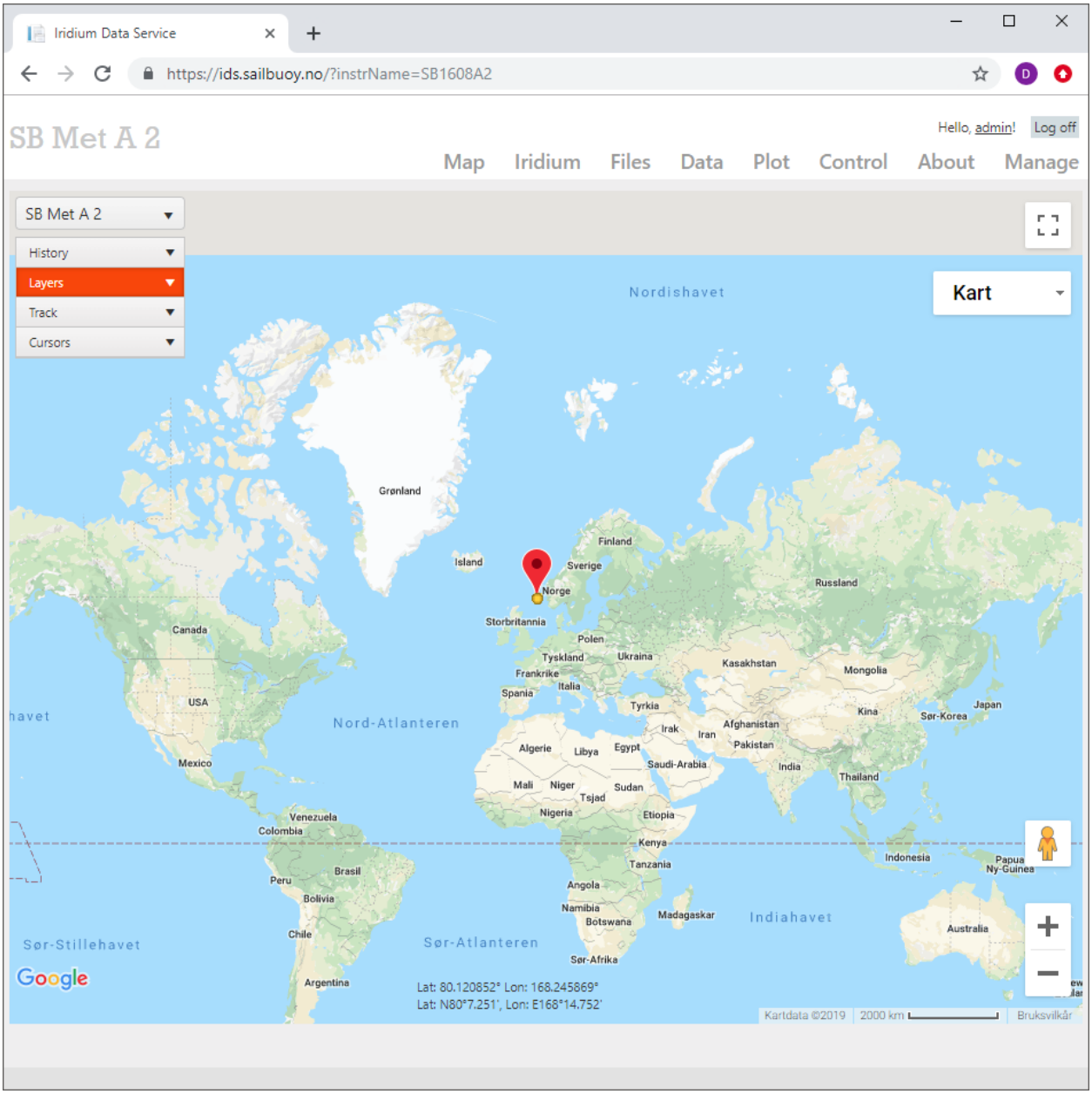
Iridium Data Service User Manual

The Iridium data service is the piloting software user by the user to pilot and access data from the Sailbuoy. This service uses the Azure cloud service to achieve the utmost reliability and uptime. As no software system is 100% reliable, the user is obliged to not pilot the Sailbuoy in such a way that will put it at risk if the service experiences downtime. Piloting under manual control can present such a risk. The system has been tested for many years and has proven to be very reliable.


