

Standards Update

Standards in Focus

By David Hodges, Chair, SCTE Standards and Technical Committee

David Hodges reports on the latest standardisation updates from various CENELEC Working Groups.



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David Hodges was chair of the CAI (Confederation of Aerial Industries) for 24 years after joining the Board in 1980. He was educated in Sevenoaks and at South East London Technical College, where he gained a full tech., and

completed his apprenticeship as a development engineer with GEC Elliott Automation, working on power station control and monitoring systems.

After a short period at the SIRA Institute as a research technologist, he joined Chubb as a project engineer working on electronic security systems, including its large security projects, and became surveillance divisional manager running the CCTV operation.

In 1976, he joined the SCTE and, two years later, joined a CAI member, Kindue, as technical director. He became involved with the CAI and joined the CAI Board in 1980. At that time, he

had the opportunity to develop some entry communications systems and, as result of this work, Blakeglow Ltd. was formed. Over the years, he has moved into the installation field and so sees the industry both from manufacturing and installation viewpoints with Blakeglow Systems Ltd.

During the past few years, he has been awarded an Honorary Fellowship of the Society and presented with its Tom Hall award. He has also been awarded an Honorary Fellowship of the CAI and was presented with the John Summerfield award. In July 2018, he was awarded the IEC 1906 award for his work in Standards.

Dave currently represents the SCTE on BSI, CENELEC, IEC Standards and represents CENELEC TC209 in ETSI ERM17 Committees. He is chair of the BSI Technical Committee Cable Standards EPL100/04 and convenor of CENELEC TC209 / IEC TC100/TA05 working group 1 safety. He is also chair of the SCTE's Standards and Technical committee.

“ The commission is currently in the process of seeking public comments on changes to the EMC directive. ”

Each year, a week is set aside during November for all the working groups of BSI EPL100/04, CENELEC TC209 and IEC TC100/TA05 to hold their meetings and for the working group convenors to meet. This year, the meetings were held from **9-13 November 2020**.

As might be expected, all standards meetings are currently virtual which, in my opinion, highlights the pros and cons of not having to travel and saves the costs of hotels etc. I still prefer face to face meetings but, like most people who are involved, can see that much work can be efficiently conducted online and it is not always necessary to have live face to face team interaction.

The risk-based process of creating and vetting standards continues to cause significant problems for the revision of harmonised standards and, for us particularly, insofar as this affects our EMC standard EN50083-2. The stalled standards are waiting for complete re-writes.

In addition to the issue of gaining approval for harmonised standards, the commission is currently in the process of seeking public comments on changes to the EMC directive.

Below is a brief update on standards work activity at present.

WG1 (Safety) IEC 60728-11 ed5

This revised Standard is with IEC, beginning the FDIS process.

WG2 (EMC and RED) EN50083-2:2012/PrA2:2019-06

The commission consultants rejected the above revision both for EMCD and RED and, according to comments, this Working Group could not provide the changes requested in the procedural time scale so it was decided to stop the procedure and start again when more of the questions had been answered.

It was also agreed that EN50083-8 should be updated, following the successful revision of Part 2.

WG3 (Coaxial equipment) IEC 60728-103 ed1

The DOCSIS work continues along with a digital-only standard.

WG5 (Optical systems and equipment)

Work is ongoing on three new standards.

IEC 60728-106 ed1. Optical equipment for systems loaded with digital channels only.

IEC 60728-113 ed2. Optical systems for broadcast signal transmissions loaded with digital channels only.

EC 60728-115 ed1. In-Building Optical systems for broadcast signal transmissions.

WG7 (Systems)

Work has started on two new standards:-

IEC60728-101-1 ed1. RF cabling for two-way home networks with all-digital channels load.

IEC 60728-101-2 ed1. Performance requirements for signals delivered at the system outlet in operation with all-digital channels load.

WG8 (Satellite systems and equipment)

This Working Group has no outstanding items at this time.

Standards liaison

In addition to the working groups, CENELEC TC209 and IEC TC100/TA05 have liaison agreements with a number of other groups and organisations. Among them are:-

- CLC/TC 46X and CLC/SC 46XA.
- CLC/TC210.
- CLC/TC 215.
- ETSI TC Cable.
- ETSI/TC ERM17.

