CONTRIBUTION TO STANDARDISATION

D8.13: Report on the contribution to standardisation (II)

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*Delivery type: **R**: Document, report; **DEM**: Demonstrator, pilot, prototype; **DEC**: Websites, patent fillings, videos, etc; **OTHER**; **ETHICS**: Ethics requirement; **ORDP**: Open Research Data Pilot.

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Document history

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Abstract

The standardisation activities of T8.9 are foreseen to be a facilitator of the acceptance and utilisation by the market of the USER-CHI solutions, as well as a tool to improve the development and the exploitation strategy of the project.

For this purpose, once studied in D8.11 the existing standards and technical committees related to USER-CHI, the “Report on the contribution to standardisation” (deliverables D8.12, D8.13 and D8.14) summarizes the actions carried out and their results regarding the interaction of the USER-CHI project consortium with those technical committees identified as relevant and includes proposals for new or revised standards related to USER-CHI system or elements.

Keywords

Standard, strategy, technical committee.

Copyright statement

Executive summary

The “Report on the contribution to standardisation” (deliverables D8.12, D8.13 and D8.14) will collect the actions performed for the contribution to standardisation from USER-CHI and the results obtained. The contribution to standardisation seeks to transfer selected results of USER-CHI to standards (EN/CLC/ISO/IEC). D8.13 is considered the second part of the document D.14 “Report on the contribution to standardisation” that shall be delivered at M48, since defining a strategy is key to a successful contribution to standardisation.

The transfer of the results of USER.CHI to standards that are widely recognised by the industry and that are developed in a system external to the Consortium will ease the market uptake of these results and their impact beyond the duration of the project. Additionally, the standardisation system is used as a targeted dissemination channel towards the stakeholders represented in the standardisation committees.

D8.13 is part of Task T8.9.2 “Contribution to the ongoing and future standardisation developments” and is based in the conclusions of D8.12 “Report on the contribution to standardisation (I)” that included the information on the strategy for the interaction with the standardisation system and the actions that may be carried out in order to disseminate the project towards possible future standardisation activities in the same field.

The Spanish Association for Standardisation (UNE), as National Standardisation Body (NSB), member of CEN-CENELEC and of ISO-IEC, is member of USER-CHI to provide support regarding the standardisation tasks included in the project (WP8 “Replication plans, scale-up and business model analysis”).

Table of Contents

List of Pictures

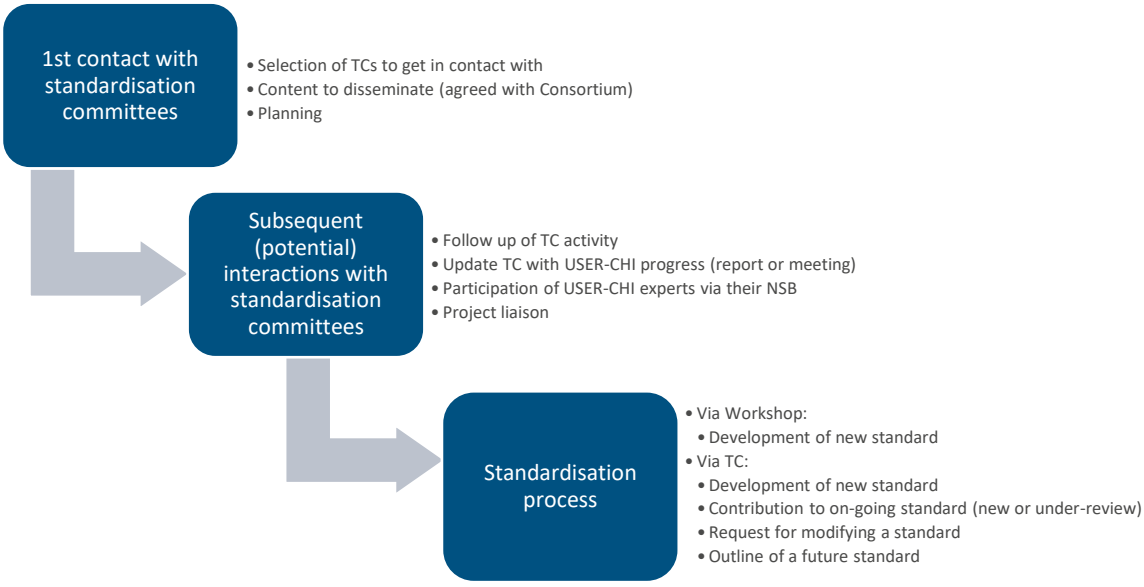
List of Tables

1. Introduction

1.1 Strategy

The D8.12 “Report on the contribution to standardisation (I)” established a strategy for the interaction with the standardisation system and indicated the actions that may be carried out in order to disseminate the project towards possible future standardisation activities in the same field. This strategy comprised the actions represented in the next figure:

PICTURE 1-1 – STRATEGY FOR THE CONTRIBUTION TO STANDARDISATION OF USER-CHI



1.2 Reminder of standardisation

Standards are voluntary technical documents that set out requirements for a specific item, material, component, system or service, or they describe in detail a particular method, procedure or best practice. Standards are developed and defined through a process of sharing knowledge and building consensus among technical experts nominated by interested parties and other stakeholders - including businesses, consumers and environmental groups, among others. These experts are organised in Technical Committees (TCs), which are subdivided in subcommittees (SCs) or working groups (WGs). These TCs are included in the structure of the standardisation

organizations (National, European and International, with the respective mirror committees) and work following their internal regulations.

The standardisation bodies operate at National (UNE, AFNOR, BSI, DIN, etc.), Regional (CEN, CENELEC, ETSI) or International (ISO, IEC, ITU) level. Sometimes there are different standardisation bodies at the same level but covering different fields. This is the case of ISO (general), IEC (electrical) and ITU (telecommunications) at International level, or CEN, CENELEC and ETSI at European level in the same way.

There are also different kinds of standardisation documents. The most widespread is the standard, which has a different code depending on the organization under which it was developed; e.g. EN for European Standards, ISO or IEC for International standards. Other types of documents are technical specifications (TS), technical reports (TR) and workshop agreements (CWA). Further amendments to the standards are identified by adding A1, A2, etc. at the end of the standard code.

At European level, all the members of CEN and CENELEC shall adopt EN standards as national standards and have to withdraw any existing national standards which could conflict with them. A summary of the characteristics of the different standardisation documents could be found in the following Table 1-1.

TABLE 1-1 CHARACTERISTICS OF DIFFERENT STANDARISATION DOCUMENTS

Type	International code	European code	National code	Main characteristics
Standard	ISO IEC	EN	UNE, NF, BS, DIN, etc. When adopting: UNE-EN, NF-EN, UNE ISO, NF-ISO, etc.	• Elaboration: 3 years • 2 steps of member approval • European: compulsory national adoption • Revision: every 5 years
Technical Specification	ISO/TS IEC/TS	CEN/TS CLC/TS	When adopting: UNE-CEN/TS, NF-CEN/TS, UNE-ISO/TS, NF-ISO/TS, etc.	• Elaboration: 21 months • 1 step of member approval or internal approval in TC • European: optional national adoption • Revision: at 3 years (upgrading to EN or deletion)
Technical Report	ISO/TR IEC/TR	CEN/TR CLC/TR	When adopting: UNE-CEN/TR, NF-CEN/TR, UNE-	• Elaboration: free timeframe • Internal approval in TC

Type	International code	European code	National code	Main characteristics
			ISO/TR, NF-ISO/TR, etc.	• European: optional national adoption • No revision required
Workshop Agreement	IWA	CWA	Variable	• Elaboration: free timeframe (usually few months) • Internal approval in the Workshop • European: optional national adoption • Revision: at 3 years (upgrading to EN or deletion)

European and International standardisation organizations (e.g. CEN and ISO) have signed formal agreements in order to avoid duplication of efforts and promote global relevance of standards, which allow to adopt or develop in parallel each other's standards with the same content and code.

The technical collaboration between ISO and CEN was formalized through the Vienna Agreement (VA).

European standards developed through the Vienna Agreement have EN ISO codification while International Standards developed through the Vienna Agreement remain only with ISO code.

Concerning CENELEC, it has close cooperation with its international counterpart, the International Electrotechnical Commission (IEC) through the Frankfurt Agreement (FA).

As a result, new electrical standards projects are jointly planned between CENELEC and IEC, and where possible most are carried out at international level. This means that CENELEC will first offer a New Work Item (NWI) to its international counterpart. If accepted, CENELEC will cease working on the NWI. If IEC refuses, CENELEC will work on the standards content development, keeping IEC closely informed and giving IEC the opportunity to comment at the public enquiry stage. CENELEC and IEC vote in parallel (both organizations are voting at the same time) during the standardisation process. If the outcome of the parallel voting is positive, CENELEC will ratify the European standard and the IEC will publish the international standard. Close to 80% of CENELEC standards are identical to or based on IEC publications.

2. Scope

2.1 Purpose of the document

This deliverable (D8.13) is part of Task T8.9.2 “Contribution to the ongoing and future standardisation developments”. This Task is aimed firstly at investigating the standardisation potential in the field allowing the project to interact with the related standardisation technical committees, assessing to what extent the relationship should be established (monitoring their information, attending to TC meetings, establishing formal liaisons, organizing joint events, etc.), to capture their inputs as stakeholders and to use the standardisation system as a fast and much focused dissemination tool to the market stakeholders.

Finally, USER-CHI will contribute to new standards developments in specific topics, related with the objectives, products and outcomes of the project. The inclusion of project outcomes in new or future standards, external to the consortium, that can be easily used by the European or international industry and public administrations, will increase the impact of the project and will positively contribute to the transfer of the knowledge generated within the project to the industry and society.

2.2 Scope of the document

This second deliverable of T8.9.2 “Contribution to the ongoing and future standardisation developments” records the actions performed and the results of the interaction with the standardisation system. These interactions are addressed to the standardisation committees previously identified (D8.11 and D8.12) where the relevant stakeholders in the pertinent fields are represented. The objectives are to:

- Facilitate the subsequent contribution to standardisation allowing the related standardisation committees an advance knowledge of USER-CHI and to comment on the standardisation possibilities
- Disseminate the results and objectives of USER-CHI using the network of the standardisation community
- Gather any feedback that may come from the standardisation community regarding the development of USER-CHI

2.3 Structure of the document

This second part of the D8.14, the D8.13 "Report on the contribution to standardisation (II)" presents the results of the interaction with the standardisation system with the objectives of disseminating the project objectives and results in the standardisation community and ease the subsequent contribution to standardisation.

It will be updated with the progress of the different actions and its outcomes resulting in an ultimate version of D8.14 at M48.

The schedule of the actions described in this document is open to changes according to the progress of the project and the standardisation landscape.

2.4 Standardisation process

The main objective of the standardisation activities in USER-CHI is to facilitate the market acceptance of the results by transferring these results and findings to standards that have a wide recognition in the market. With the collaboration of the relevant partners, the feasible results to go through a standardisation process will be identified. Different options to contribute to standardisation shall be considered depending on the type of results and the standardisation context (existence of closely related standards and reactions of the standardisation committees):

1. *Development of a new standard within a standardisation workshop*. A standardisation workshop is a group of entities with a common interest in developing a standard about a specific issue. It is the equivalent to the standardisation committee, but the number of participants is typically smaller and the working procedures faster and more flexible. A standardisation workshop is created when there is a need for developing a precise standard in an innovative field that is not covered by the existing standardisation committees, or when these committees are not interested in developing such a standard (e.g. it does not fit in their work programme). If the subject is close to the field covered by a standardisation committee, the latter shall be informed and allow for the launching of the standardisation workshop.

   Considering that the standardisation workshop option is interesting for USER-CHI mainly in the European environment, the standardisation workshop will be named hereinafter as CEN Workshop or CENELEC Workshop. The standard produced by a CEN/CENELEC Workshop is called CEN Workshop Agreement or CENELEC Workshop Agreement, typically named as CWA. The nature and timeline for the development of CWAs is very suitable for the framework of the Research & Innovation (R&I) projects.

2. *Standardisation within a standardisation committee*. It may be interesting or needed that the results of USER-CHI going through the standardisation process are standardised within a standardisation committee. The possible scenarios are:

    a. Development of a new standard within a standardisation committee. When there is a result of USER-CHI to be promoted to a standard in a field covered by a standardisation committee, and such committee decides to include this development in its work programme. The resulting standard would have the support of the standardisation committee, but the work shall be adapted to the internal timeline of such standardisation committee and could go beyond the timeframe of the project.

    b. Contribute to an on-going standard. As a consequence of the monitoring of the standardisation landscape, it may be found that the results of USER-CHI are covered by an on-going standard but that these results do not fit in the current draft of the standard. Gaps in standards may be found both in standards that are being developed from a new initiative, and standards already published that are going under a review process towards a new version.

    c. Request the modification of a standard that is not under development or review. The gap may be found also in published standards that are not under any work within the standardisation committee. In this case, a fully justified modification request can be made to the standardisation committee.

    d. Outline of a future standard. Only when there is not a clear view on a full roadmap for the contribution to standardisation (like lack of agreement within the Consortium or lack of the expected results).

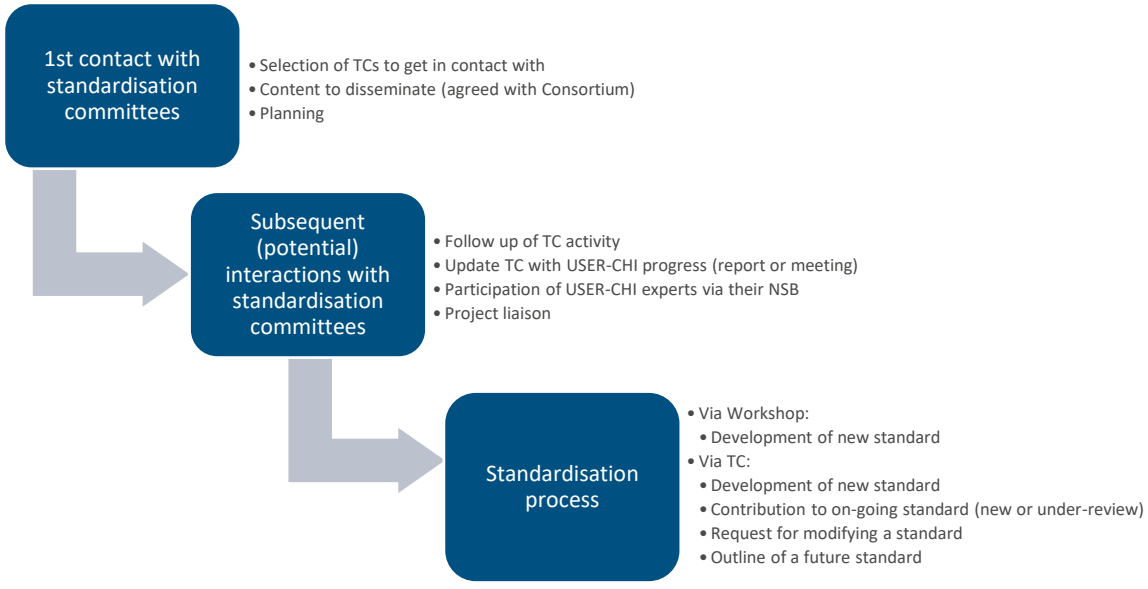
3. Actions and results

The actions and results for the implementation of each step of the strategy are detailed in the next paragraphs.

3.1 Strategy

The contribution to standardisation of USER-CHI is based in the interaction with the relevant Standardisation Technical Committees (TC) and in the initiation of a standardisation process. The strategy comprises the actions represented in the next figure:

PICTURE 3-1 – STRATEGY FOR THE CONTRIBUTION TO STANDARDISATION OF USER-CHI



3.2 First contact with the standardisation technical committees

The objectives of this first contact is to raise awareness about USER-CHI among the relevant standardisation committees and to ease subsequent communications. Different categories of

stakeholders at European/international level are present in these committees, so the standardisation system is used as a targeted dissemination channel. Feedback will be asked to gather any view, opinion or advise about the project and the standardisation possibilities or needs. Additionally, these first contacts will be useful to determine the best path towards the initiation of a standardisation process, moreover this first step will ease future interrelations if this process is launched within a standardisation committee.

3.2.1 Selection of TCs to get in contact with.

Deliverable D81.1 gave a landscape of technical committees developing standards.

For the implementation of the actions described in section 2, the relevance of the standardisation committees identified in D8.11 “Report on the standardisation landscape” was considered. It shall be noticed that, among the topics identified in D8.11, USER-CHI will bring innovation to the following ones:

- Availability and information
- Calibration of chargers
- Charging speed
- Data Model
- Data Protection
- Dynamic charge management
- Electric Vehicle Supply Equipment (EVSE)
- Electrical energy supply
- Electro-Mobility
- E-Roaming
- Intelligent transport systems
- Smart Charging
- Smart Cities
- Smart Grids
- Vehicle-to-Grid (V2G)

For the rest of the topics identified in D8.11 norelevant innovation is expected in the project, but their consideration is useful in terms of compatibility of the developments of USER-CHI. The following table shows the topics and standardisation committees that were contacted:

TABLE 3-1 STANDARDISATION COMMITTEES AND PEOPLE CONTACTED

Standardisation technical committee	Topics	Contact
CEN/TC 278 - Intelligent transport systems	Electro-Mobility, Smart Cities, Road vehicles, Interoperability	Secretary: Ms A. de Haes CCMC PM: Mr K. Alairy
CEN/TC 465 - Sustainable and Smart Cities and Communities	Smart Cities	Secretary: Ms J. Laurent
CEN/CLC/JTC 13 - Cybersecurity and Data Protection	Cybersecurity, Data Protection,	Secretary: Mr M. Uhlherr CCMC PM: Mr L. Hernalsteen
CEN/TC 301 - Road vehicles	Road vehicles	Secretary: Mr C. Chevauché CCMC PM: Mr M-A. Carreira da Cruz
CEN/TC 337 - Road operation equipment and products	Road vehicles	Secretary: Ms A. Vecchia CCMC PM: Mr K. Alairy
CEN/TC 354 - Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use	Road vehicles	Secretary: Ms A. Leplat CCMC PM: Mr T. Legrand
CEN/TC 333 - Cycles	Road vehicles	Secretary: Mr G.L. Salerio CCMC PM: Mrs C. Dalier
CEN/TC 225 - AIDC technologies	Interoperability, RFID cards	Secretary: Ms A. Ibrisim CCMC PM: Mr L. Hernalsteen
CEN/WS SCS - Description and Assessment of Good Practices for Smart City Solutions	Smart Cities	Secretary: Dipl.-Ing. R. Lindner CCMC PM: Mr C. Kohler
CEN/TC 287 - Geographic Information	Availability and information	Secretary: Ms J. Duncan CCMC PM: Mr L. Hernalsteen
ISO/TC 204 - Intelligent transport systems	Electro-Mobility, Smart Cities, Road vehicles, Interoperability	Committee Manager: Mr Adrian Guan ISO TPM: Mr Hakim Mkinsi
ISO/TC 268 - Sustainable cities and communities	Smart Cities	Committee Manager: Mme Joanna Laurent ISO TPM: Ms Monica Ibido
ISO/IEC JTC 1 - Information technology	Smart Grids, Smart Cities, Cybersecurity, Data Protection, Mobile Telecommunications, Interoperability, Availability and information	Committee Manager: Mrs Lisa Rajchel ISO TPM: Mr José Alcorta

Standardisation technical committee	Topics	Contact
ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection	Smart Grids, Cybersecurity, Data Protection	Committee Manager: Mr Sobhi Mahmoud ISO TPM: Ms Monja Korter
ISO/TC 22 - Road vehicles	Road vehicles	Committee Manager: Mme Valérie Maupin ISO TPM: Mr Hakim Mkinsi
ISO/TC 22/SC 31 - Data communication	Road vehicles, Data Protection	Committee Manager: Mr Eric Wern ISO TPM: Mr Hakim Mkinsi
ISO/TC 22/SC 32 - Electrical and electronic components and general system aspects	Road vehicles	Committee Manager: Ms Ayako Tsukiyama ISO TPM: Mr Hakim Mkinsi
ISO/TC 22/SC 37 - Electrically propelled vehicles	Road vehicles, Vehicle-to-Grid (V2G)	Committee Manager: Mr Daniel Pacner ISO TPM: Mr Hakim Mkinsi
ISO/TC 22/SC 38 - Motorcycles and mopeds	Road vehicles, Vehicle-to-Grid (V2G)	Committee Manager: Mr Andrea Di Domenico ISO TPM: Mr Hakim Mkinsi
ISO/TC 149 - Cycles	Road vehicles	Committee Manager: Mr Michael Gäbel ISO TPM: Mrs Kirsi Silander-van Hunen
ISO/TC 211 - Geographic information/Geomatics	Availability and information,	Committee Manager: Mr Mats Åhlin ISO TPM: Mr Hakim Mkinsi
CLC/BTTF 69-3 Road traffic signal systems	Road vehicles	CCMC PM: Legrand Thierry
CLC/TC 8X- System aspects of electrical energy supply	Electrical energy supply, Smart grid	Secretary: Mr C. Noce CCMC PM: Mrs C. Vigneron
CLC/TC 13 - Electrical energy measurement and control	Electrical energy supply	Secretary: Mr J. Fruhauf CCMC PM: Ms N. Amirifar
CLC/SR 120 - Electrical Energy Storage (EES) Systems	Electrical energy supply	Secretary: Mr S. Kosslers CCMC PM: Mr F. Mlanao
CLC/SR 96 - Transformers, reactors, power supply units, and combinations thereof	Electrical energy supply	Secretary: Mrs L. Dufrene CCMC PM: Mr F. Mlanao
CLC/TC 23H - Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles	Road vehicles, Vehicle-to-Grid (V2G)	Secretary: Mrs A. Le Guennec CCMC PM: Mr F. Mlanao

Standardisation technical committee	Topics	Contact
CLC/TC 21X Secondary cells and batteries	Road vehicles	Secretary: Mr S. Fertig CCMC PM: Ms N. Amirifar mailto.
PC 118 - Smart grid user interface	Smart Grids	Technical Officer: Mr Stephen Dutnall
SC 8A - Grid Integration of Renewable Energy Generation	Smart Grids, Clean Energy for transportation	Secretary: Mr Yongning Chi Technical Officer: Mr Stephen Dutnall
SyC Smart Cities - Electrotechnical aspects of Smart Cities	Smart Cities	Secretary and Technical Officer: Mr Gennaro Ruggiero
SyC Smart Energy- Smart Energy	Smart Cities, Electrical energy supply, Clean Energy for transportation	Secretary and Technical Officer: Mr Stephen Dutnall
TC 8 - System aspects of electrical energy supply	Electrical energy supply	Secretary: Mr Christian Noce Technical Officer: Mr Stephen Dutnall
TC 13 - Electrical energy measurement and control	Electrical energy supply, Clean Energy for transportation	Secretary: Mr Bela Bodi Technical Officer: Mr Stephen Dutnall
TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	Electrical energy supply, Road vehicles, Clean Energy for transportation, Calibration of chargers, Smart Charging, Vehicle-to-Grid (V2G), Charging speed, Electric Vehicle Supply Equipment (EVSE)	Secretary: Mr Peter Van den Bossche Technical Officer: Mr Miroslav Siket
TC 120 - Electrical Energy Storage (EES) Systems	Electrical energy supply, Clean Energy for transportation	Secretary: Mr Hideki HAYASHI Technical Officer: Mr Damien Lee
TC 96 - Transformers, reactors, power supply units, and combinations thereof	TC 96 - Transformers, reactors, power supply units, and combinations thereof	Secretary: Mr Wolfgang Technical Officer: Mr Damien Lee
TA 17 - Multimedia systems and equipment for vehicles	Road vehicles	Technical Area Secretary: Mr Ockwoo Nam Technical Officer: Mr Miroslav Siket
TC 125 - Personal e-Transporters (PeTs)	Road vehicles	Secretary: Mr Bram Rotthier

Standardisation technical committee	Topics	Contact
		Technical Officer: Mr Christophe Boyer
TA 15 - Wireless Power Transfer	Smart Charging, Dynamic charge management	Technical Area Secretary: Mr Ockwoo Nam Technical Officer: Mr Miroslav Siket
TC 21 - Secondary cells and batteries	Road vehicles	Secretary: Mr Yves Boudou Technical Officer: Ms Marianna Kramarikova

3.2.2 Content to disseminate.

Taking into consideration the list of technical committees related to USER-CHI project and the differentiation made between committees, different approaches have been made, in some cases a more informative one and in other cases more direct and enthusiastic. The content to disseminate has been agreed with Consortium.

The text for the communication includes:

- Brief introduction of the project;
- Explanation of the aim of the standardisation activities in the project. Presentation of UNE as part of the standardisation community and as the project partner leading these activities;
- Leaflet of the project summarizing the most important data of the project and the results achieved so far;
- Link to the USER-CHI webpage and to the youtube videos.

See Annex A for the two sample letter proposals.

3.2.3 Replies from the selected standardisation committees.

The selected standardisation committees (see table 1) were contacted in June 2022 and the result is detailed below:

TABLE 3-2 FEEDBACK FROM THE STANDARDISATION COMMITTEES

Standardisation technical committee	Result
CEN/TC 278 - Intelligent transport systems	2022-06-06. Reply indicating that the information would be circulated to the CEN/TC 278
CEN/TC 465 - Sustainable and Smart Cities and Communities	
CEN/CLC/JTC 13 - Cybersecurity and Data Protection	
CEN/TC 301 - Road vehicles	2022-06-03. Reply reporting that the main activity of CEN/TC 301 is to adopt ISO Standards as European Standard and redirecting to ISO/TC 22/SC 31/JWG1. NOTE: ISO/TC 22/SC 31 is within the list of committees to be contacted, and the committee manager of the JWG1 is the same person, therefore they have already informed.
CEN/TC 337 - Road operation equipment and products	
CEN/TC 354 - Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use	
CEN/TC 333 - Cycles	
CEN/TC 225 - AIDC technologies	
CEN/WS SCS - Description and Assessment of Good Practices for Smart City Solutions	
CEN/TC 287 - Geographic Information	
ISO/TC 204 - Intelligent transport systems	2022-07-29 Reply indicating that no input received by the members and inviting to participate in the next hybrid plenary on 2-7 October 2022
ISO/TC 268 - Sustainable cities and communities	
ISO/IEC JTC 1 - Information technology	
ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection	2022-06-03 Reply inviting the consortium to establish a liaison with ISO/IEC JTC 1/SC 27 and based on the Liaison Category (A or C) the consortium will be able to participate in meetings, contribute to the work, send comments on projects...
ISO/TC 22 - Road vehicles	
ISO/TC 22/SC 31 - Data communication	

Standardisation technical committee	Result
ISO/TC 22/SC 32 - Electrical and electronic components and general system aspects	2022-06-06 Reply indicating low connection with the project and redirecting to ISO/TC 22/SC37, ISO/TC 268 or IEC/TC69. NOTE: These committees are within the list of committees to be contacted, therefore they have already informed.
ISO/TC 22/SC 37 - Electrically propelled vehicles	
ISO/TC 22/SC 38 - Motorcycles and mopeds	
ISO/TC 149 - Cycles	
ISO/TC 211 - Geographic information/Geomatics	2022-06-28 Reply with a list of comments (Annex B) and indicating that probably some members would be interested in the project.
CLC/BTTF 69-3 Road traffic signal systems	
CLC/TC 8X- System aspects of electrical energy supply	
CLC/TC 13 - Electrical energy measurement and control	
CLC/SR 120 - Electrical Energy Storage (EES) Systems	
CLC/SR 96 - Transformers, reactors, power supply units, and combinations thereof	
CLC/TC 23H - Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles	
CLC/TC 21X Secondary cells and batteries	
PC 118 - Smart grid user interface	
SC 8A - Grid Integration of Renewable Energy Generation	
SyC Smart Cities - Electrotechnical aspects of Smart Cities	2022/06/03 Reply reporting that: - A new body had just been approved, the Systems Committee “Sustainable Electrified Transportation” which would be the best committee to engage with, but it had not been established yet. - The information of the project were shared with the convenors of SEG11which was the group who had originated the proposal for this new Systems Committee

Standardisation technical committee	Result
SyC Smart Energy- Smart Energy	
TC 8 - System aspects of electrical energy supply	2022/06/06 Reply indicating that they would analyse the information inside their Chairman Advisory Group.
TC 13 - Electrical energy measurement and control	
TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks	
TC 120 - Electrical Energy Storage (EES) Systems	
TC 96 - Transformers, reactors, power supply units, and combinations thereof	
TA 17 - Multimedia systems and equipment for vehicles	
TC 125 - Personal e-Transporters (PeTs)	2022/06/13 Reply inviting the consortium to contribute to the standardisation work being carried out in the working groups of TC125 and to give a presentation about the project on their next plenary meeting of IEC TC125.
TA 15 - Wireless Power Transfer	
TC 21 - Secondary cells and batteries	

3.3 Subsequent interaction with the standardisation technical committees

Different relationships can be established with the relevant CEN/CENELEC, ISO/IEC technical committees. Two factors determine the more suitable interactions: the impact/relevance of the standardisation work of the standardisation committees, and the feasibility of initiating a standardisation process within a standardisation committee.

3.3.1 Follow-up the activity of the relevant standardisation committees.

This allows to detect the initiation of standardisation works that can be relevant for USER-CHI and the progress of significant existing standards under-development. This is achievable through a periodical monitoring of the standardisation activity resulting in updates of D8.11 “Report on

the standardisation landscape", which has produced a first analysis of the standardisation technical committees and standards that are relevant for the project.

Continuously, with the same aim, the activity of the relevant standardisation committees is monitored.

One report with a formal update of standardisation activities were sent and in WP8 and WP9 monthly calls some questions about standardisation activities came up.

- 2021/12/02: Report on Standardisation landscape updates

This document provided an update of standardisation activities of the relevant technical committees related to USER-CHI.

Basically, it was provided information on new published and under development standards of the relevant technical committees selected in the D8.11 "Report on the standardisation landscape" as relevant as well as some news about the new website of CEN and CENELEC and information on technical committees that were working on LEVs and on communication standards between the EV and the CP.

See Annex C for the complete report.

3.3.2 Further contacts with the standardisation committees to update the progress of USER-CHI.

This is achievable by delivering reports, attending relevant technical committees' meetings or taking advantage of joint events. On the one hand, this action contributes to further dissemination of the project and can guide the initiation of the standardisation process; on the other hand, this further contact is mandatory for the standardisation committees directly covering (if that was the case) the subject that will be promoted by USER-CHI to undergo a standardisation process.

- As a result of the first contacts with the standardisation technical committees, the IEC/TC 125 "Personal e-Transporters (PeTs)" and ISO /TC268/SC2 "Sustainable cities and communities / Sustainable mobility and transportation" invited us to participate in their next meetings.
- On the other hand, as a result of the first contacts with the standardisation technical committees, SyC Smart Cities "Electrotechnical aspects of Smart Cities" informed on the creation a new body, the Systems Committee "Sustainable Electrified Transportation" which would be the best committee to engage with, but it had just been approved and not established yet.

3.3.3 The participation of one or more USER-CHI partners in the standardisation technical committees.

Standardisation is an open activity and all interested parties may participate in the technical committees through the designation of their National Standardisation Body (NSB). This option allows for a deeper follow-up of the activity of a standardisation committee and is valuable if the standardisation process is going to be initiated within the standardisation committee. Some of the partners are already participating in some of the identified standardisation committees.

As a result of the first contacts with the standardisation technical committees, TC 268/SC 2 had an interest in the project and invited the partners to participate in TC 268/SC 2/WG 2 as experts. This working group was developing ISO PWI 4078-1 "Sustainable mobility and transportation. Roadside feeding electric road system. Part 1: Service role architecture."

