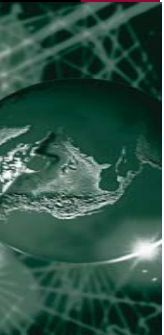* Nice Clearinghouse / Portal
So where's the' data?

* Million dollar clearinghouse Serving $10 worth of information

* Prada purse with $1 store lipstick

* "Free Data"... You Got What You Paid For

Learon Dalby- GIS Program Manager
11/15/2007

GeoStor 5.0

http://www.geostor.arkansas.gov

GeoStor Goals

- Provide seamless, statewide data warehouse with all public domain GIS data (Federal, State and Local)

- Develop a metadata search engine that would allow users to search for GIS data layers

- Develop a web based application that would allow users to **download** GIS data in a geographic boundary, GIS data format and projection of their choice

- All of the data would be provided for no-fee

- Leveraging State investment to it's fullest potential

Search for Data

Search Results

View Metadata

Define Parameters

The CULTURAL CHANGE

Knowledge

Values

Behaviour

Attitude

@Eric Lynn, LCT Consultants

Where possible…

ARKANSAS' GEODATA CLEARINGHOUSE- GEOSTOR

"Those who lead and no one follows are just going for a walk." --- unknown
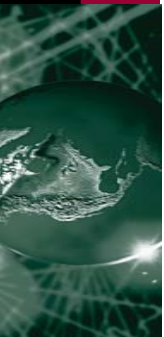
GeoStor Goals cont.

- Keep data refreshed on appropriate intervals
  - Make it cost effective for users
  - Reduce burden on contributors (i.e. Make it Easy)

- Store ONCE use many

- Leveraging the high quality data
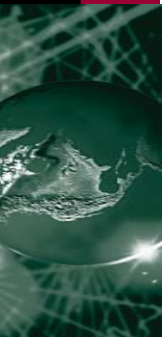
Keep data fresh

- ## Current GeoStor Data Custodians
  - Names in **_BOLD ITALIC_** maintain on preset intervals

8 Cities

Alma
Arkadelphia
Bentonville
Fort Smith
Harrison
Hope
Van Buren
West Memphis
Carroll
Crawford
Poinsett
Pulaski

Federal Entities

Corp. of Engineers
BTS
Census
Education
EIA
EPA
FEMA
USFWS
NFS
USGS
NGS
NRCS

State Entities

Archaeological Survey
Department of Education
Department of Emergency Management
Department of Environmental Quality
Game & Fish Commission
Department of Health and Human Services
Highway & Transportation Department
Natural Resources Commission
Oil & Gas Commission
Secretary of State

Universities

UA Center for Advanced Spatial Technologies
UALR GIS Applications Laboratory
UAM Spatial Analysis Laboratory

Private Sector

Techni Graphic Systems Inc

75 Counties
- ***65 County OEM's***
- ***30 County Assessor Offices***
- ***Northwest Regional Planning***
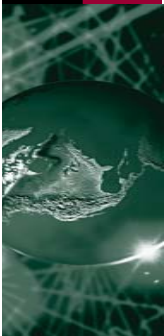
Keep data fresh

- Innovative Examples
  - Hospitals: database connection (as needed)

  - City limits: DOS scripts pull shapefile from FTP site and load into GeoStor (monthly)

  - Oil and Gas Wells: scripts pull data from SQL view and load into GeoStor (nightly)

  - Permitted Facilities: scripts pull data from SQL view and load into GeoStor (nightly)

  - GNIS: scripts pull data from a feature service and load into GeoStor (quarterly)
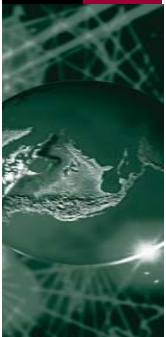
Store ONCE use many
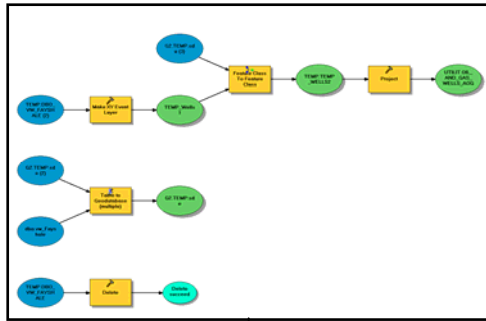
GeoStor Database
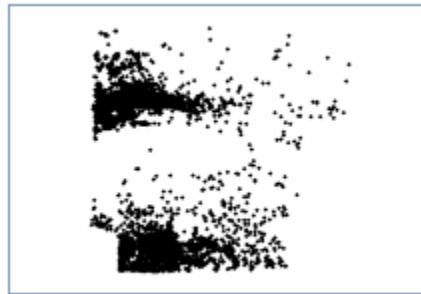
USERS

