

Network Optical Storage System

PaperClip's Network Optical Storage System (NOSS) enables the secure and reliable management and storage of millions of files. With NOSS, users can easily develop high security Windows optical storage applications and create a high-capacity storage management system for any wide area network. Up to 99 NOSS servers can be installed in a PaperClip Network or SQL environment. The technology offers powerful function calls with total device and media management for large volume storage and retrieval of archival data.

How NOSS works

The NOSS optical storage server uses a client-server architecture to provide other network workstations with rapid access to a virtually unlimited amount of optical storage.

Since NOSS stores data sequentially and without fragmentation, NOSS eliminates the storage overhead incurred in the usual DOS or Windows file systems, such as file allocation tables (FAT), directories, and the large amount of unused space present in file allocation units. This approach also increases performance and provides close to 99 percent optical efficiency for data, for both Write-Once (WORM) and rewritable media.

Intelligent caching

NOSS uses intelligent caching to improve response time. Up to 80 GB of magnetic storage can be added to cache retrievals from the optical disks. A "least recently used" (LRU) replacement algorithm is used to ensure that the cache is filled with the most current disk accesses. The cache can also look ahead, retrieving additional objects in the same folder so that disk thrashing is minimized, even as different users browse through folders on different disks. This reduces "gridlock" that comes from frequent access, heavy usage and low optical response times. The cache is also used while writing to optical disk in order to temporarily hold the data while waiting for the destination disk to become ready. In the interval during which the optical device is loading, the user can continue working. Then, when the platter is ready, NOSS automatically moves the object from cache to the optical media.

Data protection

NOSS ensures that data reliability and integrity are preserved and even improved by using real-time optical platter mirroring. Any errors which may occur in writing to the cache, or from the cache to optical, will be detected and an appropriate message will be sent to your workstation. The NOSS Object Index Database is stored on a magnetic drive for speed. In the event of a drive failure, the database can be reconstructed by running a utility that scans all optical platters.

NOSS offers two modes of back-up for optical media. The Periodic Back-up Mode allows you to specify the interval between back-up jobs and the time they will occur. Jobs may be scheduled for off-peak hours, minimizing network traffic and administrator intervention. The Dynamic Back-up Mode writes data to two platters simultaneously when immediate back-up is required.

Additional Features

Function Call Libraries

Provide all the function calls necessary to build applications quickly and easily.

Request Queuing

Controls excess platter swapping and flipping by grouping, and satisfying requests for files stored on the same platter.

Platter Classes

Numerous departments and applications can share optical devices while physically separating their data on different platters.

Index Reconstruction

In case of magnetic disk failure, lost indexes can be reconstructed by scanning the optical disks.

Device Independence

NOSS works with most rewritable and write once optical drives and jukeboxes.



PaperClip Software, Inc.

One University Plaza
Hackensack, NJ 07601
201.525.1221
www.paperclip.com