



otto
software



Tablet Experiment Enables Local Groups to Monitor Ecosystems

John Burns, a PhD candidate at the Hawaii Institute of Marine Biology, and part of UH's School of Ocean and Earth Sciences and Technology, wanted to leverage new technology to provide innovative tablet data capture software to further the study and conservation of coral reef ecosystems in Hawaii. "I've been working on the Big Island of Hawai'i for several years now doing coral research," Burns said. "We've done a lot of outreach activities with different community groups because they want to know how they can monitor the ecosystems on their own."

Monitoring tools can be expensive and difficult to customize. What's more, communities often lack the ability to easily aggregate data and store the observations, photos, and data that individuals collect on their own.

Burns' idea was to distribute waterproof electronic tablets using otto-software to support community-based monitoring and conservation of coral reef ecosystems in Hawai'i. To tackle this challenge, Burns proposes to equip four groups on the Big Island—three on the Kona side and one in Hilo—with five waterproof electronic tablets each connected to otto. The community groups that Burns is targeting primarily serve Native Hawaiians. Many of his potential users rely on the sea for food and to support local jobs.

The tablets run on otto-software which allows users to build and distribute customized data forms to community members that are automatically synced to a secure online database. The ease of using otto is that there is no software to install. All users need is a URL and a login.



With otto's add-on modules, the tool supports automated data summaries, trend mapping, and graphic displays. Burns stated, "Many conservation groups are funding community-led monitoring efforts to track the abundance of 'opihi' at different sites. They are very interested in using the tablets as it eliminates the need for using waterproof paper, and streamlines the process of data collection to archival."



Today's tablet technology provides a unique opportunity for an all-in-one monitoring device, ready to empower users even with minimal formal scientific education, Burns says. A single tablet with otto-software can replace a whole suite of complicated underwater sampling tools, including recording slates, cameras, and data sheets.

Use of the otto product provides this Hawai'i project a revolutionary solution to field data collection in their underwater environment. It supports crowd source data capture, as well as integration of the data into 3rd party databases for the community groups. The user is able to upload photos and survey data into the otto graphical navigation system, saving time and resources.

The value of otto is that it allows program managers to quickly collect and easily aggregate collected data seamlessly from community members without using paper. Researchers can then analyze the stored observations, photos, and GPS and time stamped data collected by the community for further analysis. With otto, field observations can be quickly collected and instantly uploaded to provide researchers the information they need to get their job's done. That's your research on otto!

