Enhancements of real time seismic intensity estimation using seismic intensity meters maintained by a local government –Case study on Tottori prefecture -

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Enhancements of real time seismic intensity estimation using seismic intensity meters maintained by a local government is demonstrated. Dense observation network is desirable for upgrading accuracy and quality of Earthquake Early Warning System. Seismic intensity meters installed in all municipalities are the most suitable equipment for the purpose. The seismic intensity meters in Tottori prefecture are improved to broadcast packets with peak ground acceleration and JMA seismic intensity at every one second. The data are received at Tottori University and PLUM method is applied to the data for estimating JMA seismic intensity distribution at 1km grid points. In this study, two additional methodologies are introduced on the system. One is attenuation of seismic intensities from observed sites and propagation from every grids for estimation. Another is introduction of P wave amplitudes for seismic intensity estimation. Using the methodologies, we can obtain rapid and detailed seismic intensity distribution than before.

Keywords: Local Government, Seismic Intensity Meter, Real Time, PLUM method, P wave