

6th Session – virtual Meeting – 16 and 18 March 2021

History and protocols with the SOT-ID Submitting Metadata to OceanOPS

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The SOT-ID: Identifier issues in a nutshell

- Issues with SOT station identifiers have a long history (SOT 4 and 5, 2007-09)
- ITU Call signs are non-unique and re-allocated, change when the ship changes the flag and create security and other concerns (piracy areas, government ships, ...)
- IMO numbers do not change, but are neither allocated to all ships, nor processable by all data-centers (only digits) and also create security concerns
- Numerous ships host more than one station, e.g. manual and automated weather stations, or underway, XBT and ASAP systems, all requiring individual IDs (WIGOS)
- Based on best practices from other networks (DBCP, Argo) with WMO-IDs, a Task Team suggested a new identifier series to the SOT, then OCG and eventually JCOMM
- All these bodies endorsed the SOT-ID scheme, and countries still using masks agreed to replace them by SOT-IDs



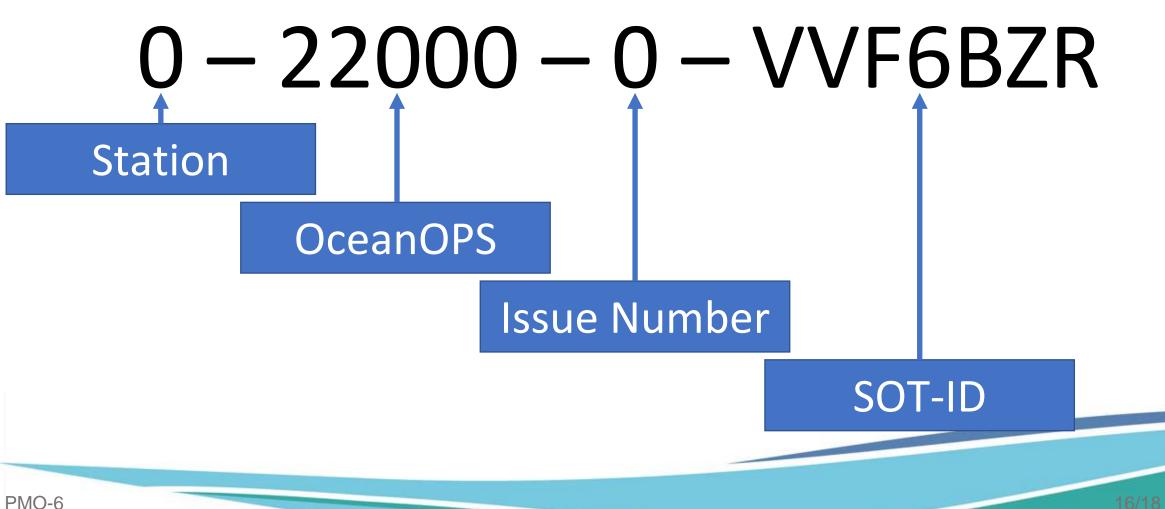
Annex to Decision 32 (JCOMM-5, reworded)

SOT-9 recommended to adopt a new scheme that would provide unique identifiers for marine observing facilities on ships. The Recommendation includes the following:

- OceanOPS will issue WIGOS Identifiers for marine observing facilities on ships with a dedicated <issuer of identifier> assigned to OceanOPS;
- The local identifier will be exactly seven characters: n1n2n3n4n5n6n7; n1,n4,n5,n6 will be letters or digits; n2,n3,n7 will be letters. This will also form the SOT-ID;
- No information, such as type of station, link to ship, operator, etc., will be encoded into the SOT-ID;
- Changes to the assigned SOT-ID will be governed according to decision trees below
- Each ship hosting or deploying instruments shall be assigned a unique hull or platform ID as part of a wider GOOS ship list. The IMO number (if available) or ICES Ship Code should be used for this purpose, with new ICES codes requested when a new ship is recruited.



Example of WIGOS and SOT-ID



6/18 March 2021

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Contact		1402553_100				Last upo	lated: 2021-01-18 b	y DC JCOMMOI
Bibliographic Referen	ice	✓ Station characteristics						
		Name: Station alias: Date established: Date closed: Declared reporting status: Calculated reporting status: Station type: WIGOS Station Identifier(s):		22 Ial	Primary	H +	100km	apbox© WM
		Program / network affiliation	Program specific ID		culated status	Declared status	From	То
		COPERNICUS-HRSST-FRM Coordinates: Time zone: Supervising organization:	1402553 > 25.4650	Approved Ope	rational Junknown)	Operational	2019-07-22	

