**COUNCIL OF
THE EUROPEAN UNION**

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Delegations will find attached Commission document D020736/02.

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Encl.: D020736/02

EUROPEAN COMMISSION

Brussels, XXX
[…](2012) XXX draft

COMMISSION DECISION

of XXX

amending Commission Decision 2012/88/EU on the technical specifications for interoperability relating to the control-command and signalling subsystems of the trans-European rail system

(Text with EEA relevance)

EN   **EN**

COMMISSION DECISION

of XXX

amending Commission Decision 2012/88/EU on the technical specifications for interoperability relating to the control-command and signalling subsystems of the trans-European rail system

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2008/57/EC of the European Parliament and of the Council of 17 June 2008 on the interoperability of the rail system within the Community[1], and in particular the second subparagraph of Article 6(1) thereof,

Whereas:

(1)   On 16 April 2012 the European Railway Agency issued its recommendation ERA/REC/03-2012/ERTMS. This Decision is based on that recommendation.

(2)   The development of additional functionalities for the European Rail Traffic Management System/ European Train Control System ('ERTMS/ETCS'), with a view to facilitating the swift deployment of ETCS on existing conventional lines, was requested by the sector and defined in the Memorandum of Understanding signed in July 2008 by the European Commission and sector Associations. This Decision should include these additional functionalities in a new baseline of the specifications called "Baseline 3", which applicants may apply in full instead of the ERTMS/ETCS specifications set out in Commission Decision 2012/88/EU of 25 January 2012 on the technical specification for interoperability relating to the control-command and signalling subsystems of the trans-European rail system[2] (last release of the Baseline 2, also known as 2.3.0d). An essential feature of Baseline 3 is that trains equipped with Baseline 3-compliant ERTMS/ETCS should be able to run on Baseline 2-compliant ERTMS/ETCS lines without any additional technical or operational restrictions caused by ERTMS/ETCS. It should also be possible to configure Baseline 3 on lines to ensure compatibility with trains equipped with Baseline 2-compliant ERTMS/ETCS (use of version 2.3.0d functions only). Baseline 3 also closes the ERTMS/ETCS open points such as braking curves and ergonomic aspects of DMI.

(3)   It is recognised that the specifications of Baseline 2 have been stable since the adoption of Commission Decision 2008/386/EC of 23 April 2008 modifying Annex A

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[1]   OJ L 191, 18.7.2008, p. 1.
[2]   OJ L 51, 23.2.2012, p. 1.

to Decision 2006/679/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system and Annex A to Decision 2006/860/EC concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high-speed rail system[3]. It should therefore be possible to continue using them. Nevertheless, for the on-board ERTMS/ETCS, the revised test specifications (referred to in Index 37b and 37c of Table A2 in Annex A) shall be applied. Moreover, as Baseline 3 closes a number of open points, the implementation of Baseline 2 for these points should be based on the relevant Baseline 3 specifications referred to in Annex A.

(4)   The European Railway Agency has revised the ERTMS specifications for the Global System for Mobile Communications Railway (GSM-R) (referred to in index 32, 33, 34 and 65 of Table A2 in Annex A). The revised specifications do not alter the requirements, but provide a clear and unambiguous classification of the existing mandatory requirements in the documents of the European Integrated Radio Enhanced Network (EIRENE), thus facilitating certification, conformity and verification processes.

(5)   Regarding specifications indicated as "reserved" in Table A2 of Annex A, the Memorandum of Understanding between the European Commission, the European Railway Agency and the European rail sector associations concerning the strengthening of cooperation for the management of ERTMS signed on 16 April 2012 contains provisions, including the definition of a timetable by the European Railway Agency, to ensure that test specifications are validated and those "reserved" specifications are provided in due time.

(6)   Decision 2012/88/EU should therefore be amended accordingly.

(7)   The measures provided for in this Decision are in accordance with the opinion of the Committee established in accordance with Article 29(1) of Directive 2008/57/EC.

HAS ADOPTED THIS DECISION:

Article 1

Commission Decision 2012/88/EU is amended as follows:

1) Article 6 is deleted.

2) The following Article is inserted:

"Article 6a

When implementing the TSI set out in Annex III to this Decision, one of the two sets of specifications listed in table A-2 of Annex A shall be applied. Baseline 3 specifications shall be maintained in order to ensure that trains equipped with Baseline 3-compliant

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[3]   OJ L 136, 24.5.2008, p. 11.

