



# Marine DWG update

OGC Marine DWG meeting

Niteroi, Brazil

Jonathan Pritchard

2<sup>nd</sup> February, 2018

# Purpose of the Marine DWG



- There is a gap in the current OGC baseline regarding marine geospatial data with an emphasis on hydrography and ocean mapping.
- To support smart exchange methods required for interoperability with organizations such as the International Hydrographic Organization (IHO) and International Oil and Gas Producers (IOGP) and their data standards.
- Motivated by the widening use of marine data for purposes other than safe navigation, described frequently as Marine Spatial Data Infrastructure (MSDI).

# Problem Statement for Marine DWG

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- Geospatial data has been successfully standardized for navigational purposes by hydrographic agencies for years.
- Data now in demand for a much wider range of applications.
- Chart data is a major source of information but does not lend itself automatically for wider use.
- bathymetric grids, point clouds, seafloor sediment mosaics and water column data may require further standardization.
- Data volumes and sources increasing driving standardized sensor processing and management techniques.

# Mission and Role for Marine DWG

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1. The **mission** of the Marine DWG is to broaden the use of marine data through the understanding of the interoperability-related requirements for relevant use cases.
2. The **role** of the Marine DWG is to serve as a forum within OGC for marine data issues; to present, refine and focus interoperability-related issues to the Technical Committee; and to serve where appropriate as a liaison to other industry, government, independent, research, and standards organizations active within the marine domain.

# OGC Marine DWG Update

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- 5 Marine DWG meetings over 12 month period
  - Vancouver, Canada
  - St. Johns, Canada
  - Delft, Netherlands
  - Southampton, UK
  - Palmerston North, NZ
- 3 co-chairs from NGA, UKHO, TDY CARIS
- 81 signed up to Marine DWG email list

# Vancouver meeting



- **Held 1 day meeting alongside the IHO MSDIWG**
  - 30 attendees (15 in person, 15 remote)
  - Included Hydrographic Offices, Mapping Agencies, Oil and Gas, Research Institutes e.g. Ocean Networks Canada
- **Topic 1: Land and Sea integration**
- **Topic 2: The wider use of marine data and related standards**
  - DOF Subsea: An update on IOGP Seabed Survey Data Model (SSDM)
  - Teledyne CARIS: Interoperability experiment between SSDM / IHO S-100
  - UKHO: Challenges around portrayal, Defence Vs Civilian data
  - IIC: Portrayal work for IHO S-100
- **Topic 3: Current Marine SDI initiatives**

# IHO MSDIWG8 - Marine DWG Actions



No	Work Item	Priority	Milestones	Start Date	End Date	Status	Responsible Contacts	Remarks
B.3	Identify wider user requirements for bathymetry data	H	1. Develop primary use case for Arctic Bathymetry SDI 2. Update <b>concept development study</b> (\$) 3. Propose test-bed 4. Build test-bed (\$\$\$)	2017	2018	Planned	IIC Esri <b>OGC Marine DWG</b> Caris Canada Portugal	\$ = funding required
D.1	Identify relevant standards to support MSDI implementation and operation.	H	1. Provide annual reports to IRCC and HSSC 2. DGGS (Ref: B3)	06/2017	01/2020	Ongoing	<b>OGC Marine DWG</b>	
D.2	Assess the suitability and shortcomings of standards in supporting data interoperability.	M	1. Identify standards relevant to bathymetry (Ref: B3) 2. Marine Cadastre 3. Oceanography	2018	2019	Planned	<b>OGC Marine DWG</b> (inc: Portugal)	
H.1	Conduct 2018 -20 meetings of MSDIWG, arranged back to back with 1-day MSDI Open Forum and <b>OGC Marine DWG</b>	H	1. Date and venue defined 2. Logistics in place 3. Open Forum programme defined 4. Develop content for DWG workshops	2017	2020	Ongoing	MSDIWG Management Group (Chair/Vice Chair, Sec, IHO Sec)	2018- Brazil 2019- Korea 2020- tbc

