



## DATA WORKFLOW

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# OTN Data Workflow

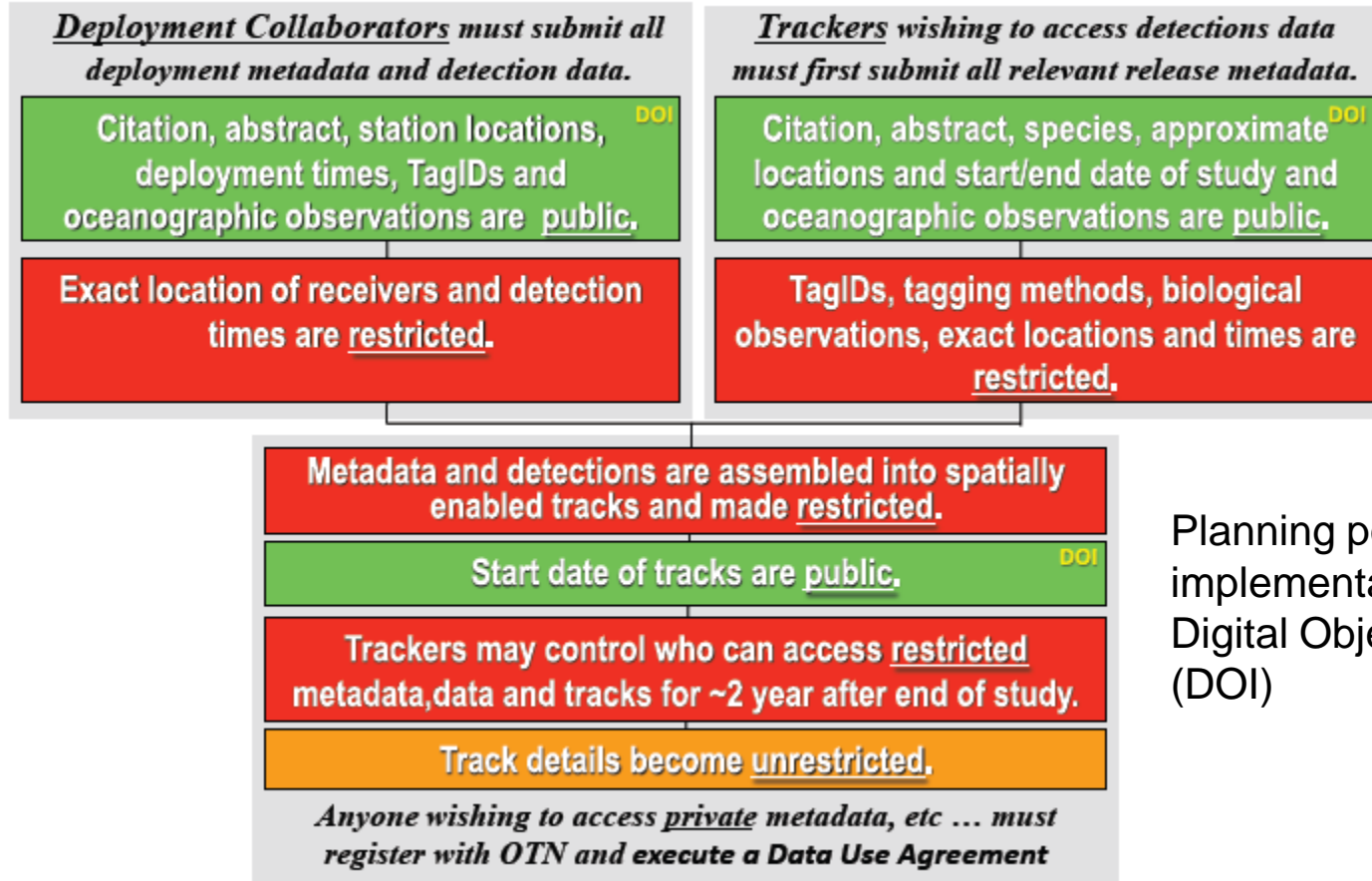
Ocean Tracking Network, Data Management (OTN DM) has been reviewing and interpreting CFI approved, OTN Data Policy and Risk Mitigation/Work Flow documentation to ensure implementation of a viable OTN Data Workflow that is within these policies.

The OTN system data flow presented here is simply illustrated by way of a series of schematic diagrams, annotated computer screen captures and step by step instructions. Examples include: spreadsheet templates for capture of collection metadata, PLONE project folders for by collaborator and by mission organization of data and metadata files, PostgreSQL database schemas and tables for integrating data and metadata, GoogleEarth maps for visualizing the database contents and comma separated (CSV) outputs files data extractions from the database. End users are encouraged to experiment and ask questions.

To date, the primary visualization focus has been on receiver data, tagging data products are currently under development.

# Data Submission and Access

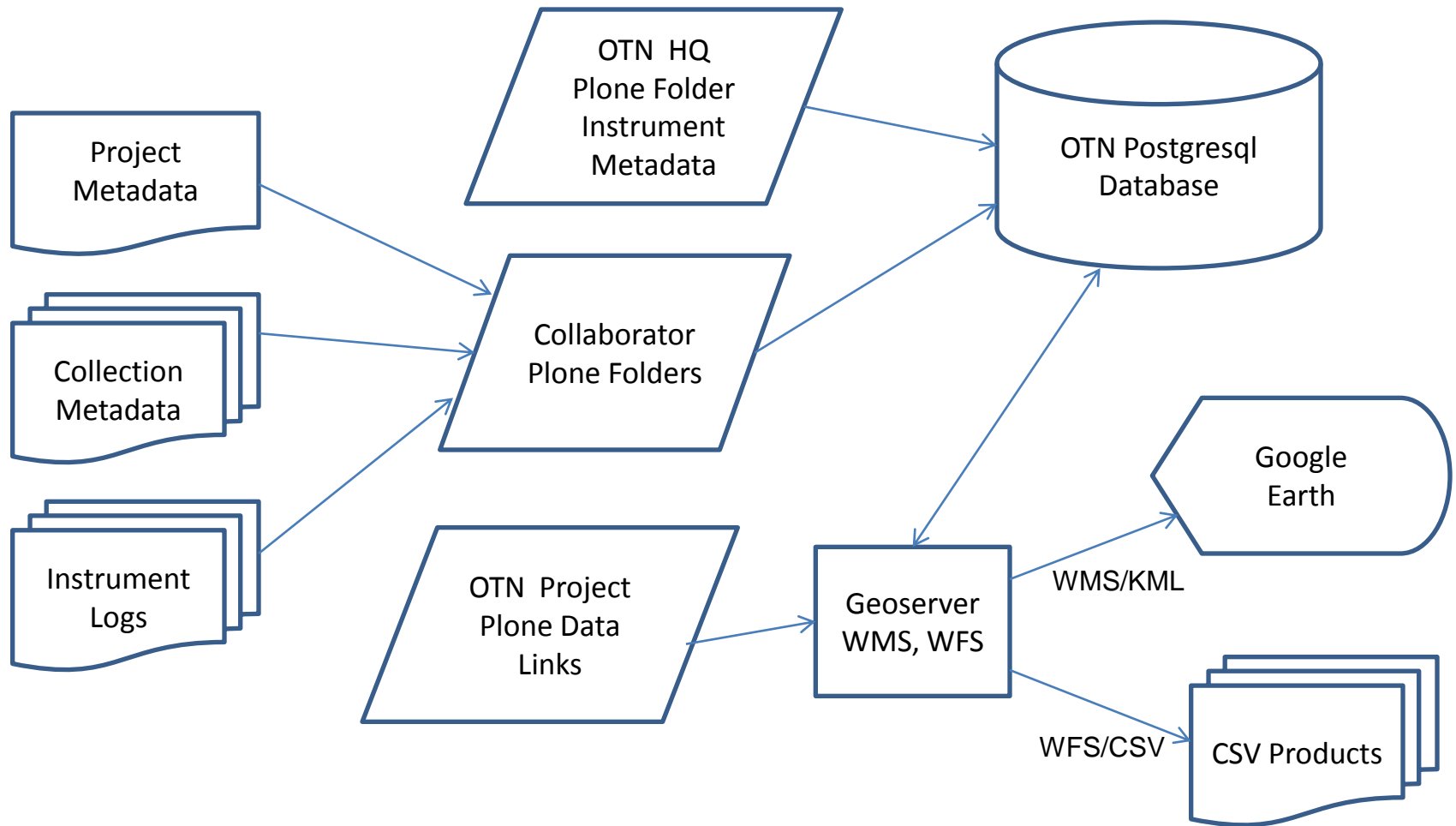
OTN DM implementation of CFI approved, OTN Data Policy



Planning possible implementation of Digital Object Identifier (DOI)

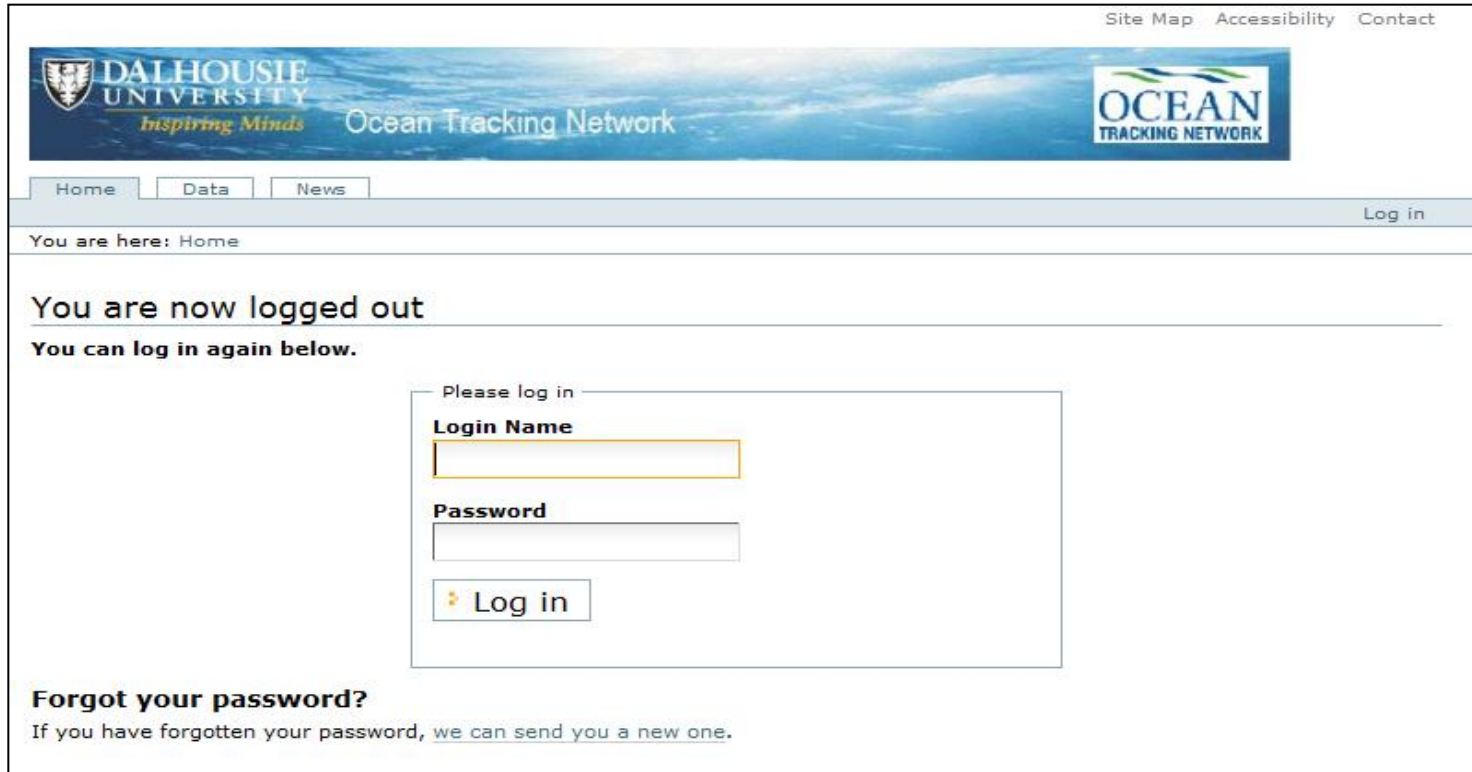
# OTN Data Workflow Diagram

OTN DM implementation of CFI approved Workflow



# Ocean Tracking Network Portal

Members Site: <http://www.marinebiodiversity.ca/OTN>



The screenshot displays the Ocean Tracking Network Portal members site. At the top, there is a banner with the Dalhousie University logo and the text "inspiring Minds" and "Ocean Tracking Network". To the right of the banner is the "OCEAN TRACKING NETWORK" logo. In the top right corner, there are links for "Site Map", "Accessibility", and "Contact". Below the banner, there are navigation tabs for "Home", "Data", and "News". A "Log in" link is located in the top right corner of the page. Below the navigation tabs, a breadcrumb trail reads "You are here: Home". The main content area features a message: "You are now logged out" followed by "You can log in again below." Below this message is a login form with the heading "Please log in". The form contains two input fields: "Login Name" and "Password". Below the "Password" field is a "Log in" button with a small icon. At the bottom of the page, there is a link for "Forgot your password?" with the text "If you have forgotten your password, we can send you a new one."

