
Examples of Geotechnical Data & Document Management Systems in the United States

The COSMOS/PEER-LL *Geotechnical Virtual Data Center*, Caltrans *GeoDOG*, and other systems

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Senior Transportation Engineer
California Department of Transportation

AGS/ICE, Electronic Transmission and Storage of Data
Birmingham, UK
June 18, 2008

Overview

- COSMOS/PEER-LL Geotechnical Virtual Data Center
 - Caltrans GeoDOG
 - Systems developed by other State Transportation Agencies
-

Geotechnical Virtual Data Center

■ Project Team:

- **Carl Stepp (PI)**, Consortium of Organizations for Strong-Motion Observation Systems
- **Jean Benoit**, University of New Hampshire
- **John Bobbit**, Petrotechnical Open Standards Consortium
- **Sean Devlin**
- **Dan Ponti**, U.S. Geological Survey
- **Charles Real**, California Geological Survey
- **Toru Saito**, Saito Statistics
- **Jennifer Swift**, University of Southern California
- **Loren Turner**, Caltrans
- **Yang Zhu**, Caltrans

COSMOS/PEER-LL

Geotechnical Virtual Data Center

PROJECT 21.03

HOME PROJECT INFO ABOUT CALENDAR USER SURVEY FORUM NEWS AND EVENTS

Geotechnical Virtual Data Center (GVDC)

The overall project is divided into a short-term and a long-term objective. The project we are now undertaking encompasses the short-term objective only, to develop a pilot web-based system linking the PG&E, Caltrans, CGS and USGS example geotechnical data sets. The long term objective (a future project not yet funded) is to extend the pilot system and develop a web-based system linking multiple data sets. [read more >>](#)

Please see the Project Workshop agenda - June 21-23 '04 in Newport Beach, CA. The results of the user scenario survey [more >>](#)

The objective is to develop consensus recommendations for classifying, archiving, and web dissemination of geotechnical data. [more >>](#)

COSMOS and the PEER Lifelines Program are coordinating additional workshops and establishing a pilot project leading to [more >>](#)

Browse through documentation on the GVDC. [Read More >>](#)

Find geotechnical data from our map-based interface. [User Login >>](#)

Sponsored by:

- Caltrans
- California Energy Commission
- Pacific Gas & Electric
- PEER Lifelines Program

In Partnership with:

- Pacific Earthquake Engineers Research Center
- United States Geological Survey
- California Geological Survey

Implemented by:

- University of Southern California
- Consortium of Organizations for Strong-Motion Observations Systems

Logos: Caltrans, PG&E, USGS, University of Southern California, Consortium of Organizations for Strong-Motion Observations Systems.

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Password:

Login Help

Forgotten your password? Enter your email address below and click the *Email Password* button and we'll email it to you.

Email Address:

Not a Subscriber Yet?

You can become a COSMOS subscriber by filling out our simple online registration form. Click the *Registration* button below to go to the registration form.

Registering is simple:

1. Provide us with your email address and a password.
2. Enter your name and address information.
3. Respond to the Account Confirmation email that we send you.

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COSMOS/PEER-LL

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Subscriber Home

Loren Turner welcome to COSMOS

Select an option from the button bar shown above or the menu below. When you're done using the COSMOS/PEER-LL Geotechnical Virtual Data Center, please click the logout button.

Menu Options

[Search](#) This option allows you to search our extensive Geotechnical database of documents.

[Account](#) Use this option to manage your account information including your name, company and address.

[Data Provider](#) Use this option to [edit disclaimer](#) or [run report](#)

[Administrator](#) Use this option to edit cosmos user table

[Help](#) This options provides you with answers to commonly asked questions concerning the information we provide and how to access and interpret information.

Download History

Download History

No documents have been downloaded.

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COSMOS/PEER-LL

Home Search Account Data Provider Administrator Help Log Out

Document Search

Use this page to search our database of geotechnical documentation.

Map Satellite Hybrid

Latitude: -116.90826416915625 Longitude: 33.511454454267506

Search

Provider: All Providers - Project Date (mm/dd/yyyy) from to

Asset Name Project Name Borehole Depth min max

Boundaries (decimal degrees) Longitude min Longitude max Latitude min Latitude max

Search for Selected Data Types: All Checked by Default

Results Per Page: 50 Search

COSMOS/PEER-LL - Mozilla Firefox

File Edit View History Bookmarks Tools Help

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Document Search

Use this page to search our database of geotechnical documentation.

Map Satellite Hybrid

Latitude: -117.55078979492188 Longitude: 33.831638461142866

Search

Provider: All Providers - Project Date (mm/dd/yyyy) from to

Asset Name Project Name Borehole Depth min max

Boundaries (decimal degrees) Longitude min Longitude max Latitude min Latitude max

Search for Selected Data Types: All Checked by Default

Results Per Page: 50 Search

VDC_754
 VDC_712
 VDC_753
 000007_00177_33118G1
 000007_00363_33118H1
 VDC_755
 and 912 more
[Click to list all data in this cluster.](#)

COSMOS / PEER-LL - Mozilla Firefox

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Document Search

Use this page to search our database of geotechnical documentation.

Geotechnical Virtual Data Center Asset
 Asset Name: CT-070094_07182201_04231
 Project Name: 07042004_07-182201_CPT-08-4
 Data Type(s): static cone
 Depth: 0.40 m Vertical
 Date: 2004-07-08
 Provider: CALTRANS

Latitude: -118.1532329550079 Longitude: 33.8767573211837

Search

Provider: All Providers - Project Date (mm/dd/yyyy) from to

Asset Name: Project Name: Borehole Depth: min max

Boundaries (decimal degrees) Longitude min Longitude max Latitude min Latitude max

Search for Selected Data Type(s) All Checked by Default

Results Per Page: 50 search

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Document Search

Use this page to search our database of geotechnical documentation.

