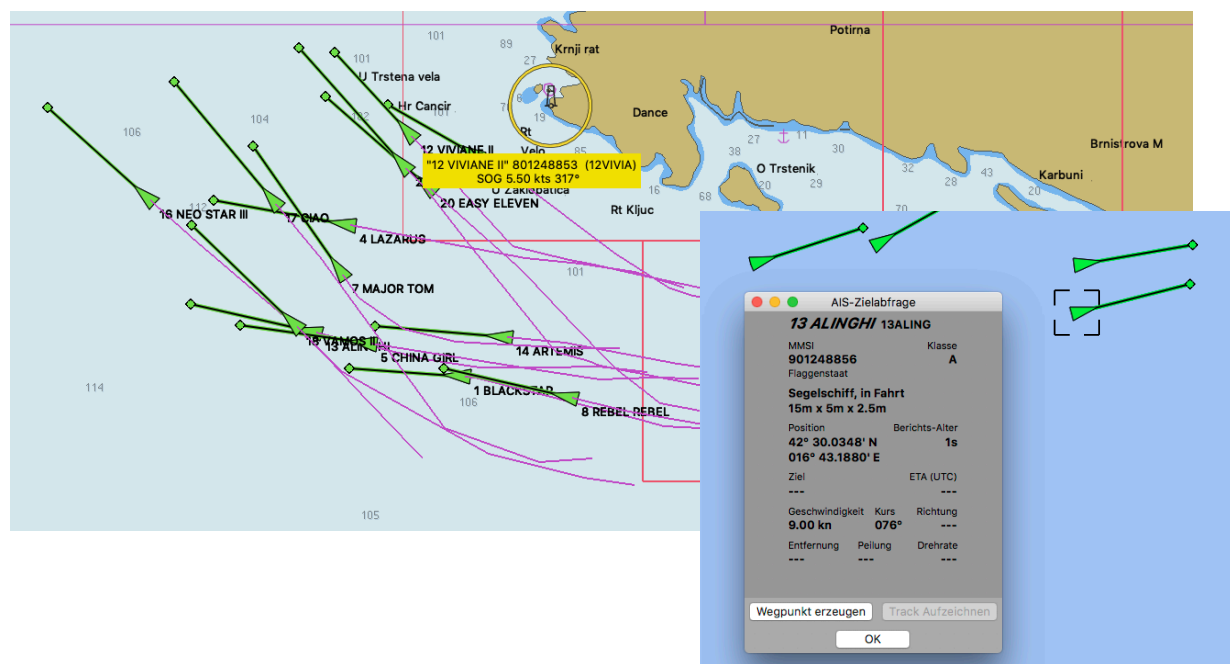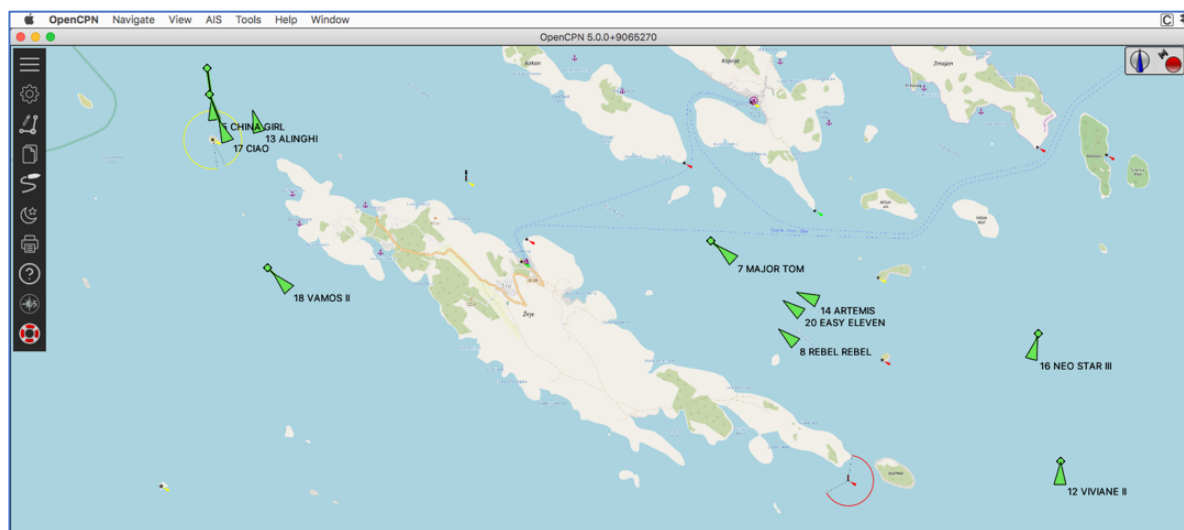# TRACKING DATA VIA AIS

As an additional source of information we will provide, tracking data via AIS – side by side with the already familiar TracTrac (Website and Apps for Android & iOS) and the Track-o-mio software for Windows, on the Round Palagruza Cannonball 2021.