Site Map Accessibility Contact

DALHOUSIE UNIVERSITY  
inspiring Minds Ocean Tracking Network

OCEAN TRACKING NETWORK

Home Data News

Log in

You are here: Home


**You are now logged out**

**You can log in again below.**

Please log in

**Login Name**

**Password**

 Log in

**Forgot your password?**

If you have forgotten your password, [we can send you a new one.](#)

Access to OTN Data Sheets, OTN Regional and Project Metadata,  
OTN Collaborator Metadata and Data Repository, OTN videos, and more...

# OTN Metadata and Field Sheets

<http://www.marinebiodiversity.ca/OTN/data/data-collection/data-sheet-templates>


You are here: Home → Data → Data Policy, Templates and Workflows → OTN Data Sheet Templates

## OTN Data Sheet Templates


by [Susan Dufault\(mqr\)](#) — last modified May 19, 2010 09:32 AM

**Excel files of data sheet templates and pdfs of data sheets for printing. NOTE: If you previously downloaded one of these templates, you may need to clear your browser cache in order to download the most recent version because your browser stores copies of previous downloads. The most recent version of each data sheet is listed in the OTN Data Sheet Catalogue.**

 [OTN Collaborator Discovery Metadata collection form](#) — by [Susan Dufault\(mqr\)](#) — last modified Jun 21, 2010 09:53 AM


 [Proposed Station Locations](#) — by [Susan Dufault\(mqr\)](#) — last modified Oct 07, 2010 12:05 PM

Data sheet used to compile data on latitude, longitude, and bottom depth for proposed station locations on new OTN arrays.

 [Proposed Station Locations pdf for printing](#) — by [Susan Dufault\(mqr\)](#) — last modified Oct 07, 2010 12:05 PM

 [OTN Mission Report](#) — by [Susan Dufault](#) — last modified Apr 22, 2010 11:21 AM


Used to collect general information, objectives, and summary of an OTN Mission

 [OTN Mission Report pdf for printing](#) — by [Susan Dufault](#) — last modified Apr 22, 2010 11:24 AM

 [OTN Receiver Deployment Field Sheet](#) — by [Susan Dufault\(mqr\)](#) — last modified Jun 10, 2010 12:50 PM

Field sheet designed to assist in the collection of metadata during receiver deployments.

 [OTN Receiver Deployment Field Sheet pdf for printing](#) — by [Susan Dufault\(mqr\)](#) — last modified Jun 10, 2010 12:51 PM

 [OTN Receiver Metadata](#) — by [Susan Dufault](#) — last modified Aug 30, 2010 11:42 AM

The otn-metadata-receiver.xls Excel file is for the collection of receiver deployment, recovery, and download metadata. The three sheets of the Excel file cover the deployment, download, and recovery metadata for multiple stations on one OTN Array. The data is collected during the mission date, after each deployment, download, or recovery mission. The data is collected in the OTN Receiver Field Log Sheet. Please submit all data electronically via email to the OTN Data Center at [otnd@marlab.ca](mailto:otnd@marlab.ca). The data should be saved and forwarded to the appropriate data management facility, even if it contains other important technical data.

 [OTN Receiver Field Log Sheet](#) — by [Susan Dufault](#) — last modified Jul 23, 2010 11:56 AM

The OTN Receiver Field Log Sheet is a summary log sheet that covers the deployment, successful recovery and associated comments represent the completion of the log sheet denoted by the consecutive deployment number. The log sheet is populated with deployment information is entered in the logsheet, it can be printed to take into the field.

 [OTN Tag Release Metadata Collection Data Sheet](#) — by [Susan Dufault\(mqr\)](#) — last modified May 19, 2010 09:32 AM

Excel file of OTN Tag Release Metadata Collection Data Sheet template

 [OTN Sentinel Tag Log Sheet](#) — by [Susan Dufault\(mqr\)](#) — last modified Jun 10, 2010 12:52 PM

Used to collect metadata on sentinel tag deployments.

 [OTN Sentinel Tag Log Sheet pdf for printing](#) — by [Susan Dufault\(mqr\)](#) — last modified Jun 10, 2010 12:52 PM

## OTN Data Sheets

### Collection/Loading of OTN metadata

Station Locations

Mission Reports

Receivers Deployments, Recoveries, Downloads

(including all associated sensors)

Tagging (animals, sentinel)

### Field Sheets

Printable field sheets to assist with tracking information while in the field and/or prefilled with field needed information (e.g. ar\_interrogate\_code).

# Receiver Metadata for Additional Sensors

Currently modifying receiver metadata, data dictionary and associated instructions to include use for additional sensors (e.g. ADCP, Microcat, Minilog-T, etc).

	OTN_ARRAY	STATION_NO	CONSECUTIVE_DEPLOY_NO	INTEND_LAT	INTEND_LONG	OTN_MISSION_ID (vvvvvvvyyyymmddhh)	DEPLOY_DATE_TIME (yyyy-mm-ddThh:mm:ss)	DEPLOY_LAT	DEPLOY_LONG	BOTTOM_DEPTH	R	
1												
2	HFX	ADCP001	1			HUDSON2008041501	2008-04-15T01:51:00	44.35190	-63.30470	100		
3	HFX	ADCP001	1			HUDSON2008041501	2008-04-15T01:51:00	44.35190	-63.30470	100		
4	HFX	ADCP002	1			HUDSON2008041501	2008-04-15T13:54:00	44.19980	-63.13500	172		
5	HFX	ADCP002	1			HUDSON2008041501	2008-04-15T13:54:00	44.19980	-63.13500	172		
6	HFX	ADCP002	2			HUDSON2008050820	2008-05-08T21:30:00	44.24940	-63.16670	168		
7	HFX	ADCP002	2									
8	HFX	ADCP003	1	1	BOTTOM_DEPTH	RISER_LENGTH	RECEIVER_DEPTH	CHECK_COMPLETE_TIME	STATUS_IN (OK?)	RCV_MODEL_NO	RCV_SERIAL_NO	SYNC_DATE_
9	HFX	ADCP003	1	2	100		97			Microcat SBE 37-SM V2.6	5342	
10	HFX	ADCP001	2	3	100		88			ADCP RD Instruments	10487	
11	HFX	ADCP001	2	4	172		169			Microcat SBE 37-SM V2.6b	5343	
12	HFX	ADCP002	3	5	172		158			ADCP RD Instruments	10572	
13	HFX	ADCP002	3	6	168		164			Microcat SBE 37-SM V2.6b	5343	
14	HFX	ADCP003	2	7	168		156			ADCP RD Instruments	10572	
15	HFX	ADCP003	2	8	169		165			Microcat SBE 37-SM V2.6b	5341	
				9	169		157			ADCP RD Instruments	10220	
				10	103		100			Microcat SBE 37-SM V2.6	5342	
				11	103		91			ADCP RD Instruments	10487	
				12	169		165			Microcat SBE 37-SM V2.6b	5343	
				13	169		156			ADCP RD Instruments	10572	
				14	172		168			Microcat SBE 37-SM V2.6b	5341	
				15	172		159			ADCP RD Instruments	10220	
				16								

Where more than one instrument (e.g. Acoustic receiver/release with benthic bod containing temperature, salinity and depth sensors): Deployment worksheet, enter a row for each instrument with the same station\_no and consecutive\_deploy\_no.



# Receiver Metadata for Additional Sensors

	OTN_ARRAY	STATION_NO	CONSECUTIVE_DEPLOY_NO	OTN_MISSION_ID (vvvvvyyyymmddhh)	AR_CONFIRM (y/n)	DATA_DOWN LOADED (y/n)	RECOVERED (y/n)	RECOVER_DATE_TIME (yyyy-mm-ddThh:mm:ss)
1								
2	HFX	ADCP002	1	HUDSON2008050820		n	y	2008-05-08T20:00:00
3	HFX	ADCP001	1	HUDSON2008100519		y	y	2008-10-07T16:02:00
4	HFX	ADCP002	2	HUDSON2008100519		y	y	2008-10-07T17:25:00
5	HFX	ADCO003	1	HUDSON2008100519		y	y	2008-10-08T11:23:00
6	HFX	ADCP001	2	HUDSON2009041011		y	y	2009-04-20T11:10:00
7	HFX	ADCP002	3	HUDSON2009041011		y	y	2009-04-20T11:50:00
8	HFX	ADCO003	2	HUDSON2009041011		y	y	2009-04-20T12:00:00

	OTN_ARRAY	STATION_NO	CONSECUTIVE_DEPLOY_NO	OTN_MISSION_ID (vvvvvyyyymmddhh)	DOWNLOAD_DATE_TIME (yyyy-mm-ddThh:mm:ss)	RCV_MOD EL_NO	RCV_SERI AL_NO	DOWNL STAT (OK:	FILENAME
1									
2	HFX	ADCP001	1	HUDSON2008100519	2008-10-07T16:04:00	Microcat	S5342		1674A.asc
3	HFX	ADCP001	1	HUDSON2008100519	2008-10-07T15:52:00	ADCP RD I	10487		M1674000.000
4	HFX	ADCP002	2	HUDSON2008100519	2008-10-07T17:25:00	Microcat	S5343		1675A.asc
5	HFX	ADCP002	2	HUDSON2008100519	2008-10-08T10:20:00	ADCP RD I	10572		M1675000.LOG, M1675001.000
6	HFX	ADCP003	1	HUDSON2008100519	2008-10-08T11:23:00	Microcat	S5341		1676A.asc
7	HFX	ADCP003	1	HUDSON2008100519	2008-10-07T17:41:00	ADCP RD I	10220		M1676001.000, M1676000.LOG

Where more than one instrument (e.g. Acoustic receiver/release with benthic bod containing temperature, salinity and depth sensors): Recovery worksheet, enter a single row for each station\_no and consecutive\_deploy\_no. Download worksheet, enter a row for each instrument with the same station\_no and consecutive\_deploy\_no.



# Data Capture Guidelines

## Field Preparations

1. get in-work/active paper Metadata Field Sheets from previous activity on array (upload/recovery) and new blank sheets (deploy or re-deploy)
2. get paper copy of mission report and enter the following fields:
  1. OTN\_mission\_id
  2. host\_mission\_id (if available)
  3. vessel\_name
  4. chief\_scientist
  5. data\_collection\_personnel
  6. other\_personnel
  7. destination
  8. mission\_objectives

## Field Operations

1. as each individual field activity is being conducted
  1. complete appropriate fields on metadata field sheet(s)
2. after last field activity is completed
  1. transcribe data from field sheets to appropriate spreadsheet files
  2. save spreadsheet files to hard drive and to USB memory stick as otn\_array\_yyyy\_mm\_dd\_metadata\_receiver. (e.g. otn\_hfx\_2008\_10\_15\_metadata\_receiver).
3. after field trip is completed
  1. create trip subfolder in array/metadata\_and\_data folder on OTN Portal named trip\_yyyy\_mm\_dd
  2. upload mission report
  3. upload spreadsheet files to new subfolder
  4. prepare scanned images of metadata field sheets and upload to new subfolder
  5. send email to OTN Data Centre, [otndc@Dal.Ca](mailto:otndc@Dal.Ca) with link to new subfolder
  6. retain file of original field sheets

# Instrument Data Download Guidelines

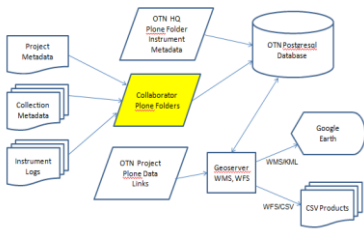
Refer to VUE Product operating Manual, along with the following points:

## Field Operations

1. after each individual instrument upload is completed
  1. write name of instrument log file(s) and other details of data capture on metadata field sheet(s)
  2. compress and save instrument log file(s) to local .ZIP file
2. after last instrument is uploaded
  1. copy .ZIP file to at least one USB memory stick
  2. remove the memory stick from the computer
3. after field trip is completed
  1. load instrument log file(s) to a local subarray VUE database
  2. export processed files(s) from VUE database, compress and save to local .ZIP file
  3. upload both raw instrument log file(s) and processed exported VUE file(s) .ZIP files containing to the designated section of the OTN portal
  4. send email to OTN Data Centre ([otndc@Dal.Ca](mailto:otndc@Dal.Ca)), informing them about newly collected data

Tip: Always keep at least two copies of log files and VUE database on separate computing devices (i.e. laptop computer and USB memory stick) and send incremental copies to OTN portal ASAP.

