

ENVIT: GIS/GPS Division

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Working Group Planning Presentation

October 19, 2001

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Project Description

- Provide GPS and reference maps as part of field notebook
- Display collected data on reference maps using GIS and edit as necessary
- Return data to field notebook

What is GPS?

- Global Positioning System
- A system of linked satellites that tell receiver its geographical data
- Will help us locate where our samples will be taken and where we are on the field

What is a GIS?

- A Geographic Information System
 - Geographic - there is a spatial, or location, element in the data.
 - Information - there is information about the location.
 - Systems - there are multiple input and output devices, with many tools for acquiring, storing, manipulating and analyzing the data
- In general, GIS is computer hardware and software capable of storing, manipulating, and analyzing spatial data

Why are we using GIS?

- For acquiring location data through a GPS
- For displaying reference information that will help us decide where to sample
- GIS will be used for modeling after the trip

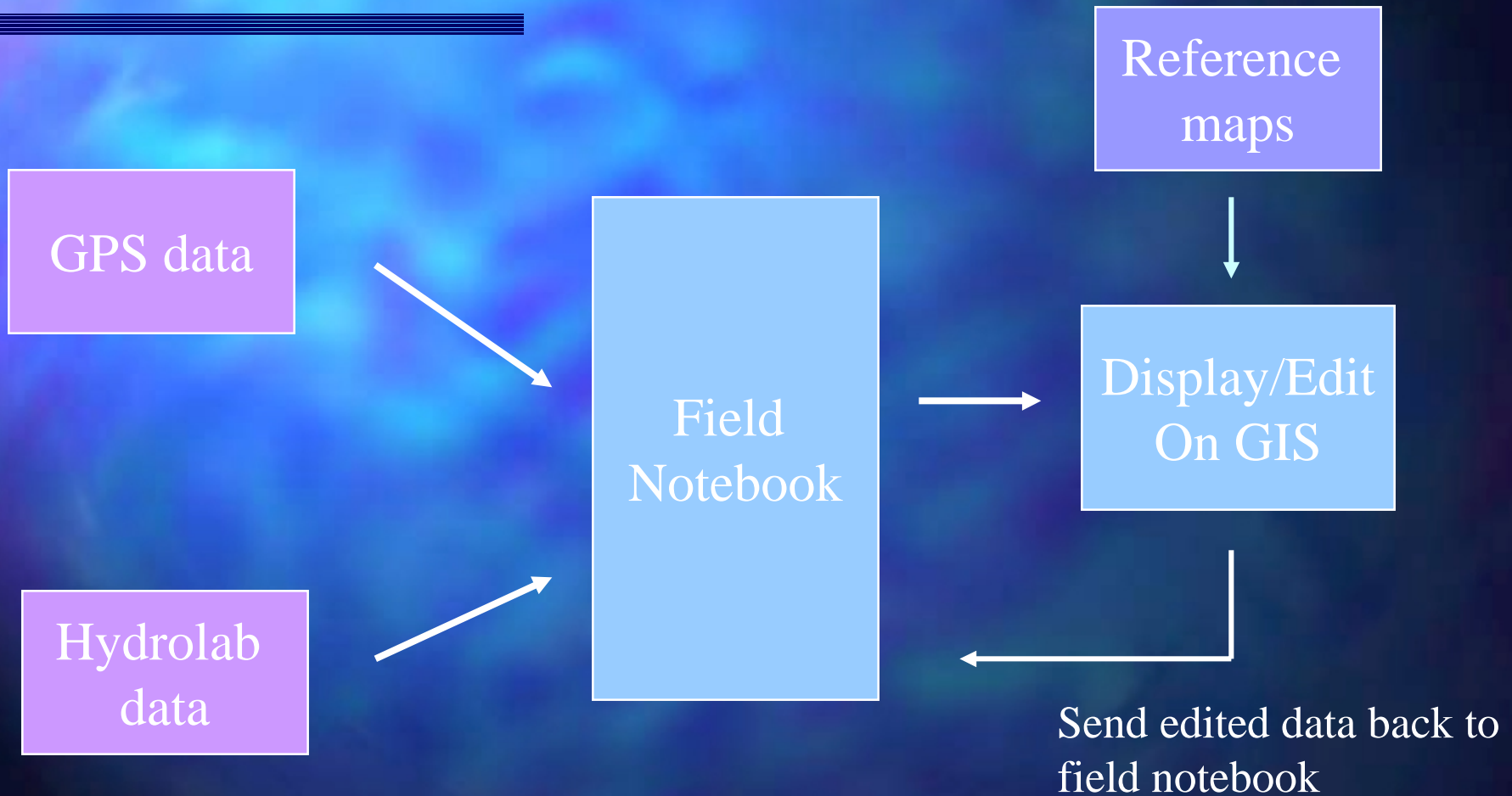
What is ArcPad?