ERTMS/ETCS can run on Baseline 2-compliant ERTMS/ETCS lines without any additional technical or operational restrictions."

3) Annex A is replaced by Annex I to this Decision.

4) Annex G is replaced by Annex II to this Decision

Article 2

This Decision shall apply from 1 January 2013.

Article 3

This Decision is addressed to the Member States.

Done at Brussels,

For the Commission
Siim Kallas
Vice-President

"Annex A

References

For each reference made in the basic parameters (Chapter 4 of this TSI) the following table indicates the corresponding mandatory specifications, via the index in table A-2.

Table A 1

Reference in Chapter 4	Index number (see Table A 2)
4.1	
4.1a	1, 4
4.1b	32
4.1c	3
4.2.1	
4.2.1 a	27, 78
4.2.1 b	28
4.2.2	
4.2.2.a	14
4.2.2.b	1, 4, 13, 15, 60
4.2.2.c	31, 37b, c, d
4.2.2.d	18, 20
4.2.2.e	6
4.2.2.f	7
4.2.3	
4.2.3 a	14
4.2.3 b	1, 4, 13, 15, 60
4.2.3 c	31, 37 b, c, d
4.2.3 d	18, 21

Reference in Chapter 4	Index number (see Table A 2)
4.2.4	
4.2.4 a	64, 65
4.2.4 b	66
4.2.4 c	67
4.2.4 d	68
4.2.4 e	73, 74
4.2.4 f	32, 33
4.2.4 g	48
4.2.4 h	69, 70
4.2.4 j	71, 72
4.2.4 k	75, 76
4.2.5	
4.2.5 a	64, 65
4.2.5 b	10, 39, 40
4.2.5c	19, 20
4.2.5 d	9, 43
4.2.5 e	16, 50
4.2.6	
4.2.6 a	8, 25, 26, 36 c, 49, 52
4.2.6 b	29, 45
4.2.6 c	46
4.2.6 d	34
4.2.6 e	20
4.2.6 f	44

Reference in Chapter 4	Index number (see Table A 2)
4.2.7	
4.2.7 a	12
4.2.7 b	62, 63
4.2.7 c	34
4.2.7 d	9
4.2.7 e	16
4.2.8	
4.2.8 a	11, 79
4.2.9	
4.2.9 a	23
4.2.10	
4.2.10 a	77 (section 3.1)
4.2.11	
4.2.11 a	77 (section 3.2)
4.2.12	
4.2.12 a	6, 51
4.2.13	
4.2.13 a	32, 33, 51, 80

Reference in Chapter 4	Index number (see Table A 2)
4.2.14	
4.2.14 a	5
4.2.15	
4.2.15 a	38

Specifications

One of the two sets of specifications listed in Table A-2 of this Annex shall be applied.

Documents referred to within a specification listed in Table A-2 shall be considered as being for information only, unless otherwise stated in Table A-2.

Note: specifications indicated as 'Reserved' in table A-2 are also listed as open points in Annex G when there is a need for notification of national rules to close the corresponding open points. Reserved documents not listed as open points are intended as improvements to the system.

Table A 2 - List of mandatory specifications

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
1	ERA/ERTMS/003204	ERTMS/ETCS Functional requirement specification	5.0		Intentionally deleted			
2	Intentionally deleted				Intentionally deleted			
3	UNISIG SUBSET-023	Glossary of Terms and Abbreviations	2.0.0		UNISIG SUBSET-023	Glossary of Terms and Abbreviations	3.0.0	
4	UNISIG SUBSET-026	System Requirements Specification	2.3.0		UNISIG SUBSET-026	System Requirements Specification	3.3.0	
5	UNISIG SUBSET-027	FFFIS Juridical recorder-downloading tool	2.3.0	Note 1	UNISIG SUBSET-027	FIS Juridical Recording	3.0.0	
6	UNISIG SUBSET-033	FIS for man-machine interface	2.0.0		ERA_ERTMS_015560	ETCS Driver Machine interface	3.3.0	
7	UNISIG SUBSET-034	FIS for the train interface	2.0.0		UNISIG SUBSET-034	Train Interface FIS	3.0.0	
8	UNISIG SUBSET-035	Specific Transmission Module FFFIS	2.1.1		UNISIG SUBSET-035	Specific Transmission Module FFFIS	3.0.0	
9	UNISIG SUBSET-036	FFFIS for Eurobalise	2.4.1		UNISIG SUBSET-036	FFFIS for Eurobalise	3.0.0	
10	UNISIG SUBSET-037	EuroRadio FIS	2.3.0		UNISIG SUBSET-037	EuroRadio FIS	3.0.0	
11	UNISIG SUBSET-038	Offline key management FIS	2.3.0		UNISIG SUBSET-038	Offline key management FIS	3.0.0	

