“ECDIS USER FEED BACK”

Presented By: Capt. Rajiv Kapoor

28-November-2019

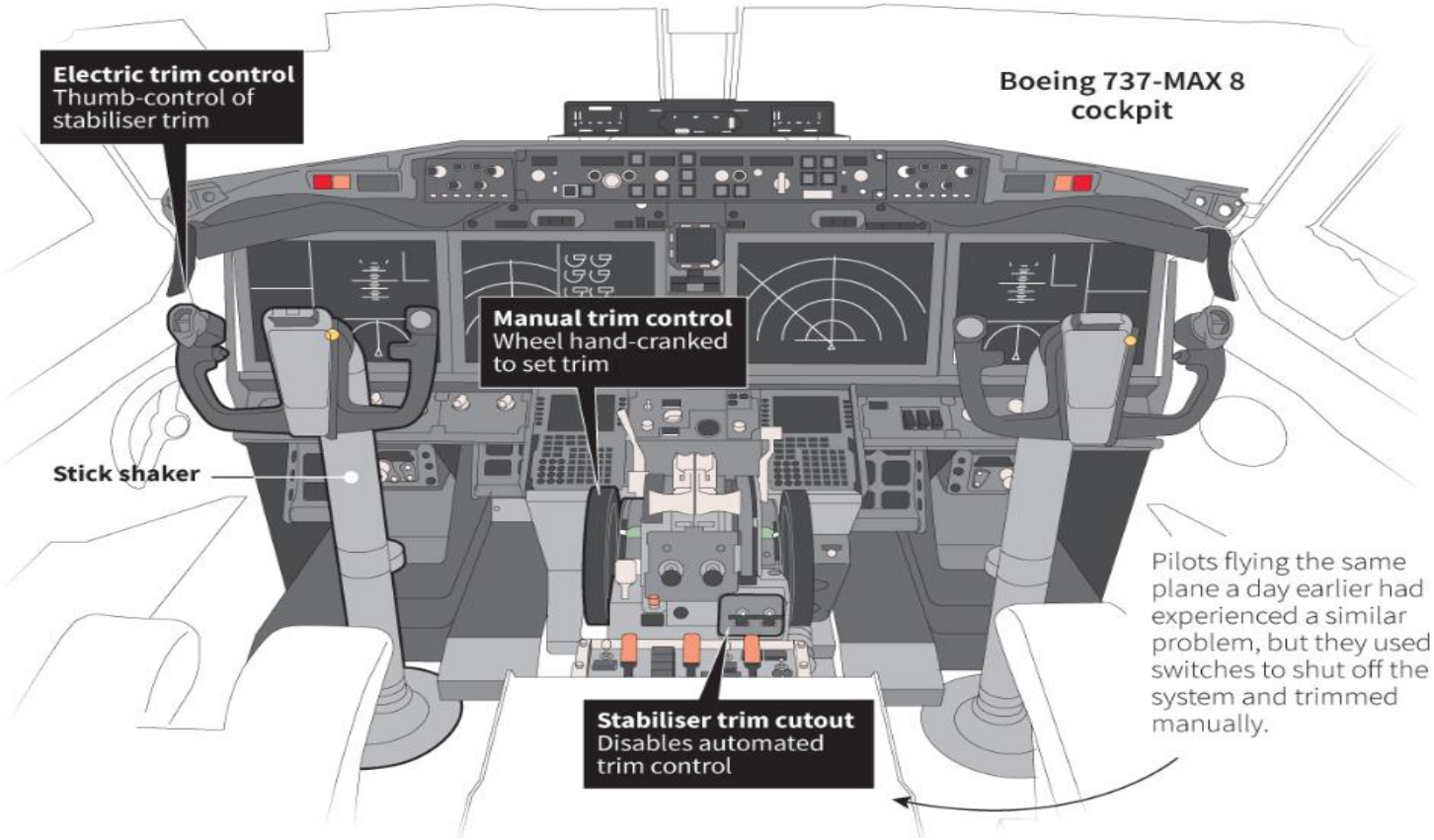
ANGLO-EASTERN

WORLD NEWS MARCH 29, 2019 / 6:23 AM / 2 MONTHS AGO

Regulators knew before crashes that 737 MAX trim control was confusing in some conditions: document

