

Le code source, un patrimoine

Software Heritage : préserver le logiciel

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Table ronde « Patrimoine informatique : objet historique, sujet ou vecteur de médiation ? »

Congrès 2026 de la Société informatique de France

Nancy, 5 juin 2026



Software Heritage

THE GREAT LIBRARY OF SOURCE CODE

Harold Abelson, Structure and Interpretation of Computer Programs

“Programs must be written for people to read, and only incidentally for machines to execute.”

Quake 2 (excerpt)

```
float Q_rsqrt( float number )
{
    long i;
    float x2, y;
    const float threehalfs = 1.5F;

    x2 = number * 0.5F;
    y = number;
    i = * ( long * ) &y; // evil floating point bit level hacking
    i = 0x5f3759df - ( i >> 1 ); // what the fuck?
    y = * ( float * ) &i;
    y = y * ( threehalfs - ( x2 * y * y ) ); // 1st iteration
    // y = y * ( threehalfs - ( x2 * y * y ) ); // 2nd iteration, this
    // can be removed

    return y;
}
```

Len Shustek, Computer History Museum

“Source code provides a view into the mind of the designer.”

Network queue, Linux (excerpt)

```
/*
 * SFB uses two B[l][n] : L x N arrays of bins (L levels, N bins per level)
 * This implementation uses L = 8 and N = 16
 * This permits us to split one 32bit hash (provided per packet by rxhash or
 * external classifier) into 8 subhashes of 4 bits.
 */
#define SFB_BUCKET_SHIFT 4
#define SFB_NUMBUCKETS (1 << SFB_BUCKET_SHIFT) /* N bins per Level */
#define SFB_BUCKET_MASK (SFB_NUMBUCKETS - 1)
#define SFB_LEVELS (32 / SFB_BUCKET_SHIFT) /* L */

/* SFB algo uses a virtual queue, named "bin" */
struct sfb_bucket {
    u16 qlen; /* length of virtual queue */
    u16 p_mark; /* marking probability */
};
```

Paris Call on Software Source Code (2019)

Experts call for greater recognition of software source code as heritage for sustainable development

.6 November 2018



UNESCO, Inria, Software Heritage invite
40 international experts meet in Paris ...



Inria
Institut National de Recherche en Informatique et en Automatique



PARIS CALL
SOFTWARE SOURCE CODE
AS HERITAGE FOR SUSTAINABLE DEVELOPMENT

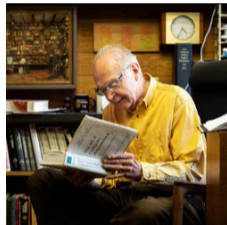
Software Heritage

The call is published on Feb 2019

“[We call to] support efforts to gather and preserve the artifacts and narratives of the history of computing, while the earlier creators are still alive”

<https://en.unesco.org/foss/paris-call-software-source-code>

Communications of the ACM, February 2021



"Telling historical stories is the best way to teach. It's much easier to understand something if you know the threads it is connected to."

Let's Not Dumb Down the History of Computer Science

Donald E. Knuth, Len Shustek

<https://doi.org/10.1145/3442377>

A unique opportunity

most of the creators are still here: we can talk to them!

but the clock is ticking...

Our mission

Collect, preserve and share the source code of *all* publicly available software.

- a *French* initiative (Inria, 2016), in partnership with *UNESCO*
- the largest source code archive ever assembled
- non-profit, international, built for the *long term*
- a *shared infrastructure* — rather than everyone on their own



Software Heritage

Archive growth



29 billion source files, 430 million projects
(March 2026)



<https://archive.softwareheritage.org>

Paris Call on Software Source Code

“[We call to] support efforts to gather and preserve the artifacts and narratives of the history of computing, while the earlier creators are still alive”



- **Rescue** Legacy Software from different media
 - physical
 - digital
 - legacy / unsupported
 - recent / supported
- **Curate** the code
 - reconstructing the development history
 - collecting metadata
- And **explain** and **illustrate**

We can leverage AI tools to make the process painless, the result more accessible. Now there is not excuse left...

SOURCE
CODE
EXHIBITION

Source code
as *Historical
Testimony*

Source code
as a *Mirror of
Society*

Source code
as *Cultural
Artifact*

The project



SOURCE CODE EXHIBITION

SOURCE

Historical Testimony

In 2026, Software Heritage is celebrating its 10th anniversary. To mark this milestone, Software Heritage and Inria have decided to set up a special display: a *Source Code Exhibition*.

Source code as *Historical Testimony*

Source code as a *Mirror of Society*

Source code as *Cultural Artifact*

The project

XMODEM: Computing and Community by Telephone Line
Historical Testimony | Community | Computer Networks | Pre-Internet

The First Programming TEXTBOOK
Historical Testimony | Early programming | EDGAC | EDGAC Order Code | Textbook

ELIZA: Rediscovering the First Chatbot
Historical Testimony | Artificial Intelligence | Chatbot

THE HOOTER: Within the Sound of Computer Programming
Historical Testimony | Early programming | Human-Computer Interaction | Machine Instruction code | Music

OPTIMIZING THE FUTURE: the Fortran Source Code of the Latin American World Model
Historical Testimony | Fortran Language | Politics | Simulation

ELIZA: Rediscovering the First Chatbot & Credits
This project was initiated by [@dimitry1993](#), a not-profit dedicated to collecting and preserving source code, with support from [DSG](#) (the French National Institute for Research in Digital Science and Technology) in its funded by both Software Heritage and Inria, and supported by [LDESIC](#) (Division for Digital Evaluation and Policies and Digital Transformation).

Exhibit Organizers
Responsible for defining the exhibition concept, curating content, and coordinating logistics.

Exhibition Committee
Responsible for reviewing proposals, curating decisions, and contributing to the introduction texts:

David C. Brock - Robert and Betta Fringer Fellow, Computer History Museum, Mountain View (CA)
Pierre Delisle - Postdoctoral Researcher, Staatliche Hochschule für Gestaltung, Karlsruhe | Universität Basel
Stefano Pongio - Cologne
Valérie Beisler - Professor, CTH, University of Luxembourg
Ralfrieder Seidel - Head of Collections, Computer History Museum, Berlin
Artemio Yaguez - Research Associate, Deutsches Museum, Munich