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
12	UNISIG SUBSET-039	FIS for the RBC/RBC handover	2.3.0		Reserved UNISIG SUBSET-039	FIS for the RBC/RBC handover		
13	UNISIG SUBSET-040	Dimensioning and Engineering rules	2.3.0		UNISIG SUBSET-040	Dimensioning and Engineering rules	3.2.0	
14	UNISIG SUBSET-041	Performance Requirements for Interoperability	2.1.0		UNISIG SUBSET-041	Performance Requirements for Interoperability	3.1.0	
15	ERA SUBSET-108	Interoperability related consolidation on TSI Annex A documents	1.2.0		Intentionally deleted			
16	UNISIG SUBSET-044	FFFIS for Euroloop	2.3.0		UNISIG SUBSET-044	FFFIS for Euroloop	2.4.0	
17	Intentionally deleted				Intentionally deleted			
18	UNISIG SUBSET-046	Radio infill FFFS	2.0.0		Intentionally deleted			
19	UNISIG SUBSET-047	Trackside-Trainborne FIS for Radio infill	2.0.0		UNISIG SUBSET-047	Trackside-Trainborne FIS for Radio infill	3.0.0	
20	UNISIG SUBSET-048	Trainborne FFFIS for Radio infill	2.0.0		UNISIG SUBSET-048	Trainborne FFFIS for Radio infill	3.0.0	
21	UNISIG SUBSET-049	Radio infill FIS with LEU/interlocking	2.0.0		Intentionally deleted			
22	Intentionally deleted				Intentionally deleted			
23	UNISIG SUBSET-054	Responsibilities and rules for the assignment of values to ETCS variables	2.1.0		UNISIG SUBSET-054	Responsibilities and rules for the assignment of values to ETCS variables	3.0.0	
24	Intentionally deleted				Intentionally deleted			
25	UNISIG SUBSET-056	STM FFFIS Safe time layer	2.2.0		UNISIG SUBSET-056	STM FFFIS Safe time layer	3.0.0	
26	UNISIG SUBSET-057	STM FFFIS Safe link layer	2.2.0		UNISIG SUBSET-057	STM FFFIS Safe link layer	3.0.0	

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
27	UNISIG SUBSET-091	Safety Requirements for the Technical Interoperability of ETCS in Levels 1 and 2	2.5.0		UNISIG SUBSET-091	Safety Requirements for the Technical Interoperability of ETCS in Levels 1 and 2	3.2.0	
28	Reserved	Reliability — availability requirements			Reserved	Reliability — availability requirements		
29	UNISIG SUBSET-102	Test specification for interface "K"	1.0.0		UNISIG SUBSET-102	Test specification for interface "K"	2.0.0	
30	Intentionally deleted				Intentionally deleted			
31	UNISIG SUBSET-094	Functional requirements for an on-board reference test facility	2.0.2		Reserved UNISIG SUBSET-094	Functional requirements for an on-board reference test facility		
32	EIRENE FRS	GSM-R Functional requirements specification	7.3.0		EIRENE FRS	GSM-R Functional requirements specification	7.3.0	
33	EIRENE SRS	GSM-R System requirements specification	15.3.0		EIRENE SRS	GSM-R System requirements specification	15.3.0	
34	A11T6001	(MORANE) Radio Transmission FFFIS for EuroRadio	12.4		A11T6001	(MORANE) Radio Transmission FFFIS for EuroRadio	12.4	
35	Intentionally deleted				Intentionally deleted			
36 a	Intentionally deleted				Intentionally deleted			
36 b	Intentionally deleted				Intentionally deleted			
36 c	UNISIG SUBSET-074-2	FFFIS STM Test cases document	1.0.0		Reserved UNISIG SUBSET-074-2	FFFIS STM Test cases document		
37 a	Intentionally deleted				Intentionally deleted			
37 b	UNISIG SUBSET-076-5-2	Test cases related to features	2.3.3		Reserved UNISIG SUBSET-076-5-2	Test cases related to features		

