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TITLE

The LOCKSS Content Audit Protocol (LCAP) for Long-Term Data Protection

ABSTRACT

LOCKSS (Lots Of Copies Keep Stuff Safe) is an open-source, peer-to-peer system designed to mitigate comprehensive threats to the long-term durability of digital information, originally developed as a research collaboration between Stanford University and industry. Productized early by Stanford University Libraries for distributed preservation of scholarly electronic journals and books at research libraries, the applications of LOCKSS preservation networks have expanded in the intervening two decades to include any type of content -- datasets, documents, images, records, web archives -- supporting a growing community of libraries, publishers, and other organizations needing a reliable mechanism for long-term integrity assurance and access. More widespread adoption of LOCKSS had been limited by an architecture constrained to end-to-end implementations. However, this is being ameliorated as part of a re-architecture effort that makes individual LOCKSS components available as standalone Web services. The core of LOCKSS' unique data integrity assurance and repair capabilities is the LOCKSS Content Audit Protocol (LCAP). Integration of this functionality into other storage systems will enhance their capabilities to detect and mitigate damage to stored data of all types.

BIOGRAPHY

Thib Guicherd-Callin is the Technical Manager of the LOCKSS Program at Stanford University Libraries. The last 13 years of his career have been devoted to distributed digital preservation systems. He holds a Master's degree in Computer Science from Stanford University.