Iridium Data Service
https://ids.sailbuoy.no/?instrName=SB1608A2
SB Met A 2
Hello, admin! Log off
Map Iridium Files Data Plot Control About Manage
SB Met A 2
History
Layers
Track
Cursors
Kart
Nordishavet
Grønland
Island
Finland
Sverige
Norge
Russland
Storbritannia
Canada
Polen
Tyskland
Ukraina
Kasakhstan
Mongolia
Frankrike
Italia
Spania
USA
Tyrkia
Kina
Japan
Sør-Korea
Irak
Iran
Afghanistan
Pakistan
Nord-Atlanteren
Algerie
Libya
Egypt
Saudi-Arabia
India
Thailand
Mexico
Mali
Niger
Sudan
Tsjad
Nigeria
Etiopia
Venezuela
Colombia
Kenya
Tanzania
Indonesia
Papua Ny-Guinea
Brasil
Peru
Angola
Bolivia
Namibia
Botswana
Madagaskar
Indiahavet
Australia
Chile
Sør-Stillehavet
Sør-Atlanteren
Sør-Afrika
Argentina
Google
Lat: 80.120852° Lon: 168.245869°
Lat: N80°7.251', Lon: E168°14.752'
Kartdata ©2019
2000 km
Bruksvilkår

Date: 12 May 2021
Bergen, Norway

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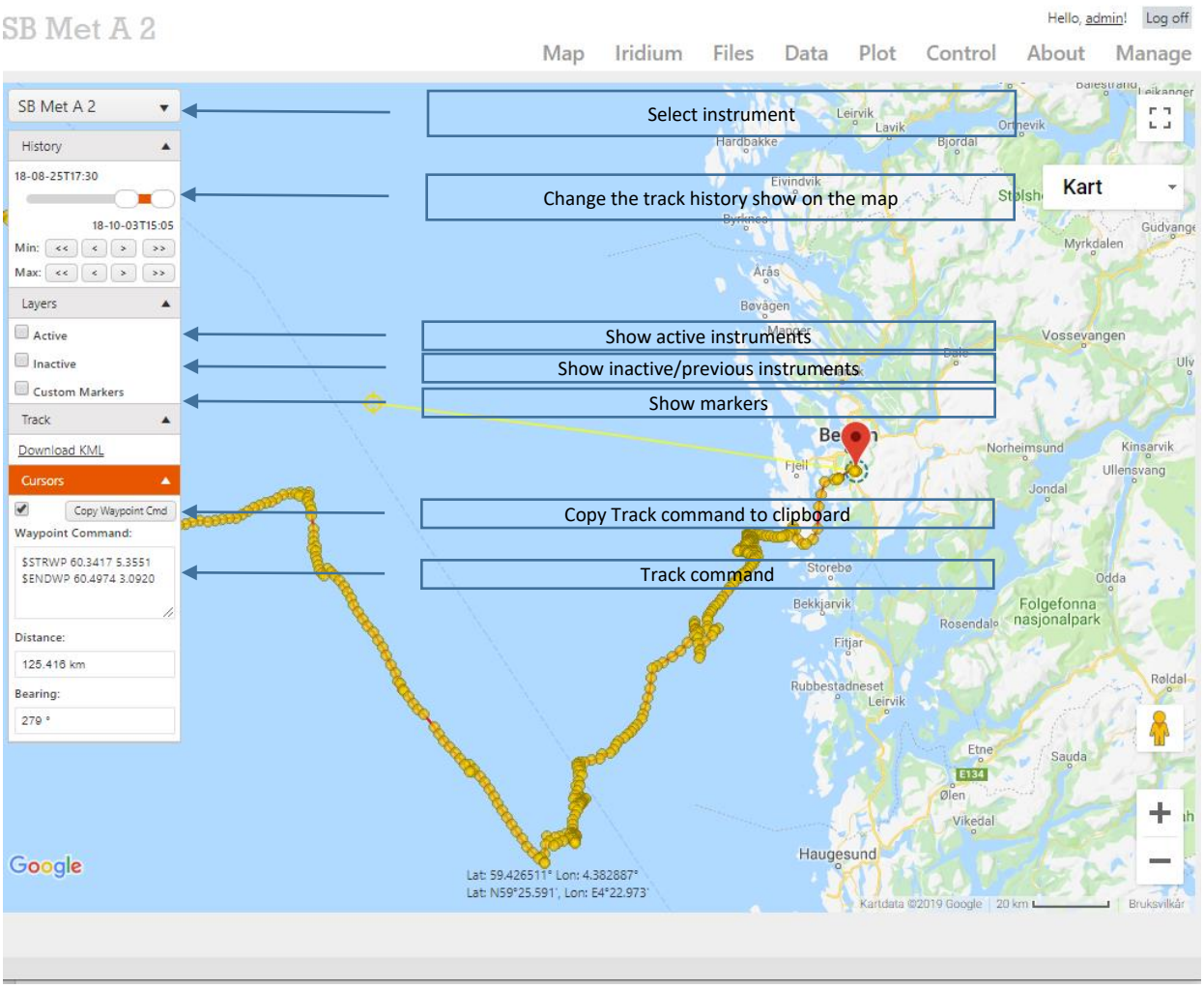
Iridium Data Service

