



**Economic and Social
Council**

Distr.
GENERAL

ECE/TRANS/SC.3/WP.3/2010/8
2 December 2009

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Inland Water Transport

Working Party on the Standardization of Technical
and Safety Requirements in Inland Navigation

Thirty-sixth session
Geneva, 10-12 February 2010
Item 10 of the provisional agenda

**COMMON PRINCIPLES AND TECHNICAL REQUIREMENTS FOR PAN-
EUROPEAN RIVER INFORMATION SERVICES**

Amendments to Resolution No. 60, “International standards for Notices to Skippers and for
Electronic ship reporting in inland navigation”

Proposal submitted by the president of the International Notices to Skippers Expert Group

Note by the secretariat

At its fifty-first session, the Working Party on Inland Water Transport asked the Working Party on the Standardization of Technical and Safety Requirements in Inland Navigation to ensure proper maintenance of the RIS related recommendations (in particular, Resolution Nos. 48, 57, 60, 63) by monitoring the work of relevant international experts groups (ECE/TRANS/SC.3/178, paragraph 27).

The Working Party may wish to consider the amendment proposal to Resolution No. 60, “International standards for Notices to Skippers and for Electronic ship reporting in inland navigation” (ECE/TRANS/SC.3/175), submitted by the president of the International Notices to Skippers (NtS) Expert Group.

AMENDMENTS TO RESOLUTION NO. 60, ‘INTERNATIONAL STANDARDS FOR NOTICES TO SKIPPERS AND FOR ELECTRONIC SHIP REPORTING IN INLAND NAVIGATION

1. An amendment to the European Commission Regulation No 416/2007 of 22 March 2007 concerning the technical specifications for Notices to Skippers as referred to in Article 5 of Directive 2005/44/EC of the European Parliament and of the Council on harmonised river information services (RIS) on inland waterways in the Community is expected in 2009 with the implementation period of 12 month. Initially, this amendment was based on the Standard Notices to Skippers of the Central Commission for the Navigation of the Rhine in its editions 2.0 from 22.10.2008.

2. However, at its June 2009 meeting, the International Notices to Skippers (NtS) Expert Group identified another necessary change to the proposed amendment of the Technical Specification 416/2007, thus applicable for the already adopted and published NtS standard of the CCNR. This change relates to the chapter 5: Online weather messages and Appendix B. The NtS group learned at the meeting and confirmed it later than the interface to the online hydro-meteo information, a so-called Hymedis interface - would be changed on a rather short notice (July 2009) and replaced by an interface based on “web services”. This change to the new interface is done in order to ease the availability to a larger user group. The old interface (as specified in initial amendment to Regulation No. 416/2007) will run in parallel until mid 2010. In order to avoid promoting the interface specification, which will be changed, The NtS group intends to delete the old interface from the amendment proposal.

3. Therefore, there NtS group submitted a change request (CR), which requests to skip the interface to the online hydro-meteo information with the following explanatory note:

The interface for online weather messages was only implemented in the River Scheldt area. On the NtS expert group meeting in Brussels on June 3th, 2009 it became clear that VTS-Scheld has decided to retire the present interface and replace it by a more state of the art interface based on webservices. Whilst recognising the value of of online hydro-meteo information for (the safety of) inland shipping it is deemed wise to skip the now retired interface from the NtS Standard awaiting experiences with the newly developed interface and to investigate the possibilities to connect to the activities of the NtS expert group webservices taskforce.

4. The explanatory text of the CR promotes investigating possibilities to connect to the activities of the NtS web services task force in the (near) future with online hydro-meteo info since the online hydro-meteo information is highly appreciated by the (presently still limited part of) the inland navigation community and does enhance both safety and efficiency.

5. It has been decided that the aforementioned amendment of the standard published by the European Commission would incorporate this change, while the RIS Working group of CCNR already has accepted the amendment. The NtS group appreciates the risk that too frequent changes to the NtS standard may lead to decreased credibility / acceptance of the standard. However, real life experience only comes once implementing a standard, a process that is presently taking place. At the same time technology evolves and River Information Services cannot avoid having to follow the technical developments.

