

# The Role of Manufactures in Geodetic Infrastructure

Donny Sosa, Surveying Industry Specialist



# What Drives Esri?

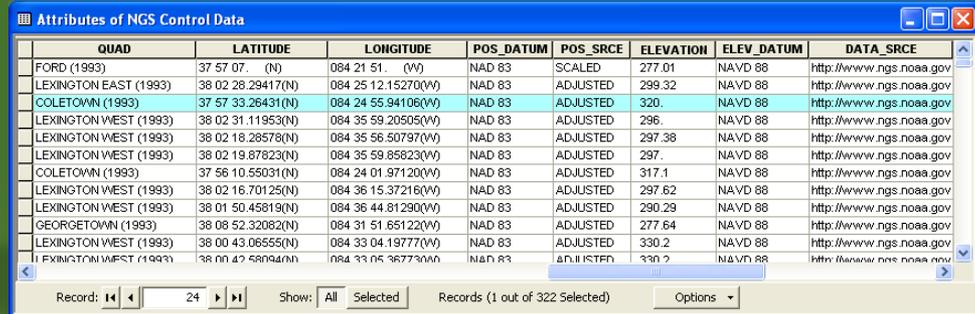
- **Our Users (many of you)**
  - Government
  - Utilities
  - National Mapping
  - Land Information
- **Trends**
  - Mobile
  - Cloud
- **Scientific Communities**
  - ODA, FIG, PBO, etc...

-

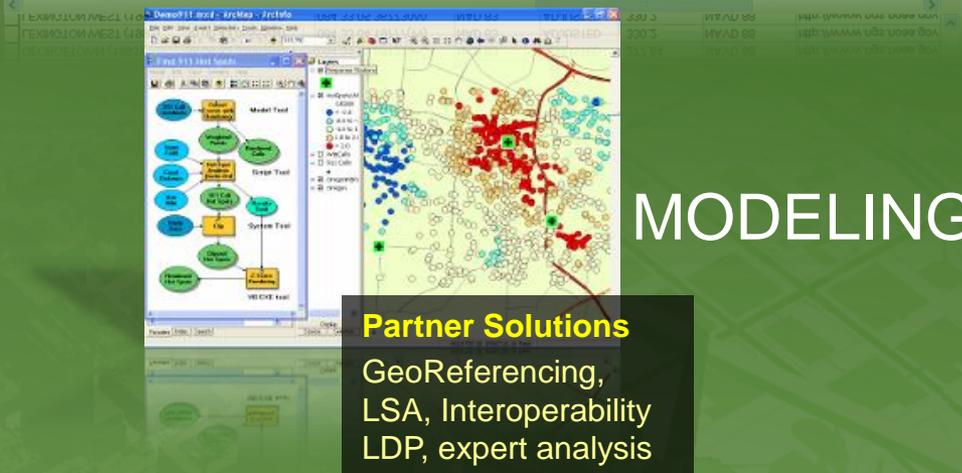
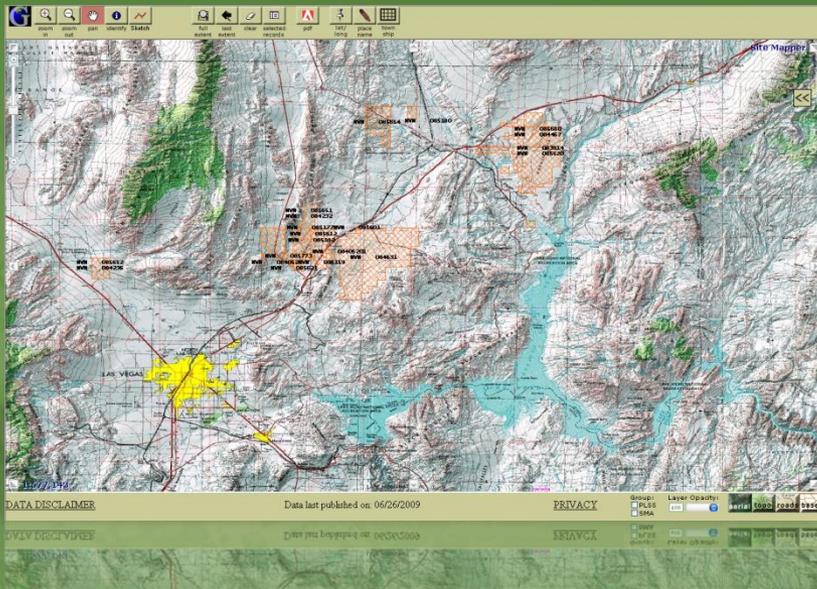
# Components of geographic data

