



SedDB and PaleoStrat - Integrating sedimentary geologic data across the waterline

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Data are the foundation of Geoinformatics. Without data, Geoinformatics does not exist. While much attention is being paid to the upcoming deluge of data from sensors and sensor arrays, one of the less spoken challenges is capturing data that serves the backbone of the Earth sciences - the fundamental geological data of igneous, metamorphic and sedimentary geology, paleontology/paleobiology, geochemistry and geochronology. SedDB (www.seddb.org) and PaleoStrat (www.paleostrat.org) are Geoinformatics projects developing information systems for sedimentary geologic data with the goal to further the application of these data in research and education, and supply the data engines for cyberinfrastructure projects such as CHRONOS and GEON that focus on the integration, discovery, and analysis of diverse and disparate data sets.

SedDB is a newly funded NSF project that will compile and serve online an integrated global data set for marine sediment geochemistry, modeled closely after the successful online information system for ocean floor igneous rock geochemistry, PetDB (www.petdb.org). The system will provide easy and fast desktop access to the complete range of chemical parameters analyzed on sediments and sedimentary rocks, to maximize the application of these data to a wide range of research topics, from paleoclimate reconstruction to fluxes between the Earth's crust and mantle, and will facilitate integration of geochemical data with other data types to promote cross-disciplinary approaches in research and education. PaleoStrat is an emerging database system that provides an integrated suite of sedimentary, paleontologic, paleobiologic, stratigraphic, geochemical, geochronologic, and related data. PaleoStrat strives to pro-

vide the researcher an environment that can capture the complete sedimentary geologic context of their research endeavor. Both systems are compiling legacy data, but also are working with the community to build tools and offer user support necessary to facilitate data input by users.

The two projects are joining forces to provide the user community with an integrated master database that combines marine and terrestrial data for sedimentology. Working with CHRONOS, GEON, EarthChem, ODP/IODP data management including the Janus database, and others, the initial focus of this alliance is on sedimentary geochemistry.