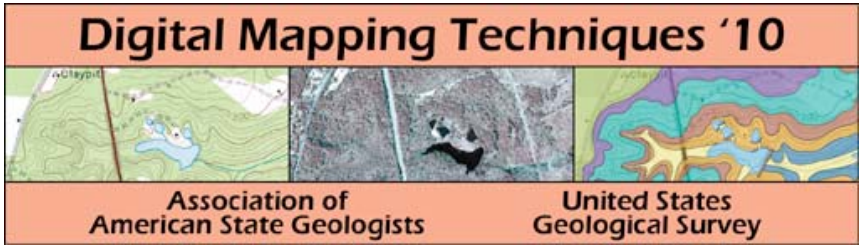

The following was presented at DMT'10 (May 16-19, 2010).

The contents are provisional and will be superseded by a paper in the DMT'10 Proceedings.

See also earlier Proceedings (1997-2009)
http://ngmdb.usgs.gov/info/dmt/

A Plan and Plea for Increasing Communication about Digital Geologic Mapping

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Definition of **Digital Geologic Mapping** – Using computers or PDA's in the field to record geologic observations instead of traditional paper maps and notebooks

Communication in the Geologic Community is Key to Advancing Digital Geologic Field Mapping

Plan

- Listserv for up-to-date communication
- Wikipedia for an up-to-date resource
- Yearly(?) surveys to monitor advancement
- *Other ideas?*

How is this going to help us and the community?

- Provide a knowledge base
- Don’t redo each other’s mistakes
- Less trial and error
- Find out what IS working
- Move ahead more quickly
- Get manufacturers on board

Why a listserv?

- Will promote conversation and networking
- Easy and fast to use
- Information will be up-to-date

Intended specs

- Open to all interested parties
- Brand neutral
- Posts should be of technical nature regarding hardware, software, other gear, data organization, etc.
- Posts should be answered to the group to promote conversation
- *Should we allow reasonable product promotion??*

To subscribe:
http://list.state.ak.us/soalists/geomapping_technology/jl.htm

Wikipedia as a resource

- Easy to access and edit by anyone
- Language is free of jargon or defined
- Information is well documented

Intended specs

- Should contain enough information to get someone started with digital field mapping
- Repository of relevant publications – living bibliography
- Record hardware and software options
- Record data organization strategies and methodologies

http://en.wikipedia.org/wiki/Digital_geologic_mapping

Survey listserv members *(yearly??)*

Current survey:

- How much interest in digital field mapping?
- How is digital mapping being used?
- Hardware and software deployed?
- Deployed system satisfactory or not?
- *Additional questions?*

http://www.surveymonkey.com/s/digitalmapping

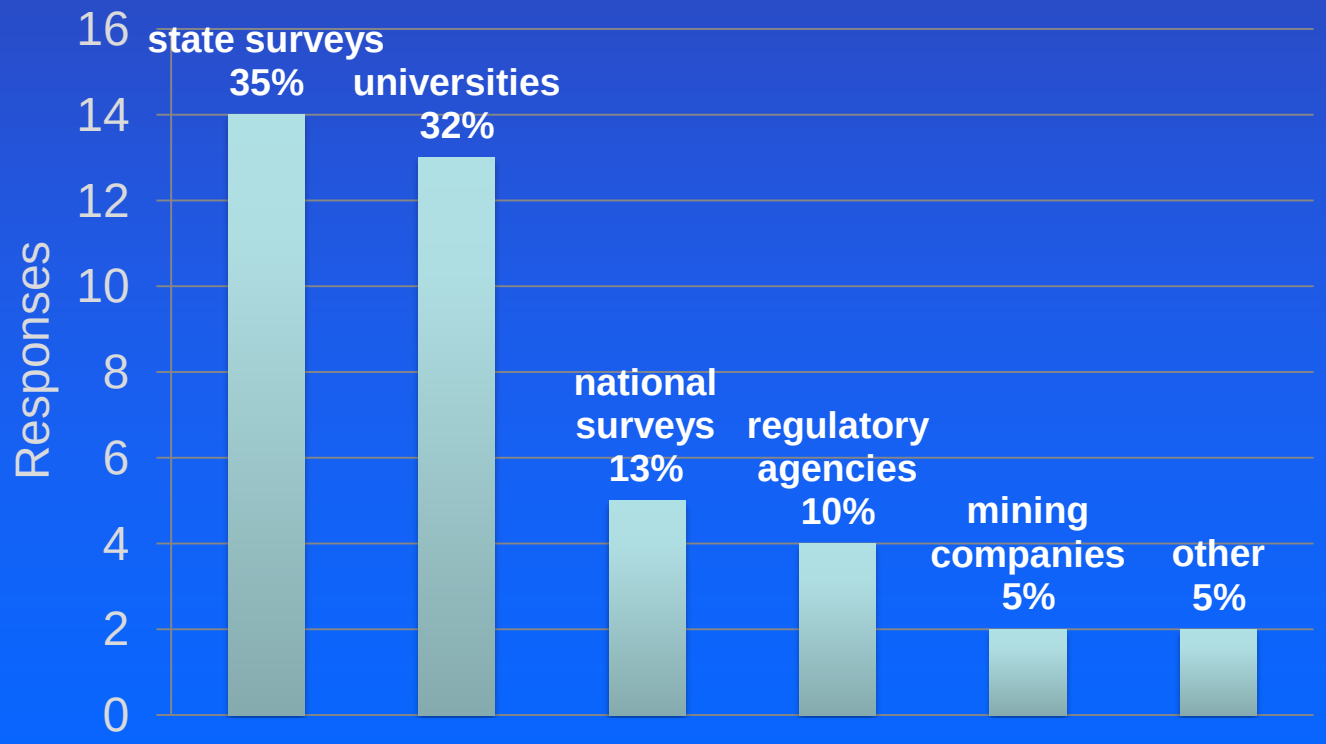
The survey will be available until July 10, 2010.