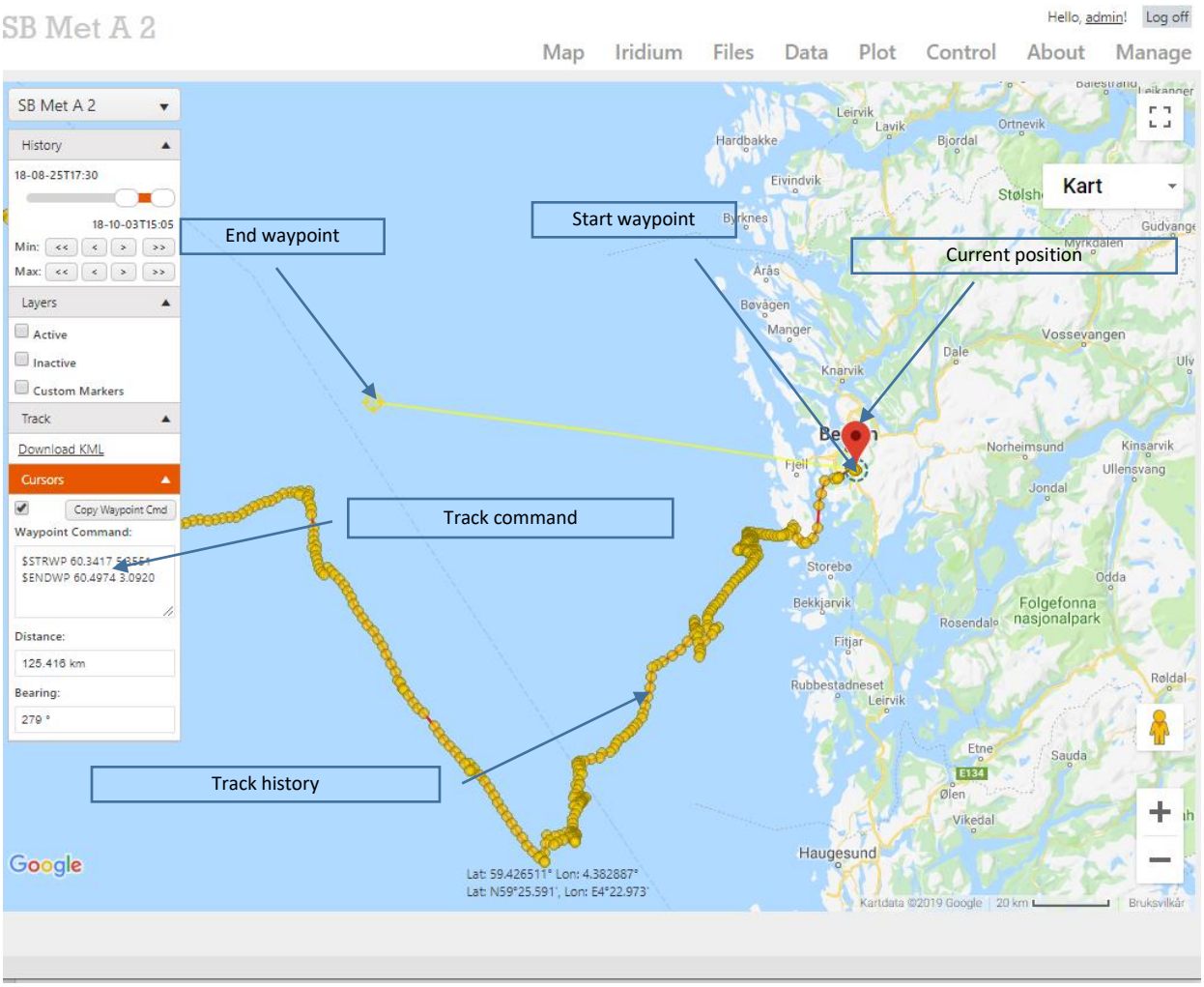
The Iridium Data Service is a cloud-based program for communicating with the instruments. It provides a user-friendly and easy way to communicate with instruments, showing data as text or graphs, displaying positions and tracks on a map, and controlling the instruments.

