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CLOCKSS: Time Keeps on Ticking

CLOCKSS (Controlled Lots of Copies Keeps Stuff Safe) is an international initiative between publishers and libraries to preserve and provide access to web-based scholarly journals. Utilizing the LOCKSS system for ingest and distribution CLOCKSS preserves digital content in dark archives with the consent of the publisher. CLOCKSS ingests all of a participating publishers web-based content, but until a "trigger event" occurs this content is not available for public use. The CLOCKSS website defines a trigger event in four ways: the publisher is no longer in business, the title is no longer issued, there no longer exist back issues of a journal, or catastrophic failure. When this event occurs CLOCKSS offers the journal through its host sites with the consent of the publisher. Its board of directors is made up of equal parts library professionals and publishers who decide when a trigger event occurs and what to offer. It is a non-profit organization whose participating members represent global libraries and publishers.

These institutions are also often decades, if not centuries old, in order to "leverage"

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¹ FAQ." *CLOCKSS-A Trusted Community Governed Archive*. CLOCKSS, 2008. Web. 10 Oct. 2010. http://www.clockss.org/.

existing infrastructure."² CLOCKSS began in 2006 and has since expanded its partnerships and content eventually hoping to have 15 different archive nodes sometime this year.³

The ingest process for CLOCKSS content follows the LOCKSS model. A package of content is received from a publisher and dispersed among several archive nodes, which are validated using checksums to be identical, and retained for preservation purposes. In this way CLOCKSS ensures redundancy of content as well as being able to repair broken or damaged copies. When a trigger event occurs files in a CLOCKSS box are updated to the latest format and distributed through a CLOCKSS host site, either University of Edinburgh or Stanford University. This "on-the-fly" migration helps keep costs down and minimizes errors or damage. It also allows CLOCKSS to retain the original preservation file formats and only upgrade for access, which limits the risk of damaging source files. Source files are in HTML, flash or PDF format since they originate from the web. XML metadata can be viewed when looking at the content and is typically bibliographic in nature. Additionally, unlike LOCKSS, this content is available globally to anyone.

The project grew out of a desire for the library community to preserve all ejournals offered by publishers. It is an attractive idea for publishers since it allows them to preserve their material without the cost of managing it. For libraries it offers greater

² FAQ." *CLOCKSS-A Trusted Community Governed Archive*. CLOCKSS, 2008. Web. 10 Oct. 2010. http://www.clockss.org/.

³ Reasons to Participate in CLOCKSS." *CLOCKSS-A Trusted Community Governed Archive*. CLOCKSS, 2008. Web. 10 Oct. 2010. http://www.clockss.org/>.

control over content distributed and gives global access to e-journals rather than local. By appropriating the LOCKSS models CLOCKSS provides a sustainable dark archive, since LOCKSS has been in operation over a decade, and allows library institutions to work directly with publishers to provide content. Currently, the project lists several universities, including NYU, as participators and many scientific and medical publishers are involved. CLOCKSS hopes to expand its network in order to bring costs down. Essentially the more institutions involved, the less they will pay.

Since 2006 CLOCKSS has had three trigger events releasing e-journals through their host sites. Its community has grown larger with more publishers and libraries participating increasing their collection scope and content. The project eventually hopes to preserve all years of web based scholarly journals.

"FAQ." *CLOCKSS-A Trusted Community Governed Archive*. CLOCKSS, 2008. Web. 10 Oct. 2010. http://www.clockss.org/.

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