NOTE: Hardware and software listed as a result of this survey are not necessarily all inclusive of those capable of meeting requirements for field entry of geologic data. Brand names listed do not imply endorsement by the State of Alaska.

Current survey

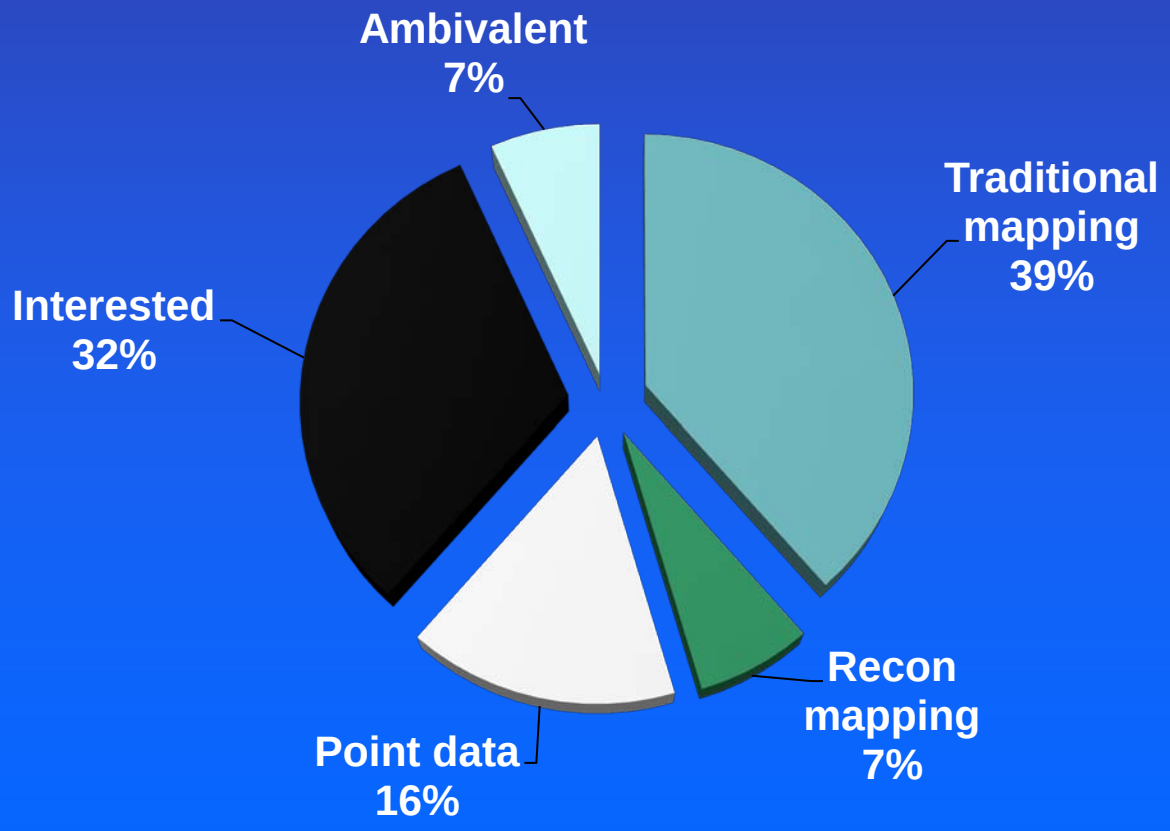
- Digital Mapping Techniques (DMT) listserv (~380 members)
- 30 random university geology departments (>500 in U.S.)
- Original geomapping_technology listserv (10 members)

Responses: 47 total = 10-20% response rate



Digital mapping in the field
(not in a vehicle)