3.3.4 The establishment of a formal liaison of USER-CHI with the standardisation committees.

It is recommended only when the work of the standardisation committee is closely linked with the main goals of the project and a direct technical contribution from the project is expected. The figure of project liaison is recognized in CEN/CENELEC but it is not very effective in ISO/IEC; this shall be taken into account since, according to the conclusions of D8.11 "Report on standardisation landscape", there is not a formal standardisation activity at European level in several of the topics relevant for USER-CHI.

As a result of the first contacts with the standardisation technical committees, ISO/IEC JTC 1/SC 27 "Information security, cybersecurity and privacy protection" proposed to a liaison with SC 27. As explained above, the figure of project liaison is recognized in CEN/CENELEC but it is not very effective in ISO/IEC. Therefore, in the case of USER-CHI interest, the consortium was recommended to participate as experts.

3.4 Standardisation process

The main objective of the standardisation activities in USER-CHI is to facilitate the market acceptance of the results by transferring these results and findings to standards that have a wide recognition in the market. For this reason, the standardisation process is considered very valuable for the market uptake of USER-CHI results and for the impact of the project beyond the financing period.

In the 4th consortium meeting (March 2022) the standardisation process was explained briefly (see Annex D).

4. Next steps

4.1 First contact with the standardisation technical committees

For those TCs that have not sent a response, a reminder will be sent in order to gather their feedback.

4.2 Subsequent interaction with the standardisation technical committees

- The follow-up the activity of the relevant standardisation committees will continue to be monitored and when there is relevant information a report with the updates will be sent.
- Presentations with USER-CHI information will be prepared for the meetings of IEC/TC 125 “Personal e-Transporters (PeTs)” and ISO /TC268/SC2 “Sustainable cities and communities / Sustainable mobility and transportation”
- The participation as experts and the establishment of liaisons (in case it is considered as necessary) will be processed.

4.3 Standardisation process

- A document with the main aspects of CWA and examples will be sent in order to help the consortium to understand the process and to select the results with the potential to be the basis of a standardisation process.
- A dedicated standardisation will be scheduled in order to have a clear understanding of “Contribution to standardisation” in USER-CHI and debate about what results can be candidates to go through a standardisation process.

5. Conclusions

The interaction with the standardisation system with the objectives of disseminating the project objectives and results in the standardisation community and easing the subsequent contribution to standardisation is focused on undertaking steps described in 3.3 and 3.4.

Relevant information about USER-CHI was delivered to the selected standardisation committees (a total of 41 standardisation technical committees or working groups were contacted) in the fields of Availability and information, Calibration of chargers, Charging speed, Data Model, Data Protection, Dynamic charge management, Electric Vehicle Supply Equipment (EVSE), Electrical energy supply, Electro-Mobility, E-Roaming, Intelligent transport systems, Smart Charging, Smart Cities, Smart Grids and Vehicle-to-Grid (V2G). The aim of this first communication was to introduce the project, show the link with the relevant standardisation committees and pulse their interest and their view about a later contribution to standardisation from the project.

As a result of these communications, good feedback was received from TC 125 “Personal e-Transporters (PeTs)” which is the key target of the interaction with the standardisation system. The scope of this TC is closely linked to the core of USER-CHI being focused on the standardisation of personal e-Transporters (electrically powered transport devices for use on the road or in the public space) because one of the main objectives of the project is to develop electromobility integrated smart solutions and this kind of devices are considered as relevant.

The communication channel with IEC/TC 125 allowed the dissemination of relevant and updated information about USER-CHI to stakeholders in this specific field and the invitation to participate in their next plenary meeting will give USER-CHI the opportunity to expand the information on the project. Therefore, the results of the interaction with IEC/TC 125 are considered satisfactory and valuable support to the dissemination of USER-CHI. In addition, the interaction with IEC/TC 125 will continue in the next stages.

On the other hand, even though no input was received by the members, ISO/TC 204 “Intelligent transport systems” also invited USER-CHI to participate in their next plenary meeting. Therefore, it is expected to have subsequent interactions with this committee that will allow the dissemination of relevant and updated information on USER-CHI.

The field of digital geographic information was considered relevant to the project because this kind of information was necessary to develop electromobility integrated smart solutions For this reason the answer of ISO/TC 211 “Geographic information/Geomatics” was considered very valuable because this committee had active work with a number of standards and innovation organisations involved in relevant projects such as smart cities, integrated transport, smart networks and digital twins and the provided a list of standards that could be useful to the project. Therefore, subsequent interactions with this committee were expected and this will allow the dissemination of relevant and updated information on USER-CHI.

Regarding the field of smart cities, more interactions were expected because the SyC Smart Cities "Electrotechnical aspects of Smart Cities" informed on the creation of a new TC, the Systems Committee "Sustainable Electrified Transportation" which would be the best committee to engage with, but it had not been established yet.

Regarding TCs in the field of calibration of chargers, charging speed, data model, data protection, dynamic charge management, electric vehicle supply equipment, electrical energy supply, and Vehicle-to-Grid, low or no interest was shown by the respective standardisation committees. The innovation activity in the project is not focused on these fields so this low feedback does not deeply impact the result of the interaction with the standardisation system. On the other hand, the summary information of USER-CHI was circulated among some of these committees/subcommittees, expanding the dissemination of the project to different types of stakeholders.

The next phase in standardisation activities in USER-CHI will be aimed to make an effective contribution to standardisation. As a first step, a dedicated standardisation session will be organised. This training on standardisation will aim to familiarise the partners with the standardisation, giving information on how to participate in technical committees and encouraging them to do it for the benefit of the USER-CHI project.

Prior to the standardisation session, a questionnaire on standardisation will be sent to identify the results of the project with the potential to be standardised.

Acronyms

In this document, the following abbreviations and acronyms are used, and in this list, they are indicated with its meaning:

Acronym	Description
AFNOR	Association Française de Normalisation (in English: French Standarisation Association)
BSI	British Standards Institution
CCMC PM	CEN-CENELEC Manager Center Project Manager
CEN	European Committee for Standarisation
CENELEC (CLC)	European Committee for Standarisation in the Electrical field
CWA	CEN or CENELEC Workshop Agreement
DIN	Deutsches Institut für Normung (in English: German Institute for Standarisation)
EN	European Standard
ETSI	European Telecommunications Standards Institute
HEN	Harmonised European Standard
IEC	International Electrotechnical Commission
ISO	International Organization for Standarisation; International Standard
ISO TPM	ISO Technical Programme Manager
JTC	Joint Technical Committee
NSB	National Standarisation Body
NWI	New Work Item
SC	Subcommittee
TC	Technical Committee
TR	Technical Report
TS	Technical Specification
UNE	Asociación Española de Normalización (in English: Spanish Association for Standardisation)
VA	Vienna Agreement
WG	Working Group
WI	Work Item
WP	Work Package

ANNEX A. Letter proposals examples

Letter example 1

Dear Mr, Ms XXX

I'm addressing you on behalf of the H2020 project USER-CHI, whose aim is to unlock the massive potential of electromobility in Europe integrating different innovative charging technologies with a holistic perspective, putting the user at the centre and empowering it, exploiting the synergies between electromobility and the process of greening and smartification of the grid which is taking place to achieve the energy transition in Europe, integrating the technological tools, business models and regulatory measures which will transform the elements into an actual, working ecosystem which improves the user experience of EV drivers beyond the current levels of ICE vehicles drivers, whilst at the same time makes financially attractive for the relevant private and public actors the large scale deployment of Europe's required user centric charging infrastructure.

The objectives of the project include developing integrated smart solutions, novel business models and new regulatory framework conditions, which will be demonstrated and validated in 5 urban areas all along the European territory.

As part of this project, under the responsibility of UNE (Spanish Standardisation Body) representing ISO in USER-CHI specific standardisation activities are included to:

- Ensure compatibility with existing technologies by the identification of relevant existing standards
- Maximize dissemination to proper stakeholders by addressing the relevant standardisation technical committees and
- Contribute with the findings and knowledge generated during the project to the development of standardisation in the field

We have identified a relevant link with ISO/TC 22 Road vehicles and its subcommittees ISO/TC 22/SC 31 "Data communication", ISO/TC 22/SC 32 "Electrical and electronic components and general system aspects", ISO/TC 22/SC 37 "Electrically propelled vehicles" and ISO/TC 22/SC 38 "Motorcycles and mopeds". This link comes from one of the main objectives of the project, which is to develop electromobility integrated smart solutions.

Standards as series of ISO 15118, dealing with vehicle to grid communication interface have been considered as relevant.

The objective of this contact is, on the one hand, to raise awareness on the project to this TC and gather feedback on any suggestion, question, or comment. On the other hand, it is intended

that in the second half of the project it contributes to standardisation from selected project results. Depending on several factors such as the nature of these results and the standardisation landscape at that moment, this contribution to standardisation may be oriented towards the generation of new pre-standards (Workshop Agreements) or to participation at TC level.

Please, find attached a brief summary containing the most relevant information about USER-CHI. You can find further detail on the website (www.userchi.eu) and also in the following links: https://www.userchi.eu/products/ and https://www.youtube.com/playlist?list=PLvzHLhum83vtT6cpfssA85GBh3489MM7H.

Feel free to circulate this information to your TC members or to anyone you consider potentially interested in the objectives and results of the project. Now the project is in the second half of its progress, and we would be very grateful if you could give us feedback regarding the interest of this project for the activity of the TC. Additionally, any suggestion, question or comment related with the project would be very useful.

If you find that additional information would be welcome, as well as other kind of contact (a dedicated telco, attending to a TC, SC or WG meeting to explain the project, etc.) we would be pleased to address it.

I would appreciate if you could provide at least initial feedback by the end of June.

Thank you in advance for your attention and looking forward for your reply.

Best regards,

Letter example 2

Dear Mr, Ms XXX

I'm addressing you on behalf of the H2020 project USER-CHI, whose aim is to unlock the massive potential of electromobility in Europe integrating different innovative charging technologies with a holistic perspective, putting the user at the centre and empowering it, exploiting the synergies between electromobility and the process of greening and smartification of the grid which is taking place to achieve the energy transition in Europe, integrating the technological tools, business models and regulatory measures which will transform the elements into an actual, working ecosystem which improves the user experience of EV drivers beyond the current levels of ICE vehicles drivers, whilst at the same time makes financially attractive for the relevant private and public actors the large scale deployment of Europe's required user-centric charging infrastructure.

The objectives of the project include developing integrated smart solutions, novel business models and new regulatory framework conditions, which will be demonstrated and validated in 5 urban areas all along the European territory.

As part of this project, under the responsibility of UNE (Spanish Standardisation Body) representing CEN/CENELEC in USER-CHI specific standardisation activities are included to:

- Ensure compatibility with existing technologies by the identification of relevant existing standards
- Maximize dissemination to proper stakeholders by addressing the relevant standardisation technical committees and
- Contribute with the findings and knowledge generated during the project to the development of standardisation in the field

CEN/TC 278 Intelligent transport systems is clearly the closest CEN/TC to USER-CHI since its scope is focused on in the field of intelligent transport systems, encompassing services and techniques to achieve road safety, environmental sustainability and traffic efficiency, and to improve the travel experience; applying information and communication technologies between vehicles/infrastructure/other road users.

In this regard, we have identified relevant working groups as CEN/TC 278/WG 17 "Mobility integration", CEN/TC 278/WG 4 "Traffic and traveller information (TTI)", CEN/TC 278/WG 7 "ITS spatial data" and CEN/TC 278/WG 8 "Road traffic data (RTD)".

The objective of this contact is, on the one hand, to raise awareness on the project to this TC and gather feedback on any suggestion, question, or comment. On the other hand, it is intended that in the second half of the project it contributes to standardisation from selected project results. Depending on several factors such as the nature of these results and the standardisation landscape at that moment, this contribution to standardisation may be oriented towards the generation of new pre-standards (Workshop Agreements) or to participation at TC level.

Please, find attached a brief summary containing the most relevant information about USER-CHI. You can find further detail on the website (www.userchi.eu) and also in the following links: https://www.userchi.eu/products/ and https://www.youtube.com/playlist?list=PLvzHLhum83vtT6cpfssA85GBh3489MM7H .

Feel free to circulate this information to your TC members or to anyone you consider potentially interested in the objectives and results of the project. Now the project is in the second half of its progress and we would be very grateful if you could give us feedback regarding the interest of this project for the activity of the TC. Additionally, any suggestion, question or comment related with the project would be very useful.

If you find that additional information would be welcome, as well as other kind of contact (a dedicated telco, attending to a TC, SC or WG meeting to explain the project, etc.) we would be pleased to address it.

I would appreciate if you could provide at least initial feedback by the end of June.

Thank you in advance for your attention and looking forward for your reply.

Best regards,

Attached leaflet

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GET IN TOUCH!

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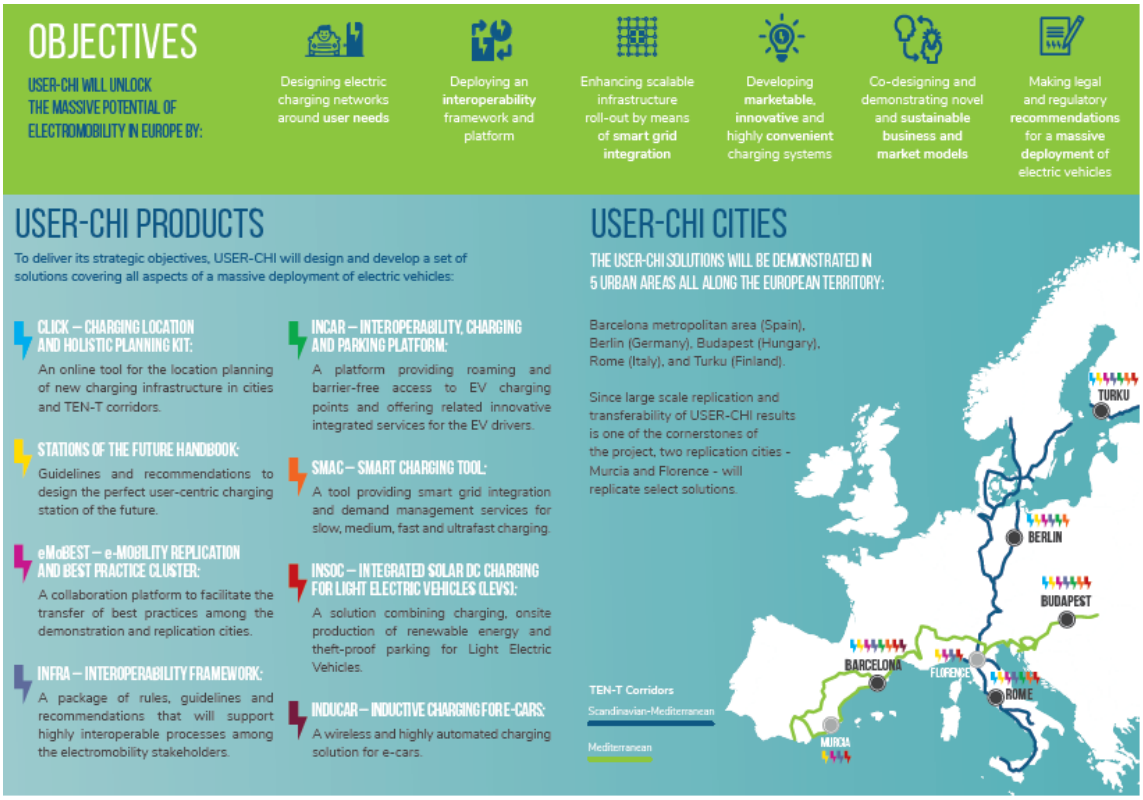
USER-CHI
CHARGING YOUR E-MOBILITY FUTURE

WHAT IS USER-CHI?

LOOKING FOR A EUROPE WHERE ELECTRIC VEHICLE CHARGING IS WIDESPREAD, EFFICIENT AND WORKS FOR USERS?

Look no further than USER-CHI. Industry powered, city driven and user-centric, USER-CHI will co-create and demonstrate smart solutions around 7 connecting nodes of the Mediterranean and Scandinavian-Mediterranean Trans-European Transport Network (TEN-T) corridors between February 2020 – January 2024 to boost a massive e-mobility market take-up in Europe.


OBJECTIVES
USER-CHI WILL UNLOCK THE MASSIVE POTENTIAL OF ELECTROMOBILITY IN EUROPE BY:
Designing electric charging networks around user needs
Deploying an interoperability framework and platform
Enhancing scalable infrastructure roll-out by means of smart grid integration
Developing marketable, innovative and highly convenient charging systems
Co-designing and demonstrating novel and sustainable business and market models
Making legal and regulatory recommendations for a massive deployment of electric vehicles
USER-CHI PRODUCTS
To deliver its strategic objectives, USER-CHI will design and develop a set of solutions covering all aspects of a massive deployment of electric vehicles:
CLICK – CHARGING LOCATION AND HOLISTIC PLANNING KIT:
An online tool for the location planning of new charging infrastructure in cities and TEN-T corridors.
STATIONS OF THE FUTURE HANDBOOK:
Guidelines and recommendations to design the perfect user-centric charging station of the future.
eMoBEST – e-MOBILITY REPLICATION AND BEST PRACTICE CLUSTER:
A collaboration platform to facilitate the transfer of best practices among the demonstration and replication cities.
INFRA – INTEROPERABILITY FRAMEWORK:
A package of rules, guidelines and recommendations that will support highly interoperable processes among the electromobility stakeholders.
INCAR – INTEROPERABILITY, CHARGING AND PARKING PLATFORM:
A platform providing roaming and barrier-free access to EV charging points and offering related innovative integrated services for the EV drivers.
SMAC – SMART CHARGING TOOL:
A tool providing smart grid integration and demand management services for slow, medium, fast and ultrafast charging.
INSOC – INTEGRATED SOLAR DC CHARGING FOR LIGHT ELECTRIC VEHICLES (LEVS):
A solution combining charging, onsite production of renewable energy and theft-proof parking for Light Electric Vehicles.
INDUCAR – INDUCTIVE CHARGING FOR E-CARS:
A wireless and highly automated charging solution for e-cars.
USER-CHI CITIES
THE USER-CHI SOLUTIONS WILL BE DEMONSTRATED IN 5 URBAN AREAS ALL ALONG THE EUROPEAN TERRITORY:
Barcelona metropolitan area (Spain), Berlin (Germany), Budapest (Hungary), Rome (Italy), and Turku (Finland).
Since large scale replication and transferability of USER-CHI results is one of the cornerstones of the project, two replication cities - Murcia and Florence - will replicate select solutions.
TURKU
BERLIN
BUDAPEST
BARCELONA
FLORENCE
ROME
MURCIA
TEN-T Corridors
Scandinavian-Mediterranean
Mediterranean

ANNEX B. Comments from ISO/TC 211 - Geographic information/Geomatics

ISO/TC 211 initial thoughts & feedback on EC USER-CHI project

Peter Parslow & ISO/TC 211, 28th June 2022

Background

The USER-CHI project is described at USER-CHI | Charging your e-mobility future (userchi.eu)

ISO/TC 211 Geographic information is described at https://committee.iso.org/tc211

The USER-CHI project has identified ISO/TC 211 as “a relevant link … because one of the main objectives of the project is to develop electromobility integrated smart solutions and the digital geographic information is considered as relevant to the project”.

ISO/TC 211 has active work with a number of standards and innovation organisations involved in relevant projects such as smart cities, integrated transport, smart networks, and digital twins.

Summary

USER-CHI has several objectives; ISO/TC 211 is most relevant to “deploying an interoperability framework and platform” and “smart grid integration”.

ISO/TC 211 believes we manage a number of standards that will be useful to the USER-CHI project and will try to work with them in order that the project’s innovation is enabled by a sound basis of proven open standard approaches. During this, ISO/TC 211 expects to learn whether our standards are well suited to this use case, and may be willing and able to amend standards if appropriate.

ISO/TC 211’s active membership overlaps somewhat with USER-CHI’s partners; active countries include Spain, Germany, and Finland.

Initial suggestions of relevant standards

Key standards recommended to the project:

- Choose a common coordinate reference system to use throughout the project, probably ETRS-89

o Make it clear to users of your system how they can relate data in WGS 84 to the chosen system

- Create your specific data model based on an open standard city or transport infrastructure model, such as the INSPIRE theme specifications or CityGML 3.0.

- Express your specifically spatial data quality requirements in terms of ISO 19157 Data quality

ISO/TC 211 standards

ISO 19103 Conceptual schema and ISO 19109 Rules for application schema

Taken together, these describe an open standard approach to modelling the data needed to represent a domain, in this case, road transport and charging infrastructure. They are based on the widely used Unified Modeling Language (UML; ISO).

Mentioned in ISO 30146 Annex A.

If the project chooses an existing city or transport network model, then it is likely that they already use these standards.

ISO 19107 Spatial schema

The project will most likely use this standard without realising it, as it specifies the representation of spatial geometry that is implemented by most spatial database systems and data exchange standards.

ISO 19111 Referencing by coordinates

The project will most likely use this standard without realising it, as it specifies the representation of a position on (or near) the surface of the earth by using a few numbers – as in a grid reference or 'latitude, longitude, elevation'.

That said, it is important to choose the right coordinate reference system for the job, taking into account accuracy requirements, elevation datum, and tectonic plate movement (when relevant).

ISO 19157 Data quality

Mentioned in ISO 30146 Annex A.

This standard provides an approach to specifying and assessing the quality of data, including aspects specific to spatial data, such as positional accuracy in relation to the real world and/or in relation to adjacent data objects.

Other geospatial standards

OGC CityGML 3.0

This open standard conceptual model and accompanying XML encoding is based on the ISO 19103 / ISO 19109 combination. It (or earlier versions) is used by a number of cities across Europe, as well as in China, Singapore, and Japan. It contains a proven mechanism for integrating live data from sensor feeds into the model, using OGC's SensorThings API specification.

INSPIRE theme specifications

These are based on ISO/TC 211 standards, so have a good acceptance even outside their original European Union remit.

- Transport network – for network and topographic description of roads
- Utility network – basic network description of e.g. power distribution
- Address – perhaps slightly over complicated address data, in order to accommodate the various models of addressing in different countries & use the various use cases for addressing.

Outside Europe, countries are beginning to adopt address models based on ISO 19160 Addressing.

CEN TS 17268 (TN-ITS)

A technical specification for the exchange of static road data, such as charging points. See https://tn-its.eu/

Some 'smart city' / digital twin standards

ISO/IEC 30145 Information technology – Smart City ICT reference framework

This three part standard was prepared by ISO/IEC JTC 1/WG 11 Smart cities. Part 3 Smart city engineering framework recognises the importance of a common 'positioning system'

"For consistency across the city, it is important that all the positioning uses a common spatial reference system, as described in ISO 19111. Often, this is a national or international (geodetic) reference framework. Examples include WGS84 (used by GPS) and PZ-90[17] (used by GLONASS), both of which are realizations of the International Terrestrial Reference Framework[14]. In many cases, a city can simply select a single international or national reference system and ensure that all other systems use it. The level of positional accuracy required depends on the use to which the positional information will be put. The level of accuracy achievable depends both on the equipment (system) used and the spatial reference system and supporting technology."

Put simply, a data infrastructure is more effective if every part of it uses the same appropriate coordinate reference system – across road infrastructure data, charging & electricity supply infrastructure data, sensor data, in-car and personal user devices. The most likely candidate in Europe is ETRS 89, but many in-car and personal devices use the global WGS 84. The "maths" for translating between the two is standardised, and already built in to many systems.

ISO/TC 211 experts can help determine the appropriate / necessary level of accuracy, which is an important part of choosing the correct system.

ISO/IEC 30146:2019 Information technology – Smart city ICT indicators

This standard was prepared by ISO/IEC JTC 1/WG 11 Smart cities. It includes a number of indicators describing the "City model" and has an informative annex further describing "City model". The annex recommends that the city model is based on open standards.

The indicators cover geographic coverage, thematic coverage, being 'up to date', The idea is that any smart infrastructure is better built on a common picture of the physical and social infrastructure. The city or project has first to determine which features are of interest to them – roads, road restrictions, buildings, charging infrastructure. This "city model" concept is now being developed within "digital twin" thinking, adopted from manufacturing industry.

Other comments on initial reading

The leaflet says that USER-CHI runs from February 2020 – January 2024, so it is quite possible that our input regarding building a common data framework is too late.

We are aware of previous European Commission funded projects that may be of interest. It is quite likely that the USER-CHI project is already aware of these, but just in case:

- Open Transport Net, 2015-2016
- European Innovation Partnership on Smart Cities and Communities | E3P (europa.eu)

o Specifically concerned with combing energy management and transport management

o Worked with ESPRESSO (2016-20187) on a reference architecture which then influenced ISO/IEC 30145.

- TN-ITS: European project on geographic (“map”) data for integrated transport; collaboration between several national highways agencies. (Some ISO/TC 211 experts involved).

ANNEX C. Report on Standardisation landscape updates

STANDARDISATION LANDSCAPE UPDATES

Table of Contents

List of Pictures

List of Tables

6. Introduction

6.1 Purpose of the document

This document provides an update of standardisation activities of the relevant technical committees related to USER-CHI.

Basically, it is provided information on new published and under development standards of the relevant technical committees selected in the D8.11- *Report on the standardisation landscape* as relevant as well as some news about the new website of CEN and CENELEC and information on technical committees that are working on LEVs and on communication standards between the EV and the CP, since even though they were not selected as relevant for the project it was asked about this topics in the October WP8 and 9 monthly meeting.

6.2 Standardisation reminder

Standards are voluntary technical documents that set out requirements for a specific item, material, component, system or service, or they describe in detail a particular method, procedure or best practice. Standards are developed and defined through a process of sharing knowledge and building consensus among technical experts nominated by interested parties and other stakeholders - including businesses, consumers and environmental groups, among others. These experts are organised in Technical Committees (TCs), which are subdivided in subcommittees (SCs) or working groups (WGs). These TCs are included in the structure of the standardisation organizations (National, European and International, with the respective mirror committees) and work following their internal regulations.

The standardisation bodies operate at National (UNE, AFNOR, BSI, DIN, etc.), Regional (CEN, CENELEC, ETSI) or International (ISO, IEC, ITU) level. Sometimes there are different standardisation bodies at the same level, but covering different fields. This is the case of ISO (general), IEC (electrical) and ITU (telecommunications) at International level, or CEN, CENELEC and ETSI at European level in the same way.

There are also different kinds of standarisation documents. The most widespread is the standard, which has a different code depending on the organization under which it was developed; e.g. EN for European Standards, ISO or IEC for International standards. Other types of documents are technical specifications (TS), technical reports (TR) and workshop agreements (CWA). Further amendments to the standards are identified by adding A1, A2, etc. at the end of the standard code.

At European level, all the members of CEN and CENELEC shall adopt EN standards as national standards and have to withdraw any existing national standards which could conflict with them. A summary of the characteristics of the different standarisation documents could be found in the following Table 1-1.

TABLE 6-1 CHARACTERISTICS OF DIFFERENT STANDARISATION DOCUMENTS

Type	International code	European code	National code	Main characteristics
Standard	ISO IEC	EN	UNE, NF, BS, DIN, etc. When adopting: UNE-EN, NF-EN, UNE ISO, NF-ISO, etc.	• Elaboration: 3 years • 2 steps of member approval • European: compulsory national adoption • Revision: every 5 years
Technical Specification	ISO/TS IEC/TS	CEN/TS CLC/TS	When adopting: UNE-CEN/TS, NF-CEN/TS, UNE-ISO/TS, NF-ISO/TS, etc.	• Elaboration: 21 months • 1 step of member approval or internal approval in TC • European: optional national adoption • Revision: at 3 years (upgrading to EN or deletion)
Technical Report	ISO/TR IEC/TR	CEN/TR CLC/TR	When adopting: UNE-CEN/TR, NF-CEN/TR, UNE-ISO/TR, NF-ISO/TR, etc.	• Elaboration: free timeframe • Internal approval in TC • European: optional national adoption • No revision required
Workshop Agreement	IWA	CWA	Variable	• Elaboration: free timeframe (usually few months) • Internal approval in the Workshop • European: optional national adoption

Type	International code	European code	National code	Main characteristics
				• Revision: at 3 years (upgrading to EN or deletion)

European and International standardisation organizations (e.g. CEN and ISO) have signed formal agreements in order to avoid duplication of efforts and promote global relevance of standards, which allow to adopt or develop in parallel each other's standards with the same content and code.

The technical collaboration between ISO and CEN was formalized through the Vienna Agreement (VA).

European standards developed through the Vienna Agreement have EN ISO codification while International Standards developed through the Vienna Agreement remain only with ISO code.

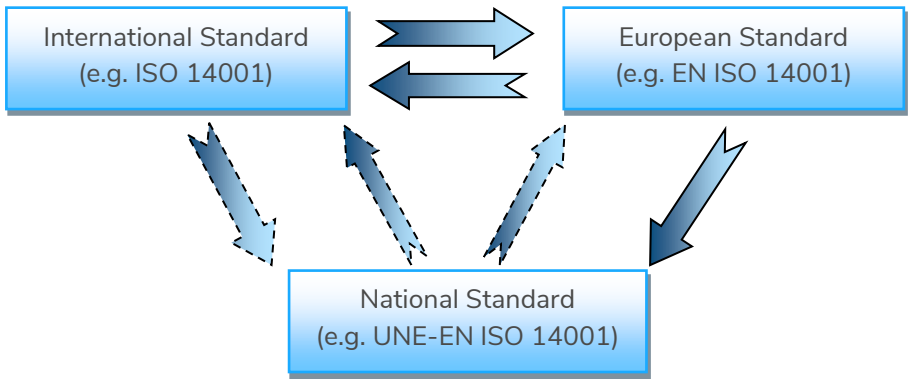
Concerning CENELEC, it has close cooperation with its international counterpart, the International Electrotechnical Commission (IEC) through the Frankfurt Agreement (FA).

As a result, new electrical standards projects are jointly planned between CENELEC and IEC, and where possible most are carried out at international level. This means that CENELEC will first offer a New Work Item (NWI) to its international counterpart. If accepted, CENELEC will cease working on the NWI. If IEC refuses, CENELEC will work on the standards content development, keeping IEC closely informed and giving IEC the opportunity to comment at the public enquiry stage. CENELEC and IEC vote in parallel (both organizations are voting at the same time) during the standardisation process. If the outcome of the parallel voting is positive, CENELEC will ratify the European standard and the IEC will publish the international standard. Close to 80% of CENELEC standards are identical to or based on IEC publications.

National standards could also be proposed as a base for new European or International standards.

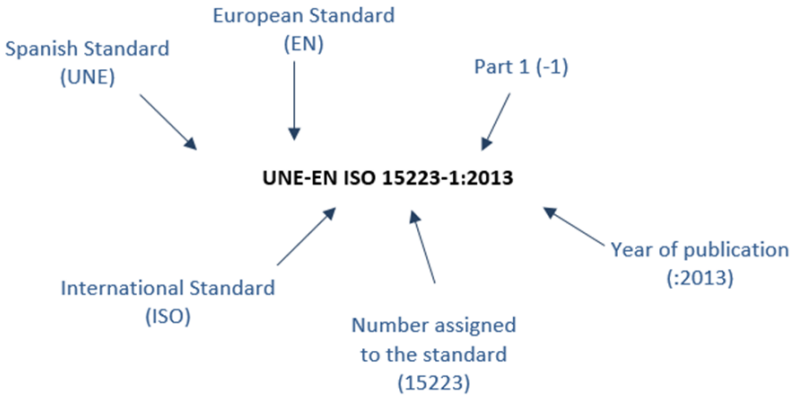
The following Picture 1-1 shows the possible tracks of the standards.

PICTURE 6-1 – POSSIBLE TRACKS OF STANDARDS ADOPTION



Therefore, the code of any standard is the combination of the above mentioned issues, and could be explained as shown in Picture 1-2:

PICTURE 6-2 – EXAMPLE OF IDENTIFICATION OF ELEMENTS IN THE CODE OF A STANDARD



7. Background

For the identification of standards and standards under development relevant for USER-CHI project, the following methodology has been followed:

1. A list of key concepts was prepared to act as a starting point for the identification of standarisation areas.
2. For the selection of the key concepts, the aims and goals of the project and the levels in which the project should integrate were taken into account. In addition, the use cases' needs were considered. The list was agreed by UNE and USER-CHI partners.
3. Both standards and standards under development were identified for each standarisation area, together with the technical committee responsible for the respective standards.