# Collaborator Plone Folders



**DALHOUSIE UNIVERSITY** Inspiring Minds **Ocean Tracking Network**

Site Map Accessibility Contact

Search Site   only in current section

Home About OTN Policies Meetings Users Groups Data News etc

You are here: Home → Data → repository → Perth, WA, Australia - receiver deployment

**Navigation**

- GoogleEarth...
- CSV product links
- ...
- WMS Link ...
- WFS Link ...
- short list
- long list
- data centres
- data collections
- Arctic
- E Indian
- Mediterranean
- Mid Pacific
- NE Atlantic
- NE Pacific
- NW Atlantic
- SE Atlantic
- SW Pacific
- W Indian
- Data Policy, Templates and Workflows

**Perth, WA, Australia - receiver deployment**

by [Jayson Semmens](#) — last modified Nov 15, 2009 01:25 PM  
— filed under: [data collection](#), [status = short list](#), [sponsor = AATAMS](#), [status = in work](#), [region = E Indian](#), [activity = receiver deployment](#), [source = secondary](#), [sponsor = OTN](#)

**Perth Line Discovery Metadata** — by [Jayson Semmens](#) — last modified Mar 02, 2009 07:59 AM  
Metadata is information about the data. Fill in the blanks and be generous with credit...

**Data and Metadata** — by [Robert M. Branton](#) — last modified Mar 02, 2010 02:51 PM  
Spreadsheets, databases, web links, etc ...

**Status** — by [Robert M. Branton](#) — last modified Jan 27, 2009 09:35 PM  
Brief summary from last review meeting ...

**Image Gallery** — by [Robert M. Branton](#) — last modified Feb 01, 2009 09:51 AM  
Maps, bathymetry profiles, instruments, etc ...

**Local Conditions** — by [Robert M. Branton](#) — last modified Dec 12, 2008 04:17 PM  
Local time, weather conditions, etc ...

**Species List** — by [Robert M. Branton](#) — last modified Feb 25, 2009 04:52 PM  
Common and scientific names with links to Google Images and World Registry of Marine Species. Add all new species here, then copy to data collection folder and remove unwanted species.

**OTN Collaboration Agreement Schedules** — by [Robert M. Branton](#) — last modified Dec 12, 2008 04:19 PM  
Project plan, equipment list, standard operating procedures, and policies ...

**Deployment Review** — by [Duncan Bates \(mgr\)](#) — last modified Dec 12, 2008 04:21 PM  
Discussions and decisions regarding this deployment

**Mailing List** — by [Robert M. Branton](#) — last modified Mar 04, 2010 10:20 AM  
Names and email address for people associated with this deployment

**species list** — by [Robert M. Branton](#) — last modified Feb 11, 2009 11:11 PM

Only site member users with permission may access the various collaborator folders.

# Collaborator Field Metadata and Data

You are here: Home → Data → repository → Perth, WA, Australia - receiver deployment → Data and Metadata

Navigation

GoogleEarth...

CSV product links ...

WMS Link ...

WFS Link ...

short list

long list

data centres

data collections

Arctic

E Indian

Mediterranean

Mid Pacific

NE Atlantic

NE Pacific

NW Atlantic

SE Atlantic

SW Pacific

W Indian

Data Policy, Templates and Workflows

Data and Metadata

by [Robert M. Branton](#) — last modified Mar 02, 2010 03:51 PM

**Spreadsheets, databases, web links, etc ...**

Missions

— by [Duncan Bates](#) — last modified May 06, 2010 09:50 AM

Contains metadata spreadsheets, mission reports, etc., grouped by mission date (yyyy\_mm\_dd), listed in reverse chronological order. Each Mission folder contains a Mission report unique to that mission, any log files downloaded during the mission, and metadata spreadsheets for any activities conducted during the mission, including the Receiver Metadata spreadsheet. NOTE: The Receiver Metadata file is cumulative. Individual mission folders contain a version of this file as submitted with that mission. To ensure that you have the most current information, you should always use the most recent version of the Receiver Metadata file.

Contents

View

Edit

Rules

Sharing

Actions ▼

Display ▼

Add new... ▼

State: **Private** ▼

Proposed Re

Perth, Au:

MS Access

—

Nov, 11. C

database

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Web Page

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General p

WMS - getca

Can be us

WFS - getca

Working c

WFS - getfe:

Most Recent Receiver Metadata File for Perth Line

— by [Susan Dufault](#) — last modified May 06, 2010 10:11 AM

This is the most recently updated version of the cumulative Receiver Metadata spreadsheet. Use this file to ensure that you have the most current information. Individual mission folders contain older versions of this file as submitted with the mission.

otn prt 2010 08 15 and otn prt 2010 09 19

— by [Nick Jarvis](#) — last modified Oct 21, 2010 05:50 AM

Stations PRT030, PRT033, and PRT036 were recovered to evaluate corrosion on 875Ts. Data downloaded in lab 2010-08-25. Stations PRT030, PRT033, and PRT036 were redeployed on 2010-09-19.

otn prt 2010 05 21

— by [Nick Jarvis](#) — last modified Sep 21, 2010 09:32 AM

Data were downloaded from the receiver at PRT034. This station was released but not recovered 2010-02-13. The receiver was found by a fisherman 800 km from Perth and returned to WA Fisheries.

otn prt 2010 02 23

— by [Nick Jarvis](#) — last modified Apr 30, 2010 03:20 PM

Stations PRT024-PRT026 were recovered and redeployed.

otn prt 2010 02 22

— by [Nick Jarvis](#) — last modified Apr 30, 2010 03:19 PM

Stations PRT27-PRT53 were deployed.

otn prt 2010 02 15

— by [Nick Jarvis](#) — last modified Apr 30, 2010 03:17 PM

Recovery attempt of station PRT034 failed. Plans to dive on stations PRT024-PRT026 aborted because of weather

Stored in folder  
Data and Metadata ->  
Missions

12

New mission metadata (mission, receiver, tag) are to be placed on collaborator plone site under a new mission folder.

Quality control is performed, revised metadata also posted on plone.

Instrument log files are also found under the mission folder.

### otn\_prt\_2010\_08\_15 and otn\_prt\_2010\_09\_19

by [Nick Jarvis](#) — last modified Oct 21, 2010 05:50 AM


**Stations PRT030, PRT033, and PRT036 were recovered to evaluate corrosion on 875Ts. Data downloaded in lab 2010-08-25. Stations PRT030, PRT033, and PRT036 were redeployed on 2010-09-19.**

 [otn\\_prt\\_2010\\_08\\_15\\_mission\\_report.xls](#) — by [Nick Jarvis](#) — last modified Oct 21, 2010 05:42 AM

 [otn\\_prt\\_receiverlogs\\_2010-08-25.zip](#) — by [Rory McAuley](#) — last modified Oct 21, 2010 05:48 AM

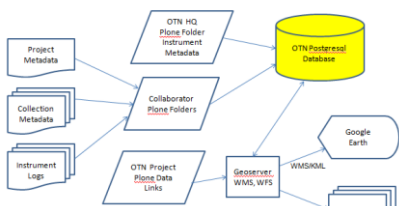
 [otn\\_prt\\_2010\\_09\\_19\\_mission\\_report.xls](#) — by [Nick Jarvis](#) — last modified Oct 21, 2010 05:52 AM

 [otn\\_prt\\_2010\\_09\\_19\\_receiver\\_metadata.xls](#) — by [Nick Jarvis](#) — last modified Oct 21, 2010 05:52 AM

 [otn\\_prt\\_2010\\_09\\_19\\_receiver\\_metadata\\_SDOC.xls](#) — by [Nick Jarvis](#) — last modified Oct 21, 2010 05:53 AM

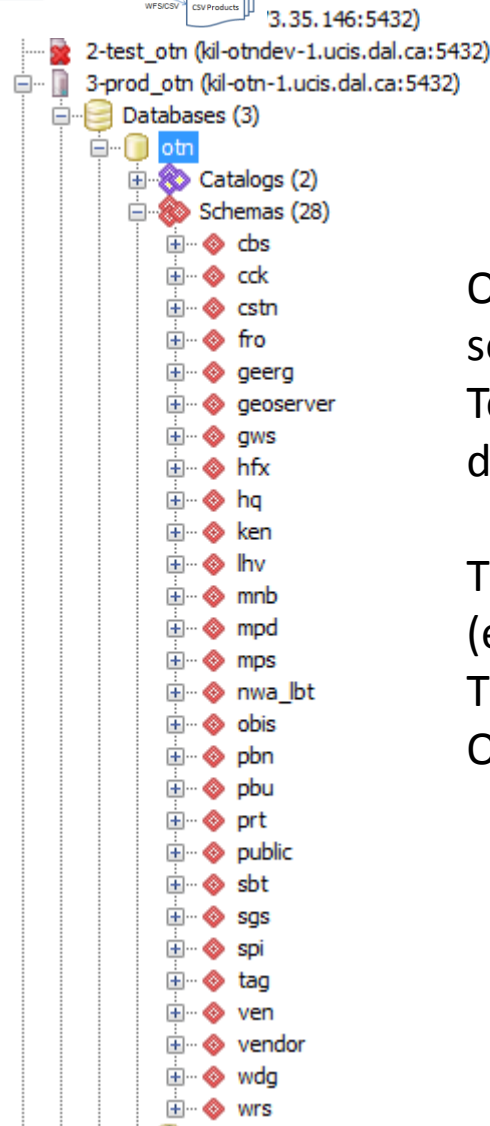
Data Manager quality controlled version of Receiver Metadata.

All metadata and instrument files are converted to CSV for loading to OTN (postgresql) database.



All metadata and instrument files are converted to CSV for loading to OTN (postgresql) database.

# OTN Databases



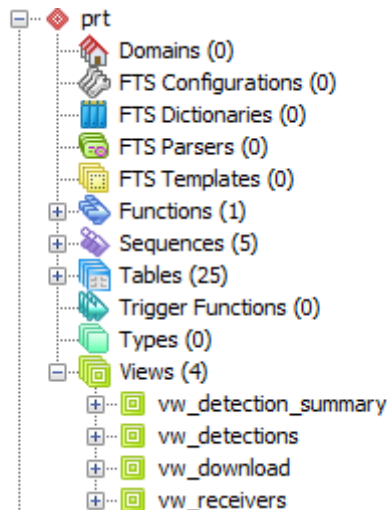
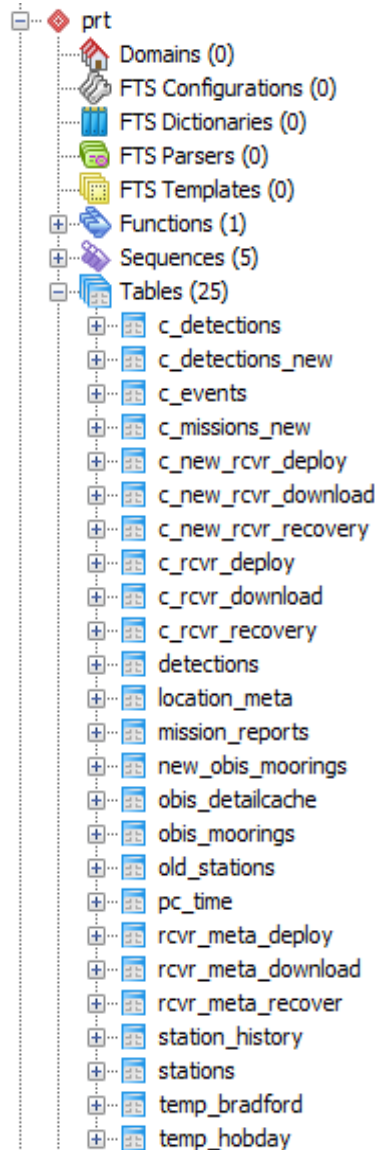
OTN maintains three environments (each contain all software/tools used by OTN Data Centre) Development, Testing and Production. Each includes OTN postgresql database. Permitting among other things data versioning.

The OTN databases contain schema for each data source (each may be one or more of: Deployment Collaborators, Tracking Collaborators, Data Collaborators), as well as OTNDC specific schemas (obis, geoserver).

