Lidar Explorer
Version 2.0 for ArcGIS

They’re your points. Use them.

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Overview

- What is Lidar Explorer for ArcGIS?
  - ArcGIS Integration
  - Project-Level Data Support
  - Outputs
- Lidar Explorer and Iowa
- Demo
What is Lidar Explorer for ArcGIS?

Lidar Explorer is…

– An ArcGIS extension

– A project-level data management tool

– A powerful and flexible tool for classifying data and generating DEMs
ArcGIS Integration

- There are thousands of ArcGIS users out there
- It’s about time someone brought a Lidar product to the ArcGIS world
- Lidar Explorer allows users to
  - Visualize data in a familiar environment
  - Analyze data using ArcGIS tools
  - Analyze data using ArcGIS-like tools that are designed specifically for Lidar data
  - Integrate with other GIS data
  - Flexibly serve novice and expert users alike
  - Integrate existing and test new analysis algorithms (Lidar Explorer SDK)
Project-Level Data Support

History of Lidar Data Management

Lidar data has typically been “reduced” in size

Why?

– Storage limitations
– Processing limitations
– Software limitations

How?

– Trimming
– Using single returns
– Thinning
– Gridding
– Tiling
Shortcomings of traditional Lidar data reduction

- **Trimming**: Overlap provides two views of target area
- **Multiple returns**: Intermediate returns contain information about the interior of vegetated areas
- **Thinning**: Very complex and difficult to get right
- **Gridding**: Interpolation inherently degerates data
- **Tiling**: The collected order of points provides analysis possibilities
Project-Level Data Support
Lidar Explorer

- Supports data that is whole and intact
  - Works with full swath data (not thinned, not trimmed)
  - Works with multiple swaths (all swaths for a project)
  - Works with tiled data (common for existing data)
- Supports data in multiple formats
  - Works directly from points (not derived rasters) in LAS format
  - Imports/exports Lidar data to/from other formats
Outputs

- Lidar Explorer supports
  - Point re-classification
  - Point deletion
  - Clipping
  - Export to ASCII
  - Export to LAS
  - Export to DEM
Lidar Explorer and Iowa

- Lidar Explorer is an ArcGIS extension
  - Eases current Iowa GIS users’ transition to using Lidar data
  - Encourages use of Lidar data by presenting it in a familiar environment
- Lidar Explorer supports project-level data
  - Single state, county or tribal agency may need to manage over a billion points spanning multiple files
  - Lidar Explorer manages these points without requiring any data reduction, serving up pristine points
- Lidar Explorer produces
  - Point redistribution
  - Reclassification
  - Analysis
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