Edition 3.02009

Notices to Skippers for Inland Navigation

International Standard

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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 standard has been developed by the "Notices to Skippers Expert Group".

Edition overview

Edition	Date	Description
1.0	28.5.2004	Adoption by CCNR
1.1	27.4.2006	Amendments adopted by the CCNR Police Committee
1.2	28.9.2006	Amendments adopted by the CCNR RIS Group
1.2.1	13.9.2007	Amendments adopted by the CCNR RIS Group
2.0	22.10.2008	Amendments adopted by the CCNR Police Committee
	[1.5.2009]	Application of the Edition 2.0
3.0?		

Each document version is identified bottom left on each page.

Abbreviations

ENC	Electronic Navigational Chart
FIS	Fairway Information System
Inland ECDIS	Inland Electronic Chart Display and Information System
GIW	Gleichwertiger Wasserstand
GSM	Global System for Mobile communications
ID	Identification
RIS	River Information Services
RNW	Regulierungsniederwasserstand
URL	Uniform Resource Locator; a type of Uniform Resource Identifier (URI) that specifies
	where an identified resource is available and the mechanism for retrieving it.
UTF-8	8-bit UCS/Unicode Transformation Format
VHF	Very High Frequency
WAP	Wireless Application Protocol
WGS 84	Wold Geodetic System 1984
XML	Extended Markup Language

1. Introduction

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 service on inland waterways, Internet service or electronic navigational chart service (e.g. Inland ECDIS with ENC).

The following Standard for Notices to Skippers provides rules for the data transmission of fairway information via Internet service.

The standardisation of Notices to Skippers will

- provide automatic translation of the most important content of notices in all the languages of the participating countries,
- provide a standardised 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 Inland ECDIS to facilitate integration of Notices to Skippers into Inland ECDIS,
- facilitate data-exchange between different countries,
- use standard vocabulary in combination with code lists.

It will not be possible to standardise all the information, which is contained in Notices to Skippers. Part of the information will be provided as "free text" without automatic translation. The standardised 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, ...)

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 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 standardised 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.

The reference tables and the XML scheme of Notices to Skippers are published by the CCNR at <u>http://www.ccr-zkr.org/</u>.

3. Water level information

Water level information is very important for voyage planning as well as safety. At the moment there is no common standard of referencing water level information (Germany for example is using the GIW, "gleichwertiger Wasserstand", the Danube Commission is recommending the RNW, Regulierungsniederwasserstand, which is defined slightly different. The vertical clearance is mostly referred to a high water level, but sometimes to low water level. The values of gauges 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.

The reference tables for Notices to Skippers (Appendix B) contain 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. Way of distribution

Member States shall ensure that Notices to Skippers are 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 according to Table 1) or
- a specific part of a waterway, defined by the river-km (ID of a fairway hectometer according to Table 1) of the start and the end point;
- a time of validity (starting date and end date according to Table 1) and
- and a date of publication of the notice (date of publication according to Table 1).

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

- WAP (Wireless Application Protocol) services,
- E-mail services,
- web services¹.

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

5. 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 Table 1. XML message definition.

The member states are not oblidged to provide weather data.. If such data is provided, this shall be done in line with this standard.

6. Procedure for changes in the Reference Tables and the 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 secretariat of the CCNR. As regards the expert group, the amendment procedure as defined in the Terms of Reference for the Notices to Skippers expert group shall apply.

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

If a proposal for amendment is adopted, the updated reference tables and XML scheme are published by the CCNR <u>http://ccr-zkr.org</u>.

7. Structure of the messages and coding in XML-format

This chapter describes the structure and formatting of standardised electronic Notices to Skippers messages.

7.1 Structure of the Notices to Skippers

7.1.1 General

Notices to Skippers have the following information sections:

- Identification of the message;
- Fairway and traffic related message;

A standardized method for exchanging notices to skippers by means of Web Service (WS) technology is under elaboration. WS will enable an easier and more secure method for exchanging notices to skippers.

- 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 message;
- Weather message.



Figure 1: Notice to Skippers message structure

A standardised message in XML format contains therefore 5 different sections:

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

Normally in one message only 2 sections will be filled: The message identification section and at least **one** of the sections - fairway and traffic related message, 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 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 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 for a fairway (link).

