



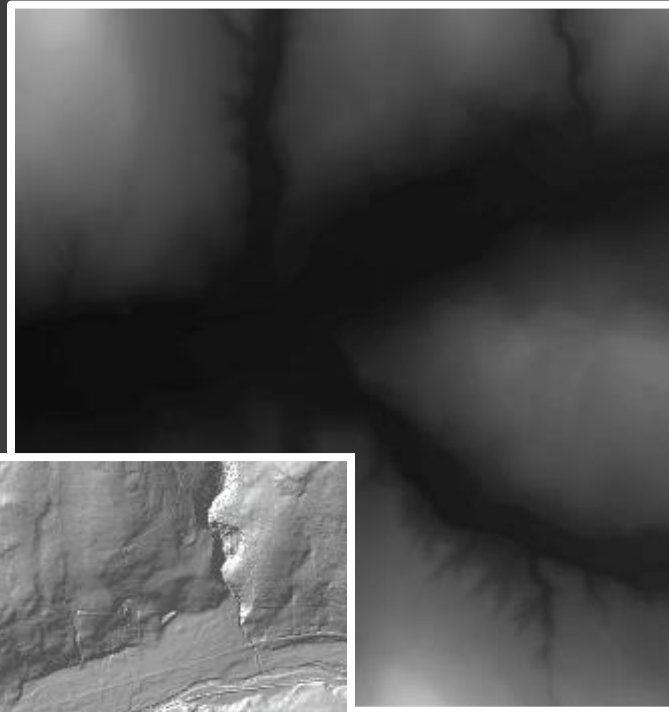
NYGeoCon 2013
Saratoga Springs, NY



THE PROGRESSION OF LIDAR

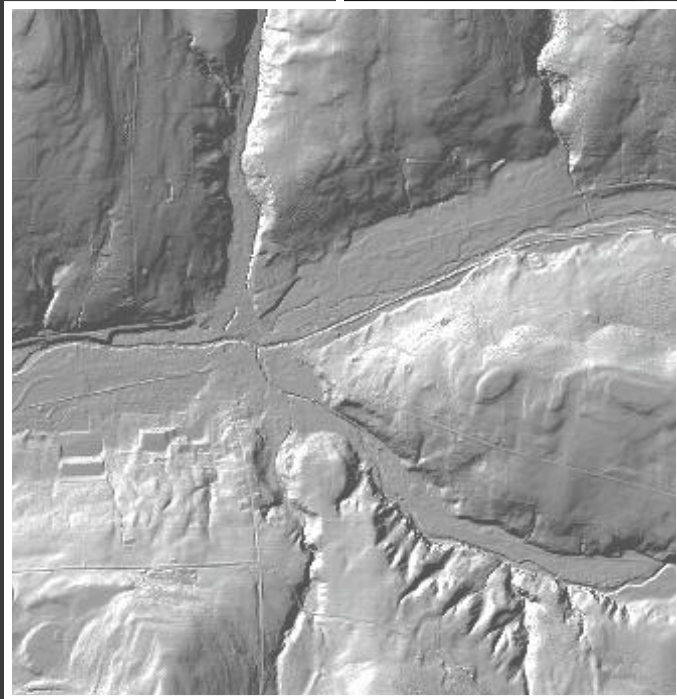
Tuesday November 12, 2013





Historical LiDAR data

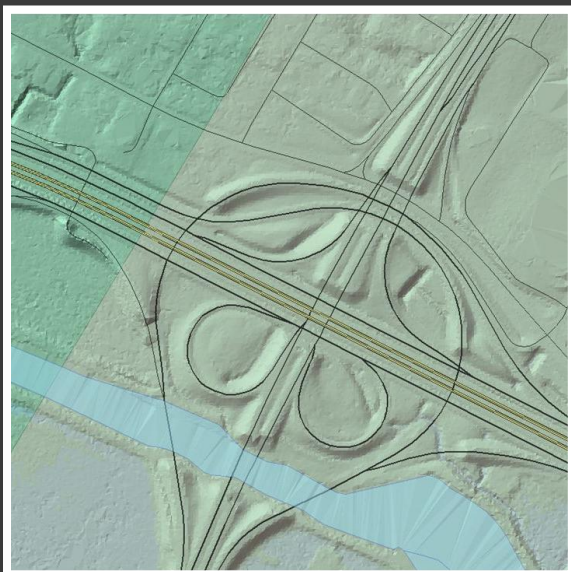
- Aerial Platforms
- “Ground” based.
- Project areas cover several hundred square miles.
- Typical point densities of 1 point / sq meter.
- Resultant accuracies of 1-2 ft.
- Costs range from \$100 - \$300 sq. mile depending on deliverable spec.