- Downloading
- Database Connections
- Feature Service Connections
- Image Service Connections
- Metadata Service Connections
- Application Connections
- UDDI Services
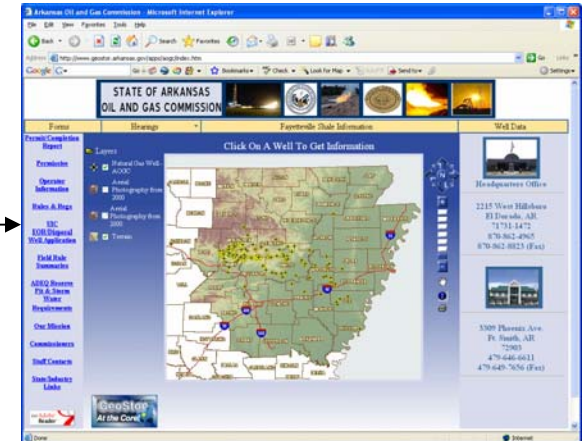
Hosting Services

Benefits

- **Hardware, software, and hosting cost are provided for no fee**

- **GeoStor system infrastructure is located under robust physical and cyber security**

- **Installation of software and internet security are provided for no fee**

- **Your data will be made available for download through GeoStor**
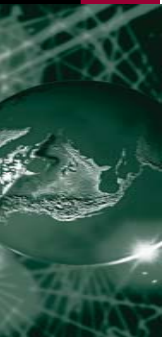
Hosting Services

Arkansas State Surveyor Office- Application

This site provides access to digital copies of the plats received by the Land Surveyor Office. Users can access plat information by searching on township-range-section, county or using other common means. Users also have the option to register for weekly or monthly updates by county. The site is populated with scanned plats submitted to the State Surveyors Office.

Launch Application

Arkansas Department of Finance and Administration- Application

The Arkansas Department of Finance and Administration, Office of Excise Tax Administration utilizes GeoStor in support of the national Streamlined Sales and Use Tax initiative. This national initiative allows for collection of sales tax based upon uniform sourcing of tax jurisdictions. The system assists tax payers in locating a sales tax rate for taxing jurisdictions in Arkansas. Vendors and sellers, as well as the general public use this system. It allows for search by address or zip code for the city, county and state sales and use tax rates throughout Arkansas.

Launch Application

Crawford County Arkansas Cadastre

This application service provides information pertaining to the Crawford County Assessor's Office. This application utilizes Crawford County parcels as well as geospatial data sets that reside in GeoStor. Metadata for each of the data sets in the application can be located within the GeoStor system. The application was designed to provide users with information related to Crawford County. "Providing public Internet access to this information better serves the taxpayers with no increase in cost." states Dianna Faucher, Crawford County Assessor. This service was built and is maintained by Crawford County personnel. GeoStor provides city, county and state entities with hosting services for no fee. See Stats

View Metadata   Launch Application

Arkansas Game & Fish Commission Map Viewer

This application was designed to provide some basic resource information. The data presented in this web map is incomplete. Until the application is complete, it is intended for demonstration purposes only. The boundaries depicted are "representations only" Users should refer to regulations and on site information as to their exact location. See Stats

View Metadata   Launch Application

Arkansas Oil And Gas Commission Fayetteville Shale

This application service provides information for the Fayetteville Shale area in the State of Arkansas. This application utilizes oil and gas well information which is maintained by the Arkansas Oil & Gas Commission and updated on GeoStor. The application was built to support gas exploration in the Fayetteville Shale area. See Stats

View Metadata   Launch Application

Arkansas Department of Education

This application service provides information for the Arkansas public school facilities. This application utilizes school and school district information maintained by the Arkansas Department of Education and updated on GeoStor. The application was designed to support the State Legislature and the public with information about public school facilities in the State of Arkansas. See Stats

Return On Investment

Download Reports
- **By month**
- **By day**

Is it worth putting our data in GeoStor?

