A Biographic Mapping Network - development of a Mobile Application for Regional Cetacean Monitoring

The WHMSI CARIBwhale project involves building a shared photo-identification and sightings database for Caribbean migratory species.

Firstly, a Caribbean version of the SpotterPro app was created by Conserve.IO, leveraging more than $10,000 in-kind developer time to create a standardized electronic sightings app for the iPhone and iPad. This app enables collection of sightings, but more importantly, of effort data, ensuring that sightings of marine mammals and other wildlife can be standardized across the region. The app syncs to a 'cloud database' enabling everyone to share their sightings on a Google map and download for inputting into GIS programs for further analysis.

CARIBwhale Dominica received the first tranche of funds from the OAS US$8,000.00 and has utilized the funds as follows (See Appendices):

1. Georgia Aquarium as per Invoice dated June 20, 2013 for the amount of US$5,000.00 Signed by Roisin Florence on behalf of the Georgia Aquarium for
"Subject: Biogeographic Mapping Network, development of a mobile application for Regional Cetacean Monitoring
Deliverable: iOS Mobile App for whale sightings has been developed and is ready for beta testing, Download link is approved by the Apple Store and is available at the App store. This work has been verified as completed by Jake Levenson at email dated July 23, 2013

2. Jake Levenson as per Invoice No. 002 for the amount of US$3,150.00 signed and dated June 25, 2013 for
OAS Workplan Item 1.1.2 Summary of photo-id for contractor background document drafted Gather partner databases for developer to draft import script (workplan item 1.1.3
Online training information developed (url submitted to Errol Harris and Caroline Renaldi)

CARIBwhale Dominica has also spent US$150.00 as the funds provided by OAS in the first tranche was US$8,000 and the total spent in items 1. and 2., above, was US$8150.00

Additionally CARIBwhale has purchased 3 iPads at a total cost including shipping, duty etc of US$2726.71 to allow CARIBwhale to test the system. On October 1, 2013 Caroline (President of CARIBwhale) and Rinata Rinaldi, Pernell Francis, Errol Harris and Marcella Harris went out on the west coast of Dominica to test/try out the equipment and Spotter Pro on the iPad. We only sighted dolphins that day - pan tropical spotted dolphins which are not listed on the choices of cetaceans on the spotter pro program and they are probably the most common dolphins in the area. The GPS location of the pan tropical spotted dolphins was accurate. A second test trip was done with Anchorage Whale Watch and although there were no sightings of whales or dolphins that day, the GPS recording of the trip route was accurate on one of the iPads.

We can say so far that on an open boat it is very difficult to use the iPad because of the glare (sun) on the screen; however, we were able to get five or six photographs of the dolphins. On the Anchorage boat, because of the roof covering on the boat it is easy to read the information and use the iPad - there is no glare.
With the start of the tourist cruise ship season and whale watch season, October 24, 2013 we will have many opportunities to continue testing and recording sightings.

It is very exciting to see smart phones as a catalyst for international collaborations on migratory species. Even more exciting is the testing server for the international photo-id database. This server went online last week. With the goal of breaking down boundaries and fostering international collaboration, this database serves as a repository for photo-identification images. Presently this will be for cetaceans, but the intention is to continue expanding this to include sea turtles as well.

The technology is based on Wildbook’s (formerly known as Ecoocean) technology they use for Mantas, Whale Sharks, and Polar Bear photo-identification. You can view their example at [www.whaleshark.org](http://www.whaleshark.org) or [Manatmatcher.org](http://Manatmatcher.org). The result is going to be a tool for mapping spatial ecology and social relationships of individual cetaceans for scientists and managers, but also an engaging citizen science project whereby anyone can contribute photo-id data. When their sighting is verified, our database will automatically update facebook allowing anyone to view past movements and future updates. Data sharing agreements are being set up (a huge effort for an international project like this one) and importing catalogs at the present time. Depending on how much developer time that takes, we'll likely incorporate some photo-id matching programs to make the job of matching easier. It is a very cool project that will likely have global ramifications. Could you imagine if we can connect photo-id studies in the cloud between Iceland, the Northeast US, and the Caribbean for migratory whales? We’re hoping this becomes a huge catalyst for expediting cetacean studies.

It is our opinion that when we are through fully testing the programmes they will be a useful program for recording and entering sightings.
Verification of work - Email from Jake Levenson, dated July 23, 2013

To me

Errol,
This email is to verify that the work invoiced by the Georgia Aquarium has been completed as outlined on the invoice and in the OAS work plan.

Work is now commencing on the next section of the OAS work plan and will be invoiced when complete.

Kind regards,
Jake Levenson
Georgia Aquarium Invoice

To: Caribwhale
C/O Mr. Errol Harris
Sutton Place
Roseau, Dominica
caribmac@cowdom.dm
(767) 612-6630

Date: June 20, 2013

Amount: $5,000

Subject: A Biogeographic Mapping Network, development of a mobile application for Regional Cetacean Monitoring

- Deliverables: iOS Mobile App for whale sightings has been developed and is ready for beta testing. Download link will be sent once it is approved by Apple store.

Terms: Payable upon receipt of invoice.

Signed: Roisin Florence

Please remit to:

Georgia Aquarium
Attn: Roisin Florence
Grants Writer & Administrator
225 Baker Street, NW
Atlanta, GA 30313-1809

Please contact me at 404-581-4181 or via email at rflorence@georgiaaquarium.org if you have any questions or additional needs.

Thanks for your continued support of Georgia Aquarium
Invoice

Bill To:
OM Logistics

E-mail: l.e.richmond@com.co

17 Newmark Dr
Framingham, MA 01701
Phone: 508-645-3170 F x. 5409
E-Mail: l.e.richmond@com.co

Invoice No.: 102

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<th>Description</th>
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<td>DAX Workplan (Rev. 1.2.5) summary of photos to needs for customer background document</td>
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<td>Conf. letter that shows &quot;In development&quot; to display import script (weekly plan Rev. 1.2)</td>
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<td>Client training program for development team. Limited in Ford Taurus and Crown Victoria.</td>
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Subtotal: $8,303
Sales Tax: $183.30
Total: $8,486.30

Date: 6/6/2013

[Signature]