   The search covered the European standarisation developed by the European Committee for Standarisation (CEN), European Committee for Standarisation in the Electrical field CENELEC (CLC), European Telecommunications Standards Institute (ETSI) and International standarisation developed by the International Organization for Standarisation (ISO) and IEC (electro technical). The databases and websites used for the search are referred in Chapter 6.

   As a result of the searching process a first draft was prepared by UNE including developed standards and standards under development and technical bodies.

   The draft was filtered in order to refine the information and enable the development of a simplified second draft.
4. As a final stage, USER-CHI partners were asked to identify those references that should really be considered for the project, specifying in what WP they would be used, how the standard would influence/impact the project implementation and risks/opportunities from technical and business perspective.
5. As a result of all the process described above a list of technical committees and standards relevant for USER-CHI was identified.

8. Standardisation activities update

8.1 Relevant technical committees update

With the feedback received by the partners, a list of technical committees relevant for USER-CHI were identified. Following, the information of each technical committee is provided including an update of the new published standards as well as the new standards under development since deliverable D8.11- *Report on the standardisation landscape.*

Therefore, in the following points, the new standards and new standards under development refer to standards published since deliverable D8.11 and new projects of standards or standards under development that have changed the stage since deliverable D8.11, respectively. The information on standards under development that are still in the same phase since deliverable D8.11 is also displayed.

In order to facilitate the access to the information, in case any further data is required, the links to the technical committee and to the list of standards have also been included.

8.1.1 CEN/CLC/ETSI/SEG-CG - CEN-CENELEC-ETSI Coordination Group on Smart Energy Grids

Keywords:

Smart Grids, Electrical energy supply, Clean Energy Package, Interoperability, Dissemination, Smart Grid Information Security, Sustainable Processes

Link:

https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/smart-grids-and-meters/cen-cenelec-etsi-coordination-group-on-smart-grids-cg-sg/

Scope:

With the new CEN and CENELEC joint website, this joint coordination group between CEN, CENELEC and ETSI has included the following scope:

The CG-SG advises on European standardisation requirements relating to smart electrical grid and multi-commodity smart metering standardisation, including interactions between commodity systems (e.g. electricity, gas, heat, water), and assesses ways to address them. This includes interactions with end-users, including consumers/prosumers.

Its aim is to promote the deployment of open and interoperable data architectures, based on European and international standards. The scope also includes any standards needed to design, operate and maintain electrical grids securely and efficiently. In the specific area of metering, its scope includes electricity, water, gas and heat/cooling metering devices and systems, and associated architectures.

Within its scope the Group will address the European requirements resulting from the Clean Energy Package, including secondary legislation, and any other relevant Commission initiatives.

The CG-SG shall also receive inputs from and provide input to the European Commission's activities related to standardisation in the field of smart grids and meters.

With respect to international standardisation activities on smart grids and meters, the Group shall monitor the progress of the relevant standardisation activities in ISO, IEC and ITU, and promote coordination between the European activities and those at the international level and promote when needed the consideration of European requirements within international standardisation.

Background:

In 2009, the European Commission and EFTA mandated CEN, CENELEC and ETSI the development of an open architecture for utility meters involving communication protocols enabling interoperability (smart metering). In response to this request (M/441), CEN, CENELEC and ETSI decided to combine their expertise and resources by establishing the Coordination Group on Smart Meters (CG-SM).

In March 2011, the European Commission and EFTA issued the Smart Grid Mandate M/490 requesting CEN, CENELEC and ETSI to develop a framework to enable ESOs to perform continuous standard enhancement and development in the smart grid field. In order to perform the requested work, the ESOs combined their strategic approach and established the Coordination Group on Smart Energy Grids (CG-SEG).

In January 2021, taking into consideration the close contact between both Groups since the beginning of its creation when the European Commission issued the mandates M/441 (utility meters) and M/490 (smart grid), CEN and CENELEC BTs and ETSI Board decided to merge both groups.

Smart grid:

A smart grid is an electricity network that can integrate in a cost-efficient manner the behaviour and actions of all users connected to it (generators and/or consumers) in order to ensure economically efficient, sustainable power system with high levels of quality and security of supply and safety. Smart grids allow companies and households to produce electricity (for example – using photovoltaic panels or wind turbines) and sell it on to other consumers through existing networks.

In March 2011, the European Commission and EFTA issued the Smart Grid Mandate M/490 which was accepted by the three European Standards Organizations (ESOs), CEN, CENELEC and ETSI in June 2011. M/490 requests CEN, CENELEC and ETSI to develop a framework to

enable ESOs to perform continuous standard enhancement and development in the smart grid field.

In order to perform the requested work, the ESOs combined their strategic approach and established in July 2011, together with the relevant stakeholders, the CEN-CENELEC-ETSI Smart Grid Coordination Group (SG-CG) being responsible for coordinating the ESOs reply to M/490.

In 2012, the SG-CG worked intensively to produce the following reports:

- Sustainable Processes
- First Set of Consistent Standards
- Reference Architecture
- Information security and data privacy

In addition, SG-CG produced a Framework Document which provides an overview of the activities. It describes how the different elements mentioned above fit together as to provide the consistent framework for smart grids, as requested by M/490.

End 2012, the Smart Grid Mandate M/490 was extended until end 2014. The objective of the extension was to allow the SG-CG to fine-tune the Smart Grid methodology developed in 2012 and to develop an extended set of standards supporting Smart Grid deployment in Europe.

End 2014, the CEN-CENELEC-ETSI Smart Grid Coordination Group finalized the following mandated reports:

- Extended Set of Standards support Smart Grids deployment
- Overview Methodology and its annexes:
    - General Market Model Development
    - Smart Grid Architecture Model User Manual
    - Flexibility Management
- Smart Grid Interoperability and its tool
- Smart Grid Information Security

These reports were sent to the CEN and CENELEC Technical Boards who approved their content early December 2014. The ETSI Board approved the reports end of December 2014.

The work done by the Group was continued after the closing of the mandate M/490 with the purpose to follow-up on the standardisation gaps identified during the first phase of M/490 and to provide best practice examples on smart energy grid specific use cases in order to show the applicability of existing and upcoming standards.

In this context, two reports have been prepared by the Coordination Group to maintain transverse consistency and promote continuous innovation in the field of Smart Grids:

- *Smart Grid Set of Standards: Report 1*

This report is the new release of the original 'First set of standards' and proposes an updated framework of standards which can support Smart Grids deployment in Europe. It provides a selection guide setting out, for the most common Smart Grid systems the relevant set of existing and upcoming standards to be considered, from CEN, CENELEC, ETSI and further from IEC, ISO, ITU or even coming from other bodies when needed. It also explains how these are able to be used, where, and for which purpose. Standardisation gaps have been identified and the related standardisation work program has been defined. The results of these activities will be included in future releases of this report.

- *Smart Grid Set of Standards: Report 2*

In this report, security standardisation specific to Smart Energy Grid and security standardisation targeting generic standards are further monitored and analysed with the focus on two specific use cases: decentralized energy resource (DER) and substation automation. It shows the applicability and interrelationship between these two groups of standards. Furthermore, the Smart Grid Information Security approach has been followed to show the applicability of different standards on the selected, specific use cases for Smart Energy Grid deployments.

In 2017, the CG-SEG established the 'Clean Energy Package' working group to ensure that the European Standards Organizations support the implementation of the outcome of the European Commission proposals for new rules for consumer-centred clean energy transition – the Clean Energy for All Europeans package.

In this context, the working group prepared in 2018 a report aiming to address both the key legal propositions of the Clean Energy Package which are considered as most relevant for standardisation as well as an initial assessment of priority topics with possible implications on CG-SEG deliverables and work programme. The content of this report was broadly based on the European Commission's proposal on the 'Clean Energy for all Europeans Package' from December 2016 (COM/2016/0860).

After all negotiations on the Clean Energy Package have been concluded in 2019, the 'Clean Energy Package' working group prepared an updated version of the Final Report.

This report has been approved by CEN and CENELEC Technical Boards in February 2020 and by ETSI Board in April 2020.

Smart Meters.

The EU Directives concerning common rules for the internal market for electricity and gas (2009/72/EC and 2009/73/EC) and the EU Directive on energy efficiency (2012/27/EU) require Member States to ensure the implementation of 'intelligent metering systems' that shall assist the active participation of consumers in the energy market. Regarding electricity, where there was a positive assessment of the long-term costs and benefits, then at least 80% of the households should be equipped with smart metering systems by 2020. In order to address these challenges, the European Commission and EFTA mandated CEN, CENELEC and ETSI (mandate M/441) in 2009 to development an open architecture for utility meters involving communication protocols enabling interoperability (smart metering).

In response to mandate M/441, the European Standardisation Organizations (ESOs), CEN, CENELEC and ETSI decided to combine their expertise and resources by establishing the Smart Meters Coordination Group (SM-CG). This group is a joint advisory body that provides a focal point concerning smart metering standardisation issues.
The first phase of the mandate requests the ESOs to produce a European standard for communications. In this context, the SM-CG produced a Technical Report, CEN-CLC-ETSI TR 50572:2011 'Functional reference architecture for communications in smart metering systems', which identifies the functional entities and interfaces that the communications standards should address. It is intended to support the development of software and hardware architecture and related standards.

The second phase of Mandate M/441 focused on the development of European Standards containing harmonized solutions for additional functionalities within interoperable frameworks. The SM-CG completed the second phase of M/441 by producing a SM-CG report which summarizes the work undertaken during the period 2009-2012.
In 2013, 2014 and 2016 the SM-CG finalized the following reports:

- *Smart Meters Co-ordination Group - Privacy and Security approach – part I*

The Report describes an approach to define privacy and security requirements for Smart Metering and the status of work carried out by CEN, CENELEC and ETSI on incorporation of security mechanisms to the standards.

- *Smart Meters Co-ordination Group - Privacy and Security approach – part II*

The document describes a repository of requirements applicable in different Member States and compares approaches on security certification schemes for Smart Metering.

- *Smart Meters Co-ordination Group - Privacy and Security approach – part III*

The third report comprises a description of a repository of security threats, recommendations regarding security certification and an update of the status of work carried out by CEN, CENELEC and ETSI.

- *Smart Meters Co-ordination Group - Privacy and Security approach – part IV*

The Report includes a summary of the minimum security requirements defined by the SM-CG Task Force Privacy & Security together with ESMIG, an update on the work of Expert Group 2 of the Smart Grid Task Force and an update of the status of work carried out by CEN, CENELEC and ETSI related to security. The Smart Meters Co-ordination Group – Minimum Security Requirements for smart metering (PDF) is also available. A repository (see the spreadsheet associated with the report, EXCEL format) was created by the SM-CG in 2015 and now links the original requirements from member states with the minimum requirements.
The document can be used by Member States that still have to (re)define security requirements for Smart Metering and will be used by the SM-CG to start working on a security certification approach in 2016.
Having completed the work carried out in the framework of Mandate M/441, Smart Meters - Coordination Group still gives input to the development and maintenance of new and existing

standards for advanced metering infrastructures in support of the European roll-out of Smart Meters.

8.1.2 CEN/CLC/JTC 13 - Cybersecurity and Data Protection

Keywords:

Cybersecurity services, **Data Protection**, Management systems and controls sets, Security evaluation and assessment, Cybersecurity services, Data Protection, Privacy and Identity Management, Product security

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:2307986&cs=1BFE244DDA2A68D1B5C93795034A8DD05

Scope:

Development of standards for cybersecurity and data protection covering all aspects of the evolving information society including but not limited to: - Management systems, frameworks, methodologies - Data protection and privacy - Services and products evaluation standards suitable for security assessment for large companies and small and medium enterprises (SMEs) - Competence requirements for cybersecurity and data protection - Security requirements, services, techniques and guidelines for ICT systems, services, networks and devices, including smart objects and distributed computing devices Included in the scope is the identification and possible adoption of documents already published or under development by ISO/IEC JTC 1and other SDOs and international bodies such as ISO, IEC, ITU-T, and industrial fora. Where not being developed by other SDO's, the development of cybersecurity and data protection CEN/CENELEC publications for safeguarding information such as organizational frameworks, management systems, techniques, guidelines, and products and services, including those in support of the EU Digital Single Market.

New standards:

EN ISO/IEC 29101:2021

Information technology - Security techniques - Privacy architecture framework (ISO/IEC 29101:2018)

EN ISO/IEC 27701:2021

Security techniques - Extension to ISO/IEC 27001 and ISO/IEC 27002 for privacy information management - Requirements and guidelines (ISO/IEC 27701:2019)

EN ISO/IEC 27017:2021

Information technology - Security techniques - Code of practice for information security controls based on ISO/IEC 27002 for cloud services (ISO/IEC 27017:2015)

EN ISO/IEC 27006:2020

Information technology - Security techniques - Requirements for bodies providing audit and certification of information security management systems (ISO/IEC 27006:2015, including Amd 1:2020)

EN ISO/IEC 29100:2020

Information technology - Security techniques - Privacy framework (ISO/IEC 29100:2011, including Amd 1:2018)

EN ISO/IEC 27018:2020

Information technology - Security techniques - Code of practice for protection of personally identifiable information (PII) in public clouds acting as PII processors (ISO/IEC 27018:2019)

EN ISO/IEC 29147:2020

Information technology - Security techniques - Vulnerability disclosure (ISO/IEC 29147:2018)

EN ISO/IEC 30111:2020

Information technology - Security techniques - Vulnerability handling processes (ISO/IEC 30111:2019)

EN ISO/IEC 27011:2020

Information technology - Security techniques - Code of practice for Information security controls based on ISO/IEC 27002 for telecommunications organizations (ISO/IEC 27011:2016)

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=205:32:0::::FSP_ORG_ID,FSP_LANG_ID:2307986,25&cs=1ED41A3D97E9C0D226A9087045F5D181C

New standards under development:

CEN/CLC/prTR (WI=JT013026)

Data protection and privacy by design and by default - Technical Report on applicability to the videosurveillance industry - State of the art

prCEN/CLC/TS XXX(WI=JT013044)

Requirements for Conformity Assessment Bodies certifying Cloud Services

CEN/CLC/prTR(WI=JT013027)

Privacy management in products and services - Biometric access control products and services

prCEN/CLC/TS XXX(WI=JT013043)

Multi-layered approach for a set of requirements for information/cyber security controls for Cloud Services

prEN XXX(WI=JT013042)

Common framework for vertical information security or cybersecurity control sets

prEN ISO/IEC 24760-3(WI=JT013039)

Information technology - Security techniques - A framework for identity management - Part 3: Practice

prEN ISO/IEC 24760-2(WI=JT013040)

Information technology - Security techniques - A framework for identity management - Part 2: Reference architecture and requirements

prCEN/CLC/TS XXX(WI=JT013041)

Protection Profile for Smart Meter - Minimum Security requirements

prEN ISO/IEC 24760-1(WI=JT013038)

IT Security and Privacy - A framework for identity management - Part 1: Terminology and concepts

prEN XXX(WI=JT013037)

Privacy Information Management System per ISO/IEC 27701 - Refinements in European context

prEN ISO/IEC 29151(WI=JT013036)

Information technology - Security techniques - Code of practice for personally identifiable information protection (ISO/IEC 29151:2017)

prEN 17799(WI=JT013033)

Personal data protection requirements for processing operations

prEN ISO 27007(WI=JT013034)

Information security, cybersecurity and privacy protection - Guidelines for information security management systems auditing (ISO/IEC 27007:2020)

prEN 17740(WI=JT013032)

Requirements for professional profiles related to personal data processing and protection

prEN 17640(WI=JT013029)

Fixed time cybersecurity evaluation methodology for ICT products

Standards under development:

FprEN 17529

Data protection and privacy by design and by default

prEN XXX (WI=JT013031)

Managed Security Services Providers Requirements

8.1.3 CEN/TC 225 - AIDC technologies

Keywords:

Information technology, **RFID**, Automatic ID applications, **Interoperability**

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6206&cs=1240DAEEB0C84DB1308ED97479093BF29

Scope:

Standarisation of data carriers for automatic identification and data capture, of the data element architecture therefore, of the necessary test specifications and of technical features for the harmonization of cross-sector applications. Establishment of an appropriate system of registration authorities, and of means to ensure the necessary maintenance of standards.

New standards:

EN 17230:2020

Information technology - RFID in rail

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=205:32:0::::FSP_ORG_ID,FSP_LANG_ID:6206,25&cs=19390EDDC10FB5D090CABEB2B529A9B8D

New standards under development:
There are not any new standards under development.

Standards under development:
There are not any standards under development

8.1.4 CEN/TC 278 - Intelligent transport systems

Keywords:

Electro-Mobility, Smart Cities, Road vehicles, Interoperability, Electronic fee collection and access control (EFC), Public transport, Traffic and traveller information, Traffic control, ITS spatial data, Road traffic data, After theft systems for the recovery of stolen vehicles, eSafety, Cooperative ITS, Mobility integration, Public transport

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6259&cs=164A194F2D8EB9ACD98538F3DDE9CA11B

Scope:

Standardisation in the field of intelligent transport systems, encompassing services and techniques to achieve road safety, environmental sustainability and traffic efficiency, and to

improve the travel experience; applying information and communication technologies between vehicles/infrastructure/other road users.
The following are included:

- aspects of cooperation (C-ITS);
- intermodality and multimodality;
- traffic management; mobility information; mobility integration;
- mobility as a service;
- systems and services for vulnerable road users;
- ITS services for automated vehicles;
- parking management;
- user fee collection;
- public transport management;
- eCall;
- after-theft vehicle recovery systems;
- kerbside and pavement management.

Mobility accessibility for all users is an important aspect of ITS standardisation.

New standards:

CEN ISO/TS 17573-3:2021

Electronic fee collection - System architecture for vehicle-related tolling - Part 3: Data dictionary (ISO/TS 17573-3:2021)

CEN/TS 17642:2021

Intelligent Transport Systems - eSafety - eCall Interface for PSAPs to access cargo and dangerous goods databases

EN ISO 14907-2:2021

Electronic fee collection - Test procedures for user and fixed equipment - Part 2: Conformance test for the on-board unit application interface (ISO 14907-2:2021)

CEN ISO/TS 21184:2021

Cooperative intelligent transport systems (C-ITS) - Global transport data management (GTDM) framework (ISO/TS 21184:2021)

EN ISO 14819-1:2021

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 1: Coding protocol for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-1:2021)

EN 16157-4:2021

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 4: VMS publication

EN ISO 14819-2:2021

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 2: Event and information codes for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-2:2021)

EN ISO 14819-3:2021

Intelligent transport systems - Traffic and travel information messages via traffic message coding - Part 3: Location referencing for Radio Data System - Traffic Message Channel (RDS-TMC) using ALERT-C (ISO 14819-3:2021)

CEN/TS 17496:2021

Cooperative intelligent transport systems - Communication profiles

CEN ISO/TR 21186-3:2021

Cooperative intelligent transport systems (C-ITS) - Guidelines on the usage of standards - Part 3: Security (ISO/TR 21186-3:2021)

CEN ISO/TR 21186-2:2021

Cooperative intelligent transport systems (C-ITS) - Guidelines on the usage of standards - Part 2: Hybrid communications (ISO/TR 21186-2:2021)

EN ISO 24014-1:2021

Public transport - Interoperable fare management system - Part 1: Architecture (ISO 24014-1:2021)

CEN ISO/TR 21186-1:2021

Cooperative intelligent transport systems (C-ITS) - Guidelines on the usage of standards - Part 1: Standardisation landscape and releases (ISO/TR 21186-1:2021)

EN ISO 13143-1:2020

Electronic fee collection - Evaluation of on-board and roadside equipment for conformity to ISO 12813 - Part 1: Test suite structure and test purposes (ISO 13143-1:2020)

CEN/TR 17546:2020

Electronic fee collection - EETS gap analysis and proposed standards roadmap

CEN ISO/TS 19321:2020

Intelligent transport systems - Cooperative ITS - Dictionary of in-vehicle information (IVI) data structures (ISO/TS 19321:2020)

CEN ISO/TS 21176:2020

Cooperative intelligent transport systems (C-ITS) - Position, velocity and time functionality in the ITS station (ISO/TS 21176:2020)

EN ISO 19299:2020

Electronic fee collection - Security framework (ISO 19299:2020)

EN 15722:2020

Intelligent transport systems - ESafety - ECall minimum set of data

EN 17358:2020

Intelligent transport systems - ESafety - eCall OAD for multiple Optional Additional Datasets

EN 16157-5:2020

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 5: Measured and elaborated data publications

EN ISO 14907-1:2020

Electronic fee collection - Test procedures for user and fixed equipment - Part 1: Description of test procedures (ISO 14907-1:2020)

EN ISO 22418:2020

Intelligent transport systems - Fast service announcement protocol (FSAP) for general purposes in ITS (ISO 22418:2020)

CEN/TS 16614-2:2020

Public transport - Network and Timetable Exchange (NeTEx) - Part 2: Public transport scheduled timetables exchange format

CEN/TS 17466:2020

Intelligent transport systems - Urban ITS - Communication interfaces and profiles for traffic management

CEN/TS 13149-9:2020

Public transport - Road vehicle scheduling and control systems - Part 9: Time service

CEN/TS 13149-10:2020

Public transport - Road vehicle scheduling and control systems - Part 10: Location service

CEN/TS 13149-11:2020

Public transport - Road vehicle scheduling and control systems - Part 11: Vehicle platform interface service

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=205:32:0::::FSP_ORG_ID,FSP_LANG_ID:6259,25&cs=13405D9A7C7558D431D3BD775B6106F49

Standards under development:

FprCEN ISO/TS 19468

Intelligent transport systems - Data interfaces between centres for transport information and control systems - Platform-independent model specifications for data exchange protocols for transport information and control systems (ISO/DTS 19468:2021)

FprCEN ISO/TS 21719-3

Electronic fee collection - Personalization of on-board equipment - Part 3: Using integrated circuit(s) cards (ISO/DTS 21719-3:2021)

FprCEN/TS 16157-10

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 10: Energy infrastructure publications

FprCEN/TS 16157-11

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 11: Publication of machine interpretable traffic regulations

FprCEN/TS 16157-12

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 12: Facility related publications

prCEN ISO/TR 6026

Electronic fee collection - Pre-study on the use of vehicle license plate information and automatic number plate recognition (ANPR) technologies

prCEN ISO/TS 22726-2

Intelligent transport systems - Dynamic data and map database specification for connected and automated driving system applications - Part 2: Logical data model of dynamic data

prCEN ISO/TS 37444

Electronic fee collection - Charging performance framework

prCEN ISO/TS 5616

Intelligent transport systems - ITS data management, access and mobility issues - Governance using secure interfaces: High level specifications & information resource

prCEN/TS 16614-5

Public transport - Network and Timetable Exchange (NeTEx) - Part 5: Alternative modes exchange format

prCEN/TS 17184 rev

Intelligent transport systems - eSafety - eCall High level application protocols (HLAP) using IMS packet switched networks

prCEN/TS 17240 rev

Intelligent transport systems - ESafety - ECall end to end conformance testing for IMS packet switched based systems

prCEN/TS 17249-5 rev

Intelligent transport systems - eSafety - Part 5: eCall for UNECE category L1 and L3 powered two-wheeled vehicles

prEN 12896-10

Public transport - Reference data model - Part 10: Alternative Modes

prEN 16405

Intelligent transport systems - ECall - Additional data concept specification for cargo in vehicles

prEN 16454 rev

Intelligent transport systems - ESafety - ECall end to end conformance testing

prEN 16986

Electronic fee collection - Interoperable application profiles for information exchange between Service Provision and Toll Charging

prEN ISO 12813 rev

Electronic fee collection — Compliance check communication for autonomous systems

prEN ISO 13141 rev

Electronic fee collection — Localisation augmentation communication for autonomous systems

prEN ISO 14906 rev

Electronic fee collection — Application interface definition for dedicated short-range communication

prEN ISO 21177 rev

Intelligent transport systems - ITS station security services for secure session establishment and authentication between trusted devices

(WI=00278582)

Public transport - Distribution APIs for MaaS

(WI=00278570)

Intelligent Transport systems - eSafety - Guidance to PSAPs regarding eCall operational issues

(WI=00278588)

Intelligent transport systems — eSafety — eCall OAD for equipment limitations

(WI=00278590)

Network and Timetable Exchange (NeTEx) – Part 6 European Accessibility Profile

(WI=00278589)

Network and Timetable Exchange (NeTEx) – Part 6 European Accessibility Profile

Standards under development:

FprCEN/TS 15531-4

Public transport - Service interface for real-time information relating to public transport operations - Part 4: Functional service interfaces: Facility monitoring

prCEN ISO/TS 14827-4

Intellligent transport systems - Data interfaces between centres for transport information and control - Part 4: Data interfaces between centres for intelligent transport systems (ITS) using XML (Profile B)

prCEN ISO/TS 17429-1 rev

Cooperative intelligent transport systems (C-ITS) - ITS station facility services - Part 1: Communication profile handler

prCEN ISO/TS 17429-2 rev

Cooperative intelligent transport systems (C-ITS) - ITS station facility services - Part 2: Facility services handler

prCEN ISO/TS 17429-3 rev

Cooperative intelligent transport systems (C-ITS) - ITS station facility services - Part 3: Content subscription handler

prCEN ISO/TS 19321 rev

Intelligent transport systems — Cooperative ITS — Dictionary of in-vehicle information (IVI) data structures

prCEN/TS 15531-5 rev

Public transport - Service interface for real-time information relating to public transport operations - Part 5: Functional service interfaces: Situation exchange

prCEN/TS 16157-6 rev

Intelligent transport systems - DATEX II data exchange specifications for traffic management and information - Part 6: Parking publications

prCEN/TS 17249-6 rev

Intelligent transport systems - eSafety - Part 6: eCall for UNECE Category L2, L4, L5, L6 and L7 tricycles and quadricycles

prEN 15509

Electronic fee collection - Interoperability application profile for DSRC

prEN 15531-1

Public transport - Service interface for real-time information relating to public transport operations - Part 1: Context and framework

prEN 15531-2

Public transport - Service interface for real-time information relating to public transport operations - Part 2: Communications infrastructure

prEN 15531-3

Public transport - Service interface for real-time information relating to public transport operations - Part 3: Functional service interfaces

prEN 16062

Intelligent transport systems - ESafety - eCall high level application requirements (HLAP) using GSM/UMTS circuit switched networks (2020)

prEN 16072

Intelligent transport systems - ESafety - Pan-European eCall operating requirements

prEN ISO 12855

Electronic fee collection - Information exchange between service provision and toll charging (ISO/DIS 12855:2020)

prEN ISO 14823-1 rev

Intelligent transport systems - Graphic data dictionary - Part 1: Specification

(WI=00278430)

Intelligent transport systems - Aftermarket eCall

(WI=00278427)

Intelligent transport systems - Urban ITS - European ITS communications and information protocols

(WI=00278539)

XXXXX-4 Intelligent transport systems - eSafety - Aftermarket eCall for UNECE categories for agricultural and forestry vehicles and equipment

(WI=00278472)

Intelligent transport systems - Management for Electronic Traffic Regulations (METR) - Part 1: General concept and architecture

(WI=00278541)

XXXXX-6 Intelligent transport systems - eSafety - Aftermarket eCall for L vehicle categories (Powered 2/3/4 Wheel) vehicles -rider based

(WI=00278534)

XXXXX-5 Intelligent transport systems - eSafety - Aftermarket eCall for category L1 & L3 (P2WV) vehicles

(WI=00278535)

XXXXX-1 Intelligent transport systems - eSafety - Aftermarket eCall for UNECE category M1/N1 vehicles

(WI=00278450)

Public transport - Interoperable fare management system - Back Office Interface

(WI=00278536)

XXXXX-3 Intelligent transport systems – eSafety - Aftermarket eCall for M2 and M3 vehicle categories buses and coaches

(WI=00278542)

CEN ISO 14827-4 Transport information and control systems - Data interfaces between centres for transport information and control systems - Part 4: Data interfaces between centres for intelligent transport systems (ITS) using XML (Profile B)

(WI=00278537)

XXXXX-2 Intelligent transport systems - eSafety - Aftermarket eCall for large goods vehicles (UNECE Category N2 and N3) and other commercial vehicles

8.1.5 CEN/TC 287 - Geographic Information

Keywords:

Availability and information

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6268&cs=1D5368A4F6E101B66AD14AB12AC0FC914

Scope:

Standardisation in the field of digital geographic information for Europe:

The committee will produce a structured framework of standards and guidelines, which specify a methodology to define, describe and transfer geographic data and services. This work will be carried out in close co-operation with ISO/TC 211 in order to avoid duplication of work.

The standards will support the consistent use of geographic information throughout Europe in a manner that is compatible with international usage. They will support a spatial data infrastructure at all levels in Europe.

New Standards:

EN ISO 19111:2020/A1:2021

Geographic information - Referencing by coordinates - Amendment 1 (ISO 19111:2019/Amd 1:2021)

EN ISO 19168-1:2021

Geographic information - Geospatial API for features - Part 1: Core (ISO 19168-1:2020)

EN ISO 19116:2019/A1:2021

Geographic information - Positioning services - Amendment 1 (ISO 19116:2019/Amd 1:2021)

EN ISO 19126:2021

Geographic information - Feature concept dictionaries and registers (ISO 19126:2021)

EN ISO 19148:2021

Geographic information - Linear referencing (ISO 19148:2021)

EN ISO 19135-1:2015/A1:2021

Geographic information - Procedures for item registration - Part 1: Fundamentals - Amendment 1 (ISO 19135-1:2015/Amd 1:2021)

EN ISO 19115-1:2014/A2:2020(

Geographic information - Metadata - Part 1: Fundamentals - Amendment 2 (ISO 19115-1:2014/Amd 2:2020)

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=205:32:0::::FSP_ORG_ID,FSP_LANG_ID:6268,25&cs=1203B0B570EEB8FF39B01AE0BEA371BE2

New Standards under development:
prEN ISO 19115-3

Geographic information — Metadata — Part 3: XML schema implementation for fundamental concepts
prEN ISO 19123-1
Geographic information - Schema for coverage geometry and functions
prEN ISO 19131
Geographic information - Data product specifications
prEN ISO 19135-1 rev
Geographic information - Procedures for item registration - Part 1: Fundamentals
prEN ISO 19144-2
Geographic information — Classification systems — Part 2: Land Cover Meta Language (LCML)
prEN ISO 19144-3
Geographic information — Classification systems — Part 3: Land Use Meta Language (LUML)
prEN ISO 19150-6
Geographic information — Ontology — Part 6: Service ontology registry
prEN ISO 19152-1 rev
Geographic information - Land Administration Domain Model (LADM) - Part 1: Fundamentals
prEN ISO 19157-3
Geographic information — Data quality — Part 3: Data quality measures register
prEN ISO 19160-2
Addressing — Part 2: Assigning and maintaining addresses for objects in the physical world
prEN ISO 19160-6
Addressing — Part 6: Digital interchange models
prEN ISO 19164
Geographic information — Indoor feature model _
prEN ISO 19168-2
Geographic information - Geospatial API for features - Part 2: Coordinate Reference Systems by Reference (ISO/DIS 19168-2:2021)

Standards under development:
EN ISO 19115-2:2019/prA1
Geographic information - Metadata - Part 2: Extensions for acquisition and processing - Amendment 1 (ISO 19115-2:2019/DAM 1:2020)
prEN ISO 19105
Geographic information - Conformance and testing (ISO/DIS 19105:2020)
prEN ISO 19156 rev
Geographic information - Observations and measurements
prEN ISO 19157-1 rev
Geographic information - Data quality - Part 1: General requirements
prEN ISO 6709
Standard representation of geographic point location by coordinates (ISO/DIS 6709:2020)

8.1.6 CEN/TC 294 - Communication systems for meters

Keywords:

Mobile Telecommunications, Application layer for communication systems for and remote reading of all meters within the scope, Data exchange for meters on bus-systems and interface, Radio meter data Exchange, Wireless mesh networking - Communication systems for meter data Exchange

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6275&cs=16B74FE5CD11284942332D060BF8398B8

Scope:

Standardisation of communications interfaces for metering and submetering systems for Water, Fuel Gases, Heat and similar energies and fluids where the protocols are applied to the meters, sensors and actuators and systems used to provide metering services. Security features like Confidentiality, Authenticity and Integrity are provided at the application and lower layers. Cooperation with CENELEC and ETSI, in relation to consistent protocol and use of spectrum, is an essential condition for achieving interoperability between entities in systems. Excluded from this scope are areas, which are under the responsibility of CLC/TC 205 and CEN/TC 247.

