IMPROVING ACCESS TO GEOSCIENCE INFORMATION -- THE REDESIGNED NATIONAL GEOLOGIC MAP DATABASE

The USGS and the Association of American State Geologists (AASG) are mandated by Congress to provide a National Geologic Map Database (NGMDB, http://ngmdb.usgs.gov/) of standardized, spatial geoscience information. During the 18 years of its existence, the NGMDB project has provided access to maps, reports, and stratigraphic nomenclature, and has been intensively involved in U.S. and international standards development. From the public Web site, we serve various user communities (e.g., professional geologists, decision makers, homeowners) who need to find geologic maps and geoscience reports, and get answers to their questions. On average, each month we serve 40,000 users, who visit the site 140,000 times and view about 8 million pages.

Online resources provided by, or linked from, the NGMDB include:
1) Cartographic, database design, science terminology, and data-exchange standards,
2) The U.S. Geologic Names Lexicon (GEOLEX), a standard reference for the Nation's stratigraphic nomenclature,
3) The Geoscience Map Catalog (containing citations and links to >96,000 maps, stratigraphic charts, and reports by >630 publishers, many containing GIS data and map images, and
4) Proceedings from the eighteen annual Digital Mapping Techniques workshops, which document map-preparation techniques and standards in use or in development by the Nation's geological surveys.

In recent years, a major redesign of the NGMDB's database and Web site was undertaken. The first phase, released in late 2012, focused on upgrades to the Map Catalog. The second phase, released in mid-2014, addressed updates to the U.S. Geologic Names Lexicon (Geolex) and the various NGMDB informational pages. Two new features were added to the redesigned site: (1) "mapView", which provides a mosaicked view of geologic maps as a new front-end to the NGMDB's Map Catalog, and (2) topoView, which enables users to quickly search and browse the USGS Historical Topographic Map Collection. We are now working on additional upgrades to the system, including porting mapView and topoView from Flash to JavaScript, to enable their use on mobile devices.

For further information, please visit the Web site (http://ngmdb.usgs.gov/) or contact the project chief (David R. Soller, U.S. Geological Survey, drsoller@usgs.gov).

The NGMDB Web site gives you access to the full suite of products and services available.
The mapView interface uses Esri's ImageServer to show thousands of the more recent geologic maps of the Nation. In this view, we've zoomed in, centered on Colorado, and selected a map to download – by clicking on the gray popup box, the Product Page for this map becomes available, where you can then view and obtain the map and any other sheets and text in the publication.
Three-dimensional maps, then and now – To the left, a structure contour map from the 1897 Geologic Folio of the Pueblo, CO, quadrangle (http://ngmdb.usgs.gov/Prodesc/proddesc_2445.htm); to the right, a view of the 1972 map of the Golden, CO, quadrangle, in Google Earth (http://ngmdb.usgs.gov/Prodesc/proddesc_9511.htm).