

# NIST, Stanford collaborate to catalog early microcomputing software data

March 6 2013

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The NSRL and Stanford University Libraries are cataloging roughly 15,000 software titles from the early days of microcomputing, an effort that will make the collection more broadly useful to social scientists and other researchers.  
Credit: NIST

When you hear the term "cultural heritage," what springs to mind? The dramas of Tennessee Williams, the paintings of Georgia O'Keeffe?

Software from the early 1980s? The National Institute of Standards and Technology (NIST) and Stanford University Libraries (SUL) hope their new project to catalog the data contained in about 15,000 software releases from the early days of microcomputing, many of which are game titles, will help give software its place in culture.

The effort is aimed at expanding the National Software Reference Library (NSRL), a collection at NIST most commonly used by law enforcement organizations. The NSRL creates short data profiles called "hashes," [digital fingerprints](#) that uniquely identify a file on a computer as an unaltered copy of a specific program or other piece of software in the library's index. These hashes help determine which files are important as evidence on computers that have been seized as part of [criminal investigations](#). But while law enforcement has been one of NSRL's best customers, the library aims to make itself useful to a far broader swath of researchers by expanding its holdings and measuring aspects of them in new ways.

"These early software titles are part of our history—they are part of business culture, of pop culture, of our art," says Barbara Guttman, computer scientist and director of the NSRL. "How people interacted with computers in the first days of microcomputing, and how that affected people, is something we know little about."

The new infusion of software is from the Stephen M. Cabrinety Collection in the History of Microcomputing at Stanford University, one of the world's largest pristine software collections. SUL acquired the collection in 1998 as part of its larger effort to preserve digital materials for research purposes. NIST is working to render the materials into "images," a word that encompasses both pictures of the original physical packaging and bit-for-bit copies of the original [software code](#). The project could, for example, make it easier for scientists to conduct studies on violence in video games and its social impact, Guttman says.

NIST will return the originals to SUL but will retain the images in the NSRL, which plans to make the software's hashes available in short order. Stanford will make their entire code available once SUL addresses the intellectual property issues involving these commercial products. Researchers will then be able to explore the collection.

Guttman says that she hopes the effort makes the collection a better resource for future generations of social scientists. "Looking at this [software](#) in its original physical formats has immediate value in that, for example, it can tell us how well data survives in certain media," she says. "But our long-term goal is to characterize these materials in as many ways as possible, so that social scientists can design and conduct studies they haven't even thought of yet."

Provided by National Institute of Standards and Technology

Citation: NIST, Stanford collaborate to catalog early microcomputing software data (2013, March 6) retrieved 26 April 2024 from <https://phys.org/news/2013-03-nist-stanford-collaborate-early-microcomputing.html>

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