

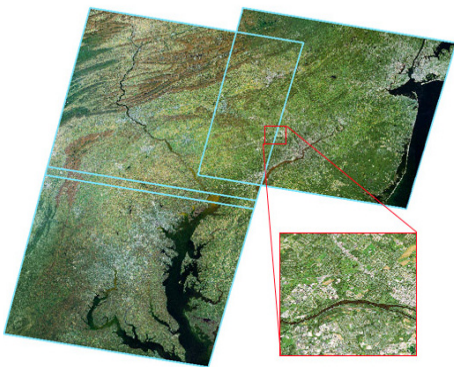


## Customer Case Study

**CUSTOMER:** i-cubed

**CHALLENGE:** i-cubed specializes in creating high-quality digital maps. Growing demand for its services has resulted in the company's equally explosive need for reliable, online data storage.

**SOLUTION:** Nexsan's SATABeast™ extreme density storage arrays equipped with Hitachi's Ultrastar™ A7K1000 hard disk drives. The one-terabyte (TB) hard drives fill i-cubed's insatiable appetite for capacity and reliability. The SATABeast provides the high-performance, energy-efficient configuration the company needs to do its job with confidence.



i-cubed Digital Maps

# i-cubed

## One-Terabyte Disk Drives Up To The Challenge

### Growing demand for map imagery intensifies i-cubed's thirst for fast, reliable online storage

Yahoo Maps, Google Earth, MapQuest, GPS systems, MapPoint – thanks to a growing list of products and services such as these, getting from place to place is a lot simpler than it used to be. The old world of multifolded paper maps is just about numbered and in its place are online services and devices that instantly deliver detailed street maps and directions to just about anywhere we might want to go. Instant, online access to aerial imagery provides photographic snapshots of everything from regions to city streets, right down to individual buildings. GPS systems now deliver the same information directly to our car or PDA.

Gathering and processing the data needed to make these maps isn't as simple. According to i-cubed Information Integration and Imaging LLC, one of the largest geoprocessing service organizations in the world, turning satellite imagery, air photos, static charts and other data into high-quality maps is an art that requires skill, training and lots and lots of reliable data storage.

### How much data does it take?

- > The raw data of a 1 meter-wide version of the United States is about 40-terabytes large.
- > After converting the raw data to a final version, that 1-meter wide map is about 6-terabytes large.
- > Creating a new version of a map of the U.S. – including intermediate products and tools – requires about 120 terabytes of storage space.

To meet their needs, i-cubed's server room is equipped exclusively with Nexsan SATABeast storage systems featuring Hitachi hard drives. That currently includes 4-4U racks of systems using Hitachi's 500GB drives and 3-2 post racks of Hitachi drives. With Hitachi's recent introduction of its Ultrastar A7K1000 1 TB hard drives, i-cubed has begun adding the higher-capacity drives as their expanding storage capacity requirements grow.

### Never enough storage

Two years ago, i-cubed's total storage requirements topped out at about 15 terabytes. Today, the company utilizes 500 terabytes of data at any one time. They estimated that within two years, they will require 2-3 petabytes of data storage.



## Customer Case Study

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There are two reasons why we work exclusively with Hitachi drives. The first is capacity. We need fast access to terabytes of data and Hitachi leads the industry in storage density. The second is reliability. We tested thousands of drives and found Hitachi drives, were by far the most reliable on the market today.

– Mich Garrett, CTO i-cubed

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# i-cubed



Ultrastar A7K1000

World's First 1-Terabyte Hard Drive

### Hitachi's Ultrastar A7K1000

- > Delivers up to one terabyte of storage capacity in a standard 3.5-inch form factor
- > 7,200 RPM
- > Targeted 1.2 million hours MTBF
- > 3Gb/s SATA interface supports Native Command Queuing (NCQ), staggered spin-up and hot-swap capability
- > Areal density margin with 5-disk design
- > The same physical connector as SCSI drives makes it ideal for mixed-drive environments
- > 5-year warranty



The Nexsan SATABeast 42 drive storage array

### Nexsan SATABeast

- > Very high performance RAID controllers: 900+ MB/s reads with dual controllers
- > Support for DCNR, APPA, 4PAA, APAL
- > 2x2x4gig FC host ports and 2x2x1gig iSCSI host ports
- > Integrated AutoMAID power management technology
- > Up to 2 GB of cache per controller
- > Hardware RAID-6 engine
- > 42 TB capacity with 1 TB drives

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