- Program for viewing and editing digital maps
- Includes location data with each map
- Will be used for location and plotting

Group Goals

- Obtain GPS data and send to field notebook
- Provide maps for field reference
- Display data from field notebook on reference maps
- Edit data
- Provide edited data to field notebook

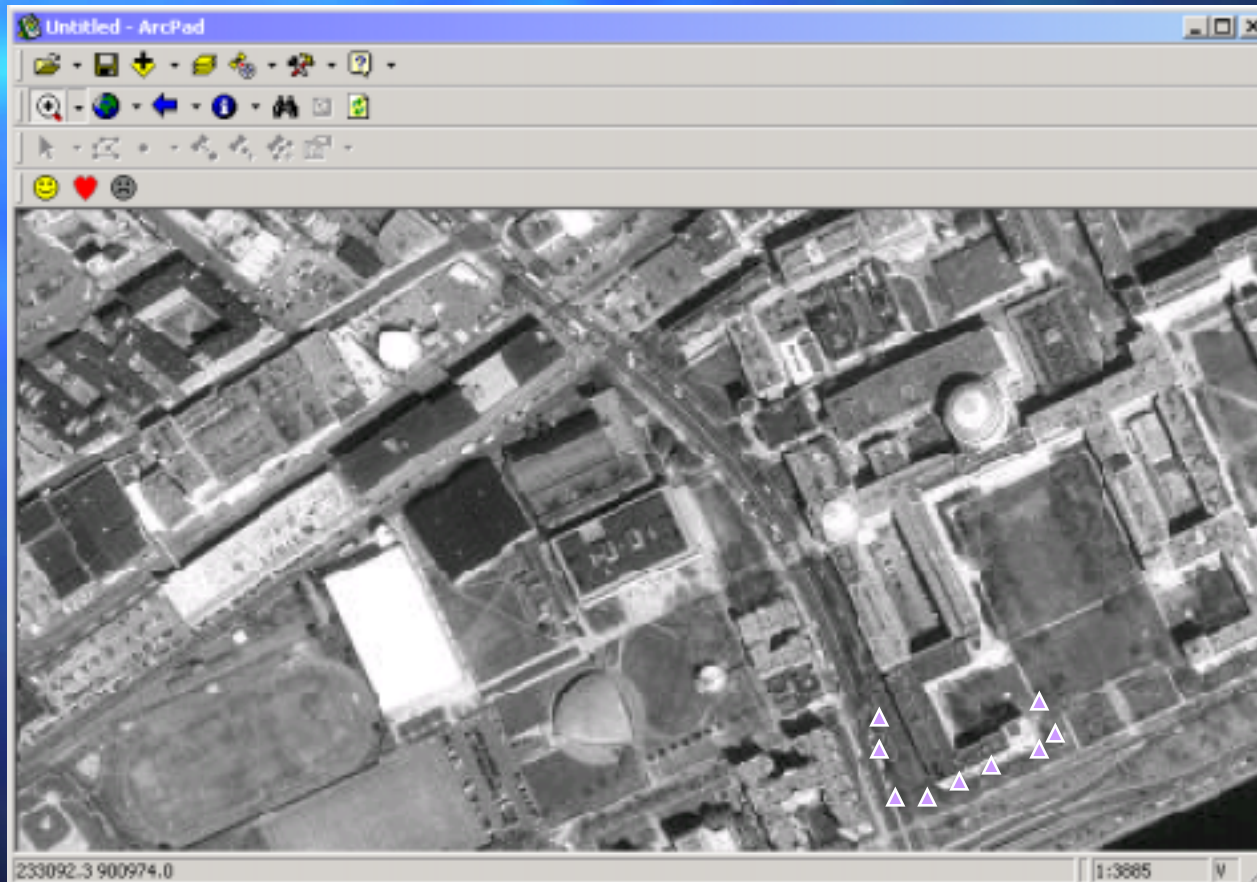
Context of GIS/GPS in Field Notebook



What We've Done

- Outlined Tasks/Goals
- Set up GPS
- Searched for map data
- Learned how to add data to maps
- Wrote scripts to
 - Open GPS, Write GPS data to file, Close GPS
 - Read data from field notebook (in progress)
 - Write data from GIS for field notebook (in progress)

Sample map for local GPS test



Next Steps

- GPS
- Reference Maps
- GIS

GPS

- Complete *open*, *write to file for field notebook to read*, and *close* functions into one button
- Load and test GPS on all iPAQs

Reference Maps

- Get data from Kevin, Eric
 - Check data format (raster, vector data)
 - Make sure data is registered and compatible with mapping systems-- that it can be used for geo-referencing
- Split it up into manageable fragments

GIS

- Write function for conversion of data from field notebook to shape file (*.shp)
- Design symbols for data types even before transposition onto map

Task Deadlines

Date	Task
10/19 -	Get spatial data from Kevin and Eric
10/26	Complete GPS functions
10/26	Load and Test GPS on all iPAQs
ongoing	Check spatial data
ongoing	Form strategy for putting data on iPAQs
11/21	GIS/field notebook data conversion function
11/21	Design Symbols (work w/ FN groups)

THE END

Thank you for your time.