

Utilization of satellite imagery and web GIS for hazard map

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Using 1m-class high-resolution satellite imageries such as IKONOS and Quick Bird, it is possible to detect some topographical information and disaster information using interpretation method same as aerial photo. Using Google Earth, we can see digital satellite imageries taken everywhere in all over the world. When heavy disaster occurred in the developing countries where is difficult to take aerial photo and go to survey, we can see the satellite imageries taken the disaster area via web page such as satellite imageries distribution company, Google Earth and so on. SAR imageries are also useful to detect the flood area and heavy buildings damage area using the method of comparison between before and after SAR imagery, in rainy condition or night.

These satellite imageries are useful on not only disaster situation but also normal situation. High resolution satellite imagery is used for base map in developing countries which have no map information, and is possible to be used for the tool which local people understand the risk of residential area combined with geographic contents data. The international rescue command can use high-resolution satellite imagery for base map in emergency situation.

To release local people hazard map with other geographic information using Web GIS is useful for the local governmental activity of disaster prevention. For example, some local municipalities have the plan to release the information related disaster such as landform classification of land condition map, past flood area, 5 meter grid DEM by airborne laser survey, public facilities and transformation network on 1/25000 topographic map using Cyber Japan Web System, for disaster prevention GIS. If these municipalities will open 1/2500 topographical map for base map in Cyber Japan Web System, it will be possible to do the actual disaster prevention for disaster weak people combined with the individual information of each family.