Map View

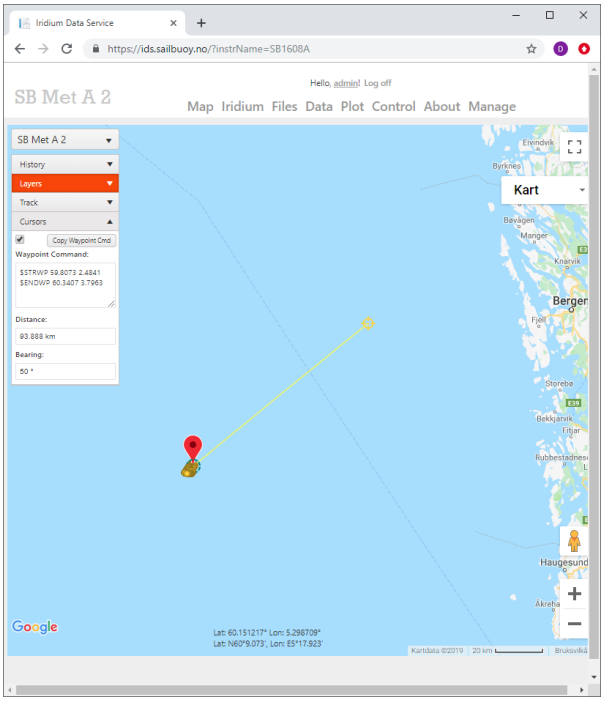
This view shows the instruments position on a world map. The positions are automatically updated on the map as data is received from the instruments. In this view it is possible to select the active instrument.
History dropdown menu shows historical positions
Layers dropdown menu add different layers to the map
Track dropdown menu to download KML file.



Defining the track commands

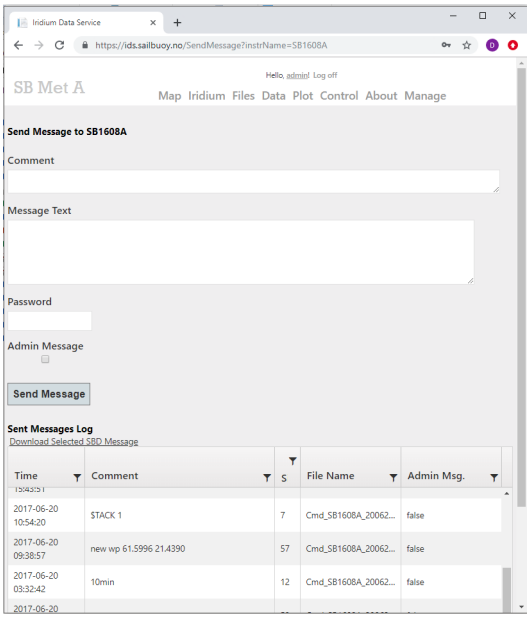


Using copy Waypoint Command.



Under cursors drop down box, activate the cursors by selecting the checkbox.

