



## **BLUEARC ACCELERATES eDISCOVERY**

Delivering relevant files to counsel for review under tight time constraints is the key to success in electronic discovery. As automation in the industry improves, price pressures are severe. The unstructured source data collected in almost all legal matters usually comprises a large volume of small files. Data integrity is paramount and fast, accurate small file processing is vital. BlueArc powers your processing network with the storage architecture that can cost effectively handle swarms of files without slowing your processing.



- **INCREASE** the number of files processed per hour
- **REDUCE** extraneous directory requirements and use a structure that helps analyze the data
- **QUICKLY** scale capacity to hundreds of terabytes and billions of files
- **REDUCE** the capital required to scale processing and archiving
- **DELIVER** evidence to the legal team more quickly
- **SIMPLIFY** management of large projects

*“I have millions of small files, and in most file systems out there that’s a problem, but with BlueArc and its transactional speed, it deals with the high file counts, large numbers of files per directory and doesn’t slow us down.”*

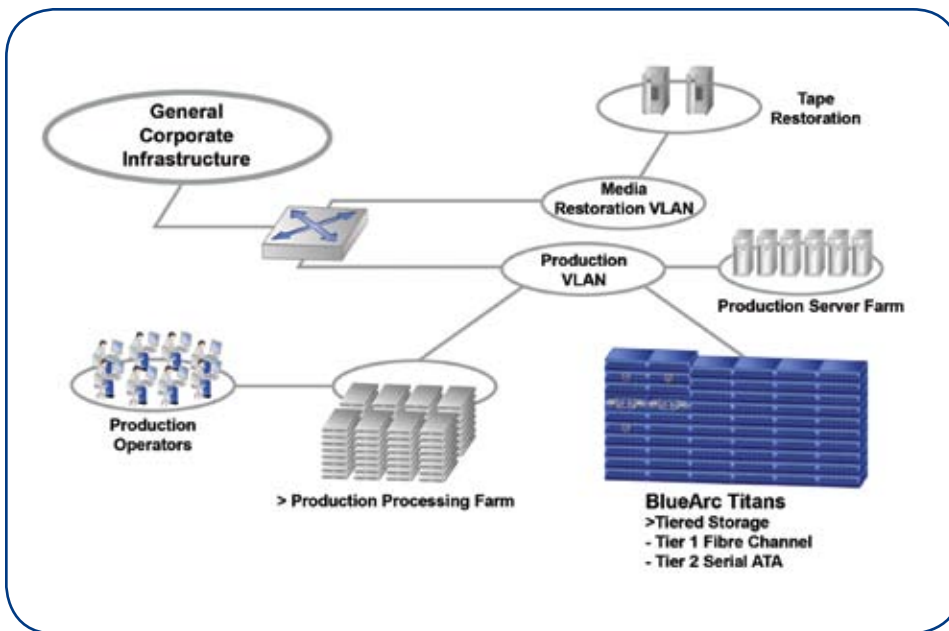
– Kevin Jacobs,  
VP of Technology Services at  
Document Technologies, Inc.

Analyzing millions of documents, including e-mails, to determine possible relevance requires reading all the files, sometimes multiple times, with specialized tools. Small file handling is a prime factor in source data processing speed, which in turn is a fundamental determinant of electronic discovery response time.

In addition, storage requirements can expand rapidly as the scope of discovery changes. By nature, the discovery process yields information that can expand or reduce the scope of legal or administrative action. If the number of targeted individuals in an investigation doubles, then the volume of source data typically doubles as well. Alternatively, if the time frame of the investigation expands, the volume of potentially relevant data explodes! Further, collected and indexed data is frequently repurposed for other related discovery requests.

Compounding the need for large storage pools at electronic discovery processing centers is that it is often necessary to maintain the data for years while supporting multiple discovery requests simultaneously. Storage that can keep up and expand without constant administration significantly eases scheduling of concurrent activity.

As storage is one of the core components of the electronic discovery process, effective storage architectures are fundamental to business success in this market. BlueArc provides industry-leading performance for storing, retrieving and maintaining large collections of small files. BlueArc removes the file-processing bottleneck that challenges even the most powerful electronic discovery environments with its unique hardware and software architecture. By implementing file system protocols and all of the I/O management logic in the hardware, rather than in software running on a general purpose computer, BlueArc Titan NAS controllers sustain data throughput



Litigation Support Architecture Overview

at near network line speed, even when file system administration requirements are severely burdened by millions of files. With features including Intelligent Tiered Storage that allow mixing high performance “active” disk and lower-cost “archival” disk behind one system, BlueArc delivers the highest performance with the lowest total cost of ownership and simplified management.

#### BlueArc storage solutions: aligned with eDiscovery & Litigation Support requirements

BlueArc’s Titan is the ideal solution for the high demands of eDiscovery & Litigation Support. In electronic discovery, millions of typically small files are analyzed for relevance. E-mails, office documents, TIFF image files and other common application file formats are normal. Titan’s hardware accelerated file system delivers consistent throughput and access over vast populations of small files that would choke more ordinary file system architectures.