Currently, Volker Leisse, Carsten Engelke and Dave Hodges are supporting WG5 of this technical committee, having attended three working group meetings, and are investigating the internal immunity method of measurement.

Further meetings of working groups will occur as required. The 2021 November meetings are already set and may be face to face meetings, rather than virtual ones.

My thanks go to Thomas Wegmann, secretary of CENELEC TC209, for the table overleaf.

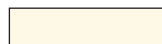
**Present status of International and European Standards and projects of EN 50083 and IEC/EN 60728 series
and other standards and projects under TC209 and 100/TA5 responsibility
(Status: 2019-11-06)**

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC 60728-1:2014 (2020-12)	EN 60728-1:2014	Part 1: System performance of forward paths
---	IEC 60728-1-1:2014 (2020-12)	EN 60728-1-1:2014	Part 1-1: RF cabling for two-way home networks
---	IEC 60728-1-2:2014 (2020-12)	EN 60728-1-2:2014	Part 1-2: Performance requirements for signals delivered at the system outlet in operation
---	IEC 60728-101:2016 (2018-12)	EN 60728-101:2017	Part 101: System performance of forward paths with all-digital channels load
---	IEC 60728-101-1	NEW	Part 101-2: RF Cabling for two-way home networks with all-digital channels load <i>NP approved</i>
	IEC 60728-101-2	NEW	Part 101-2: Performance requirements for signals delivered at the system outlet in operation with all-digital channels load <i>NP approved</i>
	IEC 60728-106	NEW	Part 106: Optical equipment for systems loaded with digital channels only <i>NP approved 2020-09-04</i>
---	IEC 60728-113:2018 (2021-12)	EN 60728-113:2018	Part 113: Optical systems for broadcast signal transmissions loaded with digital channels only
	IEC 60728-115	prEN 60728-115 NEW	Part 115: In-Building Optical systems for broadcast signal transmissions <i>CDV awaited</i>
EN 50083-2:2012	IEC 60728-2:2018 (2020-12)	---	Part 2: Electromagnetic compatibility for equipment <i>Note: IEC aligned with EN of 2012</i>
EN 50083- 2:2012/ A1:2015	---	---	Part 2: Electromagnetic compatibility for equipment; Amendment A1
EN 50083-2:2012 /prA2: 2019-06		NEW	Part 2: Electromagnetic compatibility for equipment; Amendment A2 WORK STOPPED
CLC/TR 50083-2- 1:2014	---	---	Electromagnetic compatibility measurements
CLC/TR 50083-2-2:2014	---		Interference situation for DVB-T reception in the presence of LTE base station signals
CLC/TS 50083-2- 3:2018	---		LTE (4G) Interference Mitigation Filters in the 800MHz band
EN 50083-2-4: 2019 NEW	---		LTE (4G) Interference Mitigation Filters in the 700MHz and 800MHz bands for DTT reception
	IEC 60728-3:2017 (2020-20)	EN IEC 60728-3:2018	Part 3: Active wideband equipment for cable networks NOTE: also replaces EN 60728-3-1:2012 and CLC/TC 50083-3-3:2014