Top | *2007*

Monthly Reports

| January | February | March | April | May | June | July | August | September | October | November | December |

Yearly GeoStor Downloads

Statistics gathered from download request logs.

Total number of GeoStor download requests: 12523
Total number of GeoStor layers included in requests: 16299

Month	Requests
January	1175
February	1326
March	1524
April	1453
May	1199
June	951
July	1117
August	1147
September	999
October	1435
November	197
December	
Total:	**12523**

Requests per Month
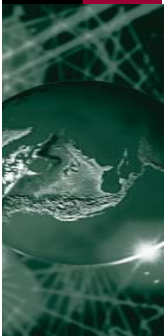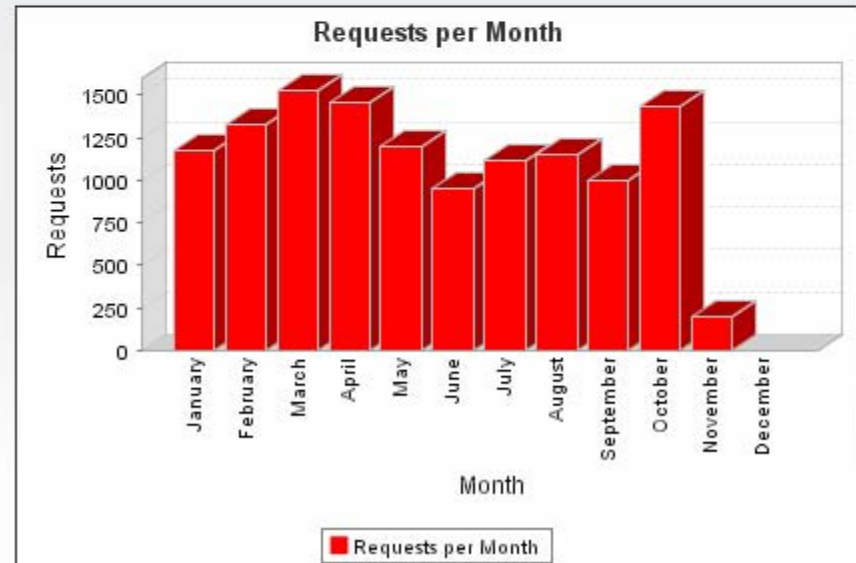
Return On Investment

Coordinate System & Formats

Popular Coordinate Systems:

Requests	Coordinate System
6532	NAD83, UTM, Zone 15 North, Meters
975	NAD83, State Plane, AR North, Feet
300	NAD83, Latitude & Longitude
182	WGS84, Latitude & Longitude
172	NAD83, State Plane, AR South, Feet
2	LL-27

Popular Output Formats:

Requests	Output Format
4702	ESRI Shape
2176	GeoTiff
413	ESRI Ascii Grid
196	ESRI Personal Geodatabase
145	AutoCAD DWG (R2000)
137	ERDAS IMG
91	JPEG 2000
55	AutoCAD DWG (R14)
43	ESRI ArcInfo E00
40	MapInfo TAB
34	ESRI BIL
28	ESRI ArcInfo Coverage
19	ER Mapper Compressed Wavelet
13	AutoCAD DXF (R2000)
12	PCI PIX
11	ESRI ArcInfo Generate
8	Microstation Design V8
7	Microstation Design V7, Scalable Vector Graphics (SVG)
6	AutoCAD DXF (R14), ERDAS RAW
5	MapInfo MID/MIF, ESRI GML
2	GML 2 (Safe Schema), VML
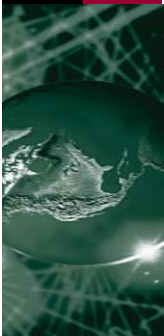
Return On Investment

Application stats

Is it worth maintaining this site?

