

GPS 101: Introduction to Geospatial Technologies

Alabama Forest Owners' Association Annual Meeting

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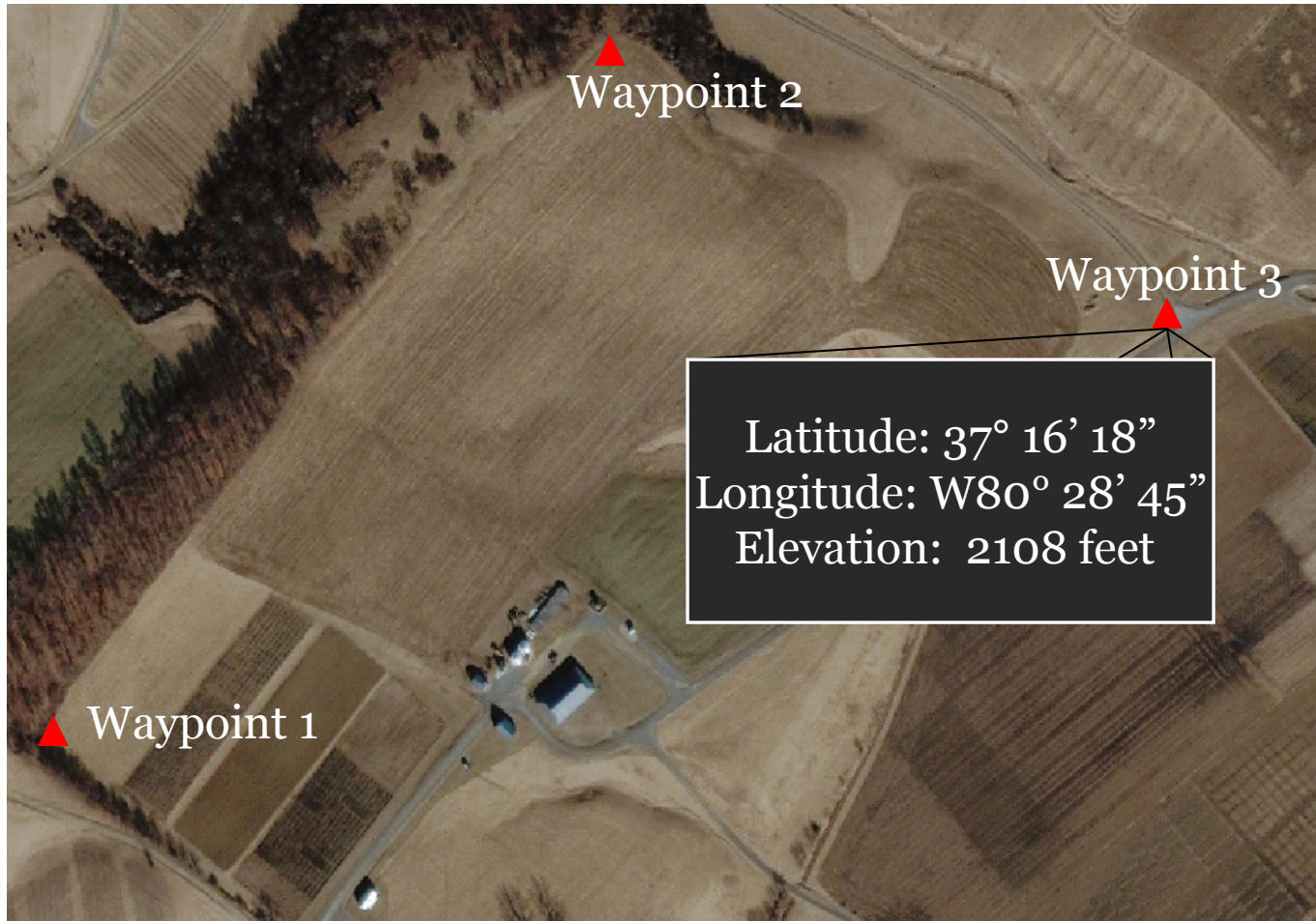
Alabama Cooperative Extension System

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Outline

- Introduction to GPS
- Introduction to GIS
- Introduction to the Garmin GPSMAP 60CSx
- Low-Cost GPS units
- Free and low-cost mapping software
- Outdoor cruising/sampling exercise
 - Create a sampling grid/transfer to GPS unit
 - Navigate using grid and collect points
 - Transfer points to software and map

Waypoints



Tracks (just start walking...)