"European Standard EN 50083 series"	International Standard IEC 60728 series (Stability Date)	European Standard EN 60728 series	Title of European Standard "Cable networks for television signals, sound signals and interactive services;"
---	IEC/TR 60728-3- 2:2016-10		Part 3-2 : Method of measurement of 5th order non-linearity for active electronic equipment using five carriers
---	IEC 60728-4:2007 (2020-12)	EN 60728-4:2008	Part 4: Passive wideband equipment for coaxial cable networks
---	IEC 60728-5:2015 (2018-12)	EN 60728-5:2016	Part 5: Headend equipment
CLC/ TR 50083-5-1: 2009	After approval in CENELEC	---	Technical Report: IP gateways and interfaces for headends
---	IEC 60728-6:2011 (2020-12)	EN 60728-6:2011	Part 6: Optical equipment
CLC/ TR 50460:2005	IEC/TR 60728-6-1: 2006 (2018-12)	---	System guidelines for analogue optical transmission systems
---	IEC 60728-7-1:2003	EN 60728-7-1:2005	Part 7-1: Hybrid Fibre Coax Outside Plant Status Monitoring - Physical (PHY) Layer Specification
	IEC 60728-7- 1:2003/ A1:2015	EN 60728-7- 1:2003/ A1:2015	
---	IEC 60728-7-2:2003 Stabilised until 2026	EN 60728-7-2:2005	Part 7-2: Hybrid Fibre Coax Outside Plant Status Monitoring - Media Access Control (MAC) Layer Specification
---	IEC 60728-7-3:2009 Edition 2 Stabilised until 2026	EN 60728-7-3:2009 Edition 2	Part 7-3: Hybrid Fibre Coax Outside Plant Status Monitoring - Power supply to Transponder Interface Bus (PSTIB) Specification
EN 50083-8:2013	IEC 60728-12:2017 (2020-12)	---	Part 8: Electromagnetic compatibility for networks
EN 50083-8			<i>Maintenance decided</i>
EN 50083-9:2002	IEC 60728-9:2000 (2012-12) IEC 60728-9-am1 (2012-12) Stabilised until 2026	---	Part 9: Interfaces for CATV/SMATV headends and similar professional equipment for DVB/ MPEG-2 transport streams
	IEC 60728-10:2014 (2020-12)	EN 60728-10:2014	Part 10: System performance for return paths
CLC/ TR 50083-10-1: 2014	---	---	Guidelines for the implementation of return paths in cable networks
EN 60728- 11:2017/ A11:2018	IEC 60728-11:2016 (2018-12)	EN 60728-11:2017	Part 11: Safety requirements <i>Common Modifications for LVD</i>
	IEC 60728-11 Ed 5	EN 60728-11:2017 NEW	Part 11: Safety requirements <i>FDIS awaited</i>
---	IEC 60728-13:2010 (2020-12)	EN 60728-13:2010	Part 13: Optical systems for broadcast signal transmissions
---	IEC 60728-13-1:2017 (2020-12)	EN 60728-13-1:2017	Part 13-1: Bandwidth expansion for broadcast signal over FTTH system
---	IEC 60728-14:2014 (2019-12)	EN 60728-14:2014	Part 14: Optical transmission systems using RFoG technology

Other standards and projects under the responsibility of CLC/TC209 and/or IEC 100/TA5

	International Standard (Stability date)	European Standard/ Publication	Title of European Standard
---	---	EN 50494:2007	Satellite signal distribution over a single coaxial cable in single dwelling installations
---	---	EN 50585:2014	Transport of satellite delivered signals over IP networks
		EN 50607:2015	Satellite signal distribution over a single coaxial cable - second generation
		CLC/TR 50607-10:2015	Satellite signal distribution over a single coaxial cable - Part 10: Implementation guideline
---	IEC 61114-1:1999 (Stabilised until 2026)	EN 61114-1:1999	Receiving antennas for satellite broadcast transmissions in the 11/12GHz band - Part 1: Electrical measurements
---	IEC 61114-2:1996 (Stabilised until 2026)	EN 61114-2:1996	Methods of measurement on receiving antennas for satellite broadcast transmission in the 11/12GHz band - Part 2: Mechanical and environmental tests on individual and collective receiving antennas



Actual projects (new or revision)



Changes since Rev. 33 of this document, published in August 2017



Actual European version, published



Delayed projects

EMC directive

To comment on the EMC directive via the open public consultation "Electromagnetic compatibility - evaluation of the EU rules", follow the link below.

https://ec.europa.eu/growth/content/open-public-consultation-electromagnetic-compatibility-evaluation-eu-rules_en

The consultation is open until **29 January 2021** for contributions.

Contributions and comments on standards

Standards' work is often painstaking and time-consuming, but always worthwhile. It is always better to take part at the formulating stage, rather than discover horrific implications for your business when the standard is published! The maintenance teams/working groups in IEC and CENELEC are always looking for technical experts; if you really cannot

devote time for the actual meetings, then at least consider commenting on the interim drafts that they issue.

For UK-based organisations, the SCTE is happy to circulate drafts of standards issued for comment and voting and to cross-correlate input into BSI. Please contact me if you would like to be on the circulation list.

Dave Hodges has a growing list of engineers who have volunteered to provide comment on draft standards as they go through the creation stage. If you would be willing to provide commitments, please email **dave@hodges.co.com**



Please email me at **dave@hodges.co.com** if you would like to be included on the draft circulation list.