Strong-Motion Recording Station
 COSMOS Virtual Data Center
[Long Beach, CA](#)
 Arista & Orange
 C&O#R-14873

Latitude: -118.1565959339330 Longitude: 33.89606717552165

Search

Provider: All Providers - Project Date (mm/dd/yyyy) from to

Asset Name: Project Name: Borehole Depth: min max

Boundaries (decimal degrees) Longitude min Longitude max Latitude min Latitude max

Search for Selected Data Type(s) All Checked by Default

Results Per Page: 50 search

COSMOS: Station USC: Long Beach, CA, Long Beach LDS Church, 6979 Orange Ave - Mozilla Firefox

COSMOS VIRTUAL DATA CENTER
 Consortium of Organizations for Strong-Motion Observation Systems

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 Earthquakes Stations Search Map Adv. Search

USC: Long Beach, CA
Long Beach LDS Church
6979 Orange Ave

Agency Number: 5380
 Latitude: 33.6610
 Longitude: -118.1760
 Site Geology: Alluvium [QYM](#)
 Owner: University of Southern California
[References](#)

Add all data on this page to the download bin

[Go to Download Bin](#) [View Map](#)

Whittier Narrows, California 1987-10-01 14:42:20 UTC
[Summary page for this earthquake](#)
 Add this station record to the download bin

Component: Up	PGA (cm/s/s): 132.70	PGV (cm)
Component: 10	PGA (cm/s/s): 221.50	PGV (cm)
Component: 200	PGA (cm/s/s): 152.50	PGV (cm)

[Return to top](#)

Landers, California 1992-06-28 11:57:34 UTC
[Summary page for this earthquake](#)
 Add this station record to the download bin

Component: Up	PGA (cm/s/s): 19.70	PGV (cm)
Component: 10	PGA (cm/s/s): 48.40	PGV (cm)
Component: 280	PGA (cm/s/s): 58.70	PGV (cm/s)

Add this to bin

COSMOS: Data Plot Long Beach, CA Whittier Narrows - Mozilla Firefox

COSMOS / PEER-LL - Mozilla Firefox

Latitude: -118.18207740783693 Longitude: 33.87148452276999

Map data ©1999-2008

Search

Provider: - All Providers - Project Date/mm/DD/yyyy from to

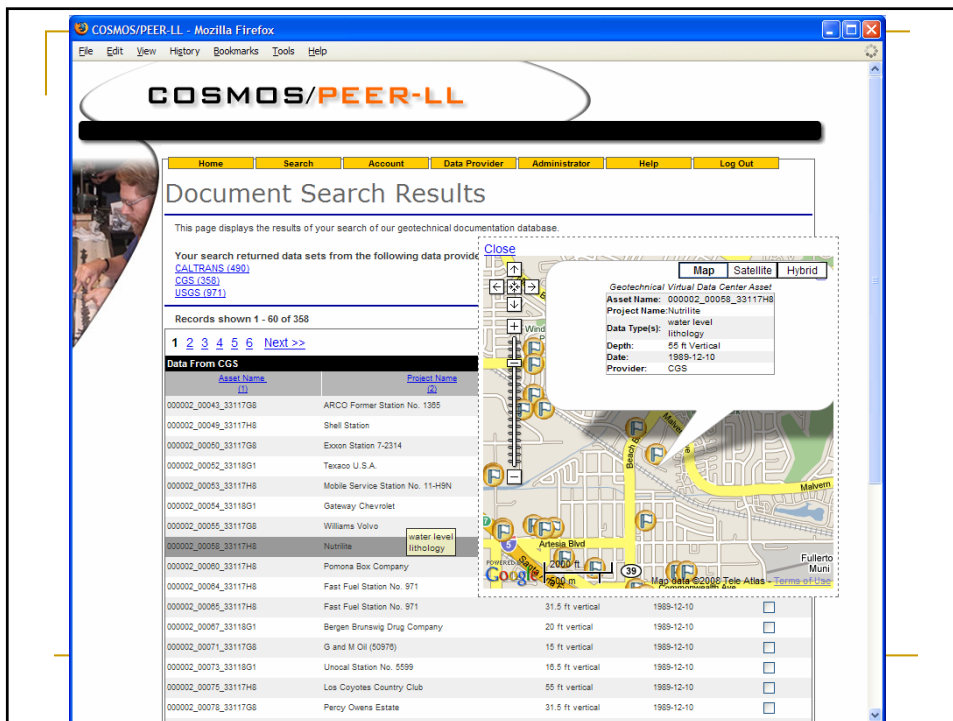
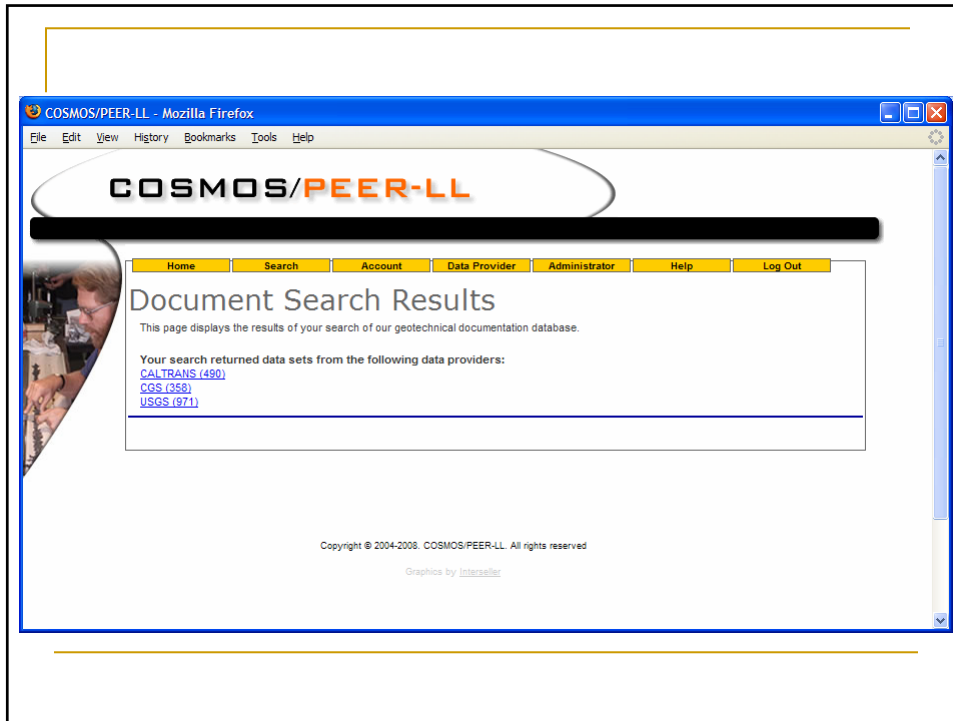
Asset Name Project Name Borehole Depth min max

