

NAVIPAC

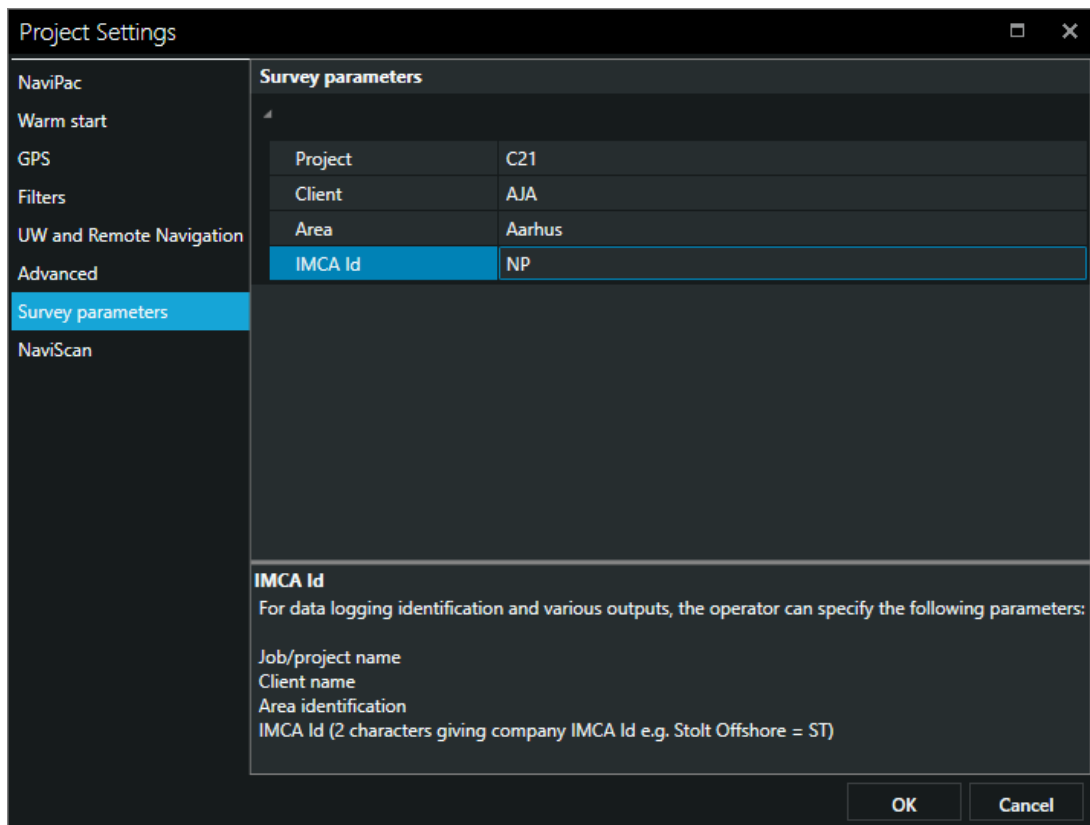
OUTPUT TO IMCA TELEMETRY SYSTEM

Last update: 31/03/2020
Version: 4.2

1 General guidelines

This document gives a short description on how to set up NaviPac to output data to an IMCA system.

Go to the NaviPac **Project settings**, option **Survey parameters** to specify e.g. the **Project** name, **Client** initials, **Area** and enter the two character for **IMCA Id**:



Survey parameters	
Project	C21
Client	AJA
Area	Aarhus
IMCA Id	NP

IMCA Id
For data logging identification and various outputs, the operator can specify the following parameters:

- Job/project name
- Client name
- Area identification
- IMCA Id (2 characters giving company IMCA Id e.g. Stolt Offshore = ST)

OK Cancel

Figure 1 Survey parameters

Add a **Data to ext. nav. System output** on the vehicle/s that you wish to send an IMCA output from, e.g. the main vessel and an ROV.