Jamie Freed

8 MIN READ



ECDIS – MAIN ADVANTAGES

Easily accessible information

Simple, reliable and fast updating of ENC's

Reduces the Navigational Workload

Anti Grounding Tool

Voyage Playback

Electronic Log Keeping

Convenient & Timely means of

- Route Monitoring
- Route Planning
- Position Monitoring
- Route & Waypoint Management

Exchange of Data

- RADAR / ARPA data can be superimposed
- Ice Data can be superimposed

The existence of multiple systems in market brings in another challenge – Non standardization?

Will ECDIS go the Radar way?

Wow or How?

Automation Trap. Automation surprises.

High Automation – boredom and complacency.

'RTFM' and regular practice at sea.

Change in attitude towards automation .

ECDIS - Main Purpose / Advantage ?

Anti Grounding Tool !!

How is this Purpose achieved ?

- *By ECDIS Safety Settings*

What are these settings ?

- *Shallow Contour, Deep Contour, Safety Contour and Safety Depth !!*
- *Look Ahead Function / Watch Vector*

ECDIS - Safety Settings
1. Deep Contour

Deep contour (selected) indicates
*"Depth areas below which shallow water **effects** get **pronounced**"*
(MSD + Max SQUAT) X 2

Is it part of ECDIS Performance standards ?

- *No*

Does it give any alarm and indication when breached ?

- ***No** alarm or indication, only colour identification*
- *Waters inside Deep Contour depicted in **Grey** Colour*

ECDIS - Safety Settings
2. Safety Contour

Highlights the selected contour in bold.

The highlighted contour value distinguishes between the ***Navigable (Safe) and Non-Navigable water (Unsafe)****.*

Is it part of ECDIS Performance standards ?

- ***Yes***

Does it give any alarm and indication when breached ?

- ***Yes****, it gives alarm and indication* ***when look ahead function/ Watch vector breaches it***