New Standards:

There are not any new published standards

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=205:32:0::::FSP_ORG_ID,FSP_LANG_ID:6275,25&cs=13F70DD49695CE3BE6A37ADB2604B6E99

New Standards under development:
EN 13757-1:2021
Communication systems for meters - Part 1: Data exchange
EN 13757-2:2018/prA1
Communication systems for meters - Part 2: Wired M-Bus communication
prEN 13757-8
Communication systems for meters - Part 8: Adaptation layer

Standards under development:
There are not any standards under development

8.1.7 CEN/TC 465 - Sustainable and Smart Cities and Communities

Keywords:

Smart Cities

Link:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:2691595&cs=1B4B2B4D071921D6418AE8D855A9F8585

Scope:

Standardisation in the field of Sustainable Cities and Communities, covering the development of requirements, frameworks, guidance and supporting tools and techniques. The proposed standardisation plan will be developed to assist cities and community decision making, and support their implementation of sustainability and sustainable development. Standardisation will focus on the development of a holistic and integrated approach in response to the needs of European Cities and Communities in both rural and urban areas.

It is proposed that the standardisation activities focus on:

- the purposes of urban sustainable development as defined by ISO 37101 related to Sustainable Cities and Communities, namely resilience, attractiveness, well-being, social cohesion, preservation and improvement of environment, responsible resource use, aligned with the main pillars of sustainable development (economic, environmental and social),
- all innovative approaches to solution and service delivery, designed for use by all Cities and Communities, Citizens and their interested parties as a means of achieving the sustainability of urban and rural development, with the aim of continuously improving solutions and services. and rural development, with the aim of continuously improving solutions and services.

Standards:

There are not any published standards.

Standards under development:

There are not any standards under development.

8.1.8 CLC/SR 120 - Electrical Energy Storage (EES) Systems

Keywords:

Electrical energy supply, Electrical Energy Storage

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258757

Scope:

There is no information on the website.

New Standards:

EN IEC 62933-5-2:2020

Electrical energy storage (EES) systems - Part 5-2: Safety requirements for grid-integrated EES systems - Electrochemical-based systems

Standards:

https://www.cenelec.eu/dyn/www/f?p=104:30:536360646864101::::FSP_ORG_ID,FSP_LANG_ID:1258757,25

New Standards under development

There are not any new standards under development

Standards under development:

prEN IEC 62933-1

Electrical energy storage (EES) systems - Part 1: Vocabulary

prEN IEC 62933-4-3

Electrical energy storage(EES) systems; part4-3: –The protection requirements of BESS according to the environmental conditions and location types

prEN IEC 62933-4-4

Electrical energy storage (EES) systems- Part 4-4: Standard on environmental issues battery-based energy storage systems (BESS) with reused batteries – requirements

prEN IEC 62933-5-3

Electrical energy storage (EES) systems Part 5-3: Safety requirements for electrochemical based EES systems considering initially non-anticipated modifications - partial replacement, changing application, relocation and loading reused battery –

8.1.9 CLC/TC 13 - Electrical energy measurement and control

Keywords:

Electrical energy supply, Electricity meters for active energy of class a, b and c

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1257151

Scope:

Standarisation in the field for metering equipment and systems (using whenever possible IEC standards), including smart metering systems, for electrical energy measurement, tariff- and load control, customer information and payment, for use in power stations, along the network and at energy end users, as well as to prepare international standards for meter test equipment and methods. Excluded: Standarisation for the interface of metering equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system, covered by IEC/TC 57

New Standards:

EN IEC 62056-3-1:2021

Electricity metering data exchange - The DLMS/COSEM suite - Part 3-1: Use of local area networks on twisted pair with carrier signalling

EN IEC 62053-23:2021/A11:2021

Electricity metering equipment - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

EN IEC 62053-24:2021/A11:2021

Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 2 and 3)

EN IEC 62053-22:2021/A11:2021

Electricity metering equipment - Particular requirements - Part 22: Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)

EN IEC 62053-21:2021/A11:2021

Electricity metering equipment - Particular requirements - Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)

EN IEC 62053-22:2021

Electricity metering equipment - Particular requirements - Part 22: Static meters for AC active energy (classes 0,1S, 0,2S and 0,5S)

EN IEC 62052-11:2021

Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment

EN IEC 62053-24:2021

Electricity metering equipment - Particular requirements - Part 24: Static meters for fundamental component reactive energy (classes 0,5S, 1S, 1, 2 and 3)

EN IEC 62053-23:2021

Electricity metering equipment - Particular requirements - Part 23: Static meters for reactive energy (classes 2 and 3)

EN IEC 62053-21:2021

Electricity metering equipment - Particular requirements - Part 21: Static meters for AC active energy (classes 0,5, 1 and 2)

EN IEC 62056-8-8:2020

Electricity metering data exchange - The DLMS/COSEM suite - Part 8-8: Communication profile for ISO/IEC 14908 series networks

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1257151,25&cs=1D3093FDEB1F8D1F5EF6E9CA873B5CFC5

New Standards under development:

prEN 50470-3

Electricity metering equipment (AC) - Part 3: Particular requirements - Static meters for active energy (class indexes A, B and C)

prEN 50470-4

Electricity metering equipment - Part 4: Particular requirements - Static meters for DC active energy (class indexes A, B, C)

EN IEC 62052-11:2021/prAA

Electricity metering equipment - General requirements, tests and test conditions - Part 11: Metering equipment

prEN IEC 62052-31

Electricity metering equipment (AC) - General requirements, tests and test conditions - Part 31: Product safety requirements and tests

prEN IEC 62052-41-ED1:2021

Electricity metering equipment - General requirements, tests and test conditions - Part 41: Energy registration methods and requirements for multi-energy and multi-rate meters

prEN IEC 62055-31:2021

Electricity metering - Payment systems - Part 31: Particular requirements - Static payment meters for active energy (classes 1 and 2)

prEN IEC 62055-42:2021

Electricity metering - Payment systems - Part 42: Transaction Reference Numbers (TRN)

prEN IEC 62056-5-3

Electrcity metering data exchange - The DLMS/COSEM suite - Part 5-3: DLMS/COSEM application layer

prEN IEC 62056-6-1

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-1: Object Identification System (OBIS)

prEN IEC 62056-6-2

Electricity metering data exchange - The DLMS/COSEM suite - Part 6-2: COSEM interface classes

prEN IEC 62057-1:2020

Test equipment, techniques and procedures for electrical energy meters - Part 1: Stationary Meter Test Units (MTU)

prEN IEC 62057-3

IEC 62057-3 ED1 Test equipment, techniques and procedures for electrical energy meters - Part 3: Automatic Meter Testing System (AMTS)

Standards under development:

FprEN IEC 62053-41:2021

Electricity metering equipment - Particular requirements - Part 41: Static meters for DC energy (classes 0,5 and 1)

8.1.10 CLC/TC 205 - Home and Building Electronic Systems (HBES)

Keywords:

Civil engineering, Home and building automation and control systems - General safety requirements and environmental conditions, General safety requirements and environmental conditions, Residential gateways guidelines for connection to other networks, Planing design and installation of hbes, Guidelines on requirements for functional safety of products intended to be integrated in a home control system, Intelligent home and building/smart houses ictsb, Definition of levels for hbesinstallations, **Smart grids,** Energy management ontology, Security and data protection

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258281

Scope:

To prepare standards for all aspects of home and building electronic systems in relation to the Information Society. In more detail: To prepare standards to ensure integration of a wide

spectrum of control applications and the control and management aspects of other applications in and around homes and buildings, including the gateways to different transmission media and public networks taking into account all matters of EMC and electrical and functional safety. TC 205 will not prepare device standards but the necessary performance requirements and necessary hardware and software interfaces. The standards should specify conformity tests. TC 205 will perform the work in close co-operation with relevant CENELEC TCs and those in CEN and ETSI.

New Standards

EN IEC 63044-4:2021

Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 4: General functional safety requirements for products intended to be integrated in HBES and BACS

EN IEC 63044-6:2021

Home and building electronic systems (HBES) and building automation and control systems (BACS) - Part 6: Requirements for planning and installation

EN 63044-1:2017/A1:2021

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 1: General requirements

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1258281,25&cs=1F7EDE6B65C78CB81DA41CE7C1EC7DFE0

Standards under development:

EN 50090-6-2:2021

Home and Building Electronic Systems (HBES)- Part 6-2 IoT Semantic Ontology model description

prEN 50090-6-3

Home and Building Electronic Systems (HBES)- Part 6-3 -3rd Party HBES IoT API

FprEN 50491-12-2

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 12-2: Smart grid - Application specification - Interface and framework for customer - Interface between the Home / Building CEM and Resource manager(s) - Data model and messaging

EN IEC 63044-3:2018/prA1:2020

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements

EN IEC 63044-5-1:2019/prA1:2021

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-1: EMC requirements, conditions and test set-up

EN IEC 63044-5-2:2019/prA1:2021

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and lightindustrial environments

EN IEC 63044-5-3:2019/prA1:2021

Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 5-3: EMC requirements for HBES/BACS used in industrial environments

prEN IEC 63345

Energy Efficiency Systems - Simple External Consumer Display

prEN IEC 63418

Fixed accessories intended for household and similar purposes that supply power through an interface

8.1.11 CLC/TC 21X Secondary cells and batteries

Scope:

To execute the following standarisation activities for secondary cells and batteries: - to implement IEC/TC 21/SC 21A documents into CENELEC standards; - to prepare Product Standards, general requirements and methods of testing included; - to prepare Safety Standards and associated Codes of Practice; - to consider Environmental Requirements (EC Rules) for the products.

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1257217

New Standards:

EN IEC 63218:2021

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium, nickel cadmium and nickel-metal hydride cells and batteries for portable applications - Guidance on environmental aspects

EN 50342-1:2015/A2:2021

Lead-acid starter batteries - Part 1: General requirements and methods of test

EN 62133-2:2017/A1:2021

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems

EN 50604-1:2016/A1:2021

Secondary lithium batteries for light EV (electric vehicle) applications - Part 1: General safety requirements and test methods

EN IEC 63056:2020/AC:2021-07

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries for use in electrical energy storage systems

EN IEC 62485-6:2021

Safety requirements for secondary batteries and battery installations - Part 6: Safe operation of lithium-ion batteries in traction applications

EN IEC 63115-2:2021

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Sealed nickel-metal hydride cells and batteries for use in industrial applications - Part 2: Safety

EN IEC 62485-5:2021

Safety requirements for secondary batteries and battery installations - Part 5: Safe operation of stationary lithium ion batteries

EN IEC 63193:2021

Lead-acid batteries for propulsion power of lightweight vehicles - General requirements and methods of test

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1257217,25&cs=1713A95D8AC1F4E337203EA2AAEC315B0

New Standards under development

There are not any new standards under development

Standards under development:

EN 61951-1:2017/prA1

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 1: Nickel-Cadmium

EN 61951-2:2017/prA1

Secondary cells and batteries containing alkaline or other non acid electrolytes - Secondary sealed cells and batteries for portable applications - Part 2: Nickel-metal hydride

prEN IEC 62619:2020

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications

EN 62620:2015/prA1

Secondary cells and batteries containing alkaline or other non-acid electrolytes - Secondary lithium cells and batteries for use in industrial applications

prEN IEC 62660-3:2021

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements

prEN 63118

12V Lithium-ion Secondary Battery for Automotive SLI Applications and Auxiliary purposes
 Part 1 - General requirements and methods of test

prEN IEC 63338

General guidance for reuse of secondary cells and batteries

8.1.12 CLC/TC 57 - Power systems management and associated information Exchange

Keywords:

Mobile Telecommunications, Availability and information

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258723

Scope:

To prepare international standards for power systems control equipment and systems including EMS (Energy Management Systems), SCADA (Supervisory Control And Data Acquisition), distribution automation, teleprotection, and associated information exchange for real-time and non-real-time information, used in the planning, operation and maintenance of power systems. Power systems management comprises control within control centres, substations and individual pieces of primary equipment including telecontrol and interfaces to equipment, systems and databases, which may be outside the scope of TC 57. The special conditions in a high voltage environment have to be taken into consideration.

NOTE 1: Standards prepared by other technical committees of the IEC and organizations such as ITU and ISO shall be used where applicable.

NOTE 2: Although the work of TC 57 is chiefly concerned with standards for electric power systems, these standards may also be useful for application by the relevant bodies to other geographical widespread processes.

NOTE3: Whereas standards related to measuring and protection relays and to the control and monitoring equipment used with these systems are treated by TC 95, TC 57 deals with the interface to the control systems and the transmission aspects for teleprotection systems. Whereas standards related to equipment for electrical measurement and load control are

treated by TC 13, TC 57 deals with the interface of equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system

New Standards

EN IEC 61970-600-2:2021

Energy management system application program interface (EMS-API) - Part 600-2: Common Grid Model Exchange Specification (CGMES) - Exchange profiles specification

EN IEC 61970-600-1:2021

Energy management system application program interface (EMS-API) - Part 600-1: Common Grid Model Exchange Standard (CGMES) - Structure and rules

EN IEC 61968-3:2021

Application integration at electric utilities - System interfaces for distribution management - Part 3: Interface for network operations

EN IEC 62488-3:2021

Power line communication systems for power utility applications - Part 3: Digital Power Line Carrier (DPLC) terminals and hybrid ADPLC terminals

EN IEC 62325-451-7:2021

Framework for energy market communications - Part 451-7: Balancing processes, contextual and assembly models for European style market

EN IEC 61970-457:2021

Energy Management system application program interface (EMS-API) – Part 457: Dynamics profile

EN IEC 61968-13:2021

Application integration at electric utilities - System interfaces for distribution management - Part 13: Common distribution power system model profiles

EN IEC 62325-451-10:2021

Framework for energy market communications - Part 451-10: Profiles for Energy Consumption Data ("My Energy Data")

EN 61850-4:2011/A1:2020

Communication networks and systems for power utility automation - Part 4: System and project management

EN IEC 62351-6:2020

Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850

EN 61850-7-1:2011/A1:2020

Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

EN IEC 61968-5:2020

Application integration at electric utilities - System interfaces for distribution management - Part 5: Distributed energy optimization

EN IEC 62351-4:2018/A1:2020

Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

EN IEC 61970-301:2020

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

EN IEC 62351-8:2020

Power systems management and associated information exchange - Data and communications security - Part 8: Role-based access control for power system management

EN IEC 61968-1:2020

Application integration at electric utilities - System interfaces for distribution management - Part 1: Interface architecture and general recommendations

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1258723,25&cs=19178AB30BE09C2F789F62D269CA75AB1

New Standards under development:

EN 61850-5:2013/prA1:2020

Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

prEN 61850-6-2

Communication networks and systems for power utility automation - Part 6-2: Configuration description language for extensions for human machine interfaces

prEN IEC 61850-7-410

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

EN IEC 61850-7-420:2021

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources and distribution automation logical nodes

prEN IEC 61968-8

Application integration at electric utilities - System interfaces for distribution management - Part 8: Interfaces for customer operations

prEN IEC 61968-9

Application integration at electric utilities - System interfaces for distribution management - Part 9: Interfaces for meter reading and control

prEN IEC 61968-100:2021

Application integration at electric utilities - System interfaces for distribution management - Part 100: Implementation profiles

EN IEC 61970-301:2020/FprA1:2021

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

prEN IEC 61970-302

Energy management system application program interface (EMS-API) - Part 302: Common information model (CIM) dynamics

prEN IEC 61970-303

Energy Management System Application Program Interface (EMS-API) - Part 303: Common information model (CIM), Network Model Management

FprEN IEC 61970-452:2021

Energy management system application program interface (EMS-API) - Part 452: CIM static transmission network model profiles

FprEN IEC 61970-456:2021

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

prEN IEC 61970-457

Energy management system application program interface (EMS-API) - Part 457: Dynamics profile

prEN IEC 61970-459

Energy Management System Application Program Interface (EMS-API) - Part 459: Framework for managing shared network model information

prEN IEC 61970-501

Energy management system application program interface (EMS-API) - Part 501: Common Information Model Resource Description Framework (CIM RDF) schema

prEN IEC 62325-451-8:2020

Framework for energy market communications - Part 451-8: HVDC processes, contextual and assembly models for European style market

prEN IEC 62351-3

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

prEN IEC 62351-5:2021

Power systems management and associated information exchange - Data and communications security - Part 5: Security for IEC 60870-5 and derivatives

prEN IEC 62351-9

Power systems management and associated information exchange - Data and communications security - Part 9: Cyber security key management for power system equipment

prEN IEC 62351-14

Power systems management and associated information exchange - Data and communications security - Part 14: Cyber security event logging

prEN IEC 62488-1

Power line communication systems for power utility applications - Part 1: Planning of analogue and digital power line carrier systems operating over EHV/HV/MV electricity grids

Standards under development:

prEN IEC 61970-401:2020

Energy management system application program interface (EMS-API) - Part 401: Profile framework

prEN 61968-11:2017

Application integration at electric utilities - System interfaces for distribution management - Part 11: Common information model (CIM) extensions for distribution

8.1.13 CLC/TC 64 Electrical installations and protection against electric shock

Scope:

To prepare International standards - concerning protection against electric shock arising from equipment, from installations and from systems without limit of voltage, - for the design, erection foreseeable correct use and verification of all kind of electrical installations at supply voltage up to 1 kV AC or 1,5 kV DC, except those installations covered by the following IEC committees: TC 9X, TC 18X, TC 44X, TC 97, TC 99X, - in co-ordination with TC 99X, concerning requirements additional to those of TC 99X for the design, erection and verification of electrical installations of buildings above 1 kV up to 35 kV. The object of the standards shall be: - to lay down requirements for installation and co-ordination of electrical equipment, - to lay down basic safety requirements for protection against electric shock for use by technical committees, - to lay down safety requirements for protection against other hazards arising from the use of electricity, - to give general guidance to IEC member countries that may have need of such requirements, and - to facilitate international exchanges that may be hampered by differences in national regulations. The standards will not cover individual items of electrical equipment other than their selection for use.

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1257163

Standards:

HD 60364-8-2:2018/A12:2021

Low-voltage electrical installations - Part 8-2: Prosumer's low-voltage electrical installation

HD 60364-7-706:2007/A1:2020

Low-voltage electrical installations - Part 7-706: Requirements for special installations or locations - Conducting locations with restricted movement

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1257163,25&cs=1B0FC4B87B37CC6A76D6B2D46DD369F25

Standards under development:

prHD IEC 60364-1

Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions

prHD IEC 60364-4-42

Low-voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects

HD 60364-4-42:2011/A11

Low voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects

HD 60364-4-42:2011/A11

Low voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects

prHD 60364-4-43

Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent

HD 60364-5-52:2011/prAB

Low-voltage electrical installations - Part 5-52: Selection and erection of electrical equipment - Wiring systems

HD 60364-5-52:2011/prA1

Low-voltage electrical installations - Part 5-52: Selection and erection of electrical equipment - Wiring systems

HD 60364-5-53:2020

Low-voltage electrical installations - Part 5-53: Selection and erection of electrical equipment - Switchgear and controlgear

HD 60364-5-54:2011/A1

Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors

HD 60364-5-54:2011/prAB

Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors

prHD 60364-5-57:2020

Low-voltage electrical installations - Part 5: Selection and erection of electrical equipment - Clause 57: Erection of stationary secondary batteries

HD 60364-5-559:2012/prA3

Electrical installations of buildings - Part 5-55: Selection and erection of electrical equipment - Other equipment ; Amendment on Clause 551

FprHD 60364-7-701:2019/prAA

Low-voltage electrical installations - Part 7-701: Requirements for special installations or locations - Locations containing a bath or shower

FprHD 60364-7-701:2019

Low-voltage electrical installations - Part 7-701: Requirements for special installations or locations - Locations containing a bath or shower

prHD IEC 60364-7-702

Low-voltage electrical installations - Part 7-702: Requirements for special installations or locations - Swimming pools and fountains

prHD 60364-7-706

Low-voltage electrical installations - Part 7-706: Requirements for special installations or locations - Conducting locations with restricted movement

HD 60364-7-708:2017/prAA:2020

Low-voltage electrical installations - Part 7-708: Requirements for special installations or locations - Caravan parks, camping parks and similar locations

HD 60364-7-710:2021

Low-voltage electrical installations - Part 7-710: Requirements for special installations or locations - Medical locations

HD 60364-7-710:2021/A11:2021

Low-voltage electrical installations - Part 7-710: Requirements for special installations or locations - Medical locations

prHD 60364-7-716:2020

Low-Voltage electrical installations - Part 7-716: Requirements for special installations or locations - DC power distribution over Information Technology Cable Infrastructure

prHD 60364-7-719

Low-voltage installations - Part 7-719: Requirements for special installations or locations - Lighting installations for advertising signs with a rated output voltage not exceeding 1 000 V, which are illuminated by hot-cathode-fluorescent-lamps, luminous-discharge tubes (neon-tubes), inductive discharge lamps, light emitting diodes (LED) and/or LED modules

prHD 60364-7-720

Part 7-720: Requirements for special installations or locations—DC power supply system in the data centre

prHD 60364-7-730

Low-voltage electrical installations - Part 7-730: Requirements for special installations or locations - Onshore units of electrical shore connections for inland navigation vessels

prHD 60364-8-2:2021

Low-voltage electrical installations - Part 8-2: Prosumer's low-voltage electrical installations

prHD 60364-7-720/prAA

Part 7-720: Requirements for special installations or locations—DC power supply system in the data centre

prHD 60364-7-716/prAA

Low-Voltage electrical installations - Part 7-716: Requirements for special installations or locations - DC power distribution over Information Technology Cable Infrastructure

prHD 60364-5-57/prAA

Low-voltage electrical installations - Part 5: Selection and erection of electrical equipment - Clause 57: Stationary secondary batteries

prHD 60364-4-43/prAA

Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent

8.1.14 CLC/TC 69X Electrical systems for electric road vehicles

Scope:

To prepare European standards related to electrical systems for road vehicles, totally or partly propelled from self-contained power sources.

Link:

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0:25:::FSP_ORG_ID,FSP_LANG_ID:1258145

Standards:

EN IEC 61851-21-2:2021

Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems

EN IEC 61851-25:2021

Electric vehicle conductive charging system - Part 25: DC EV supply equipment where protection relies on electrical separation

EN IEC 61980-1:2021

Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

CLC IEC/TS 61980-2:2020

Systèmes de transfert de puissance sans fil (WPT) pour véhicules électriques - Partie 2 : Exigences spécifiques en matière de communication entre un véhicule électrique routier et l'infrastructure

CLC IEC/TS 61980-3:2020

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

Link to all Standards:

https://standards.cencenelec.eu/dyn/www/f?p=305:32:0::::FSP_ORG_ID,FSP_LANG_ID:1258145,25&cs=1A8A86A7E14016B40402A92EC188BE43C

Standards under development:

CLC/prTS 61851-3-1

Electric Vehicles conductive power supply system - Part 3-1: General Requirements for EV supply equipment where protection relies on double or reinforced insulation - AC and DC conductive power supply systems

CLC/prTS 61851-3-2

Electric Vehicles conductive power supply system - Part 3-2: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Voltage converter unit

CLC/prTS 61851-3-3

Electric vehicles conductive power supply system - Part 3-3: Requirements for light electric vehicles - Battery swap systems

CLC/prTS 61851-3-4

Electric Vehicles conductive power supply system - Part 3-2: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - General definitions and requirements for CANopen communications

CLC/prTS 61851-3-5

Electric Vehicles conductive power supply system - Part 3-5: Particular requirements EV supply equipment where protection relies on double or reinforced insulation - Pre-defined communication parameters and general application objects

CLC/prTS 61851-3-6

Electric Vehicles conductive power supply system - Part 3-6: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation - Voltage converter and communication

CLC/prTS 61851-3-7

Electric vehicles conductive power supply system - Part 3-7: Particular requirements for EV supply equipment where protection relies on double or reinforced insulation – Battery system communication

prEN IEC 61851-23-1:2020

Electric vehicle conductive charging system - Part 23-1: DC electric vehicle charging station with an automated connection device

prEN IEC 61851-23-3

Electric vehicle conductive charging system - Part 23-3: DC electric vehicle supply equipment for Megawatt charging systems

prEN IEC 61851-23:2020

Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment

prEN IEC 61851-24:2020

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

prEN IEC 61980-2:2021

Electric vehicle wireless power transfer (WPT) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure

prEN IEC 61980-3:2021

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

prEN IEC 62576-2

Electrical characteristics test methods of EDLC Module for Electric road vehicles

prEN IEC 62840-1

Electric vehicle battery swap system - Part 1: General and guidance

prEN IEC 62840-2

Electric vehicle battery swap system - Part 2: Safety requirements

prEN IEC 63110-1:2020

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 1: Basic Definitions, Use Cases and architecture

prEN IEC 63110-2

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 2: Technical protocol specifications and requirements

prEN IEC 63110-3

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 3: Requirements for conformance tests

prEN IEC 63119-2:2021

Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases

prEN IEC 63119-3

Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure

prEN IEC 63119-4

Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy

prEN IEC 63243

Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles

8.1.15 ISO/IEC JTC 1 - Information technology

Keywords:

Smart Grids, Smart Cities, Cybersecurity, Data Protection, Mobile Telecommunications, Interoperability, Availability and information

Scope:

Standarisation in the field of information technology.

Link:

https://www.iso.org/committee/45020.html

New Standards:

ISO/IEC 30118-1:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 1: Core specification

ISO/IEC 30118-2:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 2: Security specification

ISO/IEC 30118-3:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 3: Bridging specification

ISO/IEC 30118-4:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 4: Resource type specification

ISO/IEC 30118-5:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 5: OCF device specification

ISO/IEC 30118-6:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 6: Resource to AllJoyn interface mapping specification

ISO/IEC 30118-7:2021

Information Technology – Open Connectivity Foundation (OCF) Specification — Part 7: Wi-Fi easy setup specification

ISO/IEC 30118-8:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 8: OCF resource to oneM2M resource mapping specification

ISO/IEC 30118-9:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 9: Core optional specification

ISO/IEC 30118-10:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 10: Cloud API for cloud services specification

ISO/IEC 30118-11:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 11: Device to cloud services specification

ISO/IEC 30118-12:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 12: Cloud security specification

ISO/IEC 30118-13:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 13: Onboarding tool specification

ISO/IEC 30118-14:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 14: OCF resource to BLE mapping specification

ISO/IEC 30118-15:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 15: OCF resource to EnOcean mapping specification

ISO/IEC 30118-16:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 16: OCF resource to UPlus mapping specification

ISO/IEC 30118-17:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 17: OCF resource to Zigbee cluster mapping specification

ISO/IEC 30118-18:2021

Information technology – Open Connectivity Foundation (OCF) Specification — Part 18: OCF resource to Z-wave mapping specification

ISO/IEC 28360-1:2021

Information technology — Determination of chemical emission rates from electronic equipment — Part 1: Using consumables

ISO/IEC 23510:2021

Information technology — 3D printing and scanning — Framework for an Additive Manufacturing Service Platform (AMSP)

ISO/IEC 5965:2021

Information technology — Swordfish Scalable Storage Management API Specification

ISO/IEC 5962:2021

Information technology — SPDX® Specification V2.2.1

ISO/IEC 20919:2021

Information technology — Linear tape file system (LTFS) Format specification

ISO/IEC 30145-1:2021

Information technology — Smart City ICT reference framework — Part 1: Smart city business process framework

ISO/IEC 24775-1:2021 Information technology — Storage management — Part 1: Overview

ISO/IEC 24775-2:2021

Information technology — Storage management — Part 2: Common Architecture

ISO/IEC 24775-3:2021

Information technology — Storage management — Part 3: Common profiles

ISO/IEC 24775-4:2021

Information technology — Storage management — Part 4: Block devices

ISO/IEC 24775-5:2021

Information technology — Storage management — Part 5: File systems

ISO/IEC 24775-6:2021

Information technology — Storage management — Part 6: Fabric

ISO/IEC 24775-7:2021

Information technology — Storage management — Part 7: Host elements

ISO/IEC 24775-8:2021

Information technology — Storage management — Part 8: Media libraries

ISO/IEC 5055:2021

Information technology — Software measurement — Software quality measurement — Automated source code quality measures

ISO/IEC 14165-147:2021

Information technology – Fibre channel — Part 147: Physical interfaces - 7 (FC-PI-7)

ISO/IEC 5230:2020

Information technology — OpenChain Specification

ISO/IEC 24643:2020

Architecture for a distributed real-time access system

ISO/IEC 30145-2:2020

Information technology — Smart City ICT reference framework — Part 2: Smart city knowledge management framework

ISO/IEC 30145-3:2020

Information technology — Smart City ICT reference framework — Part 3: Smart city engineering framework

Link to all Standards:

https://www.iso.org/committee/45020/x/catalogue/p/1/u/0/w/0/d/0#projects

New Standards under development:

ISO/IEC 30118-1:2021

Information technology — Open Connectivity Foundation (OCF) Specification — Part 1: Core specification

ISO/IEC WD TS 5723

Systems Engineering — Trustworthiness Vocabulary

ISO/IEC PWI 5217

Guidance on smart city digital infrastructure design

ISO/IEC AWI 5153-1

Information Technology — City service platform for public health emergencies — Part 1: Overview and general requirements

ISO/IEC AWI 5087-2

Information technology — City data model — Part 2: City level concepts

ISO/IEC AWI 5087-3

Information technology — City data model — Part 3: Service level concepts -Transportation planning

ISO/IEC DIS 19540-1

Information technology — Object Management Group Unified Architecture Framework (OMG UAF) — Part 1: Domain Metamodel (DMM)

ISO/IEC DIS 19540-2

Information technology — Object Management Group Unified Architecture Framework (OMG UAF) — Part 2: Unified Architecture Framework Profile (UAFP)

ISO/IEC PWI 10311-2

Information technology – City service platform for public health emergencies — Part 2: Response resource management

ISO/IEC PWI 10235-4

Information technology - City data model — Part 4: Service level concepts for public health emergencies

ISO/IEC CD 5087-1

Information technology — City data model — Part 1: Foundation level concepts

ISO/IEC DIS 30115-1

Information technology — Redfish scalable platforms management API specification — Part 1: Redfish Specification v1.13.0

ISO/IEC DIS 30115-2

Information technology — Redfish scalable platforms management API specification — Part 2: Redfish Schema Supplement v2021.1

ISO/IEC PWI 24398

Information technology — Overview and vocabulary on 3D printing and scanning

ISO/IEC DIS 24039

Information Technology — Smart city digital platform reference architecture – Data and service

ISO/IEC DIS 12113

Information technology — Runtime 3D asset delivery format — Khronos glTF 2.0

ISO/IEC PWI TS 10267-3

Information technology—Data use in smart cities — Part 3: Measurement, evaluation and reporting

ISO/IEC AWI 9868

Remote biometric identification systems — Design, development, and audit

ISO/IEC PWI 9814

Information technology – Trustworthiness – Overview and concepts

ISO/IEC AWI 9234

Information technology — Information modelling for VR/AR/MR based education and training systems

ISO/IEC AWI 8663

Information Technology-Brain-computer Interface-Vocabulary

ISO/IEC PWI 5957

Trustworthiness reference architecture

ISO/IEC DIS 5733

Information technology — Cloud Data Management Interface (CDMITM) Version 2.0

ISO/IEC AWI 4879

Information technology — Quantum computing — Terminology and vocabulary

ISO/IEC DIS 3532-1

Information technology — 3D Printing and scanning — Medical image-based modelling — Part 1: General requirement

ISO/IEC CD 3532-2

Information technology — 3D Printing and scanning — Medical image-Based modelling — Part 2: Segmentation

Standards under development:

ISO/IEC AWI TS 24462

Ontology for ICT Trustworthiness Assessment

8.1.16 ISO/IEC JTC 1/SC 6 Telecommunications and information exchange between systems

Scope:

Since SC6 was established in 1964, SC6 has worked on standardisation in the field of telecommunications dealing with the exchange of information between open systems, including system functions, procedures, parameters as well as the conditions for their use. This standardisation encompasses protocols and services of lower layers including physical, data link, network, and transport as well as those of upper layers including but not limited to Directory and ASN.1: MFAN, NFC, PLC, Future Networks and OID..

