

GSI^{3D} Research Consortium Newsletter

Volume 2 Issue 1

September 2011

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Welcome!

Welcome to the GSI3D Research Consortium newsletter where we hope to share information and developments about the GSI3D software, exciting applications and research using GSI3D; plus news from within the user community and useful knowledge about the GSI3D Consortium team here at the British Geological Survey (BGS).

News and Information.



Steve Mathers attended the State Geologists Meeting in Dubuque, Iowa in June; he was invited to give a presentation on the BGS National Geological Model.

Photo of presenters from the 3D Modelling in Geological Surveys session (all GSI3D consortium members)

From left: Don McKay, Director Illinois State Survey, Steve Mathers BGS, Linda Jacobsen USGS, Don Keefer Illinois State Survey.

Workshop 2012

Following last years success BGS will be hosting the 2nd GSI3D Research Consortium Workshop here in Keyworth, Nottingham.

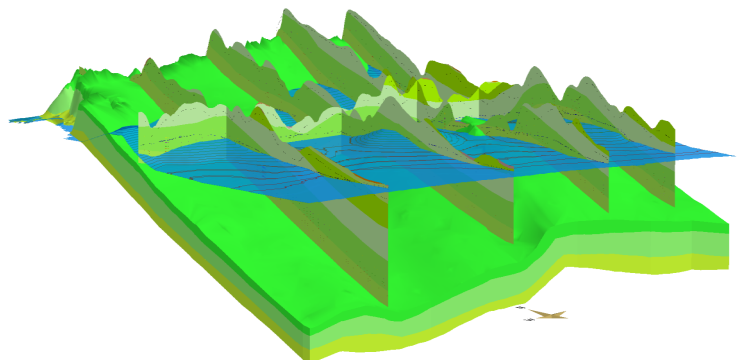
Please keep the 13th-15th March 2012 free in your diaries and more information and a programme will follow shortly.

GSI3D will be represented at the **9th Swiss Geoscience Meeting** in Zurich on November 11th 2011:

http://geoscience-meeting.scnatweb.ch/sgm2011/query_main.html?pages/swisstopo2

Registration is now open for the **Model Fusion Conference**:

<http://www.geolsoc.org.uk/gsl/groups/specialist/gig/page9939.html>



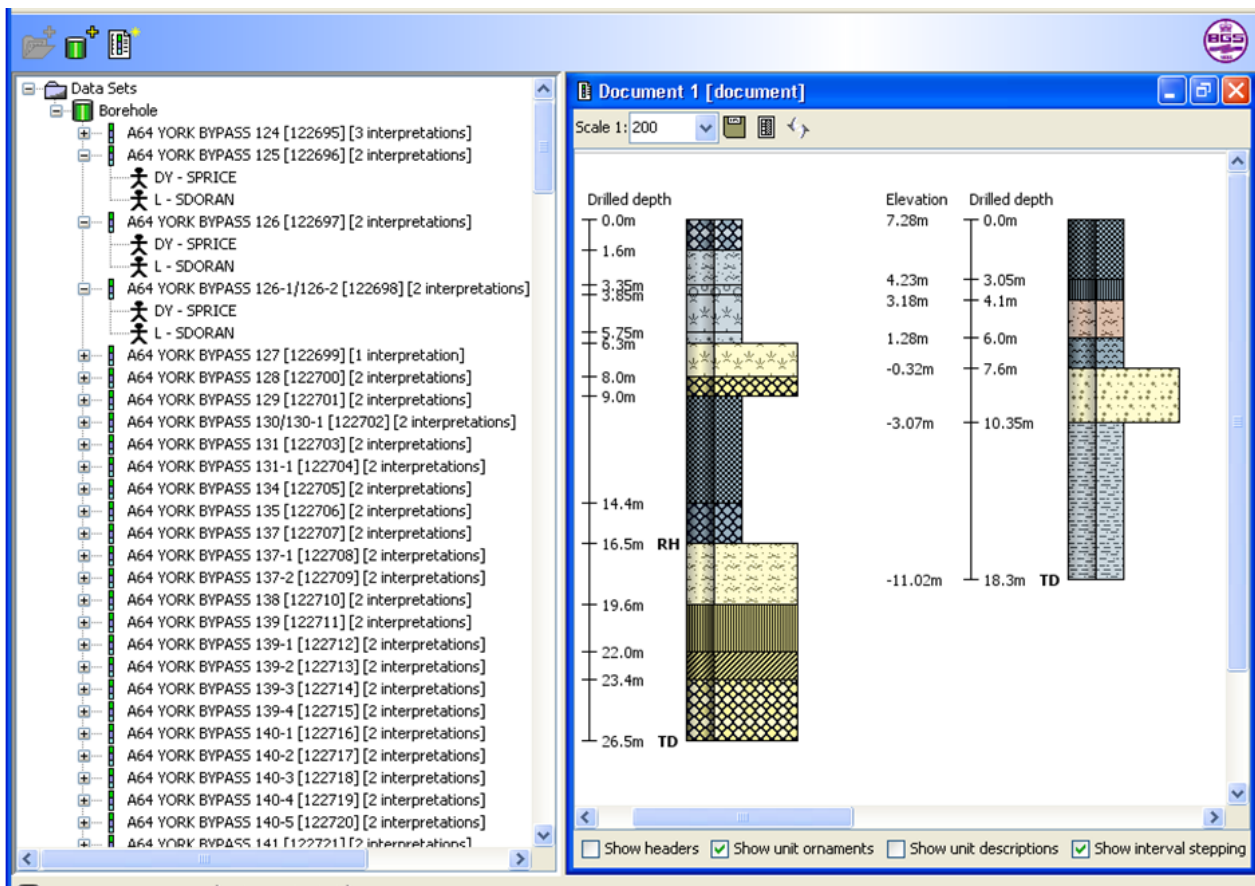
GSI3D Research Consortium
British Geological Survey
Nicker Hill
Keyworth
Nottingham
NG12 5GG
0115 936 3143

