

**ERTMS UNIT****MANAGEMENT OF PLAIN TEXT MESSAGES GUIDELINE**

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AMENDMENT RECORD

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TABLE OF CONTENTS

AMENDMENT RECORD	2
Table of contents	3
1. INTRODUCTION	4
1.1. Foreword	Error! Bookmark not defined.
1.2. scope & field of application	4
1.3. Document description	5
2. REFERENCES, TERMS AND ABBREVIATIONS	6
2.1. Reference documents	6
3. FUTURE SITUATION	7
3.1. principles	7
ANNEXES	8
A.1 Procedure for MONITORING of plain text messages	8
A.1.1 Definition of requesting organisations	8
A.1.2 Request Procedure	8
A.1.3 Workflow	8
A.2 Request Form for the assignment of text messages	11



1. INTRODUCTION

1.1.1 The ERTMS system allows displaying of text messages in the DMI. The order to display a text message on the DMI can be initiated by one of the two following cases:

1. On-Board messages, generated by the on board equipment, depending on specific events and conditions that are defined in ETCS SRS [2],
2. Trackside messages, information received from the trackside equipment. The ETCS system uses its own language to exchange data between the trackside and the onboard assemblies. The ETCS SRS [2] chapter 7 defines messages, packets and variables to be used .

1.1.2 According to the specifications the ERTMS trackside information defines two types of trackside text messages, fixed messages (Packet 76) and plain text messages (Packet 72).

1.1.3 All the possible fixed text messages shall be stored in the on-board equipment. The ERTMS trackside is able to send an order to the ERTMS on-board to select a specific fixed text message from a list and to display it on the DMI. Those messages are in English by default and the On-board unit can also store the list and display them in more languages.

1.1.4 The plain text messages have to be defined specifically by the ERTMS trackside information and the sent text is displayed on the DMI in the language they are written.

1.1.5 In 2009 the European Railway Agency collected information regarding the operational use of the ETCS trackside text messages through a questionnaire. The questionnaire was addressed to the sector organisations and was filled in by ADIF, Banedanmark, Banverket, DB, Infrabel, Network Rail, ProRail, RFF and SŽDC. The questionnaire gave a snapshot of the different use of text messages for operation from country to country and even from line to line. The questionnaire reflected different approaches for the implementation of text messages.

1.2 SCOPE & FIELD OF APPLICATION

1.2.1 ETCS is a European project that has been set up by the European Commission. Even if the field of application of ETCS is not strictly limited to the European Union, the legal obligations as stated in the interoperability directives concern only the Member States or legal entities that aim to use ETCS products within the European Union areas.

1.2.2 In the future ERA in cooperation with the sector shall monitor the use of new text messages in the projects and publish the plain text messages.



The procedure to monitor the plain text messages is described in Annex 1 of this document

- 1.2.3 Nevertheless, it is strongly recommended that any entity using ETCS and not being member of the European Union follows the principles defined both in annex A.1 herein and in document [2] for the assessment of ETCS text messages in its own project. On purpose, the Agency will manage the related request and/or keep track of the existing plain text messages. The use, of different plain text messages already not assessed, in or outside the European Union should not occur.
- 1.2.4 This document will deal only with the plain text messages defined in the trackside information. The on-board text messages and fixed text messages are currently out of scope of this document.

1.3 DOCUMENT DESCRIPTION

- 1.3.1 Chapter 1 is an introduction to the content of the document
- 1.3.2 Chapter 2 provides the references, terms and abbreviations used in this document
- 1.3.3 Chapter 3 provides the recommended principles when implementing ETCS plain text messages
- 1.3.4 Annex A.1 describes the process to monitor the ETCS plain text messages
- 1.3.5 Annex A.2 provides the template to report the ETCS plain text messages to the European Railway Agency



2. REFERENCES, TERMS AND ABBREVIATIONS

2.1. REFERENCE DOCUMENTS

Table 1 : Reference documents

Ref. N°	Document Reference	Title	Last Issue
[1]	881/2004 1335/2008	Regulation of the European Parliament and of the Council 29 th April 2004 establishing a European Railway Agency amended by the Regulation of the European Parliament and of the Council 16 th December 2008	--
[2]	SUBSET-026	ERTMS/ETCS Class 1 System Requirements Specification	2.3.0
[3]	SUBSET-108	Interoperability-related consolidation on TSI annex A documents	1.2.0
[4]	2010/640/EU	Commission Decision of 21 October 2010 amending Decisions 2006/920/EC and 2008/231/EC concerning the technical specifications of interoperability relating to the subsystem 'Traffic Operation and Management' of the trans-European conventional and high-speed rail systems	