Boundaries (decimal degrees) Longitude min Longitude max Latitude min Latitude max

Search for Selected Data Types All Checked by Default

- Field Test or Observation
 - Lithology/Stratigraphy
 - Lithology
- Geophysical Logs
- In-Situ Tests
- Lab Tests
 - Engineering Properties
 - atterberg limits
 - compressive strength
 - moisture content
 - particle-size
 - relative density
 - Geochemical Properties
 - pore water chemistry
- Repeated Monitoring

A test to determine the stress-strain properties of soil. Typically, a cylindrical specimen is sealed in a rubber membrane, placed in a cell and subjected to a uniform fluid pressure in the horizontal and vertical directions. A vertical load is applied axially to the specimen increasing the axial stress until the specimen fails.



COSMOS/PEER-LL - Mozilla Firefox

CGS (358)
USGS (971)

Records shown 1 - 60 of 358

1 2 3 4 5 6 Next >>

Data From CGS

Asset Name (A)	Project Name (P)	Measured Depth (D)	Date (S)	Download (B)
000002_00043_33117G8	ARCO Former Station No. 1305	40 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00049_33117H8	Shell Station	25 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00050_33117G8	Exxon Station 7-2314	35.5 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00052_33118G1	Texaco U.S.A.	42 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00053_33117H8	Mobile Service Station No. 11-HSN	51.5 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00054_33118G1	Gateway Chevrolet	21.5 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00055_33117G8	Williams Volvo	40 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00058_33117H8	Nutrilit	55 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00060_33117H8	Fimora Box Company	43 ft vertical	1989-12-10	<input checked="" type="checkbox"/>
000002_00064_33117H8	Fast Fuel Station No. 971	25 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00065_33117H8	Fast Fuel Station No. 971	31.5 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00067_33118G1	Bergen Brunswig Drug Company	20 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00071_33117G8	G and M Oil (00978)	15 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00073_33118G1	Unocal Station No. 5599	10.5 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00076_33117H8	Los Coyotes Country Club	55 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00078_33117G8	Percy Owens Estate	31.5 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00085_33117H8	Paul L. Dodds Co.	31 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00086_33117G8	Rona Service Station	31 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00088_33117G8	El Bandido Trucking/Deep	40 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00091_33118G1	Kraft General Foods	24 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00101_33117H8	Mobil - La Habra	50.5 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00103_33118H1	Former Chevron Station 2240	81.5 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00107_33117H8	UGST Site Assessment	30 ft vertical	1989-12-10	<input type="checkbox"/>
000002_00112_33117H8	Chevron Station No. 9-8498	31.5 ft vertical	1989-12-10	<input type="checkbox"/>

drive penetration lithology water level

1 2 3 4 5 6 Next >>

Download Data from this Provider

COSMOS/PEER-LL - Mozilla Firefox

Home Search Account Data Provider Administrator Help Log Out

GVDC Document Download

You have selected the following document(s) to download. Please read the Conditions of Use and click Download Now to begin the download of the selected document(s).

Selected Documents	Asset Name	Format	Date
<input checked="" type="checkbox"/>	000002_00043_33117G8	Excel	
<input checked="" type="checkbox"/>	000002_00049_33117H8	Excel	
<input checked="" type="checkbox"/>	000002_00050_33117G8	Excel	
<input checked="" type="checkbox"/>	000002_00052_33118G1	Excel	
<input checked="" type="checkbox"/>	000002_00053_33117H8	Excel	
<input checked="" type="checkbox"/>	000002_00054_33118G1	Excel	
<input checked="" type="checkbox"/>	000002_00055_33117G8	Excel	
<input checked="" type="checkbox"/>	000002_00060_33117H8	Excel	

Chuck Real

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PERSONAL INFORMATION AND CHOICE

"Personal information" is information about a natural person that identifies or describes an individual, including, but not limited to, his or her name, social security number, physical description, home address, home telephone number, education, financial matters, and medical or employment history, readily identifiable to that specific individual. A domain name or Internet Protocol address is not considered personal information, however, it is considered "electronically collected personal information."

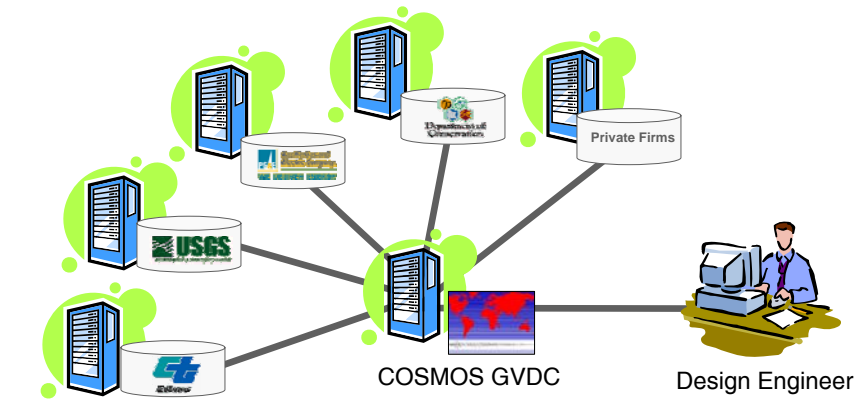
According to Government Code \S 11016.5., "electronically collected personal information" means any information that is maintained by an agency that identifies or describes an individual user, including, but not limited to, his or her name, social security number, physical description, home address, home telephone number, education, financial matters, medical or employment history, password, electronic mail address, and information that

I do not agree I agree

Download

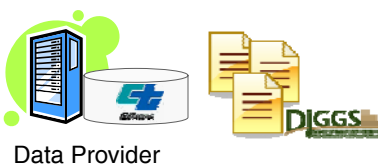
GVDC – How Does It Work?

- The GVDC is a data “broker,” not a data repository.
- Translation-based system using DIGGS.



GVDC – How Does It Work?

- First, the data provider needs to have a digital repository of their data.
- The data repository can take on many forms, however, the simplest implementation is to have a collection of DIGGS files on a web server.