**Warning! Never ever use the tracking data for navigation!!**

## What is meant by "tracking data via AIS"?

This additional service supports displaying the whole fleet within your navigation software, without the needs for any extra software, or switching to an internet browser – as long as you have an active internet connection on board.[1]





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[1] There will be no radio transmission of AIS targets!

## How does it work?

The satellite tracking data, which we receive from GTC (the satellite operator) is converted into AIS NMEA sentences on our server and will then be streamed over TCP/IP on: [2]

**IP:      192.145.45.5**

**Port:   60202**

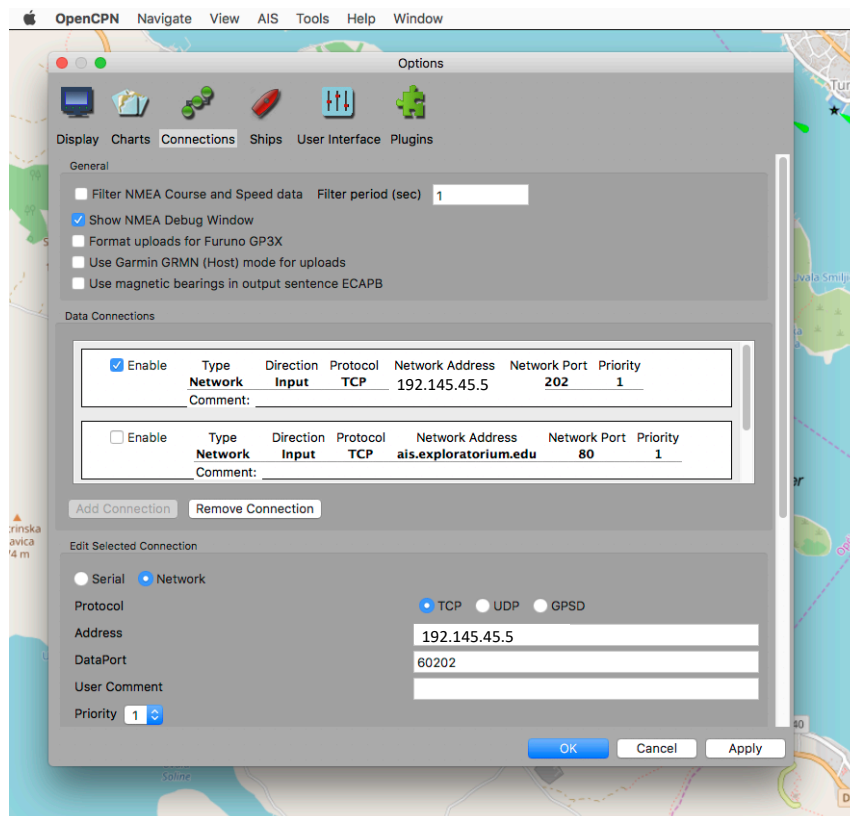**URL: http://trac.roundpalagruza.at:60202**

## Which programs are appropriate?

Every navigation software, which is capable of receiving NMEA/AIS over TCP/IP is fine. The following programs have been tested:

- openCPN (free, open Source for Mac, Windows & Linux)
- Expedition (For Windows only)
- iSailor (AIS Option "Navdata from AIS Class A" needed, aproxx. € 30.00)
- qtVlm (available on Windows, Mac, Linux, incl. RaspberryPi, Android, iOS – tested on Windows and Mac)
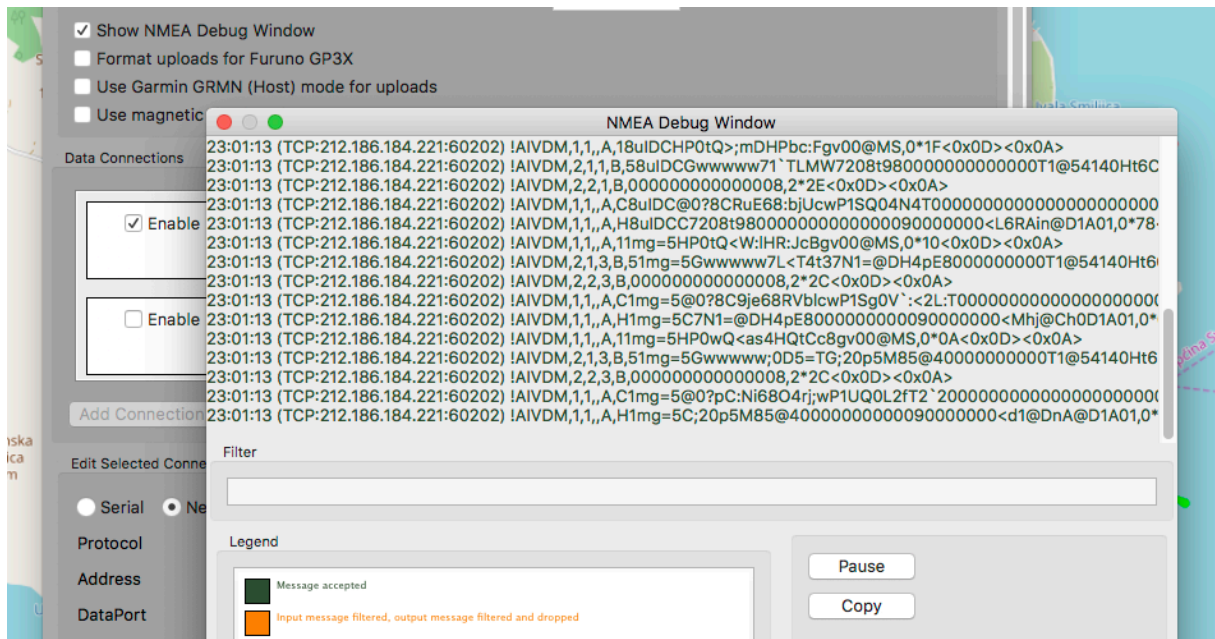
## Use case and setup in openCPN

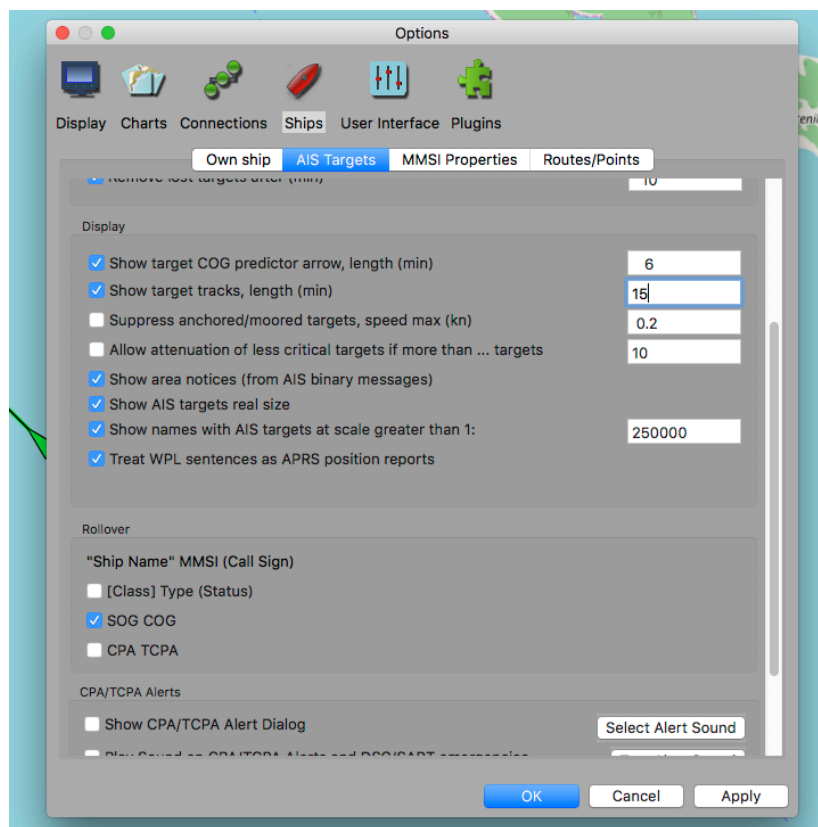Set up Connection: Settings → Connections → Add Connection, choose Network, TCP, and enter IP and Port



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[2] At this IP and Port number you will get test data which also could also be static positions.
RPC 2021 start will be on Monday, 25th of October 12pm.

If "Show NMEA Debug Window" is checked, you will see a window with the received AIS sentences, if a connection is established and the server is on.
Green color means message is accepted and OK.



