



WELCOME

WORKSHOP

Preparation of Harmonized Standards

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BREAKOUT SESSION

CENELEC Case studies: EMC – RED

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- Background
- Important aspects to consider for candidate Harmonised Standards
 - Annex ZA
 - Annex ZZ
 - Risk Assessment
- Link with Frankfurt Agreement
- Linking all together: Case studies (EMC, LVD & RED)
- Further considerations
- Guidance



Background

Electromagnetic Compatibility (EMC)

- EMC – Directive 2014/30/EU
- Replaces 'old' EMC Directive 2004/108/EC since April 2016
- EC website: [here](#)
- EC guidance: [EMC Guide](#) and ADCO recommendations
- Associated Standardization Request: [M/552](#)
- HAS Consultants: yes
- CLC coordination body: CLC/TC 210 'Electromagnetic Compatibility (EMC)'

Low Voltage (LVD)



- LVD – Directive 2014/35/EU
- Replaces ‘old’ LVD Directive 2006/95/EC since April 2016
- EC website: [here](#)
- EC guidance: [Guidelines on the LVD](#) and ADCO recommendations
- Associated Standardization Request: [M/511](#)
- HAS Consultants: yes
- CLC coordination body: CLC/BTWG 143-1 ‘Alignment of the Low Voltage Directive under the New Legislative Framework’

Radio Equipment (RED)

- RED – Directive 2014/53/EU
- EC website: [here](#)
- EC guidance: [RED Guide](#)
- Associated Standardization Request: M/536
- HAS consultants: yes
- CEN-CLC coordination body: CEN-CLC BTWG 10 'RED impact on standardization'