6. The NtS group, therefore, submits in the annex its proposal on amendments to Part I of the UNECE Resolution No. 60 on “International Standards for Notices to Skippers and for Electronic Ship Reporting in Inland Navigation”. The additions to the original text are highlighted in bold and the text to be deleted is highlighted in strike-through. The appendixes to the standard should also be updated to reflect the latest standards maintained by the NtS group.

7. The NtS group also proposes to adopt the standard on electronic reporting in inland navigation, currently in Part II in Resolution No. 60, as a separate Resolution, as it could be problematic to amend one standard without changing the other.

Annex

DRAFT REVISED PART I OF RESOLUTION NO. 60, “INTERNATIONAL STANDARD FOR NOTICES TO SKIPPERS FOR INLAND NAVIGATION AND FOR ELECTRONIC SHIP REPORTING IN INLAND NAVIGATION”

Proposed amendments to Part I “International Standard for Notices to Skippers for Inland Navigation”

INTERNATIONAL STANDARDS FOR NOTICES TO SKIPPERS FOR INLAND NAVIGATION

PREFACE

~~In the recent years many countries have implemented internet services for notices to skippers. Most of the existing services are providing information in the national language. As many notices are safety related or very important for the planning of voyages, the availability of all the notices for European waterways in all the languages would contribute to increasing safety and competitiveness of Inland Navigation.~~

~~This draft of a European standard has been developed by the “Notices to Skippers Expert Group”.~~

1. INTRODUCTION ~~(PRIMARY FUNCTIONS AND PERFORMANCE)~~

In the following, the primary functions and performance requirements are described.

Fairway Information Services (FIS) contain geographical, hydrological and administrative data that are used by skippers and fleet managers to plan, execute and monitor a trip. FIS provide dynamic information (e.g. water levels, water level predictions etc.) as well as static information (e.g. regular operating times of locks and bridges) regarding the use and status of the inland waterway infrastructure, and thereby support tactical and strategic navigation decisions.

Traditional means to supply FIS are e.g. visual aids to navigation, notices to skippers on paper, broadcast and fixed telephone on locks. The mobile phone using GSM has added new possibilities of voice and data communication, but GSM is not available in all places and at all times. Tailor-made FIS for the waterways can be supplied by radiotelephone services on inland waterways, Internet services or electronic navigational chart services (e.g. Inland ECDIS with ENC).

The following technical specifications for Notices to Skippers provide rules for the data transmission of fairway information via Internet services.

The standardization of Notices to Skippers shall

- provide automatic translation of the most important content of notices in all the languages of the participating countries,
- provide a **standardised** ~~harmonized~~ structure of data-sets in all the participating countries to facilitate the integration of notices in voyage-planning systems,
- provide a standard for water level information,

- be compatible with the data-structure of Electronic Chart Display and Information System for inland navigation (Inland ECDIS) to facilitate integration of Notices to Skippers into Inland ECDIS,
- facilitate data-exchange between different countries.

It will not be possible to standardize all the information, which is contained in Notices to Skippers. Part of the information will be provided as “free text” without automatic translation. The standardized part should cover all the information which is

- important for the safety of Inland Navigation (for example: sunken small craft on the right side of the fairway at the Danube, river-km 2010)
- needed for voyage planning (for example: closure of locks, reduction of vertical clearance, etc.)

Additional information (for example: cause of the closure of a lock) can be given as free text.

2. DATA STANDARD

Notices to Skippers shall be provided according to ~~Annex 1~~, **Chapter 7: Structure of the messages and coding in XML format, part XML Message Specification.**

In order to enable a broad applicability, the XML message definition contains a wide range of elements. The message is structured into entities (tags), such as sections, groups, subgroups and data elements. The use of free text in the data elements should be restricted to a minimum. Wherever possible, data elements are encoded (standardised). The XML message definition defines the structure of the XML message and the codes. The standardized code values, their explanation and translation into 24 languages are provided in reference tables (Appendix B).