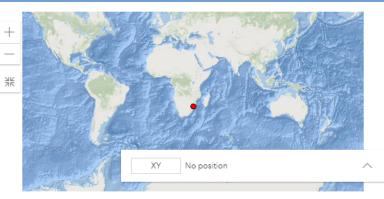
Station URL:

https://www.ocean-ops.org/board/wa/Platform?ref=1402553_100

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Main infor	mation						
HF							
Sites	PONOE MOZCHANN	IFL		WMO ID	1402553		
Reference	1402553_100			WIGOS ID	0-22000-100-1402553		
Internal ID	TRUS-06				View in OSCAR		
Status	INACTIVE i			Telecom	IRIDIUM (# 300234066511990)		
Country	EUROPEAN UNION	(COPERNICUS HRSST FRM)		Networks	Global Drifter Array		
Model	SVP_BRST (SVP)				DBCP		
				Ship	<u>BEAUTEMPS-BEAUPRE (35B5 - France)</u> 🚺		

Tracking lifecycle





Technical details

BatteryAlkalineBattery pack72Serial numberSC40 Y18 N0104Cycle time1 hIce detectionNo

NKE_CTN SST_OTHER End date

Sensors

2020-03-18T00:00:00

DROGUE_STRAIN_GAUGE

CURRENT

MOSENS (Serial N°: 468D)

PRES, HRSST

End date 2020-03-18T00:00:00

VAISALA_PTB110 (Serial N°: P3340609)

BAROMETER_ELECTRONIC_DIGITAL

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Technical details

Battery Alkaline Battery pack 72 Serial number SC40 Y18 N0104 Cycle time 1 h No Ice detection

Sensors NKE_CTN

SST_OTHER

End date

DROGUE_STRAIN_GAUGE

CURRENT

MOSENS (Serial N°: 468D)

PRES, HRSST End date 2020-03-18T00:00:00

2020-03-18T00:00:00

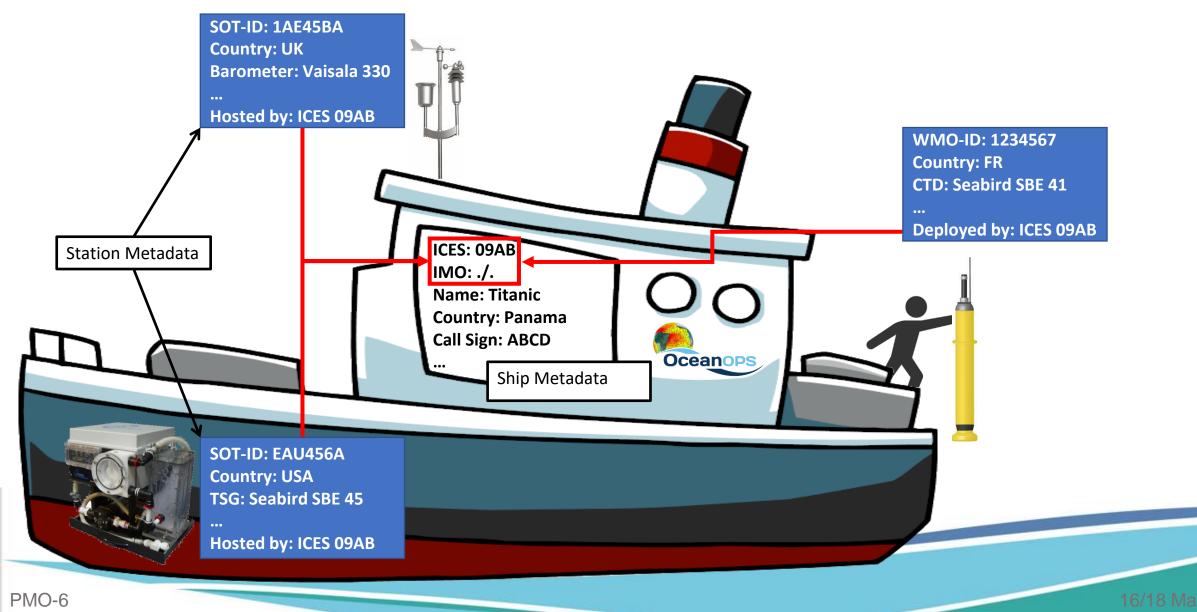
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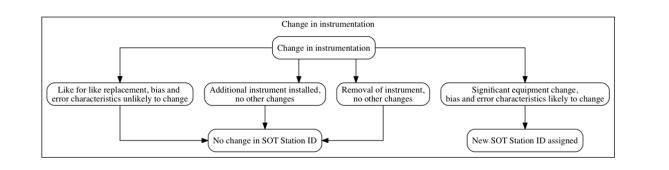
Ships host observing facilities, without being such a facility

All observing facilities installed on, or deployed by a ship, refer to the shared unique Ship-ID (ICES/IMO)





New SOT-ID? Decision trees





- Instrumentation moved to different ship: new SOT-ID; Change in network operator or recruiting country: new SOT-ID;
- Significant instrumentation change (likely to change bias or error characteristics): new SOT-ID;
- Replacement of instruments (like for like, no change to bias or error characteristic): no new SOT-ID;
- Change of ship owner, flag, callsign, name, etc. but no change of instrumentation: no new SOT-ID;
- Additional instrument installed or removal of instrument: no change of SOT-ID.
 A manual is underway!