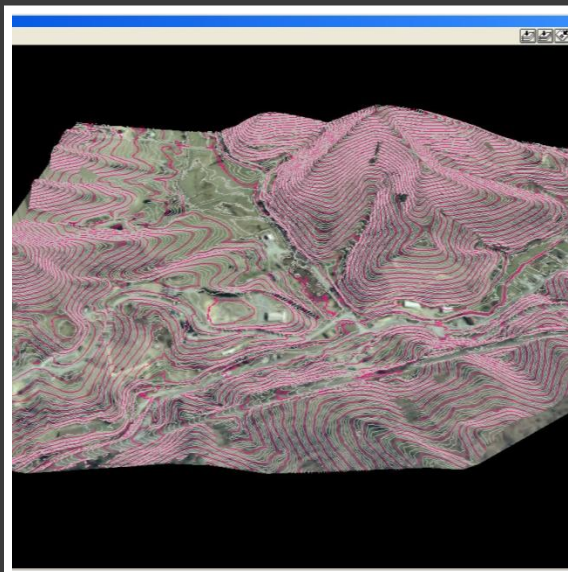


Historical LiDAR data

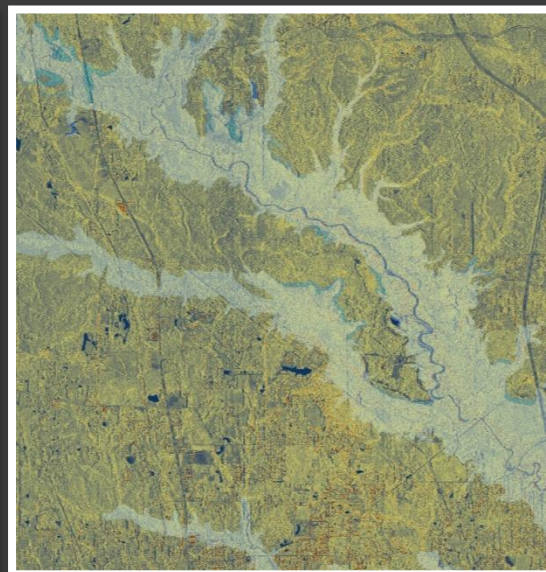
TYPICAL USES...



