Seismic data and Geosciences Infrastructures for Scientific Research.

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If a considerable amount of literature, standards and practices are starting to be available on the integration of data pertaining to different disciplines, very few works have been proposed regarding the integration of Seismic data. This of course cannot be due to a lack of interest for this field, rather to some difficulties in adapting the current paradigm of geosciences infrastructures to this kind of data. One of the most important among these difficulties is the file dimension of seismic surveys, which imposes strict limitations in network traffic. Another difficulty is that seismic data are generally sensitive data. Commercial products exists that handle seismic data, but being tailored for the oil companies are very expensive and too prescriptive. Many international initiatives aim at fostering the collaborative attitude among researchers in the field of Geophysics and particularly in seismic data analysis. Among these initiative, OGS is participating in the Antarctic Seismic Data Library System (SDLS), the ECORD, the CO2GeoNet and others, developing a web based collaborative system (SNAP) that tries to consider all the aforementioned problems. This is based on a mixed server-side/client-side paradigm where the actual seismic data can be analysed (zoom, pan, scale) directly on the server, preserving intellectual property and without overloading the network, while metadata and positioning, being of small size and not sensitive, are sent to the client and here rendered through Scalable Vector Graphics (SVG) files. SNAP integrates a Computer Supported Collaborative Tool, and a Discovery System while interfaces to GIS systems are currently under development. The whole system is based solely on open-source software. SNAP allows any institution to open its archives to the scientific community, which gives a new life to vintage seismic data that can become an invaluable asset for the future of any institution.