Ascent GIS, Inc.

- Absolute VS. Relative Accuracy Presentation Text Slides for the TWG meeting June 1st 2008

  - Note Text Sides Were Provided In Advance. Graphics Were Not Included Due to File Size Limitations.

Presentation Over View

- NAIP Accuracy History
- Absolute Accuracy Business Case
- Absolute vs Relative Accuracy Definition
- Why is Absolute Accuracy a “Buy-Up”
- Bonus Slides IR “Buy-Up”
- Questions

NAIP Accuracy History

- Relative Accuracy 2003 – 2008
- Ref to Baseline Imagery (90% Confidence)
  - 2M ± 10M
  - 1M ± 5M
- Moves to Absolute Accuracy
  - Utah in 2006
  - Arizona in 2007
  - (IN, MN, NH, NC, TX, UT, VT, VA) in 2008
  - More in future – for IFTN

Business Case

- GIS + NAIP
- Reference Layer/Base Layer
- Year to Year Consistency
- Additional Partner $s

Absolute Accuracy vs. Relative (NAIP)

- Now standard 1-meter product (no more 2m)
- NAIP accuracy standards (2008):
  - Relative: 90% against control imagery: ± 5m
  - Absolute: 95% of true ground: ± 6m
- By comparison
  - Typical USGS (95% confidence): ± 3m
  - Census (MTAIP, 95% confidence): ± 7m

Absolute Accuracy

- Control established by contractor
  - Paneled or photo-identifiable – not specified
  - Aerotriangulation or ABGPS+IMU – not specified
- Control obtained by USDA and/or partners
  - Preferably at least 20 points/county (NSSDA testing guidelines)
  - Photo-identifiable or paneled
  - Not shared with contractor

Important Points

- ABGPS is good to ~±2-3m
- Control points ensure ~±2-3m absolute
- The USGS NED (baseline elevation model)
  - Major contributor to the final product accuracy
  - The limiting factor in final product accuracy
  - Rugged areas will produce lowest accuracy
  - May not be sufficient density and/or accuracy to ensure meeting absolute accuracy requirement

Why is Absolute Accuracy a “Buy-Up”

- Additional cost
  - Ground survey: $300-$1,000 per point ($20,000 per point in AK)
  - Identify and measure points
  - USDA research and verification
- Contractors have a liability
  - Increases cost of effort
  - May have to fix/update the NED