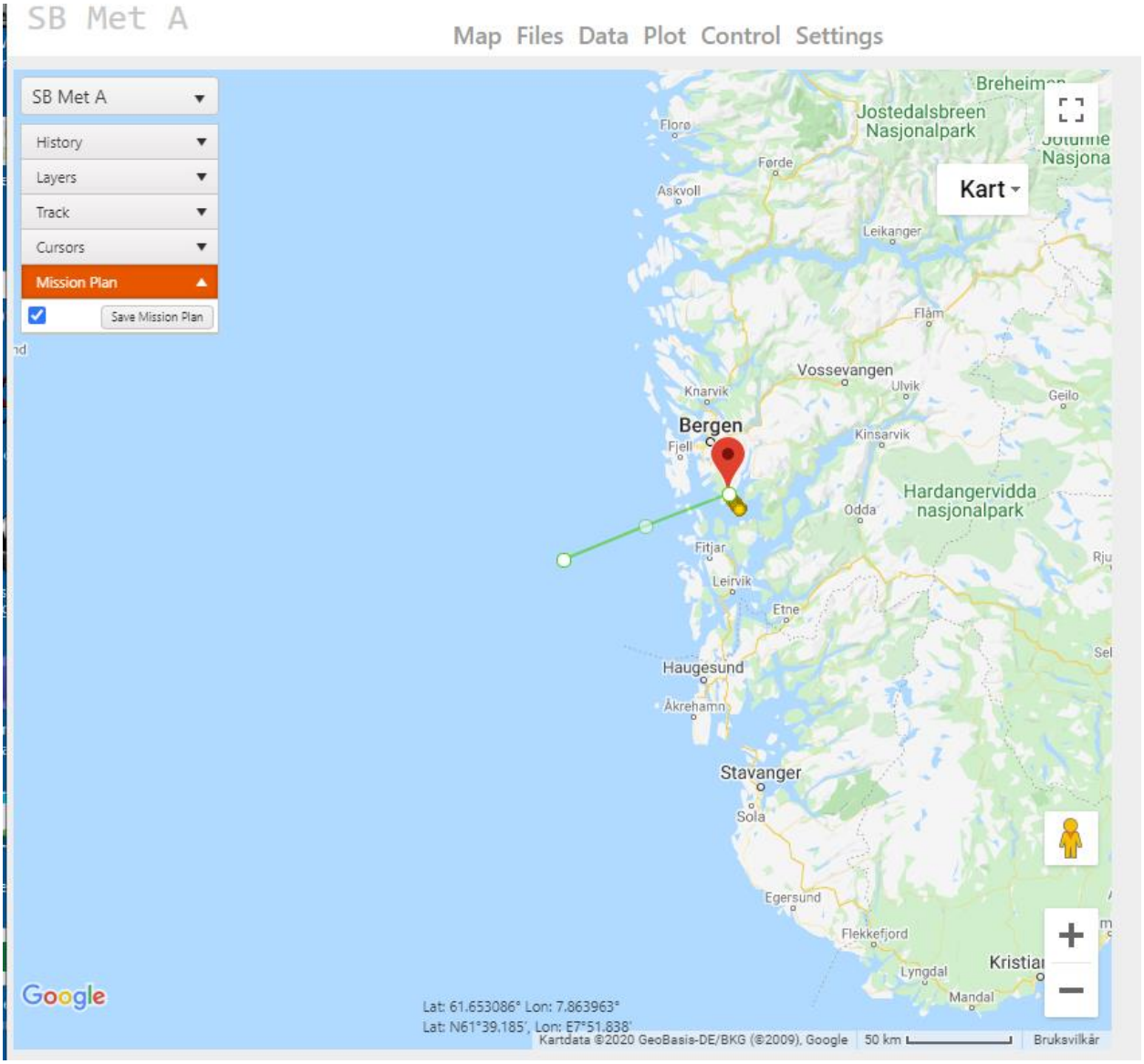
- Drag the circles on the map to define the Sailbuoy track. The track is defined by the start waypoint (blue circle) and the end waypoint (yellow circle)
- Click the "*Copy waypoint Cmd*" button to copy the track settings to clipboard or copy the text directly (iPhone)
- The "*Copy waypoint Cmd*" also saves the track on the map.



- Click on the **Control menu** and paste the command into the **Message Text** box.
- Add additional commands if necessary. (typically the **$RAD** command)
- Enter a brief explanation in the **Comment box**. If there are several pilots, enter initials in the comment box.
- Enter the password and click the **send message** button.

Mission Planner

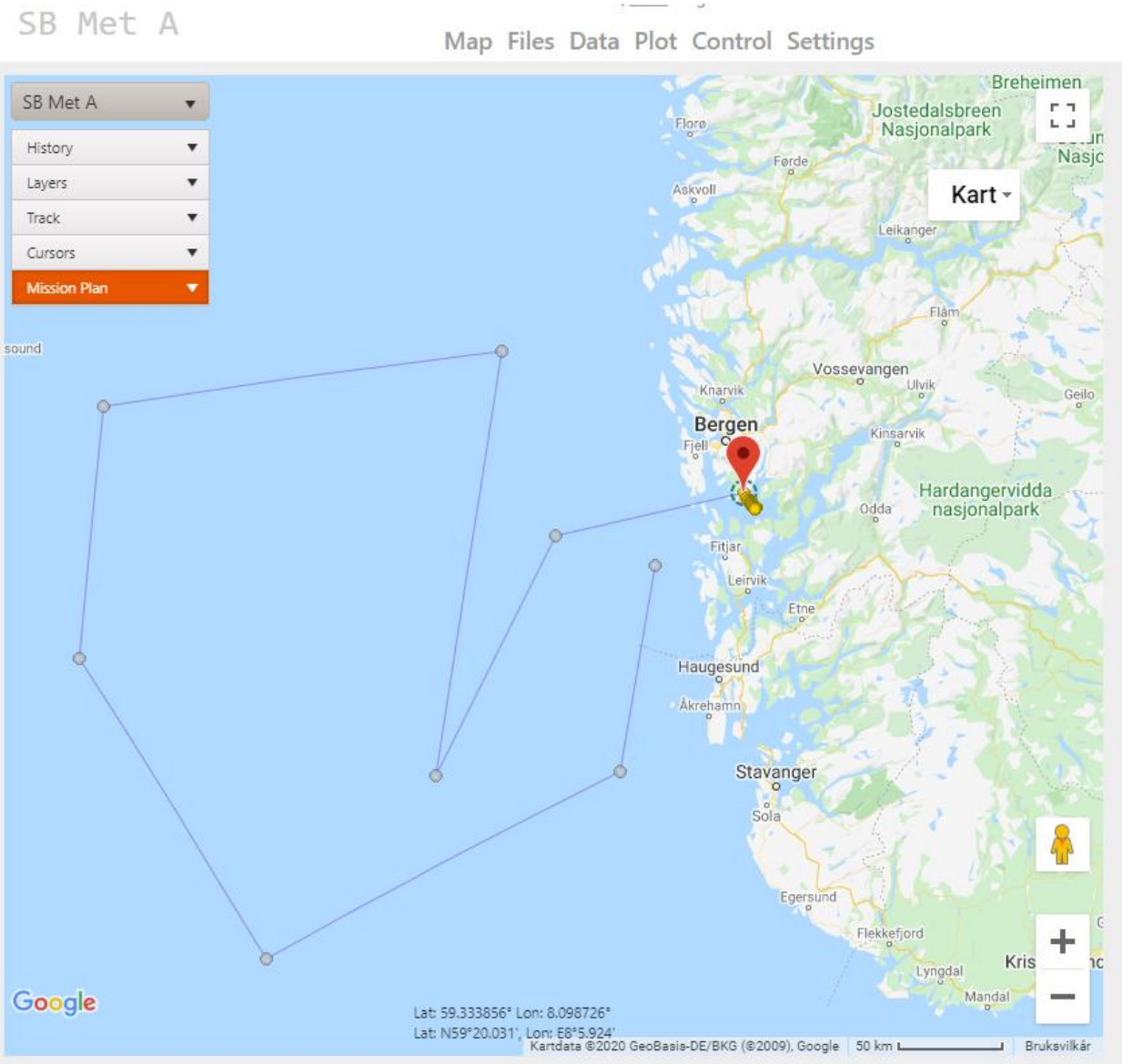
The mission planner is a tool to make the Sailbuoy follow a rack consisting of multiple waypoints. The server monitors the Sailbuoys progress and automatically sends new waypoints when required.
To define a new mission plan, click the checkbox under “Mission Plan”. Drag the dots displayed on screen.
Save and activate the mission plan by clicking on “Save Mission Plan”.