# Deployment Collaborator Schema

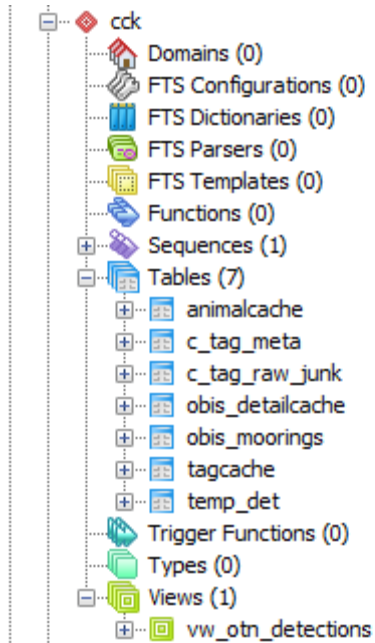
Data is loaded as is into “raw” tables (those beginning with c\_) and then processed (mostly data types) and loaded into processed tables and finally mapped to OBIS like tables (those beginning with obis\_).

Views are created to link receiver metadata with downloads and detections and also detection\_summary (counts).





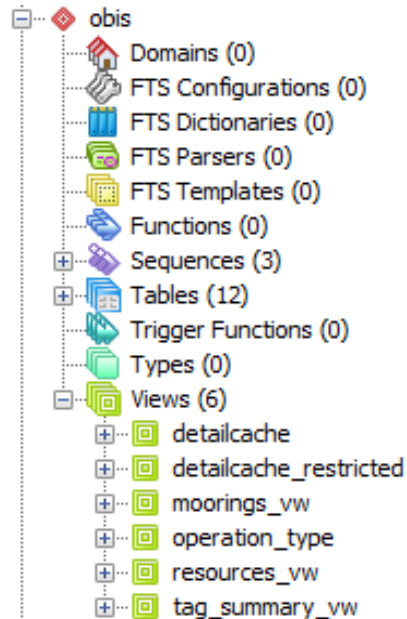
# Tracking Collaborator Schema



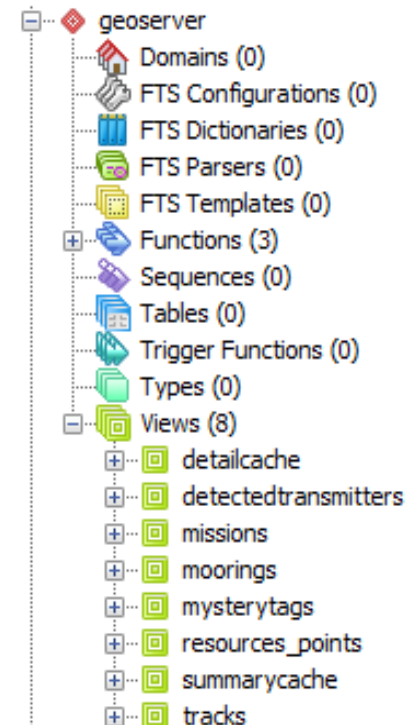
If tracking (i.e. tagging) data then a view is created comparing this tracker's tags with all detections (in obis schema). Result provided to tracking collaborator.

# OBIS and Geoserver Schemas

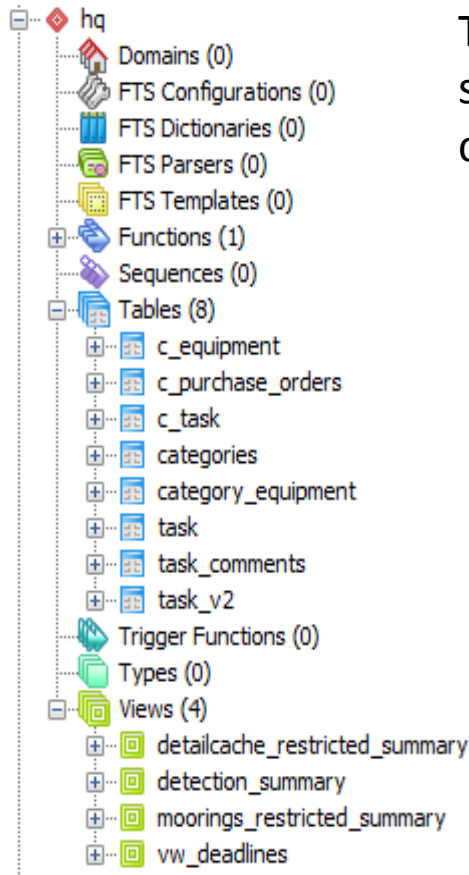
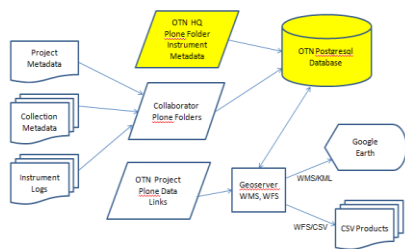
As all schemas are rolled into single schema, activities like matching receiver detections to tag metadata can be performed.



And from the rolled up schema (obis), geoserver schema views selecting from unrestricted data only, are the objects used by Geoserver to generate/query data for WMS/WFS products...Google Earth (KML), CSV.



# HQ Schema

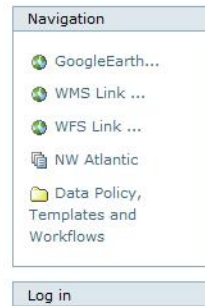
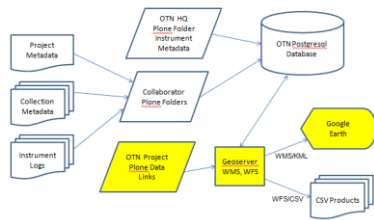


Tables for equipment inventory and collaborator status reporting. Summary views used in quality control and data updates monitoring.

detection\_summary view

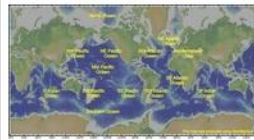
region character varying	speciesname character varying	detectedby text	releasedby text	animals numeric	detects numeric
E Indian	Carcharodon carcharias	PRT: Perth	GWS: WAFish/CSIRO	4	975
E Indian	Pagrus auratus	PRT: Perth	CCK: Cockburn Sound WA	6	614
E Indian	Thunnus maccoyii	PRT: Perth	SBT: CSIRO: SBT tagging	11	500
NW Atlantic	Dermochelys coriacea	CSTN: CSTN NW Atlantic Lea	CSTN: CSTN NW Atlantic Le	59	90637
NW Atlantic	Gadus morhua	CBS: Cabot Strait Line Phase	SPI: Shippagan, NB: Cod ta	12	3651
NW Atlantic	Halichoerus grypus	SGS: Sable Island Grey Seals	SGS: Sable Island Grey Seal	1	17270
NW Atlantic	Salmo salar	HFX: Halifax Line Phase 1	LHV: LaHave River: Salmon	1	2
NW Atlantic	Salmo salar	HFX: Halifax Line Phase 1	PBN: NOAA: Salmon tagging	16	32
NW Atlantic	Salmo salar	CBS: Cabot Strait Line Phase	MSA: MSA: Atlantic Salmon	1	776
NW Atlantic	Salmo salar	CBS: Cabot Strait Line Phase	ASF: ASF: Salmon tagging	1	2
NW Atlantic	Somniosus microcephalus	GEERG: GEERG St. Lawrence	GEERG: GEERG St. Lawrenc	9	74140
NW Atlantic	Thunnus thynnus	CBS: Cabot Strait Line Phase	TAG: Tag A Giant	5	88

# OTN Project Plone Data



## Global

— filed under: [region = global](#), [status = in work](#), [sponsor = GOOS](#), [sponsor = OTN](#)



[See other GOOS pilot projects...](#)

### Global Ocean Tracking Network Metadata and Data Atlas

[About OTN...](#)

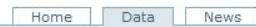
Active regions...



NW Atlantic



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## Navigation

- [GoogleEarth...](#)
- [WMS Link ...](#)
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- [NW Atlantic](#)
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## Global

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Google Earth Network Links to OBIS schema formatted data products from OTN Geoserver including: resource metadata, station locations, detections and tracks. Click this link for direct download to local Google Earth.



### Global Ocean Tracking Network Metadata and Data Atlas

[About OTN...](#)

Active regions...



NW Atlantic

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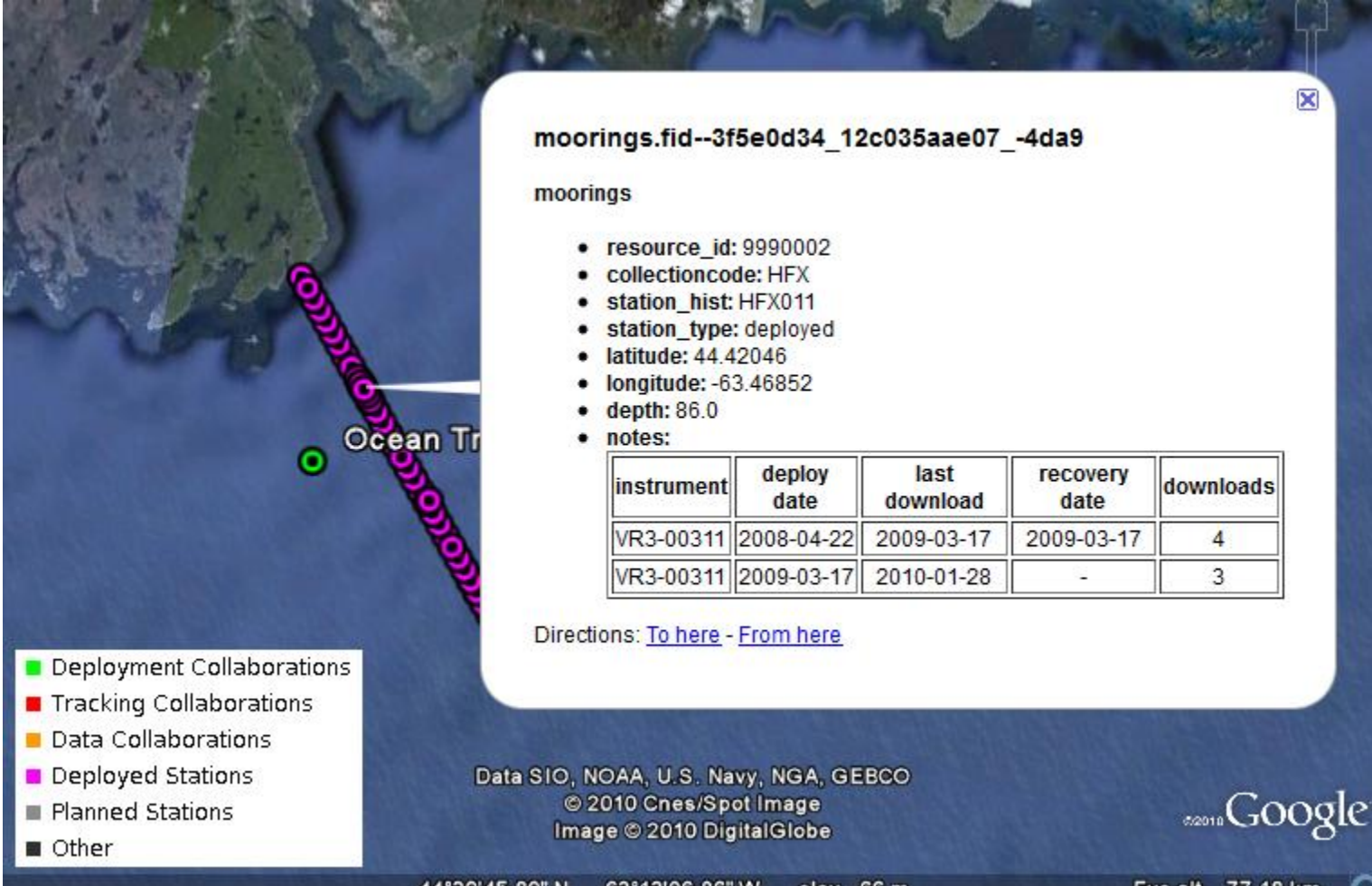
# OTN Data on Google Earth

## OTN Collaborators, NW Atlantic



# OTN Halifax Line Receiver Metadata

Zooming in to Halifax Line, click for metadata



The image shows a map of the Halifax Line in the North Atlantic Ocean. A green circle on the map represents a deployment collaboration. A pink line with circular markers represents the Halifax Line. A popup window displays the following information:

**moorings.fid--3f5e0d34\_12c035aae07\_-4da9**

**moorings**

- resource\_id: 9990002
- collectioncode: HFX
- station\_hist: HFX011
- station\_type: deployed
- latitude: 44.42046
- longitude: -63.46852
- depth: 86.0
- notes:

instrument	deploy date	last download	recovery date	downloads
VR3-00311	2008-04-22	2009-03-17	2009-03-17	4
VR3-00311	2009-03-17	2010-01-28	-	3

Directions: [To here](#) - [From here](#)

Legend:

- Deployment Collaborations (Green square)
- Tracking Collaborations (Red square)
- Data Collaborations (Orange square)
- Deployed Stations (Pink square)
- Planned Stations (Grey square)
- Other (Black square)

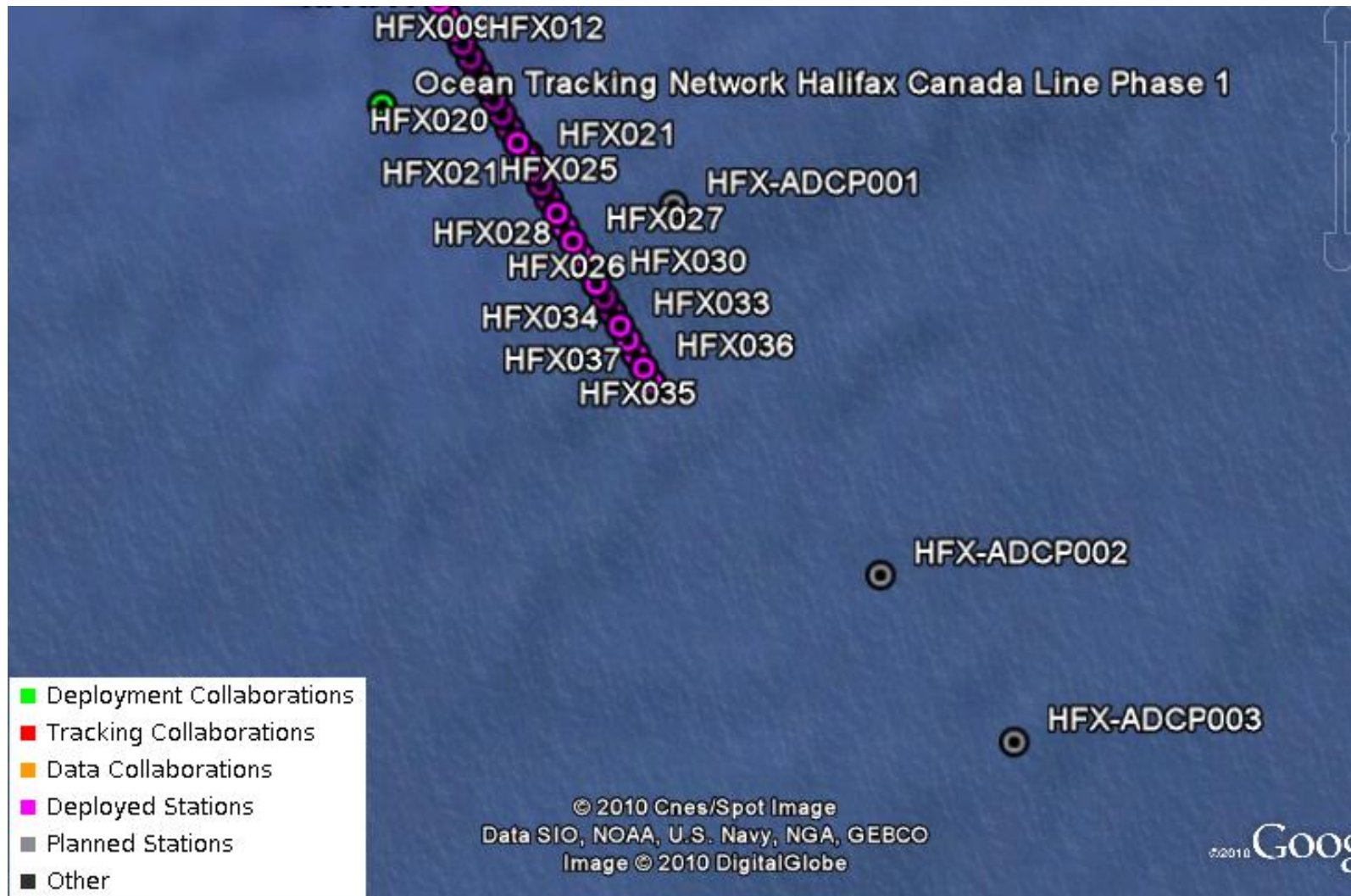
Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
© 2010 Cnes/Spot Image  
Image © 2010 DigitalGlobe

©2010 Google

44°29'45.80" N 63°13'06.86" W elev -66 m Eye alt 77.18 km

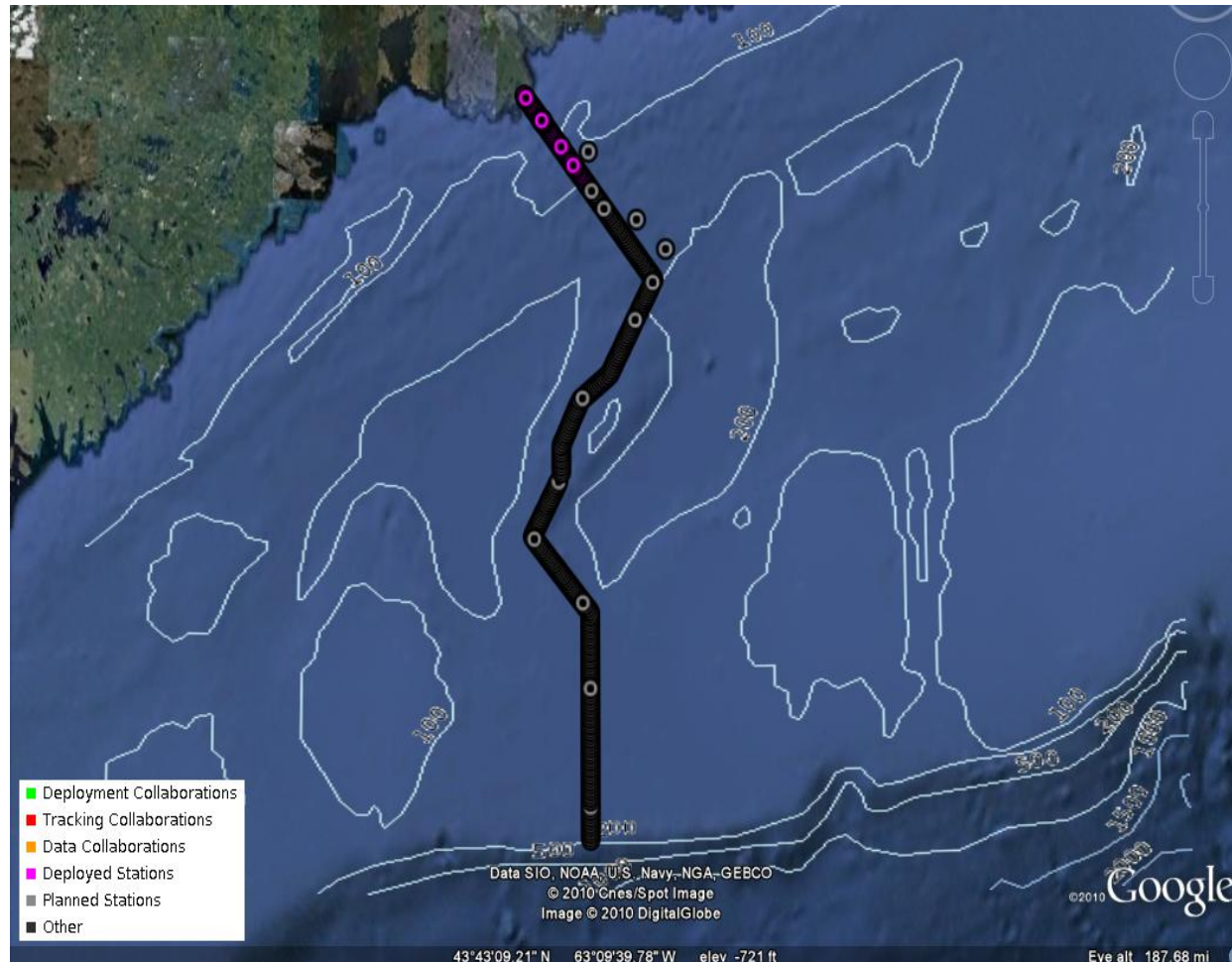


# OTN Halifax ADCP Line





# OTN Halifax Line 1, ADCP Line and Proposed Line 2



# OTN Perth Line



# OTN Perth Line Collaborator Metadata

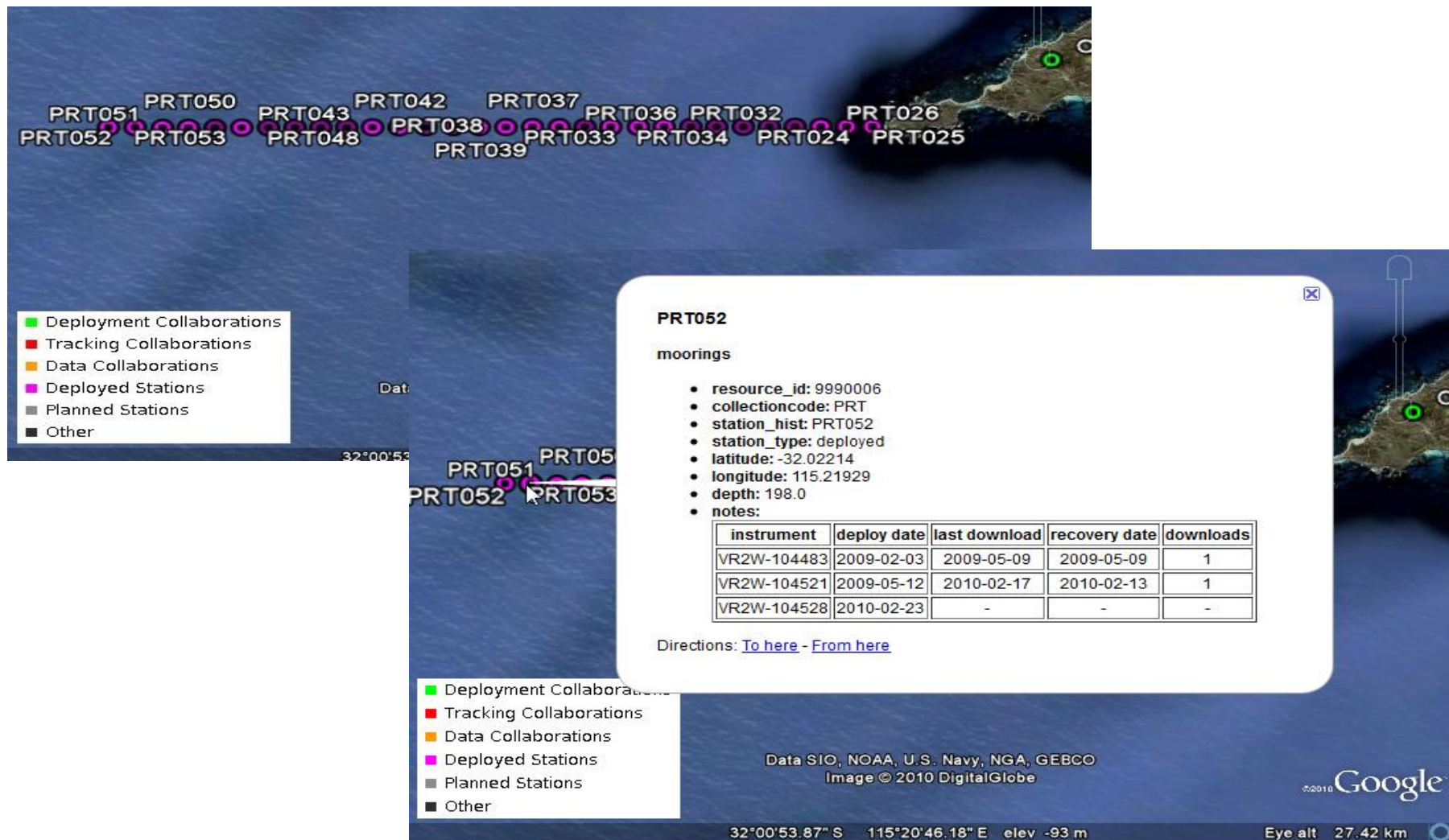
## Ocean Tracking Network Perth Australia Line Metadata and Data Set