Transportation/
Municipal Planning



Contour Generation

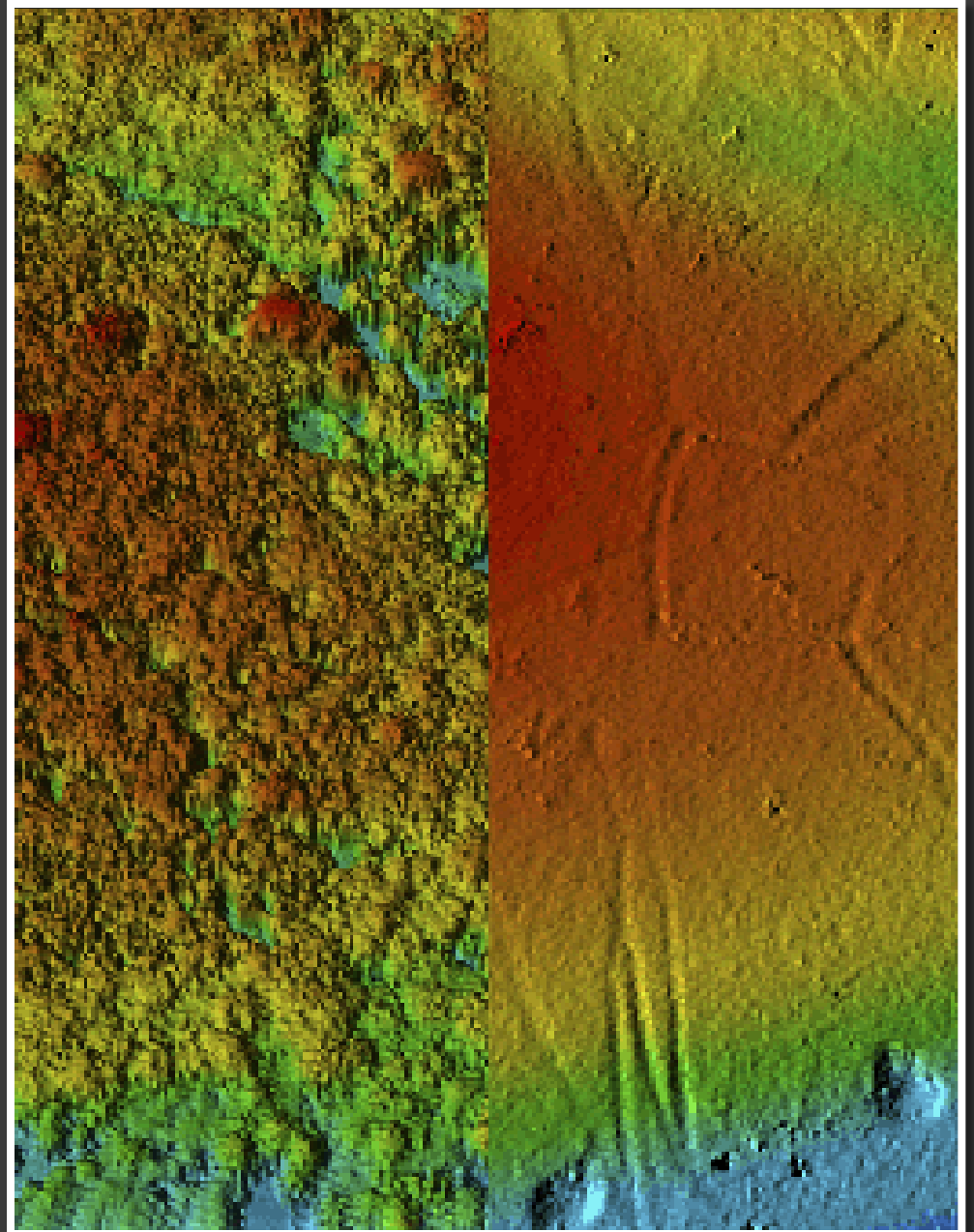


Floodplain