WMO-No. 47

Metadata Format Version 04

Semi-colon delimited exchange format – element descriptions, formats and sequence

Order	Code Name	Explanation	Table	Format	Footnote	Example
1	rcnty;	Recruiting country.	1801		No	
2	ver;	Metadata format version			No	04
3	prepared;	Date of report preparation.		ddmmyyyy	No	
4	name;	Ship's name.			No	
5	reg;	Country of registration.	1801		No	
6	call;	Call sign or WMO Number. Some sea stations are identified by a WMO Number instead of a call sign.			No	
7	IMOn;	IMO Number. Unique identifying number assigned by Lloyd's Register to the hull of the ship.			No	
8	vssl;	Vessel type.	2201		Yes	
9	vssIP;	Vessel digital image.	2203		No	
10	lenvssID;	Length overall of the ship, ignoring bulbous bow.		0.0 m	No	
11	brdvssID;	Moulded breadth. The greatest breadth amidships.		0.0 m	No	
12	frbvssID;	Freeboard. The average height of the upper deck above the maximum Summer load line.		0.0 m	No	
13	drfvssID;	Draught. The average depth of the keel below the maximum Summer load line.		0.0 m	No	
14	chtvssID;	Cargo height. Maximum height above the maximum Summer load line.		0.0 m	No	
15	brdg;	Distance of the bridge from the bow.		0.0 m	No	
16	spd;	Maximum operating speed of the vessel on normal service.		0 kts	No	
17	rte;	Route No.1.	1802		Yes	
18	rte;	Route No.2.	1802		Yes	
19	rte;	Route No.3.	1802		Yes	
20	rte;	Route No.4.	1802		Yes	
21	rte;	Route No.5.	1802		Yes	
22	rte;	Route No.6.	1802		Yes	
23	rte;	Route No.7	1802		Yes	
24	rte;	Route No.8.	1802		Yes	

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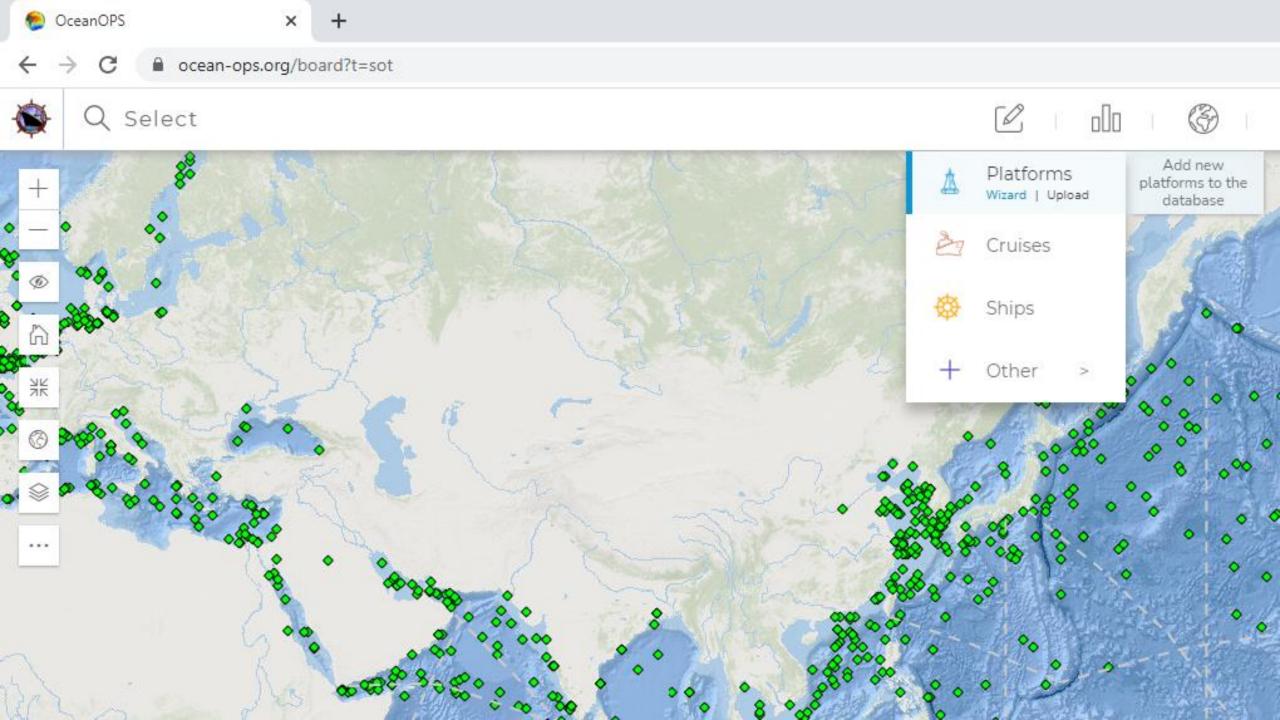
11 sub47record nmsID=""><name>ASIA VISION</name><reg>BS</reg><call>C6AX3</call><IMOn>9606948</IMOn><vssl footnote="">GT</vssl><digital_image><vsslPice</pre>

The following mandatory fields represent the minimum suite of metadata that can be submitted for a ship:

- a. rcnty (recruiting country)
- b. call (callsign)
- c. vosR (VOS recruitment date)
- d. vssIM (type of meteorological reporting vessel)
- e. atm (general observing practice)

	А	F	Z	AD	AE	
1	rcnty	call	vosR	vssIM	atm	
2	FR	BATEU02	5092006	15	3	
3	FR	EIGB	1012019	15	3	
4	FR	TAMOURE	1012003	10	1	

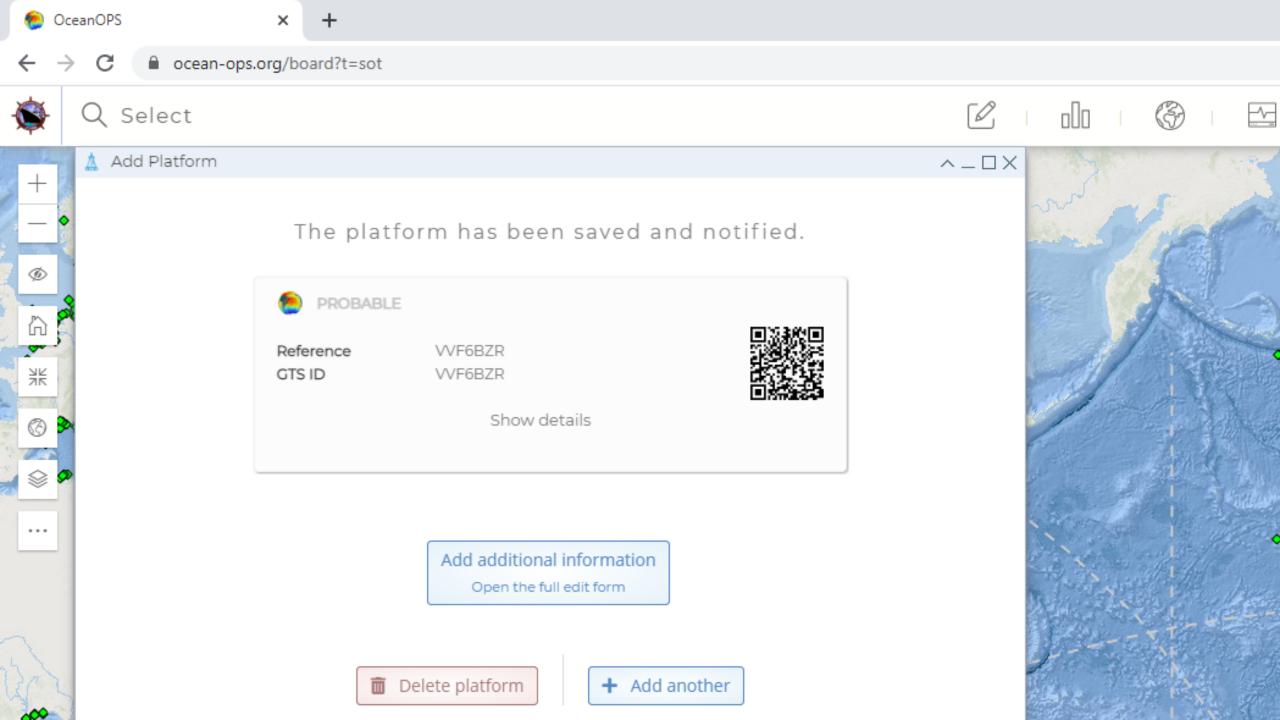
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	FR;;;;;EIGB;;;;;;;;;;;;;;;;;1012019;;;;15;3;;;;
3	FR;;;;;TAMOURE;;;;;;;;;;;;;;;;;;;1012003;;;;;10;1;;



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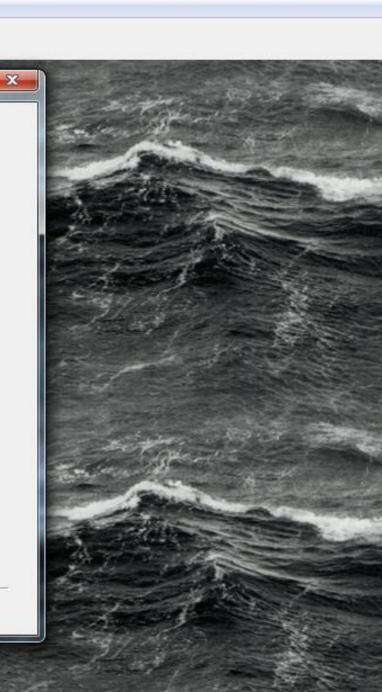
Call sign / VOS ID (masked call sign)

TurboWin

call sign (u	pper case): VVF6BZR	
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assword to insert/change VOS ID, if	applicable:	logon
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---- VOS ID (masked call sign) should only be used with the prior agreement of National Meteorological Service ---

