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Archiving, sharing, processing and publishing historical earthquakes data: the IT point of view

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Digital tools devised for seismological data are mostly designed for handling instrumentally recorded data. Researchers working on historical seismology are forced to perform their daily job using a general purpose tool and/or coding their own to address their specific tasks. The lack of out-of-the-box tools expressly conceived to deal with historical data leads to a huge amount of time lost in performing tedious task to search for the data and, to manually reformat it in order to jump from one tool to the other, sometimes causing a loss of the original data. This reality is common to all activities related to the study of earthquakes of the past centuries, from the interpretations of past historical sources, to the compilation of earthquake catalogues.
A platform able to preserve the historical earthquake data, trace back their source, and able to fulfil many common tasks was very much needed. In the framework of two European projects (NERIES and SHARE) and one global project (Global Earthquake History, GEM), two new data portals were designed and implemented. The European portal "Archive of Historical Earthquakes Data" (AHEAD) and the worldwide "Global Historical Earthquake Archive" (GHEA), are aimed at addressing at least some of the above mentioned issues. The availability of these new portals and their well-defined standards makes it easier than before the development of side tools for archiving, publishing and processing the available historical earthquake data. The AHEAD and GHEA portals, their underlying technologies and the developed side tools are presented.