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Science Data Management for a CO_2-Sequestration project

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Funded by the CO_2Man/Pilotstandort Ketzin project, a German CO_2-sequestration research-project, a data management system been developed which tries to integrate operating data and a wide range of science data: basic geological field data, but also more complex well logging data, reservoir simulation files and other file types, in particular from geochemistry and (sub-)surface geophysics. Although the software system itself has a distributed architecture, goal of the software development project was to make the data accessible to users by providing a unified, centralized view on the data. Aside from its primary data distribution function, collaboration features are also supported, and there is also a mandate to serve as a long-term digital archive.

The software development process was challenged by the total data volume, size of indvidual files, diversity of file formats and the fact that files were accumulated, with intermissions, over a period of nearly 40 years starting with a set of historical geological field data from the 1960s and 1970s. The data management system comprises an interactive web application enabling the end users, i.e. project scientists, to download custom data sets, search documents, search file metadata and create composite plots of well-logging data and other geoscience data.