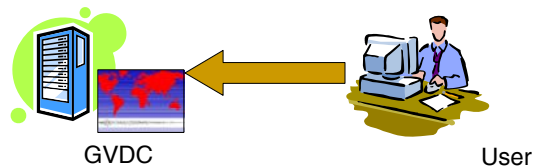
GVDC – How Does It Work?

- The Data Provider generates a MetaDIGGS XML file to reflect their available data sets.
- The GVDC “harvests” the MetaDIGGS file and stores this information in its database.



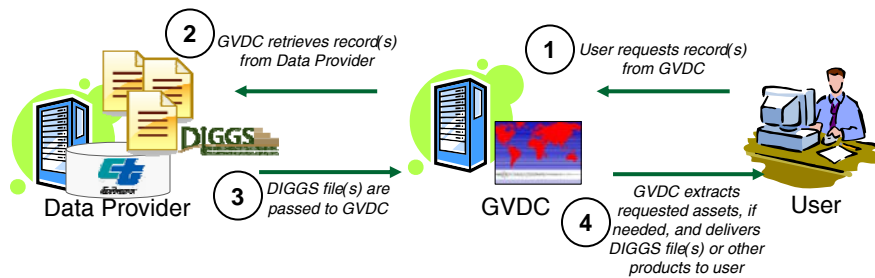
GVDC – How Does It Work?

- A user goes the GVDC to search for data.

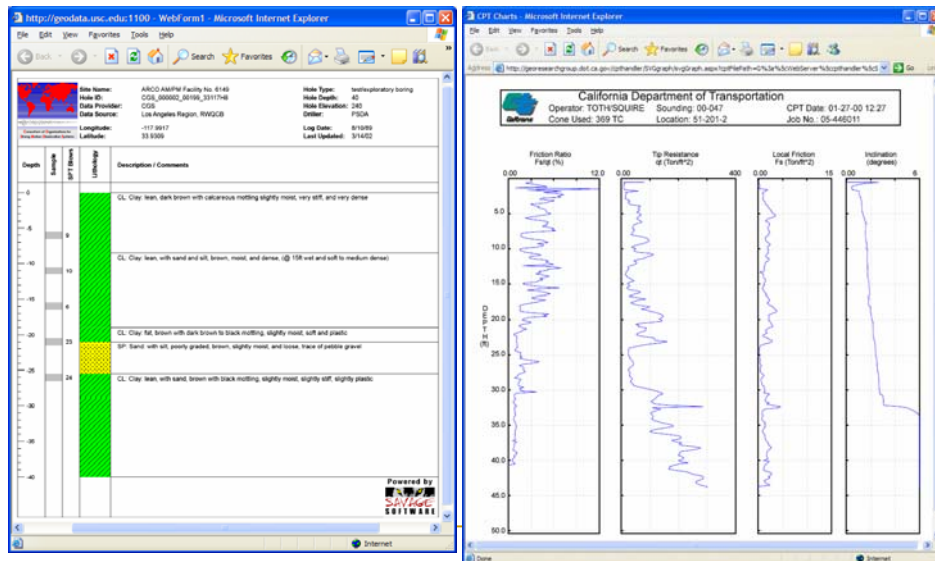


GVDC – How Does It Work?

- The user requests to download and/or preview the record(s) returned by the search process.



GVDC – How Does It Work?



GVDC – How Does It Work?

The screenshot shows a web browser window with two panes. The left pane displays XML data for a project, including details like 'City: Sacramento', 'State: California', and 'Project: County Route PM SLO 101 - none 45.5/none-99'. The right pane displays a table with columns A through O, containing data for various geotechnical parameters such as 'FOGSP/FOUL_ID', 'CORE_ID', 'SOURCE', 'TOP', 'TOP_LON/TOP_OUA/BASE', 'BASE_LU/BASE_OH/CLASS', 'SYSTEM', 'PRIMARY', 'SECOND', and 'OBTAINED'.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	3899	V555_FOUGS_ID			0 #									
2	3899	V555_FOUGS_ID			120 #						V555_FOUGS	clay		
3	3899	V555_FOUGS_ID			150 #						V555_FOUGS	sand		
4	3899	V555_FOUGS_ID			175 #						V555_FOUGS	clay		
5	3899	V555_FOUGS_ID			225 #						V555_FOUGS	sand		
6	3900	V555_FOUGS_ID			249 #						V555_FOUGS	shale		
7	3900	V555_FOUGS_ID			300 #						V555_FOUGS	sandstone		
8	3900	V555_FOUGS_ID			1000 #						V555_FOUGS	shale		
9	3902	V555_FOUGS_ID			1030 #						V555_FOUGS	shale		
10	3904	V555_FOUGS_ID			1170 #						V555_FOUGS	sandstone		
11	3905	V555_FOUGS_ID			1180 #						V555_FOUGS	shale		
12	3906	V555_FOUGS_ID			1636 #						V555_FOUGS	sandstone		
13	3907	V555_FOUGS_ID			1641 #						V555_FOUGS	shale		
14	3908	V555_FOUGS_ID			1648 #						V555_FOUGS	sandstone		
15	3909	V555_FOUGS_ID			1671 #						V555_FOUGS	shale		
16	3910	V555_FOUGS_ID			1680 #						V555_FOUGS	sandstone		
17	3911	V555_FOUGS_ID			1686 #						V555_FOUGS	shale		
18	3912	V555_FOUGS_ID			1718 #						V555_FOUGS	sandstone		
19	3913	V555_FOUGS_ID			1777 #						V555_FOUGS	shale		
20	3914	V555_FOUGS_ID			1777 #						V555_FOUGS	sandstone		
21	3915	V555_FOUGS_ID			1800 #						V555_FOUGS	shale		
22	3916	V555_FOUGS_ID			1800 #						V555_FOUGS	sandstone shale		
23	3917	V555_FOUGS_ID			1896 #						V555_FOUGS	shale		
24	3918	V555_FOUGS_ID			1912 #						V555_FOUGS	sandstone		
25	3919	V555_FOUGS_ID			1932 #						V555_FOUGS	shale		
26														

Caltrans GeoDOG Digital Repository Of Geotechnical Services

- Central data repository on the web that houses geotechnical documents as well as data generated through gINT, including borehole logs and laboratory test data.
- Search for and download data on the repository using web-based map interface.
- Pass data digitally between the soils lab, engineers/geologists, drafting services, and the data repository.
- Integration with the Department's document management system.