Se example below. The mission plan is now saved and activated on the server.

To abort or clear the mission plan, click “Clear mission plan”.

By refreshing the page or changing instrument, the progress of the mission plan is shown.



Funtionality

When clicking “Save mission plan” the mission plan is activated and saved to the server. The mission plan is only checked when a new message from the autopilot is received.
When the Sailbuoy has reached the next waypoint defined by the mission plan, new waypoints are sent to the Sailbuoy. Waypoint reached is defined by the Sailbuoy being closer to the waypoint than the previous tack distance.
By opening the Control page, it is possible to monitor the progress of the mission plan.
When the Sailbuoy has reached the second last waypoint, the last message is sent and the mission plan is finished.
The mission plan only sends the commands **$STRWP** and **$ENDWP** to the Sailbuoy.

Note:
For the mission plan to work:

- The Sailbuoy has to be in **$AUTO** mode.
- Fence mode must be off **($SWPMD 0**)

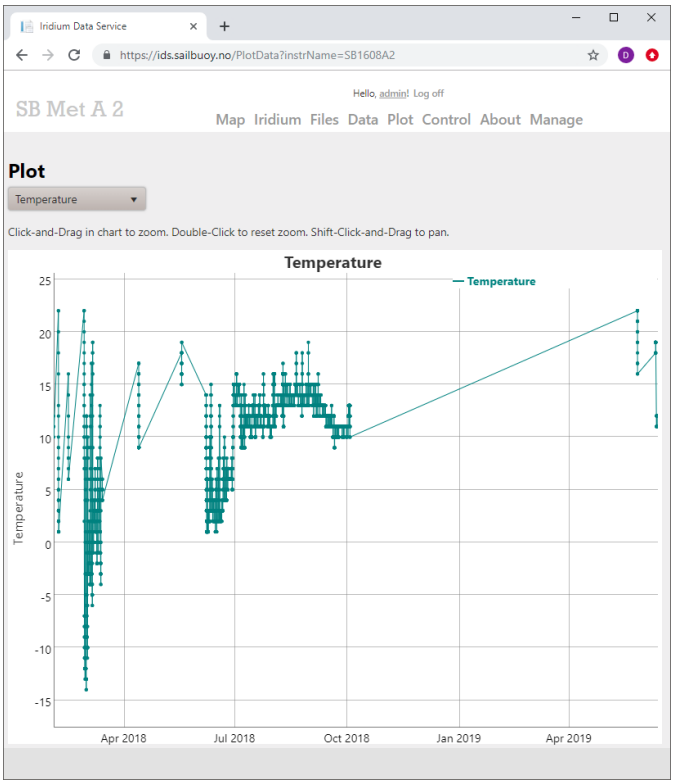
The corridor radius, tack interval etc. have to be set manually using the “Control Page”

Pseudo code:
The following is only executed when a new message is received from the autopilot.