Structuring data for multipurpose uses

ATTRIBUTES



QUAD	LATITUDE	LONGITUDE	POS_DATUM	POS_SRCE	ELEVATION	ELEV_DATUM	DATA_SRCE
FORD (1993)	37 57 07. (N)	084 21 51. (W)	NAD 83	SCALED	277.01	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON EAST (1993)	38 02 28.29417(N)	084 25 12.15270(W)	NAD 83	ADJUSTED	299.32	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
COLETOWN (1993)	37 57 33.26431(N)	084 24 55.94106(W)	NAD 83	ADJUSTED	320.	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 02 31.11953(N)	084 35 59.20505(W)	NAD 83	ADJUSTED	296.	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 02 18.28578(N)	084 35 56.50797(W)	NAD 83	ADJUSTED	297.38	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 02 19.87623(N)	084 35 59.85623(W)	NAD 83	ADJUSTED	297.	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
COLETOWN (1993)	37 56 10.55031(N)	084 24 01.97120(W)	NAD 83	ADJUSTED	317.1	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 02 16.70125(N)	084 36 15.37216(W)	NAD 83	ADJUSTED	297.62	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 01 50.45819(N)	084 36 44.81290(W)	NAD 83	ADJUSTED	290.29	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
GEORGETOWN (1993)	38 08 52.32082(N)	084 31 51.65122(W)	NAD 83	ADJUSTED	277.64	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 00 43.06555(N)	084 33 04.19777(W)	NAD 83	ADJUSTED	330.2	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>
LEXINGTON WEST (1993)	38 00 47.58094(N)	084 33 05.36779(W)	NAD 83	ADJUSTED	330.2	NAVD 88	<a href="http://www.ngs.noaa.gov">http://www.ngs.noaa.gov</a>



