



ACTIVE Archive

CHALLENGE:

CyArk had a manual solution consisting of offsite storage using hard disk drives and this system was cumbersome, time consuming and outdated. The organization needed a secure, scalable solution to protect the longevity of its vast digital content and to manage growing data volumes in a secure and cost-efficient manner.

SOLUTION:

File-based active archive to reliable digital data tape:

- Crossroads StrongBox LTFS archive with NAS interface to tape storage
- Fujifilm LTO-5 tape media
- Spectra Logic T950 enterprise tape library

RESULTS/BENEFITS:

Longevity and Convenient Accessibility of Data

- 30 years with tape versus 10 years with spinning disk
- Persistent view of data

Scalable

- Currently storing 50TB of data; 2PB server planned for future archiving

Secure

- Both onsite and offsite data storage

Cost-Effective

- Tape storage has significant cost advantages versus disk storage

CASE STUDY

CyArk (digital archiver of the world's heritage sites)

CyArk Looks to Active Archive Solution for Preserving the Past and Protecting the Future

CyArk is a non-profit foundation focused on the digital preservation of cultural heritage sites including places such as Mt. Rushmore, Pompeii and the ancient Mayan city of Tikal. Unlike artifacts safely housed in museums, the world's cultural heritage sites face constant risk from numerous factors, including prolonged exposure to sun, wind and rain, earthquakes, fires, and even acts of human aggression. In order to protect and preserve these records of mankind's history, CyArk captures these sites using 3D technology to create a robust digital archive.

Overcoming the Data Deluge

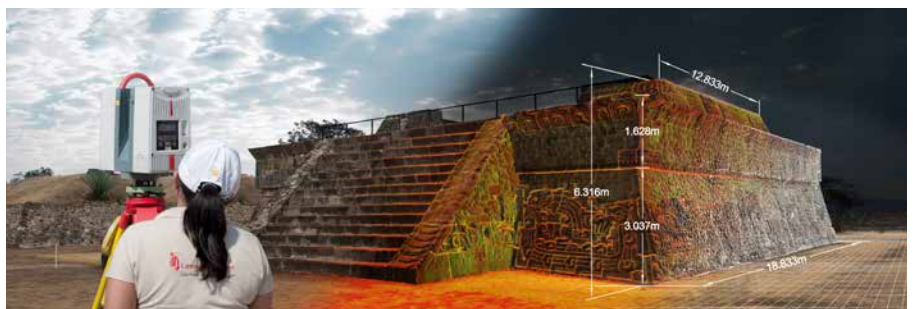
CyArk previously had a manual solution of offsite storage using hard disk drives but this system was becoming cumbersome,

time consuming and outdated. While newer, advanced technologies help CyArk capture more facets of each site it surveys, these technologies also require the organization to manage a greater volume of data than it did in the past – upwards of 5 to 10 TB per project, versus volumes in the range of 500GB just a few years ago.

Managing CyArk's growing stores of data and safeguarding the world's cultural heritage in the most cost-effective manner possible required a different approach to data storage – one that uses advanced tape technologies to deliver the simplicity and performance of disk drives at a much more affordable price point. What CyArk needed, was an active archive.

CyArk

Diagrammatic image of the Mayan ruins of Xochicalco in central Mexico showing field data collection with a 3D scanner



CASE STUDY Active Archive Alliance



A CyArk crew at work in the ancient Anasazi ruins in Mesa Verde, Colorado

An Efficient, Secure Data Archive

Active archive software technologies allow existing file systems to expand over disk platforms, tape libraries and other storage technologies. This expansion provides a persistent view of the archived data and makes it easier to access files whenever needed. CyArk implemented an active archive solution consisting of Spectra Logic T-950 libraries, Fujifilm LTO Ultrium 5 data tapes, and a Crossroads StrongBox. StrongBox is a network-attached storage appliance that provides streamlined, simple access and management for file-based storage on tape. With built-in data protection features, the combined Spectra and Crossroads active archive solution help CyArk ensure the longevity of their irreplaceable data. In addition, CyArk protects their invaluable content on multiple fronts by exporting and vaulting a tape copy of data at Iron Mountain's secure facilities.

With this new solution, CyArk is able to store its critical data in accordance with media management best practices. Any data CyArk selects using the StrongBox is written to two high-capacity Fujifilm LTO-5 tapes – the first of which is stored locally in a Spectra Logic T950 library. The second LTO-5 tape is designated for offsite storage.

“We predicted that our data archive would grow by 30 percent each year for the foreseeable future, which means it would reach one to two petabytes in five years. We needed a storage solution that was secure, scalable, cost-effective and that provided the longevity required for these important historical assets.”

Elizabeth Lee, CyArk's Vice President

Another compelling aspect of the new system is the ability to move data off spinning disk, which has a life expectancy of less than 10 years, compared with tape media, which has a life expectancy of 30 years.

In addition, StrongBox provides data access as a standard network share so users can simply drag and drop files to access or archive data. No proprietary

formats, complex training or management is required.

The Past Preserved

Live since September of 2012, the active archive solution provides CyArk with the peace of mind that the data it collects – and, by extension, the history of the world's heritage sites – will live on for years to come. The new solution improves data protection and will easily scale far into the future. In addition, it makes the entire storage process much more efficient and cost effective. As a result, CyArk's staff can remain focused on achieving the goals of their historically-important mission.

“I sleep better at night now that our active archive storage system is in place,” said Elizabeth Lee, CyArk's vice president.

The Future Protected

With the increased need for data storage due to more data-intensive technologies such as 3D fly-through animation and mobile applications, CyArk is currently building a 2PB server. The ability to easily scale the active archive system will serve to accommodate the future growth of this historic data for years to come.



CyArk's digital 3D mapping has created an unprecedented and rich visual repository of historical data to tell the story of the tragic events of the ancient volcano-stricken city of Pompeii, Italy