If new mission plan – send message “from WP0 to WP1”, update status
If WP1 is reached – send message “from WP1 to WP2”, update status
If WP2 is reached – send message “from WP2 to WP3”, update status
… etc …
If WP(N-1) is reached – send message “from WP(N-1) to WP(N)”, update status to finished

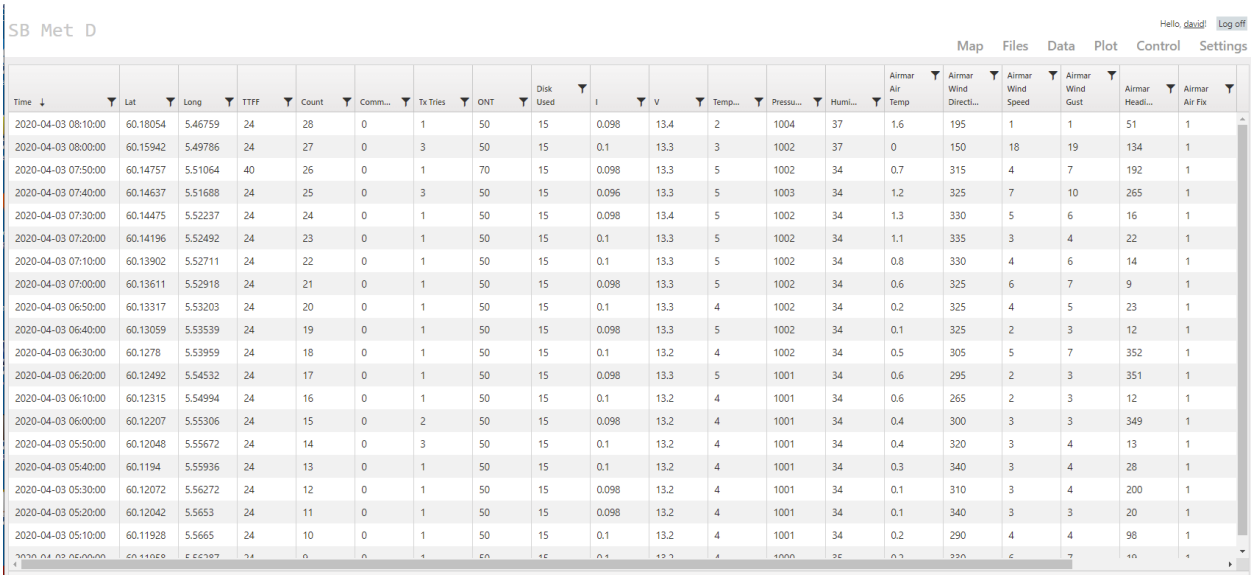
Plot view

This view shows the data plotted on a time scale. All the instrument parameters can be individually selected and shown. Autoscaling, zoom and pan is optimized.



Data view

Data view show all the parameters send form the instrument. Each row in the table corresponds to one transmission. Here one can download all the instrument data for further processing by clicking on **Download All as CSV file**.