Caltrans GeoDOG

■ Development Team:

- Xing Liu
- Janki Patel
- Loren Turner

■ Advisory Panel:

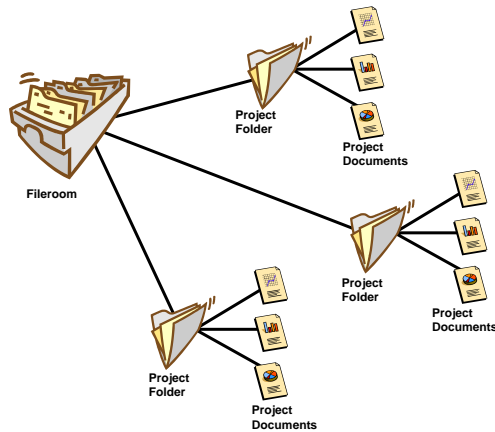
- Yung Chung
- Gem-Yeu Ma
- Bill Owen
- Mark Willian

Motivation for Caltrans GeoDOG

- 30,000+ project files
- 2million+ documents
 - Memos
 - Boring logs
 - Reports
 - Test results
 - Photos
- 300 projects/year
- 80+ years of data

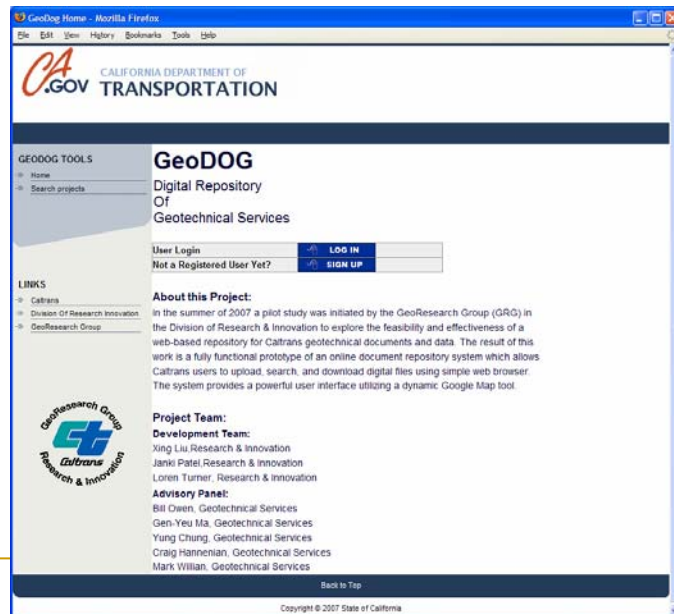


Caltrans GeoDOG Design Approach

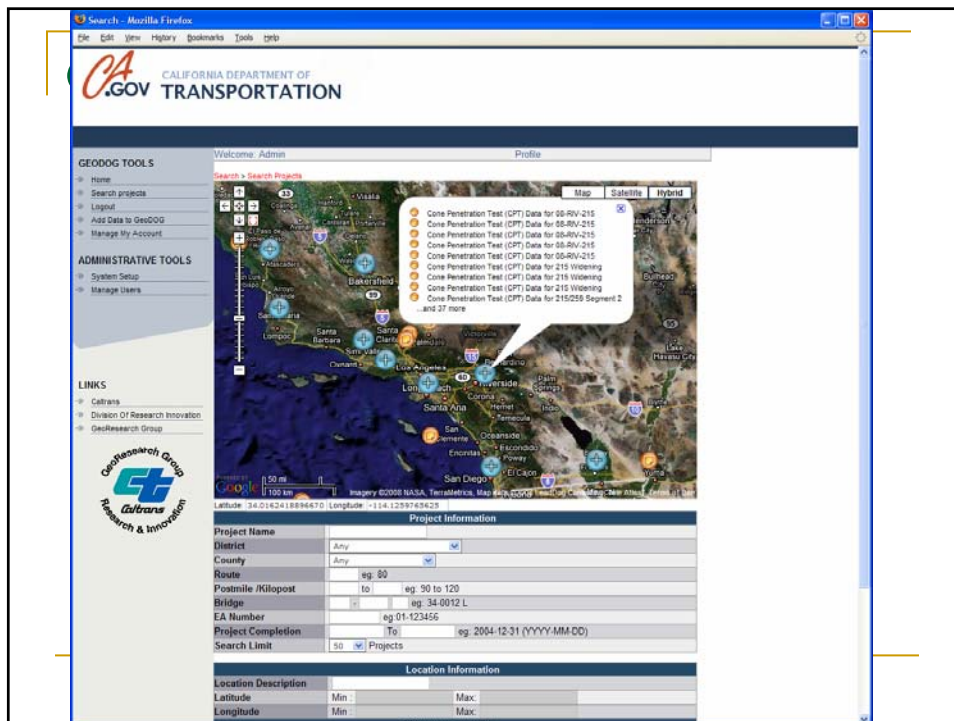
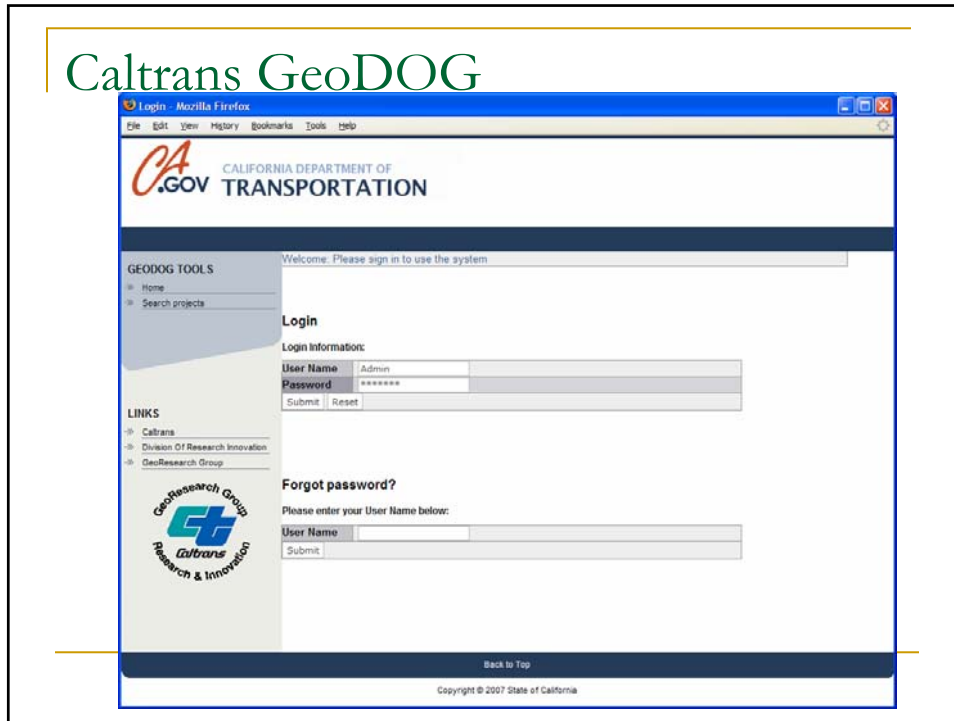


