Geophysical Research Abstracts, Vol. 9, 10774, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-10774

Images of geologic structures served by a relational digital image database (DIoGeneS)

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The image database DIoGeneS (Digital Images of Geologic & nice Structures) provides an open web based portal that allows finding and viewing images of geological structures. Initiated as an online reference collection for studies done at the Geological Institute, ETH Zurich, it has grown to a database with the following aims: 1) to simplify structural identification, 2) to serve the international geologists community as an interactive archive and 3) to provide relevant information on individual structures. The strength of this database, compared to search engines, is that the images contain various geological attributes and consequently they are easy to find based on geological classifications. The main attributes are scale, genesis (natural or experimental structure), timing (primary or secondary structure), rock type, structure and overprinted structure. Additional attributes are shape, orientation, feature characteristics, interpretation of structure and lithology. All these attributes can be searched with their specific keywords (e.g.: Boudin, Fabric, Fault Fold, Foliation, Joint, Layering, Lineation, Mylonite, Shearzone, Striae, Unconformity Ĕ in the attribute structure). The resulting list, including previews, is sorted by user selected attributes. By choosing one dataset, a full resolution image is provided along with all attributes, detailed description of the structure, illustrations and information about image owner (photographer). Datasets can be alternatively searched by geological area and by free text search. The location of the images is shown in a map/satellite view. In addition, all images are available as a Google Earth overlay categorized by the main categories. The attributes are explained with corresponding detailed geological information to facilitate the use as an online reference for geological structures. The image copyright stays with the image owner (photographer). Contributions to the database are accepted from the entire in

the geologist community and can be done by electronic submission to the editorial board, ensuring the quality of images/structures. DIoGeneS (www.diogenes.ethz.ch) provides a practical and open way of identification of geological structures for students and it is an interactive archive with relevant information on individual structures for the international geologist community.