Return On Investment
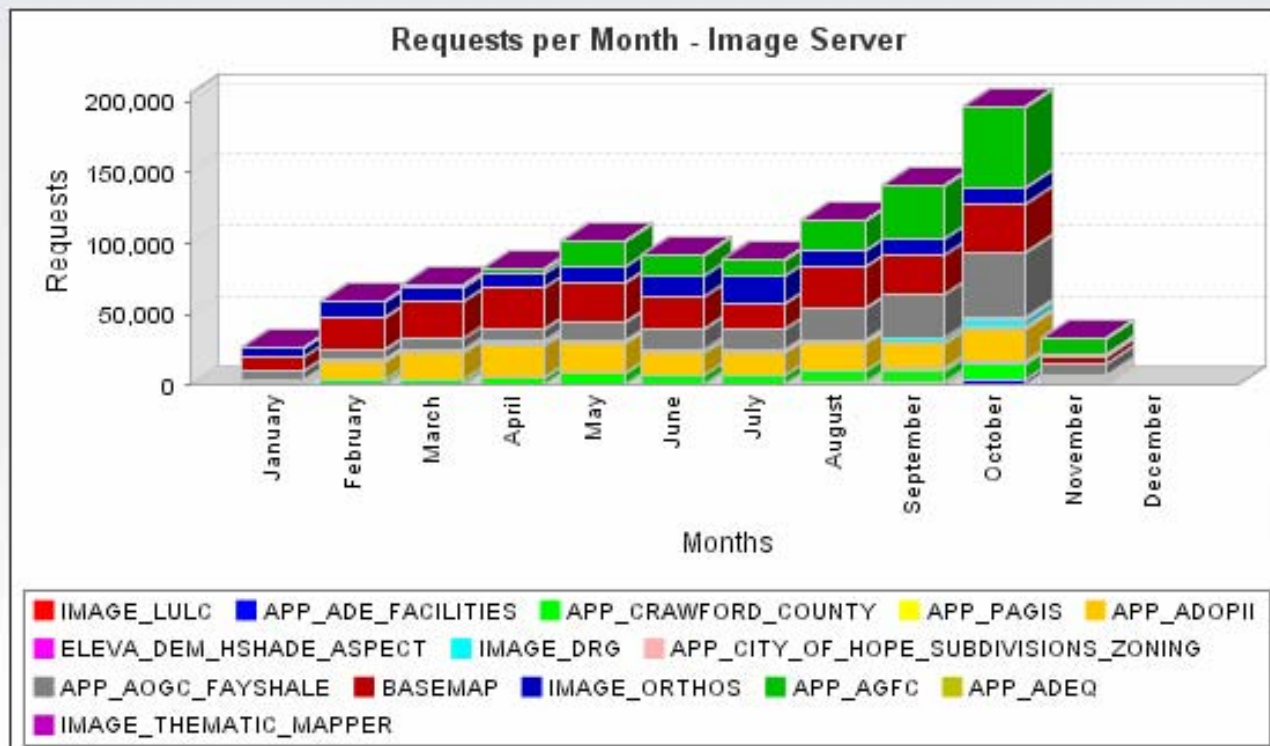
Application stats

Where should we focus updating our data?

Popular Extents

The Popular Extents summary shows areas of the map that are frequently viewed.

Popular Extents for APP_AOGC_FAYSHALE

1   5068

Popular Extents

The Popular Extents summary shows areas of the map that are frequently viewed.