ECDIS - Safety settings

Navigating Across Safety Contour

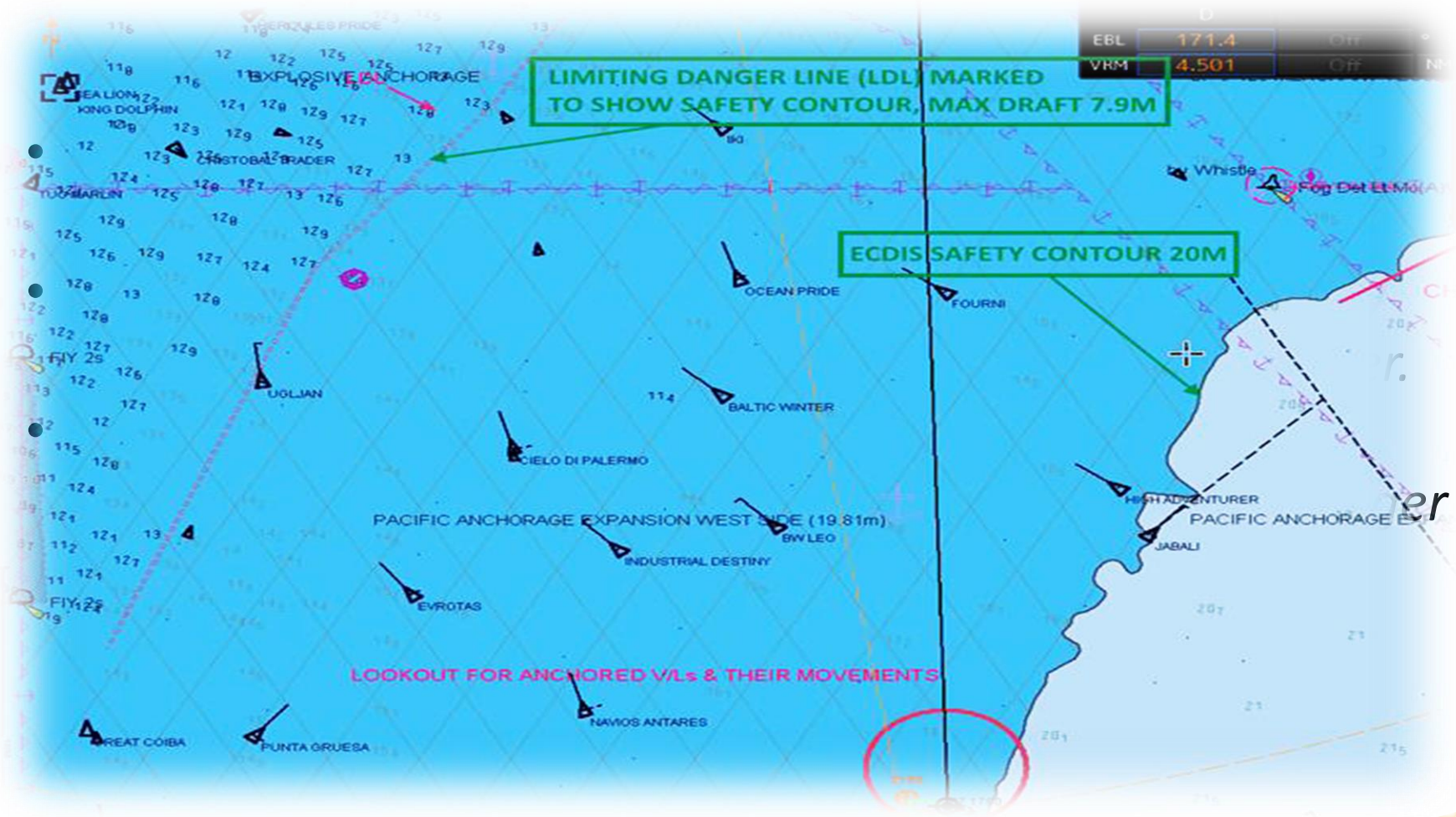
- *If the safety contour selected is not available in ENC, it would default to the next available deeper contour.*

- ***Result** - artificially displaying a reduce amount of safe water on chart.*

- ***Action** - entire area inside the safety contour cannot be taken as non – navigable water and **areas with spot soundings highlighted in bold (Safety Depth) should be treated as 'No Go Area'**.*

ECDIS - Safety settings

Navigating Across Safety Contour



ECDIS - Safety Settings
3. Safety Depth

Calculated safety depth highlights
Spot sounding equal to or below the selected value
*'**in bold**'.*

- *It informs the user of the depths that are **insufficient** for the vessel to safely pass over.*
- *Safety Depth can be set as a different value than Safety Contour, but it is strongly recommended to set as :*

Safety Depth = Safety Contour

Is it part of ECDIS Performance standards ?

- ***Yes***

Does it give any alarm and indication when breached ?

- ***No** alarm or indication*

ECDIS - Safety Settings
4. Shallow Contour

Shallow Contour (selected), indicates the "Depths below which vessel will run aground".

Grounding depth

(MSD + Max SQUAT)

Is it part of ECDIS Performance standards ?

- *No*

Does it give any alarm and indication when breached ?

- ***No** alarm or indication, only colour identification*
- *Waters inside Shallow Contour depicted in **Deep Blue** Colour*

5. Managing T&P Corrections with AIO

- One area that probably was not discussed in detail during the development of ECDIS was the correction of ENCs.
- For example, the word AIO did not appear even once during the initial ECDIS training.

