A Support System for an Early Resumption of Regular Train Operation by Applying a Public Earthquake Information

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At present, in case of an occurrence of earthquake, which tremor exceeds operation control threshold, there is a need to implement walking patrol along partial railway section, of which each seismographs is in charge, for the sake of ensuring safety. In order to resume regular train operation rapidly after restricted train operation due to earthquake, we constructed a working model system to estimate a seismic damage accurately just after an occurrence of earthquake. This system supports decision of early re-operation of train control due to earthquake. By obtaining the seismic information not only from railway operator's seismographs but also from public institution's ones in quasi-real-time, this system estimates the distribution of shake over meshed planes and extracts quake and structure damage at any given chainage of target railway route for their evaluation.