

MBARI Media Management – Tools for Turning Video into Data

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The Monterey Bay Aquarium Research Institute's (MBARI) Video Annotation and Reference System (VARS) has been used for annotating deep-sea video and images since 2004. The central tenants of VARS--using a controlled vocabulary and a centralized archive of annotations--have proven extremely effective for extracting quantitative and qualitative information from images and video. The VARS observation database has contributed to over 400 peer-reviewed publications. MBARI recently transitioned from videotape recordings to file-based formats. As part of this transition, MBARI has developed a toolkit of microservices for building video and image annotation applications. Each microservice communicates using standard web protocols and is relatively small and independently deployable. The design of the toolkit allows for the evolution and replacement of individual services over time as technologies and science requirements evolve and gives researchers tremendous flexibility in developing custom annotation applications. MBARI has created a suite of VARS applications on top of these services. These applications and microservices are open-source and available to external researchers for managing video assets and developing new, custom video analysis applications.

