Trainees at the Pacific International Training Desk (PITD) at the University of Hawaii at Manoa from Fiji and Kiribati Meteorological Services learn to operate chatty beetle.

Contact Information

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History

The concept for the Chatty Beetle came from discussions the Radio and Internet for Communication of Hydro- Meteorological and Climate Related Information (RANET) Pacific Communications Steering Committee had with Pacific Islands Disaster Managers that they did not have a way to wake up residents in remote islands in the middle of the night that a tsunami was approaching them. The RANET Team developed a ruggedized platform using Iridium Short Burst technology for the harsh, humid conditions in remote Pacific islands where HF are turned off at night to conserve power, and satellite dishes and large antennas are stored to prevent damage from the impacts of tropical cyclones.   This has resulted in improved services and timely receipt of weather and climate forecasts and warnings.

The Vision of the Chatty Beetle came from the Pacific community as a whole, but it was championed by Bruce Best (University of Guam), Colin Schulz, and Garry Clarke. A special thanks to Bryan Hodge from the Australian Bureau of Meteorological for critical technical and engineering advice. Additional thanks are owed to the US NOAA National Weather Service Pacific Region Headquarters and Ed Young (formerly Deputy Director of PRH) for guidance and leadership. Appreciation to the USAID Office of US Foreign Disaster Assistance (OFDA) for its support to develop and pilot the Chatty Beetle.

Our fondest appreciation to the late Kelly Sponberg, a friend to the Pacific, who dedicated his life to helping others and leaving the world a better place through everything he did.

CHATTY BEETLE

Radio and Internet for Communication of Hydro-Meteorological and Climate Related Information (RANET)

Chatty Beetle Terminal. A terminal is the orange box unit. It sends and received short text messages via Iridium Short Burst Data (SDB) service. Control terminals are identical to field / normal terminals, except that control terminals are given special permissions to send alerts and other functions.

What is it?

Chatty Beetle is a text-based alert and messaging device designed to provide weather alerts to remote locations where communication options are limited via Iridium Short Burst Data (SBD).

It serves as a "heads up" alert device to give communities basic alerts of potential hazards.

Also, it supports two-way messaging, allowing operators to provide status reports and other field observations.
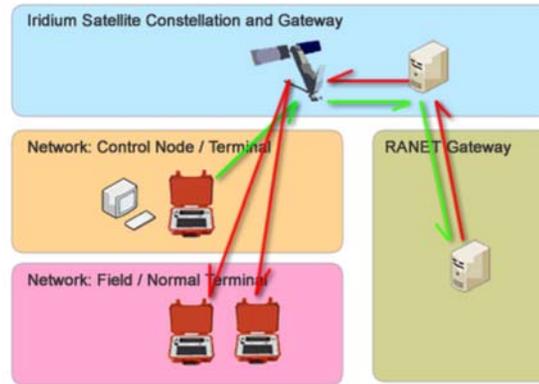
How does it work?

Fig. 1 Message Path When a Control Terminal Sends an Alert Message to a Field Terminal

Messages are sent and received from each terminal through the Iridium Satellite. The RANET gateway reads the message, interprets its routing info and any special commands (e.g. alert level), then sends it back to intended terminal.

Basic Functionality
- Hardened terminal designed to work in harsh environmental conditions

- Can operate in both stationed and mobile applications.

- Two-way messaging to remote locations.

- Audible and visual cues for alarms on terminal.

- Can operate on battery for 36hours+.

- Able to control external devices (e.g. sirens) through relay and serial port functionality.

- Capable of sending messages from terminal or web interface to email, or IM account, or as SMS.

- Capable of sending text messages to cellular phone.

Where are they deployed in the Pacific?

Fig. 2 Maptack.org tracks all the terminals deployed globally.

Over 100 Chatty Beetle terminals have been deployed throughout the Pacific Region in countries including: American Samoa, Australia, and Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Guam, Kiribati, New Zealand, and Republic of the Marshall Islands, Republic of Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. The complete list of countries can be found at:
http://maptack.org/