Display Ships / Change Setting: In Options → Ships → AIS Targets you will find some more useful settings, like to show the bow numbers and names of the skippers near the target, etc.

# FAQs

## 1. Why are the ships "jumping"?

Satellite positions are updated every 5 minutes, in some cases in even longer intervals. As a result the icon of the boat stays on its position, until a new position is sent.

As soon as our server receives any new position from Global Sat, it is forwarded immediately. With the next internal position refresh of your navigation software (typically around every 20 seconds), the boat will jump to the new position.
You can see this, when you compare your true own boat´s position in the map with the one supplied via AIS. Sometimes the two icons will nearly be on the same spot, sometimes the AIS will be on the position you had been 5 minutes ago, and sometimes you will see it somewhere in between.

## 2. I am in front of a boat, but in the tracking I am behind?

So you are faster than the tracking ☺

The boats are not sending their positions over satellite all at the same moment – consequently every single boat has it's own "update cycle"!

## 3. Can I use this kind of tracking at home, to follow the fleet?

Yes, of course. If you have Expedition, openCPN or similar applications running at home, you can connect to our server and off you go!
But the fun factor following the regatta by the TracTrac Apps and/or their website will probably be much higher.

## 4. I do not get any AIS data in my navigation program, what can I do?

Check if the AIS service is working. Enter the IP and Port number like this:

192.145.45.5:60202 into a browser.

After some seconds you should see AIS sentences like this:

```
# AIS feed of SAT-Trackers & Mobile trackers by Ronnie Zeiller
# Data provided for tracking only
# Best efforts service, no liability accepted for outages or errors
!AIVDM,1,1,,B,1:LhmC`P1:Q=cFpHPOlc8gv00@MS,0*09
!AIVDM,2,1,2,B,5:LhmCWwwwww744h85C76185D<P85DE80000000T1@54140Ht6CWh@00,0*16
!AIVDM,2,2,2,B,000000000000008,2*2D
!AIVDM,1,1,,B,1;t8FEHP0mQ?6tpHR0>:N?v00@MS,0*0E
!AIVDM,2,1,2,B,5;t8FEGwwwww79HUHT77:0mE8h5<UA<00000000T1@54140Ht6CWh@00,0*1E
!AIVDM,2,2,2,B,000000000000008,2*2D
!AIVDM,1,1,,B,12He@4pP05Q@gD0HNRP7Mgv00@MS,0*69
!AIVDM,2,1,2,B,52He@4owwwww7Te84hc7V0l5TE88<d000000000T1@54140Ht6CWh@00,0*05
!AIVDM,2,2,2,B,000000000000008,2*2D
!AIVDM,1,1,,B,15vbBBHP0RQ?DudHRvublgv00@MS,0*2C
!AIVDM,2,1,2,B,55vbBBGwwwwwQ8D8Di;R0e84I@0000000000000T1@54140Ht6CWh@00,0*26
!AIVDM,2,2,2,B,000000000000008,2*2D
!AIVDM,1,1,,B,125`S4`P0tQ?4S8HQkT:`?v00@MS,0*3A
!AIVDM,2,1,2,B,525`S4Wwwwww7L<T4t37N1=@DH4pE8000000000T1@54140Ht6CWh@00,0*76
```

If not, then the service is down. In this case please try later again.
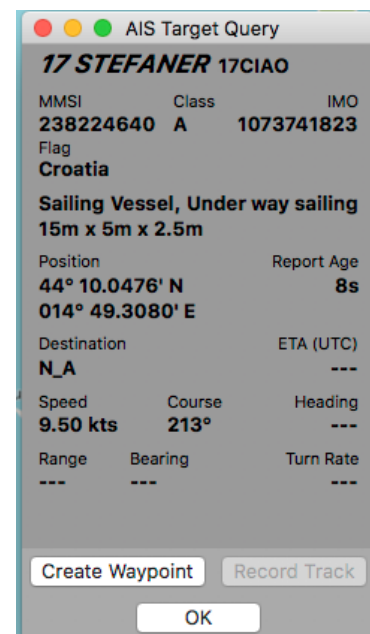
## 5. The MMSI numbers shown, are they real?

Yes, they are real numbers and you could call this boat by DSC radio call, for example to clear a "right of way" situation[3].



Speed and Course are calculated from two position reports, they might be not exact values.

The IMO number and the call sign (here shown 17CIAO) are fake numbers.

The "Report Age" shows the time passed since the last call to the AIS-server and not how old the position is.

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[3] Right now we just have MMSI numbers of the Bavaria 41s one design fleet and not for the Bavarias 46.