

Patent for invention "Seismic Data Acquisition System"

Written by Administrator

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On November 16, 2015, the Federal Institute of Industrial Property registered the Patent № 2568342 for invention "Seismic Data Acquisition System".



The Research Station RAS is the owner of Patent. The authors of invention are: Bragin V.D. – Head of Laboratory of Integrated Studies of Dynamic Processes in Geophysical Fields, Matix A.I. – Head of New Equipment Implementation (NEI) Group and Dudinskih R.R. – Leading

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Engineer of NEI Group.

The invention was made under the RS RAS project by the order of Ministry of Education and Science of the Russian Federation under the theme "Seismic monitoring of the territory of Bishkek Geodynamic Proving Ground and adjacent areas" within the framework of Federal goal-oriented Program "Investigations and developments on priority branches of Complex for Science and Technology of Russia for 2007-2013", Contract of 20 June 2012, № 11.519.11.6049.

Object of the invention is system information capacity enhancement for time-sharing channels of data transmission; reduction of transmitted seismic data losses with reception acknowledgement in real time mode and increasing noise immunity under intensive electromagnetic interference conditions.

In pilot system information acquisition was performed by the method of radio telemetry on a frequency common for all nodes of seismic receiver. In proposed system all points of seismic data acquisition, including seismic receivers, were divided into some groups. A proper M-series with noise-shaped signals was assigned for each group. Information capacity of a system will be increased in this case.

Several groups of information acquisition points with individual M-series usage are effective for distributed system. This invention can be used in data acquisition systems with branched structure on the basis of radio modems. One of such examples is the Kyrgyz Seismic Network (KNET) exploited by Research Station RAS in Bishkek.

The Research Station RAS staff congratulates our colleagues Vitaly Bragin, Alexander Matix and Ruslan Dudinskih with registration of Patent № 2568342 for invention "Seismic Data Acquisition System"!