- Database structure:
 - The system's database is organized by *Projects*.
 - *Projects* can have multiple *files* and *locations*.
 - *Locations* can be used to define anything the user wants.
 - The user can upload any file type.
 - *Files* are not directly linked to *locations*.
- Searching
 - Users search by *project*, *file* or *location* info.
 - Map interface can be used to define *location* max/min boundaries.
 - All *Location* points are displayed on the map.
 - Search results are displayed by *Projects* that match search criteria.

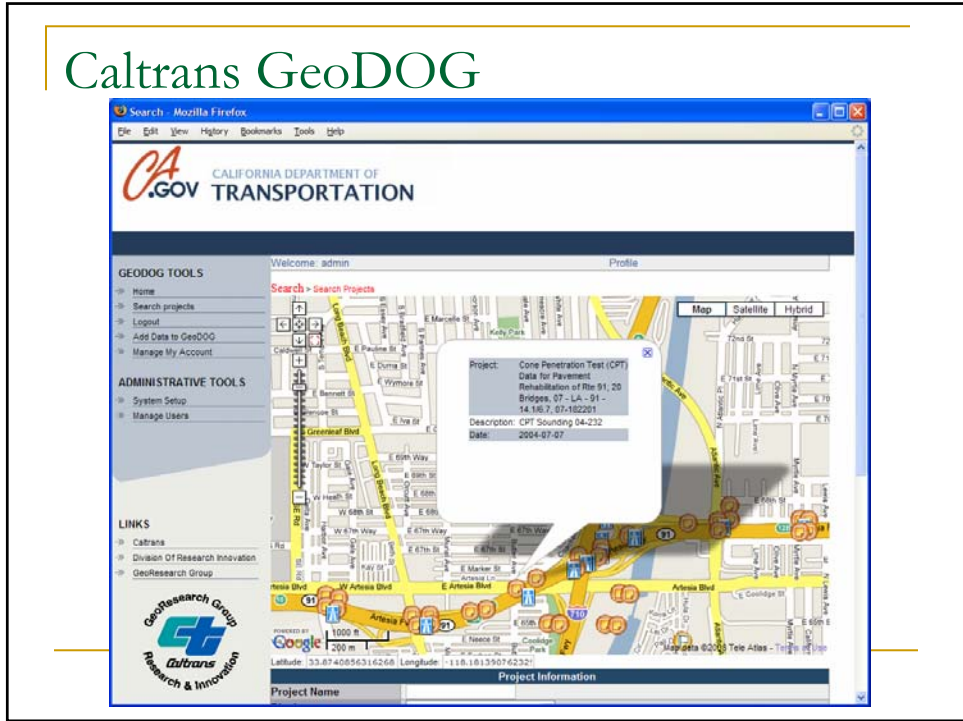
Caltrans GeoDOG



Caltrans GeoDOG



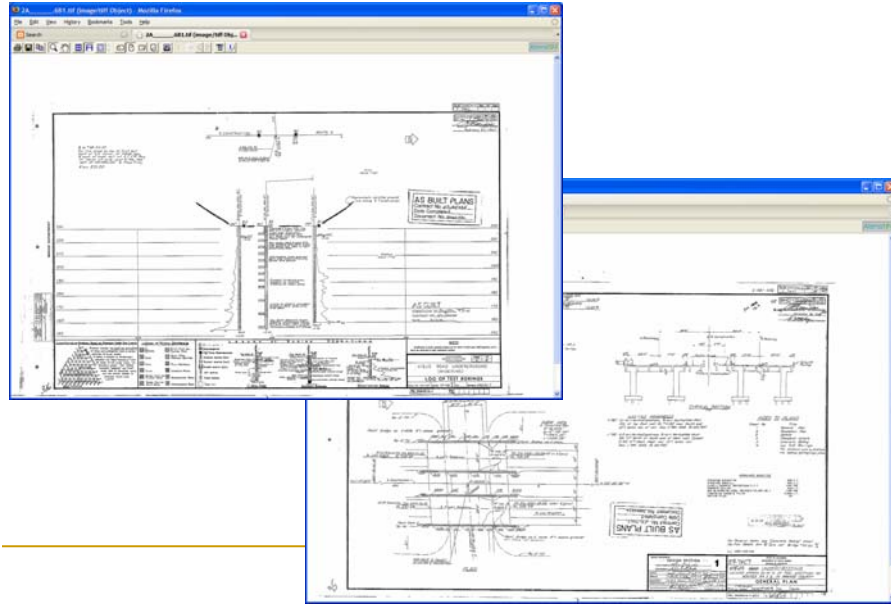
Caltrans GeoDOG



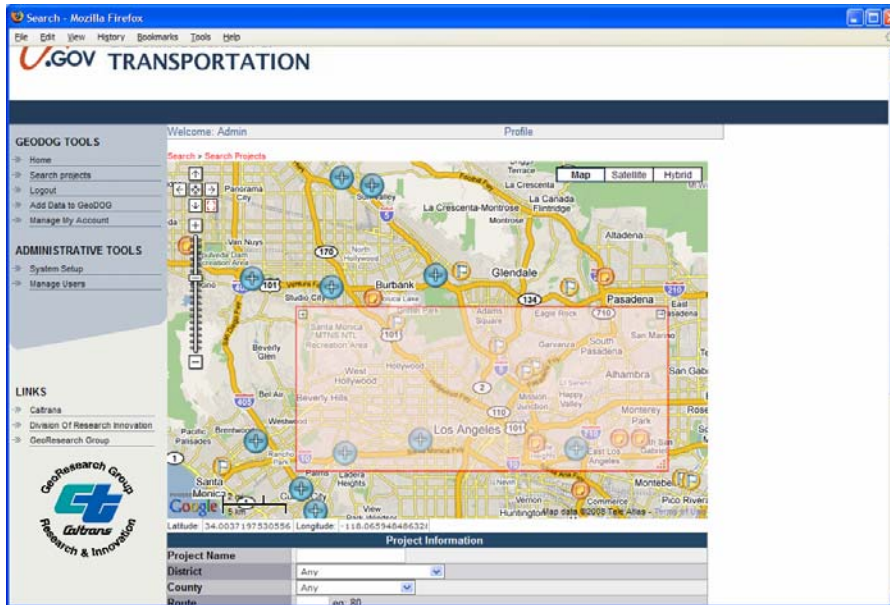
Caltrans GeoDOG



Caltrans GeoDOG



Caltrans GeoDOG



Caltrans GeoDOG

Search Results - Mozilla Firefox

CA .GOV CALIFORNIA DEPARTMENT OF TRANSPORTATION

Welcome: admin Profile

Search > Search Results

Projects Files

Total number of File(s): 209
Files per page: 10 - 25 - 50 - 100

Index	Title	Date	Author	Projects	Dist-Cty-Rte-IPM
201	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
202	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
203	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
204	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
205	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
206	Seismic CPT Sounding CPT-18	1996-04-23	Gem, Yeu Ma, Ralph Fitzpatrick	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5
207	Seismic CPT	1996-04-23	Gem, Yeu Ma,	Cone Penetration Test (CPT) Data for 12-ORA-5	12-ORA-5-38 6/39 5

GeoResearch Group

Caltrans GeoDOG

View Projects - Mozilla Firefox

CA .GOV CALIFORNIA DEPARTMENT OF TRANSPORTATION

Welcome: admin Profile

Search > Search Results > View Project

Project