Popular Extents for ELEVA_DEM_HSHADE_ASPECT

324   377
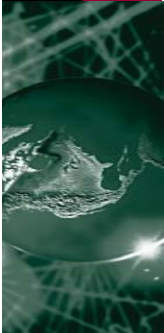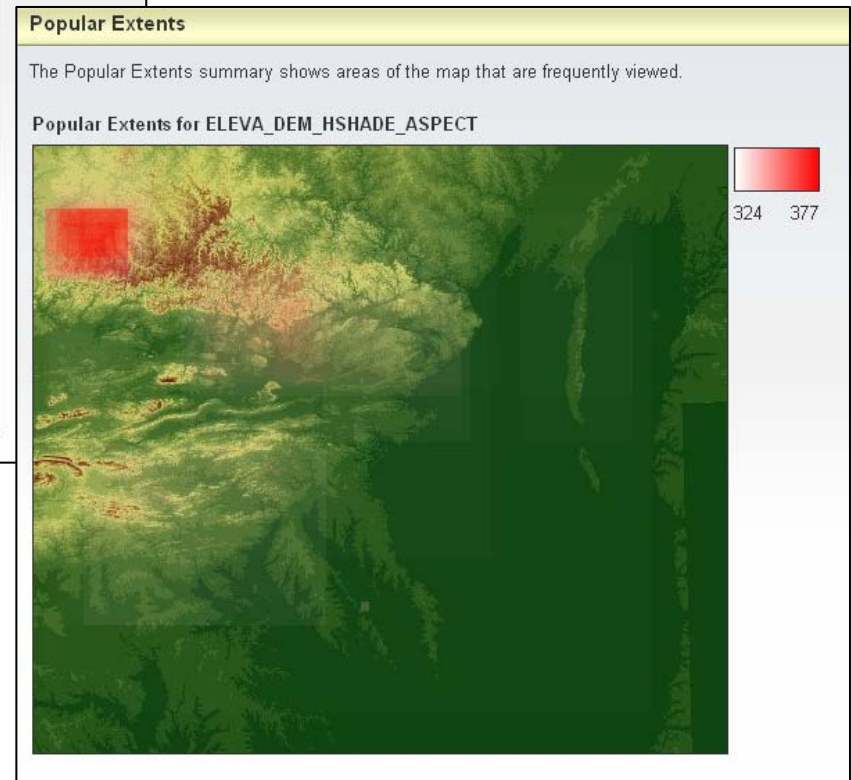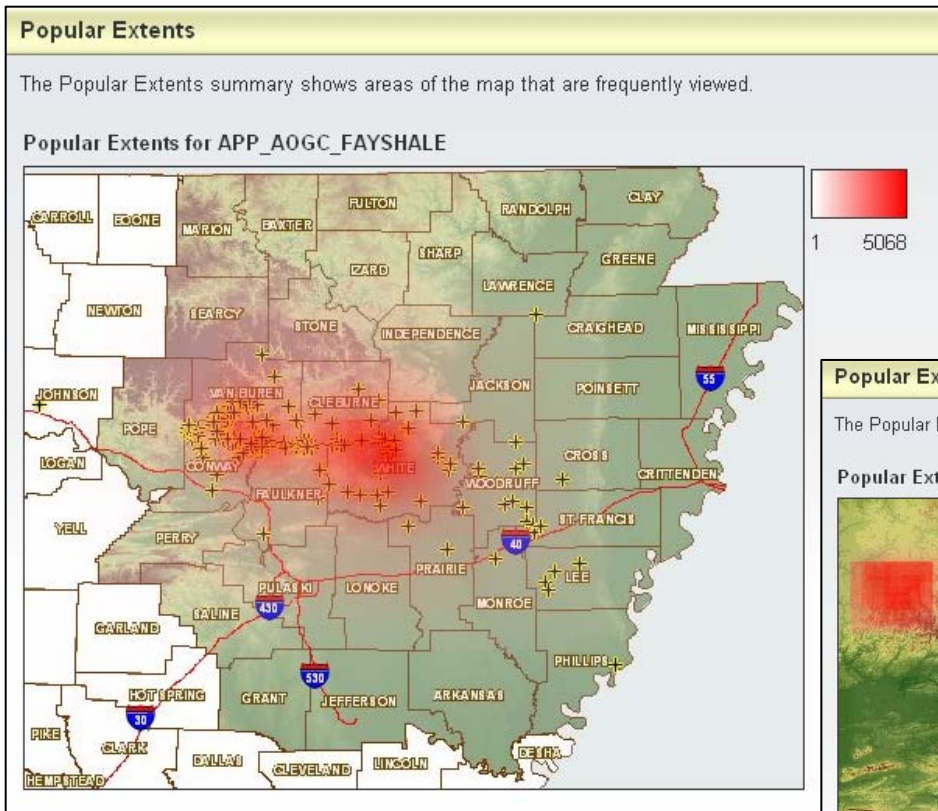
GeoStor 5.0 Hardware and Software
www.geostor.arkansas.gov

