Enhancing USGS science and integration through multidimensional modeling and visualization

Vision: USGS is a world leader in multidimensional analysis, modeling, integration, and visualization of earth resources.

Purpose: To provide a forum for folks across USGS, and with external colleagues, to share information on 3D/4D modeling, visualization, research, and integration efforts. To help the bureau stay abreast of and become a leader known for expertise in rapidly evolving multidimensional technologies. To enable the sharing of expensive software licenses.

Goals of the forum are to:

- Work toward interoperability of models (e.g., discover how robust geologic framework data can be better incorporated into water models such as MODFLOW).
- Investigate how 3D is used as a scientific tool and identify what we are not taking advantage of; to explore how we can stay with or even ahead of technological advances efficiently.
- Integrate complex “big data” through the use of powerful multidimensional tools.
- Create a “testbed” process in which small groups evaluate emerging technologies and share their conclusions and recommendations.
- Improve USGS utilization of 3D visualization for communication and outreach.
- Realize cost savings: modeling and visualization software is EXPENSIVE. USGS is not taking full advantage of its huge buying and leveraging power for bulk purchases and license sharing.
- Collect knowledge and experience on popular and new software choices and their utility/usability. Forum members can contribute to a software/hardware “Field Guide” (think database) that will show key features and applications.
- Foster the building of shared visualization spaces, such as immersion rooms.
- Provide a shared storage space for (1) presentations (Webinars, Powerpoint) on the latest advances in 3D/4D and on current USGS work, (2) publications, (3) Working Group project results, and more.

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Events

⭐ New: 3D Geological Model for Great Britain
⭐ GSISD 12/10/12 Webinar Recording and Referenced Materials: here.

UPCOMING WEBINARS: (1) EONFUSION AND SAGE GROUSE. (2) GEOVISIONARY VISUALIZATION AND DATA INTEGRATION SOFTWARE.

CALL FOR ABSTRACTS: 2013 EUROPEAN GEOSCIENCES UNION SESSION ENTITLED “MAPS TO MODELS – ADVANCES IN 3D/4D GEOSCIENCE INTERPRETATION TECHNIQUES AND METHODOLOGIES.” APRIL 7-12, 2013 VIENNA AUSTRIA

CALL FOR ABSTRACTS: 2013 GSA ANNUAL IN DENVER: 3D GEOLOGIC MAPPING WORKSHOP, ORAL SESSION, POSTER SESSION. OCTOBER 27-30, 2013 DENVER

Become a Member
**Membership and audience:** USGS scientists, IT and GIS professionals, communicators, managers interested in advancing integrated science through multidimensional modeling and visualization. Access for colleagues external to USGS will be granted to selected areas of this wiki and requires a USGS sponsor.

If you wish to join the group, please email Daniella Birch (dbirch@usgs.gov), who will provide you with the Access Code to join. Enter the code in the form below and click the submit button. If you have not joined any of the CDI working groups, then you will not see the "Edit" button at the top of the page (and will not be able to edit the pages).

After you have joined, please add your name and other information to the [Working Group Member Roster](#).

### Suggestions

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