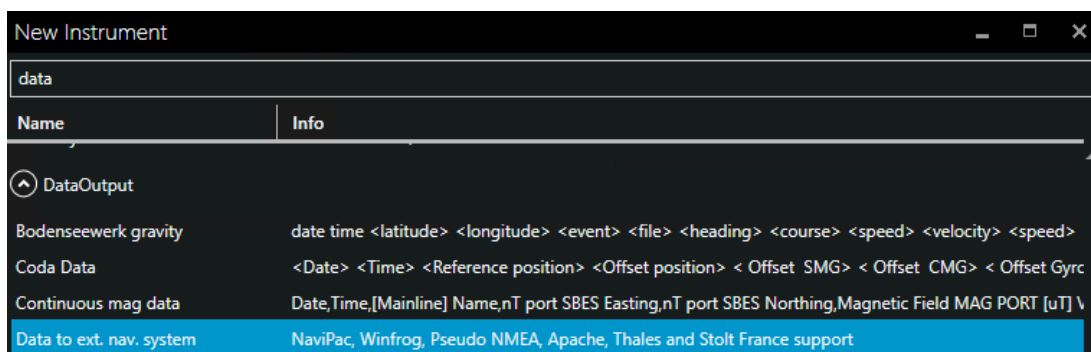


Figure 2 Data Output: Data to ext. nav. system

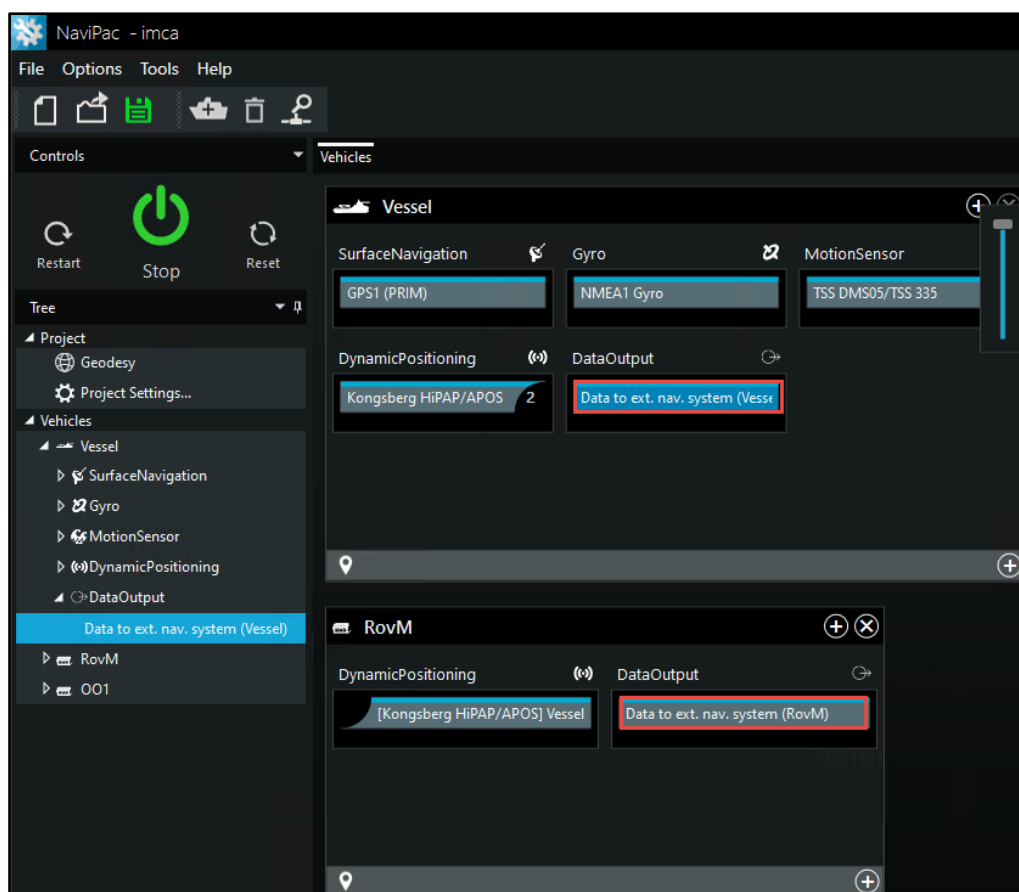
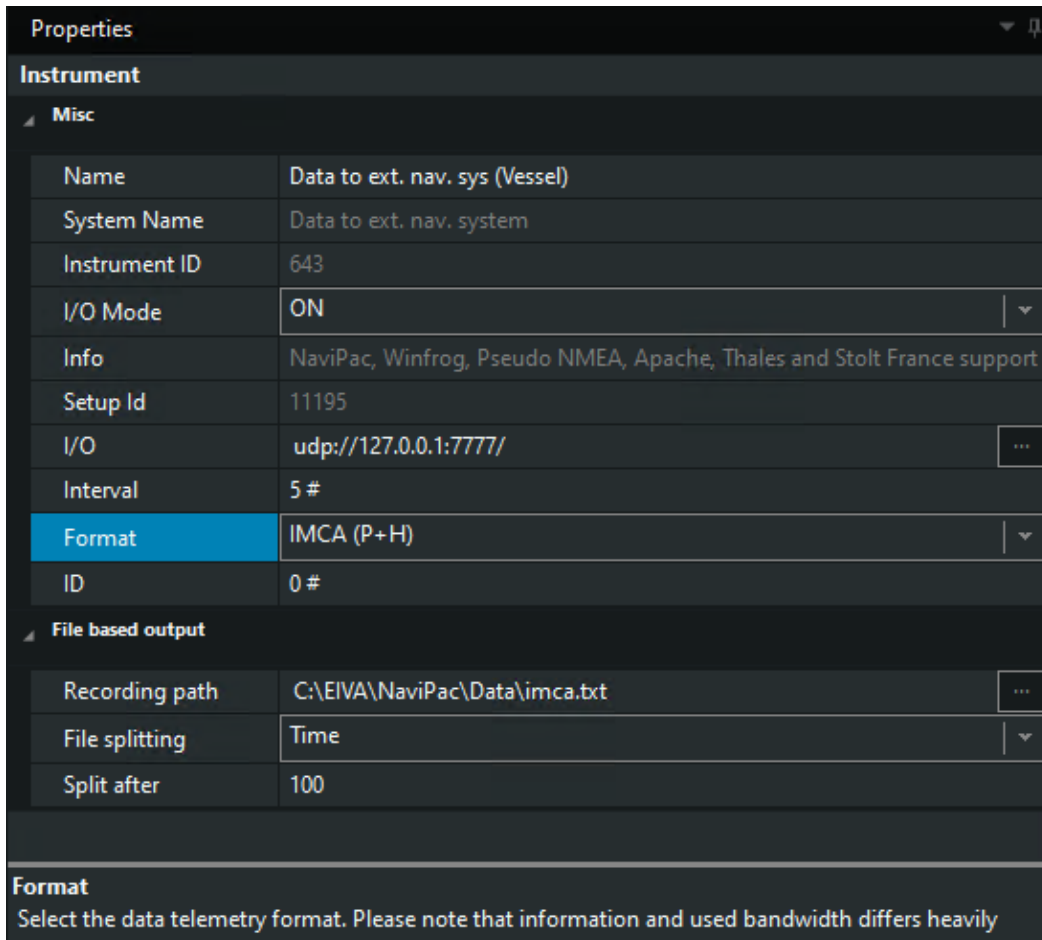


Figure 3 Data Out to IMCA from two vehicles



Instrument	
Misc	
Name	Data to ext. nav. sys (Vessel)
System Name	Data to ext. nav. system
Instrument ID	643
I/O Mode	ON
Info	NaviPac, Winfrog, Pseudo NMEA, Apache, Thales and Stolt France support
Setup Id	11195
I/O	udp://127.0.0.1:7777/
Interval	5 #
Format	IMCA (P+H)
ID	0 #
File based output	
Recording path	C:\EIVA\NaviPac\Data\imca.txt
File splitting	Time
Split after	100
Format	
Select the data telemetry format. Please note that information and used bandwidth differs heavily	

Figure 4 Data to ext. nav. system driver: Properties view

- **I/O**
Define a IMCA data output for each vehicle, e.g. vessel, Rov1 and OO1. They will be combined to one when starting NaviPac.
- **Interval**
Select a reasonable data rate (5.00 will result in 5 seconds between each output)
- **Format**
Select the format to **IMCA (P+H)**
- **ID**
Select identification number – must be used for id of data at receiving point
- **Recording path**
The default path is C:\EIVA\NaviPac\Data\
- **File splitting**
Can be set to split by **Time** in minutes, or **File Size** in KB

The output will hereafter act as any ordinary output.

