SACHIN MORE

141 Howard Street, Northborough, MA 01532-1316

✆ +1-508-335-6351

sachinsureshmore@gmail.com

Patents

U.S. Patent 6,591,287   7/2003

Method to increase the efficiency of job sequencing from sequential storage

This patent describes a technique to efficiently accessing large scientific data sets stored in a magnetic tape library.

U.S. Patent 6,715,039   3/2004

Cache slot promotion in a replacement queue cache using determinations of probabilities and costs

This patent describes a technique to manage data stored in an Integrated Cache Disk Array (ICDA). It is used to determine how soon a piece of data will be accessed again.

U.S. Patent 6,721,870   4/2004

Prefetch algorithm for short sequences

This patent describes a technique to predict future data accesses for a logical volume when the accesses are small, few and concentrated in a small area. It is used by the microcode in the EMC Symmetrix product line.

U.S. Patent 6,769,054   7/2004
U.S. Patent 7,213,113   5/2007

System and method for preparation of workload data for replaying in a data storage environment

These patents describe a technique to help replicate a customer problem in a lab environment. The method takes a trace of the I/O activity in the customer environment and transforms it into an I/O activity trace appropriate for the lab environment.

U.S. Patent 6,865,648   3/2005
U.S. Patent 7,437,515   10/2008

Data structure for write pending

These patents describe an efficient way to manage dirty data in an Integrated Cache Disk Array (ICDA).

U.S. Patent 6,954,833   10/2005

Expedited dynamic mirror service policy

This patent describes a complete overhaul of the *Dynamic Mirror Service Policy* (DMSP) in the EMC Symmetrix product line. DMSP is used for orchestrating reading data from RAID-1 devices.

U.S. Patent 7,177,853   2/2007

Cache management via statistically adjusted time stamp queue

This patent forms the basis for the cache management scheme used in EMC Symmetrix product line.

U.S. Patent 7,281,086   10/2007
U.S. Patent 7,293,136   11/2007
Management of two-queue request structure for quality of service in disk storage systems
U.S. Patent 8,935,490   1/2015
Disk access quality of service
These patents describe a method to implement *Quality of Service* (QOS) for the disks used by EMC Symmetrix product line.

U.S. Patent 7,406,574   7/2008
Management of invalid tracks
This patent describes a method to find inconsistent pieces of data in a RAID protected system like EMC Symmetrix.

U.S. Patent 7,552,280   6/2009
Asymmetrically interleaving access to redundant storage devices
This patent describes an enhancement of the *Dynamic Mirror Service Policy* scheme used by EMC Symmetrix to read data from RAID-1 protected device.

U.S. Patent 7,640,342   12/2009
System and method for determining configuration of one or more data storage systems
The patent describes a method to configure a data storage system based on observed performance metrics. It is employed in a software used by field personnel for configuring EMC Symmetrix data storage system.

U.S. Patent 7,882,373   2/2011
System and method of reducing power consumption in a storage system through shortening of seek distances
U.S. Patent 8,060,759   11/2011
System and method of managing and optimizing power consumption in a storage system
U.S. Patent 9,158,466   10/2015
Power-saving mechanisms for a dynamic mirror service policy
These patents describe ways to reduce power consumption by hard disk drives in a storage system.

U.S. Patent 8,010,738   8/2011
Techniques for obtaining a specified lifetime for a data storage device
This patent describes a method to ensure that a NAND-flash based solid state disk will be usable for a specified period of time.

U.S. Patent 8,375,187   2/2013
I/O scheduling for flash drives
This patent describes a technique called *modal writes* that boosts the performance of a RAID group made up of flash drives.

U.S. Patent 8,566,553   10/2013
U.S. Patent 8,966,216   2/2015
Techniques for automated evaluation and movement of data between storage tiers

These patents describe a technique for managing data movement in a tiered storage array. EMC Corp.'s VMAX storage array, industry's first tiered storage array, sold software based on this technique under the brand name *FAST v1*.

U.S. Patent 8,868,798   10/2014
Techniques for modeling disk performance
This patent describes a technique for modeling disk drive performance in a tiered storage system. The technique was used in EMC VMAX tiered storage array software sold under the brand name *FAST v2*.

U.S. Patent 8,838,887   9/2014
Drive partitioning for automated storage tiering

U.S. Patent 8,976,636   3/2015
Techniques for storing data on disk drives partitioned into two regions
These patents describe a technique for storing data on a hard disk drive in such a way that improves both average response time as well as the throughput.

Publications

Passion: Optimized I/O for Parallel Applications
IEEE Computer, June 1996
Sachin More, Rajeev Thakur, Alok Choudhary, Rajesh Bordawekar, Sivaramakrishna Kuditipudi

MTIO - A Multi-Threaded Parallel I/O System
11th International Parallel Processing Symposium, April 1997
Sachin More, Alok Choudhary, Ian Foster, Ming Xu

Efficient Sequencing Tape-Resident Jobs
Proceedings of the Eighteenth ACM SIGACT-SIGMOD-SIGART Symposium on Principles of Database Systems, June 1999
Sachin More, S. Muthukrishnan, Elizabeth Shriver

Data Management for Large-Scale Scientific Computations in High Performance Distributed Systems
The Eighth IEEE International Symposium on High Performance Distributed Computing, August 1999
Sachin More, Alok Choudhary, Mahmut T. Kandemir, Harsha S. Nagesh, Jaechun No, Xiaohui Shen, Valerie E. Taylor, Rajeev Thakur

Data Management for Large-Scale Scientific Computations in High Performance Distributed Systems
Cluster Computing, Volume 3, November 2000
Sachin More, Alok Choudhary, Mahmut T. Kandemir, Jaechun No, Gokhan Memik, Xiaohui Shen, Wei-keng Liao, Harsha S. Nagesh, Valerie E. Taylor, Rajeev Thakur, Rick L. Stevens

Tertiary Storage Organization for Large Multidimensional Datasets
Seventeenth IEEE Symposium on Mass Storage Systems, March 2000
Sachin More, Alok Choudhary

A novel application development environment for large-scale scientific computations
Proceedings of the 2000 International Conference on Supercomputing, May 2000
Sachin More, Xiaohui Shen, Wei-keng Liao, Alok Choudhary, Gokhan Memik, Mahmut T. Kandemir, George K. Thiruvathukal, Arti Singh

Scheduling Queries for Tape-Resident Data
6th International Euro-Par Conference, August 2000
Sachin More, Alok Choudhary