Project Name	Foundation Testing and Instrumentation Project for S5-Nwport/N55-S5 Connector Sep
District	11 - San Diego
County	ORA
Route	5
(Post Mile /Kilo Post)	/ 30.17
Bridge	00550642
EA Number	12-000000
Project Completion	1998-01-01
Comments	55-0642K SB OffRamp OC 55-642KPLT

Locations Files

File Name	Type	Author	Date	
ComplLayout	Other	Dan Speer		View
55.642KReport.doc	Other	Dan Speer		View
TensionLayout	Other	Dan Speer		View
DrivingRecords	Other	Dan Speer		View
TCGraphs	Other	Dan Speer		View

GeoResearch Group

Caltrans GeoDOG

The screenshot shows two windows. The left window is Mozilla Firefox displaying a data table with columns for 'Elev (ft)', 'Density (pcf)', and 'Depth (ft)'. The right window is Microsoft Word displaying a memorandum dated March 1, 1994, from the Department of Transportation to Mr. Frank Yamamura, Chief of Office of Structure Construction. The memorandum discusses gamma test results for Bent 4, Shaft 4B, and mentions a significant reduction in average bulk density for inspection tubes 1, 9, and 10.

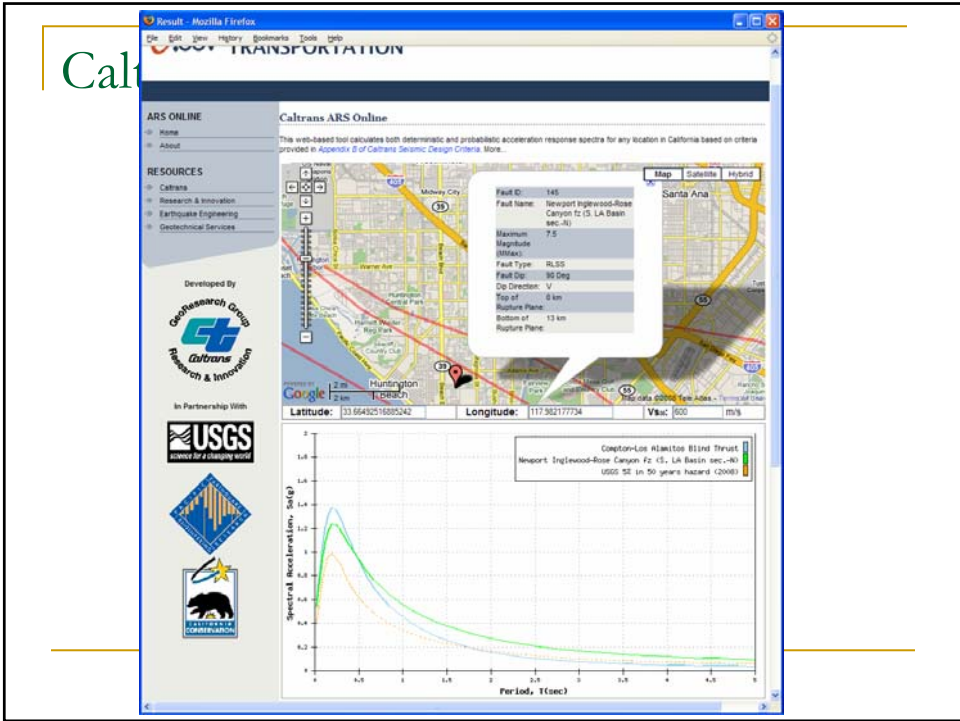
Elev (ft)	Density (pcf)	Depth (ft)
0.38	129.88	0.4420
0.40	86.44	0.7084
0.43	109.39	1.4901
0.50	122.74	1.2349
0.53	87.07	0.9359
0.60	87.99	0.7437
0.65	39.97	0.8847
0.70	29.74	0.8374
0.78	25.78	0.9257
0.80	27.03	0.7321
0.80	26.90	0.4932
0.80	22.28	0.7244
0.80	19.47	0.7169
1.00	19.19	0.7139
1.00	18.97	0.6390
1.10	15.47	0.9321
1.10	15.90	0.3469
1.20	11.20	0.9130
1.20	11.94	0.4213
1.30	19.44	0.5550
1.30	19.82	0.7239
1.40	16.24	0.7050
1.45	14.74	0.5735
1.50	19.59	0.4907
1.50	12.18	0.8400
1.60	12.04	0.9704
1.65	19.97	0.4270
1.70	15.29	1.0577
1.75	14.14	1.0443
1.80	15.17	0.9490
1.80	15.07	0.8949
1.90	15.94	0.4780
1.95	14.81	0.9730
2.00	27.47	0.9171
2.00	19.77	0.9608
2.10	15.14	0.8794
2.15	22.00	1.1879
2.20	23.34	1.2479
2.40	19.03	1.1871
2.45	16.40	0.9029

