Software Preservation

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Why Preserve?

- architecture and its evolution
- data structures and algorithms
- approaches to problems
- attention to communicating with people
- performance and other tradeoffs
- use of and evolution of programming languages
- coding styles, idioms, and their evolution
- influences from other disciplines and genres
- literature of source code
- critical literature
Principles

- Principle of Unbiased Collection
- Principle of Thorough Collection
- Principle of Safekeeping
- Principle of Respect for Ownership
- Principle of Fair Use
- Principle of Transparency
- Principle of Service

Software Preservation
Unbiased Collection

- type of software
- programming language
- approach or philosophy behind the work
- identity or nature of the developer or development group
- level of success or failure of the software
- country or region of origin
- purpose the software serves
- architecture, design approach, or development methodology
- time period in which the software was developed
- media in which the artifact is captured
Thorough Collection

- design, requirements, and architectural description documents
- programming language manuals
- whatever may be required to execute the program in the future
Precise Recording and Authentication

- location and time of collection
- name or names of the developers
- the circumstances of its creation
- the chain of possession from creation to collection

Software Preservation
Safekeeping

Once collected, an artifact should be subject to the best effort for long-term preservation.
Respect for Ownership

must be able to gather proprietary, copyrighted, trade secret, or patented software
provisions should be made to keep secret and otherwise protect the contents of the artifact to the satisfaction of its owner until it can be released for study and observation
**Fair Use**

- copies, transcriptions, and descriptions of artifacts should be available for study and to create derived works

- no bias about who can access the material or how it can be used
Transparency

All aspects of collection should be open to public scrutiny

- the identities of the members of the collection group
- the principles and practices of collection
- the procedures to exercise fair use
- descriptions of all collected items
Service

A collection of artifacts should not enrich any party—neither the collectors, the owners, nor anyone claiming fair use.

Software Preservation
Selection Process

- people based
- diversity of selectors
- nomination + second

- prioritization
- no vetoes, only timing and expenditure
- all selectors vote order when needed
Preservation

- let’s not bias our preservation choices
- let’s get moving before it’s too late
- let’s view this as creating a commons