

Geological Annotation for the Deep-Sea Images

IREI, Kazuhiro^{1*} ; OGIDO, Moritaka¹ ; KAYO, Makino¹ ; NAKAMURA, Makoto¹ ; TANAKA, Katsuhiko² ; KITAYAMA, Tomoaki² ; SAITO, Hideaki² ; HANAFUSA, Yasunori²

¹Marine Works Japan LTD., ²JAMSTEC

The Global Oceanographic Data Center (GODAC) of the Japan Agency for Marine-Earth Science and Technology (JAMSTEC) has been collecting, archiving and disseminating videos and photos acquired by deep-sea research programs using submersibles and remotely operated vehicles owned by JAMSTEC. We register those videos and photos to our database with annotations (keywords), which are names of geological features or organisms, and enable users to search for images of their interest. Those videos and photos with annotations are distributed from the data site called, " JAMSTEC E-library of Deep-sea Images (J-EDI)*1 " on the Internet.

Researchers of deep-sea can use the videos and photos distributed by J-EDI as materials for their research or lecture, and also for planning of research cruises or dives, etc. Through the database for marine biodiversity, " Biological Information System for Marine Life (BISMaL)*2 " , biological annotations are used to visualize the distribution of organisms or to accumulate the observation record of them, since those videos and photos of deep-sea organisms are not only valuable data, but also indicate the proof of existence of organisms at those points.

We put annotations which can be recognized from the images itself by clicking icons from the prefixed palette or selecting classification name from hierarchical tree. The videos and photos with annotations concerning to the ocean floor geoscience are 41,000 with 95 different kinds of terms out of approximately total 120,000 videos.

To promote the use of deep-sea videos and photos especially in the solid earth science we tried to register more detailed annotations by using scientific papers, reports or documents about research dives and we found that registration of precise annotations takes considerable time. In order to progress the annotating work efficiently we think it necessary to select contents of annotations that lead to an efficient expansion of its use.

In this presentation, we introduce the current status of annotating work for the geological features of the deep-sea and we also show our approach to expand its use.

*1 <http://www.godac.jamstec.go.jp/jedi/>

*2 <http://www.godac.jamstec.go.jp/bismal/>

Keywords: deep-sea video and photo, geological environments, annotation