



UG²/EGO Data Management Side Meeting

Meeting Minutes

Location: New Brunswick, NJ, USA

Date: 2019-05-20

Agenda: see Appendix A

Attendees: 23 in person, 3 remote (see Appendix B)

Leaders: Daniel Hayes (UCY) and Victor Turpin (JCOMM-OPS)-co-chairs of OceanGliders Data Management Task Team (OGDMTT)

Summary

The meeting was attended by people from the US, Canada, Europe, Australia, and New Zealand. Most of the people present deal with glider data on a regular basis as either a key provider (glider operator) or manager (data assembly centers). A representative from one manufacturer was also present.

The meeting started with a brief round table introduction followed by an outline of the goals and history of the OGDMTT by Dan Hayes. A summary of the previous meeting in Genoa (Sep. 2018) was provided. As a result of that meeting, an online collaborative space (Slack) has been established and new TT members have been taught and added. Also, a number of working groups have been formed to meet technical objectives as an international community. Each have been established with a small group of individuals, and leaders of each have been identified. The rest of the day was devoted to discussions about the status and plans of each of those WG.

Quality Control Working Group (leader Inmaculada Ruiz Parrado, SOCIB, Spain)

This WG was very recently established, so the discussion was centered on agreements for the main objective, the membership, and initial activities. It was agreed that the Slack workspace already in place would be used to collect documentation on what is currently done at each GDAC regarding real-time QC (RTQC). It was also decided that only physical variables would be addressed at this stage (pressure, temperature, and salinity). A number of guiding principles were identified in the discussion:

a. local knowledge should overrule any DAC process if available, but some data providers are not in a position to do this, so a community-wide recommendation is needed for bare minimum RT-QC.

b. Data received from providers should not be modified, but should initially be flagged with RT process. Any changed values should be added as separate variables, and could also be flagged with delayed-mode (DM) processes.

c. It is important to keep in mind who is using the data and to make attempts to receive feedback on data quality and impact, as well as usefulness of the RT-QC flags. This is technically difficult, but not impossible (e.g. weather forecasting centers who use GTS).

Regular internal teleconferences were recommended (e.g. every 2 months), and feedback to/from the rest of the TT, and to OG in general were noted as mandatory. Efforts to establish links with other international networks are also needed.

Data Format Working Group (leaders John Kerfoot, Rutgers/IOOS and Victor Turpin, JCOMM-OPS)

This WG was introduced by Victor Turpin of JCOMM-OPS who emphasized that the purpose of this WG is to allow the FAIR usage of glider data. JCOMM-OPS, through community contributions, has supported this effort by supporting the Technical Coordinator position, who is tasked primarily with collecting, monitoring, and promoting information about glider deployments. The only way this can work on an international level is if metadata of those deployments are harmonized, allowing automatic aggregation and mapping of deployments. It was proposed to consider the OG 1.0 data format as simply an extension to existing formats to allow such mapping, although it was recognized that there are some fundamental differences to the NetCDF files used by each GDAC that need to be harmonized initially (e.g. coordinate axes of dive profile number or time). Files that meet the OG specification would then be visible to the public automatically. Other reasons to move towards a common format are related to reduced duplication of effort and interoperability for data users. Initial objectives are:

a. Identify the initial set of variables (ocean and metadata) that will be included in OG1.0. These will be limited to physical variables and fundamental deployment and platform details.

b. Identify technical implications of adopting a mirrored GDAC, consisting of centers in Europe and the U.S.

Agenda for this task :

- The first version of the format comparison and requirements will be delivered to GDACs and member of the OG1.0 working group by the end of Juin.
- Agreement on the format should be reach by the end of 2019.
- Full Implementation agenda should be discuss with the DACS by the end of the year too.

GTS Working Group (leaders Justin Bick, BODC and Kevin O'Brien, NOAA/JCOMM-OCG)

The youngest and most specific one, this WG was initiated by the leaders to maximize the impact and visibility of glider data for operational meteorological forecasting centers

around the world. These centers use the Global Telecommunication System (GTS) to harvest data for data assimilation into weather models using specific formats, of which BUFR is the most common. There is no glider-specific BUFR format and this was identified as an achievable and useful format to pursue. It would allow the JCOMM to be automatically notified of glider deployments which contribute to weather forecasts via the platforms' WMO numbers and deployment dates. A road map was outlined on how this could be most quickly and efficiently done:

a. Put together a list of the key variables collected by gliders that are or could soon be used by weather forecasting centers. Sample files should also be provided.

b. Share this with Dave Berry, a BUFR expert, who can work with the TT team to define a format template.

c. Begin the approval procedure at the WMO, which may take over one year.

KPI and Best Practices (Victor Turpin and Emma Heslop, IOC/UNESCO)

While not a WG, KPI and best practices run throughout this TT. The main reason to discuss KPI is because it is perhaps the most useful way to quantitatively document the status, growth, and achievements of an international network of platforms. In particular, gliders are typically managed at a country or regional level, but often in the frame of international efforts of ocean observations. It was shown that KPIs are useful to three types of stakeholders: funders, operators of the global network (e.g. JCOMM OPS), and users of the network (data providers and "consumers"). The KPI in question can thus be "internal" or "external" depending on whether it is useful for operators to spot problems or deficiencies promptly or if it is useful for big-picture impact assessment. It was noted that KPI should not be restricted to the ODGMTT, but that each OG TT should have some indicators related to its objectives. A harmonized set of meta-data once again will most likely be required in order to generate those KPI. It was decided that an initial set of KPI needs to be formed for further discussion.