The XML scheme for Notices to Skippers, which is based on the XML definition and the standardised code values, contains a complete definition for all the XML elements including possible formats and code values (Appendix C).

In order to obtain a machine-readable XML message one has to fill out the empty fields in the XML scheme (free text) and to select the code values from the value lists provided in the XML scheme.

3. WATER LEVEL INFORMATION

Water level information is very important for voyage planning as well as **for the safety of navigation**. At the moment there is no common standard of referencing water level information (Germany **for example** is using the GIW, “gleichwertiger Wasserstand”, ~~for example~~, the Danube Commission is recommending the RNW, Regulierungs Niederwasser, which is defined slightly differently. The vertical clearance **is** mostly **referred** ~~refers~~ to a high water level, but sometimes to low water level. The values of gauges ~~pertain~~ **are referring** to different sea-levels or to special reference points.). Therefore, it is not possible to integrate water level information in systems for automatic calculation of clearances.

Reference data for water level gauges relevant to navigation shall be provided by member States. ~~Appendix A of Annex 1 to Part I contains a list of gauges relevant for inland navigation with their reference values.~~ The water level information in the message can be referred to the

zero point of a gauge, as it has been done in the past, and the on-board software can calculate the absolute height by use of the reference data of the standard.

4. WEATHER MESSAGES

In most tidal waters and on many of the other inland waterways, a number of hydro-meteo items are measured continuously and distributed online. The primary addressee of these measurements are the water(-way) authorities. The distribution of these data to users like skippers of inland waterway vessels varies greatly. In order to facilitate the distribution of hydro-meteo information from hydro-meteo networks to skippers, dedicated weather messages shall be distributed as Notices to Skippers in accordance with the Chapter 7, Table 1. XML message definition.

Member States are not obliged to provide weather data. If such data is provided, this shall be done in line with these technical specifications.

5. WAY OF DISTRIBUTION

If the competent authorities provide Notices to Skippers of their own country in such a way that these notices can be used by speakers of other languages, they shall be provided according to this standard in XML format downloadable in the Internet. In order to enable a specific download, Internet services should provide a possibility to select:

- a specific waterway section (**ID number of a fairway section—number of the ID** according to **Chapter 7Annex 1, Table 1**); or
- a specific part of a waterway, defined by the river-km (fairway hectometer of the ID
- according to **Annex 1Chapter 7, Table 1**) of the starting and the end point;
- a time of validity (starting date and end date according to **Annex 1 Chapter 7, Table 1**);
- and a date of publication of the notice (date of publication according to **Annex 1Chapter 7, Table 1**).

Notices according to this standard can additionally be provided for example by

- Wireless Application Protocol (WAP) services;
- E-mail services.

Data exchange between the authorities is recommended. All the authorities using this standard can integrate Notices of other authorities and countries in their own services. The participating parties (authorities) can agree on the procedure of transmitting the XML messages by push or pull services directly.

6. PROCEDURE FOR CHANGES IN REFERENCE TABLES AND XML SCHEME OF NOTICES TO SKIPPERS

Proposals for amendments to the reference tables or the XML scheme have to be sent together with an explanation, why the amendment is needed to the chairperson of the Notices to Skippers expert group.

The chairperson shall distribute the proposal to the members of the expert group as well as to the European Commission. As regards the expert group, the amendment procedure as defined in the Terms of Reference for the Notices to Skippers expert group shall apply.

Proposals that are adopted by the expert group will be published on the website of the Notices to Skippers expert group.

Proposals for amendment of the UNECE Resolution relating to the International Standard for Notices to Skippers based on consolidated adopted proposals are forwarded to the UNECE in consultation with the UNECE secretariat.

The secretariat of the UNECE will proceed with such amendment in accordance with the procedures established by the UNECE. In this context, one shall take due account of the work of the expert group.

If a proposal for an amendment of the UNECE Resolution based on consolidated proposals is adopted, the updated UNECE Resolution, together with reference tables and XML scheme are published by the UNECE.

