

REAL TIME CATALAN SEISMIC NETWORK (IGC) IN SPAIN

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In 1999, a new concept of seismic network was designed and planned by the *Institut Geològic de Catalunya* (IGC) in order to provide rapid information for Civil Defence services and society in general and to obtain systematically high quality data for the scientific community. The project of the network has been developed in several steps. It was planned to create robust, high performance field infrastructures and install up to 21 stations equipped with three component broadband sensors and a high dynamic range. A real time system based on a VSAT seismic network has been developed and is now operational in Catalonia (Spain).

The stations are based on VSAT platforms transmitting continuous almost real time seismic data via satellite to the IGC hub. Once at seismic data reception centre data are continuously stored and processed with an automatic system. When an event is detected and located, the alert system sends an alert message to a distribution list. After validation by seismologists information is disseminated (web, email, fax, etc...). The automatic generation of a seismic risk scenario based on vulnerability assessment methodologies, using GIS techniques has been developed and is implemented.

The flexibility and modularity of the seismic network allow data exchange between institutions (Orfeus, IGN, etc...), and guarantee the interoperability between different networks.