

## The unified system for storing and accessing geophysical data. Traditions and new approaches

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**Abstract** The features of the development of data collection systems within the Information Processing Center (IPC) of the Geophysical Survey of the Russian Academy of Sciences (GS RAS) are presenting. Historical information is given, including technical details related to the systematization of the archive and the evolution of geophysical data formats. The historical, territorial features, as well as the experience of deploying such information systems within the Federal Research Center of the Unified State Social Service of the Russian Academy of Sciences and abroad are taken into account. A new concept of building an information system is proposed, which takes into account the requirements for scalability, reproducibility at various objects and the use of standard software. A lot of work was done to form a homogeneous archive of waveforms and an inventory of metadata for seismic stations, which resulted in the possibility of including the GS RAS in the international centers for processing geophysical information based on FDSN. Creation of a distributed collection and processing system using a cloud service allows abstracting from the territorial features of collecting and storing geophysical information, which increases the performance of the data access service and the degree of technical readiness of key system nodes.

**Keywords** Seismological monitoring, data collection system, information system, geophysical data, universal access.

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