Routes

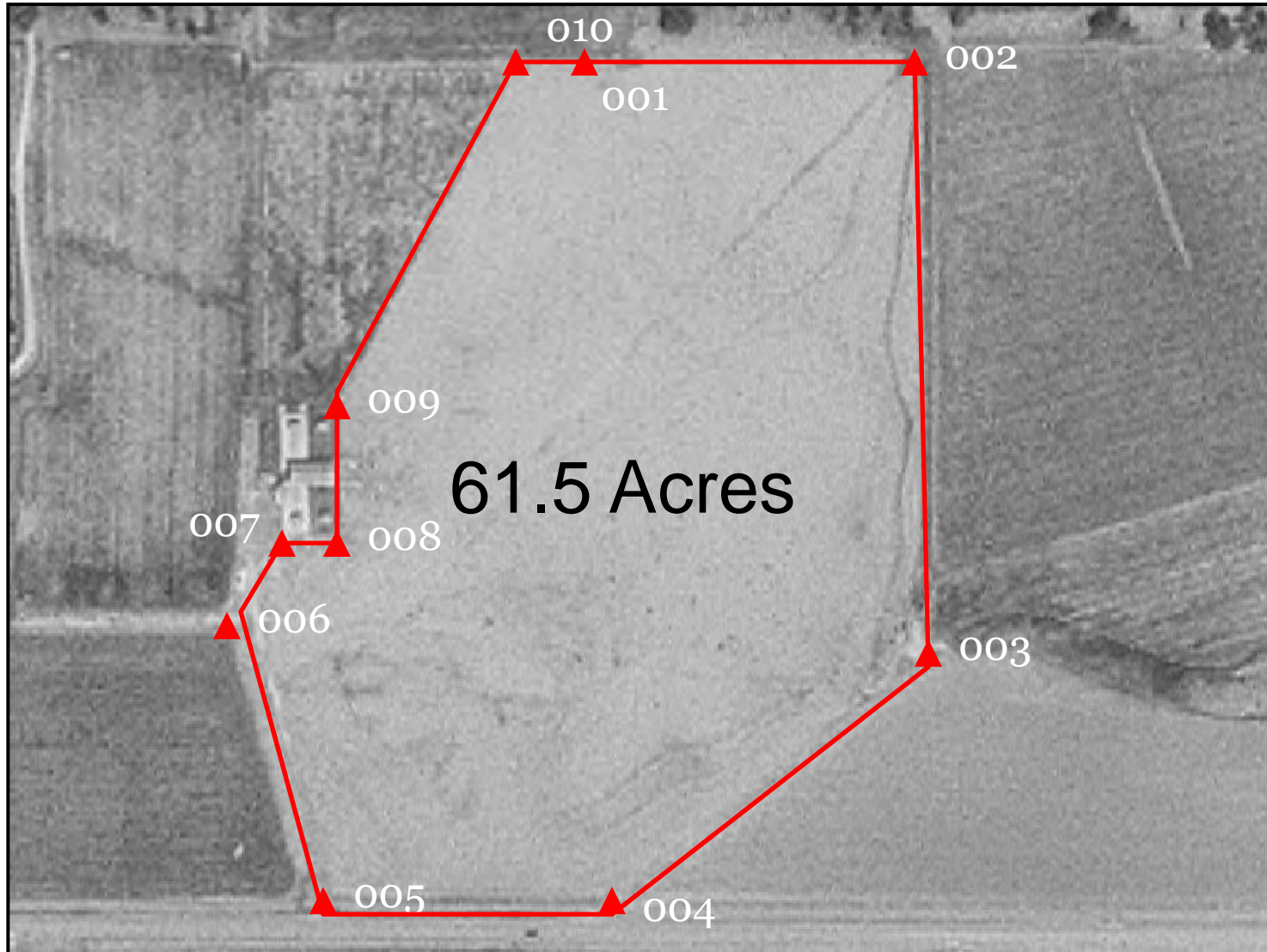


The GPS Receiver “Connects the dots”

Polygons (acreage calculation)



