

Google-based Fossil Tool Proposal

The Creation Research Society, including its iDINO project, made a significant impact at the Seventh International Conference on Creationism. Thank you for the hard work from Mark Armitage, other CRS board members, and Kevin Anderson and Diane Anderson. The conference also provided a networking opportunity to share my vision of developing an Internet tool to educate the public and to help creationists discover new evidence that undermines old-earth claims.

Dr. Mark Horstemeyer, one of the ICC hosts and founder of the Association of Christian Graduate Researchers, expressed interest in seeing this tool developed. Dr. Horstemeyer wrote that he was "very impresse" (Horstemeyer, 2013, personal communication), and he encouraged me to present this idea to the CRS as a letter to the *Quarterly* as perhaps the next best step toward generating comment and gauging interest.

The CRS webmaster, Fred Williams, is my c-host at Real Science Radio. We have discussed using Google Maps and Google Earth to create presentations of the young-earth evidence in fossils and formations. What is the extent, in length and breadth, of some particular layers of strata that contain young-earth fossils or features (such as polystrates, a flat gap, or a highly purified deposition)? Being able to show how far and wide such strata extend can help drive home the strength of such evidence.

Examples: A polystrate tree is a great teaching tool, but the lesson gets more powerful when we can show the extent of the strata that embed that single fossil across a geographic region. In Wisconsin, a fossilized school of jellyfish (e.g., rsr.org/list#jellyfish) taken as a unit forms a polystrate fossil. Realizing that this school of jellyfish was buried as a unit can compress the possible period of deposition of the strata that encases it from a million years down to minutes. Nautiloids, entirely missing "era" from Grand Canyon layers, and many other examples, also dramatically compress the alleged supe slow deposition rates.

Working Name: GEE, for Genesis Earth Explorer, is a play on the Greek word for Earth, g (transliterated *ge*, as in geology, thougs pronounced *gha*.).

Structure: GEE would consist of a database populated with fossil and formation data. This information could be explored by manipulating the mapping interface, or it could be accessed by topic with the results mapped visually onto a Google-supported display. The database includes two classes of information:

1) data elements

2) geologic infrastructure.

The data elements are fossils and primarily no-strata features. The geologic infrastructure, for the most part, is the environmental framework (transcontinental rock layers, region wide coal seams, etc.) within which the data elements may be found. Over time that infrastructure could be updated to include the greater context of the entire continental and oceanic crust, the trenches, and eventually deeper geologic features, including the Mohorovicic discontinuity, the mantel, and the inner and outer core. (This proposed web-based tool of course could be simplified, and this preliminary description presents only one possible way of structuring the data.)

Data Elements: GEE would be populated with data elements like fossils, pseudotachylytes (PSTs), etc., with optional data fields for each element. These data elements will not include conceptual or theoretical possibilitie, but empirically documented, observable terrestrial features, preferably already described in the literature. Additionally, a settings switch could activate a feature that also presents interpretive comments. GEE will display its data elements over a map in what Google refers to as an Info Window (see below). Data element fields could include:

- a brief description
- photos/video
- latitude/longitude
- depth/elevation
- notes
- reference links to journal papers, creation articles, etc.
- interpretive comments
- identification of its depositional environment, e.g., Morrison, Dakota, Redwall.

For this last field, if a data element is encased within, or forms, part of a strata layer already defined in the database, then filling in this field could be done by a simple cross-link to the relevant portion of GE's geologic infrastructure (see below).

Data Entry: The developer or development team, including perhaps select volunteers, would do the initial data entry. After launch, authorized users comprised of creation scientists and perhaps enthusiasts could perform data entry with GE"s manager having editorial veto.

Geological Infrastructure: Google provides the framework and the baseline user interface. GEE will overlay crustal features like major sedimentary strata and overthrusts, along with those data elements just described, onto Google Maps, Google Earth, or both (see below). In the initial launch, the database likely would include only a small percentage of the Eart"s geologic infrastructure, possibly describing features of the greatest magnitude, such as those that extend over large regional, continental, and intercontinental areas. The initial version also should include showcase examples (classic polystrates, flat boundaries, mixture of marine and land fossils, missing alleged eras, etc.) visually demonstrating, as researched from the literature, the extent of their encasing strata.

Infrastructure Use: The end user may specifically select and view this infrastructure, including all or any of its constituent layers and features. Fossils and other data elements will populate various locations on this infrastructure. Infrastructure layer(s) can be toggled on or off. Toggled on while viewing a data element, the user will see the extent of the time compression implied by a given polystrate fossil, "missin" stratum, nautiloid mass kill (rememberthenautiloids. com), etc. That extent (shown in the initial launch version in only two dimensions) could be referred to as the domain, or the sphere of influence (or even the *jurisdiction*), of any particular data element. For example, by the testimony of the Wisconsin jellyfish, for all the layers containing that polystrate school of fossils, for their entire extent, their total time of deposition is compressed from one million years down to the duration of a single, swift depositional event. Also, authorized users whose accounts enable them to enter data elements (fossils, ancient "reefs," 14c-rich coal seam, etc.) could be permitted to enter infrastructure details such as smaller regional and local flows, sedimentary layers, etc.

