Activity of the GIS Volunteer in the East Japan Great Earthquake Disaster

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Disaster Emergency Activities

Disaster Outbreak

March 11
- The ability for intelligence loss
- Lack of information
- The news of media

March 12-13
- Disaster prevention-related activity start
- Tohoku Traversing roadwork start

March 13
- Fuel shortage
- Survivor rescue

March 18
- The main Route 45 opening to traffic

The information blank period
The road interception period
The system establishment period for emergency
The peak period for emergency

Many Activities rescue
EMT (Emergency Mapping Team)

Activity starts: The evening of March 11
Organization: The headquarters is Cabinet Office.
Approximately 250 volunteers were bound together on the Internet and put disaster map information on base map information in improving and expressed Mash up.

http://www.drs.dpri.kyoto-u.ac.jp/emt/about.html
Purpose of EMT

Background

- The need of the information collection (Information is full of the Internet)
- Visualization of the offer information (The need of the map information)
- Situation guess based on geospatial information

Purpose

Visualization with the map information at the country level
Visualization with the map information at the prefecture level
Visualization with the map information to support the on-site activity
What is CRISIS Mapping?

The crisis mapping expresses the critical situation with natural disaster and the act of man in a map, and it is called it to support the field indirectly.

Web page was established at 18:00 on March 11

Approximately 600 volunteers gather and send the damage situation, refuge information, relief supplies information with a format with a coordinate of the Excel. The map information put Mash up on a base map in improving using WMS and expressed it.

http://www.sinsai.info/
What is Participatory GIS?

“Participatory GIS is an emergent practice in its own right; developing out of participatory approaches to planning and spatial information and communication management”

(Rambaldi and Weiner 2004)

In Japan, participatory GIS construction of the field of natural environments using the Internet was it in a trial from the mid-1990s. However, the Internet of that time did not increase the user because the information transmission speed of the line being slow, GUI of the hardware were poor.

In addition, because the environmental information contributed to participatory GIS by the expert of the field of natural environments did not have a check function, we received an evaluation that reliability was low, and the example of the system decreased.
What is VGI?

Volunteered geographic information (VGI) is the harnessing of tools to create, assemble, and disseminate geographic data provided voluntarily by individuals

(M. Goodchild)

The history of the Japanese GIS volunteer

1995: Hanshin, Awaji great earthquake disaster (referencing the old topology by GIS, debris quantity calculation, quantity of debris movement management)

2004: Niigata Chuetsu earthquake (affliction certificate issuance)

2007: Noto Peninsula earthquake (affliction certificate issuance)

2007: Niigata Chuetsu Oki earthquake (Niigata prefecture announces restoration, the rehabilitation process of the prefecture in GIS, and local governments and villages use GIS for affliction certificate issuance)

The number of the buildings in the evacuation directive area (building spot numbers)
A support supplies transfer road and refuge site map
Thank you!