Important aspects to consider

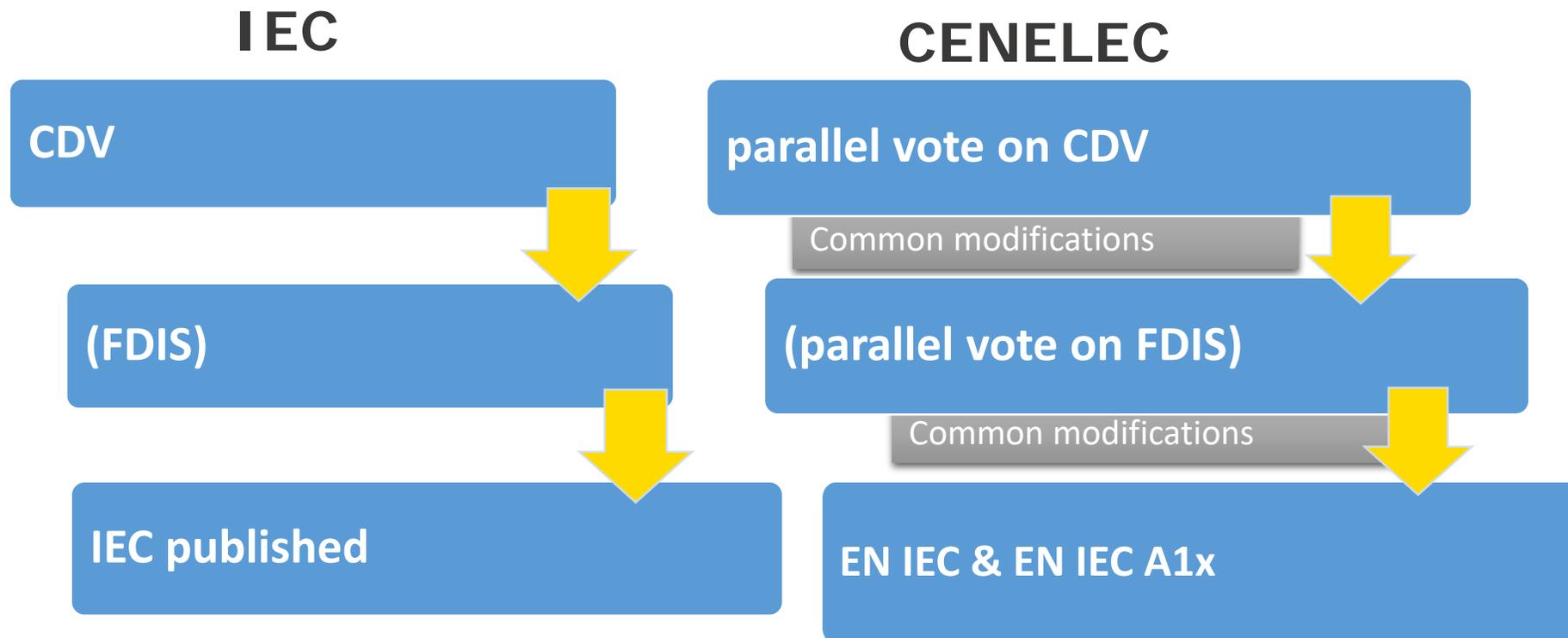
Important aspects to consider

- European elements to be provided to CCMC
 - At NWI stage (request to BT): Standardization Request reference
 - At CDV/ENQ stage → Important for HAS Consultants
 - 1) Annex ZZ (granularity) → [templates available on CLC BOSS](#)
 - 2) Risk Assessment ([CLC Guide 32](#) 'Guidelines for Safety Related Risk Assessment and Risk Reduction for Low Voltage Equipment' as help) → no template yet
 - 3) If possible, already a dated Annex ZA (link between IEC normative references and European ones) → no template

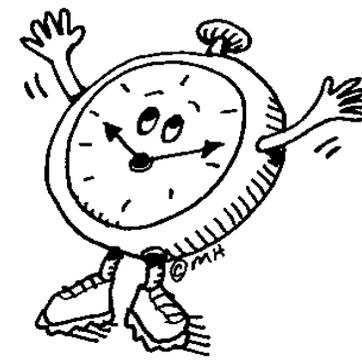
Link with Frankfurt Agreement

Link with Frankfurt Agreement

Parallel Voting: IEC draft and final standards are systematically submitted to a parallel voting procedure in CENELEC:



Link with Frankfurt Agreement



• Common Modifications

- Annex ZA and Annex ZZ are not considered as Common Modifications
- Under the current process, Annex ZA is the responsibility of CCMC (finalization)
- Annex ZZ could be 'added' to the IEC 'mother' standard if received in time (i.e. before the editing/translation work associated to CDV)
- If the Annex ZZ is sent to CCMC after the launch of the editing/translation work associated to the CDV, TC has to request NWI to CLC/BT → **amendment (A1X)**

Case studies

Case 1 – LVD & EMC

EN 60947-5-1:2017 'Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices ' (PR=59587)

- Link to EMC and LVD → positively assessed by EMC and LVD consultants
- Annexes ZZ provided
- Dated Annex ZA provided
- Risk Assessment provided



Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-6	2007	Environmental testing -- Part 2-6: Tests Test Fc: Vibration (sinusoidal)	-EN 60068-2-6	2008
IEC 60068-2-14	2009	Environmental testing -- Part 2-14: Tests Test N: Change of temperature	-EN 60068-2-14	2009
IEC 60068-2-27	2008	Environmental testing -- Part 2-27: Tests Test Ea and guidance: Shock	-EN 60068-2-27	2009
IEC 60068-2-30	2005	Environmental testing -- Part 2-30: Tests Test Db: Damp heat, cyclic (12 h + 12 h cycle)	-EN 60068-2-30	2005
IEC 60073	2002	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators	EN 60073	2002

Relationship between this European standard and the essential requirements of Directive 2014/30/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request C(2016) 7641 final of 30.11.2016¹, ('M/552') as regards harmonised standards in support of Directive 2014/30/EU relating to electromagnetic compatibility, to provide one voluntary means of conforming to essential requirements of Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZZA.1 – Correspondence between this European standard and Annex I of Directive 2014/30/EU [2014 OJ L96]