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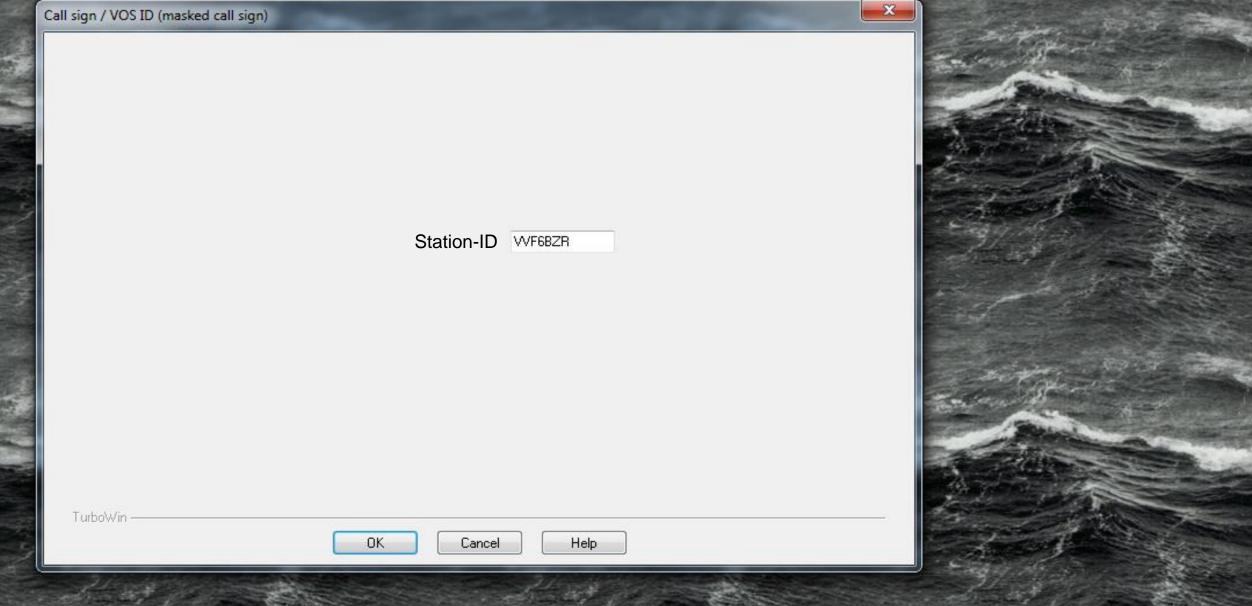


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File Input Output Options Maintenance Additional Add-ons Help Info