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
37 c	UNISIG SUBSET-076-6-3	Test sequences	2.3.3		Reserved UNISIG SUBSET-076-6-3	Test sequences		
37 d	UNISIG SUBSET-076-7	Scope of the test specifications	1.0.2		Reserved UNISIG SUBSET-076-7	Scope of the test specifications		
37 e	Intentionally deleted				Intentionally deleted			
38	06E068	ETCS Marker-board definition	2.0		06E068	ETCS Marker-board definition	2.0	
39	UNISIG SUBSET-092-1	ERTMS EuroRadio Conformance Requirements	2.3.0		UNISIG SUBSET-092-1	ERTMS EuroRadio Conformance Requirements	3.0.0	
40	UNISIG SUBSET-092-2	ERTMS EuroRadio test cases safety layer	2.3.0		UNISIG SUBSET-092-2	ERTMS EuroRadio test cases safety layer	3.0.0	
41	Intentionally deleted				Intentionally deleted			
42	Intentionally deleted				Intentionally deleted			
43	UNISIG SUBSET 085	Test specification for Eurobalise FFFIS	2.2.2		UNISIG SUBSET 085	Test specification for Eurobalise FFFIS	3.0.0	
44	Reserved	Odometry FIS			Reserved	Odometry FIS		
45	UNISIG SUBSET-101	Interface "K" Specification	1.0.0		UNISIG SUBSET-101	Interface "K" Specification	2.0.0	
46	UNISIG SUBSET-100	Interface "G" Specification	1.0.1		UNISIG SUBSET-100	Interface "G" Specification	2.0.0	
47	Intentionally deleted				Intentionally deleted			
48	Reserved	Test specification for mobile equipment GSM-R			Reserved	Test specification for mobile equipment GSM-R		
49	UNISIG SUBSET-059	Performance requirements for STM	2.1.1		UNISIG SUBSET-059	Performance requirements for STM	3.0.0.	
50	UNISIG SUBSET-103	Test specification for Euroloop	1.0.0		UNISIG SUBSET-103	Test specification for Euroloop	1.1.0	

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
51	Reserved	Ergonomic aspects of the DMI			Intentionally deleted			
52	UNISIG SUBSET-058	FFFIS STM Application layer	2.1.1		UNISIG SUBSET-058	FFFIS STM Application layer	3.0.0	
53	Intentionally deleted				Intentionally deleted			
54	Intentionally deleted				Intentionally deleted			
55	Intentionally deleted				Intentionally deleted			
56	Intentionally deleted				Intentionally deleted			
57	Intentionally deleted				Intentionally deleted			
58	Intentionally deleted				Intentionally deleted			
59	Intentionally deleted				Intentionally deleted			
60	Intentionally deleted				UNISIG SUBSET-104	ETCS System Version Management	3.1.0	
61	Intentionally deleted				Intentionally deleted			
62	Reserved	RBC-RBC Test specification for safe communication interface			Intentionally deleted			
63	UNISIG SUBSET-098	RBC-RBC Safe Communication Interface	1.0.0		UNISIG SUBSET-098	RBC-RBC Safe Communication Interface	3.0.0	
64	EN 301 515	Global System for Mobile Communication (GSM); Requirements for GSM operation on railways	2.3.0	Note 2	EN 301 515	Global System for Mobile Communication (GSM); Requirements for GSM operation on railways	2.3.0	Note 2
65	TS 102 281	Detailed requirements for GSM operation on railways	2.2.0	Note 3	TS 102 281	Detailed requirements for GSM operation on railways	2.2.0	Note 3

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
66	(MORANE) A 01 T 0004 1	ASCI Options for Interoperability	1		(MORANE) A 01 T 0004 1	ASCI Options for Interoperability	1	
67	(MORANE) P 38 T 9001	FFFIS for GSM-R SIM Cards	4.1		(MORANE) P 38 T 9001	FFFIS for GSM-R SIM Cards	4.1	
68	ETSI TS 102 610	Railway Telecommunication; GSM; Usage of the UUIE for GSM operation on railways	1.1.0		ETSI TS 102 610	Railway Telecommunication; GSM; Usage of the UUIE for GSM operation on railways	1.1.0	
69	(MORANE) F 10 T 6002	FFFS for Confirmation of High Priority Calls'	4		(MORANE) F 10 T 6002	FFFS for Confirmation of High Priority Calls'	4	
70	(MORANE) F 12 T 6002	FIS for Confirmation of High Priority Calls	4		(MORANE) F 12 T 6002	FIS for Confirmation of High Priority Calls	4	
71	(MORANE) E 10 T 6001	FFFS for Functional Addressing	4		(MORANE) E 10 T 6001	FFFS for Functional Addressing	4	
72	(MORANE) E 12 T 6001	FIS for Functional Addressing	5.1		(MORANE) E 12 T 6001	FIS for Functional Addressing	5.1	
73	(MORANE) F 10 T6001	FFFS for Location Dependent Addressing	4		(MORANE) F 10 T6001	FFFS for Location Dependent Addressing	4	
74	(MORANE) F 12 T6001	FIS for Location Dependent Addressing	3		(MORANE) F 12 T6001	FIS for Location Dependent Addressing	3	
75	(MORANE) F 10 T 6003	FFFS for Presentation of Functional Numbers to Called and Calling Parties	4		(MORANE) F 10 T 6003	FFFS for Presentation of Functional Numbers to Called and Calling Parties	4	
76	(MORANE) F 12 T 6003	FIS for Presentation of Functional Numbers to Called and Calling Parties	4		(MORANE) F 12 T 6003	FIS for Presentation of Functional Numbers to Called and Calling Parties	4	

