UNITED NATIONS **E**

Economic and Social Council

Distr.
GENERAL

ECE/TRANS/SC.3/2006/6/Add.1
28 July 2006

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Inland Water Transport

Fiftieth session
Geneva, 11-13 October 2006
Item 8(b) of the provisional agenda

ESTABLISHMENT OF COMMON PRINCIPLES AND TECHNICAL REQUIREMENTS FOR A PAN-EUROPEAN RIVER INFORMATION SERVICES (RIS)

Recommendation on Electronic Chart Display and Information System for Inland Navigation (Inland ECDIS)

Comments by Governments and River Commissions on draft edition 2.0 of Inland ECDIS

Submitted by the Government of the Russian Federation

Addendum

PROPOSALS ON AMENDMENT OF THE DRAFT EDITION 2.0
OF INLAND ECDIS STANDARD

Section 1

1. In paragraph 1(c) delete for the navigation mode as specified in Section 4 of this standard.

2. Delete paragraph 1(d).

3. Modify paragraph 2.1(a) to read:

   Inland ECDIS means an electronic chart display and information system for inland navigation, displaying selected information from an Inland System Electronic Navigational Chart (Inland SENC) with positional information from other navigation sensors to assist the skipper in route planning and route monitoring, and if required displaying additional navigation-related information

4. Modify the last sentence of paragraph 2.1(d) to read:

   The Inland ENC contains all chart information necessary for safe navigation and may contain supplementary information that may be considered as necessary for safe navigation.

5. Modify paragraph 2.1(h) to read:

   Integrated Display means a picture on the Inland ECDIS display screen consisting of the SENC overlaid with the radar-image with matching scale, offset and orientation.

6. Delete paragraphs 2.1(i) and (j).

7. Modify the introductory phrase of paragraph 3.1(c) to read:

   For safe navigation within inland waterways at least the following objects have to be included in the ENC:

8. In paragraph 3.1(d) delete If the chart intended to be used for navigation mode (ch. 5.2).

9. Modify paragraph 3.2(f) to read:

   Inland ECDIS shall be capable of accepting updates to the Inland ENC data entered manually with simple means of verification. They would be distinguishable on the display from ENC information and its official updates and not affect display legibility.

10. Modify paragraph 4.1(b) to read:

    The display size of the chart presentation for the rout monitoring shall be at least 270 mm by 270 mm.

11. Delete paragraph 4.1(c).

12. Delete Chapter 4.2.

13. Modify Chapter 4.3 to read:

4.2 Image Positioning and Orientation

(a) In Inland ECDIS the “north-up” and the “head-up” chart orientations are allowed. The skipper at his own discretion decides between the two kinds of orientation conforming of navigation conditions.

(b) Inland ECDIS should provide for true motion and relative motion with the own ship’s position in the screen center or off-centered (see Ch. 5.2).

14. Modify existing paragraph 4.5(a) to read:

In Inland ECDIS the radar image shall be added to the Inland ENC display.

15. Modify existing paragraph 4.5(d) to read:

The overlaid radar-image may contain additional navigational information, which should not degrade the SENC information and it should be clearly distinguishable from the SENC information.

16. Delete Chapter 5.1.

17. Renumber Chapter 5.2 as Chapter 5.1 and modify it to read:

5.1 Navigational Operation

(a) For navigation within inland waterways the Inland ECDIS display shall be integrated with the own ship's radar information. The radar information shall be clearly distinguishable from the SENC information.

(b) The integrated display must be in accordance with the requirements for radar on inland waterways as specified in Section 4, ch. 4.14 of this Standard.

(c) The chart and the radar image must match in size, position and orientation within the limits as specified in Section 4, ch. 3.4 and 8.3.2 of this Standard.

(d) For navigation within inland waterways the Integrated Display is recommended to be presented in the head-up orientation. Other orientations are permitted for navigation out of inland waterways and within the large lakes.

(e) It shall be possible for the operator to adjust the displayed position of the vessel so that the radar image matches the SENC display.

(f) It shall be possible to remove either the SENC or the radar information by a single operator action temporarily.

(g) The vessel's position shall be derived from a continuous positioning system of which the accuracy is consistent with the requirements of safe navigation.

(h) Inland ECDIS must provide an indication when the input from the position-fixing system is lost. Inland ECDIS shall also repeat, but only as an indication, any alarm or indication passed to it from a position fixing system.

(i) The positioning system and the SENC shall be based on the same geodetic datum.

(j) The data according to ch. 3.1.c of this standard shall always be visible and shall not be obscured by other objects during the navigation.