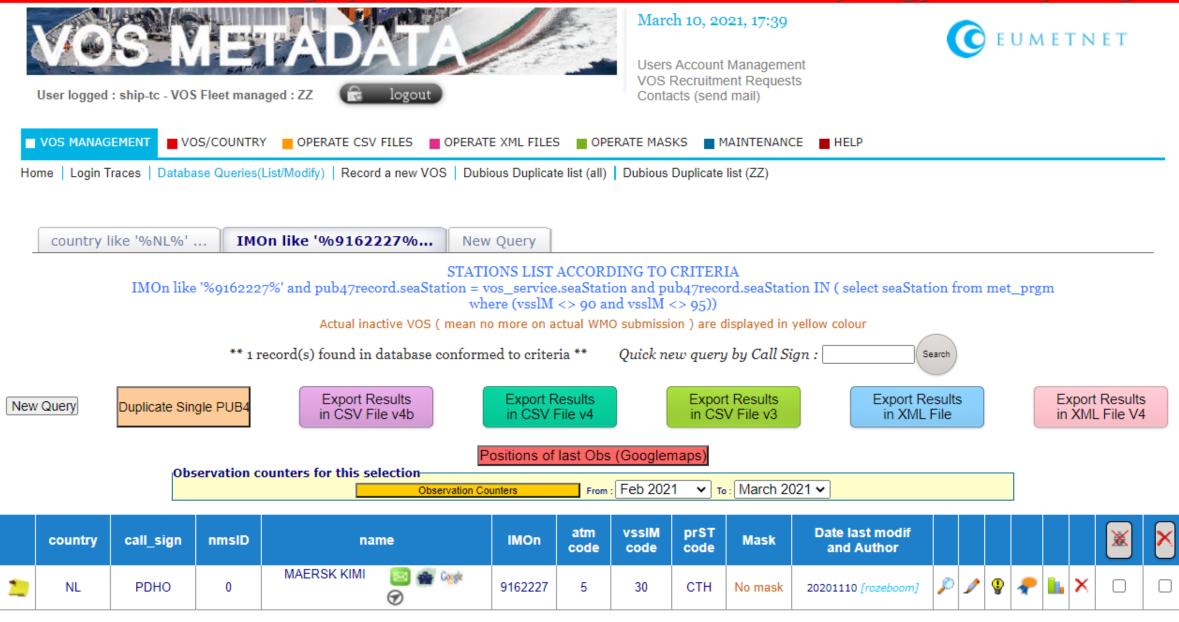
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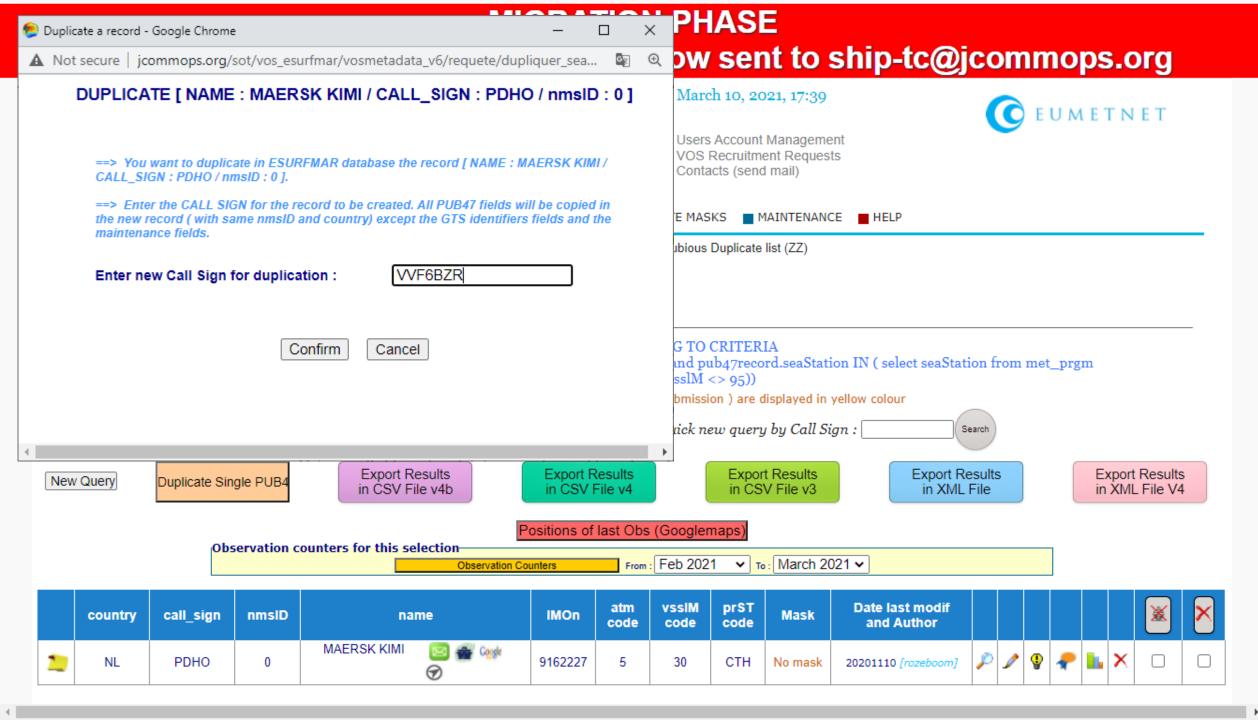
Call sign / VOS ID (masked call sign)



