Tarmin GridBank: The Premier Data Defined Storage Solution
About Tarmin

• Founded in 2007

• Corporate Headquarters: Boston, London

• Pioneer of Data Defined Storage

• Solution: GridBank Data Management Platform
Unstructured Data Challenges

Data Challenges
- Massive Data Growth
- Stagnant IT Budgets
- Accelerating OPEX
- Increasing Shortfall

Data Growth
- Storage & Data Management OPEX
- IT Budgets
- Storage CAPEX/TB

IT Budget Shortfall

2013  2014  2015  2016  2017
Unstructured Data Challenges

Data Growth
- Exponential unstructured data growth driving increased data storage cost

Data Silos
- Limited access to data between business units, locations & proprietary hardware silos

Data Risk
- Increasingly stringent regulatory & legal compliance mandates

Data Protection
- Multiple solutions required for data disaster prevention, retention, disposal & immutability

Data Discovery
- Restricted search capability across massively complex data repositories

Data Value
- Storage is seen as a cost center versus a strategic business enabler
Customer Priorities

- **Reduce TCO**
  - Reduce CAPX with no vendor lock in
  - Constrain data growth & storage OPEX

- **Reduce Business Risk**
  - Meet compliance & regulatory mandates
  - Simplify storage & data management

- **Leverage Analytics**
  - Drive new revenue streams
  - Gain competitive advantage

- **Path to the Cloud**
  - Simple, agile cloud migration model
  - Transparent, non-disruptive transition
GridBank Feature Set

Reduce TCO

• Optimize Data Storage & Limit Volume Growth
• Reduce TCO with Data Consolidation
• Evade Data Silos with Media Independence

Mitigate Risk

• Information Governance for Compliance
• AD-Integrated Security & Authentication
• High Availability Global Replication & BYOD

Grow Business Potential

• Enterprise-wide Unified Search & e-Discovery
• On Demand Access to Business Critical Data
• Maximize Return on Data with Big Analytics
GridBank Solution

Applications

Protocols

Multi-Tenancy

Global Namespace

GridBank Data Management

Distributed Metadata Repository

Storage Optimization

GridBank File System (GBFS)

Enterprise Object Storage

Media Independent Virtual Storage Pools
GridBank
Node

Enterprise Object Storage

SAN
NAS
JBOD
Cloud
Tape

File
Exchange
SharePoint
IM/Social
Sync & Share
Hadoop
3rd Party

CIFS
NFS
HDFS
FTP
WebDAV
HTTP
REST
SOAP
S3
Cloud
Other

Multi-Tenancy

Global Namespace

GridBank Policy Engine

GridBank Search & Discovery
GridBank Query

GridBank MetaBase

Data Encryption
Data Integrity
Data Replication
Multi-Site Replication
Data Retention

Data Security

Storage Optimization

GridBank File System (GBFS)

Company Confidential
## Key Benefits by Vertical

<table>
<thead>
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<th>Vertical</th>
<th>Oil &amp; Gas Industry</th>
<th>Healthcare Sector</th>
<th>Financial Institutions</th>
<th>Life Sciences</th>
<th>Education &amp; Science</th>
<th>Telco &amp; MSP</th>
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<tbody>
<tr>
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<td>Reduce Risk with Data Governance</td>
<td>Regulatory Compliance</td>
<td>Tamper-Proof Retention</td>
<td>Cheap &amp; Deep Storage</td>
<td>Improve Customer Retention</td>
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<td>Ensure Confidentiality</td>
<td>Highly Available Information</td>
<td>Legal Preparedness</td>
<td>Public Data Availability</td>
<td>Broaden Services Offerings</td>
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Oil and Gas Use Case

- Global Upstream Oil & Gas Exploration & Discovery Operations
- Massive Data Growth from Seismic Resolution
- Consolidation Across Heterogeneous Storage Arrays after M&A Activity
- Continuous Access to Distributed End Points
- Single Point of Truth for All Corporate Data
- Long Term Digital Access Retention

Tarmin Solution

- GridBank Sites Multi-TB Array
- Variable Chunk Object Dedupe & Compression
- Global Namespace File System Virtualization
- Site-Based Data Replication & Integrity Checking
- Policy-Based Archival & Information Governance

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Healthcare Industry Use Case

Healthcare Use Case
- Multi-Site UK Hospital with 8500 Employees
- Specialized Neurosurgery Services
- 100TB of Unstructured Data
- Consolidating & Archiving Inboxes & PSTs
- Regulatory Compliant Retention Program
- Improve e-Discovery Efficiency