12-2-2005
revised 9-21-2006

Server Name
Server Type
Software on Server

connection access behind firewall
connection access through firewall

GeoStor Development Team
* Brian Forsgon- Lead hardware, OS, and connectivity architect
* Makram Baster- Lead DBA
* Vince Oullis- Lead IMS and SDE administrator
* Bobbie Pierce- Lead programmer and application developer
* Learon Dalby- Program Manager

Application Server: AS1
Dell 1855

ArcIMS 9.1 Application
ArcIMS 9.1 Spatial Server
Metadata Harvestor
Microsoft 2003 Server Standard

GeoCortex Stats 2.0

Map Viewer / Applications

ArcIMS / OGC WMS - WFS

Download Request

Web Server: Web2
Dell 1855

IIS 6
Tomcat 5.5.17
Java SDK1.4.2.12
Java Advanced Imaging Librariee 1.1.2101
Geocortex IMF 5.1.003
Geocortex Site Manager 5.1.006

Web Server: Web1
Dell 1855

IIS 6
Tomcat 4.1.29
Java SDK1.4.2
Perl 5.8.3.809
ArcIMS 9.1 Servlet Connector
ESRI Portal Toolkit 2.0
Metadata Sync Tool
Channel Editor
PHP 5.0.4

Spatial Server: SP1
Dell 1855

ArcIMS 9.1 Spatial Server
Apache Tomcat 4.1.29
Java SDK1.4.2
Perl 5.8.3.809
SpatialDirect (Q server)
FME Beta Suite 2006
Microsoft 2003 Server Standard

(Vector Processing)

db.geostor.arkansas.gov

Portal Search

Database Server: DB1
Dell 6650

ArcSDE 9.1
ArcInfo 9.1
Oracle 10g Standard Edition
Microsoft 2003 Server Enterprise
Python 2.1

DELL / EMC-Brocade FC Switch

Applications Portal

Applications Portal

Raster Server: RS1
Dell 1855

SpatialDirect
FME Beta Suite 2006

(Raster Processing)

Database Server: DB2
Dell 6850

ArcSDE 9.1
ArcInfo 9.1
Oracle 10g Standard Edition
Microsoft 2003 Server Enterprise
Python 2.1
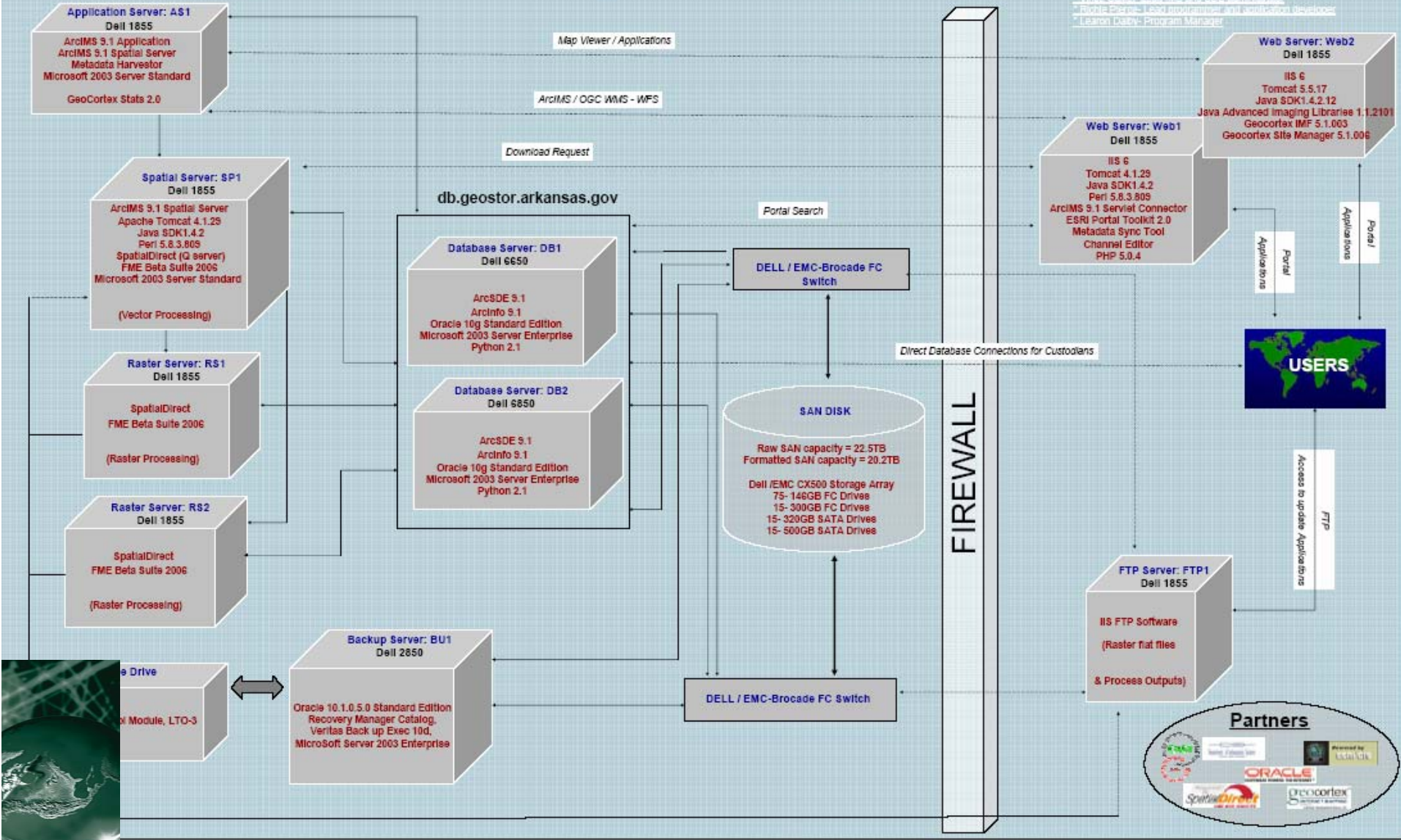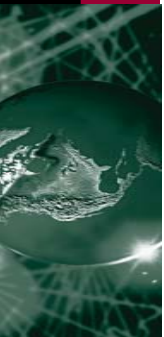
Direct Database Connections for Custodians