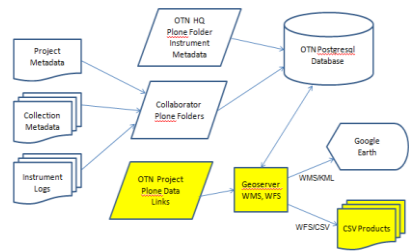
### resources\_points

- **resource\_full\_name:** Ocean Tracking Network Perth Australia Line Metadata and Data Set
- **resource\_citation:** Semmens, J., McAuley, R., O'Dor, R., Stokesbury, M., Branton, R. 2009. Ocean Tracking Network Perth Australia Line Metadata and Data Set. In: Hobday, A., Meekan, M., O'Dor, R., et al. (eds), Ocean Tracking Network East Indian Metadata and Data Series. Retrieved Month dd, yyyy from [oceantrackingnetwork.org](http://oceantrackingnetwork.org).
- **bbox:** (-32.25,-31.75,115.0,116.0)
- **chart:** N/A
- **temp\_bound:** 2009-
- **resource\_abstract:** The concept for the line that was originally called West Cape Howe and was to capture physical oceanographic data to improve the Ocean model BRAN, is now called the Perth Line. In this system, ocean currents sweep southward from waters around Indonesia. Multiple species of commercially valuable animals interact with this ocean current. BRAN is currently the most sophisticated ocean model in the world, and it is built solely on remote sensing (satellite) data. Measurements from below the ocean's surface will greatly increase the accuracy of the model. OTN receivers will provide the biological part of an ocean observation system that will collect sub surface data from measurement of physical and biological variables using moored sensors and tagged animals. This line was moved slightly north from its original proposed position as the Perth area is more accessible, and recent tracking has proven that the Perth area is a hotspot for multi-species animal migrations. Whale sharks are one species of interest in the system. They draw in many tourists and therefore are very economically valuable to the economy of this area. Other animals that will also be tagged in the vicinity will include Great White sharks and valuable tuna species. AATAMS has many on-going research studies in nearby Ningaloo reef. There will be much valuable information gained on the migrations of these animals as they cross the Perth Line.
- **resource\_contact:** Jayson Semmens - [Jayson.Semmens@utas.edu.au](mailto:Jayson.Semmens@utas.edu.au)
- **resource\_website:** <http://oceantrackingnetwork.org/news/overseas1.html>
- **getdata:** N/A
- **resource\_usage:** A memorandum of understanding with and/or permission from the leading scientific contact is required to gain access to these data prior to the release date listed in the citation. Acknowledge the use of specific records in the form appearing in the Citation field. For information purposes, email to [otndc@dal.ca](mailto:otndc@dal.ca) the full citation of any publication made (printed or electronic) that cites OTN or any constituent part. Also see the OTN Data Policy at <http://www.marinebiodiversity.ca/OTN/policies/otn-data-policy-ver-11-oct-30>.
- **ron\_id:** 9992002
- **region\_name:** East Indian Ocean
- **provider\_id:** 1001
- **provider\_name:** OTN Global
- **operation\_type:** line
- **resource\_id:** 0000000



# OTN Perth Line Receiver Metadata





# OTN Project Plane CSV Products

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## Ocean Tracking Network

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- [GoogleEarth...](#)
- [WMS Link ...](#)
- [WFS Link ...](#)
- [NW Atlantic](#)
- [Data Policy, Templates and Workflows](#)

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— filed under: [region = global](#), [status = in work](#), [sponsor = GOOS](#), [sponsor = OTN](#)

[See other GOOS pilot projects...](#)

### Global Ocean Tracking Network Metadata and Data Atlas

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Active regions...

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Need to login to see more including CSV Products.

# OTN Project Plone CSV Products

Under Construction



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Inspiring Minds



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TRACKING NETWORK

Home

About OTN

Policies

Meetings

Users

Groups

Data

News

Events

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Lenore Bajona

Log out

You are here: Home → Data

Navigation

GoogleEarth...

CSV product links

...

WMS Link ...

WFS Link ...

short list

long list

data centres

data collections

data inventory

metadata

Contents

View

Edit

Criteria

Subfolders

Rules

Sharing

Actions

Display

Add new...

State: Published

Info

Welcome! You are no

CSV product links ...

by Robert M. Branton — last modified Jul 16, 2010 11:50 AM

Global

by Ron O'Dor — last modified  
— filed under: [region = global](#)



Links to CSV version of OTN Data Products

- Please review our [Data Policy](#). If you do not agree with our policy then do not access our data.
- List of Resources and Providers: [CSV Resources Link](#) (this may take a couple of minutes)
- Click the getdata links to get csv file versions of the various data product ...

Region	Resource	Getdata Links
East Indian Ocean	OTN - Perth Australia Line	MooringSites
Northwest Atlantic Ocean	GEERG - St Lawrence River Estuary Greenland Sharks	Missions, MooringSites
	OTN - Cabot Strait Line Phase 1	MooringSites
	OTN - Halifax Canada Line Phase 1	Missions, MooringSites, MysteryTags

- Private products require you to enter a userid and password, contact: [otndc@dal.ca](mailto:otndc@dal.ca)
- These data are also available via [Google Earth...](#)
- More products coming soon...

# OTN Perth Line Mooring Sites

Under Construction

CSV product link

by [Robert M. Branton](#) — last

- Please review our
- List of Resources and
- (this may take a co
- Click the getdata link

1	FID	collection	latitude	longitude	depth			
2	moorings.	PRT	-32.0503	115.7238	10.2			
3	moorings.	PRT	-32.0445	115.7241	10			
4	moorings.	PRT	-32.0432	115.716	11			
5	moorings.	PRT	-32.0415	115.7078	17			
6	moorings.	PRT	-32.04	115.7	19			
7	moorings.	PRT	-32.0379	115.6926	19			
8	moorings.	PRT	-32.0365	115.6848	21			
9	moorings.	PRT	-32.0343	115.6771	18			

Region	Resource	Getdata Links
East Indian Ocean	OTN - Perth Australia Line	<a href="#">MooringSites</a>
Northwest Atlantic Ocean	GEERG - St Lawrence River Estuary Greenland Sharks	Missions, <a href="#">MooringSites</a>
	OTN - Cabot Strait Line Phase 1	<a href="#">MooringSites</a>
	OTN - Halifax Canada Line Phase 1	Missions, <a href="#">MooringSites</a> , <a href="#">MysteryTags</a>

- Private products require you to enter a userid and password, contact: [otndc@dal.ca](mailto:otndc@dal.ca)
- These data are also available via [Google Earth...](#)
- More products coming soon...



# OTN Halifax Line Missions

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CSV product link

by [Robert M. Branton](#) — last

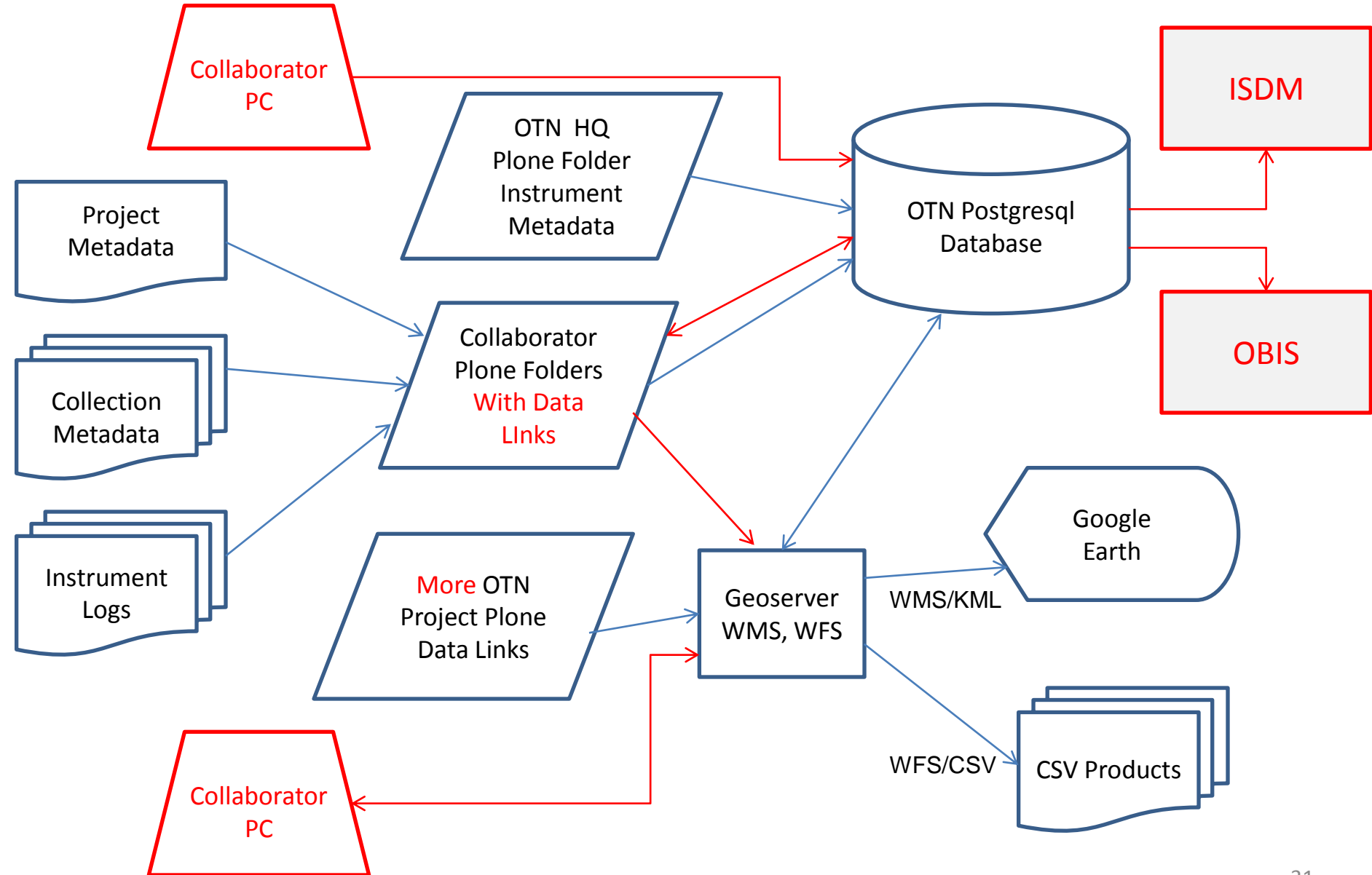
- Please review our
- List of Resources and
- (this may take a co
- Click the getdata link

FID	resource	otn_mission	host_mission	vessel_name	mission_date	chief_scientist	data_collector	other_person	destination	weather
2	missions.1HFX	C62008042	0	C6	2008-04-2		Bates D	0	HFX	0
3	missions.1HFX	C62008042	0	C6	2008-04-2		Bates D	0	HFX	0
4	missions.1HFX	C62008042	0	C6	2008-04-2		Smith PC	0	HFX	0
5	missions.1HFX	C62008050	0	C6	2008-05-0		Smith PC	0	HFX	0
6	missions.1HFX	C62008052	0	C6	2008-05-2		Bates D	0	HFX	0
7	missions.1HFX	C62008053	0	C6	2008-05-3		Bates D	0	HFX	0
8	missions.1HFX	DOMINI20	BIO200805	Dominion	2008-09-2		Bates DL	Kirchhoff	Halifax line	sunny, fin

Region	Resource	Getdata Links
East Indian Ocean	OTN - Perth Australia Line	MooringSites
Northwest Atlantic Ocean	GEERG - St Lawrence River Estuary Greenland Sharks	Missions, MooringSites
	OTN - Cabot Strait Line Phase 1	MooringSites
	OTN - Halifax Canada Line Phase 1	Missions, MooringSites, MysteryTags

- Private products require you to enter a userid and password, contact: [otndc@dal.ca](mailto:otndc@dal.ca)
- These data are also available via [Google Earth...](#)
- More products coming soon...

# Future OTN Data Workflow Diagram



# Future OTN Data Access and Products

Place site links to Collaborator/OTN developed postgresql queries and/or WMS, WFS products. Facilitating creation and Internet access of individual collaborator and/or regional standard reports.

Add bathymetry, add additional oceanographic data.

Detections and animal tracks WMS, WFS products.

Get Data and other (e.g. charts) links from KML Collaborator Metadata.

Distribution to Ocean Biogeographic Information System (OBIS) of public tag releases, with links to tracks.

Collaborator password protected access to OTN postgresql collaborator data schema.

Collaborator password protected access to OTN Geoserver collaborator schema layers.

