

Marine Facilities Advisory Board
March 2019
Data Working Group- Terms of Reference
Author: Graham Allen

Purpose

The MFAB Data Working Group will provide expert advice and input to MFAB on topics relating to the full lifecycle (acquisition, management and delivery to end-users) of marine science data from the 3 NERC Research Vessels and from autonomous vehicles.

Remit

The scope of the Data Working Group is potentially very extensive, but the Working Group will focus on a topic at a time, as directed by MFAB. Some suggested topics already discussed at MFAB March 2018 included:

- Standardizing data formats across the three research vessels
- Review of requirements of the on-board data logging system
- Review of the flow of data from research vessels to BODC
- Identify training needs

Further topics and details were discussed at MFAB March 2019.

Ways of working

Data Working Group will adopt the standard MFAB Working Group modus operandi:

- MFAB working groups acquire views on a topic, and synthesis them into a short document. The full MFAB committee is then invited to comment on a draft document, which is finalised and presented to Exec Dir NOC and CPEB as an MFAB position paper on that topic.
- MFAB meeting will discuss and agree the topic of interest.
- MFAB Data Working Group will be directed by MFAB as to the next topic to consider.
- MFAB Data Working Group will provide the response draft document as directed by MFAB Meeting.
- MFAB Data Working Group membership may co-opt relevant experts to address specific topics.

Membership

Name	Position	Affiliation	Working Group role
Dr Graham Allen	Head of British Oceanographic Data Centre	National Oceanography Centre	Chair
Dr Andy Rees or Tim Smythe (tbd)	Senior Scientist	Plymouth Marine Labs	USER: Scientist – data collector and user
Jo Hopkins	Physical Oceanographer	National Oceanography Centre	USER: Scientist – data collector and user
Kate Hendry	Royal Society Research Fellow and Reader in Geochemistry	University of Bristol	USER: Scientist – data collector and user
Alex Tate	Senior Data and System Architect	British Antarctic Survey	<i>Sir David Attenborough</i> Data Systems lead
Alvaro Lorenzo Lopez	Senior Software Engineer, Theme Leader (C2 Software)	Marine Autonomous and Robotic Systems Group, NMF, National Oceanography Centre	SYSTEM BUILDER: Builder of autonomous data collection systems
Juan Ward	Engineering Manager	Scientific Ship Systems team, NMF, National Oceanography Centre	SYSTEM MANAGER: User of on-board data collection systems <i>RRS Discovery and James Cook</i>
Lou Darroch	Data Manager	British Oceanographic Data Centre, National Oceanography Centre	DATA MANAGER - BODC

Appendix I

Notes from MFAB 26th March 2019

Discussion on Data Working Group Terms of Reference

Background

- At MFAB March 2018, a paper proposing a Data Working Group was submitted and discussed (See Appendix II)
- At MFAB March 2019, Graham Allen, submitted a MFAB Data Working Group Terms (ToR) (V0.2) of Reference based on Appendix II and the MFAB 2018 Meeting minutes.
- MFAB discussed the V0.2 ToR:
 - Updated the Working Group Membership (including greater representation of scientist users and Sir David Attenborough systems)
 - Provided an agreed Topic 1 (the first topic for the Working Group to consider)
 - Provided a time line for the Working Group to update MFAB on Topic 1 progress
- This document ToR V0.3 was written post-MFAB March 2019, to capture discussions and allow the Data Working Group to commence.

Topic 1 – Easy on-board access to the science data

The Problem

- On-board scientists spend effort writing personal applications to access the data from on-board data systems. Access to the data is required to make on-board cruise decisions and answer science questions. These applications are vessel, person and instrument specific.

User Requirements

- On-board scientists require a standardized, easy-to-use way of accessing the data, that removes the need for the writing of applications.

Solution Development

- Working Group will report back inter-sessionally to MFAB on progress before 1st October 2019
- Working Group will initially document the current (as-is) situation for on-board access of data
- Working Group will review the as-is situation and decide next steps depending on the review and input from science users on the Working Group as to prioritized user requirements
- Considerations:
 - In scope instruments?

Appendix II

Presented to and discussed at MFAB Meeting March 2018

NOTE:

This paper was presented to the MFAB March 2018 as a discussion point on the forming of an MFAB Data Working Group. MFAB March 2018 meeting notes gave Mark Inall (MFAB Chair) and action to approach Graham Allen (Head of BODC) to form the MFAB Data Working Group.

Proposed MFAB Working Group

“Data within the Marine Facilities: rigour, QC, integrity and the connectivity to and integration with BODC”

The committee is invited to discuss the proposal to set up a working group, agree on the broad scope of the working group, suggest membership of the working group, and agree on a reporting timeline.

Background

BODC has worked hard to integrate data flow within NOC operations, from deck to desktop. There are initiatives in place to design integrated management of marine autonomous systems data flows (UK, EU, and international –all linked), and there are international ship data standards, such as the GO_SHIP programme, but there is no initiative we are aware of which combines data managers, scientists and engineers to look at the data flow from ship to shore. We feel there is therefore a need for such an initiative to feed into requirements, priorities and solutions of ship deck to desktop data flow.

Scope

There are other on-going initiatives in the general area of data management that we need to consider and be aware of when setting up the scope of the working group. Bearing in mind also the mode of operation of MFAB working groups; MFAB working groups acquire views on a topic, and synthesis them into a short document. The full MFAB committee is then invited to comment on a draft document, which is finalised and presented to Exec Dir NOC and CPEB as an MFAB position paper on that topic. Current, ongoing initiatives we are aware of include:

- NERC National Capacity Data Service Commissioning. This is in progress. As NERC requested a joint application across 4 NERC Data Centres (BODC, CEH, CEDA and BAS – note BGS excluded) and a prescription of increased coordinated activity across data centers and activities specifically targeted at supporting Dodona (making marine science data more available for multi-disciplinary environmental science).
- NOC building a full end-to-end data delivery, discovery and access system for near real time data. Oceanids is one part of this, independently BODC have initiated the near-real time delivery system project.

- NOC Technology Working Group – an internal NOC initiative to better coordinate technology activities across the various technology groups in NOC. One objective of this group is improve collaboration and consistency in processes and tools between BODC and National Marine Facilities.

An MFAB working group should be designed to complement and not duplicate current activities.

Working Group Membership

Membership should be drawn from MFAB, with a small number of non-MFAB experts invited to contribute.

Mark Inall, Sophie Fielding, Graham Allen, 8th March 2018