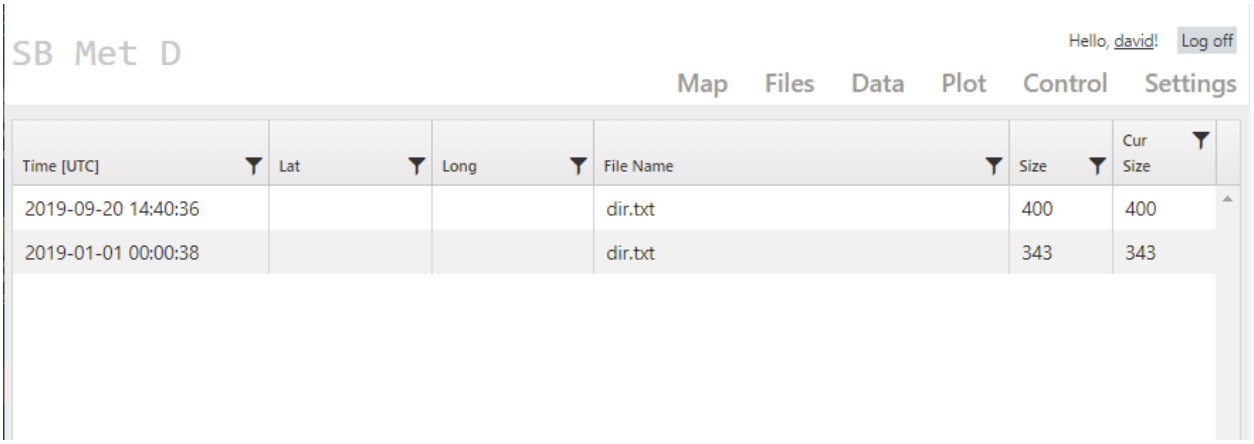
Time	Lat	Long	TTFF	Count	Comm...	Tx Tries	ONT	Disk Used	I	V	Temp...	Pressu...	Humi...	Airmar Air Temp	Airmar Wind Directi...	Airmar Wind Speed	Airmar Wind Gust	Airmar Headi...	Airmar Air Fix
2020-04-03 08:10:00	60.18054	5.46759	24	28	0	1	50	15	0.098	13.4	2	1004	37	1.6	195	1	1	51	1
2020-04-03 08:00:00	60.15942	5.49786	24	27	0	3	50	15	0.1	13.3	3	1002	37	0	150	18	19	134	1
2020-04-03 07:50:00	60.14757	5.51064	40	26	0	1	70	15	0.098	13.3	5	1002	34	0.7	315	4	7	192	1
2020-04-03 07:40:00	60.14637	5.51688	24	25	0	3	50	15	0.096	13.3	5	1003	34	1.2	325	7	10	265	1
2020-04-03 07:30:00	60.14475	5.52237	24	24	0	1	50	15	0.098	13.4	5	1002	34	1.3	330	5	6	16	1
2020-04-03 07:20:00	60.14196	5.52492	24	23	0	1	50	15	0.1	13.3	5	1002	34	1.1	335	3	4	22	1
2020-04-03 07:10:00	60.13902	5.52711	24	22	0	1	50	15	0.1	13.3	5	1002	34	0.8	330	4	6	14	1
2020-04-03 07:00:00	60.13611	5.52918	24	21	0	1	50	15	0.098	13.3	5	1002	34	0.6	325	6	7	9	1
2020-04-03 06:50:00	60.13317	5.53203	24	20	0	1	50	15	0.1	13.3	4	1002	34	0.2	325	4	5	23	1
2020-04-03 06:40:00	60.13059	5.53539	24	19	0	1	50	15	0.098	13.3	5	1002	34	0.1	325	2	3	12	1
2020-04-03 06:30:00	60.1278	5.53959	24	18	0	1	50	15	0.1	13.2	4	1002	34	0.5	305	5	7	352	1
2020-04-03 06:20:00	60.12492	5.54532	24	17	0	1	50	15	0.098	13.3	5	1001	34	0.6	295	2	3	351	1
2020-04-03 06:10:00	60.12315	5.54994	24	16	0	1	50	15	0.1	13.2	4	1001	34	0.6	265	2	3	12	1
2020-04-03 06:00:00	60.12207	5.55306	24	15	0	2	50	15	0.098	13.2	4	1001	34	0.4	300	3	3	349	1
2020-04-03 05:50:00	60.12048	5.55672	24	14	0	3	50	15	0.1	13.2	4	1001	34	0.4	320	3	4	13	1
2020-04-03 05:40:00	60.1194	5.55936	24	13	0	1	50	15	0.1	13.2	4	1001	34	0.3	340	3	4	28	1
2020-04-03 05:30:00	60.12072	5.56272	24	12	0	1	50	15	0.098	13.2	4	1001	34	0.1	310	3	4	200	1
2020-04-03 05:20:00	60.12042	5.5653	24	11	0	1	50	15	0.098	13.2	4	1001	34	0.1	340	3	3	20	1
2020-04-03 05:10:00	60.11928	5.5665	24	10	0	1	50	15	0.1	13.2	4	1001	34	0.2	290	4	4	98	1

Files view

Files view shows a list of files transmitted by the instrument.

- **Date/Time** – Is the date-time of when the file was made
- **Position (Lat/Long)** – is the position of the instrument when the file was transmitted.
- **Filename**: is the filename in 8.3 format
- **Size** – the filesize in bytes (can be less than actual file size due to compression)
- **Cur Size** – bytes transmitted

If **Size** is not equal to **Cur Size** the file has not been fully transmitted.



Settings

In settings the server configuration of the instrument is set.

Edit warnings

Enable/disable server warnings.

Control view

This view give access to controlling the instrument by entering text commands. A message log is shown on the right where previous commands can be downloaded.

- Enter a meaningful comment with initials of who sent the command.
- The commands are written directly in the textbox. Do not enter more than 250 characters per message.
- The order of the commands in the message is arbitrary.
- **NB! Wait for response from instrument before sending next message.**
- Note: a password is required to send the commands to the instrument.