Essential requirements of Directive 2014/30/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Electromagnetic disturbances (emissions), Article 6 and Annex I 1.(a)	7.3.1, 7.3.3, 8.4.1, 8.4.3, 8.4.4	
Electromagnetic immunity to electromagnetic disturbances (immunity), Article 6 and Annex I 1.(b)	7.3.1, 7.3.2, 8.4.1, 8.4.2, 8.4.4	Full coverage of requirements for conducted and radiated disturbances in the range 150 kHz to 2,7 GHz

WARNING 1: Presumption of conformity stays valid only as long as a reference to this European standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2: Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

Relationship between this European standard and the safety objectives of Directive 2014/35/EU [2014 OJ L96] aimed to be covered

This European standard has been prepared under a Commission's standardisation request relating to harmonised standards in the field of the Low Voltage Directive, M/511, to provide one voluntary means of conforming to safety objectives of Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding safety objectives of that Directive, and associated EFTA regulations.

Table ZZB.1 – Correspondence between this European standard and Annex I of Directive 2014/35/EU [2014 OJ L96]

Safety objectives of Directive 2014/35/EU	Clause(s) / sub-clause(s) of this EN	Remarks/note
1 a)	1, 2, 3, 4, 5, Annex F, Annex K, Annex L, Annex M	
1 b)	1, 2, 3, 4, 5, 6, 8.2, 8.3, Annex E, Annex H, Annex J, Annex K, Annex L, Annex M	
1 c)	1, 2, 3, 4, 5 Also refer to 2 a) to 2 d) and 3 a) to 3 c) in this table	
2 a)	1, 2, 3, 4, 5.3, 7.1, 7.2, 7.3, 8.1, 8.3, Annex F	
2 b)	1, 2, 3, 4, 5.3, 7.1, 7.2, 8.2, 8.3, Annex H, Annex J	This standard does not deal with any specific requirements on acoustic noise and optical radiation.
2 c)	1, 2, 3, 4, 6, 7.1, 8.1, 8.2, 8.3, 8.4, Annex C, Annex J	
2 d)	1, 2, 3, 4, 5.3, 6, 7.1, 7.2, 8.1, 8.3, Annex F, Annex G, Annex J, Annex K, Annex L	
3 a)	1, 2, 3, 4, 6, 7, 8.1, 8.2, Annex C, Annex G, Annex J	

A	B	F	G	H	I	J
Standard ref. and title:	IEC 60947-5-1:2016 Control circuit devices					
Requirement	Sub requirements	NAC comments	TC121A/WG3 comments	Subclause title	Referring to Part 1 subclause	Subclause title
A.2 Preliminary observations		ide 32				
	principles of safety integration	<i>Why are these clauses mentioned here?</i>	General principles of safety integration are applied in clauses 6 to 8 of this standard.	Normal service, mounting and transport conditions		
				Constructional and performance requirements		
				Tests		
	assessment of the hazards set out in A.4 to A.7					
	requirements for information set out in A.9.					

Case 2 – EMC & RED

- EN 55035:2017 'Electromagnetic compatibility of multimedia equipment - Immunity requirements CISPR 35:2016 (Modified)'

Incl. Common Modifications

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Relationship between this European Standard and the essential requirements of Directive 2014/30/EU [2014 OJ L96] aimed to be covered

This European Standard has been prepared under the European Commission standardization request C(2016) 7641 final of 30.11.2016 ⁴⁾, ('M/552'), as regards harmonized standards in support of Directive 2014/30/EU relating to electromagnetic compatibility, to provide one voluntary means of conforming to essential requirements of Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility [2014 OJ L96].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZZA.1 – Correspondence between this European Standard and the Essential Requirements set out in Directive 2014/30/EU [2014 OJ L96]