Management



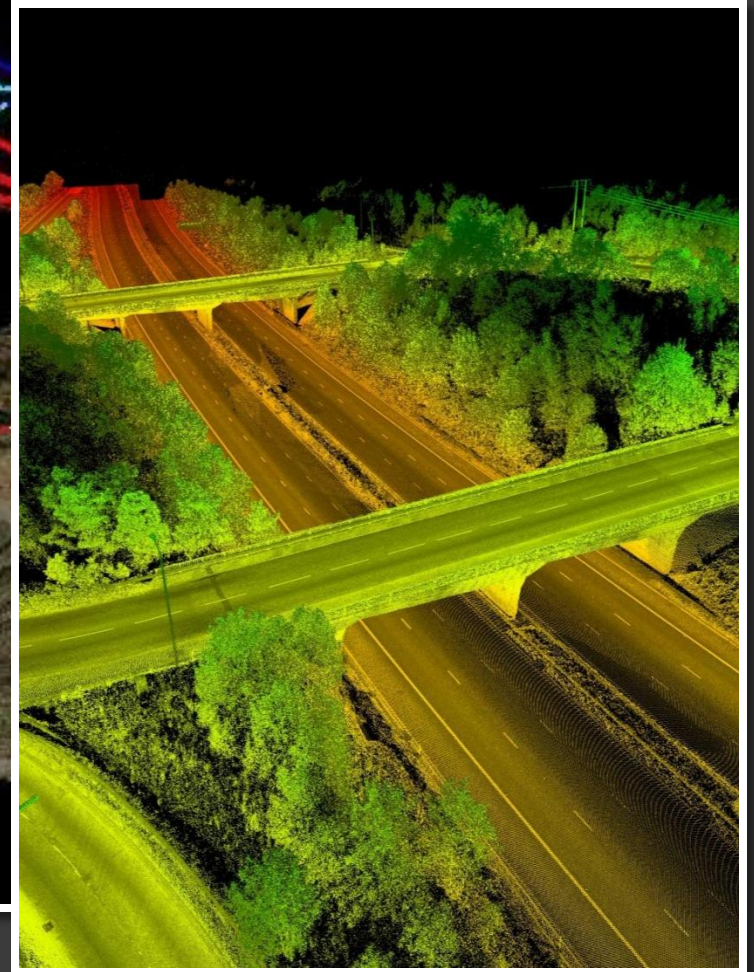
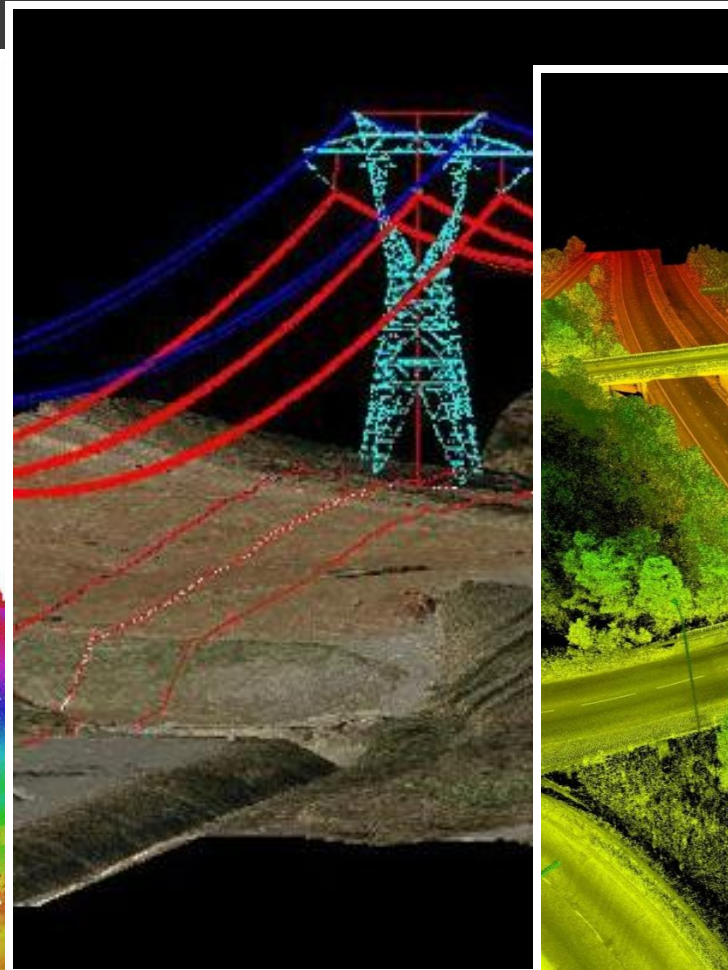
