Social Media Mapping for Disaster Prevention and Reduction

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The cloud computing society where everyone can access the Internet using various information tools has been already developed all over the world, and it is the times of IoT (Internet of Things) and IoE (Internet of Everything) when various things were connected to the Internet. On the other hand, in recent years, because the occurrence frequency of meteorological disasters such as typhoon, local heavy rain and heavy snow in attrition to earthquake and volcanic eruption tremendously increased, it is the most important issue to adopt the effective measures for disaster prevention and reduction around the world. Additionally, as the digital infrastructures are toughened in the above measures, the importance of information and communication technologies (ICT) and internet environment is widely recognized especially in recent Japan. At the time of the Heavy Rain Disaster in western Japan in July, 2018, it was possible to gather and accumulate various disaster information using the function of social media mapping included in the spatiotemporal information system developed by the author's lab. Taking up the above social media mapping, the present study described the issues related to the development and utilization of digital infrastructures as one of the measures for disaster prevention and reduction.
In the advanced information society such as Japan, a great variety of information is transmitted via the internet and such information can easily be transmitted, received and shared at “anytime”, “anywhere” and with “anyone” through various ICT. In such a society, as the virtual space is closely involved with the real space, these mutually influence. Accordingly, when a disaster occurs in the real space, submission and reception of the related information using a variety of means (including both mass media and social media) are started approximately at the same time in the virtual space. Due to the close relationship between the real and virtual spaces, it is possible to rescue and support victims, and cause excessive information and confusion. Additionally, it is essential to effectively utilize the information included in the virtual space at the time of disaster. Specifically, it is an important issue to make use of the information in social media for rescue in the real space. For example, it is hopeful to assign the persons without the damaged areas who can appropriately choose the important information to report it to the local governments within the damaged areas and national government. Furthermore, it is essential to take the measures for the people vulnerable to disaster who require the disaster information most. For this, it is necessary to prepare a variety of ICT in addition to oral communication.

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