3. FUTURE SITUATION

3.1. PRINCIPLES

3.1.1. The use of plain text messages by an ETCS trackside implementation shall follow these principles, which will be assessed to avoid interoperability problems:

a) A plain text message shall not replace nor duplicate any existing ETCS functionality. If functionality is already described in the SRS it should be used as such.

b) A plain text message shall not be inconsistent with a signalling indication given on the DMI or outside

c) A plain text message shall be clear and concise

d) Plain text message length shall be limited to a maximum number of XXX characters (e.g. longest one currently in use plus 20%)

Note: The exact value of characters will be fixed after the collection of the first bunch of text messages

e) Plain text message giving “important operational information” shall request an acknowledgement from the driver; plain text message giving “auxiliary operational information” shall not request any acknowledgement

f) In case driver acknowledgement is needed the Infrastructure Manager shall take care about the spacing of the different text messages following each other.

g) The content of a plain text message shall not repeat or summarise an applicable operational rule and/or a written order

h) A plain text message shall not be used in order to replace drivers' route knowledge/information contained in the route book unless already in use by the national signalling system according to national rules

i) The plain text messages shall give meaningful information that the driver needs to act upon or take notice of, and the benefit shall be greater than any distraction that they may cause.



ANNEXES

A.1 PROCEDURE FOR MONITORING OF PLAIN TEXT MESSAGES

A.1.1 DEFINITION OF REQUESTING ORGANISATIONS

The parties involved in the process for the assignment are the ERTMS UNIT of the Agency and the requesting organisations. The Agency will only deal with requests submitted by the following organisations:

- Official representative body of a Member State,
- Infrastructure Manager.

A.1.2 REQUEST PROCEDURE

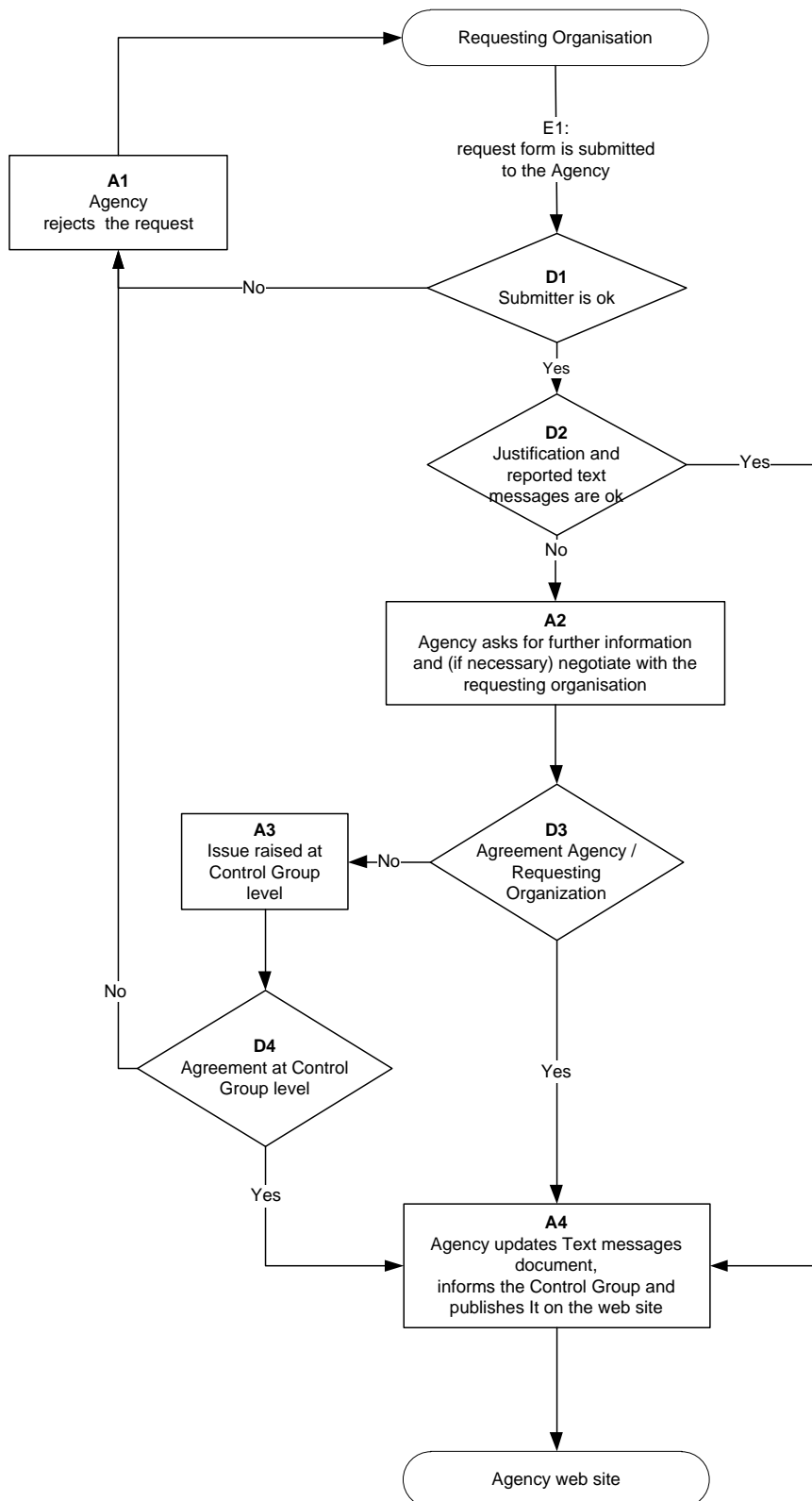
Any request has to be addressed to the Agency via the request form as given in the annex A.4 or downloadable at the following URL:

<http://www.era.europa.eu/Core-Activities/ERTMS/Pages/ERTMSCurrentBaseline.aspx>

The description of the request should contain valuable information to allow the Agency and the operational experts (Operational Harmonisation WP) to analyse if the potential interoperability issues could exist, further to give sense to the meaning of the assessed plain text messages at the time of the publication, i.e. reference to real planned project(s) or reference to awarded contracts.

A.1.3 WORKFLOW

The workflow hereafter describes all the steps of the assignment process from the time a request has been raised to the time of publishing the assessed text messages.





#	Description	Who
E1	The triggering event is a request form sent to the Agency. The form to be used is available on the Agency web site at: http://www.era.europa.eu/Contact-Us/Contact-Form/Pages/home.aspx	Requesting organisation
D1	The Agency checks the administrative correctness of the submitted information regarding the validity of the submitter according to the list of recognized organisations for the assignment process as listed in A.1.1.	Agency
A1	The Agency cannot recognize the requesting entity as valid for the procedure or the Control group has decided not to assess the request. The Agency informs the requesting organisation about the reason(s) of rejection.	Agency
D2	The Agency and the operational experts (Operational Harmonisation WP) check if the request is duly justified according to the references of the requesting organisation, reference(s) to the planned project(s) or reference(s) to awarded contracts and also assesses the possibility of interoperability problems. If necessary, discussions could take place at this step in order to fix the interoperability problems created by a plain text messages.	Agency, OH WP experts
A2	The information given by the recognized organisation to justify the request is not sufficient. The Agency sends it back to the submitter asking for further information.	Agency
D3	When an agreement is made between the Agency and the requesting organisation, the Agency proceeds towards the publication. Otherwise, the Agency raises the issue to the Control Group. Whatever the decision is, the requesting organisation is informed about the next step.	Agency, requesting organisation
A3	The Agency has informed the Control Group of an issue and the Control Group decides on how to continue.	Agency, Control Group
D4	When a positive outcome is found in the Control Group, the Agency proceeds within the procedure towards the publication. Otherwise the Agency rejects the request.	Agency
A4	The Agency updates the text messages document and publishes it on the Agency web site. The Agency informs the Control Group too.	Agency



A.2 REQUEST FORM FOR ASSIGNMENT OF TEXT MESSAGES

SUBMISSION OF ETCS PLAIN TEXT MESSAGES

REQUEST FORM

Please fill all the fields in the three sections of the form and send it to the following address: xxx.xxx@era.europa.eu

1. Date of Submission: *dd/mm/yyyy*

2. Information about the submitter:

Name:
Organization:
Position:
Address:
City:



Country:
Phone:
E-mail:

3. Information about the ETCS lines where text messages are used

Please fill in the table below with the lines where text messages will be used.