www.gsi3d.org.uk

Technical Update

Borehole tool

The borehole window of GSI3D does not permit any editing or advanced visualization of borehole data. Within BGS we have a very large national borehole database which the 3D modelling teams use to interpret boreholes ready for import into GSI3D and other packages. To aid this process we are developing a combined borehole viewer and editing tool that will be compatible with GSI3D borehole data formats. This tool can be connected directly to a database, or used against a set of data files, and allows the geologist to make borehole interpretations graphically rather than by editing a spreadsheet or text file. This is also something we could look into releasing in some form if there was some interest from the community.

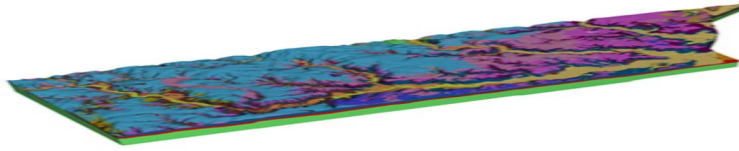


Terrain data tools

One of the most fundamental imports into a 3D geological model is some representation of the terrain for the model area such as a DTM/DEM. Because these data layers can be quite large, especially at a national scale, within BGS we have developed a special data format and also a software tool for compiling terrain models (or other grid-based data layers) into this format. We have also developed a module that is compatible with GSI3D that allows us to extract portions of these compiled terrain data files quickly and easily when starting a modelling project simply by defining a box and a desired resolution in the GSI3D map window. Terrain data is then imported directly into the workspace as a TIN layer. This significantly reduces the overhead of data preparation for 3D modelling projects. We have never released this function outside BGS because we have never released the data compilation tools necessary to create the compiled terrain files, but this is something we could look into if there was some interest from the community.



Profile
Holger Kessler
Team Leader
Geological Modelling Systems



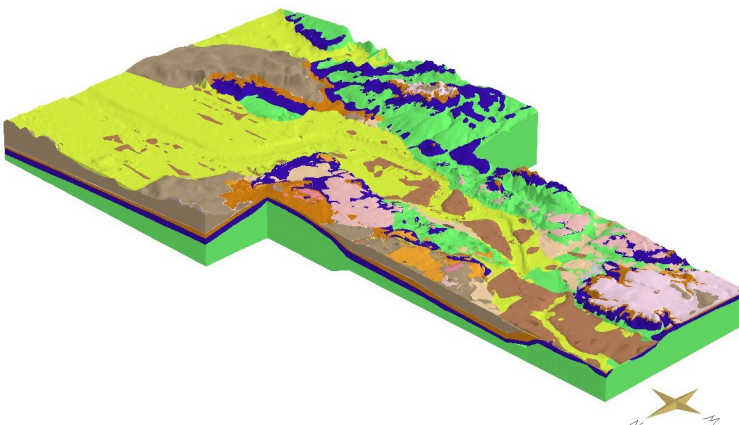
'to see the consortium grow and the method being used globally is the most rewarding element of my job '

After completing a degree in Physical Geography and Soil Science Holger joined the BGS in 1998 as a geological surveyor. He spent the first few years of his career mapping the Quaternary Geology of Norfolk and South Yorkshire. As part of a major research program into 3D geological modelling in 2000 Holger was tasked with evaluating the emerging GSI3D methodology, then in use at the Lower Saxony Geological Survey in Germany. As they say: "The rest is history". Over the following 10 years Holger led the testing and implementation of GSI3D at the BGS, leading to his appointment as Team Leader for Geological Modelling Systems in 2007. He says: "I can still remember the magic moment when Hans-Georg Sobisch showed me the first calculations of a 3D model in GSI3D in my lounge in Nottingham. The past decade has been a fascinating journey and to see the consortium grow and the method being used globally is the most rewarding element of my job."

