Japan Geoscience Union Meeting 2013
(May 19-24 2013 at Makuhari, Chiba, Japan)

MTT39-01 Room:102A Time:May 21 14:30-14:45

Enabling an online event with interaction between social media and an internet broadcasting

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This paper introduces the process to hold an online event that discuss on the iOS map application.

Keywords: social media, geomedia, apple map, online event

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MTT39-02 Room:102A Time:May 21 14:45-15:00

Introducing natural landscape photographs via Twitter for geomorphological outreach

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Twitter is known as a type of social media consisting of short text messages up to 140 characters per post. It also provides effective linkage with images and videos. A thumnail of an image or an emmbeded video may be shown immediately below the text of a tweet if the text includes a link to the image or the video. Numerous images of natural landscapes are open to public via the Internet, and many of them are related to geomorphology. Introducing such images in a tweet with a text explanation contributes to geomorphological outreach. If images are artistic, it is possible to attaract people's attentin to geomorphology from their interests in art. Using a specific web site for compiling tweets in a web page, it is possible to keep such geomoprhological tweets like in a dictionary. This paper introducing an example of geomorphological outreach using natural landscape photographs and Twitter.

Keywords: Twitter, landscape photography, geomorphology, outreach

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MTT39-03 Room:102A Time:May 21 15:00-15:15

Real-time posting of fieldwork information through social media: a case of a geoarchaeological survey in Oman

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Fieldwork is a research activity carried out in a place away from researcher's office. It is also a travel with an extraordinary experience. In fieldwork, all objects and events??those related to not only data collection, but also meals, accommodation, landscape and people??are potentially subjects of documentation. It is an advantage of social media that a reporter can effectively send information to those whom are interested in it. Recent global popularization of the Internet has made it possible to post entries in real-time or semi-real-time (within a day) from anywhere in the world, including secluded areas. Social media are now the best way to broadcast everyday fieldwork experiences.

This paper reports a case of news posting using social media for a geoarchaeological survey project in Oman in the Arabian Peninsula from December 2012 to March 2013. All project members were users of Twitter and/or Facebook and were able to access the Internet unlimitedly in the guesthouse they stayed at. The members posted their experiences freely but in consideration of the conscience among scientists. The entries are classified into three categories: The most frequently posted topics were associated with living experiences such as foods, scenes, animals, and interaction with people. The second came the news related to logistics, including shopping and arrival/departure of team members. The third was the information on the study area and scientific discoveries, although those were less frequently posted because of the confidentiality required for research and some security reasons. The amount of information included in these entries is comparable to that in the official field diaries. Social media will be all the more effective means of outreach if they are combined with official news releases.

Keywords: fieldwork, outreach, immediacy, geoarchaeology, Oman

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MTT39-04 Room:102A Time:May 21 15:15-15:30

The Experiment of the Big-Data Handling in ”i-Jishin” Cloud System

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1. ”i-Jishin” Cloud System

Since January 2011, we are developing the ”i-Jishin” Cloud System. In this system, the MEMS accelerometer built in the Personal Digital Assistant like iphone/ipod touch/ipad is used. ”i-Jishin” performs data observation by continuous measurement and records the trigger data, and automatically uploads the data on Cloud. We can see the position of a terminal, a trigger waveform, etc. by a browser trough the Internet.

Since the release in August 2010, the number of downloads of the ”i-Jishin” software is reaching about 87,000 as of January, 2013. The number of earthquake early warnings is 5000 times or more from the beginning of mission of the system in January, 2011 to the present. More than 40,000 earthquake data related with the earthquake early warnings, and other individual 120,000 data from all over the world have been gathered in the Cloud server. It is expected that these data continue to increase further.

In order that users may treat a huge quantity of these data efficiently, it is necessary to display data on between space-time. As part of this trial, first of all, we built the mechanism of extracting the earthquake information related with the earthquake early warning.

