GEOScene3D

Research and Development

GeoScience R&D

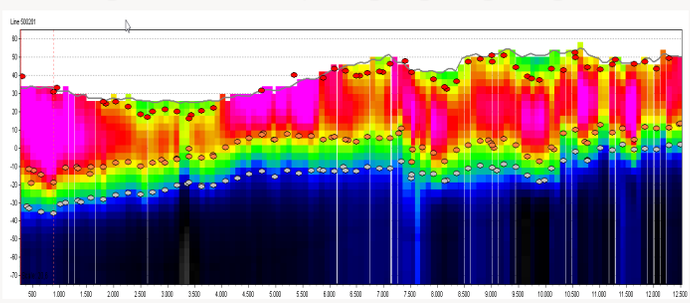
Research and Development at I•GIS

As our partners and customers are highly skilled specialists that expect and deserve state-of-the-art tools and products to assist them in solving their real world geoscientific tasks, we find it essential that the development of our products is knowledge-driven and pushing the limit on technical capabilities. To achieve this, our R&D team is heavily involved in a series of research project together with top universities and research organizations to develop new theory and finding solutions allowing us to provide our partners and customers with better products and services.
Do you have special needs, good ideas... maybe you should partner up with I•GIS on your next R&D project?

Some of the results from our R&D projects

GeoScene3D has gained a lot from our many R&D projects. Some of the major results include:

- A Multiple-Point Statistics tools and workflow package
- Algorithms to perform Clustering of AEM data
- Voxel Modelling tools
- Tools to handle Urban geological modelling
- Smart Interpretation - A Machine Learning tool allowing semi-automatic picking of geologic targets.



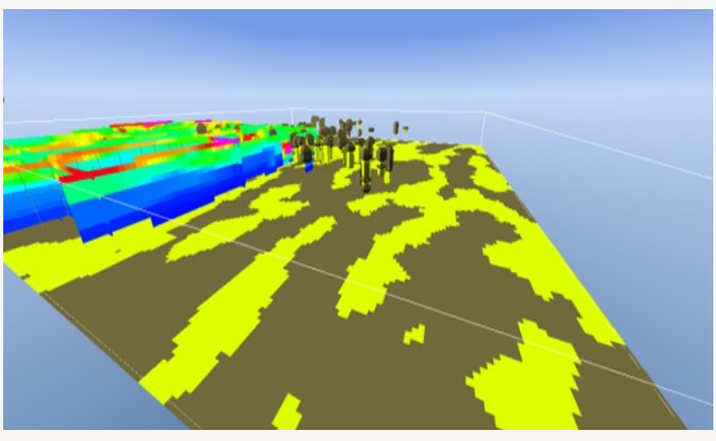
Meet some of our Research partners

Research Institutions:

- University of Copenhagen
- Aarhus University
- Geological Survey of Denmark and Greenland (GEUS)
- Stanford University
- Lund Technical University
- Swedish Geological Survey (SGU)
- United States Geological Survey (USGS)
- State Geological Survey of Nebraska
- University of Cagliari

Other R&D Partners:

- The Danish Environmental Protection Agency
- Ramboll
- Central Denmark Region
- Guideline Geo
- Municipalities in Denmark
- Aqua Geo Frameworks