Query, Menu, and Map Interface: The end user could enter a search term to find information, navigate via the map interface, or use a menu system. Examples of search terms include: petrified trees / nautiloids / Joggins. Menus would offer view: by region, such a: Grand Canyon / Hell Creek Formation / Himalayan Plateau; by fossil, such as jellyfish, dinosaur soft tissue; by "era," "period," or "epoc;" and by formation or megasequence.

Google APIs: This application could be developed for Google Maps, Google Earth, or both. In 2013 Google released a new version of Google Maps that partially integrates Google Earth. Our Real Science Radio webmaster

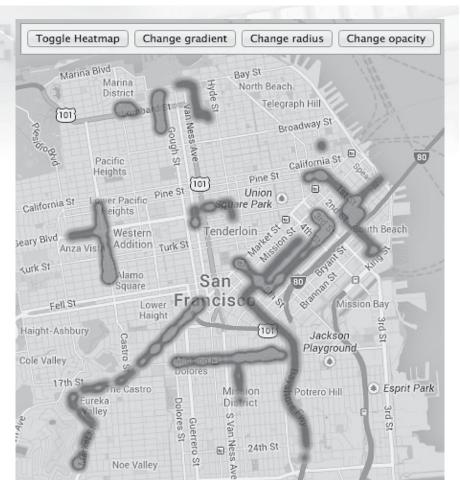


Figure 1. Sample customized map using the Google Maps API (application programming interface)

(rsr.org), Nathan Rambeck, positively reviewed this proposal. (Separately, Mr. Rambeck has just finished the functional design for a mapping application using Google Maps for mass transit projects that includes images, video, links, etc., for each database element, to allow the creation of custom maps to show aspects of a transportation project over a geographical area.) Interested programmers may view the Google Maps develope"s guide, demo gallery, and APIs (application programming interfaces, at tiny.cc/ API). See there the JavaScript to Add an Overlay, for Info Windows, Show/ Hide Overlays, Custom Controls, Layers, Heatmaps, Panoramio, MapTypes, Image Overlay, and Street View Service.

Googl's tutorials, such as "Annotate Google Eart" (at tiny.cc/AnnoGE), specifically invite no-profit groups (like CRS or Dr. Horstemeye's ACGR), to create custom map presentations and (at tiny.cc/NarrGET, to create "Narrated Google Earth Tours."

Interlaced Strata: GEE could increase both the awareness of timeconstraining artefacts in the geologic colum, and their persuasive impact. As an analogy, consider that biblical genealogies argue against insertion of thousands of years, especially where a progenitor interacts with a descendant, including, for example, by the naming of that descendant. GEE could lead to discovery of currently unknown examples of interlaced, time-compressed strata. A data element such as a polystrate fossil constrains the deposition time for a discrete series, or unit, of layers. That series may interlace strongly, or even only at its periphery, with an adjacent series of layers. Such interlacing suggests a constraint also for the period of deposition for those neighboring strata. That compression of neighboring strata

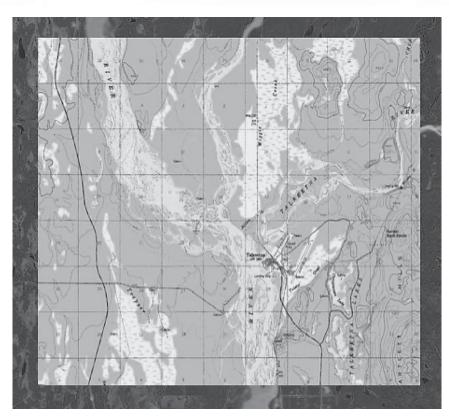


Figure 2. USGS map as a sample "Custom overlay"

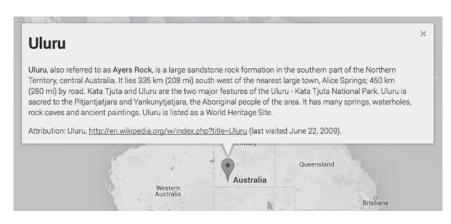


Figure 3. A customizable "Info window" on Google Map

also might continue to further neighbors. GEE also could help identify examples of especially powerful time constraints where multiple data elements have overlapping spheres of influence.

Promotion: Google has long enabled special-interest groups to create customized tours. GE's authorized user accounts, whether of creation scientists, authors, organizations, or select enthusiasts, could enable them to create their own customized tours through the data, highlighting elements and infrastructure of particular interest to their work. Such tours could promote or supplement creationist DVDs, books, models, museums, theories, etc. While various creation and flood models aggressively compete for support, as long as the standard for entering the geological infrastructure and data elements is based on empirical observation and documentation, this web tool might receive broad support and provide benefit throughout the creation movement.

Ownership: At Real Science Radio, we have allocated our own resources elsewhere. Thus, regarding this tool, we merely advocate for its development. We make no claim to any ownership whatsoever. If ever developed, whether by Dr. Horstemeye"s ACGR or any of the creation groups (CMI, AIG, ICR, CRS), the team that develops this resource should maintain control over it, enabling its use for the benefit of all young-earth creationists. GEE might display links to the leading creation ministries as Fred Williams and I currently do on every page of youngearth.com. If interest, and most importantly, financial support, were generated for this project, then at Real Science Radio, we would commit ourselves to participate, if that would be helpful, perhaps by reviewing the functional specification, with data entry, and in promotion.

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