GIScience 2012

Role of Volunteer Geographic Information in Advancing Science: Quality and Credibility

1a - NMAs perception changes

- Ground of perception changes
- First reactions about VGI data
- Some interesting findings
- NMAs second thought

Ground of perception changes

- **Unsatisfactory map update cycle**
  - Perception from NMAs employees and data users;
  - Caused by insufficient available resources;
  - Situation not really questioned until…
- **More up-to-date data get visible on the web**
  - Google
    - Understandable, Big businesses have big resources
  - Openstreetmap
    - Volunteers Geographic Information? How's that !!?

First reactions about VGI data

- **NMAs**
  - Volunteers “stuff” can’t be reliable!
  - Can’t use it in authoritative products!
  - *Perception fed by bogeymen stories…*
- **Researchers**
  - Something new out there!
  - Must be funding available for this!
  - Must have a look and put graduate students at work

Findings about VGI data[1]

- **VGI data is more reliable than expected**
  - Compared to first NMAs' perception
- **Some limitations apply**
  - Data availability based on contributors' distribution
  - Data content based on contributors' interest
  - Metadata can't be extracted from the source

1- Specifically related to NMAs' concerns

How NMAs' changed their view

- **VGI can be used in NMAs operations**
  - Partial updates possible when VGI data is available
- **Potential uses of VGI data …**
  - Using existing VGI data without integration
    - Planning fieldwork for updating operations
  - Including existing VGI data in NMAs' operations
    - Update NMAs databases using VGI geometries/attributes
    - Provide potential updates using a separate VGI layer
  - Developing NMAs own VGI web interfaces
    - Each NMAs must develop its own community

1b - NMAs Challenges

- **Find meaningful differences between datasets**
  - ❖Considering that datasets have different
    - Content, accuracy, geometric model/representation
  - ❖Discriminate between relevant/irrelevant differences
    - Within Omission, Commission and attribute changes
- **Integrate relevant differences**
  - ❖Taking into account user's perception
    - Partial features/attributes updating
  - ❖Dealing with legal/licensing issues
    - As they will create derivative works

2 – Integration vs. Interaction

- **NMAs can use VGI without real integration**
  - Selected differences used for planning
  - Selected differences displayed as a separate layer
- **NMAs can integrate VGI data**
  - Selected differences used for partial updating
- **NMAs can integrate VGI communities**
  - VGI data exist because of the communities
  - NMAs interest is to keep communities alive
    - Increase the probability of getting updates
    - Volunteers may be meticulous quality controllers
  - At this stage, integration is interaction

3 - Important question

- **What will be learned from the Canadian NMA experience since there are…**
  - ❖NMA interactions with OSM community
    - Participation to the talk-ca mailing list
    - Entire map coverage available in OSM format
    - Detected differences provided to the community
  - ❖Community interaction with NMA
    - Map coverage uploaded for inhabited areas
    - Detailed quality control feedback received
  - ❖Interaction model is at work