

Construction of the cloud type microtremor observation system

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The microtremor observation has treated till today as physical investigation information, including the structure model creation for strong motion prediction of the researcher and engineer, etc.

If microtremor observation can observe easily and the observed data can be easily transmitted to a database with information on that observation point, it can expect that the number of collection of observational data will increase explosively in the future because an amateur can also observe, and the advancement of structural model and prediction of seismic strong motions will be attained by leaps and bounds.

It will become an unprecedented thing which leads to grasp of detailed damage distribution, and the improvement in accuracy of real-time earthquake information from the above.

It became somewhat easy to treat microtremor observation now.

However, about the process of the whole microtremor observation, beginners cannot always carry out easily.

We have released battery, sensor and logger integral-type microtremor meter JU-210 which can be observed, and JU-215 (with a Wireless local access network (WLAN)) which an amateur can treat was made.

Moreover, in a senna and Fujiwara (2008), the software which can analyze microtremor data easily is also created and exhibited.

In response to the above-mentioned development, "i-bidou" system which can be observed only with a microtremor meter and a smart phone was built by this research using the smart phone which has spread through a world explosively.

Moreover, about the microtremor meter, JU-310 which improved the communications system etc. was developed so that cooperation with "i-bidou" system could be smoothly taken as an upgrade version of above-mentioned JU-215.

After registration is performed in a microtremor database, it is analyzed automatically.

Moreover, a series of flows which can peruse an analysis result immediately were also built.

It is expected that it will be sharply improved by the tuning time of a structural model according to the Cloud environment from now on. Furthermore, the benchmark test was done by the amateur and was able to obtain the good result.

The future still more user-friendly "i-bidou" system will be built.

Furthermore, correction analysis of the structure model registered into J-SHIS etc., may be able to be conducted at high speed.

Keywords: Microtremor observation, Cloud, Mobile terminal, i-Bidou, Structure, Strong motion prediction