(k) As tracking and tracing information (for example AIS) of other vessels is useful for the planning of the passing, but of no use during passing itself, T&T (AIS) symbols shall not disturb the radar image during passing and shall be faded out therefore. Preferably the application should allow the skipper to define the area where the symbol is faded out.

(l) The maritime ECDIS symbols for AIS targets shall only be used in inland navigation, when heading information is available. For vessels without heading information it is recommended to use a square.

18. Renumber Chapter 5.3 as Chapter 5.2.

19. Modify Chapter 8.1 to read:

Inland ECDIS shall provide a suitable alarm and/or indication, if the SENC positioning does not match the radar picture within the limits of Section 4, ch. 5.1 and 5.2.

Section 4

20. Delete paragraph 2 and chapter 2.1.

21. Modify Chapter 2.2 to read:

2. System Configurations

2.1 Inland ECDIS equipment, stand-alone-system without connections to radar and positioning sensors

This configuration allows installation onboard the vessels already equipped with corresponding radar and positioning sensors (See Appendix B, Fig. 1).

2.2 Inland ECDIS equipment, stand-alone-system without connections to radar

This configuration allows installation onboard the vessels already equipped with corresponding radar station (See Appendix B, Fig. 2).

2.3 Inland ECDIS equipment, parallel installation and connection to radar and positioning sensors

This configuration allows installation onboard the vessels not equipped with corresponding radar and positioning sensors (See Appendix B, Fig. 3).

2.4 Inland ECDIS equipment, monitor shared with connected radar equipment and positioning sensor

In special cases, it is possible to share one display for the Inland ECDIS equipment and for the radar equipment. The prerequisite for this is a monitor with matching graphic parameters for both video signals, and a video switch, which allows a fast switchover of the video sources, and – if needed - a mechanical rotation of the display to the required orientation (see Appendix B, Fig. 4).

2.5 Radar equipment with integrated Inland ECDIS functionality

This is a radar and position sensor installation with integrated Inland ECDIS functionality (see Appendix B, Fig. 5).

22. In paragraph 3.1b) change the cross references to chapters 2.3, 2.4 and 2.5, accordingly.

23. In paragraph 3.4.1 delete In **navigation mode**.

24. Delete Chapter 4.1 and renumber the rest of Chapters accordingly.

25. In existing paragraph 4.3d) delete In **navigation mode,**.

26. Modify existing Chapter 4.4 to read:

4.3 Chart orientation, positioning and shifting

In Inland ECDIS the “north-up” and the “head-up” chart orientations and the “centered” or “off centered” presentations, as required for the radar picture, are allowed. The skipper at his own discretion decides between the two kinds of orientation conforming of navigation conditions. For some waterways “head-up” orientation may be mandatory and defined by local waterway regulations.

27. In existing paragraph 4.5a) delete **In navigation mode,**.

28. In existing paragraph 4.5b) delete which runs from the display center to the top and.

29. In existing paragraph 4.7a) replace In **navigation mode**, with In Inland ECDIS.

30. In existing paragraph 4.7c) delete in **navigation mode**.

31. Delete existing paragraph 4.7g).

32. In existing paragraph 4.10a) delete In **navigation mode,**.

33. Modify existing paragraphs 4.14a) and 4.14i) to read:

a) The radar image representation is recommended for operation within inland waterways. For some waterways it may be mandatory and defined by local waterway regulations.

i) If the quality and plausibility monitors of the Inland ECDIS equipment detect that the radar picture cannot be oriented and/or positioned with the accuracy required by this document, a corresponding alarm and indication shall be presented on the display.

34. In the introductory phrase of section 5 delete in **navigation mode**.

Section 4, Appendix A

35. In the second sentence of paragraph 1 replace in **navigation mode** with in Inland ECDIS.

36. Modify paragraph 1.5 to read:

1.5 Requirements for additional services

Navigation systems may support additional services if they are useful. These services must not interfere with Inland ECDIS.

The navigation system provider is responsible for additional test equipment, necessary to verify interface specification, protocol specification and compliance tests with the Inland ECDIS standard.

37. In paragraph 2.1 replace **Navigation mode** with **Inland ECDIS**.

38. In the last sentence of paragraph 2.2.2 delete while running in **navigation mode**.

Section 4, Appendix B

39. Add additional Figure as Figure 1 for **Inland ECDIS equipment, stand-alone-system without connections to radar and positioning sensors** (similar to existing Figure 1 but without position sensor). Change the numbering of figures and their titles according to paragraph 2 of Section 4.

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