Tarmin Solution
- GridBank Cloud Storage & Object Dedupe
- Archival of Radiology Images & Email Data
- Automated Vaulting to Central Repository
- Integrated e-Discovery & Search

E-Discovery Process

1. Archive
   - Centralized
   - Apply retention
   - Create Index

2. Collect & Preserve
   - Target custodians
   - Search
   - Apply legal hold

3. Review
   - Role-based workflow
   - Analyses
   - Report & audits

4. Export
   - Native format
   - Attorney review
   - Coding tools
Financial Institutions Use Case

Leading Investment Bank Use Case
- Globally Distributed Repositories
- Archival of 50 Billion Check Images & Growing
- Compliance Risk Mitigation
- Escape proprietary vendor Lock-In

Universal Bank Use Case
- Private Cloud Object Storage
- Exponential Growth in Trading Data
- Compliance Risk Mitigation
- Provide Interfaces for Financial Analytics Tools

Tarmin Solution
- Global Implementation of GridBank Sites
- Hardware Agnostic Storage Abstraction Layer
- Information Governance across Diverse Storage Pools
Life Sciences Use Cases

Life Sciences Use Case

- Large Life Sciences Research Institute
- Scientific Data Storage Repository
- High Performance Data Mining & Analytics
- Hadoop Cluster for Big Data Analysis
- 1PB of Storage with High Availability & DR

Tarmin Solution

- Scale Out NAS for Primary Storage
- High Performance SSDs for Analytics Pool
- High Density HDDs for Live Store
- Archival to Tape for Long Term Retention

Diagram:

- Data Sources
- GridBank Scale Out NAS Nodes
- HPC Analytics Pools
- High Density HDD Live Store
- Tape Storage
- 10 GbE/FC
- Client Access
Education and Research Use Cases

Research University Use Case
- Pioneering HPC University
- Perform Compute on Research Data on Live Store
- Comply with FoIA Public Data Access Mandates
- Archive Completed Projects to Lowest TCO per TB

Teaching University Use Case
- Storage Infrastructure Refresh
- Consolidate Wide Range of Hardware
- Centralized Control & High Availability Access
- Comply with Organizational ILM Policies
- Implement Live & Archive Store

Tarmin Solution
- Unique Solution for Education Market
- HPC Storage, GridBank & Tape Pool Archival
- Cheap & Deep Tape Storage
Awards & Recognitions

- CIO 100 Honoree 2014
- World Finance 100
- CRN 5 Star Partner Program Winner 2014
- Storage Awards The Storries XI Winner
- DCS Awards Winner
- SVC Awards 2013 Winner
- Gartner Cool Vendor 2013
- Golden Bridge Awards Gold Best Business World 2013
- CRN 5 Star Partner Program Winner 2013
- Storage Awards The Storries IX Winner
- Storage Monitoring Product of the Year
- Datacentre Solutions Awards 2013 Winner
- Storage Awards The Storries IX Winner
- Archiving & Compliance Product of the Year
- Tech Awards Circle 2013 Winner
"The rapid growth of our company is generating more and more data… GridBank allows us to store and protect our G&G data and create a platform for improving business efficiency while reducing TCO“

- David Edwards, Group Head of Information Systems, Premier Oil, Plc.

"We are very impressed with GridBank and see it as an important part of our strategy for ensuring customers achieve unmatched value from their relationship with brightsolid"

Richard Higgs, Managing Director, brightsolid Online Technology

"The object platform industry is just getting started in capturing a bigger piece of the scale-out unstructured data storage… opportunity, which IDC has forecast will be worth $27 billion by 2017 and is… becoming known as the "data-defined storage" market."

- Ashish Nadkarni, Research Director, Storage Systems, IDC
**GridBank Benefits**

**Data Defined Storage**
- Takes a single, holistic, comprehensive data centric approach
- Consolidates application data across large, distributed locations & cloud
- Provides big data insight & analytics & application integration

**Data Consolidation**
- Massively Scalable Architecture
- Reduce TCO
- Enhance Operational Efficiencies

**Data Management**
- Simplify Data Management
- Enforce Compliance
- Reduce Business Risk

**Data Value**
- Improve Business Agility
- Drive Revenue Growth
- Increase Competitive Advantage
Thank You!

Questions & Answers