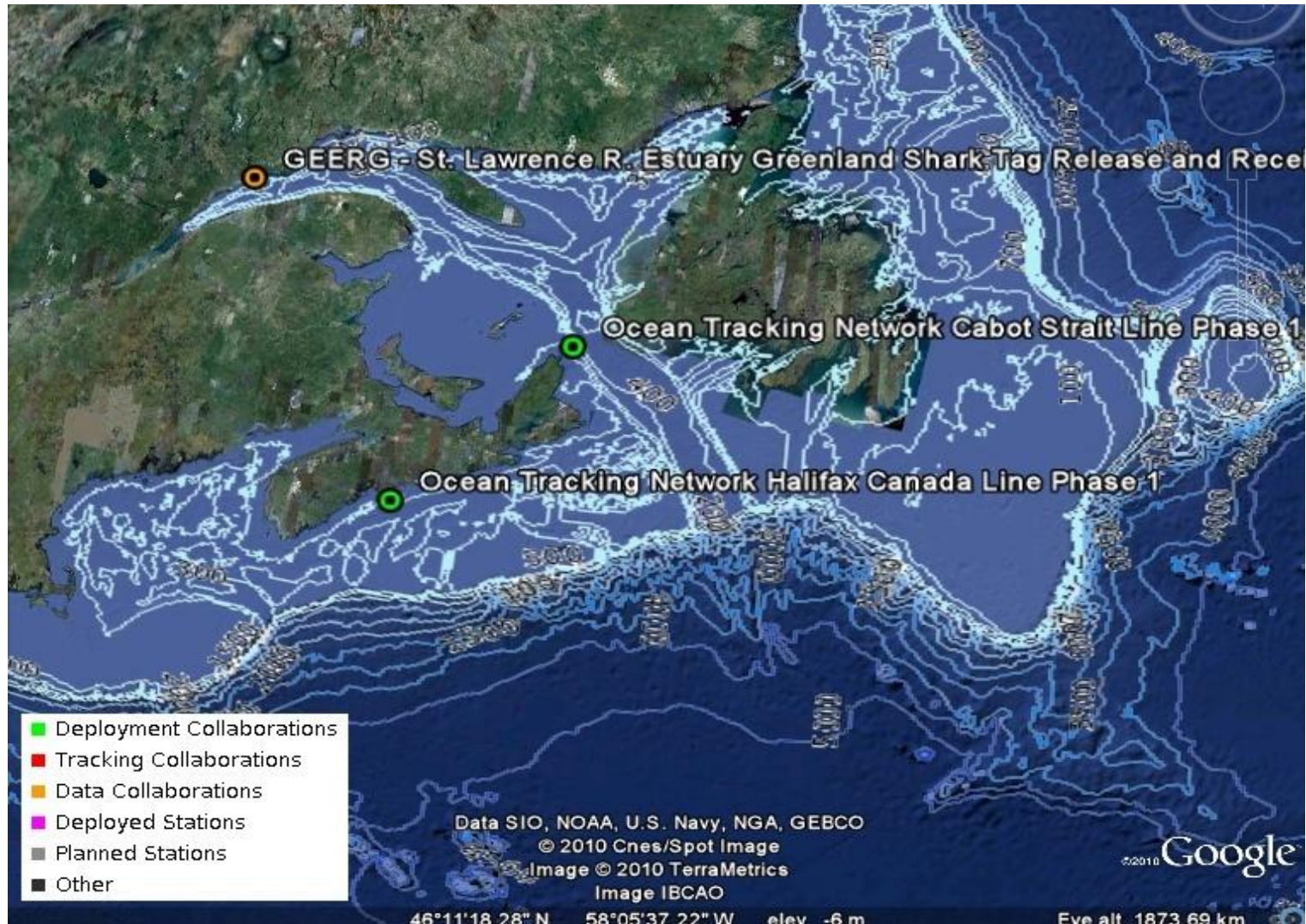
Final archival of entire (raw files, database content, geoserver products, etc) OTN data collection at DFO, Integrated Science Data Management (ISDM).  
OTN collaborator data restriction agreements will be honoured.

# Regional Summary Report Example

NW Atlantic Draft Report Statistics from postgresql queries.

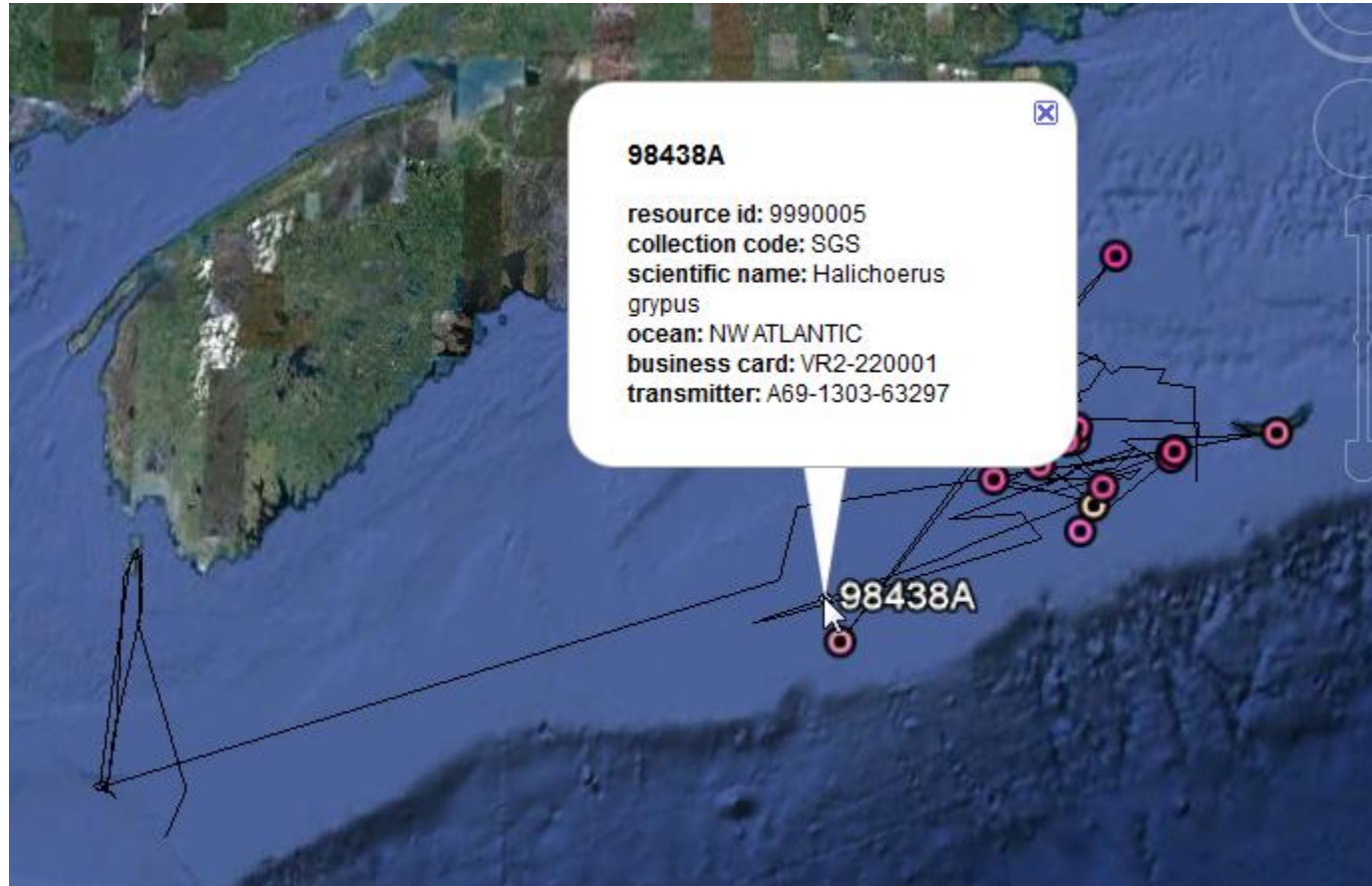
Summary of Detections							
<u>Collaborator</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Species</u>
Halifax Line: Stations HFX1-37	NA	NA	NA	408	197	1	Atlantic salmon
Minas Passage: Stations MPS1-MPS12	NA	NA	NA	NA	NA	NA	NA
Cabot Strait/Strait of Canso: Stations CBS1-CBS37	NA	NA	NA	NA	144	4422	Atlantic salmon, Atlantic cod, Atlantic bluefin tuna
Summary of Individual Tags Detected							
<u>Collaborator</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Species</u>
Halifax Line: Stations HFX1-37	NA	NA	NA	28	50	1	Atlantic salmon
Minas Passage: Stations MPS1-MPS12	NA	NA	NA	NA	NA	NA	NA
Cabot Strait/Strait of Canso: Stations CBS1-CBS37	NA	NA	NA	NA	2	19	Atlantic salmon, Atlantic cod, Atlantic bluefin tuna
Total	0	0	0	28	52	20	
Number of Detected Tags by Release Organization							
<u>Organization</u>							
NOAA	-	-	-	-	16	-	
UOM	-	-	-	-	-	-	
ASF	-	-	-	-	-	1	
UMASS	-	-	-	-	-	-	
USGS	-	-	-	-	-	-	
DMR	-	-	-	-	-	-	
DFO	-	-	-	1	2	10	
USM	-	-	-	-	-	-	
ECU	-	-	-	-	-	-	
UNH	-	-	-	-	-	-	
MSA	-	-	-	-	-	1	
TAG	-	-	-	-	-	5	
UNKNOWN	-	-	-	27	34	3	
Total	0	0	0	28	52	20	

# FAO Bathymetry





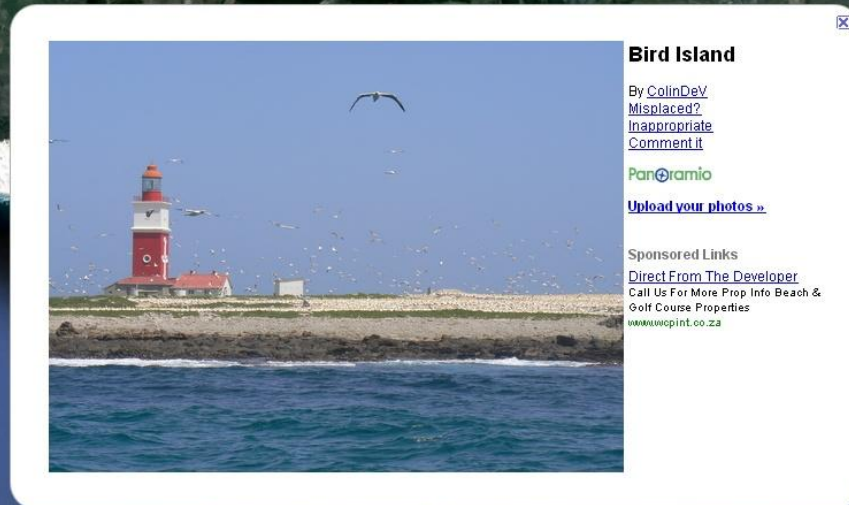
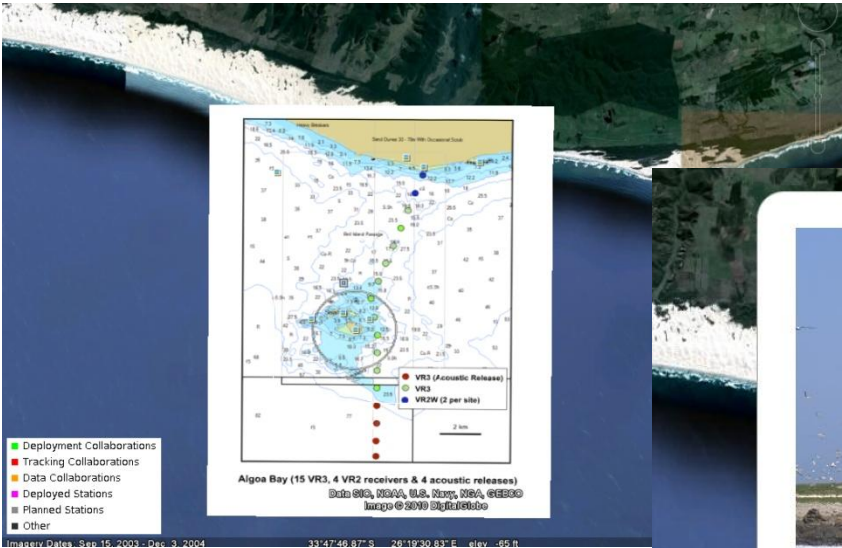
# Animal Track including VMT detections of other animals



# Maps & Charts

## Algoa Bay Acoustics Receivers

Fade Image, add MPA and Panoramio Photos





# Distribution to OBIS and ISDM

Home Search Data Maps About OBIS Contact English

**OBIS** OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

Welcome to OBIS!  
Last updated on Tue, 2010-09-21 21:59. Originally submitted by endberg on 2010-05-25 15:58.

OBIS allows users to search marine species datasets from all of the world's oceans.

With our evolving OBIS database repository, users can identify biodiversity hotspots and large-scale ecological patterns, analyze dispersions of species over time and space, and plot species' locations with temperature, salinity, and depth.

To search the database, please select the "Search Data" option in the toolbar above.

If you want to see overview maps of OBIS content and derived information, select "Maps".