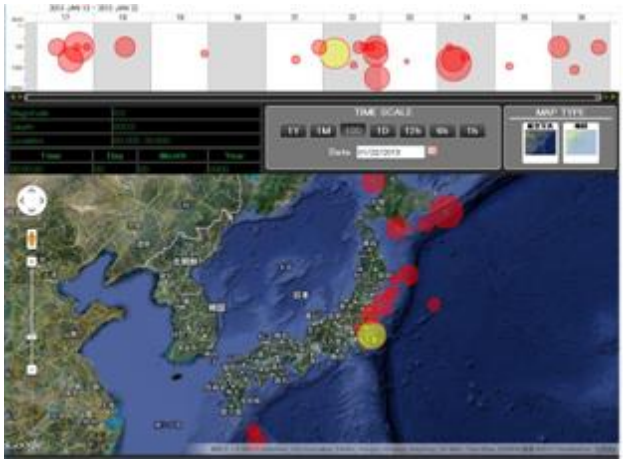
2. Time-line display

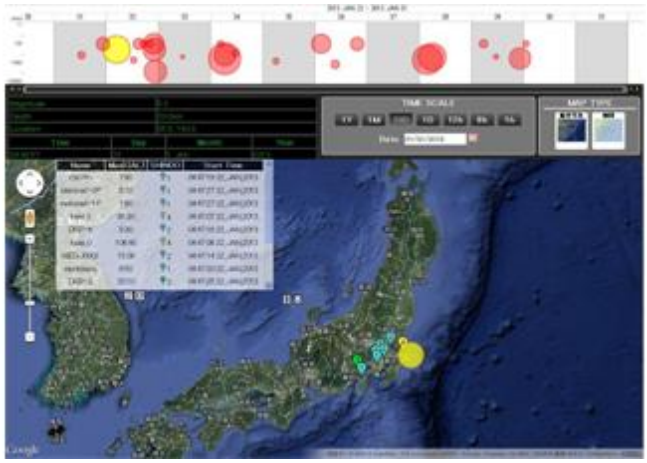
As on the upper part of the figure, the distribution of hypocenters is created. The horizontal axis is time, and the vertical axis is the depth of the focus. Each earthquake was indicated by the time line with the circle which changed the size of the radius according to the magnitude of an earthquake. The scale of the horizontal axis can be changed from 1 year to 1 hour. User can chose the past data from the calendar or the scale bar under a time-line display. In the map under the figure, the same earthquakes as currently displayed on the time line are expressed as the circle whose center is epicenter. If an earthquake is chosen with a mouse on the time line or a map, the earthquake will change to yellow. If user clicks the yellow domain, ”i-Jishin” terminals triggered by the earthquake early warning will be expressed as a balloon on the map, and will be displayed in a table list. When user clicks the balloon which shows ”i-Jishin” terminal on a map, the position information such as latitude and longitude of the terminal is shown. Moreover, the user can see the triggered waveform, download data, and to use the analysis soft via browser.

3. Handling of Data which is not related with Earthquake Early Warning

At present, the waveform data which are triggered at each terminal and not related with an earthquake early warning, are also being accumulated in the Cloud server. These data is collected as ”Earthquake Information” in the WEB page of geonavi. On ”Earthquake Information” page, we can see the 500 latest data, but this page is not a legible state. In order to perform better observation, the seismic observation system created by using commercial strong-motion seismograph (SU102) and the Cloud server of ”i-Jishin” is also built. However, since the observational data here is not being related with the earthquake early warning, either, it is not written on the time line. It is necessary to consider and build the structure which the user can use easily.

Keywords: Dense Seismic Observation System, Big Data, Time Line, Sensor Cloud





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MTT39-05 Room:102A Time:May 21 15:30-15:45

Information transmission using the social media in a large active geopark

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The San'in Kaigan Geopark is located in the west of Japan, spanning approximately 110km from its easternmost point, at Kyogamisaki Cape in the city of Kyotango, to its westernmost point, on the Hakutokaigan Coast in the city of Tottori, and measuring a maximum of 30km from north to south.

In terms of administrative jurisdictions, the Geopark spans a total of three cities and three towns in 3 prefectures (Kyoto Prefecture, Hyogo Prefecture, Tottori Prefecture).

Sharing and generating information is difficult in such a large active geopark. Then, we decided to use a social media to share and generate information smoothly. We created fan page of the geopark to Facebook. We have established an administrator in each area to generate regional information.

Keywords: geopark, facebook, San'in Kaigan Geopark, social media

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The role of social media in San'in Kaigan Geopark

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The purpose of this report is to show the regional bias of information flow based on the analysis of newspaper reports in the case of Tottori, introduce a new movement of the San'in Kaigan Geopark arose by using social media between scientists and local communities and discuss the role of social media in San'in Kaigan Geopark.

Keywords: social media, newspaper, San'in Kaigan Geopark