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# Objective of the trial

- Check ENC event-driven updates operations on Connected ECDIS.
- Investigate changes required in the bridge procedures.

**Trial vessel: M/T Ursula Essberger.**

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# Sea Trial Setup

Updates By Events

## Trial Bridge Setup:

- **MyRA** voyage planning tool.
- Event-driven updates download and delivery by vessel route.



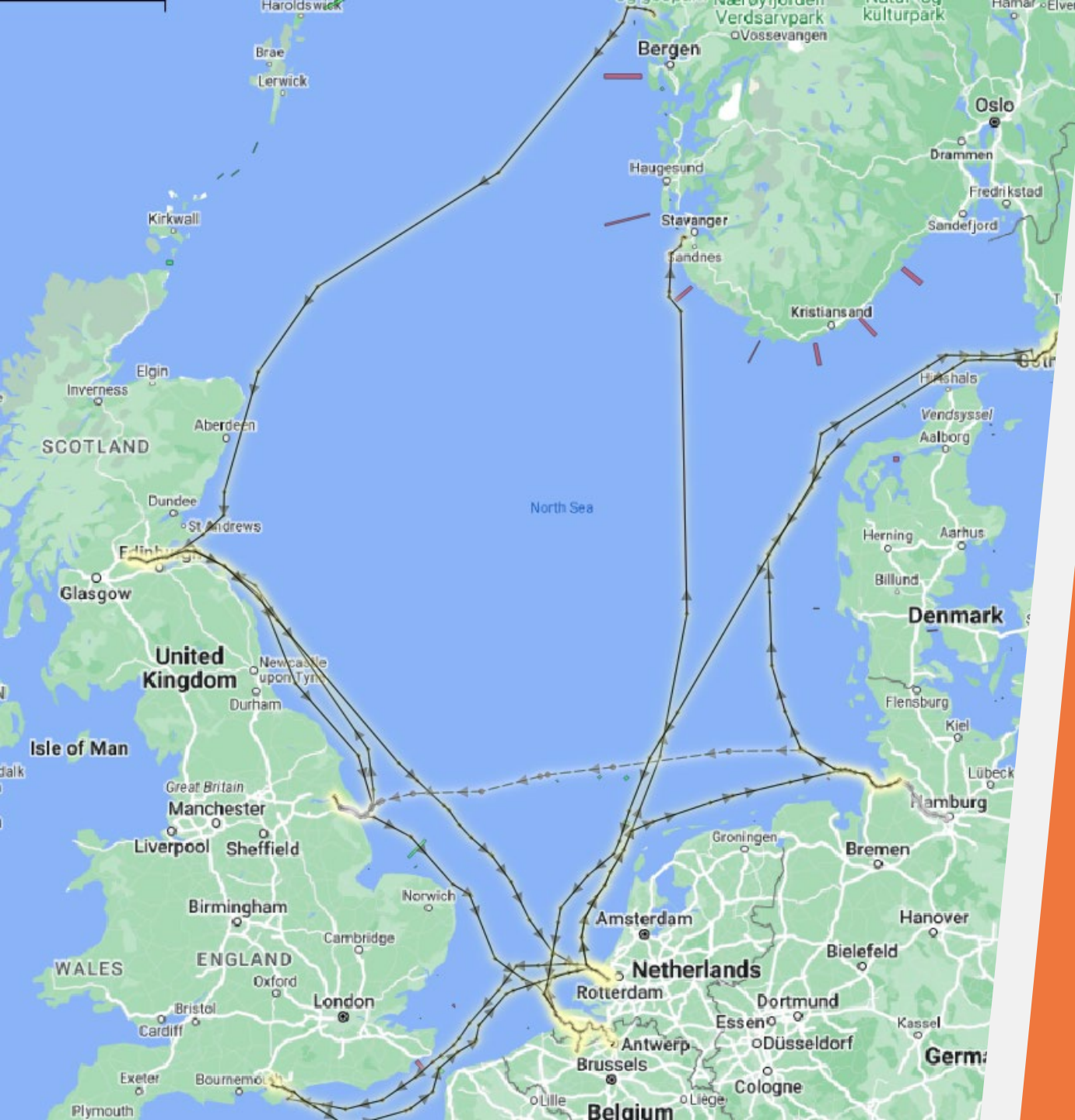
# Sea Trial Setup

## Updates By Events

### Trial Bridge Setup:

- Separate (3rd) ECDIS station dedicated for trial.
- **eGlobe G2 Connect ECDIS** connected to CW for updates and data exchange.