Waypoints at Field Corners



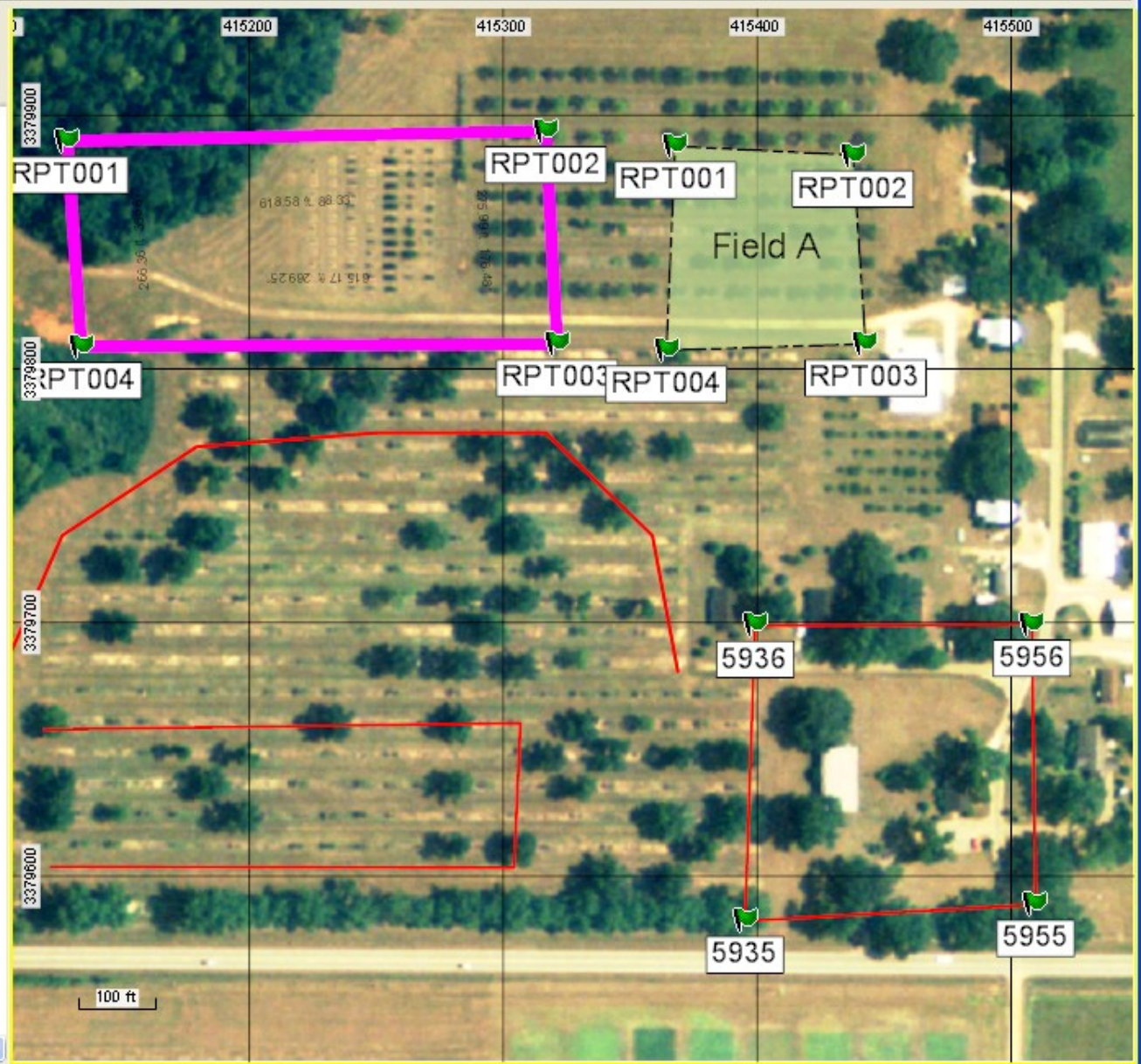


testing.gpx*

List: Find: Clear

Waypoints

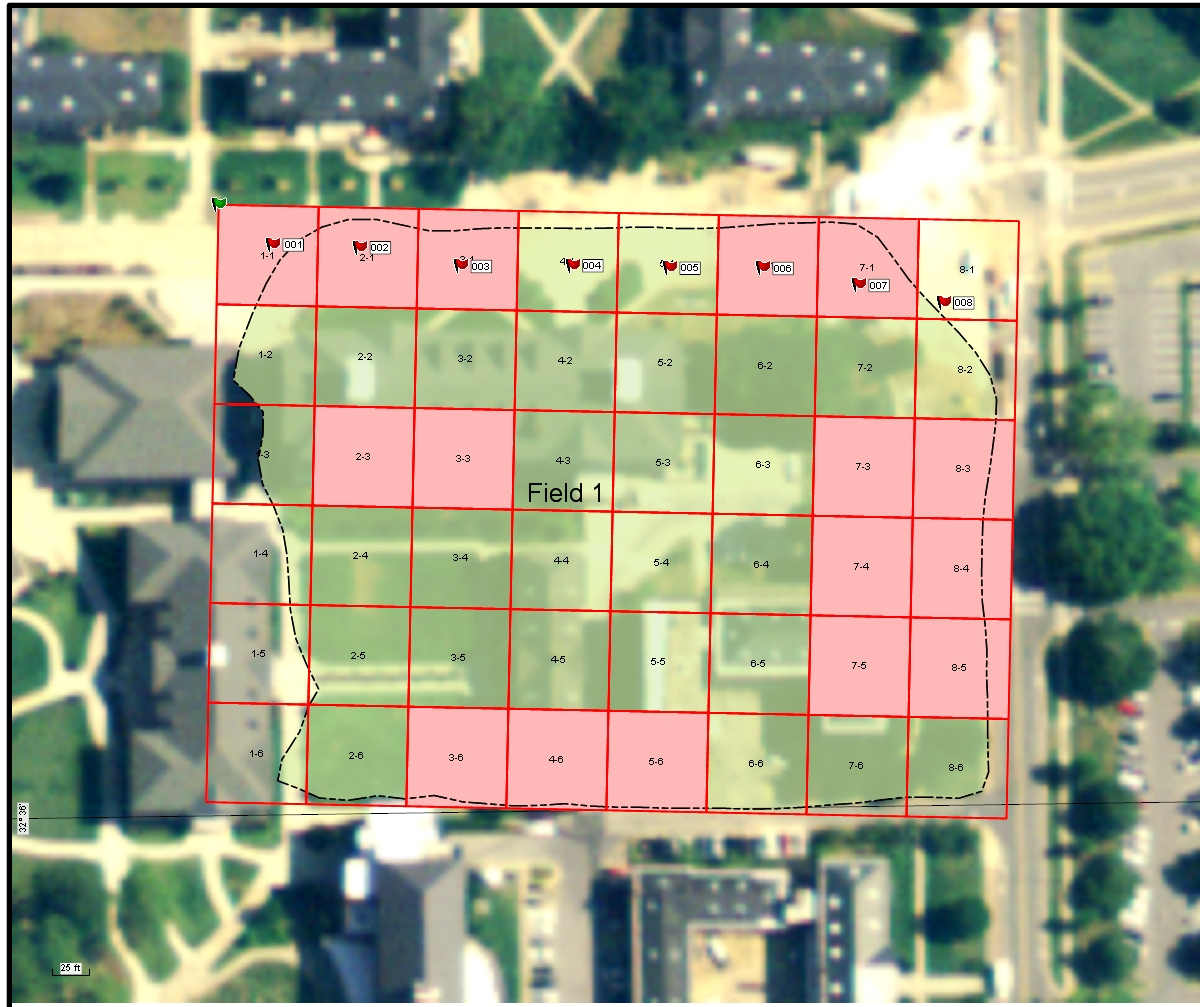
| Label | Type | Symbol | Rank |
|--------|------|----------------|------|
| 5935 | Tree | Flag, Green 1 | 1 |
| 5936 | Tree | Flag, Green 2 | 2 |
| 5955 | Tree | Flag, Green 3 | 3 |
| 5956 | Tree | Flag, Green 4 | 4 |
| RPT001 | Tree | Flag, Green 5 | 5 |
| RPT001 | Tree | Flag, Green 6 | 6 |
| RPT001 | Tree | Flag, Green 7 | 7 |
| RPT002 | Tree | Flag, Green 8 | 8 |
| RPT002 | Tree | Flag, Green 9 | 9 |
| RPT003 | Tree | Flag, Green 10 | 10 |
| RPT003 | Tree | Flag, Green 11 | 11 |
| RPT004 | Tree | Flag, Green 12 | 12 |
| RPT004 | Tree | Flag, Green 13 | 13 |
| Tree 1 | Tree | Flag, Green 14 | 14 |