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

7.1.2 XML message definition overview

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

Table 1, XML message specification

Nr.	Tag (Group headers and closers are boldly printed)	Description	Mandatory	Rule applicable
			Conditional	
	xml version="1.0" encoding="utf-8" ?			
	<ris message=""></ris>	Notice to Skippers		
1s	<identification></identification>	Identification section	М	1
1.1	<from>String</from>	Sender of the message	М	
1.2	<pre></pre>	Originator (initiator) of the information in this message	М	
1.3	<country_code>CH</country_code>	Country where message is valid	М	
1.4	language_code	Original language used in the textual info. (contents)	М	
1.5	<pre></pre> district>WaddenZee	District / Region within the specified country, where the message is applicable	С	
1.6	<pre><date_issue>20011231<date_issue></date_issue></date_issue></pre>	Date of editing	С	
1.7	<time_issue>1145<time_issue></time_issue></time_issue>	Time of editing	С	
1e				

2s	<ftm></ftm>	Fairway and traffic related section	С	1
2.1	<year>2001</year>	Year of first issuing of the notice	М	
2.2	<pre><number>9999</number></pre>	Number of the notice (per year)	М	
2.3	<pre><serial number="">99</serial></pre>	Serial number of the notice (replacements and withdrawals).	М	
		Original notice: 00		
2.4s	<target_group></target_group>	Target group information	С	
2.4.1	<target_group_code>ALL</target_group_code>	Target group (vessel type) for this message	М	Default: all
2.4.2	<pre><direction_code>ALL</direction_code></pre>	Upstream or downstream traffic, or both	М	Default:all
2.4e				
2.5	<subject_code>OBSTRU</subject_code>	Subject code	M	
2.6s	<validity_period></validity_period>	Overall period of validity	M	
2.6.1	<pre><date_start>20011231</date_start></pre>	Start date of validity period	М	
2.6.2	<pre><date_end>9999999</date_end></pre>	End date of validity period (indefinite: 99999999)	М	
2.6e				
2.7	<contents>String</contents>	Contents / notice text in original language	С	
2.8	<source/> String	Notice source (authority)	С	
2.9	<reason_code>REPAIR</reason_code>	Reason / justification of notice	С	
2.10s	<communication></communication>	Communication channel information	С	
2.10.1	<reporting_code>INF</reporting_code>	Reporting regime (information or duty to report)	М	5
2.10.2	<communication_code>TEL</communication_code>	Communication code (telephone, VHF etc.)	М	5
2.10.3	<number>String</number>	Telephone, VHF number, e-mail address, URL or teletext	С	5
2.10e				
2.11s	<fairway_section></fairway_section>	Fairway section, also available for objects (no. 2.12)	M	2
2.11.1s	<geo_object></geo_object>	Geo information of fairway	M	
2.11.1.1	<id>String</id>	Unique id of the fairway section (1x or 2x)	M	
2.11.1.2	<name> String </name>	(Local) Name of the fairway section (f.e.: Rhine between bridge A and bridge B)	M	
2.11.1.3	<type_code>FWY</type_code>	Type of geographical object	M	Default: FWY
2.11.1.4s	<coordinate></coordinate>	Fairway section begin and end coordinates (2x)	С	7
2.11.1.4.1	lat>42 34.1234 N		M	5
2.11.1.4.2	<long>123 45.1234 E</long>		M	5
2.11.1.4e				
2.11.1e				
2.11.2s	limitation>	Fairway section limitations	С	
2.11.2.1s	limitation_period>	Limitation periods / intervals	С	
2.11.2.1.1	<pre><date_start>20011231</date_start></pre>	Start date of limitation period (overall)	M	5
2.11.2.1.2	<date_end>20011231</date_end>	End date of limitation period	С	
2.11.2.1.3	<time_start>1420</time_start>	Start time of limitation period	С	
2.11.2.1.4	<time_end>0500</time_end>	End time of limitation period	С	

