

MTT034-P01

Room:Convention Hall

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Development of Mobile Applications Facilitate Citizens for Participation of Disaster-Prevention Activities

Hiroki Azuma^{1*}, Hiroyuki Fujiwara¹, Yuichiro Usuda¹, Rui Fukumoto²

¹NIED, ²Wingbase Inc.

1. Introduction

It is difficult to convey disaster risk information to citizens to realize actual disaster-prevention activities only through the hazard maps (Meiji Yasuda Life Insurance Co., 2009). On the other hand, the recently popularized device called a smart phone (mobile below) is widely adoptive to the disaster prevention activities from normal basis to the time of disaster (Mori et al., 2009). We developed easy-use mobile applications as an attempt to offer the disaster risk information for citizens. And these approach refer from a basic prerequisites for the informational environment in which mobile is used in the disaster prevention activities based on the arranged research (Usuda et al., 2010).

2. Feature analysis for Mobile application

Technical attributions of the mobile application are arranged to three points of the following. We developed applications using these elements.

A. Geo location service

Particular information based on the current place should be applied.

B. Use of existing social media network

Applications should be run in an existing network of social media should be able to be made the best use of without reserve. Putting in mobility, beginning to use, studying new social media to seeing for the disaster-prevention activity, and becoming accustomed are never to be suggested.

C. Intuitive interface

An intuitive user-interface is needed to be kind to people who are not familiar with mobile like a smart phone daily.

3. Developed Mobile Applications

All these applications below scheduled to be distributed from an online application stores. Free for charge.

3.1. Minna no Bosai (Everyone's activities for disaster prevention)

It is mixi mobile application with the hazard assessment function to display the radar chart by six stages from A to F as for the hazard risk at the present place.

3.2. Saigai Repo (Disaster Reports)

It is the twitter-posting application that even people who are bad at entering up characters with smart phone can finish posting only for 20s. After posting, they can check how other posters feel on a map screen.

3.3. Mosimo Jishin (If an earthquake occurs...)

It is the application that has user take their images with smart phone camera and displays some kinds of images about possible damage there. The result of damage is extracted the date from hazard information about the place and real damage data. Thus, their images are displayed each time the place and timing changes.

3.4. Disaster Risk Finder

It is the application that gets the disaster risk information directly from WMS/WFS/WCS GIS interoperable server, and displays the image of damage through mobile camera using AR technique.

4. Future development

We will try the strategy that uses users at remote locations mutually as a disaster prevention peer network as the notification goes to the user that there is a friend in the stricken area in an urgent and warning, etc. as a trigger by occurring of disaster.

References

Yuichiro USUDA, Toshinari NAGASAKA (2010), Basic Prerequisites of Information Usage Environment for the Disaster-Prevention Activities, Japan Society for Disaster Information Studies No.8, pp.105-119

Masafumi MORI, Nobuo FUKUWA, Jun TOBITA and Kazumi KURATA (2009), Usage of the Latest Mobile Device for Disas-



Keywords: social media, mobile application, Interoperability, API, Disaster Risk Information, AR