Application of Real-time Strong-motion Monitoring System to disaster mitigation for High-Rise Building

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We apply Real-time Strong-motion Monitoring System (RSMS) to reduce earthquake-related damage of the 29-story building of Kogakuin University in the downtown Tokyo, Shinjuku, Japan. RSMS of Kogakuin University, which consists of 40 channels of accelerometers and data servers, is the system to monitor the building response and to estimate the building damage in real-time. The building securities are able to check the building damage during major earthquake using RSMS. In addition, RSMS can show the building response by the estimation ground motion, such as Tokai earthquake and a Near-Field Earthquake in the Tokyo Metropolitan Area. The building securities check the building response and damage by the estimated wave and announce the building safety information on the disaster drill.

We can quickly estimate the building damage using RSMS, and we announce the building information as 1st phase information, finally, we can establish the emergency operation office.