Breakout Meeting (21/5)

This was attended mostly by glider operators interested in providing glider data to others in the proper way, or to acquire glider data for their work. Specialists in data management were also present, as well as one manufacturer. The primary outcome was the identification of a need to help new users enter the community: where to get and to provide data. An action item was noted to create one pagers for this for the US, EU, and Australia (the first action of the OGDMTT in 2017, but never finalized and published).

Output of the Breakout Session should be available soon.

Action Items

1. Collect and share QC documentation: what is done in real time for pressure, temperature, conductivity, and salinity at each data center? - Parrado, Slater
2. Create a document describing what an OG1.0 NetCDF format needs to include and how it should be formatted. - Turpin, Kerfoot
3. Create a list of parameters needed to be included in a new glider-specific BUFR file, with example files (existing NetCDF from different data centers). - Hayes, Buck
4. Create a short list of KPI for internal and external purposed for the OGDMTT and put on Slack with invitation to add/comment. - Turpin, Heslop
5. Encourage wider participation in the OGDMTT and WG. -Turpin, Hayes
6. Discuss next meeting teleconference, face-face.
7. Create one pagers for data upload and download for the US, EU, and Australia - Hayes, Turpin, Kerfoot, Woo



UG²/EGO Data Management Side Meeting

Monday 20 May 2019, 10:00 – 17:00, Hyatt* Hotel reserved room

- **Introduction: Dan Hayes / Victor Turpin ~30 min**
 - Progress against objectives since last data management meeting (Genova).
 - Working Groups initiatives (QC, BP, GTS-BUFR, KPI, OG1.0)
 - How do we report to the community? How do we make the OceanGliders Data Management programs run on a regular basis?
- **Quality Control: Inmaculada Ruiz-Parrado / Benjamin LaCour ~30 min**
 - brief discussion via Skype will be held in order to discuss a convenient way to kick off this WG.
- **OG1.0 Data Format: John Kerfoot / Victor Turpin ~1h30**
 - Report about the IOOS/IMOS/EGO format
 - Open discussion and proposition toward the OG1.0
 - Implementation plan
 - Toward an "ARGO like" GDAC strategy?

Lunch Break 12:30 – 14:00

- **GTS-BUFR: Kevin O'Brien / Justin Buck ~1h30**
 - Develop the BUFR format which will be derived from the OG1.0 Format for real-time transmission to the GTS. First steps are to define the parameters to be sent via the GTS, the desired format and then present to the community for feedback. At this meeting, current ideas will be presented and feedback will be welcome.
- **Maps and KPI for Data Management: ~1h30**
 - How would we like to see OceanGliders data management represented into the JCOMMOPS system?
 - Governing our own networks
 - Governing Integrated OOS
 - What kind of index would be interesting to monitor the OceanGliders program in terms of Data Management?
- **Priorities and agenda 2019/2020 : ~30 min**

Appendix B. Attendee list.

OG DMTT Side Meeting May 20, 2019
Hyatt Regency New Brunswick

Sign In

NAME	EMAIL	INITIALS
TURPIN Victor	vturpin@jcommops.org	VT
JUSTIN BUCK	juck@bode.ac.uk	JB
Dan Hayes	dhayes@ny.nyu.edu	DH
KEVIN O'BRIEN	Kevin.O'Brien@noaa.gov	KOB
Kyle Wilcox	Kyle@axts.co	KW
Dawn Petraitis	dawn.petraitis@noaa.gov	DP
Kai Salm	kai.salm@taltech.ee	KS
Francis Bringas	Francis.Bringas@noaa.gov	FB
James Pegg	James.Pegg@dfo-mpo.gc.ca	JP
Melany Belzile	melany.belzile@dfo-mpo.gc.ca	MB
Ehsan Abdi	e.abdi@cyprus-subsea.com	EA
CHRISTIAN REISS	christian.reiss@noaa.gov	CR
Joanne O'Callaghan	joanne.o'callaghan@niwa.co.nz	JOC
ALVARO LORENZO-LOPEZ	ALVARO.LORENZO@NOC.AC.UK	ALL
Bob Fratantonio	robert.fratantonio@rpsgroup.com	RBF
Richard Davis	richard.davis@dal.ca	RD
Adam Comeau	adam.comeau@dal.ca	AC
MARCIA PEARSON	mpearson@dal.ca	MP
John Kerfoot	kerfoot@marine.mtgservers.edu	JK
Kathleen Bailey	kathleen.bailey@noaa.gov	KCB
Emma Slater	emmer@bode.ac.uk	ES
Guilherme Castilho	castilho@ucsd.edu	GFC
Inmh		SUBB
Miguel		SUBB
Joachim		SUBB
Elizabeth Croed	elizabeth.croed@km.kunzberg-us.com	EC

This list has been included in the og-dm@jcommops.org mailing list