# St. Johns meeting

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- Maritime Search and Rescue Scenario from the ArcticSDP, Angela Amirault, Compusult
- The Evolution of Smart Bay and Smart Atlantic, Scott Bruce, Marine Institute
- Arctic Regional Marine Spatial Data Infrastructures Working Group Update, Sebastian Carisio, NGA



# Delft meeting

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- Overview of the Copernicus program, Catharina Bamps, European Union
- Copernicus Marine Environment Monitoring Service (CMEMS), Cecilia Donati, Institutional Relations Manager at Mercator
- Satellite Derived Bathymetry, Chris Howlett, TCarta Marine
- OGC Sensor Web Enablement Standards, Simon Jirka, 52° North Initiative

# Southampton meeting

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- Semantically enhancing SensorML with controlled vocabularies in the marine domain, Alexandra Kokkinaki, British Oceanographic Data Centre
- Maritime Limits and Boundaries and IHO S-121, Sébastien Durand, Canadian Hydrographic Service
- Formation of UN-GGIM Marine Working Group
- IOC Plan for Oceanographic Data and Information Management
- Point Cloud DWG and Marine DWG combined session
  - Scope and work of the Point Cloud DWG, Stan Tillman
  - Bathymetry and Point Clouds, Jonathan Pritchard

# Palmerston North meeting

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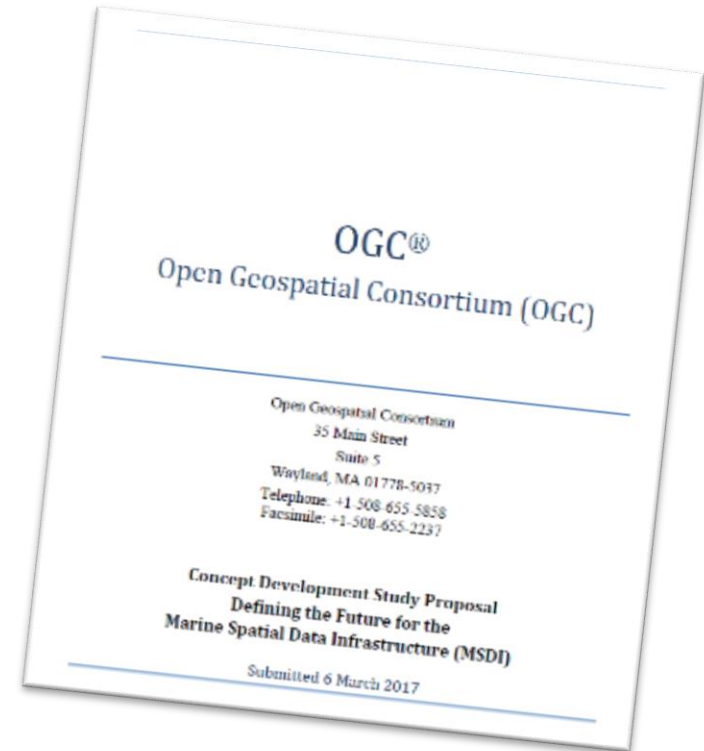


- New Zealand Hydrographic Authority – Adam Greenland, National Hydrographer, LINZ and Rachel Gabara, Manager Marine Geospatial Data and Products, LINZ
- Ocean Mapping at NIWA – Kevin Mackay, Principle Technician, Marine Geology
- Introduction to HDF for Marine datasets –Ted Haberman, Director of Earth Science, The HDF Group

# Meeting Outputs



- OGC MSDI Concept Development Study (CDS)
- Monitoring next steps of the OGC Arctic Spatial Data Pilot, Marine aspects had less focus
- OGC pilot for IHO S-121 enablement (Maritime Limits and Boundaries)
- OGC Marine DWG to liaise with new UN-GGIM MGIWG with IHO MSDIWG
- Collaboration with OGC Point Cloud DWG



# Future Marine DWG Meetings

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- 2018 OGC TC Meetings Program:
  - Orleans, France, March 19<sup>th</sup> to 23<sup>rd</sup>
  - Fort Collins, Co, USA, June 4<sup>th</sup> to 8<sup>th</sup>