Essential requirements of Directive 2014/30/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Annex I. 1(b) (electromagnetic immunity)	Clause 5 Immunity requirements Table 1 – Immunity requirements for enclosure ports	Not applicable for broadcast receivers (Annex A) under 2014/30/EU
	Clause 5 Immunity requirements Table 2 – Immunity requirements for analogue/digital data ports	Not applicable for broadcast receivers (Annex A) under 2014/30/EU
	Clause 5 Immunity requirements Table 3 – Immunity requirements for DC network power ports	Not applicable for broadcast receivers (Annex A) under 2014/30/EU
	Clause 5 Immunity requirements Table 4 – Immunity requirements for AC mains power ports	Not applicable for broadcast receivers (Annex A) under 2014/30/EU

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

4) COMMISSION IMPLEMENTING DECISION C(2016) 7641 final of 30.11.2016 on a standardisation request to the European Committee for Standardisation, to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards harmonised standards in support of Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.

Relationship between this European Standard and the essential requirements of Directive 2014/53/EU [2014 OJ L153] aimed to be covered

This European Standard has been prepared under the European Commission standardization request C(2015) 5376 final of 4.8.2015⁵⁾ ('M/536'), as regards harmonized standards in support of Directive 2014/53/EU relating to radio equipment, to provide one voluntary means of conforming to essential requirements of Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [2014 OJ L153].

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZZB.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

Table ZZB.1 – Correspondence between this European Standard and Article 3 of Directive 2014/53/EU [2014 OJ L153]

Essential requirements of Directive 2014/53/EU	Clause(s) / sub-clause(s) of this EN	Remarks / Notes
Article 3 1.(b) (electromagnetic compatibility), immunity	Clause 5 Immunity requirements Table 1 – Immunity requirements for enclosure ports	Only applicable for broadcast receivers (Annex A) under 2014/53/EU
	Clause 5 Immunity requirements Table 2 – Immunity requirements for analogue/digital data ports	Only applicable for broadcast receivers (Annex A) under 2014/53/EU
	Clause 5 Immunity requirements Table 3 – Immunity requirements for DC network power ports	Only applicable for broadcast receivers (Annex A) under 2014/53/EU
	Clause 5 Immunity requirements Table 4 – Immunity requirements for AC mains power ports	Only applicable for broadcast receivers (Annex A) under 2014/53/EU

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

5) COMMISSION IMPLEMENTING DECISION C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment. [2014 OJ L153].

Further considerations

Some considerations (1)

- Standards with parts – possibilities:
 - Part 1 with requirements applicable to all products, other parts with requirements allocated to different types or intended use of products
 - Parts all mutually independent
 - One part dealing with limits or test levels, another part dealing with measurement methods and a third part dealing with performance criteria
- Only one Annex ZZ for all parts or a Annex ZZ for each part?
 - Parts that do not confer Presumption of Conformity (stand alone) → no OJEU listing/no Annex ZZ
 - Annex ZZ for each part that needs to be offered for OJEU citation

Some considerations (2)

- Amendments:
 - An amendment cannot be considered in isolation to the standard being amended
 - When amending a standard, minimally review the (existing) Annex ZZ:
 - Is it still correct?
 - Yes: no amendment of Annex ZZ needed → this may require some attention upfront (EC awareness)
 - No: update Annex ZZ

Some considerations (3)

- The Annex ZZ is not the only key to OJEU citation
 - Use templates for 'Foreword' and 'Annex ZZ' (circular)
 - EC Vademecum 'on European standardisation in support of Union legislation and policies' requirements
 - Standardization Request (tendency to have supplementary requirements)
 - 'verification mechanism'
 - Scope
 - Normative references → IR3
 - Gold plating → no requirements beyond E.R. linked to those E.R.
 - No substitute for regulation,...

Guidance

Guidance

- CEN BOSS and CENELEC BOSS (development of info related to harmonized standards)
- Frankfurt Agreement (CLC Guide 13) – FAQ + Day to Day document
- CLC Guide 32 'Guidelines for Safety Related Risk Assessment and Risk Reduction for Low Voltage Equipment'
- EC guidance documents
 - Blue Guide
 - EMC Guide
 - Guidelines on the LVD
 - RED Guide
 - EC Vademecum on European Standardization



THANK YOU

QUESTIONS



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