- “Line id”
Numbering to identify individually the line:
- “Line”
It defines the line (e.g. from Rome to Naples),
- “ETCS levels”
ETCS level(s) which is (are) implemented (e.g. L2),
- “SRS version”
Subset 026 version used for the implementation (2.2.2, 2.3.0 ...)
- “ETCS supplier”
Supplier for the ETCS trackside equipment (e.g. Ansaldo).

Line id	Line	ETCS Levels	SRS Version	ETCS Supplier	Maximum speed (km/h)
1					
2					
3					
4					

4. Needs of text messages on these ETCS lines

Please fill in the table below to understand the need of the plain text message. The table contains the following information:

- “objective”
The objective of a text message must be clearly expressed (risk mitigation, level of performances on the line...) in such a way that it is possible to understand why the corresponding need is not covered by all other harmonised ETCS functions offered (e.g. mode/level indications, speed/distance monitoring...).
- “conditions”
Which rules are applied or which criteria are used for sending this’ text message?



- “content meaning”
Are the text messages considered as orders (an operational rule to be applied exists) or information, and which criteria are used to make the distinction between an order and an information?
- “combination”
Are the text messages used in combination with some other information/indications shown to the driver (symbols of modes, levels, track conditions...), and if yes what are the relationships between text messages and the other information/indications?
- “language”
In which languages are the text messages displayed?
- “acknowledgement”
If text messages require an acknowledgement, give the needs/reasons and indicate the principles leading to a brake reaction, if any, in case driver fails to acknowledge in time (emergency brake, service brake...).
- “classification”
Are the text messages classified as “important text messages” or “auxiliary text messages”, and which criteria are used for this distinction?
- “frequency”
If possible, the submitter shall indicate as an average the frequency of display of this text message per 100 kilometres.



Please fill in the right column of the table below with the “line id.” used in section 1. Several lines can be added for each item in case the responses are different for several lines.

<i>item</i>	<i>Response</i>	<i>line id.</i>
Objective		All
Conditions		All
Content meaning		All
Combination		All
Language		All
Acknowledgement		All
Classification		All
Frequency		All



5. Summary of the different plain text messages on these ETCS lines

Each text message is identified by its content. The following information are needed (the main parameters used in the table are defined in section 3.12.3 of the SRS):

- “content”
Text message itself (translate also to English if it is not displayed in English).
- “frequency”
Average frequency of display of the text message per 100 kilometres.
- “class”
Class of the text message (“IMP” for an “important text message” or “AUX” for an “auxiliary text message”).
- “logical operator”
Logical operator used between the start / end conditions (“AND” or “OR”).
- “start condition”
Conditions (location, mode and/or level) which trigger the display of this text message on the DMI.
- “end condition”
Conditions (length, time, mode and/or level) which remove this text message from the DMI.
- “ack”
The text message requests an acknowledgement (Yes or No).
- “brake if no ack”
If any, the reaction of the onboard system in case the driver does not acknowledge (“S” for service brake or “E” for emergency brake).
- “report to RBC”
Referring to baseline 3, driver’ acknowledgement sent back to RBC (Yes or No). Note: If applicable

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ASSIGNMENT OF VALUES TO ETCS VARIABLES

Complete the column "line id." of the table below with the "line id." used in question 1 for both types of lines (in service/to be put into service before 2015).

<i>content</i>	<i>line id.</i>	<i>class (AUX or IMP)</i>	<i>logical operator (AND or OR)</i>	<i>start condition</i>			<i>end condition</i>				<i>ack (Y or N)</i>	<i>brake if no ack (S or E)</i>	<i>Report to RBC (if BSL3) (Y or N)*</i>
				<i>location</i>	<i>mode</i>	<i>level</i>	<i>length</i>	<i>time</i>	<i>mode</i>	<i>level</i>			

*Note: Optional column, only applicable for B3