低価格 MEMS 加速度センサーを用いた市民参加型「見える」地震減災ネットワークの構築
Towards Constructing Visible Disaster Mitigation Community Network in Yokohama

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As is well known, Japan is one of the most seismically active countries in the world. For this reason, government and a number of research institutes have been developed both basic and applied seismological researches extensively. However, along with these studies, to live in such country it is also important that each individual gets prepared to protect his/her home and family from future disaster. For this purpose, it is necessary to promote disaster awareness of people. In addition, preparedness priority should vary by region and/or community. Therefore, in this study we selected small community in Yokohama and developed a visible disaster mitigation network so that people in the community actively participate seismic monitoring and share information. Yokohama is located in the southern Kanto where the three plates meet, and there is no question about suffering a devastating earthquake in the future. The selected area is reclamation district and there are a number of old apartments where a big population of elderly person lives alone. So we utilized the network as home monitoring system for them as well. The network consists of a server located in the main office and distributed tiny sensor units. Each unit composed of QCN sensor provided by Stanford University and Raspberry Pi. The size of unit is about 30 cm by 10 cm by 10 cm and it is easily installed at houses and schools. Once the sensor detects the ground motion, the data is sent to the server and calculate seismic intensity and evaluate the status of building. In our presentation we will show how we utilize the network in the community and demonstrate various applications developed for people and school in the community.

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