MODELING

GEOMETRY

# Mobile

*Leveraging the Web with New Functionality & Devices*



Customizable Applications



Capture Photos



Tablet



iPhone



*... Connects & Integrates Mobile Workers*

# Online Services - Key Component of GIS

## Ready-to-Use Maps & Imagery

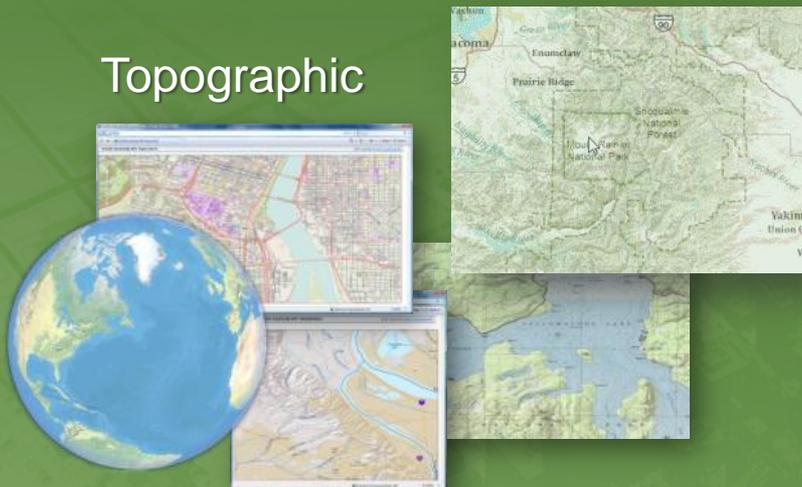
Streets



Demographic & Thematic



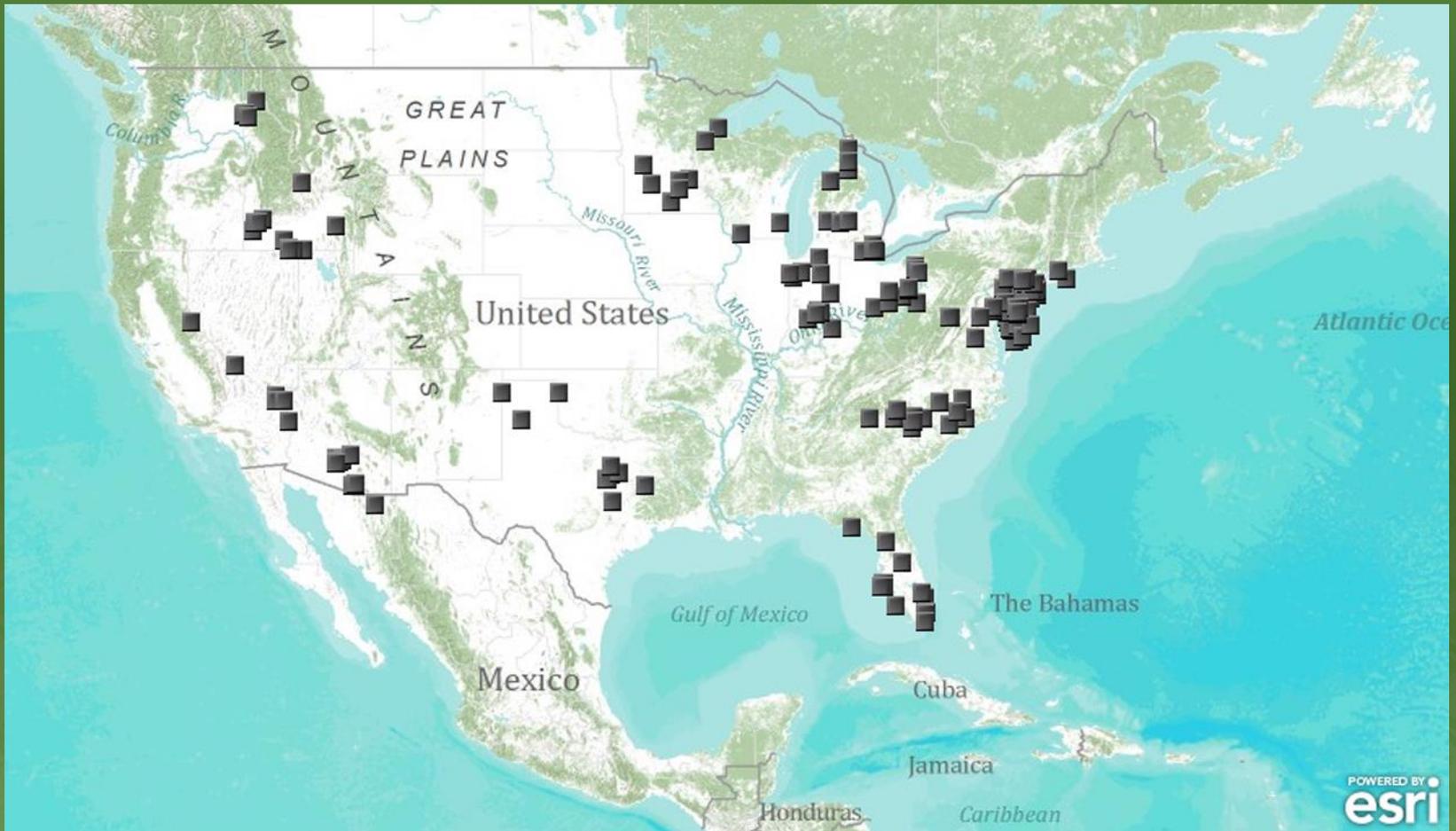
Topographic



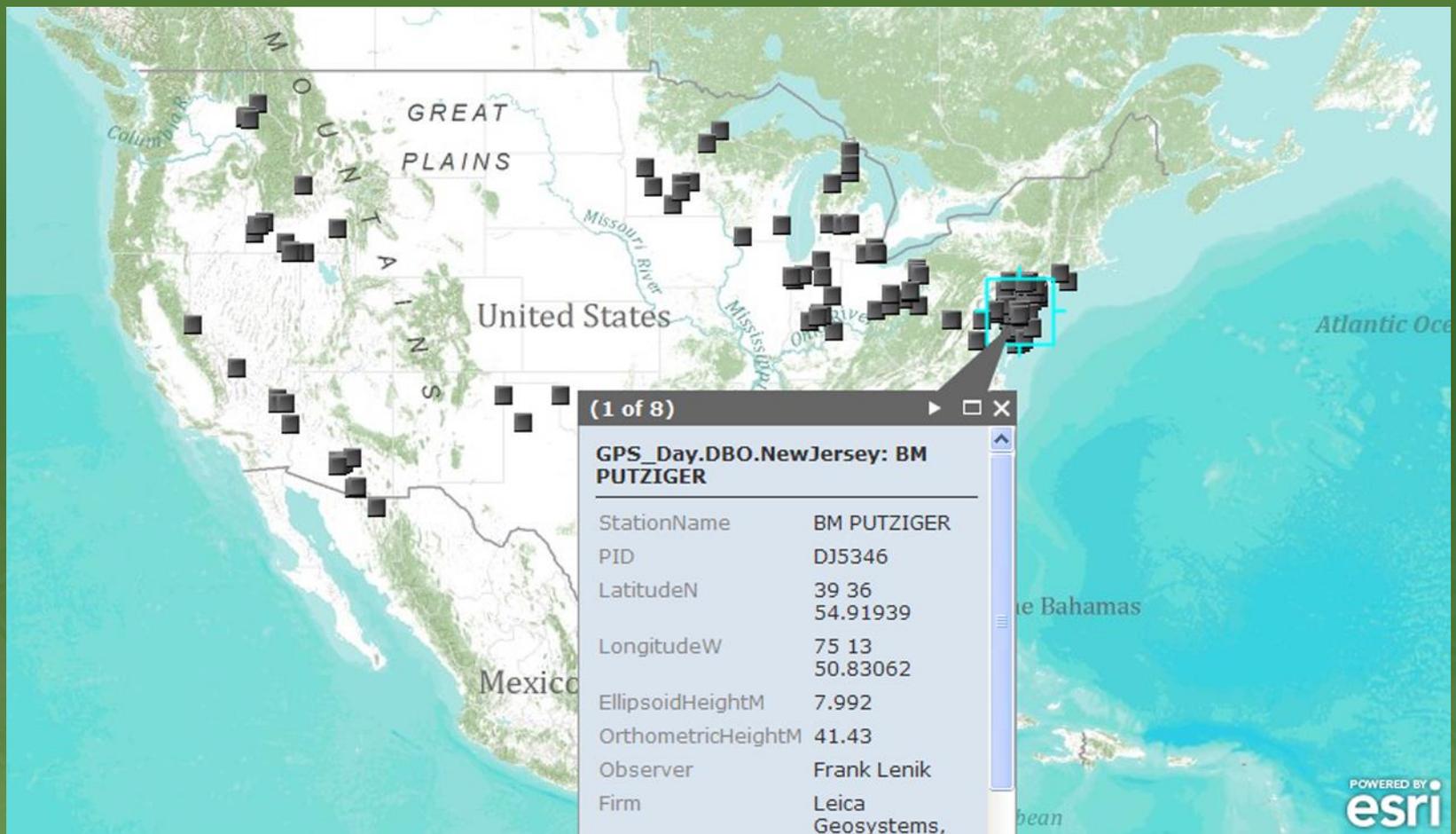
Imagery



# GIS Features



# GIS Features



# Connected Systems

Web maps ....

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## The Mapping Platform for Your Organization

Create interactive maps and apps and share them with the rest of your organization. Realize new opportunities and gain insight into your data. Do this quickly and easily with nothing to install or setup.

**30-DAY FREE TRIAL**

**Reach Your Users**  
Share your maps and data through blogs, social media, or custom apps.

**Go Mobile**  
Access your maps and information from anywhere, on any device.

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Choose from many beautiful basemaps to kick-start your projects.

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# Connected Systems

## Web maps, Servers, Mobile ....

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**30-DAY FREE TRIAL**

**Reach Your Users**  
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**Go Mobile**  
Access your maps and information from anywhere, on any device.

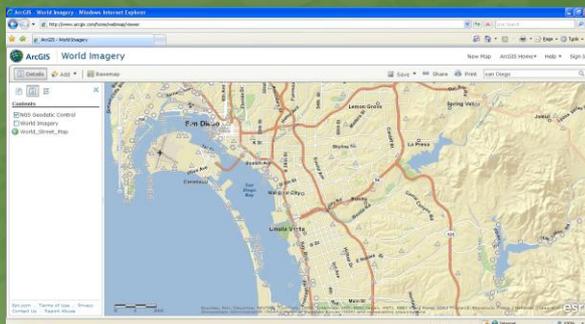
**Ready-to-use Content**  
Choose from many beautiful basemaps to kick-start your projects.