Holger is married to Katharine, and lives in Southwell nr. Nottingham together with their children Tom and Anna. In his spare time he enjoys his garden, where he makes sure he gets his hands on some real geology.

Workbench tools

In the last newsletter we asked for your opinion on software tools for delivering 3D models to your customers. This time around we would like to tell you about some other developments going on within the British Geological Survey. Besides the core modelling tool GSI3D, within BGS we are also developing a suite of workbench tools that aid in the process of building 3D geological models, and we would like to get a feel for whether these are useful to you or your organization so that we can assess the feasibility or release these additional tools to the Consortium. Please let us know if you have an opinion on any of these tools.



The GSI3D Research Consortium website can be found at www.gsi3d.org.uk and for any enquiries please contact our Enquiries team on enquiries@bgs.ac.uk.

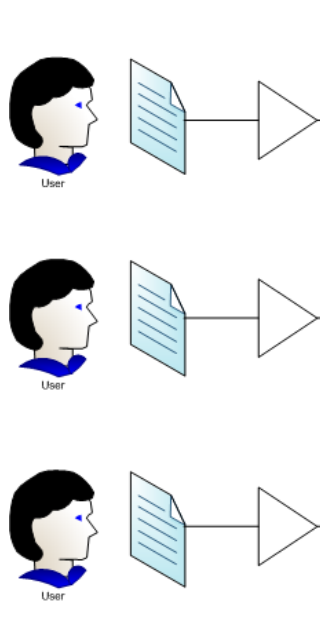
If you would like to contribute to our Newsletter, or have any comments please contact the Consortium Manager eward@bgs.ac.uk.

How do we manage your feedback?

The development of GSI3D is carried out in-house within the British Geological Survey. Whenever someone reports a bug in the software or suggests a new or changed piece of functionality we log this using professional issue tracking software so that we do not lose any feedback from Consortium members or users within BGS itself.

When we have remedied bugs or implemented new functions we are able to easily flag these as fixed in our issues database. We used this approach extensively when preparing the release of GSI3D v2011.

If you ever find a problem with using GSI3D, wish some function worked a little differently, or have an idea for something new, please do not hesitate to get in touch. Licensed users can do this via Help > Contact Helpdesk, but anyone can also contact us via enquiries@bgs.ac.uk.



| | | | |
|---------|------------------|------------|--|
| minor | new | 2011-09-27 | 3D delete all objects doesn't work on multiple "3dmaps" |
| feature | new | 2011-09-26 | Enable the setting of contours at specified absolute values |
| feature | new | 2011-09-26 | Enable export of contours |
| minor | new | 2011-09-26 | editing TIN boundary |
| tweak | new | 2011-09-26 | Texture image browse option in unit dialog is irrelevant |
| feature | new | 2011-09-23 | enable send map to 3D window without need for a GRID |
| major | new | 2011-09-22 | Project boreholes into section does not work and causes strange behaviour |
| minor | new | 2011-09-22 | Import of sections from another GSIPR does not register any rasters |
| feature | new | 2011-09-12 | Labelling surfaces in the section window |
| feature | new | 2011-09-12 | Editing a raster image location in the section window |
| feature | new | 2011-09-07 | Highlight selected section in 3D window |
| minor | new | 2011-09-07 | Send visible objects to 3D doesn't work correctly in section window folder |
| feature | new | 2011-08-18 | Control points in geological units |
| feature | new | 2011-08-18 | Ability to retain imported TIN data in geological units |
| feature | resolved (bwood) | 2011-08-16 | Open new project without exiting program |
| feature | resolved (bwood) | 2011-08-16 | Search for a specific borehole |
| feature | resolved (bwood) | 2011-08-16 | dpi: resolution of 3D Window export |
| feature | new | 2011-08-16 | Enable snapping of correlation lines to crossing sections where there is a hierarchical relationship |
| feature | new | 2011-08-16 | Multiscaled GVS |
| feature | new | 2011-08-16 | Improved tools for compiling multiscaled model capping surfaces |
| feature | new | 2011-08-16 | Improved tools for dissecting and merging cross-sections |
| feature | new | 2011-08-09 | Topology check |
| feature | new | 2011-08-09 | Export of legend item |
| feature | new | 2011-08-09 | Zoom to a geological unit |
| feature | new | 2011-08-09 | Select shapefile in Map Window |

The GSI3D Team



Holger Kessler
Team Leader
Geological Modelling Systems



Ricky Terrington
GSI3D Helpdesk Manager



Steve Mathers
Team Leader
National Framework Model



Emma Ward
GSI3D Research Consortium Manager



Rob Smith
IPR and Licensing
Manager



Ben Wood
GSI3D Lead Software Developer