USERS

SAN DISK

Raw SAN capacity = 22.5TB
Formatted SAN capacity = 20.2TB

Dell /EMC CX500 Storage Array
75- 146GB FC Drives
15- 300GB FC Drives
15- 320GB SATA Drives
15- 500GB SATA Drives

FIREWALL

Access to update Applications

FTP

Raster Server: RS2
Dell 1855

SpatialDirect
FME Beta Suite 2006

(Raster Processing)

FTP Server: FTP1
Dell 1855

IIS FTP Software

(Raster flat files

& Process Outputs)

e Drive

l Module, LTO-3

Backup Server: BU1
Dell 2850

Oracle 10.1.0.5.0 Standard Edition
Recovery Manager Catalog,
Veritas Back up Exec 10d,
MicroSoft Server 2003 Enterprise

DELL / EMC-Brocade FC Switch

Partners

ORACLE

SpatialDirect

geocortex

Hardware / Software

- Dell

- ESRI- PTK, ArcInfo 9.1, ArcIMS 9.1, SDE 9.1

- Microsoft Server 2003

- Oracle 10g

- Safe Software- Spatial Direct

- Latitude Graphics- Internet Mapping Framework

- GeoCortex- Statistics

The Stats

All stats are for the period of Jan 9, 2006- Nov 5, 2007

- Downloads = 33,846
  - Average Request Time = 7.5 minutes

- Number of Image Request = 1,378,283
  - Average Request Time = 452ms

- Number of Feature Requests = 709,082
  - Amount of data returned by Feature Request = 1.7TB

Nov 1, 2006 – Nov 1, 2007
- Number of Files downloaded from FTP = 1,844,622
  - Amount of data = 14.2TB