MIGRATION PHASE

Emails containing updates should be now sent to ship-tc@jcommops.org

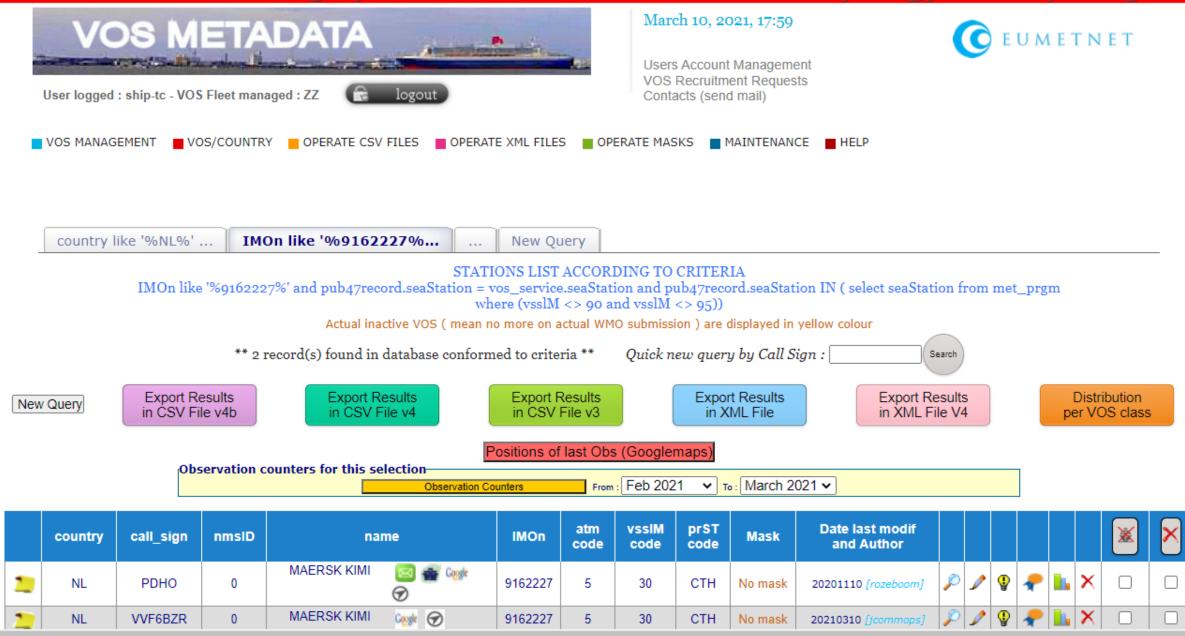




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MIGRATION PHASE

Emails containing updates should be now sent to ship-tc@jcommops.org



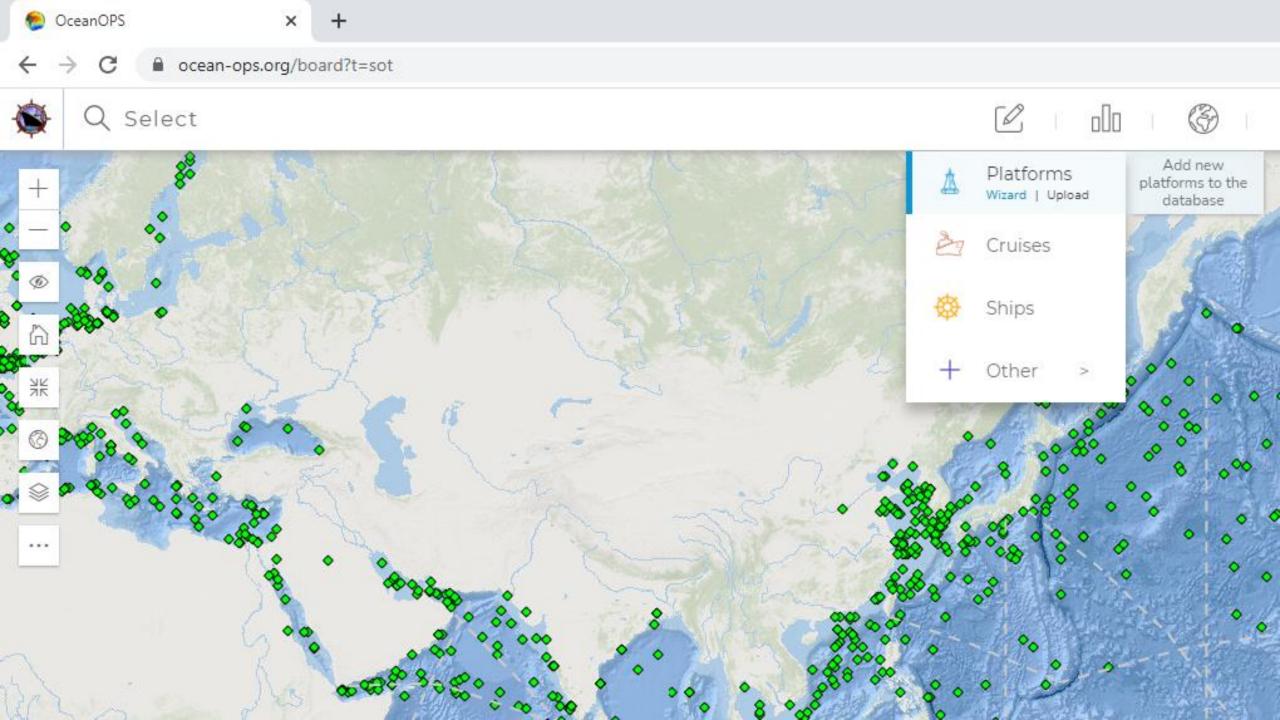
STATION METADATA UPDATE

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<u>Name</u> = MAERSK KIMI | <u>Country</u> = NL | <u>Call sign</u> = VVF6BZR | <u>nmsID</u> = 0