Link:

https://www.iso.org/committee/45072.html

New Standards:

ISO/IEC/IEEE 8802-1Q:2020/Amd 31:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks — Amendment 31: Stream Reservation Protocol (SRP) enhancements and performance improvements

ISO/IEC/IEEE 8802-1CM:2019/Amd 1:2021

Telecommunications and information exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1CM: Time-sensitive networking for fronthaul — Amendment 1: Enhancements to fronthaul profiles to support new fronthaul interface, synchronization, and syntonization standards

ISO/IEC/IEEE 8802-3:2021/Amd 4:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 4: Physical layers and management parameters for 50 Gb/s, 200 Gb/s, and 400 Gb/s operation over single-mode fiber

ISO/IEC/IEEE 8802-3:2021/Amd 6:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 6: Maintenance #13: Power over ethernet over 2 pairs

ISO/IEC/IEEE 8802-3:2021/Amd 7:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 7: Physical layer and management parameters for 400 Gb/s over multimode fiber

ISO/IEC/IEEE 8802-3:2021/Amd 8:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 8: Physical layer specifications and management parameters for 2.5 Gb/s, 5 Gb/s, and 10 Gb/s automotive electrical ethernet

ISO/IEC/IEEE 8802-1Q:2020/Amd 2:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks — Amendment 2: YANG data model

ISO/IEC/IEEE 8802-1Q:2020/Amd 3:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks — Amendment 3: Virtual station interface (VSI) discovery and configuration protocol (VDP) extension to support network virtualization overlays over layer 3 (NVO3)

ISO/IEC/IEEE 8802-1AX:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AX: Link aggregation

ISO/IEC 8825-1:2021

Information technology — ASN.1 encoding rules — Part 1: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)

ISO/IEC 8825-2:2021

Information technology — ASN.1 encoding rules — Part 2: Specification of Packed Encoding Rules (PER)

ISO/IEC 8825-3:2021

Information technology — ASN.1 encoding rules — Part 3: Specification of Encoding Control Notation (ECN)

ISO/IEC 8825-4:2021

Information technology — ASN.1 encoding rules — Part 4: XML Encoding Rules (XER)

ISO/IEC 8825-5:2021

Information technology — ASN.1 encoding rules — Part 5: Mapping W3C XML schema definitions into ASN.1

ISO/IEC 8825-6:2021

Information technology — ASN.1 encoding rules — Part 6: Registration and application of PER encoding instructions

ISO/IEC 8825-7:2021

Information technology — ASN.1 encoding rules — Part 7: Specification of Octet Encoding Rules (OER)

ISO/IEC 8825-8:2021

Information technology — ASN.1 encoding rules — Part 8: Specification of JavaScript Object Notation Encoding Rules (JER)

ISO/IEC 8824-1:2021

Information technology — Abstract Syntax Notation One (ASN.1) — Part 1: Specification of basic notation

ISO/IEC 8824-2:2021

Information technology — Abstract Syntax Notation One (ASN.1) — Part 2: Information object specification

ISO/IEC 8824-3:2021

Information technology — Abstract Syntax Notation One (ASN.1) — Part 3: Constraint specification

ISO/IEC 8824-4:2021

Information technology — Abstract Syntax Notation One (ASN.1) — Part 4: Parameterization of ASN.1 specifications

ISO/IEC/IEEE 8802-1AE:2020/Cor 1:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AE: Media access control (MAC) security — Technical Corrigendum 1: Information technology — Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area

networks — Part 1AE: Media access control (MAC) security —TECHNICAL CORRIGENDUM 1: Tag control information figure

ISO/IEC 21481:2021

Information technology — Telecommunications and information exchange between systems — Near field communication interface and protocol 2 (NFCIP-2)

ISO/IEC 17982:2021

Information technology — Telecommunications and information exchange between systems — Close capacitive coupling communication physical layer (CCCC PHY)

ISO/IEC 24824-4:2021

Information technology — Generic applications of ASN.1 — Part 4: Cryptographic message syntax

ISO/IEC/IEEE 8802-3:2021

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet

ISO/IEC/IEEE 8802-1X:2013/AMD 2:2020

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part 1X: Port-based network access control — Amendment 2: YANG data model

ISO/IEC/IEEE 8802-1AE:2020

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AE: Media access control (MAC) security

ISO/IEC/IEEE 8802-1Q:2020

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged network

ISO/IEC/IEEE 8802-1AR:2020

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1AR: Secure device identity

ISO/IEC/IEEE 8802-11:2018/AMD 3:2020

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 3: Enhancements for very high throughput to support Chinese millimeter wave frequency bands (60 GHz and 45 GHz)

ISO/IEC/IEEE 8802-11:2018/AMD 4:2020

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 4: Enhancements for transit links within bridged network

ISO/IEC/IEEE 8802-11:2018/AMD 5:2020

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications — Amendment 5: Preassociation discovery

ISO/IEC 9594-1:2020

Information technology — Open systems interconnection — Part 1: The Directory: Overview of concepts, models and services

ISO/IEC 9594-2:2020

Information technology — Open systems interconnection — Part 2: The Directory: Models

ISO/IEC 9594-3:2020

Information technology — Open systems interconnection — Part 3: The Directory: Abstract service definition

ISO/IEC 9594-4:2020

Information technology — Open systems interconnection — Part 4: The Directory: Procedures for distributed operation

ISO/IEC 9594-5:2020

Information technology — Open systems interconnection — Part 5: The Directory: Protocol specifications

ISO/IEC 9594-6:2020

Information technology — Open systems interconnection — Part 6: The Directory: Selected attribute types

ISO/IEC 9594-7:2020

Information technology — Open systems interconnection — Part 7: The Directory: Selected object classes

ISO/IEC 9594-8:2020

Information technology — Open systems interconnection — Part 8: The Directory: Public-key and attribute certificate frameworks

ISO/IEC 9594-8:2020/CD COR 1

Information technology — Open systems interconnection — Part 8: The Directory: Public-key and attribute certificate frameworks — Technical Corrigendum 1

ISO/IEC 9594-9:2020

Information technology — Open systems interconnection — Part 9: The Directory: Replication

ISO/IEC 9594-11:2020

Information technology — Open systems interconnection directory — Part 11: Protocol specifications for secure operations

Link to all Standards:

https://www.iso.org/contents/data/committee/04/50/45072/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development:

ISO/IEC PWI 24326

Information technology — Open systems interconnection — Next generation object identifier resolution system

ISO/IEC CD 21558-2.2

Telecommunications and information exchange between systems — Future network architecture — Part 2: Proxy model based quality of service

ISO/IEC DIS 4396-1

Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 1: Reference model

ISO/IEC DIS 4396-2

Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 2: Common application connection establishment protocol

ISO/IEC DIS 4396-3

Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 3: Common distributed application protocol

ISO/IEC DIS 4396-4

Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 4: Flow allocator protocol

ISO/IEC DIS 4396-5

Telecommunications and information exchange between systems — Future network recursive inter-network architecture and protocols — Part 5: Error and flow control protocol

ISO/IEC CD 4005-1

Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 1: Communication model and requirements

ISO/IEC CD 4005-2

Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 2: Physical and data link protocols for shared communication

ISO/IEC CD 4005-3

Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 3: Physical and data link protocols for control communication

ISO/IEC CD 4005-4

Telecommunications and information exchange between systems — Low altitude drone area network (LADAN) — Part 4: Physical and data link protocols for video communication

ISO/IEC AWI 19369

Information technology — Telecommunications and information exchange between systems — NFCIP-2 test methods

ISO/IEC AWI 18092

Telecommunications and information exchange between systems — Near Field Communication — Interface and Protocol (NFCIP-1)

ISO/IEC AWI 5021-1

Telecommunications and information exchange between systems — Wireless LAN Access Control — Part 1: Networking architecture specification

ISO/IEC AWI 5021-2

Telecommunications and information exchange between systems — Wireless LAN Access Control — Part 2: Technical specification for dispatching platform

ISO/IEC DIS 29168-1

Information technology — Open systems interconnection — Part 1: Object identifier resolution system

ISO/IEC DIS 29168-2

Information technology — Open systems interconnection — Part 2: Procedures for the object identifier resolution system operational agency

ISO/IEC PWI 11935

Telecommunications and information exchange between systems — Artificial intelligence enabled networking

ISO/IEC PWI 11914

Telecommunications and information exchange between systems — Networking technology for blockchain

ISO/IEC PWI 11913

Telecommunications and information exchange between systems — Wearable robot area network

ISO/IEC PWI 11912

Telecommunications and information exchange between systems — Deterministic wireless industrial network

ISO/IEC 9594-2:2020/Amd 1

Information technology — Open systems interconnection — Part 2: The Directory: Models — Amendment 1

ISO/IEC 9594-8:2020/Cor 1

Information technology — Open systems interconnection — Part 8: The Directory: Public-key and attribute certificate frameworks — Technical Corrigendum 1

ISO/IEC 9594-11:2020/AWI Amd 1

Information technology — Open systems interconnection directory — Part 11: Protocol specifications for secure operations — Amendment 1

ISO/IEC CD 9594-12

Information technology — Open systems interconnection — Part 12: The Directory: Public key infrastructure establishment and maintenance

ISO/IEC/IEEE FDIS 8802-1X

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1X: Port-based network access control

ISO/IEC/IEEE 8802-1AS

Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Part 1AS: Timing and synchronization for time-sensitive applications in bridged local area networks

ISO/IEC/IEEE DIS 8802-1CS

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1CS: Link-local registration protocol

ISO/IEC/IEEE 8802-3:2021/FDAmd 5

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 5: Physical layers specifications and management parameters for 10 Mb/s operation and associated power delivery over a single balanced pair of conductors

ISO/IEC/IEEE 8802-3:2021/FDAmd 9

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 9: Physical layer specifications and management parameters for 25 Gb/s and 50 Gb/s passive optical networks

ISO/IEC/IEEE 8802-3:2021/DAmd 10

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 10: Maintenance #14: Isolation

ISO/IEC/IEEE 8802-3:2021/DAmd 11

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 11: Physical layers and management parameters for 100 Gb/s and 400 Gb/s operation over single-mode fiber at 100 Gb/s per wavelength

ISO/IEC/IEEE 8802-3:2021/DAmd 12

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 12: Maintenance #15: Power over Ethernet

ISO/IEC/IEEE 8802-3:2021/DAmd 13

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 13: Physical layers and management parameters for 100 Gb/s operation over DWDM systems

ISO/IEC/IEEE 8802-3:2021/DAmd 14

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 14: Bidirectional 10 Gb/s, 25 Gb/s, and 50 Gb/s optical access PHYs

ISO/IEC/IEEE 8802-3-2

Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3-2: Standard for Ethernet YANG data model definitions

ISO/IEC/IEEE DIS 8802-11

Telecommunications and information exchange between systems — Specific requirements for local and metropolitan area networks — Part 11: Wireless LAN medium access control (MAC) and physical layer (PHY) specifications

ISO/IEC/IEEE FDIS 8802-22

Telecommunications and information exchange between systems — Wireless Regional Area Networks (WRAN) — Specific requirements — Part 22: Cognitive Wireless RAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications: Policies and procedures for operation in the bands that allow spectrum sharing where the communications devices may opportunistically operate in the spectrum of primary service

ISO/IEC PWI 6643

Functional architecture and procedures for transaction data control for Blockchain networks

ISO/IEC PWI 5096

Artificial Intelligence enabled networking

ISO/IEC PWI 5095

Telecommunications and information exchange between systems — Narrow band variable low power wake up OOK signal and radio device interoperable with ISM legacy communication

Standards under development:

ISO/IEC/IEEE 8802-1Q:2020/DAMD 1
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks — Amendment 1: Stream Reservation Protocol (SRP) enhancements and performance improvements
ISO/IEC/IEEE 8802-1Q:2020/FDAMD 3
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks — Amendment 3: Virtual station interface (VSI) discovery and configuration protocol (VDP) extension to support network virtualization overlays over layer 3 (NVO3)
ISO/IEC/IEEE 8802-1Q:2020/FDAMD 31
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 1Q: Bridges and bridged networks —

Amendment 31: Stream Reservation Protocol (SRP) enhancements and performance Improvements
ISO/IEC/IEEE 8802-3:2021/FDAMD 1
Telecommunications and information exchange between systems — Specific requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 1: Physical layer specifications and management parameters for 2.5 Gb/s and 5 Gb/s operation over backplane
ISO/IEC/IEEE 8802-3:2021/FDAMD 2
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 2: Physical layer and management parameters for power over Ethernet over 4 pairs
ISO/IEC/IEEE 8802-3:2021/FDAMD 3
Telecommunications and exchange between information technology systems — Requirements for local and metropolitan area networks — Part 3: Standard for Ethernet — Amendment 3: Media access control parameters for 50 Gb/s and physical layers and management parameters for 50 Gb/s, 100 Gb/s, and 200 Gb/s operation
ISO/IEC DIS 21558-1
Telecommunications and information exchange between systems — Future network architecture — Part 1: Switching and Routing
ISO/IEC DIS 21558-3
Telecommunications and information exchange between systems — Future network architecture — Part 3: Networking of everything
ISO/IEC DIS 21559-1
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 1: Switching and routing
ISO/IEC CD 21559-2.2
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 2: Proxy model based quality of service
ISO/IEC DIS 21559-3
Telecommunications and information exchange between systems — Future network protocols and mechanisms — Part 3: Networking of everything
ISO/IEC AWI 23917
Information technology — Telecommunications and information exchange between systems — NFCIP-1 Protocol Test Methods
ISO/IEC WD 29168-2
Information technology — Open systems interconnection — Part 2: Procedures for the object identifier resolution system operational agency

8.1.17 ISO/IEC JTC 1/SC 27 - Information security, cybersecurity and privacy protection

Scope:

The development of standards for the protection of information and ICT. This includes generic methods, techniques and guidelines to address both security and privacy aspects, such as:

- Security requirements capture methodology;
- Management of information and ICT security; in particular information security management systems, security processes, and security controls and services;
- Cryptographic and other security mechanisms, including but not limited to mechanisms for protecting the accountability, availability, integrity and confidentiality of information;
- Security management support documentation including terminology, guidelines as well as procedures for the registration of security components;
- Security aspects of identity management, biometrics and privacy;
- Conformance assessment, accreditation and auditing requirements in the area of information security management systems;
- Security evaluation criteria and methodology.

SC 27 engages in active liaison and collaboration with appropriate bodies to ensure the proper development and application of SC 27 standards and technical reports in relevant áreas

Linlk:

https://www.iso.org/committee/45306.html

New Standards:

ISO/IEC 27555:2021

Information security, cybersecurity and privacy protection — Guidelines on personally identifiable information deletion

ISO/IEC 11770-3:2021 I

nformation security — Key management — Part 3: Mechanisms using asymmetric techniques

ISO/IEC 27551:2021

Information security, cybersecurity and privacy protection — Requirements for attribute-based unlinkable entity authentication

ISO/IEC 27036-1:2021

Cybersecurity — Supplier relationships — Part 1: Overview and concepts

ISO/IEC 18033-1:2021

Information security — Encryption algorithms — Part 1: General

ISO/IEC 18014-2:2021

Information security — Time-stamping services — Part 2: Mechanisms producing independent tokens

ISO/IEC 11770-7:2021

Information security — Key management — Part 7: Cross-domain password-based authenticated key exchange

ISO/IEC 18033-3:2010/Amd 1:2021

Information technology — Security techniques — Encryption algorithms — Part 3: Block ciphers — Amendment 1: SM4

ISO/IEC 9797-2:2021

Information security — Message authentication codes (MACs) — Part 2: Mechanisms using a dedicated hash-function

ISO/IEC 27050-4:2021

Information technology — Electronic discovery — Part 4: Technical readiness

ISO/IEC TS 27022:2021

Information technology — Guidance on information security management system processes

ISO/IEC 23264-1:2021

Information security — Redaction of authentic data — Part 1: General

ISO/IEC 10118-1:2016/Amd 1:2021

Information technology — Security techniques — Hash-functions — Part 1: General — Amendment 1: Padding methods for sponge functions

ISO/IEC TS 27110:2021

Information technology, cybersecurity and privacy protection — Cybersecurity framework development guidelines

ISO/IEC TS 27006-2:2021

Requirements for bodies providing audit and certification of information security management systems — Part 2: Privacy information management systems

ISO/IEC 20008-2:2013/Amd 1:2021

Information technology — Security techniques — Anonymous digital signatures — Part 2: Mechanisms using a group public key — Amendment 1

ISO/IEC 18033-5:2015/Amd 1:2021

Information technology — Security techniques — Encryption algorithms — Part 5: Identity-based ciphers — Amendment 1: SM9 mechanism

ISO/IEC 11770-4:2017/Amd 2:2021

Information technology — Security techniques — Key management — Part 4: Mechanisms based on weak secrets — Amendment 2: Leakage-resilient password-authenticated key agreement with additional stored secrets

ISO/IEC 10116:2017/Amd 1:2021

Information technology — Security techniques — Modes of operation for an n-bit block cipher — Amendment 1: CTR-ACPKM mode of operation

ISO/IEC TS 27570:2021

Privacy protection — Privacy guidelines for smart citiesISO/IEC 11770-5:2020

ISO/IEC TS 27100:2020

Information technology — Cybersecurity — Overview and concepts

ISO/IEC 27014:2020

Information security, cybersecurity and privacy protection — Governance of information security

ISO/IEC 20897-1:2020

Information security, cybersecurity and privacy protection — Physically unclonable functions — Part 1: Security requirements

ISO/IEC 18032:2020

Information security — Prime number generation

ISO/IEC 19772:2020

Information security — Authenticated encryption

ISO/IEC 11770-5:2020

Information security — Key management — Part 5: Group key management

ISO/IEC 19989-2:2020

Information security — Criteria and methodology for security evaluation of biometric systems — Part 2: Biometric recognition performance

ISO/IEC 27035-3:2020

Information technology — Information security incident management — Part 3: Guidelines for ICT incident response operations

ISO/IEC 20547-4:2020

Information technology — Big data reference architecture — Part 4: Security and privacy

ISO/IEC 19989-1:2020

Information security — Criteria and methodology for security evaluation of biometric systems — Part 1: Framework

ISO/IEC 19989-3:2020

Information security — Criteria and methodology for security evaluation of biometric systems — Part 3: Presentation attack detection

ISO/IEC 13888-1:2020

Information security — Non-repudiation — Part 1: General

ISO/IEC 13888-3:2020

Information security — Non-repudiation — Part 3: Mechanisms using asymmetric techniques

ISO/IEC 18033-4:2011/Amd 1:2020

Information technology — Security techniques — Encryption algorithms — Part 4: Stream ciphers — Amendment 1: ZUC

ISO/IEC 29184:2020

Information technology — Online privacy notices and consent

Lino to all Standards:

https://www.iso.org/committee/45306/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development:

ISO/IEC NP TS 9569

Information security, cybersecurity and privacy protection — Towards Creating an Extension for Patch Management for ISO/IEC 15408 and ISO/IEC 18045

ISO/IEC CD 27006-1

Requirements for bodies providing audit and certification of information security management systems — Part 1: General

ISO/IEC 27001:2013/CD Amd 1

Information technology — Security techniques — Information security management systems — Requirements — Amendment 1

ISO/IEC WD 27040.3

Information technology — Security techniques — Storage security

ISO/IEC WD 27033-7.3

Information technology – Network security — Part 7: Guidelines for network virtualization security

ISO/IEC DTR 24485.4

Information technology — Security techniques — Security properties, test and evaluation guidance for white box cryptography

ISO/IEC AWI 20008-3

Information technology — Security techniques — Anonymous digital signatures — Part 3: Mechanisms using multiple public keys

ISO/IEC AWI 18033-8

Information security — Encryption algorithms — Part 8: Fully Homomorphic Encryption

ISO/IEC WD 11770-8

Information technology — Security techniques — Key management — Part 8: Password-based key derivation

ISO/IEC AWI TR 6890

Towards creating an extension for patch management for ISO/IEC 15408 and ISO/IEC 18045

ISO/IEC WD 4922-2.3

Information security — Secure multiparty computation — Part 2: Mechanisms based on secret sharing

ISO/IEC WD 27562

Privacy guidelines for fintech services

ISO/IEC WD TS 27561

Information technology — Security techniques — Privacy operationalisation model and method for engineering (POMME)

ISO/IEC WD TS 27560.3

Privacy technologies — Consent record information structure

ISO/IEC WD 27403.6

Cybersecurity – IoT security and privacy – Guidelines for IoT-domotics

ISO/IEC DIS 27400

Cybersecurity — IoT security and privacy — Guidelines

ISO/IEC WD 27035-4

Information technology — Information security incident management — Part 4: Coordination

ISO/IEC WD 27031

Information technology — Cybersecurity — Information and communication technology readiness for business continuity

ISO/IEC WD 27006-2

Requirements for bodies providing audit and certification of information security management systems — Part 2: Privacy information management systems

ISO/IEC CD 24760-2

Information technology — Security techniques — A framework for identity management — Part 2: Reference architecture and requirements

ISO/IEC 24760-3:2016/CD Amd 1

Information technology — Security techniques — A framework for identity management — Part 3: Practice — Amendment 1

ISO/IEC WD 24759

Information technology — Security techniques — Test requirements for cryptographic modules

ISO/IEC CD 24392

Information technology — Security techniques —Security reference model for Industrial Internet Platform (IIP)

ISO/IEC 20008-2:2013/CD Amd 2

Information technology — Security techniques — Anonymous digital signatures — Part 2: Mechanisms using a group public key — Amendment 2

ISO/IEC WD 19790

Information technology — Security techniques — Security requirements for cryptographic modules

ISO/IEC DIS 18033-7

Information technology — Security techniques — Encryption algorithms — Part 7: Tweakable block ciphers

ISO/IEC WD 17825

Information technology — Security techniques — Testing methods for the mitigation of non-invasive attack classes against cryptographic modules

ISO/IEC WD 14888-4

Information technology — Security techniques — Digital signatures with appendix — Part 4: Stateful hash-based mechanisms

ISO/IEC WD TR 6114.2

Information technology – Security techniques – Security assurance throughout the product life cycle

ISO/IEC WD 4983

Information technology — Security techniques — Secure deployment, updating, and upgrading

ISO/IEC DIS 29192-8

Information security — Lightweight cryptography — Part 8: Authenticated encryption

ISO/IEC 29146:2016/DAmd 1

Information technology — Security techniques — A framework for access management — Amendment 1

ISO/IEC DIS 29128-1

Information security, cybersecurity and privacy protection — Verification of cryptographic protocols — Part 1: Framework

ISO/IEC PWI 29128-2

Information security, cybersecurity and privacy protection — Verification of Cryptographic Protocols — Part 2: Evaluation Methods and Activities for Cryptographic Protocols

ISO/IEC PWI 29128-3

Information security — Verification of cryptographic protocols — Part 3: Part 3: Evaluation Methods and Activities for Protocol Implementation Verification

ISO/IEC PWI 29004

Modes of operation for tweakable block ciphers

ISO/IEC DIS 27559

Privacy enhancing data de-identification framework

ISO/IEC DIS 27557

Information technology — Information security, cybersecurity and privacy protection — Organizational privacy risk management

ISO/IEC DIS 27556

Information security, cybersecurity and privacy protection – User-centric privacy preferences management framework

ISO/IEC DIS 27553-1

Information security, cybersecurity and privacy protection — Security and Privacy requirements for authentication using biometrics on mobile devices — Part 1: Local modes

ISO/IEC PWI 27553-2

Security and Privacy requirements for authentication using biometrics on mobile devices — Part 2: Remote modes

ISO/IEC CD 27402.2

Cybersecurity — IoT security and privacy — Device baseline requirements

ISO/IEC PWI 27109

Cybersecurity education and training

ISO/IEC 27070

Information technology — Security techniques — Requirements for establishing virtualized roots of trust

ISO/IEC PWI 27045

Information technology — Big data security and privacy — Processes

ISO/IEC DIS 27036-2

Cybersecurity — Supplier relationships — Part 2: Requirements

ISO/IEC CD 27036-3

Cybersecurity — Supplier relationships — Part 3: Guidelines for hardware, software, and services supply chain security

ISO/IEC DIS 27035-2

Information technology — Information security incident management — Part 2: Guidelines to plan and prepare for incident response

ISO/IEC PWI 27034-4

Information technology — Security techniques — Application security — Part 4: Verification and validation guidelines

ISO/IEC 27021:2017/Amd 1

Information technology — Security techniques — Competence requirements for information security management systems professionals — Amendment 1: Addition of ISO/IEC 27001:2013 clauses or subclauses to competence requirements

ISO/IEC PWI 27017

Information technology — Security techniques — Code of practice for information security controls based on ISO/IEC 27002 for cloud services

ISO/IEC 27013

Information security, cybersecurity and privacy protection — Guidance on the integrated implementation of ISO/IEC 27001 and ISO/IEC 20000-1

ISO/IEC CD 27011

Information security, cybersecurity and privacy protection — Information security controls based on ISO/IEC 27002 for telecommunications organizations

ISO/IEC PWI 27009

Information security, cybersecurity and privacy protection — Sector-specific application of ISO/IEC 27001 — Requirements

ISO/IEC DIS 27005

Information security, cybersecurity and privacy protection — Guidance on managing information security risks

ISO/IEC FDIS 27002

Information security, cybersecurity and privacy protection — Information security controls

ISO/IEC PWI 27001

Information technology — Security techniques — Information security management systems — Requirements

ISO/IEC 24745

Information security, cybersecurity and privacy protection — Biometric information protection

ISO/IEC TS 23532-1

Information security, cybersecurity and privacy protection — Requirements for the competence of IT security testing and evaluation laboratories — Part 1: Evaluation for ISO/IEC 15408

ISO/IEC TS 23532-2

Information security, cybersecurity and privacy protection — Requirements for the competence of IT security testing and evaluation laboratories — Part 2: Testing for ISO/IEC 19790

ISO/IEC FDIS 20009-3

Information security — Anonymous entity authentication — Part 3: Mechanisms based on blind signatures

ISO/IEC PWI 19792

Information technology — Security techniques — Security evaluation of biometrics

ISO/IEC WD 18031

Information technology — Security techniques — Random bit generation

ISO/IEC 15946-5

Information security — Cryptographic techniques based on elliptic curves — Part 5: Elliptic curve generation

ISO/IEC PWI 7748

Guidance and practice for privacy preservation based on zero-knowledge proofs

ISO/IEC PWI 7732

Age verification

ISO/IEC PWI 7709

Security and privacy reference architecture for multi-party data fusion and mining

ISO/IEC PWI 7699

Guidance for addressing security threats and failures in artificial intelligence

ISO/IEC PWI 7680

Requirements for the competence of ICT products cybersecurity conformity assessment body personnel – Knowledge, skills and effectiveness for ISO/IEC 15408 and ISO/IEC 19790 validators

ISO/IEC PWI TR 7677

Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045. (WG3 N2083)

ISO/IEC PWI 6135

Requirement standards for bodies providing audit and certification of sector-specific information security management systems

ISO/IEC PWI 6109

Data life cycle log audit guidelines

ISO/IEC PWI 6102

Guidance on illustrative processes for a privacy information management system

ISO/IEC PWI 6089

Impact of AI on security and privacy

ISO/IEC PWI 6088

Examination of scope and structure of ISO/IEC 29115:2013 Entity Authentication Assurance Framework for possible revision

ISO/IEC PWI 6087

Digital authentication: Risks and mitigations

ISO/IEC PWI 5908

ISO/IEC 15408 in the cloud

ISO/IEC PWI 5896

Cybersecurity assurance of systems and system of systems (SoS) based on ISO/IEC 15408

ISO/IEC DTR 5895

Multi-party coordinated vulnerability disclosure and handling

ISO/IEC DTR 5891

A general framework for runtime hardware security assessment

ISO/IEC PWI 5888

Information security, cybersecurity and privacy protection — Security requirements and evaluation activities for connected vehicle devices

ISO/IEC PWI 5689

Security frameworks based on the conceptual model of cyber-physical systems

ISO/IEC PWI 5192

Guidelines on Security Operations Center (SOC)

ISO/IEC PWI 5181

Data Provenance – Security and privacy

ISO/IEC CD 4922-1.2

Information security — Secure multiparty computation — Part 1: General

Standards under development:

ISO/IEC 9797-1:2011/WD AMD 1.2

Information technology — Security techniques — Message Authentication Codes (MACs) — Part 1: Mechanisms using a block cipher — Amendment 1: Information technology — Security techniques — Message authentication codes (MACs) — Part 1: Mechanisms using a block cipher — Amendment 1

ISO/IEC 9797-2

Information security — Message authentication codes (MACs) — Part 2: Mechanisms using a dedicated hash-function

ISO/IEC DIS 15408-1

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 1: Introduction and general model

ISO/IEC DIS 15408-2

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 2: Security functional components

ISO/IEC DIS 15408-3

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 3: Security assurance components

ISO/IEC DIS 15408-4

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 4: Framework for the specification of evaluation methods and activities

ISO/IEC DIS 15408-5

Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 5: Pre-defined packages of security requirements

ISO/IEC DIS 20897-2

Information security, cybersecurity and privacy protection — Physically unclonable functions — Part 2: Test and evaluation methods

ISO/IEC DTR 22216

Information technology — Security techniques — Introductory guidance on evaluation for IT security

ISO/IEC CD 23264-2.2

Information security — Redaction of authentic data — Part 2: Redactable signature schemes based on asymmetric mechanisms

ISO/IEC CD 23837-1

Information technology security techniques — Security requirements, test and evaluation methods for quantum key distribution — Part 1: Requirements

ISO/IEC CD 23837-2

Information technology security techniques — Security requirements, test and evaluation methods for quantum key distribution — Part 2: Evaluation and testing methods

ISO/IEC CD 27032

Information Technology — Cybersecurity — Guidelines for Internet Security

ISO/IEC CD 27035-1

Information technology – Information security incident management — Part 1: Principles and process

ISO/IEC WD 27046.4

Information technology — Big data security and privacy — Implementation guidelines

ISO/IEC CD 27071

Information technology – Security techniques – Security recommendations for establishing trusted connections between devices and services

ISO/IEC DIS 27099

Information Technology — Public key infrastructure — Practices and policy framework

ISO/IEC WD 27554.4

Application of ISO 31000 for assessment of identity management-related risk

ISO/IEC FDIS 27555

Information security, cybersecurity and privacy protection – Guidelines on personally identifiable information deletion

ISO/IEC CD 27556.3

Information technology — User-centric framework for the handling of personally identifiable information (PII) based on privacy preferences

8.1.18 ISO/IEC JTC 1/SC 41 - Internet of Things and related technologies

Scope:

ISO/IEC JTC 1/SC 41 is being supported administratively by IEC. All information related to ISO/IEC JTC 1/SC 41 is available on the IEC web site

Standardisation in the area of Internet of Things and related technologies.