Index N	Set of specifications # 1 (ETCS baseline 2 and GSM-R baseline 0)				Set of specifications # 2 (ETCS baseline 3 and GSM-R baseline 0)			
	Reference	Name of Specification	Version	Notes	Reference	Name of Specification	Version	Notes
77	ERA/ERTMS/033281	Interfaces between CCS track-side and other subsystems	1.0		ERA/ERTMS/033281	Interfaces between CCS track-side and other subsystems	1.0	
78	Reserved	Safety requirements for ETCS DMI functions			Reserved	Safety requirements for ETCS DMI functions		
79	Not applicable	Not applicable			UNISIG SUBSET-114	KMC-ETCS Entity Off-line KM FIS	1.0.0	
80	Not applicable	Not applicable			Reserved	GSM-R Driver Machine Interface		

Note 1: only the functional description of information to be recorded is mandatory, not the technical characteristics of the interface.

Note 2: the specifications listed in section 2.1 of EN 301 515 are mandatory.

Note 3: the change requests (CRs) listed in table 1 and 2 of TR 102 281 are mandatory.

Table A 3 - List of mandatory standards

The standards listed in this table shall be applied in the certification process, without prejudice to chapter 4 and chapter 6 of this TSI.

No	Reference	Document name and comments	Version
A1	EN 50126	Railway applications —The specification and demonstration of reliability, availability, maintainability and safety (RAMS)	1999
A2	EN 50128	Railway applications — Communication, signalling and processing systems — Software for railway control and protection systems	2001
A3	EN 50129	Railway applications — Communication, signalling and processing systems — Safety related electronic systems for signalling	2003
A4	EN 50159-1	Railway applications - Communication, signalling and processing systems -- Part 1:	2001
A5	EN 50159-2	Railway applications - Communication, signalling and processing systems -- Part 2: Safety related communication in open	2001

		transmission systems	

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"Annex G

Open Points

Open Point	Notes
Braking aspects	It only applies to ERTMS/ETCS Baseline 2 (see Annex A, Table A2, Index 15). Resolved for ERTMS/ETCS Baseline 3 (see Annex A, Table A 2, Indexes 4 and 13).
Index 28 – Reliability/ availability requirements	Frequent occurrences of degraded situations caused by failures of control-command and signalling equipment will decrease the system safety.
Minimum wheel diameter for speed greater than 350 km/h	See Annex A, Table A 2, Index 77
Minimum axle distance for speed greater than 350 km/h	See Annex A, Table A 2, Index 77
Metal and inductive components free space between wheels	See Annex A, Table A 2, Index 77 This is not an open point for freight wagons
Characteristics of sand applied to tracks	See Annex A, Table A 2, Index 77
Vehicle metal mass	See Annex A, Table A 2, Index 77
Combination of rolling stock characteristics influencing shunting impedance	See Annex A, Table A 2, Index 77
Electromagnetic interferences (traction current)	See Annex A, Table A 2, Index 77
Electromagnetic interferences (electromagnetic fields)	See Annex A, Table A 2, Index 77 This is not an open point for power systems other than DC
Vehicle Impedance	See Annex A, Table A 2, Index 77
DC and low frequency components of traction current	See Annex A, Table A 2, Index 77
Use of magnetic / eddy current brakes	See Annex A, Table A 2, Index 77
Index 78 - Safety requirements for ETCS DMI functions	This open point is related to the interface between ETCS on-board and the driver, i.e. errors in displaying information and in entering data and commands.

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