A Prototype Development of Assurance Cases Tool and Experiments on SNS Discussion of Radiation Disaster

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ABSTRACT

This poster will discuss how to make consensus building on disaster management including citizens and professionals. For ordinary citizens, it is difficult to understand scientific information such as about radiation disaster. This poster reports our progress of developing a prototype SNS tool for facilitating citizens to understand such scientific information. The prototype system is based on the notion of assurance cases, which have been recently widely used for system assurance in safety and security critical systems.

Now we are developing real-time visualization system for radiation health discussion on social media using natural language processing (LDA: Latent Dirichlet Allocation) and k-means clustering as shown in Figure 1.

Figure 1 Prototype of Community Visualizer

The system visualizes major topics of the discussion and suggests related assurance case(s) studied by past hazards so that both users and facilitators

Keywords

Assurance Cases, Radiation Disaster, SNS, Consensus Building.