- Another issue with ECDIS was that most of us thought ECDIS would reduce some work for the ship staff.
- *T&P Corrections and other important corrections must be applied only as a Manual Update.*

6. Management of Manual Corrections

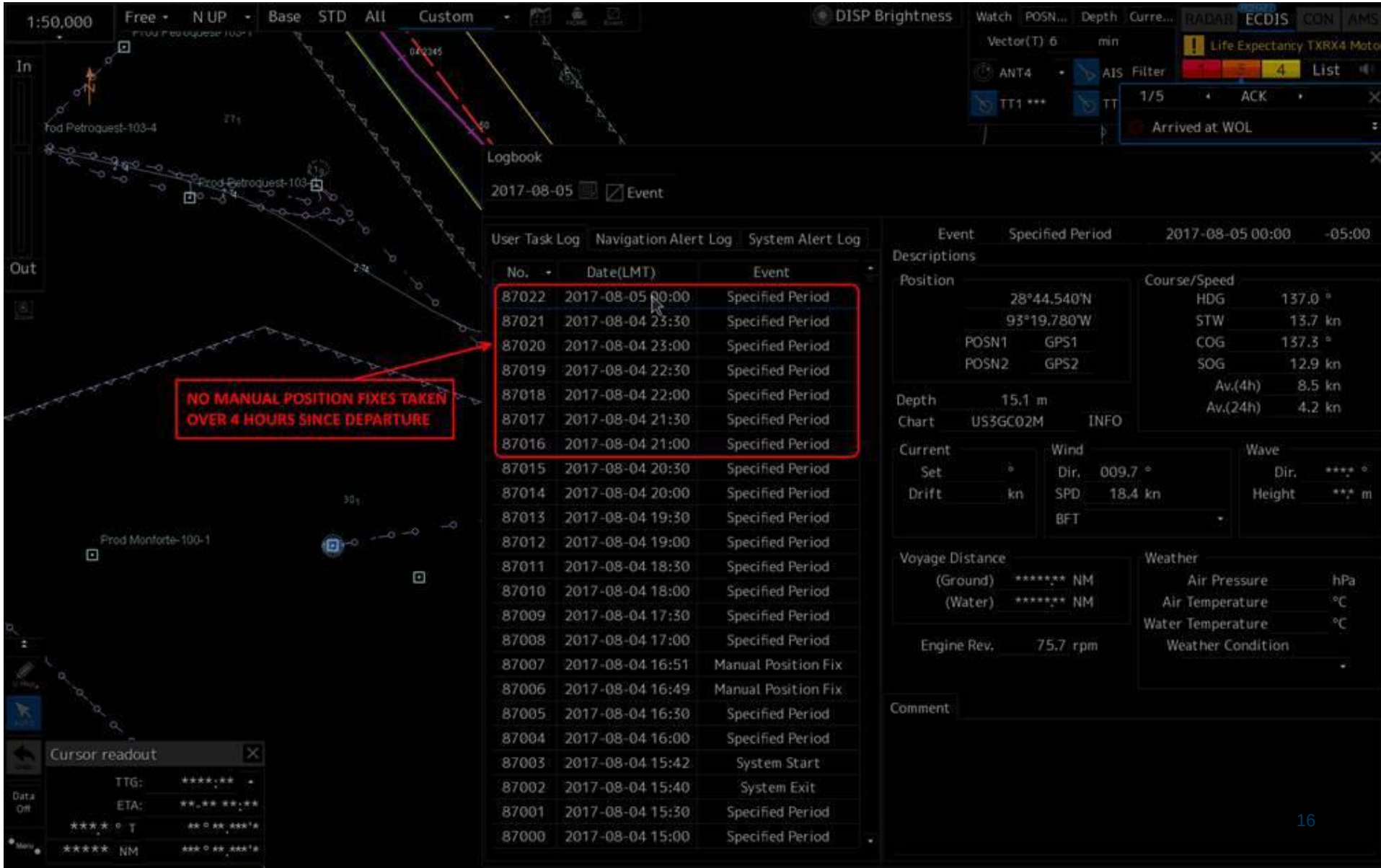
- ***Maintain a log of all manual updates*** *to the ECDIS either in electronic form or manual records in NP 133C.*