SEARCH OBIS PAGES

Search

IOBIS.ORG VERSION 2

Looking for the version of the IOBIS website from before September 2010? IOBIS version 2 is still running here

RECENT NEWS

2010-09-21  
Launch of the new OBIS web site imminent

2010-09-02  
Prototype OBIS web site becomes available

2010-09-02  
IndOBIS node manager on study visit

2010-08-02  
New Data on OBIS

2010-07-15  
New members of staff

more

Species Search

Common name contains African lanternshark

Taxonomic Tree

Scientific name Elasmobranchii

Authority Bigelow, Schroeder & Springer, 1953

Rank Species

Common names

Other languages

Geographic coverage

Temporal coverage

Records this rank

Records counting

Environmental Information

Bottom depth

Sample depth

Temperature

Salinity

Dissolved oxygen

Phosphate

Silicate

Links to Other Information Systems

Related datasets

CENSUS OF MARINE LIFE

OBIS strives to document the ocean's diversity, distribution and abundance of life. Created by the Census of Marine Life, OBIS is now part of the Intergovernmental Oceanographic Commission of UNESCO, under its International Oceanographic Data and Information Exchange programme

[www.iobis.org](http://www.iobis.org)

**Fisheries and Oceans Canada**  
www.dfo-mpo.gc.ca

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Scientific Data and Products

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Working Near Water

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**Resources**

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**Integrated Science Data Management (ISDM)**

Providing Access to Ocean Data

ISDM's mandate is to manage and archive ocean data collected by DFO, or acquired through national and international programmes conducted in ocean areas adjacent to Canada, and to disseminate data, data products, and services to the marine community in accordance with the policies of the Department.

**Programme Descriptions**

Show descriptions

- Argo
- Atlantic Zone Monitoring Programme (AZMP)
- BioChem
- Climate Variability (CLIVAR)
- National Contaminants Information System (NCIS)
- Tides and Water Levels
- Global Temperature-Salinity Profile Project (GTSP)
- Joint Commission on Oceanography and Marine Meteorology (J-COMM)
- Responsible National Oceanographic Data Centre (RNODC)
- Ship of Opportunity Programme (SOOP) Implementation Panel

**Data Request Form**

Requests for data, data products and additional information may be made online by completing the Data Request Form

**Important Messages**

Commercial Reproduction

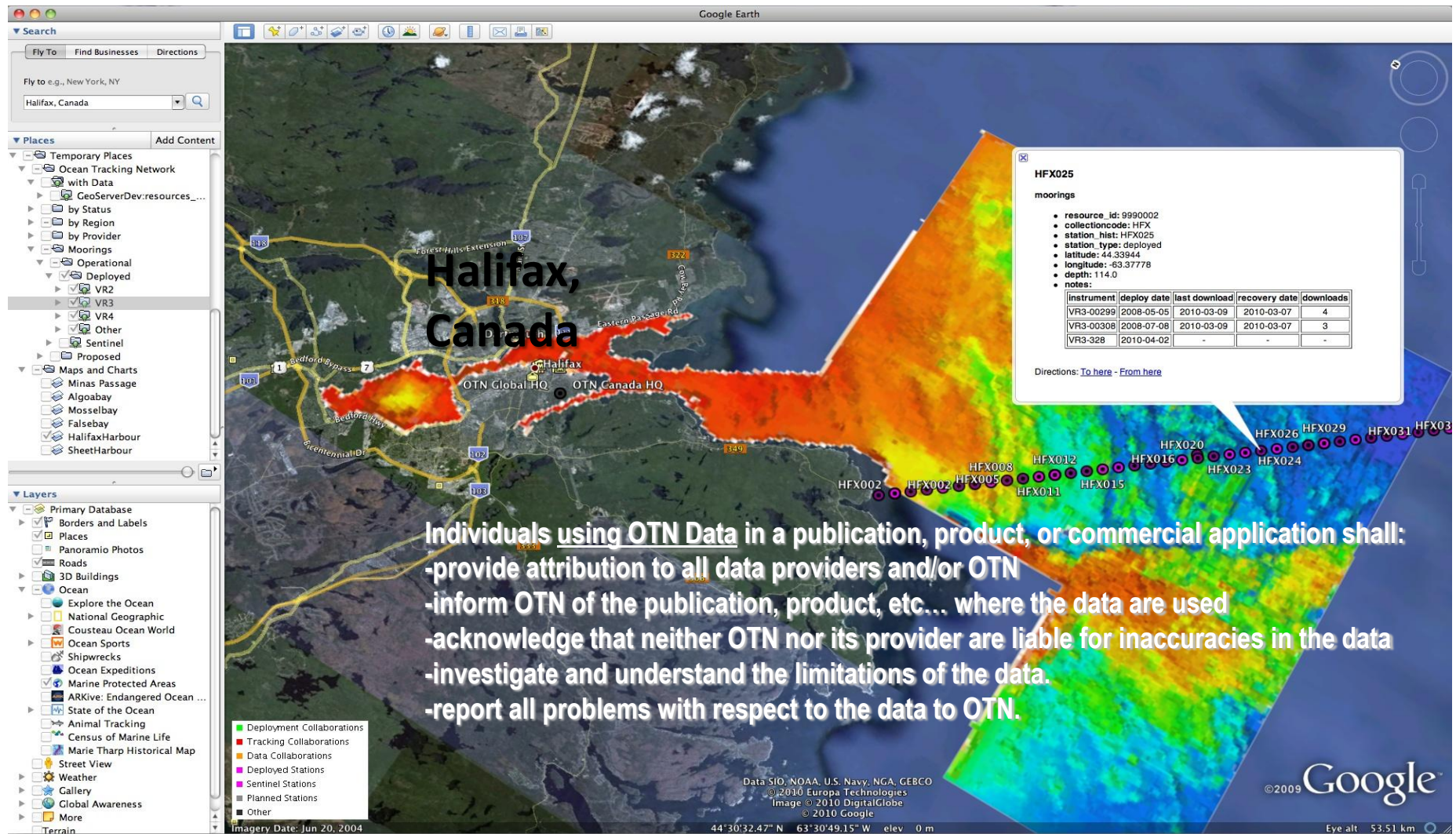
Past notices

**Quick Links**

- Argo
- AZMP
- BioChem
- CLIVAR
- Code List
- Contaminants
- Currents
- Drifting Buoys
- Geoport
- GTS code forms and advisories
- GTSP
- ICES
- J-COMM
- NAFO
- Ocean Profiles
- Offshore Oil & Gas
- Remote Sensing
- RNODC
- SOOP
- Standards
- Thermosalinographs
- Tides and Water Levels
- TWL Applications
- Waves
- WOCE

[www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/index-eng.html](http://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/index-eng.html)

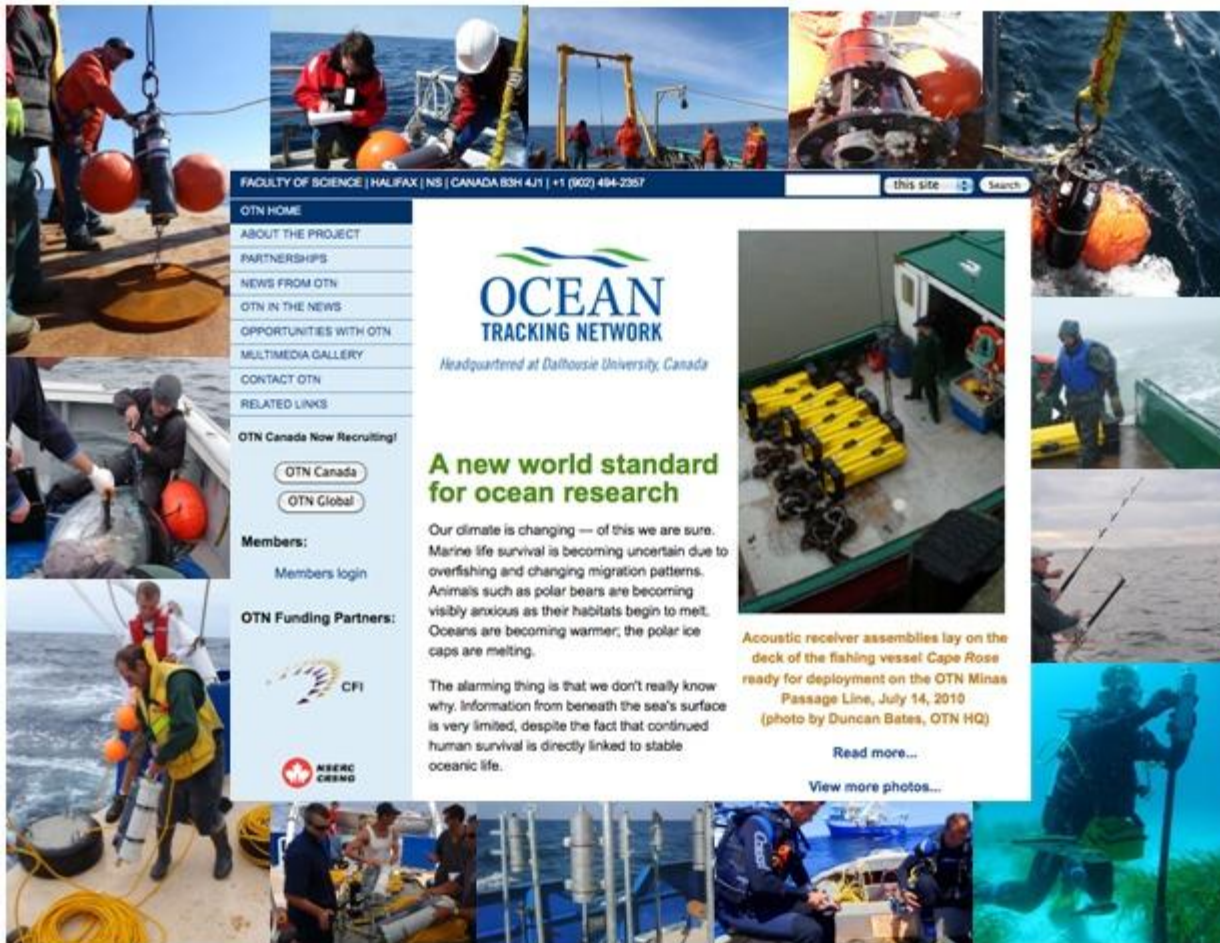
# NRCan Multibeam Bathymetry





# OTN's Outreach Site

The most recent news item shown here is about deployment of acoustic receivers in and around the Minas Passage tidal power site in Nova Scotia's Bay of Fundy, location of the 'world's highest tides' and so the 'gold standard for moored instrument deployments' .



The screenshot displays the Ocean Tracking Network (OTN) website. The header includes the OTN logo and the text "Headquartered at Dalhousie University, Canada". A navigation menu on the left lists: OTN HOME, ABOUT THE PROJECT, PARTNERSHIPS, NEWS FROM OTN, OTN IN THE NEWS, OPPORTUNITIES WITH OTN, MULTIMEDIA GALLERY, CONTACT OTN, and RELATED LINKS. Below the menu, there are links for "OTN Canada Now Recruiting!", "OTN Canada", and "OTN Global". The "Members:" section includes a "Members login" link. The "OTN Funding Partners:" section features logos for CFI and NSERC. The main content area displays a news article titled "A new world standard for ocean research" with a sub-headline "Our climate is changing — of this we are sure. Marine life survival is becoming uncertain due to overfishing and changing migration patterns. Animals such as polar bears are becoming visibly anxious as their habitats begin to melt. Oceans are becoming warmer; the polar ice caps are melting." The article text continues: "The alarming thing is that we don't really know why. Information from beneath the sea's surface is very limited, despite the fact that continued human survival is directly linked to stable oceanic life." Below the article, there are links for "Read more..." and "View more photos...". The article is accompanied by several photographs: a large image of acoustic receiver assemblies on the deck of the fishing vessel Cape Rose, and smaller images showing researchers working on the ship and a diver underwater.

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OTN Funding Partners:  
CFI  
NSERC

**OCEAN TRACKING NETWORK**  
Headquartered at Dalhousie University, Canada

**A new world standard for ocean research**

Our climate is changing — of this we are sure. Marine life survival is becoming uncertain due to overfishing and changing migration patterns. Animals such as polar bears are becoming visibly anxious as their habitats begin to melt. Oceans are becoming warmer; the polar ice caps are melting.

The alarming thing is that we don't really know why. Information from beneath the sea's surface is very limited, despite the fact that continued human survival is directly linked to stable oceanic life.

Acoustic receiver assemblies lay on the deck of the fishing vessel Cape Rose ready for deployment on the OTN Minas Passage Line, July 14, 2010 (photo by Duncan Bates, OTN HQ)

Read more...  
View more photos...