# Voyages

19 routes made during the ADDS trial 25.06 – 04.09.2023

The vessel was trading between ports in the UK, Germany, the Netherlands, Belgium, Sweden, France, Finland.



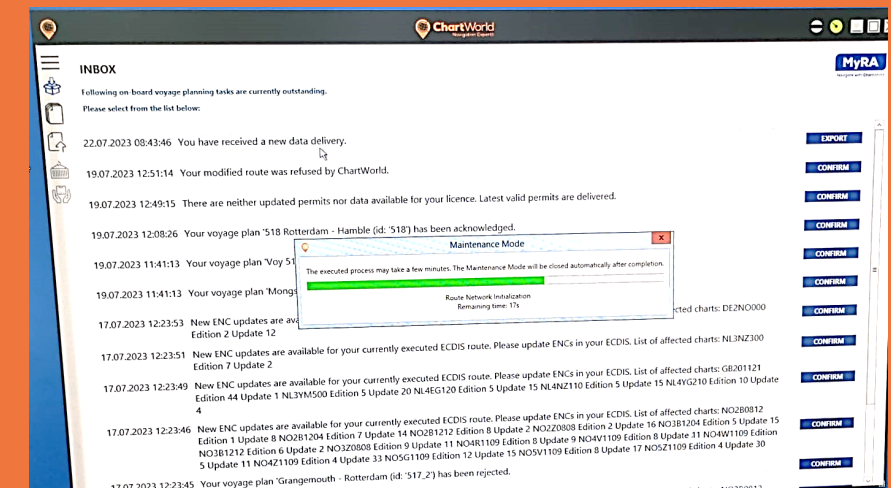
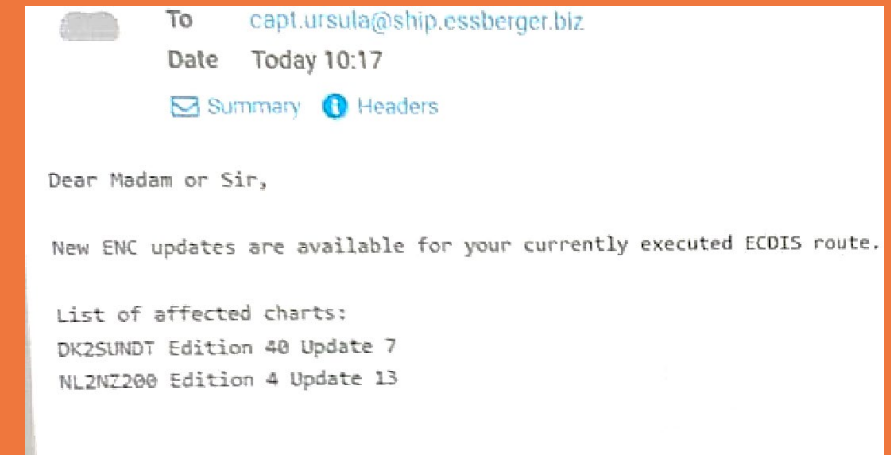
# ENC Update statistics

ENC updates delivered to the vessel during the trial 25.06 – 04.09.2023

Condition	Description	ENC update batches
New or modified voyage plan	The voyage plan is created in MyRA, or the route is changed in the ECDIS	28
Weekly updates	Weekly license updates (mostly new editions and new charts)	10
Event Driven updates	Updates delivered between the weekly updates	13