~~ANNEX 1:~~Chapter 7. STRUCTURE OF THE MESSAGES AND CODING IN XML FORMAT

~~1. INTRODUCTION~~

This ~~annex~~ **chapter** describes the structure and formatting of standardized electronic **Notice to Skippers messages**~~navigation information~~ — messages that can be sent by local authorities to inland navigation vessels.

~~7.12~~ STRUCTURE OF THE NOTICES TO SKIPPERS

~~27.1.1~~ General

Notices to Skippers messages ~~Navigation messages, with navigation information for inland skippers about a geographical object~~ have the following information sections:

- Identification of the message.
- Fairway and traffic related message.
- Water level related messages as:
 - Water level messages;
 - Least sounded depth - messages;
 - Vertical clearance - messages;
 - Barrage status - messages;
 - Discharge messages;
 - Regime messages;
 - Predicted water level - messages;
 - Least sounded predicted depth - messages;
 - Predicted discharge - messages.
- Ice messages.
- **Weather messages.**

A standardized message in XML format contains therefore also 4 different sections:

- **Message** identification
- Fairway and traffic related messages
- Water level related messages
- Ice **messages**
- **Weather messages.**

~~Normally in~~ **In** one message only 2 sections will be filled: ~~The the message~~ **the message** identification section and at least **one** of the following sections: Fairway and traffic related messages, Water level related ~~message~~, Ice message **or Weather message** (mix of sections, different type of message information is not allowed).

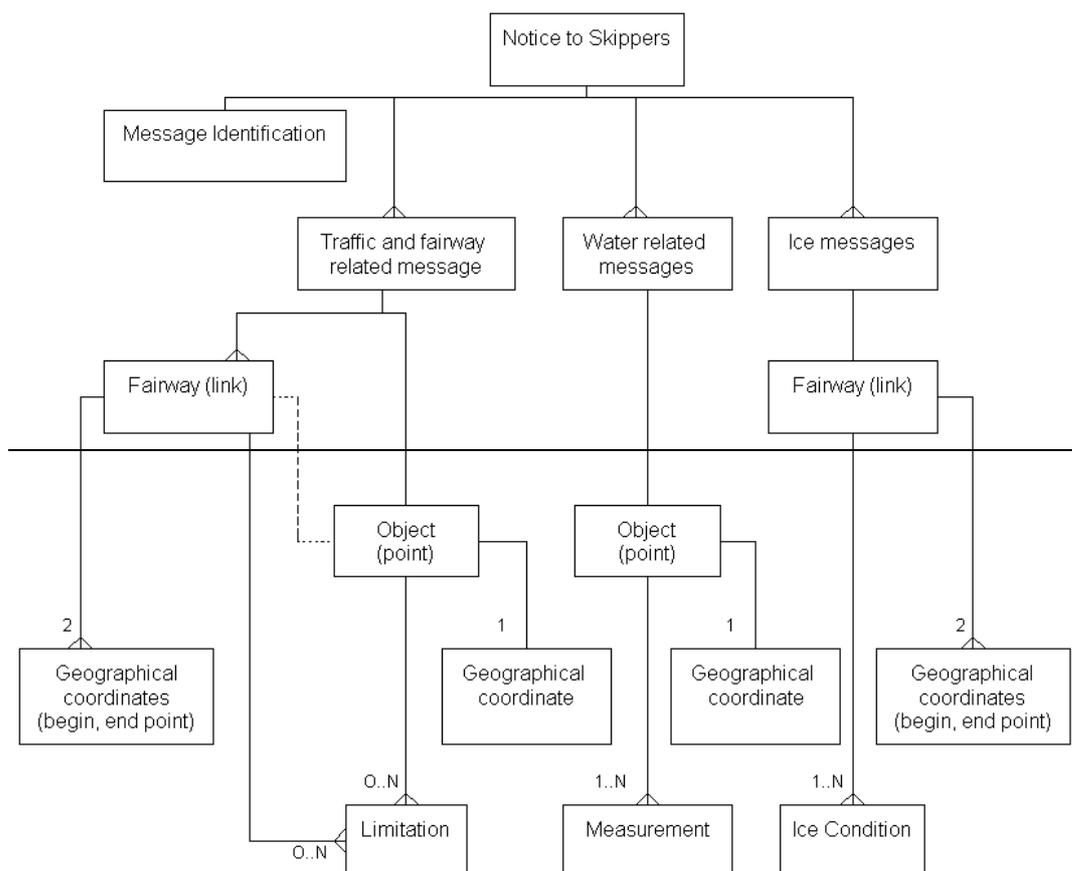
The fairway and traffic related section contains limitations for a Fairway (link) or an Object. ~~The diagram also shows that a~~ **A** Notice to Skippers relates to a Fairway or a geographical Object (point). If the message is about an Object, the fairway section shall be filled with the related fairway information without the limitation section.