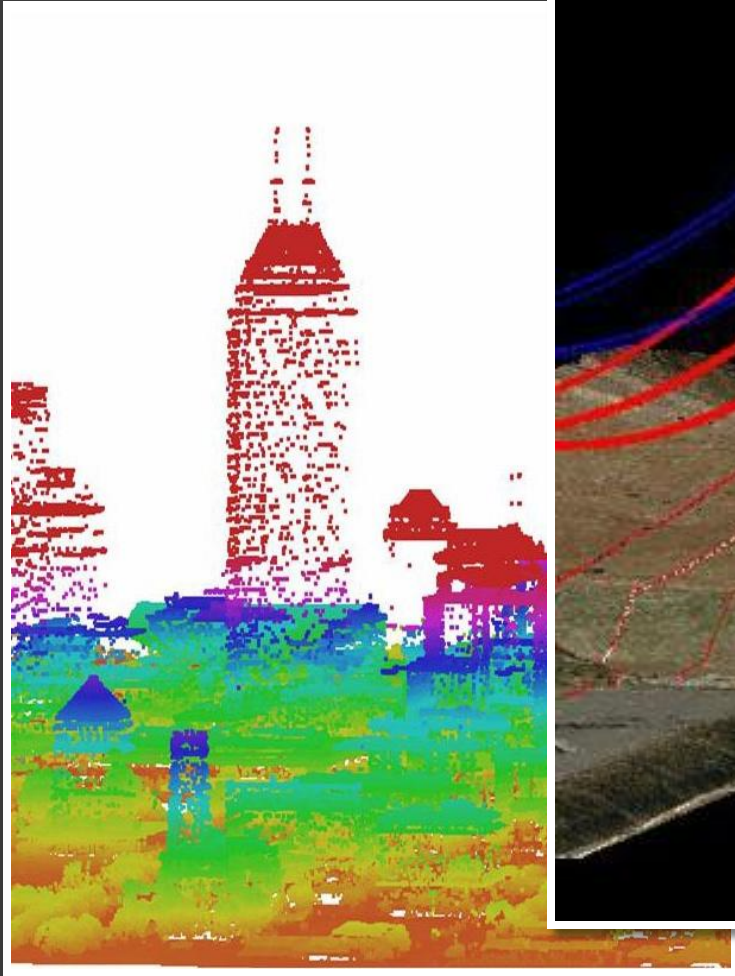
At some point, the question
- What about all the “other”
data? was asked.