Caltrans GeoDOG

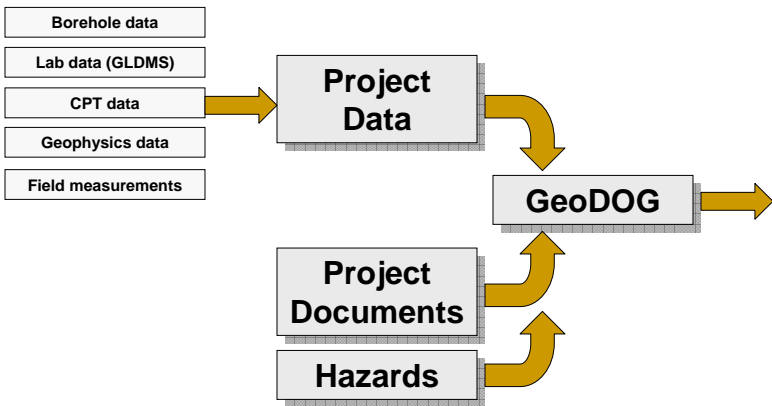
The screenshot shows the Caltrans GeoDOG web application. The top navigation bar includes 'CALGIS TOOLS' (Home, Search projects, Logout, Add Data to GeoDOG, Manage My Account) and 'ADMINISTRATIVE TOOLS' (System Setup, Manage Users). The main content area is titled 'Add File' and includes a form for uploading documents. The form fields are: Author (Loren Turner), Title (Meeting Documents for DIGGS), Type (Correspondence), Date (2008-11-05), and Keyword. Below the form is a table listing existing documents.

Author	Title	Type	Date	Keyword(s)	Filepath	Size
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		results and Depth.doc	39212
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		meeting/discussy.doc	27648
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		S purpose goals.doc	26160
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		citation Final Draft.doc	57856
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		etlog/discopencr.doc	31276
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		as Ground Plans.doc	27248
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		network group list.doc	34816
Loren Turner	Meeting Documents for DIGGS	Correspondence	2008-11-05		Responsibilities.doc	28160

Caltrans



Caltrans GeoDOG

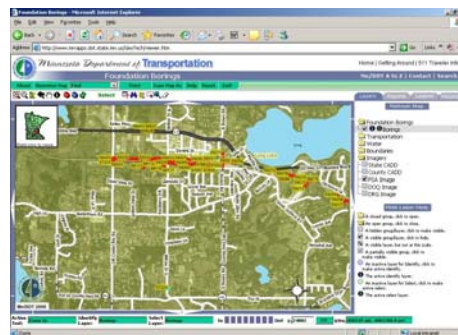


GVDC & GeoDOG Technologies

- WAMP
 - Windows (Server 2003)
 - Apache
 - MySQL (PostgreSQL/PostGIS for GVDC)
 - PHP
- GoogleMaps
 - Clustering
 - Selection box tool
 - Map overlays
- Other Technologies
 - Java Applets
 - Javascript & AJAX

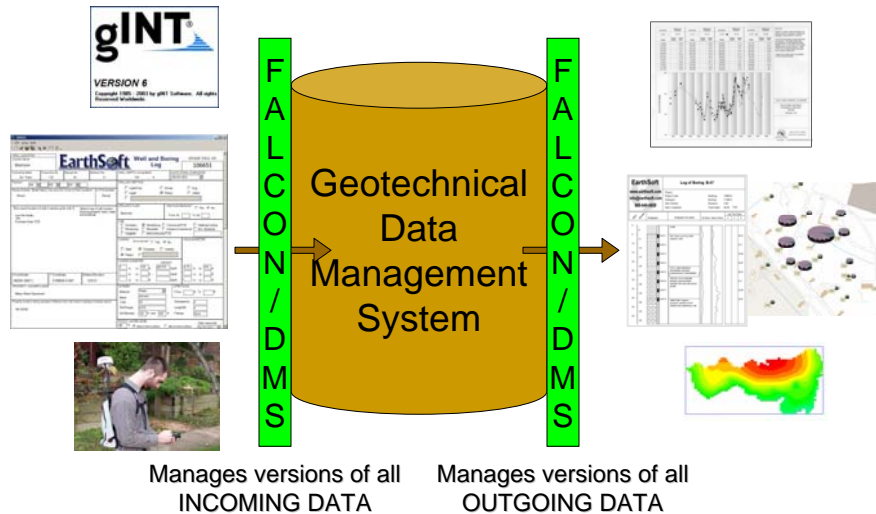
Minnesota DOT - Geotechnical Investigation Information Interchange Internet Interface (GI⁵)

- ArcIMS web application
- Makes over 25,000 borings and soundings available on-line
- Graphic interface allows search by zoom, pan, and by data queries
- Users can download static PDF logs, eventually DIGGS data files
- Updated quarterly



http://www.mrr.dot.state.mn.us/geotechnical/foundations/Gis/gi5_splash.html

Ohio DOT - Geotechnical Data Management System



<http://www.dot.state.oh.us/>

Examples of Geotechnical Data & Document Management Systems in the United States

The COSMOS/PEER-LL *Geotechnical Virtual Data Center*, Caltrans *GeoDOG*, and other systems

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California Department of Transportation

AGS/ICE, Electronic Transmission and Storage of Data
Birmingham, UK
June 18, 2008