1. Serve as the focus and proponent for JTC 1's standardisation programme on the Internet of Things and Digital Twin, including their related technologies.
2. Provide guidance to JTC 1, IEC, ISO and other entities developing Internet of Things and Digital Twin related applications.

Link:

https://www.iso.org/committee/6483279.html

New Standards:

ISO/IEC 21823-3:2021

Internet of things (IoT) — Interoperability for IoT systems — Part 3: Semantic interoperability

ISO/IEC 30165:2021

Internet of Things (IoT) — Real-time IoT framework

ISO/IEC TR 30167:2021

Internet of Things (IoT) — Underwater communication technologies for IoT

ISO/IEC 30147:2021

Information technology — Internet of things — Methodology for trustworthiness of IoT system/service

ISO/IEC 30163:2021

Internet of Things (IoT) — System requirements of IoT/SN technology-based integrated platform for chattel asset monitoring supporting financial services

ISO/IEC 20924:2021

Information technology — Internet of Things (IoT) — VocabularyISO/IEC 30161:2020

Internet of Things (IoT) — Requirements of IoT data exchange platform for various IoT services

ISO/IEC 30144:2020

Information technology — Sensor network system architecture for power substations

ISO/IEC 30143:2020

Information technology — Underwater acoustic sensor network (UWASN) — Application profiles

ISO/IEC 30142:2020

Information technology — Underwater acoustic sensor network (UWASN) — Network management system overview and requirements

Link to all Standards:

https://www.iso.org/committee/6483279/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development:

ISO/IEC TR 30176

Internet of Things (IoT) —- Integration of IoT and DLT/blockchain: Use cases

ISO/IEC TR 30174

Internet of Things (IoT) — Socialized IoT system resembling human social interaction dynamics

ISO/IEC AWI 30173

Digital twin — Concepts and terminology

ISO/IEC AWI 30172

Digital Twin — Use cases

Standards under development:

ISO/IEC WD 30162

Internet of Things (IoT) — Compatibility requirements and model for devices within industrial IoT systems

ISO/IEC AWI 30149

Internet of things (IoT) — Trustworthiness framework

ISO/IEC AWI 30147

Information technology — Internet of things — Methodology for trustworthiness of IoT system/service

8.1.19 ISO/TC 204 - Intelligent transport systems

Keywords:

Electro-Mobility, Smart Cities, Data Protection, Road vehicles, Interoperability, Big data and artificial intelligence, Architecture, ITS database technology, Fee and toll collection, General fleet management and commercial/freight, Public transport/emergency, Integrated transport information, management and control, Traveller information systems, Vehicle/roadway warning and control systems, Communications, Nomadic Devices in ITS Systems

Scope:

Standarisation of information, communication and control systems in the field of urban and rural surface transportation, including intermodal and multimodal aspects thereof, traveller information, traffic management, public transport, commercial transport, emergency services and commercial services in the intelligent transport systems (ITS) field.

Excluded:

- in-vehicle transport information and control systems (ISO / TC 22).

Note:

ISO / TC 204 is responsible for the overall system aspects and infrastructure aspects of intelligent transport systems (ITS), as well as the coordination of the overall ISO work programme in this field including the schedule for standards development, taking into account the work of existing international standarisation bodies.

Link:

https://www.iso.org/committee/54706.html

New Standards:

ISO/TR 4445:2021

Intelligent transport systems — Mobility integration — Role model of ITS service application in smart cities

ISO/SAE PAS 22736:2021

Taxonomy and definitions for terms related to driving automation systems for on-road motor vehicles

ISO/TS 17573-3:2021

Electronic fee collection — System architecture for vehicle-related tolling — Part 3: Data dictionary

ISO/TR 4286:2021

Intelligent transport systems — Use cases for sharing of probe data

ISO 22737:2021

Intelligent transport systems — Low-speed automated driving (LSAD) systems for predefined routes — Performance requirements, system requirements and performance test procedures

ISO 22085-2:2021

Intelligent transport systems (ITS) — Nomadic device service platform for micro mobility — Part 2: Functional requirements and dataset definitions

ISO 4426:2021

Intelligent transport systems — Lower layer protocols for usage in the European digital tachograph

ISO 15638-24:2021

Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 24: Safety information provisioning

ISO/TS 20684-2:2021

Intelligent transport systems — Roadside modules SNMP data interface — Part 2: Generalized field device basic management

ISO 20684-1:2021

Intelligent transport systems — Roadside modules SNMP data interface — Part 1: Overview

ISO/TS 20684-10:2021

Intelligent transport systems — Roadside modules SNMP data interface — Part 10: Variable message signs

ISO 16460:2021

Intelligent transport systems — Localized communications — Communication protocol messages for global usage

ISO/TS 21184:2021 Cooperative intelligent transport systems (C-ITS) — Global transport data management (GTDM) framework

ISO 14907-2:2021

Electronic fee collection — Test procedures for user and fixed equipment — Part 2: Conformance test for the on-board unit application interface

ISO 14819-1:2021

Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 1: Coding protocol for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C

ISO/TR 21186-2:2021

Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 2: Hybrid communications

ISO/TR 21186-3:2021

Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 3: Security

ISO 14819-2:2021

Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 2: Event and information codes for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C

ISO 14819-3:2021

Intelligent transport systems — Traffic and travel information messages via traffic message coding — Part 3: Location referencing for Radio Data System-Traffic Message Channel (RDS-TMC) using ALERT-C

ISO 24014-1:2021

Public transport — Interoperable fare management system — Part 1: Architecture

ISO/TR 21186-1:2021

Cooperative intelligent transport systems (C-ITS) — Guidelines on the usage of standards — Part 1: Standardisation landscape and releases

ISO 13143-1:2020

Electronic fee collection — Evaluation of on-board and roadside equipment for conformity to ISO 12813 — Part 1: Test suite structure and test purposes

ISO 13185-4:2020

Intelligent transport systems — Vehicle interface for provisioning and support of ITS Services — Part 4: Unified vehicle interface protocol (UVIP) conformance test specification

ISO 15638-9:2020

Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 9: Remote digital tachograph monitoring

ISO 15638-20:2020

Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 20: Weigh-in-motion monitoring

ISO 17515-2:2020

Intelligent transport systems — Evolved universal terrestrial radio access network (E-UTRAN) — Part 2: Device to device communications (D2D)

ISO/TS 17573-2:2020

Electronic fee collection — System architecture for vehicle related tolling — Part 2: Vocabulary

ISO 18561-1:2020

Intelligent transport systems (ITS) — Urban mobility applications via nomadic device for green transport management — Part 1: General requirements for data exchange between ITS stations

ISO 20524-2:2020

Intelligent transport systems — Geographic Data Files (GDF) GDF5.1 — Part 2: Map data used in automated driving systems, Cooperative ITS, and multi-modal transport

ISO 20530-1:2020

Intelligent transport systems — Information for emergency service support via personal ITS station — Part 1: General requirements and technical definition

ISO/TS 21176:2020

Cooperative intelligent transport systems (C-ITS) — Position, velocity and time functionality in the ITS station

ISO 21217:2020

Intelligent transport systems — Station and communication architecture

ISO/TR 21724-1:2020

Intelligent transport systems — Common Transport Service Account Systems — Part 1: Framework and use cases

ISO 22418:2020

Intelligent transport systems — Fast service announcement protocol (FSAP) for general purposes in ITS

ISO 22738:2020

Intelligent transport systems — Localized communications — Optical camera communication

Link to all Standards:

https://www.iso.org/committee/54706/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development:

ISO/PWI 24318

Intelligent transport systems — Mobility integration — Architecture for automation

ISO/PWI 24315-1

Intelligent transport systems - Management for Electronic Traffic Regulations (METR) — Part 1: General concept and architecture

ISO/PWI 24311

Intelligent transport systems — Urban ITS — 'Controlled zone' management for UVARs using C-ITS

ISO/PWI 24309-1

Intelligent transport systems — Location referencing harmonization for Urban ITS — Part 1: State of the art and guidelines

ISO/PWI 24309-2

Intelligent transport systems — Location referencing harmonization for Urban ITS — Part 2: Transformation methods

ISO/PWI 24299

Intelligent transport systems — Public transport - Machine learning/artificial intelligence for public transport route design and update

ISO/NP 22086-2

Intelligent transport systems (ITS) — Network based precise positioning infrastructure for land transportation — Part 2: Functional requirements and data interface via nomadic device

ISO/NP TS 7815-1

Intelligent transport systems — Telematics applications for regulated commercial freight vehicles (TARV) using ITS stations — Part 1: Secure vehicle interface framework and architecture

ISO/NP TS 7815-2

Intelligent transport systems — Telematics applications for regulated commercial freight vehicles (TARV) using ITS stations — Part 2: Specification of the secure vehicle interface

ISO/NP TS 23374-2

Intelligent transport systems — Automated valet parking systems (AVPS) — Part 2: Security integration

ISO/DTS 14812.2

Intelligent transport systems — Vocabulary

ISO/DTS 4398

Intelligent transport systems — Guided transportation service planning data exchange

ISO/AWI 24317

Intelligent transport systems — Mobility integration — Mobility integration needs for vulnerable users and light modes of transport

ISO/CD 23375

Intelligent transport systems — Collision evasive lateral manoeuvre systems (CELM) — Performance requirements and test procedures

ISO/CD 23374-1

Intelligent transport systems — Automated valet parking systems (AVPS) — Part 1: System framework, requirements for automated driving, and communication interface

ISO/AWI 21734-2

Public transport — Performance testing for connectivity and safety functions of automated driving bus — Part 2: Performance requirements and test procedures

ISO/CD 21219-7

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 7: Location referencing container (TPEG2-LRC)

ISO/CD 21219-23

Intelligent transport systems - Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 23: Roads and multimodal routes (TPEG2-RMR)

ISO/CD 21219-24

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 24: Light encryption (TPEG2-LTE)

ISO/CD 21219-25

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 25: Electromobility charging infrastructure (TPEG2-EMI)

ISO/CD 21219-26

Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 26: Vigilance location information (TPEG2-VLI)

ISO/CD 21177

Intelligent transport systems — ITS station security services for secure session establishment and authentication between trusted devices

ISO/CD 20900

Intelligent transport systems — Partially automated parking systems (PAPS) — Performance requirements and test procedures

ISO/CD 17386

Intelligent transport systems — Manoeuvring Aids for Low Speed Operation (MALSO) — Performance requirements and test procedures

ISO/CD 14823-1

Intelligent transport systems — Graphic data dictionary — Part 1: Specification

ISO/AWI 14813-1

Intelligent transport systems — Reference model architecture(s) for the ITS sector — Part 1: ITS service domains, service groups and services

ISO/CD 12813

Electronic fee collection — Compliance check communication for autonomous systems

ISO/AWI 24298

Intelligent transport systems — Public transport — Light emitting diode (LED) destination board system for public transport buses

ISO/AWI 23793-1

Intelligent transport systems — Minimal Risk Maneuver (MRM) for automated driving — Part 1: Framework, straight-stop and in-lane stop

ISO/DIS 21219-1

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 1: Introduction, numbering and versions (TPEG2-INV)

ISO/CD 21219-13

Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 13: Public transport information (TPEG2-PTS)

ISO/AWI 19297-5

Intelligent transport systems — Shareable geospatial databases for ITS applications — Part 5: Data encoding method

ISO/AWI 17438-2

Intelligent transport systems — Indoor navigation for personal and vehicle ITS stations — Part 2: Requirements and specification for indoor maps

ISO/AWI 17438-3

Intelligent transport systems — Indoor navigation for personal and vehicle ITS stations — Part 3: Requirements and specification for indoor positioning reference data

ISO/AWI TS 5206-1

Intelligent transport systems — Parking — Part 1: Core data model

ISO/DTR 4447

Intelligent transport systems — Mobility integration — Comparison of two mainstream Integrated mobility concepts

ISO/AWI 23792-1

Intelligent transport systems — Motorway chauffeur systems (MCS) — Part 1: Framework and general requirements

ISO/AWI TS 22741-10

Intelligent transport systems — Roadside modules AP-DATEX data interface — Part 10: Variable message signs

ISO/AWI TR 21734-3

Public transport — Performance testing for connectivity and safety functions of automated driving bus — Part 3: Service framework and use cases

ISO/DIS 17572-1

Intelligent transport systems (ITS) — Location referencing for geographic databases — Part 1: General requirements and conceptual model

ISO/CD 15638-23

Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 23: Tyre monitoring

ISO/AWI TS 37444

Electronic fee collection – Charging performance framework

ISO/PWI 24102-7

Intelligent transport systems — ITS station management — Part 7: ITS-S capabilities

ISO/PWI 24102-8

Intelligent transport systems — ITS station management — Part 8: ITS-S application processes

ISO/PWI 24102-9

Intelligent transport systems — ITS station management — Part 9: ITS-S managed entities

ISO/DTR 23797

Intelligent transport systems — Mobility integration — Gap and overlap analysis of ISO/TC 204 work programme for mobility integration

ISO/PWI 23792-2

Intelligent transport systems — Motorway chauffeur systems (MCS) — Part 2: Requirements and test procedures for discretionary lane change

ISO 23376

Intelligent transport systems — Vehicle-to-vehicle intersection collision warning systems (VVICW) — Performance requirements and test procedures

ISO/PRF TR 23255

Intelligent transport systems — Architecture — Applicability of data distribution technologies within ITS

ISO/FDIS 22741-1

Intelligent transport systems — Roadside modules AP-DATEX data interface — Part 1: Overview

ISO/PWI TR 22087.2

Intelligent transport systems — Collection of agent behaviour information and sharing between ITS stations

ISO/PRF 22085-3

Intelligent transport systems (ITS) — Nomadic device service platform for micro mobility — Part 3: Data structure and data exchange procedures

ISO/DTS 21719-2

Electronic fee collection — Personalization of on-board equipment (OBE) — Part 2: Using dedicated short-range communication

ISO/TS 21719-3

Electronic fee collection — Personalization of on-board equipment — Part 3: Using integrated circuit(s) cards

ISO/CD 21219-21

Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 21: Geographic location referencing (TPEG-GLR)

ISO/DTS 20684-3

Intelligent transport systems — Roadside modules SNMP data interface — Part 3: Triggers

ISO/DTS 20684-4

Intelligent transport systems — Roadside modules SNMP data interface — Part 4: Notifications

ISO/DTS 20684-5

Intelligent transport systems — Roadside modules SNMP data interface — Part 5: Logs

ISO/DTS 20684-6

Intelligent transport systems — Roadside modules SNMP data interface — Part 6: Commands

ISO/DTS 20684-7

Intelligent transport systems — Roadside modules SNMP data interface — Part 7: Support features

ISO/CD 20530-2

Intelligent transport systems — Information for emergency service support via personal ITS station — Part 2: Service requirement for road incident notification

ISO 20529-2

Intelligent transport systems — Framework for Green ITS (G-ITS) standards — Part 2: Integrated mobile service applications

ISO/PRF TR 20527

Intelligent transport systems — Interoperability between interoperable fare management (IFM) systems and near field communication (NFC) mobile devices

ISO/PRF TS 19468

Intelligent transport systems — Data interfaces between centres for transport information and control systems — Platform-independent model specifications for data exchange protocols for transport information and control systems

ISO/PWI 18561-3

Intelligent transport systems — Urban mobility applications via nomadic device for green transport management — Part 3: Mobility integration service applications using hybrid V2X

ISO/PWI 17438-5

Intelligent transport systems — Indoor navigation for personal and vehicle ITS stations — Part 5: Requirements and message specification for central ITS station (C-ITS-S) based positioning

ISO/PWI TR 17185-4

Intelligent transport systems — Public transport user information — Part 4: 'Safe' journey planning use cases for multimodal travel for vulnerable road users

ISO/PWI 15638-25

Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 25: Overhead clearance monitoring

ISO/DIS 14906

Electronic fee collection — Application interface definition for dedicated short-range communication

ISO/DIS 14827-2

Intelligent transport systems — Data interfaces between centres for transport information and control systems — Part 2: AP-DATEX

ISO/AWI TS 14827-4

Intelligent transport systems — Data interfaces between centres for intelligent transport systems — Part 4: Data interfaces between centres for Intelligent transport systems (ITS) using XML (Profile B)

ISO/CD 13141

Electronic fee collection — Localisation augmentation communication for autonomous systems

ISO/FDIS 12855

Electronic fee collection — Information exchange between service provision and toll charging

ISO/PWI TR 12786

Intelligent transport systems — Big data and artificial intelligence supporting intelligent transport systems — Use cases

ISO/PWI 12770

Intelligent transport systems — Mobility integration — ITS data aggregation role and functional model

ISO/PWI 12769

Intelligent transport systems — Public transport — Framework of Internet of Things (IoT) Application Programming Interface (API) layer for Interoperable Fare Management System (IFMS)

ISO/PWI 12768

Intelligent transport systems — Automated Valet Driving Systems (AVDS)

ISO/PWI TR 7878

Intelligent transport systems — Mobility integration — Enterprise view

ISO/PWI TR 7874-1

Intelligent transport systems — Mobility integration multimodal pricing — Part 1: Framework

ISO/PWI TR 7874-2

Intelligent transport systems — Mobility integration multimodal pricing — Part 2: Comparison/mapping of modal product rules

ISO/PWI TS 7874-3

Intelligent transport systems — Mobility integration multimodal pricing — Part 3: Guidance for using framework to MaaS (mobility as a service) marketplace

ISO/DTR 7872

Intelligent transport systems — Mobility integration — Digital infrastructure service role and functional model for urban ITS service applications

ISO/PWI 7869

Intelligent transport systems — Networked communications — LoRa

ISO/PWI 7865

Intelligent transport systems — Localized communications — Bluetooth

ISO/PWI 7856

Intelligent transport systems — Remote support for LSAD system (RS-LSADS) — Performance requirements, system requirements and performance test procedures

ISO/PWI TR 6029-1

Intelligent transport systems — Seamless positioning for multimodal transportation in ITS stations — Part 1: General information and use case definition

ISO/DTR 6026

Electronic fee collection — Pre-study on the use of vehicle licence plate information and automatic number plate recognition (ANPR) technologies

ISO/DTS 5616

Intelligent transport systems — ITS data management, access and mobility issues — Governance using secure interfaces : High level specifications & information resource

ISO/DIS 5345

Intelligent transport systems — Identifiers — Processes

ISO/DTS 5255-1.2

Intelligent transport systems — Low speed automated driving system (LSADS) — Part 1: Service role and functional model

ISO/PWI TR 5255-2

Intelligent transport systems - Mobility integration low-speed automated driving (LSAD) system service architecture — Part 2: Gap analysis

ISO/PWI 5255-3

Intelligent transport systems - Mobility integration low-speed automated driving (LSAD) system service architecture — Part 3: System components

ISO/PWI TR 4448-1

Intelligent transport systems — Ground-based automated mobility systems — Part 1: Overview of paradigm

ISO/PWI TS 4448-2

Intelligent transport systems — Ground-based automated mobility systems — Part 2: Data definitions

ISO/PWI TS 4448-3

Intelligent transport systems — Ground-based automated mobility systems — Part 3: Communications and cybersecurity

ISO/PWI TS 4448-4

Intelligent transport systems — Ground-based automated mobility systems — Part 4: Procedures and protocols for kerbside loading and unloading

ISO/PWI TS 4448-5

Intelligent transport systems — Ground-based automated mobility systems — Part 5: Procedures and protocols for automated devices on footways

ISO/PWI TS 4448-6

Intelligent transport systems — Ground-based automated mobility systems — Part 6: Automated device behaviour on footways

ISO/PWI TS 4448-7

Intelligent transport systems — Ground-based automated mobility systems — Part 7: Integration of kerbside and footway deployment

ISO/PWI TS 4448-8

Intelligent transport systems — Ground-based automated mobility systems — Part 8: Social communication by automated devices on footways

ISO/PWI TS 4448-9

Intelligent transport systems — Ground-based automated mobility systems — Part 9: Determination of kerbside readiness for automated vehicle use

ISO/PWI TS 4448-10

Intelligent transport systems — Ground-based automated mobility systems — Part 10: Determination of footway readiness for automated vehicle use

ISO/PWI TS 4448-11

Intelligent transport systems — Ground-based automated mobility systems — Part 11: Determination of weather-worthiness of automated vehicles for use on footways

ISO/AWI 4273

Intelligent transport systems — Automated braking during low speed manoeuvring (ABLS) — Requirements and test procedures

ISO/DIS 4272

Intelligent transport systems — Truck platooning systems (TPS) — Functional and operational requirements

ISO/PWI TR 4255

Public transport — Integration of multiple demand responsive transportation (DRT) services with public transport

Standards under develpoment:

ISO/DIS 13111-2

Intelligent transport systems (ITS) — The use of personal ITS station to support ITS service provision for travelers — Part 2: General requirements for data exchange between ITS stations

ISO/AWI TS 17429-1

Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 1: Communication profile handler

ISO/AWI TS 17429-2

Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 2: Facility services handler

ISO/AWI TS 17429-3

Cooperative intelligent transport systems (C-ITS) — ITS station facility services — Part 3: Content subscription handler

ISO/CD 18561-2

Intelligent transport systems — Urban mobility applications via nomadic device for green transport management — Part 2: Trip and modal choice applications and specification

ISO/AWI 19297-4

Intelligent transport systems — Shareable geospatial databases for ITS applications — Part 4: Common data structure

ISO/AWI TS 19321

Intelligent transport systems — Cooperative ITS — Dictionary of in-vehicle information (IVI) data structures

ISO/WD 21210-1

Intelligent transport systems — IPv6 Networking — Part 1: Common terms, definitions and requirements

ISO/WD 21210-2

Intelligent transport systems — IPv6 Networking — Part 2: Addressing and forwarding

ISO/WD 21210-3

Intelligent transport systems — IPv6 Networking — Part 3: Mobility management

ISO/WD 21210-4

Intelligent transport systems — IPv6 Networking — Part 4: ITS station management adaptation entity

ISO/DIS 21219-1

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 1: Introduction, numbering and versions (TPEG2-INV)

ISO/DIS 21219-9

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 9: Service and network information (TPEG2-SNI)

ISO/DIS 21219-10

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 10: Conditional access information (TPEG2-CAI)

ISO/DIS 21219-14

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 14: Parking information (TPEG2-PKI)

ISO/DIS 21219-15

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 15: Traffic event compact (TPEG2-TEC)

ISO/DIS 21219-16

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol exports group, generation 2 (TPEG2) — Part 16: Fuel price information and availability (TPEG2-FPI)

ISO/CD 21219-17

Intelligent transport systems — Traffic and travel information via transport protocol experts group, generation 2 (TPEG2) — Part 17: Speed information (TPEG2-SPI)

ISO/DIS 21219-19

Intelligent transport systems — Traffic and travel information (TTI) via transport protocol experts group, generation 2 (TPEG2) — Part 19: Weather information (TPEG2-WEA)

ISO/AWI 21734-1

Public transport — Performance testing for connectivity and safety functions of automated driving bus — Part 1: General framework

ISO/PRF 22085-2

Intelligent transport systems (ITS) — Nomadic device service platform for micro mobility — Part 2: Functional requirements and dataset definitions

ISO/DIS 22085-3

Intelligent transport systems (ITS) — Nomadic device service platform for micro mobility — Part 3: Data structure and data exchange procedures

ISO/AWI TS 22726-1

Intelligent transport systems — Dynamic data and map database specification for connected and automated driving system applications — Part 1: Architecture and logical data model for harmonization of static map data

ISO/AWI TS 22726-2

Intelligent transport systems — Dynamic data and map database specification for connected and automated driving system applications — Part 2: Logical data model of dynamic data

ISO/DIS 23795-1

Intelligent transport systems — Extracting trip data via nomadic device for estimating CO2 emissions — Part 1: Fuel consumption determination for fleet management

ISO/CD 23795-2

Intelligent transport systems — Extracting trip data via nomadic device for estimating CO2 emissions — Part 2: Information provision for eco-friendly driving behaviour

ISO/CD 24102-6

Intelligent transport systems — ITS station management — Part 6: Path and flow management

ISO/AWI 24533-1

Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Part 1: Road transport information exchange methodology

ISO/DIS 24533-2

Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Part 2: Common Reporting System

8.1.20 ISO/TC 22/SC 31 - Data communication

Scope:

Data communication for vehicle applications

This includes

- Data buses and protocols (including dedicated sensor communication)
- V2X communication (including V2G)
- Diagnostics
- Test protocols
- Interfaces and gateways (including those for nomadic devices)
- Data formats
- Standardised data content

Link:

https://www.iso.org/committee/5383568.html

New Standards

ISO 21111-6:2021

Road vehicles — In-vehicle Ethernet — Part 6: Electrical 100-Mbit/s physical entity requirements and conformance test plan

ISO 21111-10:2021

Road vehicles — In-vehicle Ethernet — Part 10: Transport layer and network layer conformance test plans

ISO 20730-3:2021

Road vehicles — Vehicle interface for electronic Periodic Technical Inspection (ePTI) — Part 3: Data definitions

ISO/TR 20078-4:2021

Road vehicles — Extended vehicle (ExVe) web services — Part 4: Control

ISO 14229-2:2021

Road vehicles — Unified diagnostic services (UDS) — Part 2: Session layer services

ISO 15765-5:2021

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 5: Specification for an in-vehicle network connected to the diagnostic link connector

ISO 15765-4:2021

Road vehicles — Diagnostic communication over Controller Area Network (DoCAN) — Part 4: Requirements for emissions-related systems

ISO 23239-1:2021

Road vehicles — Vehicle domain service (VDS) — Part 1: General information and use case definitions

ISO 18541-1:2021

Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 1: General information and use case definition

ISO 18541-2:2021

Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 2: Technical requirements

ISO 18541-3:2021

Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements

ISO 18541-4:2021

Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 4: Conformance test

ISO 23150:2021

Road vehicles — Data communication between sensors and data fusion unit for automated driving functions — Logical interface

ISO 21806-10:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 10: 150-Mbit/s coaxial physical layer

ISO 21806-11:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 11: 150-Mbit/s coaxial physical layer conformance test plan

ISO 21806-12:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 12: 50-Mbit/s balanced media physical layer

ISO 21806-13:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 13: 50-Mbit/s balanced media physical layer conformance test plan

ISO 21806-14:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 14: Lean application layer

ISO 21806-15:2021

Road vehicles — Media Oriented Systems Transport (MOST) — Part 15: Lean application layer conformance test plan

ISO 17215-3:2021

Road vehicles — Video communication interface for cameras (VCIC) — Part 3: Camera message dictionary

ISO 13209-4:2021

Road vehicles — Open Test sequence eXchange format (OTX) — Part 4: Expanded extensions interface definition

ISO 11992-3:2021

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 3: Application layer for equipment other than brakes and running gear

ISO 20730-1:2021

Road vehicles — Vehicle interface for electronic Periodic Technical Inspection (ePTI) — Part 1: Application and communication requirements

ISO 21806-3:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 3: Application layer conformance test plan

ISO 21806-8:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 8: 150-Mbit/s optical physical layer

ISO 21806-9:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 9: 150-Mbit/s optical physical layer conformance test plan

ISO 21111-1:2020

Road vehicles — In-vehicle Ethernet — Part 1: General information and definitions

ISO 21111-2:2020

Road vehicles — In-vehicle Ethernet — Part 2: Common physical entity requirements

ISO 20794-5:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 5: Application layer conformance test plan

ISO 20794-6:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 6: Transport and network layer conformance test plan

ISO 20794-7:2020

Road vehicles — Clock extension peripheral interface (CXPI) — Part 7: Data link and physical layer conformance test plan

ISO 21806-1:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 1: General information and definitions

ISO 21806-2:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 2: Application layer

ISO 21806-4:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 4: Transport layer and network layer

ISO 21806-5:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 5: Transport layer and network layer conformance test plan

ISO 21806-6:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 6: Data link layer

ISO 21806-7:2020

Road vehicles — Media Oriented Systems Transport (MOST) — Part 7: Data link layer conformance test plan

ISO 15118-8:2020

Road vehicles — Vehicle to grid communication interface — Part 8: Physical layer and data link layer requirements for wireless communication

ISO 23132:2020

Road vehicles — Extended Vehicle (ExVe) time critical applications — General requirements, definitions and classification methodology of time-constrained situations related to Road and ExVe Safety (RExVeS)

ISO 21111-3:2020

Road vehicles — In-vehicle Ethernet — Part 3: Optical 1-Gbit/s physical entity requirements and conformance test plan

ISO 21111-5:2020

Road vehicles — In-vehicle Ethernet — Part 5: Optical 1-Gbit/s physical layer system requirements and test plans

Linl to all Standards:

https://www.iso.org/committee/5383568/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development:

ISO/CD 27145-6

Road vehicles — Implementation of World-Wide Harmonized On-Board Diagnostics (WWH-OBD) communication requirements — Part 6: External test equipment

ISO/DIS 14229-7

Road vehicles — Unified diagnostic services (UDS) — Part 7: UDS on local interconnect network (UDSonLIN)

ISO 14229-1:2020/CD Amd 1

Road vehicles — Unified diagnostic services (UDS) — Part 1: Application layer — Amendment 1

ISO/DIS 26021-3

Road vehicles — End-of-life activation of in-vehicle pyrotechnic devices — Part 3: Data definitions

ISO/CD 23150

Road vehicles — Data communication between sensors and data fusion unit for automated driving functions — Logical interface

ISO/CD 20730-2

Road vehicles — Vehicle interface for electronic Periodic Technical Inspection (ePTI) — Part 2: Application and communication requirements conformance test plan

ISO/PRF 26021-1

Road vehicles — End-of-life activation of in-vehicle pyrotechnic devices — Part 1: Application and communication interface

ISO 21111-11

Road vehicles — In-vehicle Ethernet — Part 11: Application layer to session layer conformance test plans

ISO 20080:2019/Amd 1

Road vehicles — Information for remote diagnostic support — General requirements, definitions and use cases — Amendment 1

ISO 20078-1

Road vehicles — Extended vehicle (ExVe) web services — Part 1: Content and definitions

ISO 20078-2

Road vehicles — Extended vehicle (ExVe) web services — Part 2: Access

ISO 20078-3

Road vehicles — Extended vehicle (ExVe) web services — Part 3: Security

ISO/DIS 15118-4

Road vehicles — Vehicle to grid communication interface — Part 4: Network and application protocol conformance test

ISO/FDIS 15118-20

Road vehicles — Vehicle to grid communication interface — Part 20: 2nd generation network layer and application layer requirements

ISO/PWI 15118-21

Road vehicles — Vehicle to grid communication interface — Part 21: Common 2nd generation network layer and application layer requirements conformance test plan

ISO/CD 11898-1

Road vehicles — Controller area network (CAN) — Part 1: Data link layer and physical coding sub-layer

ISO/PWI 3481

Road vehicles — Vehicle on-board diagnostics (VOBD) — Vehicle emissions system communication

Standards under development:

ISO/DIS 13209-2

Road vehicles — Open Test sequence eXchange format (OTX) — Part 2: Core data model specification and requirements

ISO/DIS 13209-3

Road vehicles — Open Test sequence eXchange format (OTX) — Part 3: Standard extensions and requirements

ISO/AWI 11992-2

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 2: Application layer for brakes and running gear

ISO/AWI 11992-4

Road vehicles — Interchange of digital information on electrical connections between towing and towed vehicles — Part 4: Diagnostic communication

ISO/AWI TR 23841

Road vehicles — Guidelines for the structure and layout of data communication standards

ISO/DIS 22900-2

Road vehicles — Modular vehicle communication interface (MVCI) — Part 2: Diagnostic protocol data unit (D-PDU API)

ISO/DIS 16844-1

Road vehicles — Tachograph systems — Part 1: Electromechanical components

ISO/DIS 16844-2

Road vehicles — Tachograph systems — Part 2: Recording unit communication interface

ISO/DIS 16844-3

Road vehicles — Tachograph systems — Part 3: Motion sensor communication interface