Nr.	Tag (Group headers and closers are boldly printed) Description		Mandatory	Rule applicable
			Conditional	
2.11.2.1.5	<interval_code>SAT</interval_code>	Interval for limitation if applicable	С	
2.11.2.1.e				
2.11.2.2	limitation_code>OBSTRU	Kind of limitation	М	5
2.11.2.3	<pre><pre><pre><pre><pre><pre><pre><pre></pre></pre></pre></pre></pre></pre></pre></pre>	Position, which side	М	5, default: AL
2.11.2.4	<value>3.14159</value>	Value of limitation (i.e. max draught)	С	
2.11.2.5	<reference_code>NAP</reference_code>	Value reference	С	
2.11.2.6	<indication_code>MAX</indication_code>	Indication of the type of value (select a code from the reference table)	С	
2.11.2e				
2.11.e				
2 126		Object section ()		3
2.125		Object Section ()	M	3 E
2.12.15			IVI M	5
2.12.1.1.		(I cool) Nome of the geographical object	IVI M	5
2.12.1.2	sname>sume>sume>sume>sume>sume>sume>sume>su	Local Name of the geographical object	M	5
2.12.1.5	<pre> vape tode < i v </pre>	Object coordinates (1x)		Q J
2.12.1.45	<countrale></countrale>		M	5
2.12.1.4.1			M	5
2 12 1 4e			191	J
2 12 1e				
2 12 25	<pre> /goo</pre>	Object limitation section	C	
2 12 2 15	<pre></pre>	Limitation periods / intervals	č	
212211	<pre></pre>	(see <fairway section="">)</fairway>	M	5
2 12 2 1 2	<pre><date end="">20011231</date></pre>		C	Ŭ
212213	<time_start>1420</time_start>		č	
2 12 2 1 4	<pre><time_end>0500c/time_end></time_end></pre>	***************************************	Ċ	
2.12.2.1.5	<interval code="">SAT</interval>	***************************************	Č	
2.12.2.1e				
2.12.2.2	limitation_code>OBSTRU		М	5
2.12.2.3	<pre><pre>cposition code>AL</pre></pre>	******	M	5. default: AL
2.12.2.4	<value>3.14159</value>	***************************************	С	
2.12.2.5	<reference code="">NAP</reference>	***************************************	С	
2.12.2.6	<indication_code>MAX</indication_code>		С	
2.12.2e				
2.12e				
2e				1

3s	<wrm></wrm>	Water level related section	С	1
3.1s	<validity_period></validity_period>	Overall period of validity of water level message	С	
3.1.1	<pre><date_start>20011231</date_start></pre>	Start date of validity period	М	5
3.1.2	<pre><date_end>20011231</date_end></pre>	End date of validity period	М	5
3.1e				
3.2s	<geo_object></geo_object>	Geo Information of measurement location, tide gauge	М	5
3.2.1	<id>String</id> (Waterway section)	Unique id of the geographical object	М	5
3.2.2	<name>String</name> (PegeIname)	(Local) Name of the geographical object	М	5
3.2.3	<type_code>FWY</type_code>	Type of geographical object	М	5, default: FWY
3.2.4s	<coordinate></coordinate>	Object coordinates (1x or 2x)	С	9
3.2.4.1	<lat>42 34.1234 N</lat>		М	5
3.2.4.2			М	5
3.2.4e				
3.2.e				
3.3	<reference_code>NAP</reference_code>	Value reference (measurement reference)	С	6
3.4s	<measure></measure>	Measurements (normal or predicted values)	М	5
3.4.1	<pre><predicted>1</predicted></pre>	Predicted measurement (1) or real measurement (0)	М	5
3.4.2	<measure_code>DIS</measure_code>	Kind of water level related information	М	5
3.4.3	<value>314159</value>	Value	С	10

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Nr.	Tag (Group headers and closers are boldly printed)	Description	Mandatory	Rule applicable
			Conditional	
3.4.4	<difference>314159</difference>	Difference with previous measurement	С	
3.4.5	<pre> <</pre>	Barrage status	С	11
3.4.6	<regime_code>HIG</regime_code>	Regime applicable	С	12
3.4.7	<pre><measuredate>20011231</measuredate></pre>	Date of measurement	М	5
3.4.8	<measuretime>1420</measuretime>	Time of measurement	М	5
3.4e				
3e				
			_	
4s	<icem></icem>	Ice related section	С	1
4.1s	<validity_period></validity_period>	Overall period of validity of ice information	C	
4.1.1	<pre><date_start>20011231</date_start></pre>	Start of validity period	M	5
4.1.2	<pre><date_end>20011231</date_end></pre>	End of validity period	M	5
4.1e				
4.2s	<fairway_section></fairway_section>	Fairway	M	5
4.2.1	<geo_object></geo_object>	Geo Information of fairway location	M	5
4.2.1.1	<id>String</id>	Unique id of the fairway section (1x or 2x)	M	5
4.2.1.2	<name>String</name>	(Local) Name of the fairway section	М	5
4.2.1.3	<type_code>FWY</type_code>	Type of geographical object	М	5, default: FWY
4.2.1.4	<coordinate></coordinate>	Fairway section begin and end coordinates (2x)	С	7
4.2.1.4.1	< at>42 34.1234 N		М	5
4.2.1.4.2			М	5
4.2.1.4e				
4.2.1e				
4.2.2s	<pre></pre>	Fairway section limitations		not applicable
4.2.2e		Fairway section limitations		not applicable
4.2e				
4.3s	<ice_condition></ice_condition>	Ice conditions	М	5
4.3.1	<measuredate>20011231</measuredate>	Date of measurement	М	5
4.3.2	<measuretime>1420</measuretime>	Time of measurement	M	5
4.3.3	<pre><ice code="" condition="">A</ice></pre>	Condition code	С	4
4.3.4	<ice_accessibility_code>A</ice_accessibility_code>	Accessibility code	С	4
4.3.5	<ice classification="" code="">A</ice>	Classification code	С	4
4.3.6	<ice code="" situation="">NOL</ice>	Situation code	С	4
4.3e				
40				

