ID: Type: **Oral**

T3.1-O1. Compact seafloor cabled seismic and tsunami observation system enhanced by ICT

Seafloor cabled seismic and tsunami observation systems have been deployed around the Japan islands arc to monitor seismic activities and detect tsunamis offshore. Because the number of cabled observation system on the seafloor is limited, the number of observational stations of cabled system should increase. Therefore we have developed a new compact seafloor cabled observation system with low cost. The new cabled system is characterized by system reliability using TCP/IP technology and down-sizing of an observation node using up-to-date electronics. In 2010, we had developed and installed the first system in the Japan Sea. The first system has 3 seismic stations and total length of cable is 25 km. After the installation, the first system is being operated continuously and we have continuous seismic data for more than 4 years. The second system has pressure gauge and seismometers in a node. In addition, an external port for additional sensor can be equipped instead of a pressure gauge. The power will be supplied to additional sensors using Power over Ethernet technology. The capsule for observation node has diameter of 26 cm and length of about 1.3 m. The second system is planned to be installed in summer, 2015.

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