Research on the software for receiving and applying the Nowcast Earthquake Information

Keiji Doi[1]; Muneo Hori[2]; Kiyoshi Takano[3]; Taku Urabe[4]; Yoshiko Yamanaka[3]; Hiroshi Tsuruoka[1]; Naoyuki Yamada[5]; Kenshiro Tsumura[6]; Nobuo Arai[7]

[1] ERI; [2] Earthq. Res. Inst., Univ. Tokyo; [3] ERI, Univ. of Tokyo; [4] ERI, Univ. Tokyo; [5] JMA; [6] Japan Met. Assoc.; [7] Research Department, Japan Weather Association

So-called Nowcast Earthquake Information has been being developed by the Japan Meteorological Agency. In order to make this kind of information effective to use practically, it is required to be sent with enough time for users to take measures to save their lives and properties before strong ground motion which may damage to them comes. Effective information means that it tells users how strong ground motion will come and how much time they will have before its arrival.

The estimation of a degree of ground motion may vary from place to place where users receive the information because it depends not only on the location and the magnitude of an earthquake but also on local geographical feature, foundation conditions, etc. of the places of the users. However, it is not realistic or practical for a provider of the information to distribute the information to take all environments of the users into consideration because it takes a lot of time to make individual messages to the users and it will spoil the validity of the Nowcast Earthquake Information.

Moreover, it may be easily thought that the more difficult it is for the provider to send users , the more a number of the users increases, if the provider judges to send information or not taking into account thresholds whether take disaster prevention correspondence or not. Thus, it may be more practical and realistic that users do interpret the information to judge the necessity of their action and the provider distributes the information uniformly.

In this study, the authors prepare prototype software to interpret Nowcast Earthquake Information processing such parameters as a degree of ground motion and residual time to a principal seismic wave. The authors also prepare software to show the results from the interpret software mentioned above.