5s	<werm></werm>	Weather related section	С	1
5.1s	<validity_period></validity_period>	Period of validity	М	5, 13
5.1.1	<pre><date_start>20011231</date_start></pre>	Start of validity period	М	
5.1.2	<pre><date_end>20011231</date_end></pre>	End of validity period (indefinite: 99999999)	М	
5.1e				
5.2s	<fairway_section></fairway_section>	Fairway	М	5
5.2.1s	<geo_object></geo_object>	Geo Information of fairway location	М	5
5.2.1.1	<id>String</id>	Unique id of the fairway section (1x or 2x)	М	5
5.2.1.2	<name>String</name>	(Local) Name of the fairway section	М	5
5.2.1.3s	<coordinate></coordinate>	Fairway section begin and end co-ordinates (2x)	С	7
5.2.1.3.1	<lat>42 34.1234 N</lat>		М	5
5.2.1.3.2			М	5
5.2.1.3e				
5.2.1e				
5.2e				
5.3s	<weather_report></weather_report>	Weather Report (1x or 2x)	М	5
5.3.1	<forecast>0</forecast>	Actual (0) or Forecast (1) report	М	
5.3.2	<pre><weather_class_code>ORAIN</weather_class_code></pre>	Classification of weather report (0Nx)	М	5, 14
5.3.3s	<weather_item></weather_item>	Weather items (0Nx)	С	5
5.3.3.1	<weather_item_code>WI</weather_item_code>	Weather item type (Wind, Wave etc)	M	5
5.3.3.2	<value_min>4</value_min>	Actual or Minimum value	M	
5.3.3.3	<value_max>5</value_max>	Maximum value	С	

Nr.	Tag (Group headers and closers are boldly printed)	Description	Mandatory Conditional	Rule applicable
5.3.3.4 5.3.3.5 5.3.3.6	<value_gusts>7</value_gusts> <weather_category_code>2</weather_category_code> <direction_code_min>W</direction_code_min>	Gusts value (Wind) Classification of wind report Direction of wind or wave	C C C	
5.3.3.7 5.3.3e	<pre><direction_code_max>N</direction_code_max> <!-- weather item--></pre>	Direction of wind or wave	С	
5.3e 5e				

Rules applicable to table 1:

- 1 In one message at least 2 sections have to be filled in:
 - the identification section (1) and
 - 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.

7.2.2 Explanation of tags

The meaning of the different tags used in the XML definition is described on the page "Tags" of the reference tables for Notices to Skippers (Appendix B).

7.2.3 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 B).

The formats and possible values of all XML elements are described in the XML scheme for Notices to Skippers (Appendix C).

- 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 and longitude 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 ("."). No thousand separators are used.
- Only cm, m³/s, h, km/h, 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 location code according to the Standard for Electronic Ship Reporting in Inland Navigation has to be used as unique ID.

7.2.3.1 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.

Blockage

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.

<u>Partial obstruction</u> 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.

<u>Delay</u>	In case, an obstruction occurs, limited in time, at a bridge, lock or on a section, between a specified start and end date. For example: Delay of at most 2 hours on November 13 between 08:00 and 17:00. Encoded: date_start: 20021113 date_end: 20021113 time_start: 0800 time_end: 1700 limitation_code: Delay position_code: All value: 2				
<u>No service</u>	In case a movable bridge is not operated during a specified period. This period should lie within the normal operating hours. No service of a lock is an 'Obstruction' or 'Delay'. No service of a movable bridge means that passing under the bridge still is possible. Otherwise it is an 'Obstruction'.				
<u>Change Service</u>	In case a modification in the normal operating hours occurs at a lock or a bridge. Normally this means a limitation of the operating hours, due to work, rather than an increase. A limitation in the operating hours of a lock usually implies an obstruction. 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. A limitation in the operating hours of a bridge usually implies 'No Service'.				
Vessel length	In case somewhere a smaller maximum length for passing vessels is allowed / possible. Usually this occurs at a lock (half lock chamber).				
Clearance width	In case somewhere a smaller maximum width for passing vessels is available. This occurs during work on a lock / bridge. 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.				
<u>Vessel air draught</u>	In case somewhere a smaller maximum height for passing vessels is allowed.				
Clearance height	This occurs also if the vertical clearance is locally decreased by for example painting equipment.				