- ***Manual corrections do not get removed*** *when an update is applied. Use the date dependent feature, if available, for setting the 'end date' or the 'date to be deleted'.*

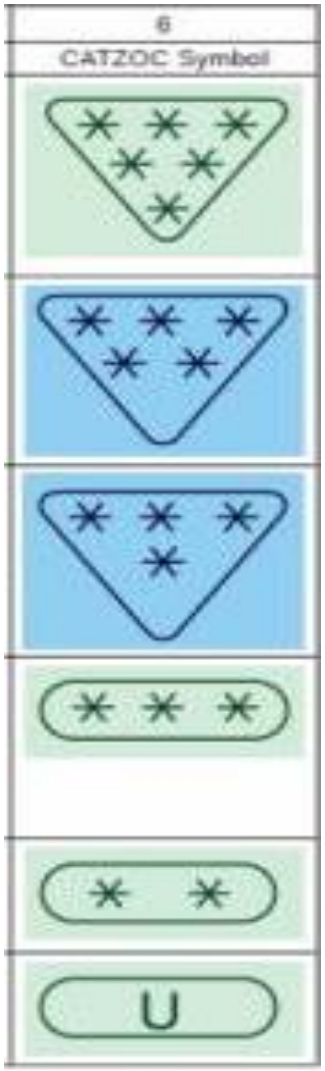
7. Manual Position Fixing

- *Manual positions are required as "**2nd means of position fixing**" so as to **verify GPS position**.*
- *Such positions must be obtained by **visual and/or radar observations** of terrestrial or other charted fixed objects, or means other than the GPS and inserted soon after the observation.*

No Manual Position Fixing



8. CATZOC



- ***CATZOC** values are assigned on the basis of positional and depth accuracy of survey.*

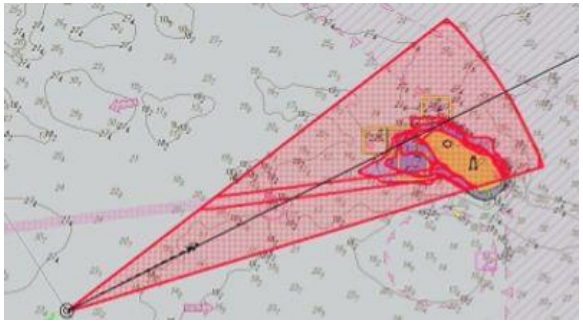
- ***What to do if CATZOC depth uncertainty value is less than or equal to UKC available ?***

- ***What to do if ZOC depth uncertainty value is more than UKC available ?***

9. Look Ahead Function/ Watch Vector

- ***What is Look Ahead Function/ Watch Vector ?***

- ***What factors relating to the Look ahead function/ Watch vector/Anti Grounding Guard zone should a navigator take into account ?***



10. Route Check

- ***What are the draw backs of automated Route check ?***

- ***Why is important to check the route visually ?***

- ***How often the visual route check should be done ??***

- *Master should validate/approve the route after satisfying himself that there are no hazards along the planned route.*

11. Voyage Chart Status

- ***In the Voyage Charts status report in certain makes of ECDIS , why does 'To be ordered appear against some charts?***