**Maps for Personal Use**  
Discover useful maps, data, and other information. [Home](#) | [Map](#) | [Gallery](#) | [Help](#)

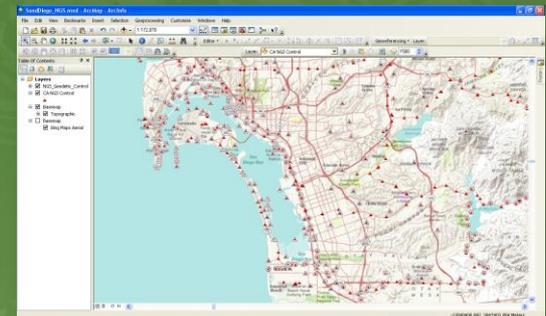


Mobile

Web

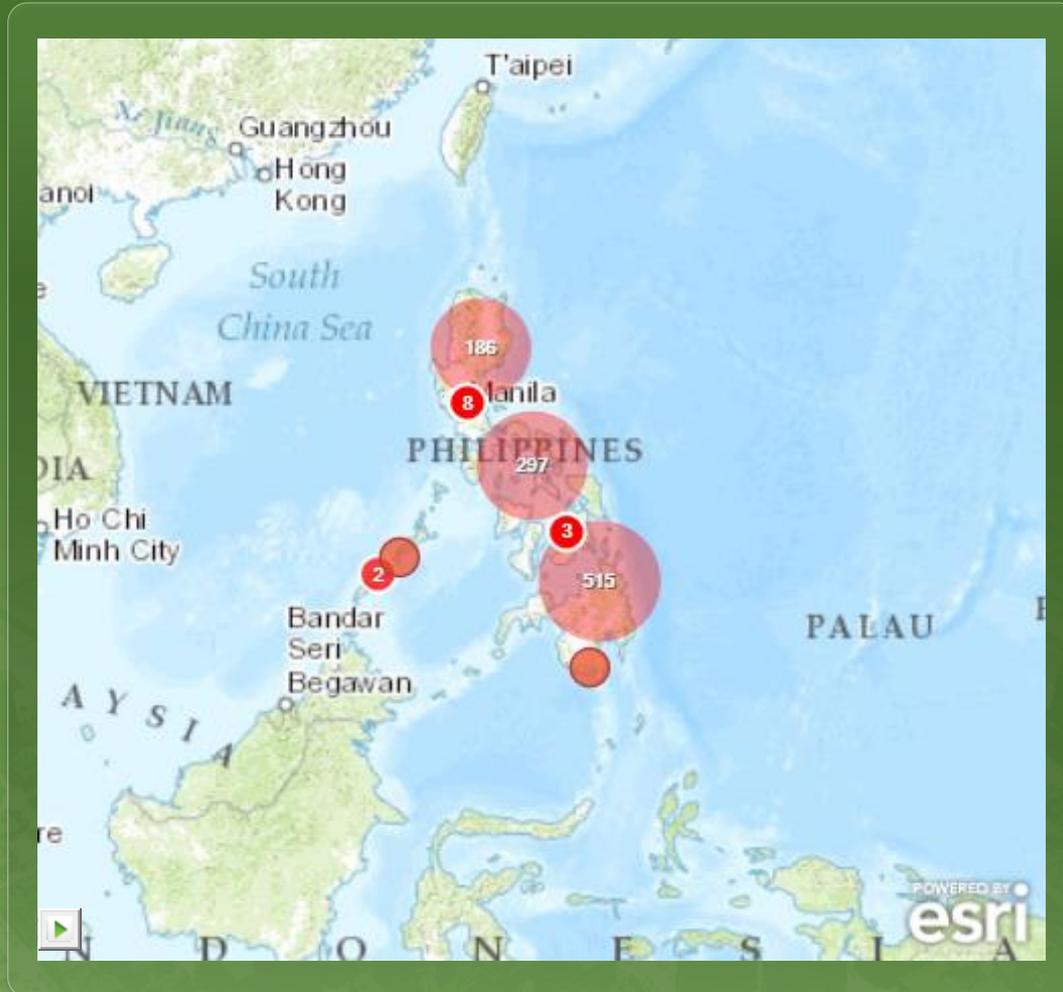


Desktop



# Connected Systems (GCP Stations)

## Cloud Computing



# Geospatial Connected Systems

*Tools, data, technology, applications ....*



# Strategic Partnerships

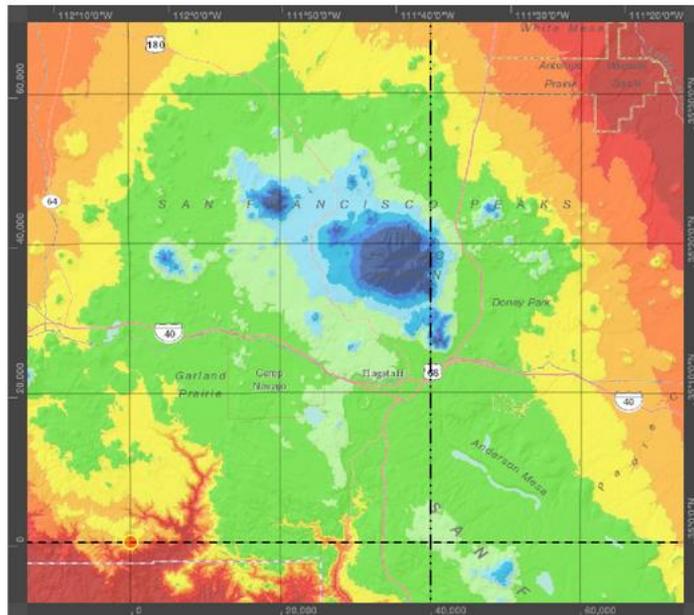
NOAA, NGS Trimble Leica Geosystems  
Altus Carlson Topcon Hemisphere Javad  
FIG BLM Berntsen International **Geodetic Analysis**  
Blue Marble Geographics Way Association SURV-KAP  
Champion Instruments Greabert PenBay Media Coden  
Hydrographic Survey HercuLoc Gatewing GeoSoft Landmark  
MicroSurvey Software NCEES Pacific Crest **Safe Software**  
SPAR Point Group **Spectra Precision** International Right of  
SubSurface Instruments Adtollo

# Private

## Low Distortion Projection Design

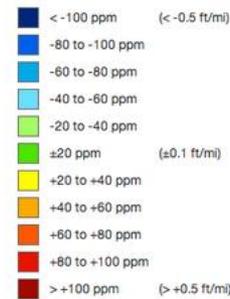
A simple, automated tool for the design of map-projected coordinate systems.

[Get started here »](#)



### Quantified linear distortion.

LDP Design provides you with a map-centric design environment where you can interactively change map projection parameters and visualize distortion in parts per million (= mm per km).



# Public (Authoritative)

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**ArcGIS**    GALLERY    MAP    GROUPS    MY CONTENT

## NGS Geodetic Control

This map displays National Geodetic Survey (NGS) classifications of geodetic control stations located within the US.  
Map Service by [Federal\\_User\\_Community](#) (last modified: July 1, 2011)  
(0 ratings, 140 views)

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[Facebook](#) [Twitter](#)

Open ▾

### Description

The National Geodetic Survey (NGS) serves as the Nation's depository for geodetic data. NGS provides the public with survey control information.

This map shows geodetic control stations maintained by the National Geodetic Survey (NGS) to provide a base reference for latitude, longitude, and height throughout the United States. Stations are located within the US and trust Territories. Separate layers are used to identify the quality of stations as combined control (horizontal and vertical), horizontal control, vertical control, and lower quality, along with locations that are part of the Continuously Operating Reference Stations (CORS) network. NOTE: A single station can be classified multiple ways. For example, a horizontal control station could also have low quality Orthometric Height, and be part of the CORS network.