The data can be viewed in the **Instrument Spy**.

Enable the Instrument Spy from the NaviPac Online menu bar, alternatively activate it from NaviPac **Online / Options / Instrument Control**. **Select** Instrument monitor and control:

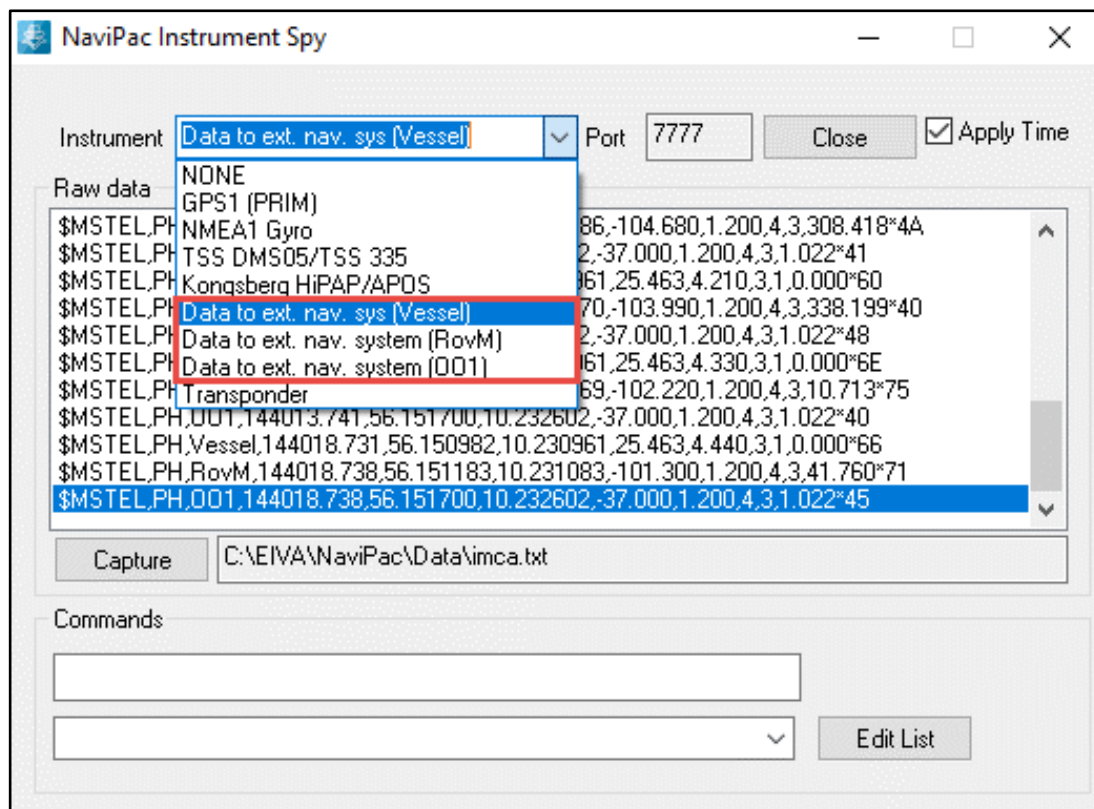


Figure 5 NaviPac Online: Instrument Spy

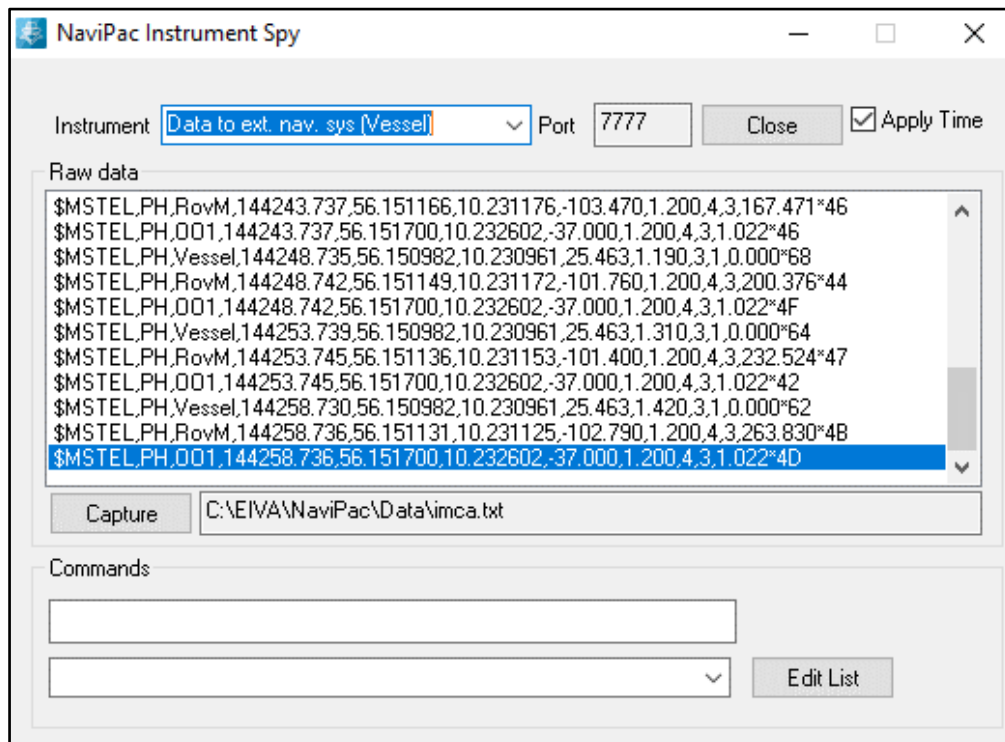


Figure 6 NaviPac Instrument Spy with three IMCA outputs

In this example the data outputs from the NaviPac vehicles.gives you one update per selected vehicle/Object ID:

*** EIVA a/s - NaviPac InsMon Capture:Data to ext. nav. system (Vessel)

```
$MSTEL,PH,Vessel,000924.993,56.158571,10.223948,37.400,5.130,3,1,0.000*63
$MSTEL,PH,RovM,000925.013,56.158773,10.224147,-104.700,1.200,4,3,0.000*41
$MSTEL,PH,O01,000925.013,56.159200,10.225605,-37.000,1.200,4,3,0.000*3F
$MSTEL,PH,Vessel,000925.995,56.158571,10.223948,37.400,5.150,3,1,0.000*62
$MSTEL,PH,RovM,000926.014,56.158770,10.224151,-104.670,1.200,4,3,0.000*47
$MSTEL,PH,O01,000926.014,56.159200,10.225605,-37.000,1.200,4,3,0.000*3B
```

The strings are formatted as:

\$<IMCA Id>TEL,PH,<Name>,<hhmmss.ss>,<Latitude>,<Longitude>,<height>,<std dev>,<source>,<status>,<true heading><cr><lf>

Where

- IMCA Id:
Gives the entered 2 character Id
- Name:
Gives the vehicle name as selected/entered in setup
- Hhmmss.ss:
Time stamp in UTC
- Latitude:
Position latitude in WGS84
- Longitude:
Position longitude in WGS84
- Height:
Height (positive) or depth (negative) of the vehicle
- Std dev:
Position accuracy indicator. Gives position DOP
- Source:
Position source
 - GPS/DGPS/RTK (1-3)
Vessel position or offsets – GPS status
 - USBL (4)
Dynamic positioned objects
- Status
Status of positioning
 - RAW (1)
Raw positioning data – eg. Vessel reference positions
 - FILTERED (2)
Filtered position –eg. Kalman filtered position
 - DERIVED (3)
Calculated position (offset or dynamic offset)
- True heading
Gives the true heading of the vehicle

Note, the **Commands** option in the **Instrument Spy** are used for reading telemetry data in IMCA format, described in the manual, **Reading telemetry data in IMCAformat.pdf**. This is not required for the IMCA output.