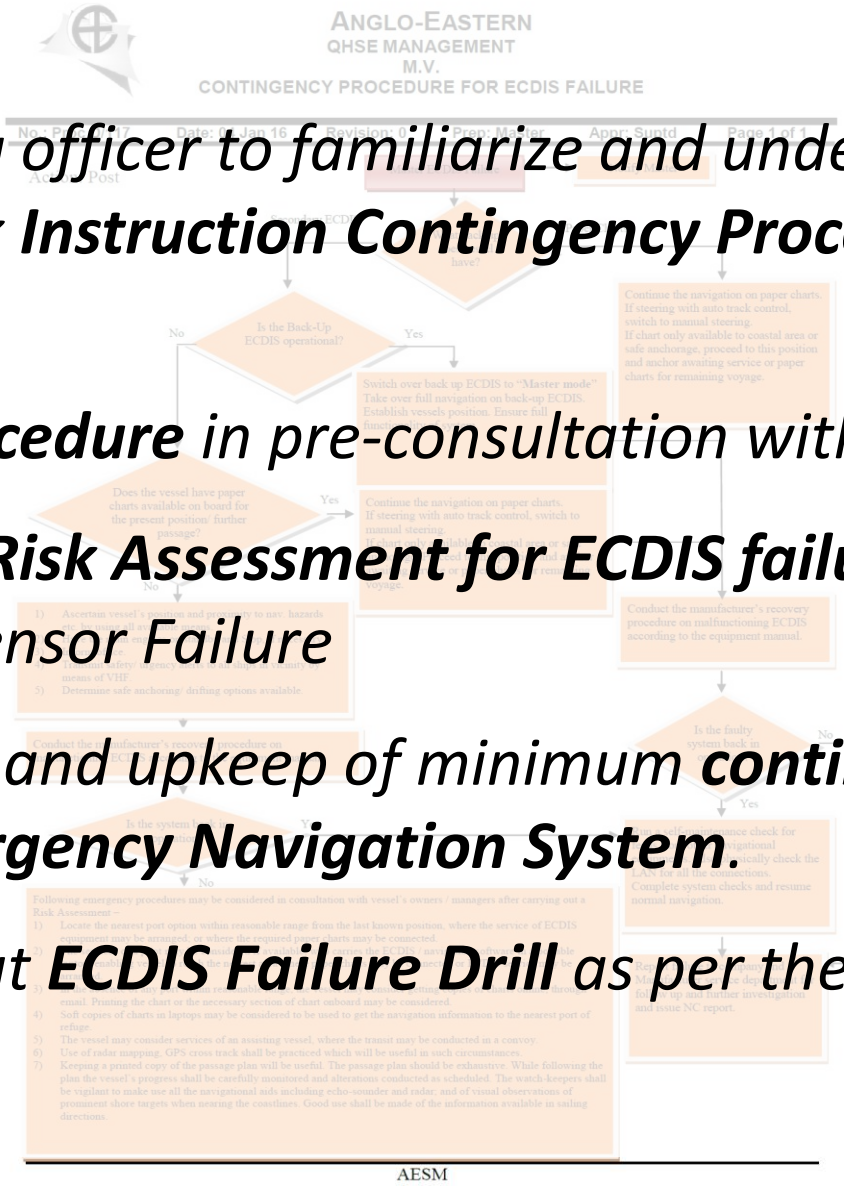
- ***If ECDIS manufacturer is not the chart service provider?***

- *Vessel should use the catalogue provided by the chart service provider and to be kept up to date, by updates sent by them.*

12. Computer Virus / Malware Prevention Update of System

- *Take a **backup of system data at regular intervals** as per maker's instruction.*
- *Prior transferring data from the communication computer to the ECDIS, using any external media, **scan the communication computer** with the latest version of the antivirus update.*
- *Use a dedicated USB which is suitably marked, as "FOR ECDIS USE ONLY**". Do not connect any other device to the USB port** of ECDIS. A clean DVD is the preferred mode for data transfer to / from ECDIS.*

13. ECDIS Failure


ANGLO-EASTERN
QHSE MANAGEMENT
M.V.
CONTINGENCY PROCEDURE FOR ECDIS FAILURE
AESM

- *All navigating officer to familiarize and understand **Ship-Specific Work Instruction Contingency Procedure For ECDIS.***
- ***Recovery procedure** in pre-consultation with makers*
- *Ship-specific **Risk Assessment for ECDIS failure** including mandatory sensor Failure*
- *Maintenance and upkeep of minimum **contingency paper charts / Emergency Navigation System.***
- *Must carry out **ECDIS Failure Drill** as per the Emergency Drill Planner*

QUESTIONS / FEEDBACK..

Thank You!

ANGLO-EASTERN