	Pub47record Pub47dataset Digital image Dimensions Vos service Met prgm Operations Automated Barometer Dry bulb Hygrometer Sea temp Barograph Anemometer Other
	Maintenance AREA : Obs Reports Subscription Ship Contacts details Inspection reports
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Pub47record g IMOn	1234567
==> Pub47 WMO o	code name : IMOn : IMO Number. Unique identifying number assigned by Lloyd's Register to the hull of the ship
nmsID	0
==> NMS referenc relying on the atm	e number. Unique reference or identifier (if applicable) : for file importation, if nmsID is not defined in file, the nmsID will be computed by the application field value (atm=1,2,3 : nmsID = 1 and atm = 4,5 : nmsID=0)
name	TESTSHIP
==> Pub47 WMO o	code name : name : Ship's name
reg	[NL]NETHERLANDS
==> Pub47 WMO o	code name : reg : Country of registration of the ship
call_sign	VVF6BZR
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vssl	[CS] : Container ships, including open and closed container ships and refrigerated container ships.
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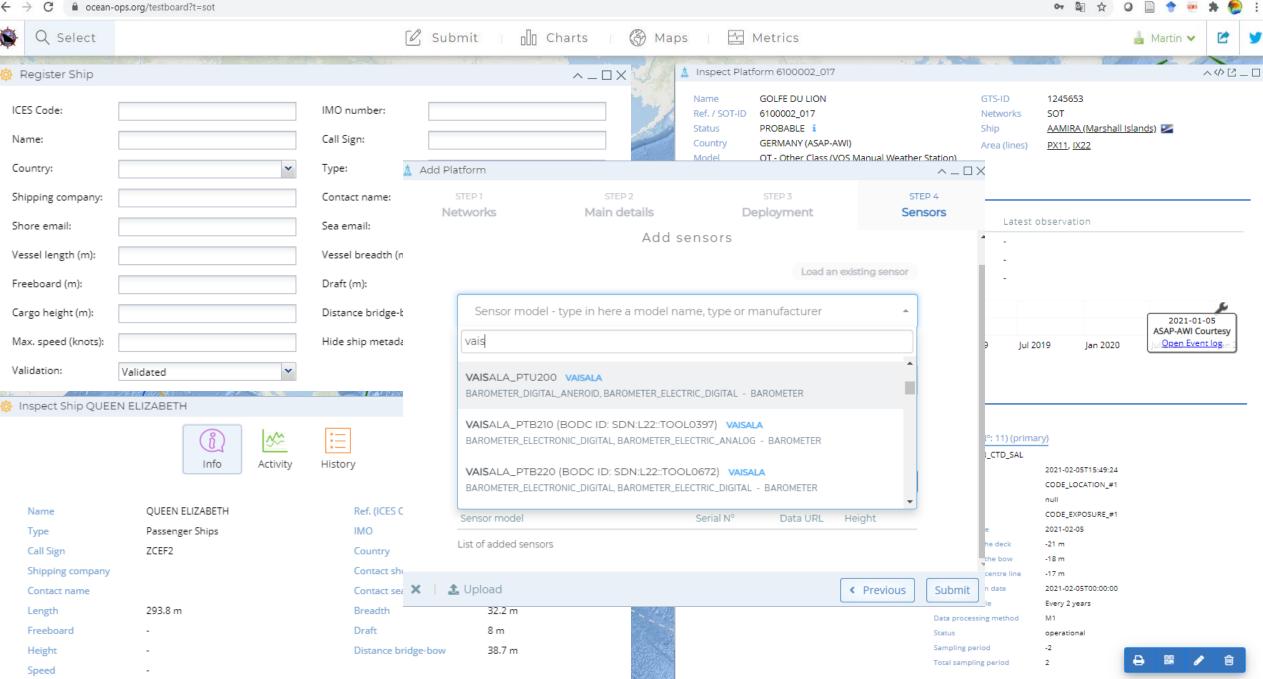
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	ICES	MHZG	P078			Program	-	MFMB	Ø
	Call sign	V7QG2	DBBE			Reference	-	6100002_017	Ø
	Vessel length	345	72.4			Schedule of observation	-	Every year	Ø
	Vessel breadth	54	12.5			Ship IMO	-	4564567	
	Freeboard	8	1.7			Ship call sign	-	DBBE	
	Draft	12	51			Ship contact sea email	-	Not public	
	Cargo height	-	341			Ship contact shore email	-	Not public	
	Distance bridge-bow	284	40			Ship contact shore name	-	BLE-Hamburg	
	Max speed	-	11.4			Ship distance bridge-bow	-	40	
	Max speed	-	11.44			Ship draft	-	5.1	
Confirm changes Keep existing ship me			Keep existing ship metadata			Ship freeboard	-	1.7	
						Ship height	-	34.1	
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	Please select a model (no model named	ODAS was found)				Shipping company	-	Carniva Shell	
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Esri, GEBCO, DeLorme, NaturalVue

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Speed				19			Total sam	pling period	2	🖨 🕮 🖌	

C ocean-ops.org/testboard?t=sot



Esri, GEBCO, DeLorme, NaturalVue

Powered by Esri

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Related features of the OceanOPS API

- With the API, you can query e.g. which different stations used the same identifier in GTS submissions (reallocated call-signs) and which individual unique SOT-IDs have been assigned to these different stations
- It is also possible to track which different IDs the same station used in GTS submissions over its lifetime (masks, changed call-signs, switch to SOT-ID)

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API docume	ntation beta	applicable version: 1.0.0beta21 last edited: 2021-02-22
About the API	This version is tagged "beta". The specifications listed below and the results provided by this API are highly susceptible to	change. Feedbacks are welcomed.
v1.0.0beta21 details Concepts & API organisation	About the API	
Vocabularies	General information	
Platforms	OceanOPS Web Service API is a REST API designed to distribute metadata, in interoperable and ready-to-use formats, to i	



Work in progress....

- It is strongly recommended to use SOT-IDs for every new station
- SOT-IDs have been allocated to EVERY station, including closed
- You can replace the call-sign by the SOT-ID at any time history is maintained
- The implementation of the new SOT metadata format is underway, including a corresponding user interface adapted to SOT needs with manual/training
- You can (and at present you MUST) continue to submit metadata in Pub47 format, but keep the upcoming changes in mind, in particular a SOT-ID field

Many thanks to SOT-ID and metadata Task Team – great job and effort!