The Stats
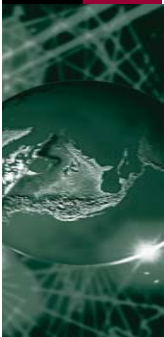

GeoStor Utilization
Image & Feature Services
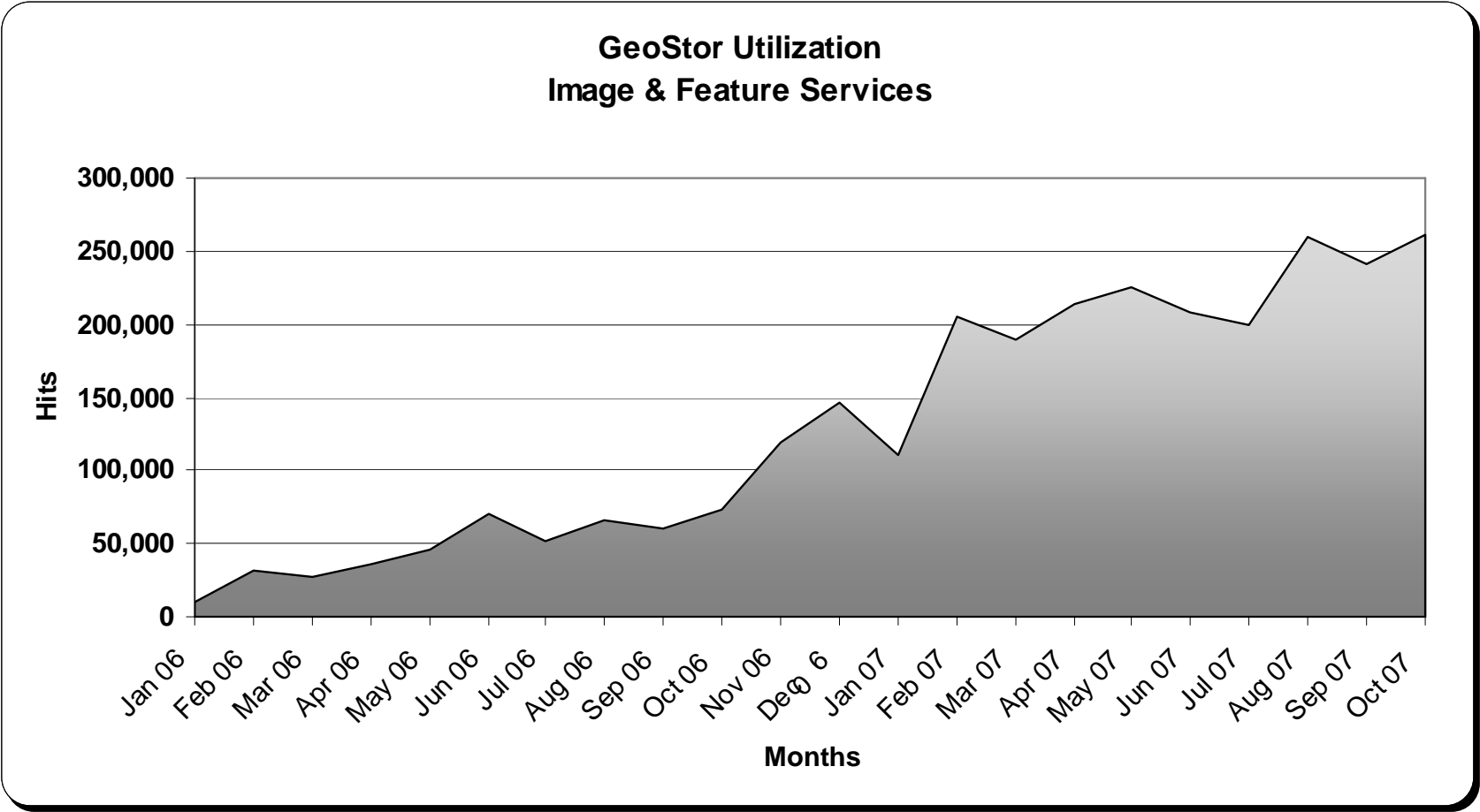
2,848,863 Request

Things to Think About

- Management of websites and ArcIMS services for outside agencies

- Using map services in place of downloads

- Using a map viewer that is easy to use, doesn't require a plug-in download but is robust enough to please GIS desktop users

- Backup/Recovery

- Finding the balance between COOL and useful
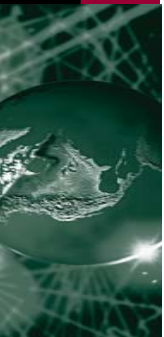
Contact Information

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www.geostor@arkansas.gov