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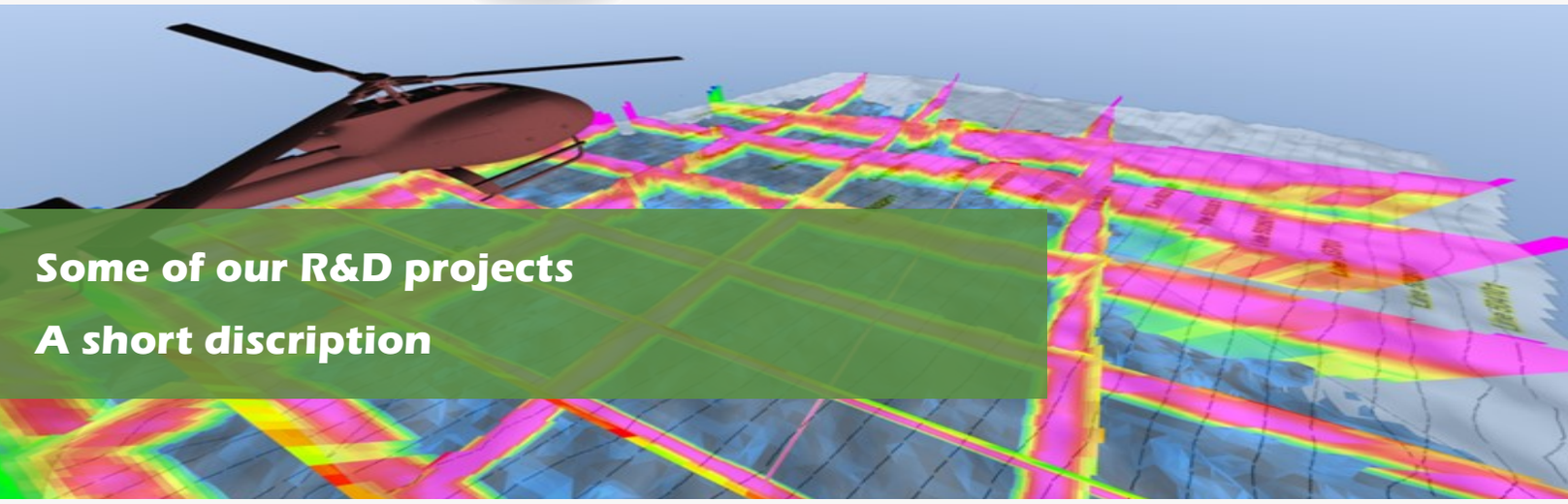


Some of our R&D projects

A short discription

GAP - Groundwater Architecture Project

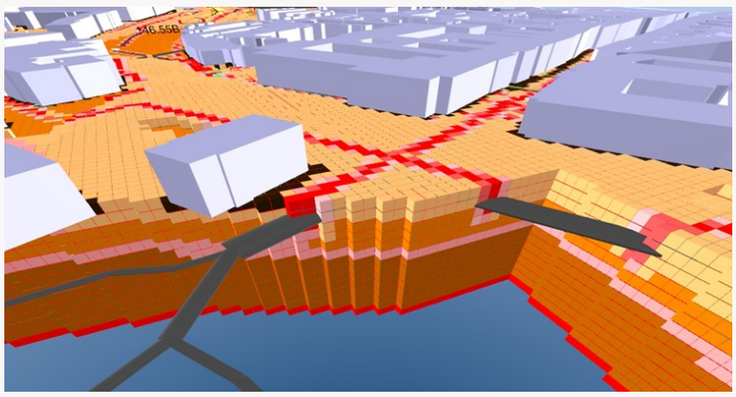
In an ambitious two-year project, Stanford University partners with leading Danish companies and three water agencies in California to develop a template for an optimal workflow that would use airborne electromagnetic (AEM) data as the foundation for the development of hydrogeologic conceptual models. This provides a key step in the implementation of the Sustainable Groundwater Management Act (SGMA) in California and will provide value to groundwater architecture mapping worldwide. The workflow includes not only the deployment of the AEM technology to acquire vast amounts of AEM data, but more importantly designing the supporting geophysical and computational infrastructure for data analysis, interpretation, and archiving. Significant advancements can be made by studying ways in which California can develop and implement a workflow and build on Danish experience.

ERGO - Effective High Resolution Geologic Modeling

The goal of this project is to develop a user-friendly expert system that can combine a vast amount of different geo-data with geologic expert knowledge. One part of the system will utilize machine learning approaches developed through the research projects enabling fast and accurate geological interpretations. The other part will be based on the development of the theory of Multiple Point Statistics (MPS) to allow correctly integration of soft (uncertain) data in the MPS simulations.

MAGIC - MApping Geology In Cities.

Based on the increasing urbanization, building activity, contamination, and drainage of climate change induced heavy precipitation, a need for knowledge about the urban subsurface in modern cities is growing fast. To obtain this knowledge, a massive amount of geotechnical data and tools to obtain, visualize and interpret on these data are required. This project attack these challenges, and aim to develop integrated tools enabling non-geoscience experts to both generate and utilize urban geologic al and geotechnical information.



GeoERA

I•GIS is part of the ambitious GeoERA project including 45 national and regional Geological Survey organizations form 32 European countries. This European geological research platform consist of 15 research projects covering the applied geosciences, addressing the four themes: Groundwater, GeoEnergy, Raw Materials, and Information Platform.

WANT TO KNOW MORE?

If you want to know more about any of our research and development projects or want to become our next research partner contact us at consultancy@geoscene3d.com. For more information visit geoscene3d.com/R-D