All the data that was once
“filtered” to obtain bare
earth information was now
of interest.





What we started to find...





Technology Advancement – Bricks to Slicks





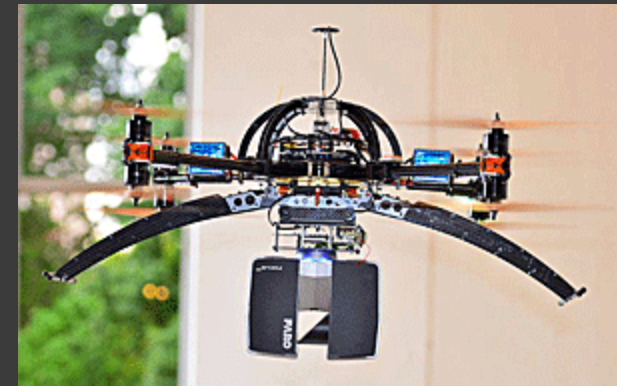
Technology Advancement Cont..



Faro Focus 3D Terrestrial Laser Scanner



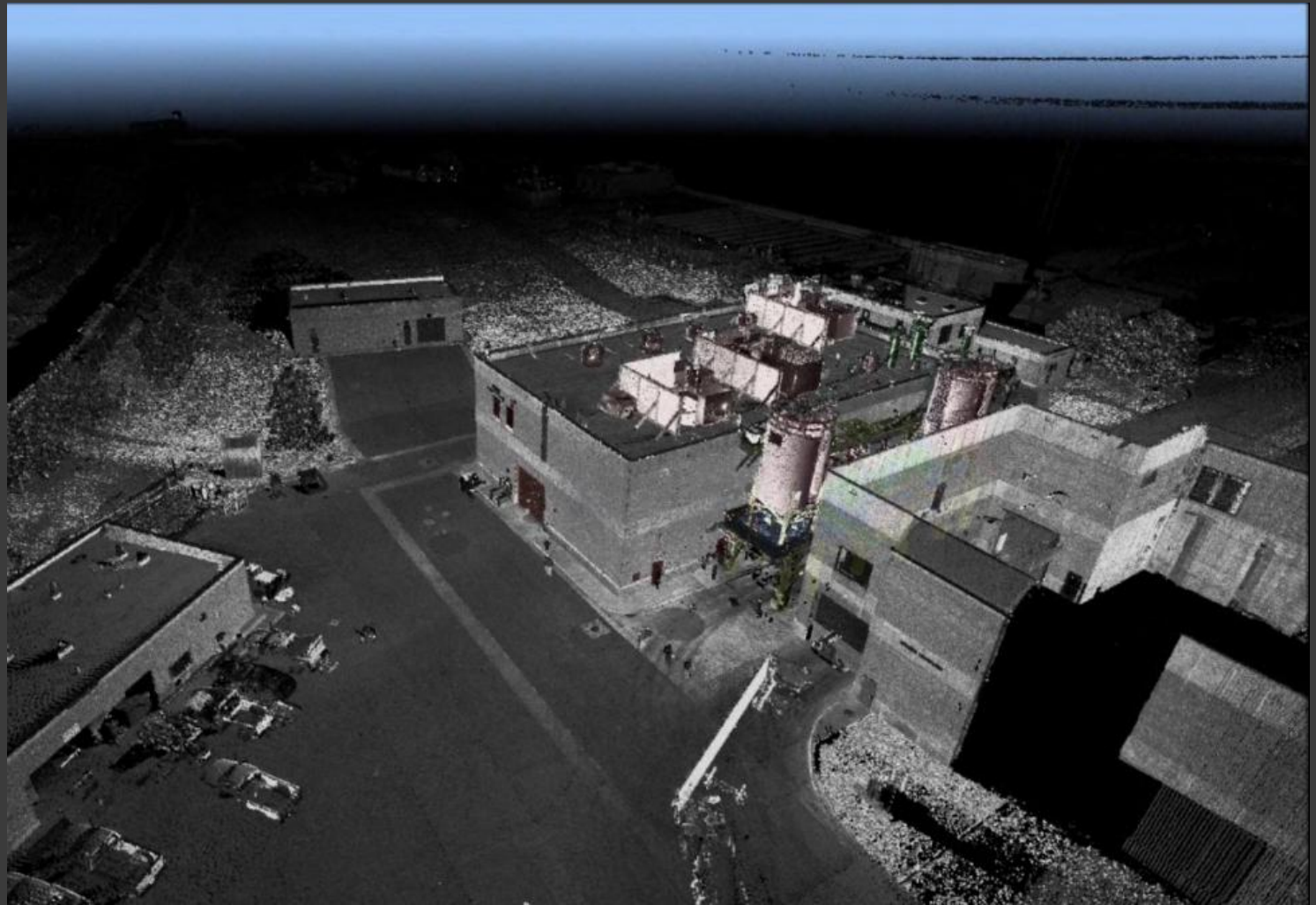
PULSE - Portable Underwater Laser Scanning Equipment



UAV with FARO scanner



What does the advancement in technology mean for me?





Modeling issues encountered.





GAYLORD PALMS



The Result...

...HUGH datasets.

- Data formats to be considered
 - LAS, ASCII, PCI, FLS
- Data storage requirements
 - Portable Hard Drives, Cloud Storage
- Software Products:
 - Autodesk Map 3D Revit, Kubit
 - Esri ArcGIS 3D + extensions
 - Leica Cyclone
 - Lizardtech GeoExpress
 - VRMesh
 - FARO Scene



Other Considerations...

- Data Compression is a developing technology
 - Rapidlasso LASZip, open source LAS file compression
 - <http://rapidlasso.com/>
 - PAR GvLF (LiDAR Framework), data compression and spatial indexing
 - <http://www.pargovernment.com>
 - Lizardtech LiDAR Compressor
 - <http://www.lizardtech.com/products/lidar/>



QUESTIONS



Verne LaClair



42 Genesee Street Suite 2
New Hartford, NY 13413
verne@vertexgeo.com