ISO/DIS 16844-4

Road vehicles — Tachograph systems — Part 4: Display unit communication interface

ISO/DIS 16844-6

Road vehicles — Tachograph systems — Part 6: Diagnostic communication interfaces

ISO/DIS 16844-7

Road vehicles — Tachograph systems — Part 7: Parameters

ISO/DIS 15118-9

Road vehicles — Vehicle to grid communication interface — Part 9: Physical and data link layer conformance test for wireless communication

ISO/PRF 14229-2

Road vehicles — Unified diagnostic services (UDS) — Part 2: Session layer services

ISO/DIS 14229-3

Road vehicles — Unified diagnostic services (UDS) — Part 3: Unified diagnostic services on CAN implementation (UDSonCAN)

ISO/DIS 14229-5

Road vehicles — Unified diagnostic services (UDS) — Part 5: Unified diagnostic services on Internet Protocol implementation (UDSonIP)

8.1.21 ISO/TC 22/SC 32 - Electrical and electronic components and general system aspects

Scope:

Electrical and electronic (E/E) components and cross-sectional specifications for E/E systems and components

This includes:

- Wiring harness (e.g cables, connectors, interconnections)
- Dedicated connectors (e.g trailer connectors, OBD-connector)
- Dedicated E/E components and parts (e.g. alternators, fuses, ignition equipment)
- EMC
- Environmental conditions
- Functional safety
- Cybersecurity
- Dedicated optical components
- Software update

Link:

https://www.iso.org/committee/5383636.html

New Standards:

ISO 11452-9:2021

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 9: Portable transmitters

ISO/SAE 21434:2021

Road vehicles — Cybersecurity engineering

ISO 6969:2004/Amd 1:2021

Road vehicles — Sound signalling devices — Tests after mounting on vehicle — Amendment 1

ISO 8092-5:2021

Road vehicles — Connections for on-board electrical wiring harnesses — Part 5: Test methods and general performance requirements for wiring harness connector operation

ISO 8820-10:2020

Road vehicles — Fuse-links — Part 10: Fuse-links with tabs Type L (high current miniature)

ISO 21780:2020

Road vehicles — Supply voltage of 48 V — Electrical requirements and tests

ISO 25981:2020

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Connectors for electronically monitored charging systems with 12 V or 24 V nominal supply voltage

ISO 19453-6:2020

Road vehicles — Environmental conditions and testing for electrical and electronic equipment for drive system of electric propulsion vehicles — Part 6: Traction battery packs and systems

ISO 12098:2020

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 15-pole connector for vehicles with 24 V nominal supply voltage

ISO 8820-11:2020

Road vehicles — Fuse-links — Part 11: Fuse-links with tabs (blade type) Type M (medium-high current)

Link to all Standards:

https://www.iso.org/committee/5383636/x/catalogue/p/1/u/0/w/0/d/0

New Standards under development

ISO/DPAS 5112

Road vehicles — Guidelines for auditing cybersecurity engineering

ISO/CD 11451-5

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 5: Reverberation chamber

ISO/AWI 8092-7

Road vehicles — Connections for on-board electrical wiring harnesses — Part 7: Electrical connection requirements, test methods and interface definition for miniaturized coaxial connections

ISO/AWI 24581

Road vehicles — General requirements and test methods of in-vehicle optical harnesses for up to 100Gbit/s communication

ISO/AWI PAS 8800

Road Vehicles — Safety and artificial intelligence

ISO/AWI TS 5083

Road vehicles — Safety for automated driving systems — Design, verification and validation

ISO/FDIS 21448

Road vehicles — Safety of the intended functionality

ISO/DIS 20653

Road vehicles — Degrees of protection (IP code) — Protection of electrical equipment against foreign objects, water and access

ISO/AWI 19813

Road vehicles — Ignition systems — Test methods and requirements for high voltage boots on plug-top coils and pencil coils

ISO/CD 19642-1

Road vehicles — Automotive cables — Part 1: Vocabulary and design guidelines

ISO/CD 19642-2

Road vehicles — Automotive cables — Part 2: Test methods

ISO/AWI 11565

Road vehicles — Spark-plugs — Test methods and requirements

ISO/AWI 11452-1

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 1: General principles and terminology

ISO/AWI 11452-8

Road vehicles — Component test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 8: Immunity to magnetic fields

ISO/AWI 11451-1

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 1: General principles and terminology

ISO/AWI 11451-2

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 2: Off-vehicle radiation sources

ISO/AWI 11451-3

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 3: On-board transmitter simulation

ISO/AWI 10924-1

Road vehicles — Circuit breakers — Part 1: Definitions and general test requirements

ISO/AWI 10924-2

Road vehicles — Circuit breakers — Part 2: User's guide

ISO/AWI 10924-3

Road vehicles — Circuit breakers — Part 3: Miniature circuit breakers with tabs (Blade type), Form CB11

ISO/AWI 10924-4

Road vehicles — Circuit breakers — Part 4: Medium circuit breakers with tabs (Blade type), Form CB15

ISO/AWI 10924-5

Road vehicles — Circuit breakers — Part 5: Circuit breakers with bolt with rated voltage of 450 V

ISO/AWI TR 9968

Road vehicles — Functional safety — The application to generic rechargeable energy storage systems for new energy vehicle

ISO/AWI TR 9839

Road vehicles — Application of predictive maintenance to hardware with ISO 26262-5

ISO/AWI PAS 8926

Road vehicles — Functional safety — Qualification of pre-existing software products for safety-related applications

ISO/SAE PWI 8477

Road vehicles — Cybersecurity verification and validation

ISO/SAE PWI 8475

Road vehicles — Cybersecurity Assurance Levels (CAL) and Target Attack Feasibility (TAF)

ISO/AWI TR 7964

Road vehicles — Future directions for vehicle EMC validation — Adapting to emerging complex systems and safety considerations (including functional safety and SOTIF)

ISO/AWI 7637-1

Road vehicles — Electrical disturbances from conduction and coupling — Part 1: Definitions and general considerations

ISO/AWI 6518-2

Road vehicles — Ignition systems — Part 2: Electrical performance and function test methods

ISO 4091:2003/DAmd 1

Road vehicles — Connectors for the electrical connection of towing and towed vehicles — Definitions, tests and requirements — Amendment 1

Standards under development:

ISO/DIS 17447-1

Road Vehicles — Glow-plugs with conical seating and their cylinder head housing — Part 1: Basic characteristics and dimensions for metal-sheath-type glow-plugs

ISO/CD 24089

Road vehicles — Software update engineering

ISO/CD 16750-1

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 1: General

ISO/CD 16750-2

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 2: Electrical loads

ISO/CD 16750-3

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 3: Mechanical loads

ISO/CD 16750-4

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads

ISO/CD 16750-5

Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 5: Chemical loads

ISO/CD 19642-11

Road vehicles — Automotive cables — Part 11: Dimensions and requirements for coaxial RF cables with a specified analog bandwidth up to 6 GHz (20 GHZ)

ISO/CD 19642-12

Road vehicles — Automotive cables — Part 12: Unscreened paired or quad RF cables with a specified analog bandwidth up to 1 GHz

ISO/AWI 8092-6

Road vehicles — Connections for on-board electrical wiring harnesses — Part 6: In-vehicle Ethernet, general performance requirements and interface definitions

ISO/DIS 21111-8

Road vehicles — In-vehicle Ethernet — Part 8: Electrical 100-Mbit/s Ethernet transmission media, components and tests

ISO/AWI 28741

Road vehicles — Spark-plugs and their cylinder head housings — Basic characteristics and dimensions

ISO/DIS 24195

Road vehicles — Vocabulary for engineering of starting devices

ISO/SAE FDIS 21434

Road vehicles — Cybersecurity engineering

ISO/DIS 11451-4

Road vehicles — Vehicle test methods for electrical disturbances from narrowband radiated electromagnetic energy — Part 4: Harness excitation methods

ISO/CD 10605

Road vehicles — Test methods for electrical disturbances from electrostatic discharge

ISO/AWI 8092-2

Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements

ISO/DIS 7637-2

Road vehicles — Electrical disturbances by conduction and coupling — Part 2: Electrical transient conduction along supply lines

8.1.22 PC 118 - Smart grid user interface

Keywords:

Smart Grids,

Scope:

The Project Committee PC118 was disbanded 31/12/2018.

All publications are currently under the responsibility of the Chinese National Committee.

For further information please contact IEC Central office.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:8701

Standards:

IEC 62746-10-1:2018

Systems interface between customer energy management system and the power management system - Part 10-1: Open automated demand response

IEC 62746-10-3:2018

Systems interface between customer energy management system and the power management system - Part 10-3: Open automated demand response - Adapting smart grid user interfaces to the IEC common information model

IEC TR 62939-1:2014

Smart grid user interface - Part 1: Interface overview and country perspectives

IEC TS 62939-2:2018

Smart grid user interface - Part 2: Architecture and requirements

Standards under development:

There are not any standards under development.

8.1.23 SyC Smart Energy- Smart Energy

Keywords:

Smart Cities, Electrical energy supply, Clean Energy for transportation

Scope:

Standarisation in the field of Smart Energy in order to provide systems level standarisation, coordination and guidance in the areas of Smart Grid and Smart Energy, including interaction in the areas of Heat and Gas.

To widely consult within the IEC community and the broader stakeholder community to provide overall systems level value, support and guidance to the TCs and other standard development groups, both inside and outside the IEC.

To liaise and cooperate with the SEG Smart Cities and future SEGs, as well as the future Systems Resource Group.

Link:

https://www.iec.ch/dyn/www/f?p=103:186:::::FSP_ORG_ID:11825

New Standards

IEC SRD 63200:2021

Definition of extended SGAM smart energy grid reference architecture model

IEC SRD 63268:2020

Energy and data interfaces of users connected to the smart grid with other smart grid stakeholders - Standardisation landscape

IEC SRD 63199:2020

Top priority standards development status in the domain of smart energy

Link to all Standards:

https://www.iec.ch/dyn/www/f?p=103:215:616209115880543::::FSP_ORG_ID,FSP_LANG_ID:11825,25

New Standards under development:

IEC SRD 62913-1 ED2

Generic smart grid requirements - Part 1: Specific application of the Use Case methodology for defining generic smart grid requirements according to the IEC systems approach

IEC TS 63417 ED1

Guide and plan to develop a unified IEC Smart energy Ontology

Standards under development:

PWI TR SYCSMARTENERGY-1

Cyber Security and Resilience Guidelines for Cyber-Physical Power Systems

8.1.24 TA 6 - Storage media, storage data structures, storage systems and equipment

Keywords:

Data Model, Availability and information

Scope:

To develop international publications on storage media, data structures, systems and equipment related to multimedia applications for professional and consumer electronics. These include standards or guidelines on file format, metadata, and applications related to storage systems and equipment.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1442

New Standards:

There are no new Standards developed since the las version

Standards:

https://www.iec.ch/dyn/www/f?p=103:22:14961967720625::::FSP_ORG_ID,FSP_LANG_ID:1442,25

New Standards under development:

IEC 62702-1-1 ED2

Audio archive system - Part 1-1: DVD disk and data migration for long term audio data storage

IEC 62702-1-2 ED2

Audio archive system - Part 1-2 : BD disk and data migration for long-term audio data storage

Standards under development:

PWI TR 100-28 ED1

Universal Archival Disk Format (UADF)

8.1.25 TC 21 - Secondary cells and batteries

Keywords:

Road vehicles, Starter and Auxiliary batteries, Traction and stationary batteries, Safe operations and marking of batteries, Marking symbols for identification of secondary battery chemistry, Secondary high temperature cells and batteries

Scope:

To provide standards for all secondary cells and batteries related to product (dimension and performance), safety (including marking and labelling), testing, and safe application (installation, maintenance, operation) irrespective of type or application or configuration (hybrid, stand alone, module). Main applications are:

- automotive (car, motorcycle, truck) for starting, lighting, ignition, start/stop
- industrial (telecom, UPS, reliable power supply and traction)
- electrical vehicles (full electrical vehicle, hybrid car, bicycle)
- portable (computer, tool, lamp)
- onboard batteries (aircraft, railway, ship, motor-home)
- energy storage (renewable, on- grid and off-grid).

All electrochemical systems are considered such as Lead acid, Nickel based (NiMH, NiCd) and Lithium based. New battery technologies and chemistries such as flow batteries and High temperature batteries (e.g. sodium sulfur, sodium nickel chloride) are included. The work is shared between TC 21 and SC 21A according to technologies and applications. For standarisation of applications and system integration, TC 21 is cooperating with the responsible Committees, TC 9, TC 34, TC 69, TC 82, TC 105, TC 116, TC 120 and ISO TC22/SC21.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1290

New Standards:

IEC 60095-2:2021

Lead-acid starter batteries - Part 2: Dimensions of batteries and dimensions and marking of terminals

IEC TS 61044:2021

Opportunity charging of lead-acid traction batteries

IEC 60095-4:2021 RLV

Lead-acid starter batteries - Part 4: Dimensions of batteries for heavy vehicles

IEC 60095-4:2021

Lead-acid starter batteries - Part 4: Dimensions of batteries for heavy vehicles

IEC 62485-6:2021

Safety requirements for secondary batteries and battery installations - Part 6: Safe operation of lithium-ion batteries in traction applications

IEC 62485-5:2020

Safety requirements for secondary batteries and battery installations - Part 5: Safe operation of stationary lithium ion batteries

IEC 63193:2020

Lead-acid batteries for propulsion power of lightweight vehicles - General requirements and methods of test

IEC TR 61431:2020

Guidelines for the use of monitor systems for lead-acid traction batteries

Link to all Standards:

https://www.iec.ch/dyn/www/f?p=103:22:616209115880543::::FSP_ORG_ID,FSP_LANG_ID:1290,25

New Standards under development:

IEC 63330 ED1

Requirements for reuse of secondary batteries

Standards under development:

IEC 63118 ED1

12V Lithium-ion Secondary Battery for Automotive SLI Applications and Auxiliary purposes

Part 1 - General requirements and methods of test

IEC 62660-3 ED2

Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements

IEC 62902 ED2

Secondary cells and batteries - Marking symbols for identification of their chemistry

8.1.26 TC 57 - Power systems management and associated information exchange

Keywords:

Mobile Telecommunications, Telecontrol protocols, Distribution automation using distribution line carrier systems, Power system IED communication and associated data models, Software interfaces for operation and planning of the electric grid, Enterprise business function interfaces for utility operations, Data and communication security, Deregulated energy market communications, Power system intelligent electronic device communication and associated data models for microgrids, distributed energy resources and distribution automation

Hydroelectric power plants, Communication for monitoring and control**,** **Interoperability**, Interfaces and protocol profiles relevant to systems connected to the electrical grid

Scope:

To prepare international standards for power systems control equipment and systems including EMS (Energy Management Systems), SCADA (Supervisory Control And Data Acquisition), distribution automation, teleprotection, and associated information exchange for real-time and non-real-time information, used in the planning, operation and maintenance of power systems. Power systems management comprises control within control centres, substations and individual pieces of primary equipment including telecontrol and interfaces to equipment, systems and databases, which may be outside the scope of TC 57. The special conditions in a high voltage environment have to be taken into consideration.

Note 1: Standards prepared by other technical committees of the IEC and organizations such as ITU and ISO shall be used where applicable.

Note 2: Although the work of TC 57 is chiefly concerned with standards for electric power systems, these standards may also be useful for application by the relevant bodies to other geographical widespread processes.

Note 3: Whereas standards related to measuring and protection relays and to the control and monitoring equipment used with these systems are treated by TC 95, TC 57 deals with the interface to the control systems and the transmission aspects for teleprotection systems. Whereas standards related to equipment for electrical measurement and load control are treated by TC 13, TC 57 deals with the interface of equipment for interconnection lines and industrial consumers and producers requiring energy management type interfaces to the control system.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1273

New Standards:

IEC 61970:2021 SER

Energy management system application program interface (EMS-API) - ALL PARTS

IEC 61970-452:2021

Energy management system application program interface (EMS-API) - Part 452: CIM static transmission network model profiles

IEC 61850:2021 SER

Communication networks and systems for power utility automation - ALL PARTS

IEC 61850-7-420:2021

Communication networks and systems for power utility automation - Part 7-420: Basic communication structure - Distributed energy resources and distribution automation logical nodes

IEC TR 61850-90-16:2021

Communication networks and systems in power utility automations - Part 90-16: Requirements of system management for Smart Energy Automation

IEC 61970-600-1:2021

Energy management system application program interface (EMS-API) - Part 600-1: Common Grid Model Exchange Standard (CGMES) - Structure and rules

IEC 61970-600-2:2021

Energy management system application program interface (EMS-API) - Part 600-2: Common Grid Model Exchange Standard (CGMES) - Exchange profiles specification

IEC 61970-CGMES:2021

Energy management system application program interface (EMS-API) - Common Grid Model Exchange Specification (CGMES)

IEC 61968-3:2021

Application integration at electric utilities - System interfaces for distribution management - Part 3: Interface for network operations

IEC TR 61850-7-5:2021

Communication networks and systems for power utility automation - Part 7-5: IEC 61850 modelling concepts

IEC 62488-3:2021

Power line communication systems for power utility applications - Part 3: Digital Power Line Carrier (DPLC) terminals and hybrid ADPLC terminals

IEC 62325-451-7:2021

Framework for energy market communications - Part 451-7: Balancing processes, contextual and assembly models for European style market

IEC 61968-13:2021

Application integration at electric utilities - System interfaces for distribution management - Part 13: Common distribution power system model profiles

IEC 61970-457:2021

Energy management system application program interface (EMS-API) - Part 457: Dynamics profile

IEC 62351:2021 SER

Power systems management and associated information exchange - Data and communications security - ALL PARTS

IEC TR 62351-90-3:2021

Power systems management and associated information exchange - Data and communications security - Part 90-3: Guidelines for network and system management

IEC TR 61850-90-13:2021

Communication networks and systems for power utility automation - Part 90-13: Deterministic networking technologies

IEC 62325-451-10:2020

Framework for energy market communications - Part 451-10: Profiles for Energy Consumption Data (“My Energy Data”)

IEC TR 61850-90-3:2016/COR1:2020

Corrigendum 1 - Communication networks and systems for power utility automation - Part 90-3: Using IEC 61850 for condition monitoring diagnosis and analysis

IEC 61850-4:2011+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 4: System and project management

IEC 61850-4:2011/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 4: System and project management

IEC 62351-6:2020

Power systems management and associated information exchange - Data and communications security - Part 6: Security for IEC 61850

IEC TR 61850-90-9:2020

Communication networks and systems for power utility automation - Part 90-9: Use of IEC 61850 for Electrical Energy Storage Systems

IEC TR 61850-90-11:2020

Communication networks and systems for power utility automation - Part 90-11: Methodologies for modelling of logics for IEC 61850 based applications

IEC 61850-7-1:2011+AMD1:2020 CSV

Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

IEC 61850-7-1:2011/AMD1:2020

Amendment 1 - Communication networks and systems for power utility automation - Part 7-1: Basic communication structure - Principles and models

IEC 61968-5:2020

Application integration at electric utilities - System interfaces for distribution management - Part 5: Distributed energy optimization

IEC TR 61850-90-12:2020

Communication networks and systems for power utility automation - Part 90-12: Wide area network engineering guidelines

IEC 62351-4:2018+AMD1:2020 CSV

Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

IEC 62351-4:2018/AMD1:2020

Amendment 1 - Power systems management and associated information exchange - Data and communications security - Part 4: Profiles including MMS and derivatives

IEC 61970-301:2020

Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC TS 61850-1-2:2020

Communication networks and systems for power utility automation - Part 1-2: Guideline on extending IEC 61850

Link to all Standards:

https://www.iec.ch/dyn/www/f?p=103:22:11733363063662::::FSP_ORG_ID,FSP_LANG_ID:1273,25

New Standards under development

IEC TS 61850-1-2/AMD1 ED1

Amendment 1 - Communication networks and systems for power utility automation - Part 1-2: Guideline on extending IEC 61850

IEC 61850-7-410 ED3

Communication networks and systems for power utility automation - Part 7-410: Basic communication structure - Hydroelectric power plants - Communication for monitoring and control

IEC TR 61850-7-510 ED2

Communication networks and systems for power utility automation - Part 7-510: Basic communication structure - Hydroelectric power plants - Modelling concepts and guidelines

IEC TS 61850-80-6 ED1

Communication networks and systems for power utility automation – Part 80-6: Using IEC 61850 for communication between substations and control centres

IEC TS 61850-80-7 ED1

Communication networks and systems for power utility automation - Part 80-7: Communication services and data model to support IEC 61850 system management

IEC TR 61850-90-14 ED1

Communication networks and systems for power utility automation – Part 90-14: Using IEC 61850 for FACTS (Flexible AC Transmission Systems), HVDC (High Voltage Direct Current) Transmission and Power Conversion data modelling

IEC TR 61850-90-27 ED1

Communication networks and systems for power utility automation - Part 90-27: Use of IEC 61850 for thermal energy systems connected to electric power grid

IEC 61968-8 ED2

Application integration at electric utilities - System interfaces for distribution management - Part 8: Interfaces for customer operations

IEC 61968-100 ED2

Application integration at electric utilities - System interfaces for distribution management - Part 100: Implementation profiles

IEC 61970-301/AMD1 ED7

Amendment 1 - Energy management system application program interface (EMS-API) - Part 301: Common information model (CIM) base

IEC 61970-302 ED2

Energy management system application program interface (EMS-API) - Part 302: Common information model (CIM) dynamics

IEC 61970-456 ED3

Energy management system application program interface (EMS-API) - Part 456: Solved power system state profiles

IEC 61970-457 ED2

Energy management system application program interface (EMS-API) - Part 457: Dynamics profile

IEC 62351-3 ED2

Power systems management and associated information exchange - Data and communications security - Part 3: Communication network and system security - Profiles including TCP/IP

IEC 62488-1 ED2

Power line communication systems for power utility applications - Part 1: Planning of analogue and digital power line carrier systems operating over EHV/HV/MV electricity grids

IEC TS 63353 ED1

IIoT applications in power distribution systems management: Architecture and functional requirements

IEC TS 63389 ED1

Developing a profile composed of a set of Basic Application Profiles (BAPs) of IEC 61850 for DER compliant to IEEE 1547

Standards under development:

IEC 62351-9 ED2

Power systems management and associated information exchange - Data and communications security - Part 9: Cyber security key management for power system equipment

IEC TR 61850-10-3 ED1

Communication networks and systems for power utility automation - Part 10-3: Functional testing of IEC 61850 systems

IEC 62325-451-8 ED1

Framework for energy market communications - Part 451-8: HVDC processes, contextual and assembly models for European style market

IEC 62351-5 ED1

Power systems management and associated information exchange - Data and communications security - Part 5: Security for IEC 60870-5 and derivatives

IEC 61850-5/AMD1 ED2

Amendment 1 - Communication networks and systems for power utility automation - Part 5: Communication requirements for functions and device models

IEC TS 62351-100-4 ED1

Power systems management and associated information exchange – Data and communication security – Part 100-4: Conformance testing for IEC 62351-4

IEC TS 62351-100-6 ED1

Power systems management and associated information exchange – Data and communications security – Part 100-6: Conformance testing for IEC 62351-6

IEC 61970-401 ED1

Energy management system application program interface (EMS-API) - Part 401: Profile framework

IEC 61850-6-2 ED1

Communication networks and systems for power utility automation - Part 6-2: Configuration description language for extensions for human machine interfaces

IEC 62351-14 ED1

Power systems management and associated information exchange - Data and communications security - Part 14: Cyber security event logging

IEC TS 61850-80-5 ED1

Communication networks and systems for power utility automation - Part 80-5: Guideline for mapping information between IEC 61850 and IEC 61158-6 (Modbus)

PWI TR 57-1001

Development of IEC TR 61850-6-100, SCL Function Modelling for Substation Automation

PWI TR 57-1003

IEC TR 61850-90-22, SCD based substation network auto-routing with visualization and supervision support

IEC TR 61850-90-19 ED1

Communication networks and systems for power utility automation - Part 90-19: Using Role Based Access Control (RBAC) and IEC 61850

PWI TR 61850-90-20 ED1

Communication networks and systems for power utility automation - Part 90-20: Guideline to redundancy systems

PWI 62325-452-1 ED1

Day Ahead Market

PWI 62325-452-4 ED1

Weather data to support market operations

PWI 62325-452-5 ED1

Communications with Demand Response Systems

PWI 62325-550-2 ED1

Common Dynamic Data Structures for DAM, RT, FTR

PWI 62325-552-1 ED1

Dynamic Data Structures for DAM

PWI 62488-4 ED1

Broadband systems operating over EHV/HV/MV/LV electricity grids

8.1.27 TC 64 Electrical installations and protection against electric shock

Scope:

To prepare International standards:

- concerning protection against electric shock arising from equipment, from installations and from systems without limit of voltage,

- for the design, erection foreseeable correct use and verification of all kind of electrical installations at supply voltage up to 1 kV AC or 1,5 kV DC, except those installations covered by the following IEC committees: TC 9, TC 18, TC 44, TC 97, TC99

- in co-ordination with TC 99, concerning requirements additional to those of TC 99 for the design, erection and verification of electrical installations of buildings above 1kV up to 35kV.

The object of the standards shall be:

- to lay down requirements for installation and co-ordination of electrical equipment

- to lay down basic safety requirements for protection against electric shock for use by technical committees

- to lay down safety requirements for protection against other hazards arising from the use of electricity

- to give general guidance to IEC member countries that may have need of such requirements

- and to facilitate international exchanges that may be hampered by differences in national regulations.

The standards will not cover individual items of electrical equipment other than their selection for use.

Horizontal Safety Function: Protection against electric shock for equipment and installations without limitation of voltage.

Group Safety Function: Protection against electric shock for low-voltage electrical installations.

Horizontal Energy Efficiency Function: low-voltage electrical installations.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1249

New Standards:

IEC 60364-7-710:2021

Low-voltage electrical installations - Part 7-710: Requirements for special installations or locations - Medical locations

IEC 60364-5-54:2011+AMD1:2021 CSV

-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors

IEC 60364-5-54:2011/AMD1:2021

Amendment 1 - Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors

IEC 60364-5-53:2019+AMD1:2020 CSV

Low-Voltage electrical installations - Part 5-53: Selection and erection of electrical equipment - Devices for protection for safety, isolation, switching, control and monitoring

IEC 60364-5-53:2019/AMD1:2020

Amendment 1 - Low-Voltage electrical installations - Part 5-53: Selection and erection of electrical equipment - Devices for protection for safety, isolation, switching, control and monitoring

IEC TS 60364-8-3:2020

Low-voltage electrical installations - Part 8-3 : Functional aspects - Operation of prosumer's electrical installations

IEC TR 60479-4:2020

Effects of current on human beings and livestock - Part 4: Effects of lightning strokes

IEC TS 61200-102:2020

Electrical installation guide - Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network

Link to all Standards:

https://www.iec.ch/dyn/www/f?p=103:22:11733363063662::::FSP_ORG_ID,FSP_LANG_ID:1249,25

New Standards under development:

IEC 60364-1 ED6

Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions

IEC 60364-4-42 ED4

Low-voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects

IEC 60364-4-43 ED4

Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent

IEC 60364-5-52/AMD1 ED3

Amendment 1 - Low-voltage electrical installations - Part 5-52: Selection and erection of electrical equipment - Wiring systems

IEC 60364-5-55/AMD3 ED2

Amendment 3 - Electrical installations of buildings - Part 5-55: Selection and erection of electrical equipment - Other equipment ; Amendment on Clause 551

IEC 60364-5-57 ED1 Low-voltage electrical installations - Part 5: Selection and erection of electrical equipment – C

lause 57: Erection of stationary secondary batteries

IEC 60364-7-702 ED4

Low-voltage electrical installations - Part 7-702: Requirements for special installations or locations - Swimming pools and fountains

IEC 60364-7-706 ED3

Low-voltage electrical installations - Part 7-706: Requirements for special installations or locations - Conducting locations with restricted movement

IEC 60364-7-712 ED3

Low voltage electrical installations - Part 7-712: Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems

IEC 60364-7-716 ED1

Low-Voltage electrical installations - Part 7-716: Requirements for special installations or locations – DC power distribution over Information Technology Cable Infrastructure

IEC 60364-7-720 ED1

Part 7-720: Requirements for special installations or locations—DC power supply system in the data centre

IEC 60364-7-751 ED1

Low-voltage electrical installations – Part 7-751: Requirements for special installations or locations – Low voltage generating sets

IEC 60364-8-2 ED2

Low-voltage electrical installations - Part 8-2: Prosumer's low-voltage electrical installations

IEC 60479-2 ED2

Effects of current on human beings and livestock - Part 2: Special aspects

IEC TR 60479-5 ED2

Effects of current on human beings and livestock - Part 5: Touch voltage threshold values for physiological effects

IEC TS 61200-201 ED1

Application guides complying with IEC 60364 - Asynchronous motor starting and protection

IEC TS 61200-202 ED1

Application guides complying with IEC 60364 - Lighting circuits

IEC TS 61200-203 ED1

Application guides complying with IEC 60364 - Uninterruptible Power Systems

IEC TS 61200-204 ED1

Application guides complying with IEC 60364 - Rotating generators

IEC TS 61200-205 ED1

Application guides complying with IEC 60364 - Source changeover system

8.1.28 TC 69 - Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks

Keywords:

Electrical energy supply, Road vehicles, Clean Energy for transportation, Calibration of chargers, Smart Charging, Dynamic charge management, Vehicle-to-Grid (V2G), Charging speed, Electric Vehicle Supply Equipment (EVSE), Electric vehicle wireless power transfer (WPT) systems, **Electric vehicle charging roaming service,** Light electric vehicles conductive power supply systems, Electric Vehicles conductive power/energy transfer system, Electric vehicle battery exchange infrastructure safety requirements, Electric vehicle conductive charging system - DC Charging with an automatic connection system, Electric vehicle

conductive charging system - DC EV supply equipment where protection relies on electrical separation, Electrical characteristics test methods of EDLC Module for Electric road vehicles, Dynamic electric vehicle wireless power transfer systems, EMC requirements for off board electric vehicle charging systems, Electrically propelled vehicles, energy storage, electric double-layer capacitors and hybrid capacitors, Management of Electric Vehicles charging and discharging infrastructures

Scope:

To prepare publications on electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks (hereafter EV) drawing current from a rechargeable energy storage system (RESS). Possibilities to transfer power/energy include conductive power/energy transfer, wireless power/energy transfer and battery swap.

The different publications can cover, but are not limited to:

- general requirements (e.g. safety, EMC, construction, testing);
- functional requirements (e.g. charging modes);
- communication between the EV and the EV supply equipment;
- electrical power/energy transfer between EV and supply network (G2V and V2G);
- management of the corresponding infrastructures in view of offering the associated value added services.

EV include but are not limited to passenger cars and buses, two and three-wheel and light four-wheel vehicles, trucks and goods vehicles, trailers and special and industrial trucks.

Trains, trams and trolleybuses are out of scope of TC69.