Most file systems support adequate levels of

throughput when dealing with large files, but thousands or millions of small files degrade performance due to the high percentage of non-data transfer operations. BlueArc’s Titan hardware allows thousands of parallel operations, maintaining throughput even under these extreme circumstances typical to electronic discovery.

*“In this challenging business, we cannot compromise on security, scalability and speed of response, and BlueArc gives us the strongest infrastructure available to continue our rapid growth.”*

– Tho Han, Director of Information Technology for Fios

#### Speed up directory lookups, improve file access, accelerate extraction and processing

It is essential that your storage solution accelerate the electronic discovery workflow. With millions of files, the sheer quantity of files in a directory can cause performance issues. File access and directory lookups often degrade as more files are added to a

*“We have folders with more than 300,000 files in them and they’re all small TIFFs, 1K or less, but the Titan system has no problem with it.”*

– James Nelson, Senior Systems Engineer at eMag Solutions, LLC.

## CASE STUDY

### Document Technologies, Inc. (DTI)

#### Introduction

Document Technologies, Inc. (DTI) is a fast-growing document outsourcing company, providing end-to-end solutions for the legal and corporate markets. The company handles all facets of legal documentation – from photocopying to imaging and electronic discovery.

#### Problem

As DTI worked to accommodate dramatic increases in case load and new clients, it rapidly became apparent that they needed to scale their technology infrastructure in terms of capacity and performance to meet unforgiving legal deadlines – often enforced through judge’s subpoena. Yet the company’s existing storage would be bogged down during peak loads – forcing the company’s IT staff to slow down or stop other parallel processes, including backups. When overloaded, the systems would force a backlog of data to be processed, as no new images could be loaded for analysis, bringing business to a standstill. A solution was needed that could handle highest levels of I/O and capacity to store the dozens of terabytes that could be created from individual cases.

#### Solution

Following a thorough investigation into the variety of available network storage solutions, DTI deployed an active-active Titan storage system with more than forty terabytes of high performance Fibre Channel storage and forty terabytes of high capacity SATA storage. Titan was selected for its high capacity and performance that outstripped competitive offerings from four to ten times in both operations per second and throughput metrics. Featuring a hardware file system, Titan offered DTI the ability to ramp up demand without being bogged down by I/O, enabling the company to tap the full capacity of the existing environment without storage limitations.

## CUSTOMER HIGHLIGHT



Electronic Discovery, Digital Forensics, Legal Consulting

**Legis Discovery** counts on BlueArc to drive its growing business in electronic discovery. Employed by major corporations and law firms to make sure they have the best information at their disposal before heading to court, Legis Discovery combines its employees' deep knowledge of forensic science with the unparalleled throughput, scalability and performance of BlueArc's Titan network storage system to do a better job, faster and at a lower cost than the competition.

- Tremendous scalability allowing incremental storage to be tied to incremental revenue
- System speed that vastly improves the company's ability to provide electronic discovery



Titan

**BlueArc Titan Networked Storage**

- Hardware accelerated file system
- Up to 20 Gbps throughput and over 200,000 IOPs per dual node
- Bladed modular architecture
- Supports NFS, CIFS, iSCSI and NDMP
- Scalable up to 4 PB of storage under a single namespace
- Up to four-way Titan clusters
- Virtual Volumes with Parallel RAID

**eDiscovery & Litigation Support storage requirements are constantly expanding in scope, as cases can last years, or new projects come on line. BlueArc's Titan scales to meet expanding demands on your business.**

The need to expand file storage can occur at any time, as projects rapidly accelerate, more data requires extraction, and your business takes on new clients. Many electronic discovery cases can last years and related requests come in frequently. The need to expand file storage can occur at any time. A storage system that scales quickly and easily to hundreds of terabytes without the need for extra equipment is optimal. Titan discovers new storage and immediately starts placing it into service without configuration complications.

*"Titan is blindingly fast. Ultimately it's the I/O of BlueArc's silicon-based technology that outperforms NetApp and EMC's processor-based technologies. We wanted something that was engineered for performance."*

- Warren Roy, President and CEO of Global Relay

Titan provides more cost effective processing storage. Finally, electronic discovery businesses need to operate cost efficiently. Titan has the lowest total cost of ownership for storage, and when combined with its unique throughput advantages, Titan becomes an obvious choice for eDiscovery & Litigation Support.

directory. While this may not be a problem when you have several thousands of files in a directory, with millions of files this can become a crippling impediment. BlueArc's unique object-based file system, combined with Titan's hardware architecture, provides a quantum improvement in directory lookup speed. Ordinary file systems need to create extraneous directories or folders to effectively handle this many files, while Titan can easily handle millions of files in one directory.

*"BlueArc's Titan 2000 has admirably demonstrated the highest levels of performance and scalability we need to stay at a leadership position in our business, serving customers' needs."*

- Brendan Sullivan, CEO for eMag Solutions

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