

NSGIC Bi-Annual Conference

This is a summary of the bi-annual NSGIC conference I attended in Snowbird, Utah, during the week of September 23, 2019. The days were long and informative. The 3 main themes were E-911, 3dEP, and data acquisition and sharing. Recurring issues I heard from states included parcel data acquisition, emergency management, and data sharing.

Here is the link to the agenda

<https://nsgic.memberclicks.net/assets/agenda/Abstract%20Agenda-%202019%20Annual%20Conf%20-%20Sheet1%20%2827%29.pdf>

I met some vendors, including Planet and Surdex, we discussed Idaho collecting leaf off imagery for parts of the state.

Jack Dangermond Keynote

Jack began his talk he lifted the shade and pointed to one of his first projects, the ski runs at Snowbird Resort. He used overlays including terrain and data from the solar ephemeris, this was the first time he returned to see his work from 50 years ago.

His presentation was about Earth as a nervous system.

There are now 8 million AGOL users

Ability to upload and share imagery as a basemap in ArcGIS Online.

60% of ESRI users have switched to ArcGIS Pro.

Indoor GIS

ESRI maintains ArcGIS hub, a massive open data portal that is international. I encourage everybody to check out this site.

<http://hub.arcgis.com/search>

OpenTopography.org

This site provides topographic data and services. Datasets such as LiDAR are available and users can create and download elevation models thanks to a supercomputer located in the San Diego Supercomputer Center that can process 5.1 million points in 83 seconds. The Idaho LiDAR Consortium is a partner with this organization. The hydrologic modeling tools look interesting.

<https://opentopography.org/>

ESRI

Artificial intelligence (AI) and machine learning (ML)

An ESRI instructor provided a lunchtime presentation on Artificial Intelligence and Machine Learning. The demonstration was on how AI was used to extract building footprints from NAIP imagery and used for damage assessment.

<https://azure.microsoft.com/es-es/blog/microsoft-and-esri-launch-geospatial-ai-on-azure/>

Google

Google presented Geo Data Upload, an application that allows data uploads to be added to the Google maps. Partners are provided storage for up to 250gb of data.

<https://support.google.com/mapcontentpartners/answer/9359574?hl=en>

They also shared Sentinel imagery. This site has multispectral imagery produced by European Space Agency.

<https://www.sentinel-hub.com>

Alaska

Alaska gave a presentation focused on LiDAR data collection efforts along the coastlands of the state. Of particular interest were the aerial imagery of several inundated villages where local residents were forced to move inland. As with many data collections presented, funding was provided by FEMA. Here are a few links that describe what Alaska is doing.

https://www.usgs.gov/land-resources/eros/coned/science/alaska-north-slope-lidar?qt-science_center_objects=0#qt-science_center_objects

<https://elevation.alaska.gov/>

Nevada

Nevada presented their data collection efforts to acquire LiDAR data in around Elko and the area north of Reno. The Nevada Bureau of Mines was the lead agency and FEMA provided the funding. This

project led to the discovery of hundreds of faults that were never mapped. One issue Nevada faces is there are many areas such as Area 51 that are off limits to data collection.

Tom Tom

This presentation was focused on data collaboration and providing transportation updates to their system.

Arkansas

Arkansas provided 2 different presentations, the first one was about administrative boundaries and errors in the state PLSS. Different boundaries do not line up correctly (surprise) and there is an effort underway to recover missing survey corners. They have a modest budget of \$100,000.

<http://surveyor.arkansas.gov/glo-map/>

The second presentation from Arkansas was about flooding and emergency management. The state needed current imagery to identify areas at risk, because of cloud cover they used drones to capture imagery. Arkansas also had a problem getting parcel data and recommended states acquire parcel data before the next emergency.

Parcel data was a recurring issue for several states.

Wyoming

Mapping wildlife corridors are a priority for Wyoming. Wildlife generates revenue, and they are working to understand the natural corridors used by animals. Radio collars, cameras, imagery and even LiDAR all contribute to the project.

Indiana

I found this presentation informative. Counties and local government collaborated with the state to create 4 important geospatial data layers.

- Address points
- Street centerlines
- Parcels
- Administrative boundaries.

I cut and pasted the following information from their website.

All Indiana counties have committed to share GIS data, resulting in:

- Over 6,800 Jurisdictional Boundaries

- 616,888 Street Centerlines Segments
- 3,117,569 Address Points
- 3,576,546 Land Parcels

For more information <https://www.in.gov/gis/datashare.htm>

Utah

GIS data lifecycle

Utah created scripts that cycle through databases and ArcGIS Online, SQL Enterprise, and Open Data Portals to extract time stamps from GIS data that can be used to prioritize data updates. Scripts are freely available on GIT HUB. I think Idaho can benefit from this process.

The Geo-Enabled Elections Project

This was a panel discussion about integrating GIS with elections. Here is an informative link.

<https://elections.nsgic.org/>

New York

This presentation was given by the recently retired New York GIO. Issues they are facing include an “obsolete” strategic plan. “Times have changed,” he said, and he encouraged every state to review their plans.

Parcel data is an issue in New York, he also mentioned the Geospatial Data Act needs to be considered in the new strategic plan.

<https://www.nsgic.org/geospatial-data-act-sets-table>

Another issue in New York is next generation E-911 coordination, and he also mentioned that the FGDC have seen their funding reduced to a “trickle.”

Arkansas

This presentation was focused on flooding and emergency management. They needed current imagery to identify areas at risk, because of cloud cover they used drones to capture imagery. Arkansas also had a problem getting parcel data and recommended states acquire parcel data before the next emergency.

Parcel data was a recurring issue for several states.

Pennsylvania

Increasing data sharing is a priority, one of their goals is get an open data portal for every county in the state.

Nebraska

Converting paper to digital is an ongoing project, the state is converting historical data to digital databases.

National Address Database (NAD)

This presentation was a panel discussion regarding addresses. Here are some bullet points.

- Next generation E-911 requires NAD.
- NAD supports geo-election projects.
- States are using NAD to support broadband mapping projects.
- When a map of the USA was displayed, Idaho was one of about 5 states that were painted white
- Public safety and emergency response
- Minnesota and Illinois have issues with county cooperation
- Census
- Several states mentioned the State Address Authority, who in Idaho?
- Arnold

Florida

E-911 project is a very high priority. They are moving more operations to the cloud, including ArcGIS Enterprise. SAAS provides aa easier budget model because it uses operating expense (OE) instead of capital outlay (CO). They are looking at providing statewide GIS Enterprise access to local governments.

Arizona

This short presentation their plan to move state GIS operations to the cloud. They also mentioned OE is easier to move through the legislative budget process than CO. They are also working on improving visibility.

Washington

Working on a collaborative project to acquire LiDAR data. Increasing use of ArcGIS Online, Survey123, and dashboards. Starting to create a database of owned and leased facilities.

Alabama

Working on the State Fusion Center and emergency response.

West Virginia

This state is in the process of reviving their technical working groups. Additional key issues include broadband mapping, implementing geo-enabled elections, and E-911.

Virginia

Emphasis on next generation E-911.

Vermont

Issues included no PLSS layer, the need for parcel data, and they are in the midst of IT Consolidation.