any real world scenarios that you have witnessed or been involved in that informed your articulation of this use case.
Scenario 1 - Installing software-based artwork in exhibition (stakeholders/users = museum visitor and conservators/exhibition install team)	Visitor would like to experience the software running as the artist originally intended. Conservator would like to have the ability to re-run the software as closely as possible to original artist	Original hardware (if provided by artist), copies of software, disk images of computer running artwork, replica hardware installation instructions, video	Software may fail to reproduce precise speed and colors of original, may experience lag, original hardware may not be capable of running 8 hours per day, dependencies for running	Seeing "Programmed" show at the Whitney and hearing conservators/curators talk about preparation (and modifications to software-based artworks required),

	specifications	documentation of work running, reference photos, written notes or other documentation about work running, install team needs a reference to know if the work is running properly	software(including authentication codes, etc.) may not be readily available. Work may fail to run in emulator, virtual machine. Visitors may not understand how software has been modified if hardware or software needed to be modified	emulation/virtualization failures of disk images in Guggenheim media lab for selected artworks,
Scenario 2 - Curator would like to review software-based artwork for inclusion in a future exhibition	Curator wants to see artwork or a reference version of it so they can evaluate it	Videos/photos of artwork, original hardware and software (if provided), replica hardware, emulators, virtual machines, disk images or computer running artwork	Space may not be available to set up work, work may not be able to be emulated or virtualized on a short timeline, not enough documentation/knowledge to set the work up properly or provide reference to curator that work is running properly,	
Scenario 3 - Museum keeping web artworks accessible 24/hours per day to the public (stakeholders=Conservators, IT, internet users)	Artwork should be available 24/7 through Guggenheim servers and faithfully reproduce what artist intended	Original versions of code, code annotations by computer science students, original documentation of work (written, video, photo), treatment reports, emulators, virtual machines	Internet standards keep changing so work behaves strangely, technologies become obsolete so work doesn't function anymore, running old code or code that hasn't been properly audited presents security risks to museum (server could be compromised or artwork defaced)	Pop-up windows of Brandon not opening to correct size in Google Chrome post-restoration

Questionnaire Template:

Scenarios for Use and Access Creator/Researcher Questionnaire

1. For what purpose(s) do you create/use/reuse software for? Check all that apply.
   - ❑ To validate or test existing claims
   - ❑ To generate a new research outcome
   - ❑ To document or assist in the research process
   - ❑ As an historical artifact
   - ❑ To provide or recreate an experience
   - ❑ Other_____

2. What function(s) do you create/use/reuse software for? Check all that apply.

   - ❑ Replication/reproducibility/validation
   - ❑ Research outcome
   - ❑ Aggregation
   - ❑ Computation
   - ❑ Migration
   - ❑ Artifact
   - ❑ Other_____

3. What documentation should be collected related to how you create/use/reuse software?

   - ❑ User manuals
   - ❑ Technical specs/requirements
   - ❑ Bugs/Testing Protocols
   - ❑ Correspondence
   - ❑ Promotional material
   - ❑ Publications

- ❏ Other_____

4. For software you have created/used/reused, what components do you consider as essential to retain?

- ❏ Hardware / peripherals
- ❏ Libraries
- ❏ Dependencies
- ❏ Programming languages
- ❏ Algorithms
- ❏ Environments
- ❏ Documentation

5. What was the storage location for the software you created/used/reused?

- ❏ Removable media (diskettes; CDs; USB drives)
- ❏ Computer hard drive
- ❏ Hosted on website (github; research group homepage; cloud storage)

6. Which institutional stakeholders are involved in how you create/use/reuse researcher software? Please check that all apply

- ❏ Software developer
- ❏ Librarian
- ❏ Copyright officer
- ❏ Archivist
- ❏ Curator
- ❏ Research data manager
- ❏ Steward
- ❏ Publisher
- ❏ Deployer
- ❏ Other_____

7. On a scale of 1-5, please rate your level of agreement with the following statements:

1 – Strongly disagree 2 – Disagree 3 – Neither agree or disagree 4 – Agree 5 – Strongly agree

___ It is important to me that the provenance of this software has been fully documented.

___ It is important to me that I will be able to access this software in the future.

___ It is important to me that others can easily discover this software in the future.

___ It is important to me that I can replicate my previous experiences with this software in the future.

___ It is important to me that others can use this software in the future.

___ This software offers a unique experience.

___ I want research libraries to steward this software.

___ I am comfortable with the idea that this software may be updated or enhanced in the future.

Data Analysis and Discussion Questions:

Internal Scenarios for Use and Access

1. **As you were developing out more verbose scenarios for use and access, what types of internal questions arose?**
2. **Was it difficult to choose which user scenarios to articulate, or was it relatively simple? If difficult, what might make that process easier?**
3. **Did you have some existing source of user data to inform these scenarios, and if so, what are the sources of this data?**
4. **What was your thinking/criteria/basis for prioritization if you had numerous scenarios for use and access?**

Researcher/Creator Questionnaire

5. **Were you surprised by any of the questionnaire responses from your users?**
6. **Did you find any patterns across user responses?**
7. **What new questions did these responses raise for your team? What additional information do you want or need to know from your users in order to inform internal policies, requirements and workflows for software preservation and emulation?**