**Every route change triggers the delivery of updates by the route.**

**In total, 63 event-driven chart updates selected by routes were delivered in 13 batches**



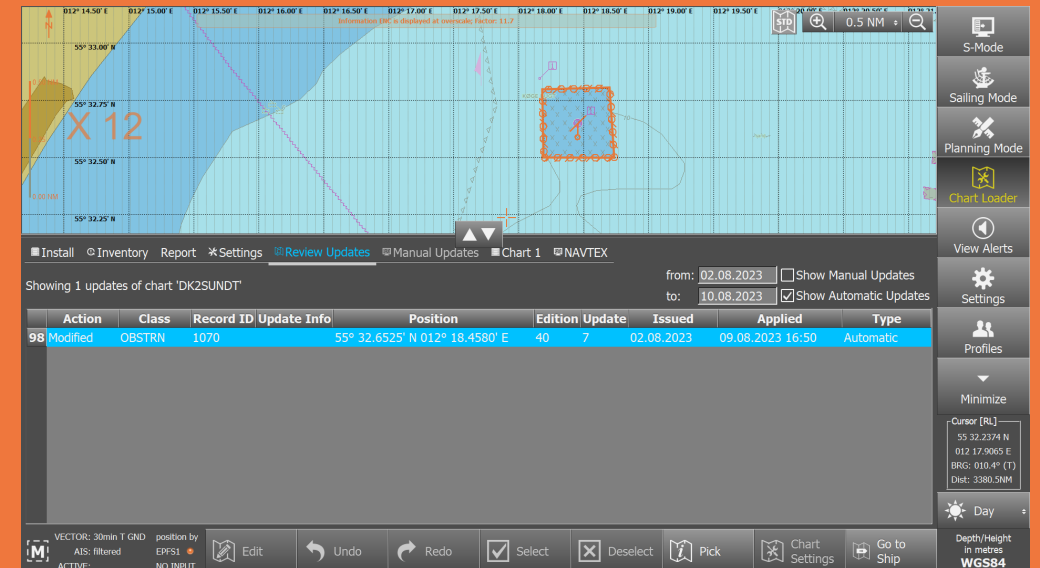
# Onboard Process

## Normal ECDIS update process done by 2<sup>nd</sup> Officer

1. Apply weekly ENC updates.
2. Update ECDIS ENC for every new voyage plan.
3. Check every voyage plan for safety on up-to-date ENC.
4. Follow the procedure of NP-133c – ENC and ECDIS Maintenance Records.

## Additional task for ADDS event-driven update

1. Once a watch the 2nd Officer checks e-mail notifications for new ENC updates for executed route.
2. If ENC updates are available, download and apply directly in the ECDIS connected to CW.
3. Review the updates and analyse their effect on safety.



# Bridge Team Feedback

1. I applied ENC updates in the ECDIS immediately when received.
2. After applying the ADDS updates I repeated the complete route check-in ECDIS and reviewed found no dangers.
3. The updates were irrelevant to the current voyage but might affect the next voyage.
4. ENC update notification email has very limited information - shows charts which are affected it doesn't say what has changed.
5. **Using the option to update ECDIS ENC from the server saves plenty of time. No USB sticks. So that is a great plus. The main factor is working stable internet connection**
6. Need a backup solution for updates in case internet in ECDIS is not working or slow.
7. Nice to know that you will be notified about any changes directly with no delay.





# Conclusions from the trial

- The event-driven updates work effectively when ECDIS is connected for direct download.
- For short voyages most of the updates by route are downloaded during the voyage planning.
- Updates were delivered for the whole route to prevent not up-to-date charts in the ECDIS ENC Status report.
- When AIO is updated, it mostly includes data not relevant to the route.
- Technical issues
  - The event-driven updates are delivered only from Wednesday to Friday which might cause confusion for the crew.
  - The data server for event-driven updates distributes data one week ahead of normal weekly updates – the same week base media from different servers contain different data.



# Topics for Discussion

## 1. Bridge procedures.

- a. How often should the updates be checked and applied in ECDIS? Is this a task for 2<sup>nd</sup> Officer watch only or for every Nav officer watch?
- b. Shall every applied update be written in the NP133c Form?
- c. Shall the ECDIS route be checked for safety for every applied update?

## 2. General issues with the event-driven updates.

- a. Shall the updates be delivered only ahead of the vessel's route or for the whole route to keep all chars by route up to date (inspection issue)?
- b. Shall the updates be accompanied by a detailed description of the change in human-readable form?
- c. Will the event-driven updates eventually replace NAVTEX and SafetyNET messages? If so, ECDIS would require special notification functions for receiving and plotting the updates.