If ~~one~~ **a** notice contains different limitations for different target groups or different communication information for different limitations, several fairway and traffic related sections with the same number can be used.

The Water level related message section contains measurements for an Object usually a tide gauge.

The Ice message section contains information about the ice conditions ~~and~~ for a fairway (link).

The Weather message contains information about the weather conditions for a fairway (link).



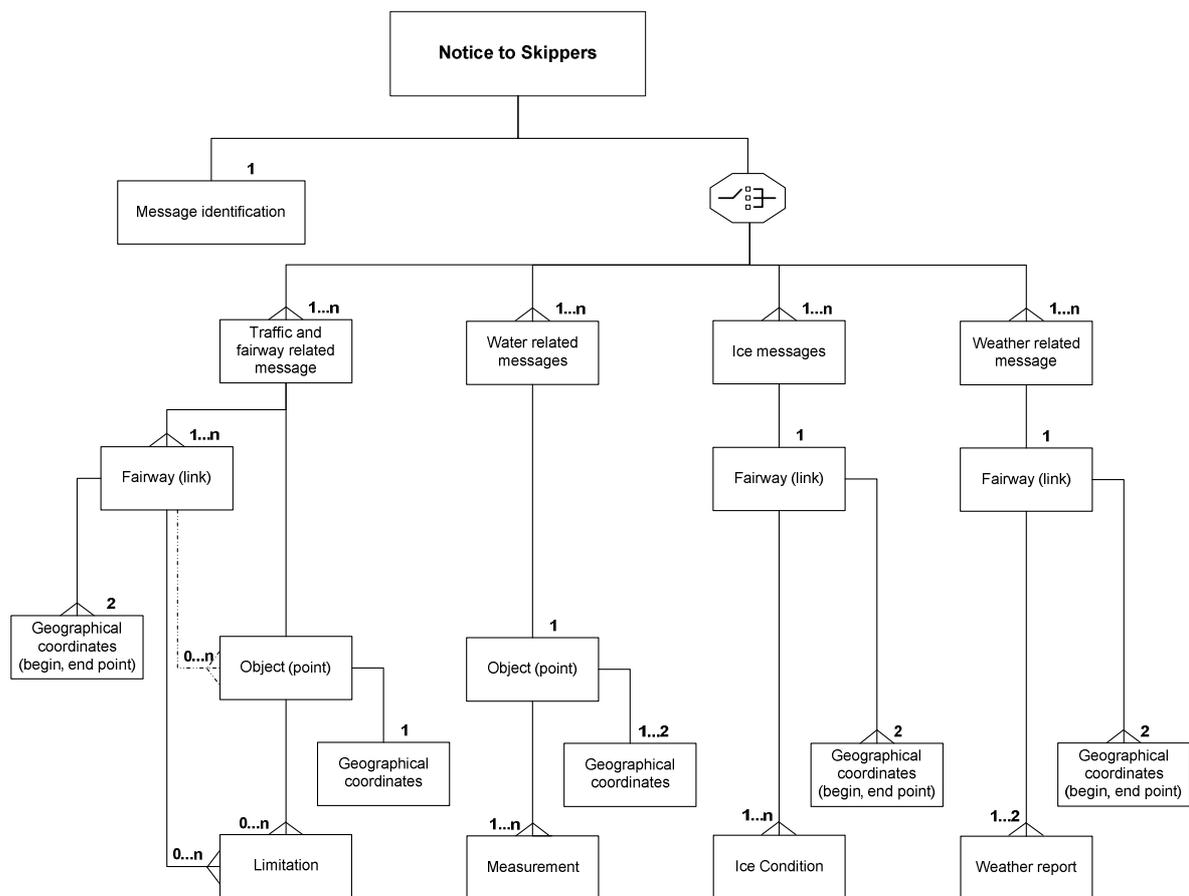


Figure 1: Notice to Skippers Navigation-Message structure

27.1.2 XML message definition overview

This section gives an overview of the definition of the message coded in XML. ~~Appendix A contains~~ **The XML scheme containing** a complete definition for all the XML elements including the possible formats, **can be found in Appendix C.**

Table 1, XML message ~~specification~~ **definition:** [Note by the secretariat: as no amendments is proposed to table 1, it is not reproduced in the present document.]

Rules applicable **to Table 1:**

- 1 In one message at least 2 sections have to be filled in:
 - the identification section (1)
 - one of the sections:
 - Fairway and traffic related messages (2),
 - Water level related message (3)
 - Ice message (4)
 - **Weather message (5).**
- 2 Group 2.11 (fairway section) is also available for object related messages (no. 2.12)
- 3 Group 2.12 (objects) is not available for fairway related messages (no. 2.11)
- 4 In group 4.3, at least one of the conditional elements 4.3.3 to 4.3.6 have to be filled in

- 5 If a conditional group contains mandatory subgroups or elements, these are only mandatory if the group on the higher level is applied.
- 6 Only mandatory for water levels and vertical clearances
- 7 **A fairway section is defined by the begin and end coordinates (2 sets of coordinates)**
- 8 **An object is defined by the coordinates of its center point (1 set of coordinates)**
- 9 **A wrm geo_object has 2 sets of coordinates in case the type_code is FWY, otherwise only 1 set of coordinates is to be used**
