# Vocabulary Mapping for the Distributed Oceanographic Match-Up Service

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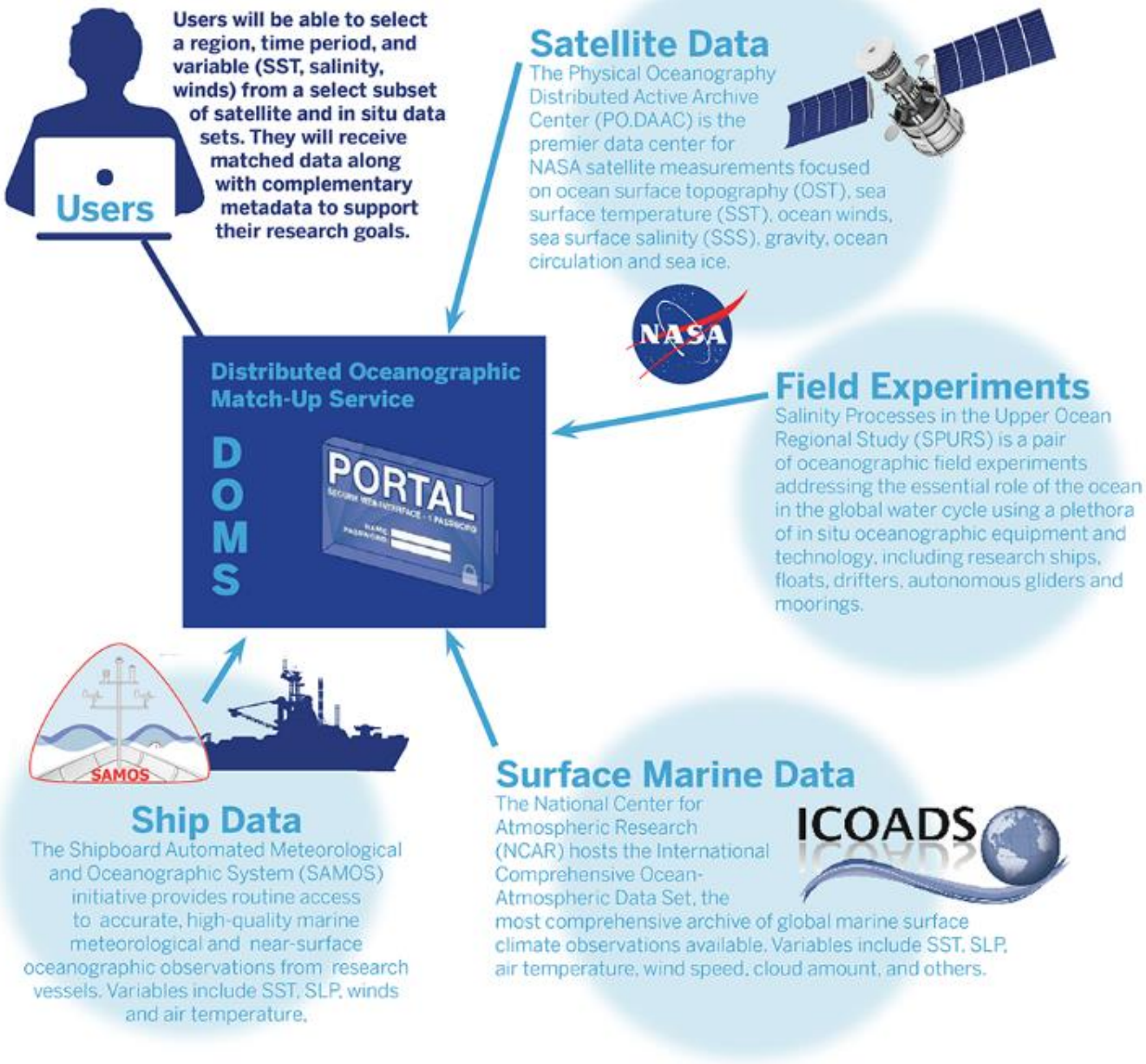
ODIP II 2nd Workshop, Boulder, CO, USA
May 3, 2016




# DOMS Overview

- Parameters
  - Sea temperature
  - Salinity
  - Winds
- In Situ Datasets
  - SAMOS
  - ICOADS
  - SPURS
- Satellite Datasets
  - ASCAT winds
  - Aquarius salinity
  - MUR sea temperature
  - MODIS sea temperature

# Vocabulary Mapping Using NVS

- Standard vocabulary terms between DOMS nodes
  - Consistent representation in software and output format
  - Familiar terms for user community
- Quickly settled on Climate and Forecast Standard Names for parameters
  - SAMOS parameters mapped during ODIP I
- Used NERC Vocabulary Server search tool to find platform and device vocabularies
  - https://www.bodc.ac.uk/data/codes_and_formats/vocabulary_search/
  - SeaVoX Platform Categories
  - SeaDataNet device categories

# Parameters

- Climate and Forecast Standard Names http://vocab.nerc.ac.uk/collection/P07/current/
  - ISO8601 (time)
  - latitude
  - longitude
  - sea_water_temperature
  - sea_water_salinity
  - wind_speed
  - eastward_wind
  - northward_wind
- Selected broadest terms
- Each node homogenized parameters, reference frames, and units

# Platform Categories

- SeaVoX Platform Categories
  http://vocab.nerc.ac.uk/collection/L06/current/

| Platform Category | FSU | NCAR | JPL |
|---|---|---|---|
| ship | X | X | X |
| moored_surface_buoy | | X | X |
| drifting_surface_float | | X | X |
| drifting_subsurface_profiling_float | | X | X |
| autonomous_underwater_vehicle | | X | X |
| offshore_structure | | X | |
| coastal_structure | | X | |
| towed_unmanned_submersible | | X | X |
| orbiting_satellite | | | X |

# Device Categories

- SeaDataNet device categories
  http://vocab.nerc.ac.uk/collection/L05/current/

| Device Category | FSU | NCAR | JPL |
|---|---|---|---|
| bathythermographs | | X | |
| discrete water samplers | | X | |
| CTD | | X | X |
| current profilers | | | X |
| radiometers | | | X |
| scatterometers | | | X |

# Vocabulary Challenges

- Quality flags
- Creating CF-like terms (e.g., wind_speed_height, wind_speed_quality)
- DOMS Linked Data

# Summary

- Creating service to deliver matched in situ and satellite oceanographic data to users according to customized queries
- Couldn’t be done without mappings to standard vocabularies
  - Using NVS
  - Building on previous ODIP work
- Next vocabulary challenge – quality

# Acknowledgements

Development of DOMS is funded by NASA ESTO via the AIST program under grants FSU (NNX15AE29G), NCAR (NNX15AG22G), and JPL.

Disclaimer: Any opinions, findings, and conclusions or recommendations provided are those of the contributors to the DOMS project and do not necessarily reflect the views of NASA.