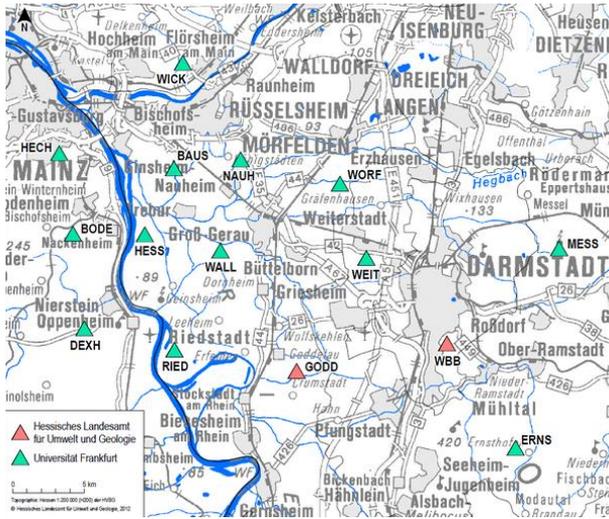
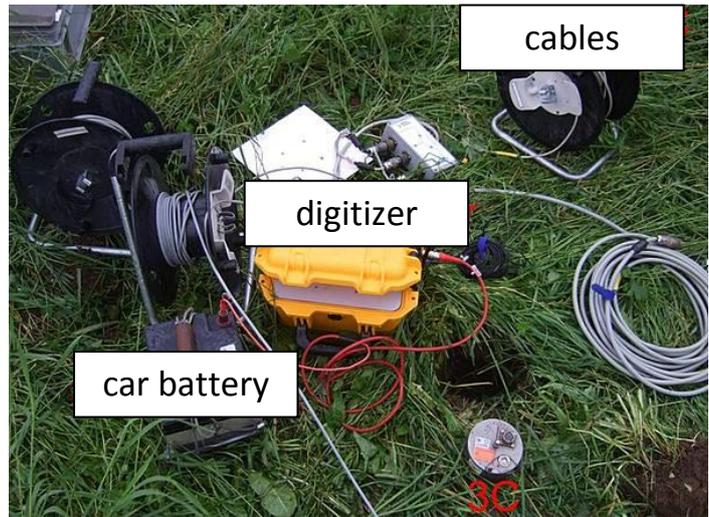


# SiMoN – Seismic Monitoring in the northern Upper Rhine Rift (Germany)



Source: www.simon.hlug.de



Source: www.simon.hlug.de (P. Blascheck, University of Stuttgart)

**Information:**

www.geo-t.de

**Funded by:**

**BMW – Federal Ministry for Economic Affairs and Energy**

**Client:**

**Überlandwerk Groß-Gerau GmbH**

**Start:**

October 2011

**End:**

June 2015

**Status:**

Completed

**Project description**

Induced seismicity related to deep geothermal projects represents a significant factor of uncertainty in the realization of German geothermal projects, especially in the Upper Rhine Rift due to the special geological situation. These circumstances do not only lead to restraint by investors and project operators, but also to a strongly decreasing public acceptance. Especially since the seismic events in Basel, Landau and Insheim, German geothermal projects cannot be planned and implemented without a focus on the seismic risk. A declared aim is therefore to minimize induced seismicity.

Within the joint research project SiMoN the universities of Frankfurt and Stuttgart as well as the Hessian State Office for Environment and Geology (HLUG) were conducting fundamental research to gain a deeper insight into the connection between natural nano-, micro- and macro-seismic and through technical measures induced or triggered seismicity. This leads to a better understanding of the regional stress field. Active fault zones can be identified better and the overall understanding of the tectonic setting of the region can be broadened. This can help to adapt the necessary steps related to the project implementation in a way that triggered or induced seismicity is being minimized.

Funded by:



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Within the scope of the project, a regional network for long-term seismic monitoring has been installed in the northern part of the Upper Rhine Rift where several geothermal projects are planned for the future. The monitoring network comprises 13 new stations at the university of Frankfurt as well as five permanent stations of other operators like the HLUG. A total of three nano-seismic measurement campaigns were performed, which even detect vibrations below perception level. The Überland-werk Groß-Gerau GmbH (ÜWG) therefore provided information on its project planning for the best possible practical relevance. GeoThermal Engineering GmbH was acting as a service provider for ÜWG and was supplying its knowledge and experience in project development in the Upper Rhine Rift.

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Exploration

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- Hessian State Office for Environment and Geology (HLUG)
- Goethe University Frankfurt – Institute of Geophysics
- University of Stuttgart – Institute of Geophysics
- igem – Institute for geothermal resource management

**Company profile**

GeoThermal Engineering GmbH (GeoT) is an engineering consultancy and project developer specialized on deep geothermal energy projects. The company joins a professional and qualified team of geoscientists and engineers and has established itself as a competent and reliable partner for projects in the deep geothermal market. GeoT's portfolio includes the entire project development ranging from planning to supervision of drilling work and plant operation. For international geothermal projects, GeoT is involved in several joint ventures where the company contributes skilled expert know-how. Furthermore, GeoT is integrated in several research and development projects in cooperation with well-known universities and research institutes.

Portfolio:

**Exploration:** geology, geochemistry, geophysics (incl. 2D/3D seismic surveys), geomechanics, hydrogeology, feasibility studies, risk analyses, exploration strategies, well path planning, well site geology

**Consulting:** market research, economic consultancy services, political consulting, business consultancy, due diligence, financing and funding, risk mitigation, project management, public relations

**R & D:** project initiation and funding possibilities, applications, project coordination, networking

– „unlocking geothermal potential“ –