- <u>Vessel draught</u> In case somewhere a smaller maximum draught for passing vessels is allowed.
- <u>Available depth</u> In case the least sounded depth is modified. This has no impact on the maximum draught.
- <u>No mooring</u> In case somewhere on the fairway mooring is not allowed.
- <u>Change marks</u> 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".
- <u>Work</u> Other activities on or near the fairway which do not fall within the mentioned subjects.
- <u>Dredging</u> Dredging activities for which none of the other mentioned subjects are valid.
- Exercises Exercises for which none of the other mentioned subjects are valid.
- <u>Event</u> Events (rowing competitions, fireworks etc.) where none of the other mentioned subjects are valid.
- Announcement All other notices where none of the other (structured) subjects are valid.
- <u>Notice withdrawn</u> 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.

7.2.3.2 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 B).

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.

7.2.3.3 Encoding of limitation periods

The limitation period has to be encoded by

- date_start
- date_end
- time_start
- time_end
- interval_code.

As the limitation period is very important for voyage planning, limitation periods have to be encoded in accordance with the following examples:

Limitation period	date_start	date_end	time_start	time_end	Interval_code
2005-01-01, 07:00 to 2005-01-31, 20:00	20050101	20050131	0700	2000	Continous (C)
2005-01-01 to 2005-01-31, each day from 07:00 to 20:00	20050101	20050131	0700	2000	Daily (M)
2005-01-01 to 2005-01-31, every working day (Monday to Friday) from 07:00 to 20:00	20050101	20050131	0700	2000	Monday to Friday (M)
2005-01-01 to 2005-01-21, each week from	20050103	20050107	0700	2000	Continous (C)
Monday 07:00 to Friday 20:00	20050110	20050114	0700	2000	Continous (C)
	20050117	20050121	0700	2000	Continous (C)
2005-01-01 to 2005-01-31, each day from	20050101	20050131	0700	2000	Daily (M)
07:00 to 20:00 with the exception of 2005-01-06	20050106	20050106			With the exception of (M)

Appendix A: Specifications of examples for the implementation of the Notices to Skippers Standard

Example for the presentation of a Notice to Skippers

In the following example the text mask is given in plain text, the content of the message with grey underlay. Sections, which are not obligatory, are in square brackets.

Notice to Skippers

A new Notice to Skippers of via-donau is available for [the Donau waterway in] Austria in the original language German, which has been compiled by BMVIT, Schifffahrtspolizei [on 10 June 2003 at 11:10]:

The fairway and traffic related message no 89/00 in the year 2003, [published by the Strom- und Hafenaufsicht Hainburg] concerning dredging [caused by siltation] is valid between 7 October 2003 and 25 October 2003 [for all vessels in all directions].

[Additional information is provided via internet, www.via-donau.org.] or

[There exists an additional duty to report via VHF channel 16.]

[On workdays from 7 October 2003 until 25 October 2003 between 06:00 o'clock and 19:00 o'clock] following limitation is valid for the waterway Donau, Furt Orth, km 1902,000 to 1902,600: available depth [210 cm referred to low water level Danube Commission] along the left side of the fairway.

[[On workdays from 7 October 2003 until 25 October 2003 between 06:00 o'clock and 19:00 o'clock] following limitation is valid for the lock Greifenstein, km 1950,000: available length [200 cm referred to equivalent low water level] along the left side of the fairway.] Additional text in national language: [xxxx]

Water level related message

This message is valid for the gauge Kienstock [between 10 June 2003 and 11 June 2003].

All values are referred to the zero point of gauge.

The measured value for the water level on 10 June 2003 at 10:00 o'clock was 197 cm.

[The difference to the last measured value is +15 cm]. [At the moment the barrage is closed] and [navigation faces normal regime.]

[According to the forecast the water level on 11 June 2003 at 12:00 o'clock will be 205 cm].

Ice related message

This message is valid for the waterway Danube [between 3 December 2003 and 5 December 2003].

On 3 December 2003 at 0:00 o'clock navigation faced [light floating ice] [Navigation is normal.] [The section is navigable] [and skippers face no limitation.]