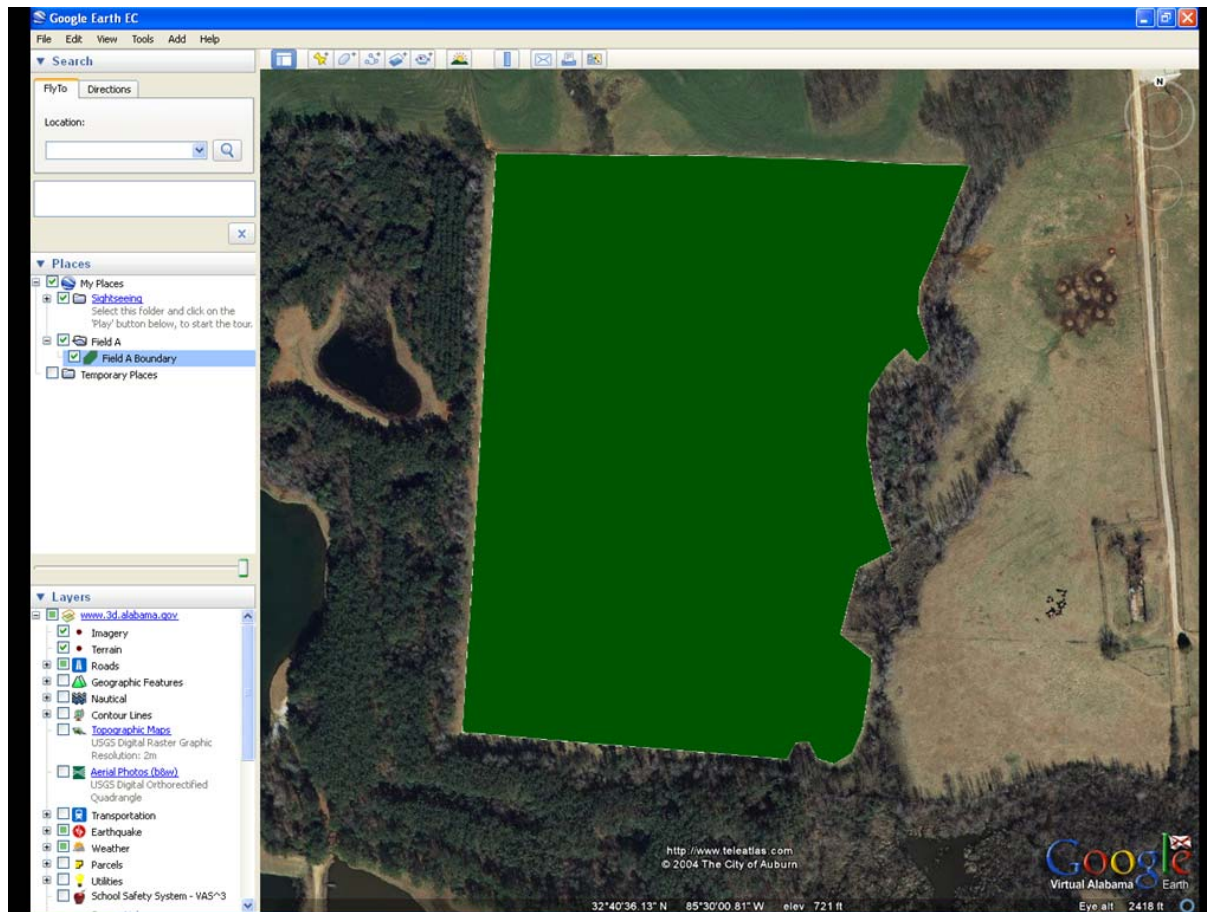
GPS/GIS Exercise

- Open an aerial image (freely available)
- Create a sampling/cruising grid over a field
- Transfer the grid to the GPS unit
- Navigate through the field using the grid
- Collect a waypoint within each grid square
 - Verifies that each grid square has been visited
- Transfer the waypoints into the GIS software

Example of a cruise/sampling map



Video Tutorials



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