- 43% are interested in developing a system
- 89% would like to be or are mapping digitally
- 11% are happy with their current hybrid systems or ambivalent



Digital field mapping by organization

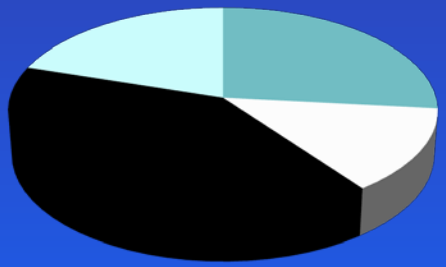
Traditional and recon

Point data

Interested

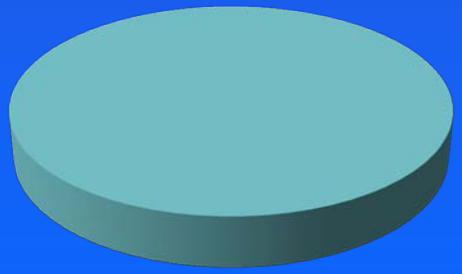
Ambivalent

State surveys *(15)*

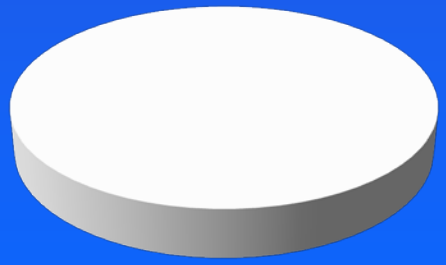


Universities *(13)*

National surveys *(5)*



Mining companies *(2)*



(x) is the number of responses, including individual responses per organization

Hardware in traditional and recon mapping

(not in a vehicle)

- Some respondents listed multiple devices
- List includes responses from organizations and individuals

PDA – 15 devices, incl. 10 Trimble products
(iPAQ; Dell Axim; Trimble Juno, Recon, Nomad, GeoXplorer)

Phone/PDA – 3 devices
(O2 XDA Flame, iPhone, Android)

Laptop/tablets – 14 devices, incl. 10 ruggedized
(GoBooks, Xplore, Getac V100, Toughbooks,
Fujitsu tablet, HP tablet, Dell laptops)

Software in traditional and recon mapping

- Some respondents listed multiple software systems
- List includes responses from organizations and individuals

PDA – ESRI ArcPad *(11),* Geologic Data Assistant (GDA) *(2),* Trimble Terrasync (ArcPad eq), OziExplorer (GPS-topo software), HanDbase (relational database manager)

Phone/PDA – Maps, Field Assets, My Maps, Google Earth, Google Maps, GeoPaparazzi, eGeo Compass, ArcPad

Laptop/tablets – ESRI ArcGIS *(4),* ArcPad *(4),* BGS Sigma Mobile, GeoMapper/PenMap, Global Mapper (ArcGIS eq), BeeGIS, MS Access, Google Earth, Garmin MapSource, National Geographic Maps-Topo!

(x) is the number of responses, including individual responses per organization

Satisfaction: traditional and recon mapping

Not satisfied *(7 responses)*; not user friendly, not cost effective

Hardware: laptops, PDAs, and Trimbles (note: no tablets)
Issues: cost, external Bluetooth connection

Software: ArcGIS *(2)*, ArcPad *(5)*, GDA *(2)*, others
Issues: ArcPad - not stable, unexpected behavior, difficult to setup, versions change too fast, a lot of work

Satisfied, with reservations *(7 responses)*
"It functions" "good for what it is"

Hardware: Trimbles, ruggedized tablets, PDAs, phone/PDAs
Issues: cost, too heavy *(2)*, screen size, data organization

Software: ArcPad *(5)*, Terrasync, BeeGIS
Issues: ArcPad/PDA incompatibility

(x) is the number of responses, including individual responses per organization

Satisfaction: traditional and recon mapping

Satisfied *(5 responses)* "I'll never go back to paper."

Relatively complex software

- British Geological Survey, started in 1989, software now publicly available
  Hardware: iPAQs, GoBooks, Xplore iX104s, Toughbooks, Getac V100s
  Software: ArcPad, BGS SIGMA Mobile (ArcGIS, MS Access)

- UC Berkeley, started in 1997, software now commercially available
  Hardware: Fujitsu Tablet PC
  Software: GeoMapper/PenMap

Good ArcPad programmers committed to upgrading system

- University of Texas at El Paso, started in 1996
  Hardware: Trimbles (Junos, Recons, and Nomads), iPAQs, tablets
  Peripherals: Geoclinos, rangefinders

- University of Tennessee - Knoxville, started in 2007
  Hardware: Trimble GeoXT

Plea

If you are interested in digital field mapping technology, please sign up for the listserv, edit the wiki, and fill out the survey.

Contact: jennifer.athey@alaska.gov for more information

Many heads are better than one!