### Comments (0)

**Thank You**



# GIS Maps In Excel

MyClients.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View Add-Ins Esri Maps

Map Contents Add Data Search Basemap Organize Layers Clustering Heatmap Visible Range Layer Details Enrich Layer Sign Out Share Layer Share Map Create Slide Copy Image Help

	B	C	D	E	F	G	H	I	J	K	L	M	N
	ClientNo	POC_First Name	POC_Last Name	POC_Job Title	Address 1	Address 2	City	State	Email	Telephone	Fax	Website	
1	1002	Frank	Esparza	AMT System Admin	10007 Texas 146		Baytown	TX		(713) 943-2126		<a href="http://www.surva.com">www.surva.com</a>	
2	2301	Paula	Angelle	Staff Land Analyst	10207 Fm 1942		Mont Bel	TX		(281) 385-6095		<a href="http://www.surva.com">www.surva.com</a>	
3	1098	Maximillian	Ludwig	Supervisor - Engineering Support	11340 Eagle Drive								
4	1509	Amy	Robinett	Associate	11340 Eagle Drive								
5	3203	Robert	Killion	Sr. Geologist	12555 Interstate 10								
6	3299	Coleen	Sullivan	Systems Engineering Associate	14600 Hatcherville								
7	2507	Cedric	James	Marketing Director	4447 1/2 N FM 565								
8	4612	Thomas	Misek	GIS Coordinator	6813 East Wallisvill								
9	6402	Christopher	Neel	Level I Entry	9500 East Freeway								
10	5706	Kate	Brunskill	Manager of Taxes - GIS Applications	9528 Warren Road								
11	7019	Kris	Holden	Event Manager	1 CoreLogic Dr								
12	10914	Jodi	Locklear	Intelligence Analyst	1 Justice Park Drive								
13	12008	Keneth	Kelley	Geospatial Analyst	1 Justice Way								
14	12625	Jennifer	Miller	Assistant Professor	1 University Station								
15	17833	Garry	Keener	Sr. GIS Tech	10 Desta Drive Suite								
16	22822	Melissa	Baker	n/a	100 E WEATHERFOR								
17	24533	Travis	Baker	Senior GIS Application Developer	100 E. Weatherford								
18	30358	Randy	Skinner	Planning Manager	100 E. Weatherford								
19	40555	Melissa	Carty	GIS Analyst	100 Glenborough								
20	47255	Robert	Graham	GIS Coordinator	100 Glenborough								
21	54791	Ujval	Purohit	GIS Analyst	100 Glenborough								
22	70813	John	McPherson	GIS Technician	100 Glenborough Dr								
23	40755	Sunny	Lindsey	GIS Coordinator	100 Main St								
24	47455	William	Flynn	GIS Analyst	100 Oak Hill Drive								
25	54991	Brian	Moeller	GIS Analyst	100 Waugh								
26	71013	Venkata "Suresh"	Ojili	GIS Admin	1000 Louisiana Suite								
27	40955	Leiser	Watkins	GIS Manager	1000 Louisiana Street								
28	47655	Robin	Britton	GIS Lead	1000 Throckmorton								
29	55191	Betsi	Chatham	Senior GIS Analyst	1000 Throckmorton								
30	71213	Elizabeth	Young	IT Lead Programmer Analyst	1000 Throckmorton								
31	41155	HAVAN	SURAT	PLANNER	1000 THROCKMORTON ST		FORT WORTH TEXAS		ENHABE@17-392-8004			<a href="http://www.surva.com">www.surva.com</a>	
32	41155	HAVAN	SURAT	PLANNER	1000 THROCKMORTON ST		FORT WORTH TEXAS		ENHABE@17-392-8004			<a href="http://www.surva.com">www.surva.com</a>	
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### Client Database

### Esri Maps

Map Contents Search Fix Locations

- Texas Client List
  - Locations found: 1101 Successful; 3 errors
  - Fix errors
- NOAA NGS Survey Control Points
  - Survey Control Points
    - Survey Control Points
- U.S. States
- Heat Map
- USA Shale Gas Basins and Plays
- DOE EIA Shale Basins
  - Shale Basins - small scale
    - Basin
  - Shale Basins - large scale
    - Basin

# Esri Conferences

If you find yourself in San Diego in July...

## **The Survey Summit is for**

- Land Surveyors and Business Owners
- Emerging Technologists
- High Accuracy Mapping
- Geodesists

## **The Esri User Conference is for**

- Esri users, partners, and developers
- Boasts the largest GIS gathering (15,000)
- These folks DO NOT know who you are...