"The East Japan Earthquake Archive" - Visualization Contents of the Big Data of the Earthquake Disaster

Hidenori Watanabe[1*]

1 Faculty of System Design, Tokyo Metropolitan University

The East Japan Earthquake Archive is a digital archive using Google Earth to visualize and report on the real state of the damage from the earthquake in eastern Japan. Since data such as photographs, panorama pictures and disaster victims' testimonies are unified on Google Earth, users can browse all the data from a bird's-eye view. In addition, a time-stamp function is incorporated in this archive, so users can also browse all the data along with the time elapsed since the earthquake.

The East Japan Earthquake Archive offers a "mash-up" of content that users can explore to "understand the real state of affairs - that cannot be understood by inspecting individual photographs." The map shows over 100 photos from the New York Times overlapping with three-dimensional geographical features that offer comprehensive views of Sendai airport and the Fukushima nuclear plants. It includes 360-degree panorama images and geographically arranged videos of victims' testimonies collected by the Asahi Shimbun newspaper and recorded in stereo by student volunteers and mapped on Google Earth. The film clips can be browsed in balloons by clicking face icons and the sound environment of a location is reproduced in three dimensions.

All of the materials were collected by online volunteers. Users can browse the content freely on their PCs and smartphones. The project is ongoing, constantly updated with the most recent photos and information that users can browse chronologically.

We have also created two mash-up contents in "The Great East Japan Big Data Workshop—Project 311," a major post-disaster initiative designed use technology to help improve the preparedness for future natural disasters. We aim to establish a legally sound evidence base if cases of thyroid cancer arise in the future. Secondly, we have mapped out the mainstream media's data, including NHK's breaking-news coverage scripts and crowd-sourced data such as geo-tagged tweets and crowd information gathered by the WeatherNews' Gensai Report.