- 10 **Mandatory if measure_code is either "DIS", "VER", "LSD" or "WAL"**
- 11 **Mandatory if measure_code is "BAR"**
- 12 **Mandatory if measure_code = "REG"**
- 13 **Predictions for different periods require individual weather messages**
- 14 **May contain combinations of weather_class_code tags**

27.1.3 Explanation of tags

The meaning of the different tags used in the XML definition is described on the page "Tags" of **the reference table for Notices to Skippers** (~~a~~Appendix ~~BA~~ to Annex 4).

27.1.4 Explanation of codes

The meaning of the different codes used in the XML definition is described in **the reference tables for Notices to Skippers** (Appendix BA). The formats and possible values of all XML elements are described in the XML Scheme **for Notices to Skippers** (~~in~~ Appendix ~~CB~~ to Annex 4).

~~Viewpoints/considerations—~~notices to skippers

- Notices to **Skippers** can be divided into two categories, namely URGENT and NOT URGENT. Urgent notices always contain a limitation for shipping traffic. There must therefore be one or more records in the limitations section. If there is no limitation section, the message is not urgent.
- Latitude (Lat) and Longitude (Long) coordinates are referred to WGS 84 and presented in degrees and minutes with at least three, but preferable four decimals (dd mm.mmmm N, ddd mm.mmmm E)
- Decimals in numeric fields are indicated with a **decimal point** ("."period). No thousand separators are used.
- Only cm, m³/s, h, km/h, and kW, **Bft (wind), mm/h (rain) and degree Celsius** are allowed to be used as units.
- For Waterways there is no Objects section. For Objects (bridges, etc.) the waterway section shall be included.
- The ~~United Nations Code for Trade and Transport Locations~~ (~~UN/LOCODE~~) **location code** according to the **technical specification for electronic ship reporting** ~~Ship Reporting Standard~~ has to be used as unique ID.

27.1.4.1 Subject codes assigned to the notices to skippers

In the following, the meaning of and situations defined by the different (examples of) subject codes are explained.

