DBCP Iridium Pilot Project meeting

17th of October 2007

Jeju, South Korea.

Background

The Pilot Project will seek to evaluate the feasibility of Iridium technology for real-time telecommunication of drifter data under various conditions. It will form a pilot study for technology evaluation and assessment of satellite communication options with Iridium
See also:

- DBCP23 Document 8-4-1 for background and project status.
- http://www.jcommops.org/dbcp/iridium-pp/

At the time of the meeting seven buoys had been deployed with Iridium Satellite communications and five of those were still active. Most manufacturers were developing prototypes buoys.

Attendees

David Meldrum, Chair of DBCP
Jean Rolland, Météo France
Hester Viola, JCOMMOPS
Yvonne Cook, Environment Canada
Shaun Dolk, AOML
Mayra Pazos, AOML
Julie Fletcher, UZ Met Service
Graeme Ball, Australian Bureau of Met
Michael Andreas Purwoadi, Indonesia
Ignatius Rigor, Uni of Washington

Manufacturers and Communications providers

Mark Blaseckie, AXYS Technologies
Emily Macpherson, Metocean
Jeff Wingenroth, Technocean
Bill Woodward, CLS America
Christian Ortega, CLS Argos
Michel Guigue, CLS Argos
Seema Owen, CLS America

Meeting Report

- The DBCP chair demonstrated the use of the Short Burst Data communications using iridium to send a simple message to and from an iridium modem in the meeting room.

- The deployments made so far were discussed, and a summary of the buoys deployed was presented. At that time 5 buoys were transmitting successfully.

- The Chair then explained the process that project participants should go through to make use of the **Iridium Upgrade scheme**. Under this scheme project participants have the opportunity to upgrade drifters to Iridium Satellite communications for a small additional cost ($500 of which will be financed by the project).

- Metocean confirmed that it would continue to provide low cost communications for the duration of the project as negotiated.

- CLS Argos committed to providing the same offering for the duration of the project, once its Argos 3b system was in place (projected to be by March 2008)

- Data Formats: Buoys should communicate using one of the supported transmission formats (currently at version 3.2). Météo France explained that this format is very lean and is sufficient for the moment. The group decided that it should have a review of the usefulness of the data format in January 2008. Data from the buoys are to be sent to both of the following email addresses

    - cmm-vos@shom.fr (to facilitate the GTS transmission, via Météo France)
    - dbcpiridium@gmail.com (to allow all pilot project participants to view SBD messages)

- Météo France reported that its system for GTS dissemination was working well. It planned to make some improvements to the operational level of the system, though this was not a direct requirement of the Pilot Project, as it is not anticipated that Météo France would need to provide the long term solution for GTS dissemination of Iridium Buoy Data.

- CLS reported that is also able to provide a full end-to-end solution to insert data onto the GTS, after March 2008 for all buoys participating in the Pilot Project and as mentioned will offer reduced priced satellite communications for the duration of the project.

- It was confirmed that the pilot project will be considered to have begun in July 2007 and will continue until end of June 2009.

- The DBCP Technical Coordinator stressed the importance of notification of buoy deployments – the following metadata elements are required (preferably in an Excel Spreadsheet). For everyone deploying Iridium buoys as part of the project, they need to notify each deployment (or batch of buoys deployed) on **iridium-pp@jcommops.org** - giving at least the following details
    - **Platform Metadata**
      WMO Number,
      Iridium Number (IMEI),
      GTS bulletin header,
      Platform Model,
      Manufacturer,
      Manufacture date (MM/YYYY),
      Any other Serial number used

Deployment Metadata
Deployment date,
Deployment location (latitude, longitude),
Deployment type (e.g. ship name, cruise),
Iridium Upgrade used Y/N,
Ocean Basin (e.g. Indian, South Pacific, North Atlantic)

For example, the format could be as follows (in a text file or excel spreadsheet):
WMO Number, Iridium No (IMEI), GTS bulletin header, Platform Model, Manufacturer,Manufacture date,Serial number if available, Deployment date, Deployment Latitude,Deployment Longitude, Deployment type (e.g. ship name & by who), Iridium Upgrade used Y/N,Ocean Basin
62509,508430,"SSVX13 LFPW","SVPB","METOCEAN","04/2007",12345,"03/05/2007",43,-63,"From Canadian Coast Guard's ship - Off Nova Scotia","N","North Atlantic"
etc

- Météo France's Iridium Buoys (WMO 62509, 44746 and 44747) had been reporting Iridium locations instead of GPS locations since the end of July and this was working perfectly. There appears to be no difference in the comparisons with model outputs. The accuracy of these positions is sufficient for meteorological purposes. Buoy manufacturers stressed that the accuracy of the Iridium Locations may not be sufficient for Oceanographic purposes.

- The Chair stressed that he hoped that manufacturers would be able to capture and include the number of failed message attempts in messages, to assess the capabilities of the Iridium system, particularly in remote areas.

- Issues to consider in future include archiving of Iridium Messages. The messages are currently being sent to dbcpiridium@gmail.com which provides a form of archive as the raw data is stored there for each platform, but perhaps another solution is needed.

Actions

- All participants should notify of deployments onto the email address iridium-pp@jcommops.org, preferably in an Excel spreadsheet

- Conduct a review of the appropriateness of the data format in January 2008.

- Manufacturers should look into capturing and including the number of failed message attempts in messages, to assess the capabilities of the Iridium system, particularly in remote areas.

- Data archiving and access to old data should be addressed and data accessible to all project participants.