

Notes from USGS Session/Volunteered Geographic Information (VGI) Workshop
January 14, 2010

Attendees: Kari Craun, Jay Donnelly, Paul Wiese, Eric Wolf, Greg Matthews, Larry Moore, Mark DeMulder, Jenny Runyon, David Terrell, Barbara Poore, Morgan Bearden, Lynn Usery, Mike Domaratz, Lou Yost, Katrina Burke, Morgan Bearden

Goal: Document what we heard on January 12-13 and develop actionable next steps

I. Brainstorm – Common themes that were heard on January 12-13:

1. There are large numbers of people contributing VGI information to various programs. From the 10,000 involved in the NOAA climate information program to over 200,000 and growing involved in OpenStreetMap (OSM).
2. Many types of recognition and rewards are provided for volunteer efforts. Some of what we heard included:
 - a. Structure of different levels of user/contributor/volunteer – advances seen as a reward or incentive
 - b. Being an administrator or reviewer was also seen as a higher level incentive.
 - c. Working with a group/sharing in a common task seen as a reward in itself
 - d. Fun!
 - e. Use of gaming mechanics to incentivize (e.g., earning real or virtual trinkets, badges, etc... as more work is done).
 - f. Mapping parties
 - g. See results of work right away
3. Evaluation metrics?
 - a. Published results
 - b. Quality of work evaluated by other volunteers, possibly published
4. Targeted acquisition vs. Free4all (?)
5. Training vs. not
 - a. There was quite a bit of variability in the philosophy on training. This ranged from – we don't provide training because we think the system should be intuitive to we provide very thorough training and more training is how people are rewarded.
6. VGI is contributed mostly by males
7. There is a large disparity in urban #'s vs rural (more data in urban areas, more volunteers in these areas) (“tyranny of geography”?)
8. Government sponsored programs were seen as more “stiff” (formal, structured)
9. Individuals involved in government sponsored programs were/are older
10. NOAA climate data gathering is reliant on volunteer efforts (not an option)
11. Mike Thompson hypothetical headlines said a lot to us (would we rather be known for great, old data or somewhat less great, new data – paraphrasing).
12. Keith Clarke idea for “heat maps” showing least accurate data to encourage participation in those areas.
13. Some difference in volunteer vs contributor terminology.

14. Many contributors provide information only once; a small percentage continue to provide regularly.
15. There is some literature out there now about VGI.
16. Mobile devices (PDA's, iphones), social networking are important in collection of much of this data.
17. "Just do it" remarks by many of the participants encouraging USGS.
18. New technology is pushing the ability of volunteers to provide info.
19. Development side – FGDC geocloud sandbox.
20. Possible use for trans, structures, names
21. Concern over "new hot thing" vs implementation over the long haul
22. Age demographics – missing mid-career participants
23. Why does White House use Google maps (vs TNM or OSM or...)
24. Think about single contributor vs. group contributions (teachers, 4-H, etc...)

II. Brainstorm – Options/Benefits to NGP for use of VGI

1. Data gaps – where does VGI make the most sense?
2. Ranking of data types for VG (from high to low):
 - a. Transportation
 - i. Roads (position, route #, surface, vertical offsets)
 - ii. Railroads
 - iii. Trails
 - iv. Waterways
 - v. Airports
 - vi. Powerlines
 - vii. Pipelines
 - viii. Seaplane stations (?)
 - b. Structures (points or footprints; both? Attribution? Addresses? Feature types? Names?)
 - i. Schools
 - ii. Hospitals
 - iii. Fire stations
 - iv. Post offices
 - v. Museums
 - vi. Libraries
 - vii. Houses of worship
 - viii. Stadiums
 - ix. Disaster-related – Supermarkets, Water sources, Gas stations.
 - c. Names
 - i. Natural features (?BGN process); note that names data is already collected using a volunteer process, but, there are not a large number of people currently involved.
 - ii. Variant names
 - iii. Niche community
 - d. Hydrography (general question re: authoritative data sources and how this works with volunteer data?)

- i. Names
 - ii. Geometry
 - iii. Navigation
 - iv. Reach codes
 - v. Centerlines
 - e. Land cover
 - i. “eyes” in field
 - ii. Ground truth
 - iii. National parcels – harvest l.c. codes (?)
 - iv. Use photos
 - v. “adopt-a-pixel”
 - vi. Change
 - vii. Phenology
 - f. Elevation
 - i. NGS height modernization program mentioned
 - g. Ortho
 - h. Name own theme (user content from volunteer or contributor)
 - i. Other gov data?
 - 3. Walking papers concept?
 - 4. Mobile device usage – how could we implement?
 - 5. Potentially use existing volunteer network/infrastructure.
- III. Concerns – Brainstorming concerns over using the VGI concept in TNM and other parts of the NGP
- a. Data vandalism – idea of willful destruction or provision of wrong data on purpose
 - b. Licensing/reuse issues re: “creative commons” licensing vs public domain
 - c. Standards
 - i. Restrict input or not?
 - ii. Need for standardized data?
 - d. Concern over processing of volumes of data from volunteers
 - e. Staffing concerns (internal)
 - i. Need point of contact, other staff support.
 - ii. Concern over coordination of themes.
 - f. Liaison involvement?
 - i. Need to make sure liaisons are in the communication loop re: volunteer activities.
 - ii. It’s possible local volunteer coordination could be done by liaisons to some extent, e.g., local “mapping party” coordination.
 - iii. How does partner data mix with VGI data?
 - 1. where?
 - 2. what?
 - 3. how to focus/direct partner data?
 - 4. what would be the involvement of partners?
 - g. Budget?

- i. How much is needed?
 - ii. What would be decreased to fund?
 - iii. What are development/start-up costs vs. operational, ongoing costs?
- h. Current National Map Corps is the wrong model
 - i. Does not allow for social networking
 - ii. Too top-down
- i. Quality Assurance
 - i. Self-correcting model might not work in rural areas
 - ii. Not convinced we want to pursue the self-correcting model because we would have to publish the data first.
 - iii. How to handle conflicting updates – e.g, from partners vs USGS vs volunteers?
 - iv. Concern about trust/reputation for accuracy (ref Mike Thompson “headlines re: this)
 - v. Concern that workforce is not available for QA
- j. Concern about not being able to recruit volunteers in rural areas
- k. How to handle versioning?
- l. Concern about ability to be responsive and provide an immediate view of the data provided.
- m. VGI data doesn’t necessarily support current products (e.g., US Topo)(?)
- n. Need to have a communications plan
 - i. Be mindful of current partnership agreements
 - ii. How des this (use of VGI data) relate to stewardship agreements?
 - 1. How does this relate to our current business model overall?
- o. Concern about ability to technologically implement – no early release before ready

Next steps/Action Items:

Kari Craun has the action to develop a detailed next steps white paper.

Larry Moore will provide the transportation proposal – to be incorporated in the white paper mentioned above.

Due date for the white paper to the NGP management team is 1 month from the January 14 workshop date.

Mark DeMulder will attend/participate in Where 2.0 Conference.

Kari Craun will coordinate NGTOC technical participation in WhereCamp – to include a proposed activity for developing applications using *The National Map* data.