- i. Blockage
- ii.
- iii. In case no form of navigation is possible:
- through all the lock chambers of a lock;
 - through all the passages of a bridge;
 - passing a specified point on the fairway;
 - on a specified section of the fairway.
- iv.
- v. Partial obstruction
- vi. In case limited navigation is possible:
- through one or more lock chambers of a lock, leaving at least one open;
 - through one or more passages of a bridge, leaving at least one open;
 - passing a specified point on the fairway, leaving a part of the fairway open.
- vii. Delay
- viii. In case an obstruction occurs, limited in time, at a bridge, lock or on a section, between a specified start and end date.
- ix. *For example. Delay of at most 2 hours on November 13 2002 between 08:00 and 17:00.*
- x. *Encoded:*
- xi. *date_start: 20021113*
- xii. *date_end: 20021113*
- xiii. *time_start: 0800*
- xiv. *time_end: 1700*
- xv. *limitation_code: Delay*
- xvi. *Position_code: all*
- xvii. *value: 2*
- xviii. No service
- xix. In case a movable bridge is not operated during a specified period.
- xx. This period should lie within the normal operating hours.
- xxi. No service of a lock is an ‘Obstruction’ or ‘Delay’.
- xxii. No service of a movable bridge means that passing under the bridge still is possible. Otherwise it is an ‘Obstruction’.
- xxiii. Change Service
- xxiv. In case a modification in the normal operating hours occurs at a lock or a bridge.
- xxv. Normally this means a limitation of the operating hours, due to work, rather than an increase.
- xxvi. A limitation in the operating hours of a lock usually implies an obstruction.
- xxvii. For example, if a lock normally is operated between 06:00 and 20:00, and the operating hours are now limited to between 10:00 and 14:00, then this will result in an obstruction between 06:00 and 10:00 and another obstruction between 14:00 and 20:00.

- xxviii. A limitation in the operating hours of a bridge usually implies 'No Service'.
- xxix. Vessel length xxx. In case somewhere a smaller maximum length for passing vessels is allowed / possible.
xxxi. Usually this occurs at a lock (half lock chamber).
- xxxii. Clearance width xxxiii. In case somewhere a smaller maximum width for passing vessels is available.
xxxiv. This occurs during work on a lock / bridge.
xxxv. This subject is also used if the available width of the fairway is less, even if this has no influence on the maximum available width of the waterway.
- xxxvi. Vessel air draught xxxvii. In case somewhere a smaller maximum height for passing vessels is allowed.
- xxxviii. Clearance height xxxix. This occurs also if the vertical clearance is locally decreased by for example painting equipment.
- xl. Vessel draught xli. In case somewhere a smaller maximum draught for passing vessels is allowed.
- xlii. Available depth xliii. In case the least sounded depth is modified. This has no impact on the maximum draught.
- xliv. No mooring xlv. In case somewhere on the fairway mooring is not allowed.
- xlvi. Change of marks xlvi. In case a change occurs in the fairway marks used for navigational purposes, such as buoys, beacons, sector lights, notice marks, etc. **Encoding of "Change marks" can be used for NEW MARKS as it indicates the change from the state "no marks" to "some marks"**.
- xlviii. Work xlix. Other activities on or near the fairway which do not fall within the mentioned subjects.
- l. Dredging li. Dredging activities for which none of the other mentioned subjects are valid.
- lii. Exercises liii. Exercises for which none of the other mentioned subjects are valid.
- liv. Event liv. Events (rowing competitions, fireworks etc.) where none of the other mentioned subjects are valid.
- lvi. Announcement lvii. All other notices where none of the other (structured) subjects are valid.
- lviii. Notice withdrawn lix. The message has to be published as a serial number of the original message.

If for one single message more subjects are possible, then the limitation with the greatest impact on shipping traffic is selected.

27.1.4.2. Explanation of ice codes

The meaning of the ice codes used in the XML definition is described in **the reference tables of Notices to Skippers** (Appendix ~~BA to Annex 4~~).

The thickness indicated in column 2 of the ice_condition_code gives information on average thickness only. The description has to be used to select the code for a specific situation.

27.1.4.3. Encoding of limitation periods

[Note by the secretariat: as no amendments is proposed to this section, it is not reproduced in the present document]