Link:

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:1255

New Standards

IEC PAS 62840-3:2021

Electric vehicle battery swap system - Part 3: Particular safety and interoperability requirements for battery swap systems operating with removable RESS/battery systems

IEC 61851-25:2020

Electric vehicle conductive charging system - Part 25: DC EV supply equipment where protection relies on electrical separation

IEC 61980-1:2020

Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirements

ISO 15118-8:2020

Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication

Link to all Standards:

https://www.iec.ch/dyn/www/f?p=103:22:10053612005638::::FSP_ORG_ID,FSP_LANG_ID:1255,25

New Standards under development:

IEC 61851-21-1 ED2

Electric vehicle conductive charging system - Part 21-1 Electric vehicle on-board charger EMC requirements for conductive connection to AC/DC supply

IEC 63119-1 ED2

Information exchange for electric vehicle charging roaming service - Part 1: General

IEC 63380 ED1 Local Charging station management systems and Local Energy Management Systems network connectivity and information exchange

IEC 60050-YYY ED1

EV Supply equipment – Part YYY: Vocabulary

IEC 61851-23-3 ED1

Electric vehicle conductive charging system - Part 23-3: DC electric vehicle supply equipment for Megawatt charging systems

IEC TS 61851-26 ED1

Electric vehicle conductive charging system - Part 26: EV supply equipment with automated connection of a vehicle coupler located at the underbody of an electric vehicle

IEC TS 61851-27 ED1

Electric vehicle conductive charging system - Part 27: EV supply equipment with automated connection of a vehicle coupler according to IEC 62196-2 or IEC 62196-3

IEC 61980-4 ED1

Interoperability and safety of high power wireless power transfer (H-WPT) for electric vehicles

IEC 63380 ED1

Local Charging station management systems and Local Energy Management Systems network connectivity and information exchange

IEC 63381 ED1

Communication requirements of dynamic wireless power transfer (D-WPT) for electric vehicles

IEC 63382 ED1

Management of Distributed Energy Storage Systems based on Electrically Chargeable Vehicles (ECV-DESS) - Part 1: Definitions, Requirements and Use Cases - Part 2: Data models Protocols, Messages - Part 3: Conformance tests

IEC TR 63393 ED1

Electrical systems for electric road vehicles and electric industrial trucks - Common items of TC 69 publications

Standards under development:

IEC 62840-1 ED1

Electric vehicle battery swap system - Part 1: General and guidance

IEC 62840-2 ED2

Electric vehicle battery swap system - Part 2: Safety requirements

ISO 15118-4 ED2

Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test

IEC 61980-2 ED1

Electric vehicle wireless power transfer (WPT) systems - Part 2: Specific requirements for communication between electric road vehicle (EV) and infrastructure

IEC 61980-3 ED1

Electric vehicle wireless power transfer (WPT) systems - Part 3: Specific requirements for the magnetic field wireless power transfer systems

IEC 63243 ED1

Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles

IEC 62576-2 ED1

Electrical characteristics test methods of EDLC Module for Electric road vehicles

IEC 63119-2 ED1

Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases

IEC 63119-3 ED1

Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure

IEC 63119-4 ED1

Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy

ISO 15118-9 ED1

Road vehicles - Vehicle to grid communication interface - Part 9: Physical and data link layer conformance test for wireless communication

IEC 63110-1 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 1: Basic Definitions, Use Cases and architectures

IEC 63110-2 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 2: Technical protocol specifications and requirements

IEC 63110-3 ED1

Protocol for Management of Electric Vehicles charging and discharging infrastructures - Part 3: Requirements for conformance tests

IEC 61851-23-1 ED1

Electric vehicle conductive charging system - Part 23-1: DC electric vehicle charging station with an automated connection device

ISO 15118-20 ED1

Road vehicles - Vehicle to grid communication interface - Part 20: Network and application protocol requirements

IEC 61851-23 ED2

Electric vehicle conductive charging system - Part 23: DC electric vehicle supply equipment

IEC 61851-24 ED2

Electric vehicle conductive charging system - Part 24: Digital communication between a DC EV charging station and an electric vehicle for control of DC charging

IEC TS 61851-3-1 ED1

Electric Vehicles conductive power supply system - Part 3-1: DC EV supply equipment where protection relies on double or reinforced insulation - General rules and requirements for stationary equipment

IEC TS 61851-3-2 ED1

Electric Vehicles conductive power supply system - Part 3-2: DC EV supply equipment where protection relies on double or reinforced insulation - Particular requirements for portable and mobile equipment

IEC TS 61851-3-4 ED1

Electric Vehicles conductive power supply system - Part 3-4: DC EV supply equipment where protection relies on double or reinforced insulation - General definitions and requirements for CANopen communication

IEC TS 61851-3-5 ED1

Electric Vehicles conductive power supply system - Part 3-5: DC EV supply equipment where protection relies on double or reinforced insulation - Pre-defined communication parameters and general application objects

IEC TS 61851-3-6 ED1

Electric Vehicles conductive power supply system - Part 3-6: DC EV supply equipment where protection relies on double or reinforced insulation - Voltage converter unit communication

IEC TS 61851-3-7 ED1

Electric vehicles conductive power supply system - Part 3-7: DC EV supply equipment where protection relies on double or reinforced insulation - Battery system communication

8.1.29 TC ITS - TECHNICAL COMMITTEE (TC) INTELLIGENT TRANSPORT SYSTEMS (ITS)

Keywords:

Electro-Mobility, Smart Cities, Road vehicles

Scope:

We are responsible for standarisation to support the development and implementation of Intelligent Transport Systems (ITS) service provision across the network, for transport networks, vehicles and transport users, including interface aspects, multiple modes of transport and interoperability between systems.

We are helping to accelerate the introduction of ITS services and applications and to maximize their benefits by developing common European standards and technical specifications to enable interoperability. TC ITS is leading the drive to achieve international standards.

Link:

https://www.etsi.org/committee/1402-its

New Standards:

ETSI TS 103 141 V2.1.1 (2021-11)

Intelligent Transport Systems (ITS); Facilities layer; Communication congestion control; Release 2

ETSI TS 102 941 V2.1.1 (2021-10)

Intelligent Transport Systems (ITS); Security; Trust and Privacy Management; Release 2

ETSI TS 103 097 V2.1.1 (2021-10)

Intelligent Transport Systems (ITS); Security; Security header and certificate formats; Release 2

ETSI TR 103 439 V2.1.1 (2021-10)

Intelligent Transport Systems (ITS); Multi-Channel Operation study; Release 2

ETSI TS 103 248 V2.1.1 (2021-08)

Intelligent Transport Systems (ITS); GeoNetworking; Port Numbers for the Basic Transport Protocol (BTP); Release 2

ETSI TS 103 724 V2.1.1 (2021-08)

Intelligent Transport Systems (ITS); Facilities layer function; Interference Management Zone Message (IMZM); Release 2

ETSI TS 102 940 V2.1.1 (2021-07)

Intelligent Transport Systems (ITS); Security; ITS communications security architecture and security management; Release 2

ETSI TR 103 694 V1.1.1 (2021-05)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Informative report for the Diagnosis, Logging and Status Service

ETSI TR 103 300-1 V2.2.1 (2021-04)

Intelligent Transport Systems (ITS); Vulnerable Road Users (VRU) awareness; Part 1: Use Cases definition; Release 2

ETSI TS 103 300-2 V2.2.1 (2021-04)

Intelligent Transport Systems (ITS); Vulnerable Road Users (VRU) awareness; Part 2: Functional Architecture and Requirements definition; Release 2

ETSI TS 103 300-3 V2.1.2 (2021-04)

Intelligent Transport Systems (ITS); Vulnerable Road Users (VRU) awareness; Part 3: Specification of VRU awareness basic service; Release 2

ETSI TS 103 794 V1.1.1 (2021-04)

Intelligent Transport Systems (ITS); LTE-V2X Access layer for Intelligent Transport Systems operating in the 5 GHz frequency band; Test specification

ETSI TS 102 723-9 V1.1.1 (2021-03)

Intelligent Transport Systems (ITS); OSI cross-layer topics; Part 9: Interface between security entity and facilities layer

ETSI TS 103 301 V2.1.1 (2021-03)

Intelligent Transport Systems (ITS); Vehicular Communications; Basic Set of Applications; Facilities layer protocols and communication requirements for infrastructure services; Release 2

ETSI TS 102 636-4-2 V1.4.1 (2021-02)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 2: Media-dependent functionalities for ITS-G5

ETSI TS 102 941 V1.4.1 (2021-01)

Intelligent Transport Systems (ITS); Security; Trust and Privacy Management

ETSI TR 103 630 V1.1.1 (2020-11)

Intelligent Transport Systems (ITS); Security; Pre-standardisation Study on ITS Facility Layer Security for C-ITS Communication Using Cellular Uu Interface

ETSI TS 103 723 V1.2.1 (2020-11)

Intelligent Transport Systems (ITS); Profile for LTE-V2X Direct Communication

ETSI TS 103 300-3 V2.1.1 (2020-11)

Intelligent Transport Systems (ITS); Vulnerable Road Users (VRU) awareness; Part 3: Specification of VRU awareness basic service; Release 2

ETSI EN 302 890-2 V2.1.1 (2020-10)

Intelligent Transport Systems (ITS); Facilities Layer function; Part 2: Position and Time management (PoTi); Release 2

ETSI TS 103 601 V1.1.1 (2020-10)

Intelligent Transport Systems (ITS); Security; Security management messages communication requirements and distribution protocols

ETSI TS 103 097 V1.4.1 (2020-10)

Intelligent Transport Systems (ITS); Security; Security header and certificate formats

ETSI TR 103 496 V2.1.1 (2020-10)

Intelligent Transport Systems (ITS); Cooperative ITS (C-ITS) support for transport pollution management applications; Use cases and standardisation study; Release 2

ETSI TR 103 460 V2.1.1 (2020-10)

Intelligent Transport Systems (ITS); Security; Pre-standardisation study on Misbehavior Detection; Release 2

ETSI TS 103 723 V1.1.1 (2020-09)

Intelligent Transport Systems (ITS); Profile for LTE-V2X Direct Communication

ETSI TR 103 579 V1.1.1 (2020-09)

Intelligent Transport Systems (ITS); Pre-Standardisation Study on payment applications in Cooperative ITS using V2I communication

ETSI TS 102 636-4-3 V1.1.1 (2020-08)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 3: Media-dependent functionalities for LTE-V2X

ETSI TS 102 636-4-2 V1.3.1 (2020-08)

Intelligent Transport Systems (ITS); Vehicular Communications; GeoNetworking; Part 4: Geographical addressing and forwarding for point-to-point and point-to-multipoint communications; Sub-part 2: Media-dependent functionalities for ITS-G5

ETSI TS 103 300-2 V2.1.1 (2020-05)

Intelligent Transport System (ITS); Vulnerable Road Users (VRU) awareness; Part 2: Functional Architecture and Requirements definition; Release 2

Link to all Standards:

https://www.etsi.org/committee/1402-its

Standards under development:

There are not any standards under development.

8.1.30 TC SMARTM2M - TECHNICAL COMMITTEE (TC) SMART MACHINE-TO-MACHINE COMMUNICATIONS (SMARTM2M)

Keywords:

Smart Grids, Internet of Things (IoT), Smart appliances, **Smart cities**, Smart Metering

Scope:

We are developing standards to enable M2M services and applications and certain aspects of the Internet of Things (IoT).

We are a partner in oneM2M and help to produce the specifications to enable users to build platforms by which devices and services can be connected, regardless of the underlying technology used.

Our work enables connected devices to exchange information through SAREF, our smart applications reference ontology that runs with oneM2M-compliant communication platforms. With SAREF, SmartM2M is promoting oneM2M Base Ontology with extensions in many IoT domains.

We are the first group in ETSI to develop Smart Cities requirements. SmartM2M is the home of the first Smart Agriculture oneM2M/ITS Pilot. We are investigating virtualized IoT architectures, identifying new elements that are required to support a virtualized IoT service layer. We are also supporting the ETSI role in AIOTI (www.aioti.eu) WG03 (IoT Standarisation) in collaboration with the H2020 IoT Large Scape Pilot and IoT Platforms. We collaborate with TC CYBER to achieve the move towards better IoT Cybersecurity, Safety and Privacy protection.

Link:

https://www.etsi.org/committee/1414-smartm2m

New Standards:

ETSI TS 103 757 V2.1.1 (2021-08)

SmartM2M; Asynchronous Contact Tracing System; Fighting pandemic disease with Internet of Things (IoT)

ETSI TS 103 410-11 V1.1.1 (2021-07)

SmartM2M; Extension to SAREF; Part 11: Lift Domain

ETSI TS 103 735 V1.1.2 (2021-07)

SmartM2M; Smart Lifts IoT System

ETSI TR 103 717 V1.1.1 (2021-07)

SmartM2M; Study for oneM2M; Discovery and Query specification development

ETSI TR 103 716 V1.1.1 (2021-04)

SmartM2M; oneM2M Discovery and Query solution(s) simulation and performance evaluation

ETSI TS 103 735 V1.1.1 (2021-03)

SmartM2M; Smart Lifts IoT System

ETSI TR 103 674 V1.1.1 (2021-02)

SmartM2M; Artificial Intelligence and the oneM2M architecture

ETSI TS 103 757 V1.1.2 (2021-01)

SmartM2M; Asynchronous Contact Tracing System; Fighting pandemic disease with Internet of Things (IoT)

ETSI TR 103 675 V1.1.1 (2020-12)

SmartM2M; AI for IoT: A Proof of Concept

ETSI TR 103 715 V1.1.1 (2020-11)

SmartM2M; Study for oneM2M; Discovery and Query solutions analysis & selection

ETSI TS 103 673 V1.1.1 (2020-08)

SmartM2M; SAREF Development Framework and Workflow, Streamlining the Development of SAREF and its Extensions

ETSI TR 103 714 V1.1.1 (2020-07)

SmartM2M; Study for oneM2M Discovery and Query use cases and requirements

ETSI TS 103 410-7 V1.1.1 (2020-07)

SmartM2M; Extension to SAREF; Part 7: Automotive Domain

ETSI TS 103 410-8 V1.1.1 (2020-07)

SmartM2M; Extension to SAREF; Part 8: eHealth/Ageing-well Domain

ETSI TS 103 410-9 V1.1.1 (2020-07)

SmartM2M; Extension to SAREF; Part 9: Wearables Domain

ETSI TS 103 410-10 V1.1.1 (2020-07)

SmartM2M; Extension to SAREF; Part 10: Water Domain

ETSI TS 103 548 V1.1.2 (2020-06)

SmartM2M; SAREF consolidation with new reference ontology patterns, based on the experience from the SEAS project

ETSI TS 103 410-6 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 6: Smart Agriculture and Food Chain Domain

ETSI TS 103 410-5 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 5: Industry and Manufacturing Domains

ETSI TS 103 410-4 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 4: Smart Cities Domain

ETSI TS 103 410-3 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 3: Building Domain

ETSI TS 103 410-2 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 2: Environment Domain

ETSI TS 103 410-1 V1.1.2 (2020-05)

SmartM2M; Extension to SAREF; Part 1: Energy Domain

Link to all Standards:

https://www.etsi.org/committee/1414-smartm2m

Standards under development:

There are not any standards under development.

8.1.31 TC INT - TECHNICAL COMMITTEE (TC) CORE NETWORK AND INTEROPERABILITY TESTING (INT)

Keywords:

Interoperability

Scope:

We develop test specifications to test interoperability, conformance, performance and security. The methodology used is end-to-end (e2e) and includes verification of both the control and user plane. The test specifications are based on 3GPP specifications which enable network operators to test their network for services for both fixed and mobile customers.

We produce test purposes, test descriptions, and TTCN-3 test cases to enable interoperability testing of the core network elements and covering the single-network, interconnect and roaming scenarios. Use Cases and requirements specified by ETSI for Automated and Autonomic Management and Control (self- management) of Networks and Services are tested via “industry standards-anchored” Proof of Concepts (PoC) events.

Specifically, within 5G Network Slice Service Assurance space along with SDN, NFV, E2E Orchestration. As all those paradigms are targeting a common objective they can be considered as key Enablers for 5G.

Link:

https://www.etsi.org/committee/1401-int

New Standards:

ETSI TS 183 036 V3.7.1 (2021-02)

Core Network and Interoperability Testing (INT); ISDN/SIP interworking; Protocol specification

ETSI TS 103 571-1 V2.1.1 (2021-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for the Sh/Dh interfaces; (3GPPTM Release 15); Part 1: Protocol Implementation Conformance Statement (PICS)

ETSI TS 103 571-2 V2.1.1 (2021-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for Sh/Dh interfaces; (3GPPâ„¢ Release 15); Part 2: Test Suite Structure (TSS) and Test Purposes (TP)

ETSI TS 103 571-3 V2.1.1 (2021-01)

Core Network and Interoperability Testing (INT); Diameter Conformance testing for the Sh/Dh interfaces; (3GPPâ„¢ Release 15); Part 3: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) pro forma specification

ETSI TS 186 001-5 V2.4.0 (2020-09)

Core Network and Interoperability Testing (INT); Network Integration Testing between SIP and ISDN/PSTN network signalling protocols; Part 5: Test Suite Structure and Test Purposes (TSS&TP) for Network Integration Tests between ISDN-ISDN and ISDN-PSTN over SIP II NNI/SIP-I NNI

ETSI TS 103 653-1 V1.1.1 (2020-08)

Core Network and Interoperability Testing (INT); VoLTE/ViLTE interoperability test description over 4G/early 5G in physical/virtual environments; (3GPPâ„¢ Release 15); Part 1: Test Purposes (TP) and Protocol Implementation Conformance Statement (PICS) for VoLTE/ViLTE interoperability

ETSI TS 103 653-2 V1.1.1 (2020-08)

Core Network and Interoperability Testing (INT); VoLTE/ViLTE interoperability test description over 4G/early 5G in physical/virtual environments; (3GPPâ„¢ Release 15); Part 2: Test Descriptions for VoLTE/ViLTE interoperability

ETSI TS 103 653-3 V1.1.1 (2020-08)

Core Network and Interoperability Testing (INT); VoLTE/ViLTE interoperability test description over 4G/early 5G in physical/virtual environments; (3GPPâ„¢ Release 15); Part 3: Abstract Test Suit (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) for VoLTE/ViLTE interoperability

Link to all Standards:

https://www.etsi.org/committee/1401-int

Standards under development:

There are not any standards under development.

8.2 Relevant standards

An update of the relevant standards identified by partners in the D8.11- *Report on the standardisation landscape* is shown in in Table 3-1.

It is included a code of colours (grey for withdrawals, green for updates and blue for under development) and the link to the latest version of each standards.

TABLE 8-1 UPDATE OF RELEVANT STANDARDS FOR USER-CHI

Standard code	Standard Title	Status
1.-Electro-Mobility		
EN 61851-1:2011	Electric vehicle conductive charging system - Part 1: General requirements	Published
EN 61851-22:2002	*Electric vehicle conductive charging system - Part 22: AC electric vehicle charging station.*	Withdrawn 2020-09-23
EN 61851-23:2014/ AC:2016-06	Conductive charging systems for electric vehicles - Part 23: DC charging stations for electric vehicles	Published
EN 60038:2011	CENELEC standard voltages	Published
EN 60529:1991/A2:2013/AC:2019-02	Degrees of protection provided by cases (IP code)	Published
EN 61439-1:2011	Low-voltage switchgear and control gear assemblies - Part 1: General requirements	Updated **EN IEC 61439-1:2021**
EN 61439-2:2011	Low-voltage switchgear and control gear assemblies Part 2: Energy switchgear assemblies	Updated **EN IEC 61439-2:2021**
EN 60664-1:2007	Insulation coordination for electrical equipment in low voltage systems - Part 1: Principles, requirements, and tests	Updated **EN IEC 60664-1:2020/AC:2020-12**
EN 61140:2016	Protection against electric shock – Common requirements for installations and equipment	Published
EN 62196-1:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements	Under Approval **prEN IEC 62196-1:2020**
EN 62196-2:2017	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and	Under Approval **prEN IEC 62196-2:2020**

Standard code	Standard Title	Status
	interchangeability requirements for AC pin and contact-tube accessories	
EN 62196-3:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers.	Under Approval **prEN IEC 62196-3:2020**
EN 50178:1997	Electronic equipment for use in power installations	Published
EN 60947-1:2007/A2:2014	Low-voltage switchgear and controlgear - Part 1: General rules	Published
EN 60947-3:2009/A2:2015	Low-voltage switchgear and controlgear - Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	Updated **EN IEC 60947-3:2021/AC:2021-11**
EN 60947-6-1:2005/A1:2014	Low-voltage switchgear and controlgear - Part 6-1: Multiple function equipment - Transfer switching equipment	Approved **FprEN IEC 60947-6-1:2020**
EN 60947-6-2:2003/A1:2007	Low-voltage switchgear and controlgear - Part 6-2: Multiple function equipment - Control and protective switching devices (or equipment) (CPS)	Approved **FprEN IEC 60947-6-2:2020**
EN 60950-1:2006/A2:2013	*Information technology equipment - Safety - Part 1: General requirements*	Withdrawn 2020-12-20
EN IEC 61000-6-1:2007	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	Updated **EN IEC 61000-6-1:2019**
EN 61000-6-3:2007/A1:2011/AC:2012	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	Updated **EN IEC 61000-6-3:2021** **Under Drafting** **EN IEC 61000-6-3:2021/prA1 (Frag 1)** **EN IEC 61000-6-**

Standard code	Standard Title	Status
		3:2021/prA 1 (Frag 2) EN IEC 61000-6-3:2021/prA 1 (Frag 3) EN IEC 61000-6-3:2021/prA 1 (Frag 4)
EN 61140:2016	Protection against electric shock - Common aspects for installation and equipment	Published
HD 60364-4-41:2017/A12:2019	Low-voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock	Updated HD 60364-4-41:2017/A12:2019
HD 60364-6:2016/AC:2017-11	Low-voltage electrical installations - Part 6: Verification	Published
2.-Smart Grids		
ISO 17800:2017	Facility smart grid information model	Published
ISO/IEC 30101:2014	Information technology -- Sensor networks: Sensor network and its interfaces for smart grid system	Published
IEC 62746-10-3:2018	Systems interface between customer energy management system and the power management system - Part 10-3: Open automated demand response - Adapting smart grid user interfaces to the IEC common information model	Published
EN ISO 15118-1:2019	Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)	Published
EN ISO 15118-2:2016	Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and application protocol requirements (ISO 15118-2:2014)	Under Drafting prEN ISO 15118-2 rev
EN ISO 15118-3:2016	Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)	Published

Standard code	Standard Title	Status
EN ISO 15118-4:2019	Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)	Under Enquiry prEN ISO 15118-4
EN ISO 15118-5:2019	Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)	Published
EN ISO 15118-8:2019	Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)	Updated EN ISO 15118-8:2020
3.-Smart Cities		
ISO 37106:2018	Sustainable cities and communities — Guidance on establishing smart city operating models for sustainable communities	Updated ISO 37106:2021
ISO/CD 37166	Smart community infrastructures —Urban data integration framework for smart city planning (SCP)	Under development ISO/FDIS 37166
ISO/IEC 21972:2020	Information technology — Upper level ontology for smart city indicators	Published
ISO/IEC 30146:2019	Information technology — Smart city ICT indicators	Published
ISO/IEC AWI 24039	Information Technology - Smart city digital platform	Under development ISO/IEC DIS 24039
ISO/IEC DIS 30145-1	Information technology — Smart City ICT reference framework — Part 1: Smart city business process framework	Updated ISO/IEC 30145-1:2021
ISO/IEC DIS 30145-2	Information technology — Smart City ICT reference framework — Part 2: Smart city knowledge management framework	Updated ISO/IEC 30145-2:2020
ISO/IEC DIS 30145-3	Information technology — Smart City ICT reference framework — Part 3: Smart city engineering framework	Updated ISO/IEC

Standard code	Standard Title	Status
		30145-3:2020
4.-Electrical energy supply		
ISO 1185:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 N (normal) for vehicles with 24 V nominal supply voltage	Published
ISO 1724:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 N (normal) for vehicles with 12 V nominal supply voltage	Published
ISO 3731:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 24 S (supplementary) for vehicles with 24 V nominal supply voltage	Published
ISO 3732:2003	Road vehicles — Connectors for the electrical connection of towing and towed vehicles — 7-pole connector type 12 S (supplementary) for vehicles with 12 V nominal supply voltage	Published
ISO 21848:2005	*Road vehicles — Electrical and electronic equipment for a supply voltage of 42 V — Electrical loads*	Withdrawn 2021-08-24
ISO/FDIS 21780	Road vehicles — Supply voltage of 48 V — Electrical requirements and tests	Updated ISO 21780:2020
ISO 18246:2015	Electrically propelled mopeds and motorcycles — Safety requirements for conductive connection to an external electric power supply	Under development ISO/CD 18246
HD 472 S1:1989/AC:2013	Nominal voltages for low-voltage public electricity supply systems	Published
EN 61851-21:2002	*Electric vehicle conductive charging system - Part 21: Electric vehicle requirements for conductive connection to an AC/DC supply*	Withdrawn 2020-09-23
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply	Published

Standard code	Standard Title	Status
ISO 17409:2015	Electrically propelled road vehicles -- Connection to an external electric power supply -- Safety requirements	Updated ISO 17409:2020
5.-Cybersecurity		
ISO/IEC 27007:2020	Information security, cybersecurity and privacy protection — Guidelines for information security management systems auditing	Published
ISO/IEC 27009:2020	Information security, cybersecurity and privacy protection — Sector-specific application of ISO/IEC 27001 — Requirements	Published
ISO/IEC 27032:2012	Information technology — Security techniques — Guidelines for cybersecurity	Published
ISO/IEC DIS 15408-1	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 1: Introduction and general model	Under development
ISO/IEC DIS 15408-2	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 2: Security functional components	Under development
ISO/IEC DIS 15408-3	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 3: Security assurance components	Under development
ISO/IEC DIS 15408-4	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 4: Framework for the specification of evaluation methods and activities	Under development
ISO/IEC DIS 15408-5	Information security, cybersecurity and privacy protection — Evaluation criteria for IT security — Part 5: Pre-defined packages of security requirements	Under development
ISO/IEC CD 27032.2	IT Security Techniques — Cybersecurity — Guidelines for Internet Security	Under development
ISO/SAE DIS 21434	Road vehicles — Cybersecurity engineering	Updated ISO/SAE 21434:2021
IEC 63119-4 ED1	Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy	Under development

Standard code	Standard Title	Status
		IEC 63119-4 ED1
6.-Data Protection		
ISO 24100:2010	Intelligent transport systems — Basic principles for personal data protection in probe vehicle information services	Published
ISO/IEC TS 20748-4:2019	Information technology for learning, education and training — Learning analytics interoperability — Part 4: Privacy and data protection policies	Published
7.-Road vehicles		
IEC 62660-1:2018	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 1: Performance testing	Published
IEC 62660-2:2018	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 2: Reliability and abuse testing	Published
IEC 62660-3:2016	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 3: Safety requirements	Under development IEC 62660-3 ED2
IEC TR 62660-4:2017 ED1	Secondary lithium-ion cells for the propulsion of electric road vehicles - Part 4: Candidate alternative test methods for the internal short circuit test of IEC 62660-3	Published
ISO 8715:2001	Electric road vehicles — Road operating characteristics	Published
ISO/PAS 16898:2012	*Electrically propelled road vehicles — Dimensions and designation of secondary lithium-ion cells*	Withdrawn 2020-07-22
ISO 20762:2018	Electrically propelled road vehicles — Determination of power for propulsion of hybrid electric vehicle	Published
9.-Data Model		
EN 12896-1:2016	Public transport - Reference data model - Part 1: Common concepts	Published
EN 12896-2:2016	Public transport - Reference data model - Part 2: Public transport network	Published

Standard code	Standard Title	Status
EN 12896-3:2016	Public transport - Reference data model - Part 3: Timing information and vehicle scheduling	Published
EN 12896-4:2019	Public transport - Reference data model - Part 4: Operations monitoring and control	Published
EN 12896-5:2019	Public transport - Reference data model - Part 5: Fare management	Published
EN 12896-6:2019	Public transport - Reference data model - Part 6: Passenger information	Published
EN 12896-7:2019	Public transport - Reference data model - Part 7: Driver management	Published
EN 12896-8:2019	Public transport - Reference data model - Part 8: Management information & statistics	Published
ISO/TS 20452:2007	Requirements and Logical Data Model for a Physical Storage Format (PSF) and an Application Program Interface (API) and Logical Data Organization for PSF used in Intelligent Transport Systems (ITS) Database Technology	Published
ISO/TR 25104:2008	Intelligent transport systems — System architecture, taxonomy, terminology and data modelling — Training requirements for ITS architecture	Published
10.-Mobile Telecommunications		
ETSI TS 102 735 V7.1.0 (2010-01)	Universal Mobile Telecommunications System (UMTS); Band-specific requirements for UMTS Frequency Division Duplex (FDD) operation in the bands 1 900 MHz to 1 920 MHz paired with 2 600 MHz to 2 620 MHz and 2 010 MHz to 2 025 MHz paired with 2 585 MHz to 2 600 MHz	Published
ETSI TR 102 736 V7.0.0 (2007-09)	Universal Mobile Telecommunications System (UMTS); 2,6 GHz Frequency Division Duplex (FDD) downlink external	Published
11.-Interoperability		
prEN ISO 19363	Electrically propelled vehicles - Magnetic field wireless power transfer - Safety and interoperability requirements	Published EN ISO 19363:2021
ISO/IEC 19500-2:2012	Information technology — Object Management Group — Common Object Request Broker Architecture (CORBA) — Part 2: Interoperability	Published

Standard code	Standard Title	Status
ISO/IEC 24727-6:2010	Identification cards — Integrated circuit card programming interfaces — Part 6: Registration authority procedures for the authentication protocols for interoperability	Published
ISO/IEC 21823-1:2019	Internet of Things (IoT) - Interoperability for IoT systems - Part 1: Framework	Published
ISO/IEC 21823-2:2020	Internet of Things (IoT) - Interoperability for IoT systems - Part 2: Transport interoperability	Published
IEC 63243 ED1	Interoperability and safety of dynamic wireless power transfer (WPT) for electric vehicles	Under development
13.-Availability and information		
EN ISO 19133:2007	Geographic information - Location-based services - Tracking and navigation	Published
EN ISO 19128:2008	Geographic information - Web map server interface (ISO 19128:2005)	Published
EN ISO 19134:2008	Geographic information - Location-based services - Multimodal routing and navigation (ISO 19134:2007	Published
EN IEC 63119-1:2019	Information exchange for electric vehicle charging roaming service - Part 1: General	Published
IEC 63119-2 ED1	Information exchange for Electric Vehicle charging roaming service - Part 2: Use cases	Under development
IEC 63119-3 ED1	Information exchange for Electric Vehicle charging roaming service - Part 3: Message structure	Under development
IEC 63119-4 ED1	Information exchange for Electric Vehicle charging roaming service - Part 4: Cybersecurity and information privacy	Under development
15.-Calibration of chargers		
IEC 61851-21-2:2018	Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems	Under development IEC 61851-21-2/FRAGF ED1

Standard code	Standard Title	Status
IEC 61000-6-2:2016 ED3	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	Published
EN 62311.2008	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)	Updated EN IEC 62311:2020
IEC 61439-7:2018	Low-voltage switchgear and controlgear assemblies - Part 7: Assemblies for specific applications such as marinas, camping sites, market squares, electric vehicle charging stations	Under development IEC 61439-7 ED2
IEC 61439-1:2020 ED3	Low-voltage switchgear and controlgear assemblies - Part 1: General rules	Published
IEC 61851-1:2017 ED3	Electric vehicle conductive charging system - Part 1: General requirements	Published
IEC 60529:1989+AMD1:1999+AMD2:2013	Degrees of protection provided by enclosures (IP Code)	Updated IEC 60529:1989/AMD2:2013/COR1:2019 ED2
IEC 62196-2:2016	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility requirements for AC pin and contact-tube accessories	Under development IEC 62196-2 ED3
EN 50620:2017	Electric cables - Charging cables for electric vehicles	Under Approval EN 50620:2017/prA2
ETSI EN 301 489-1 V2.2.3 (2019-11)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised Standard for ElectroMagnetic Compatibility	Published
ETSI EN 301 489-3 V2.1.1 (2019-03)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246	Published

Standard code	Standard Title	Status
	GHz - Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU	
ETSI EN 301 489-17 V3.2.2 (2019-12)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for Broadband Data Transmission Systems - Harmonised Standard for ElectroMagnetic Compatibility	Updated ETSI EN 301 489-17 V3.2.4 (2020-09)
ETSI EN 301 489-52 V1.1.0 (2016-11)	Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment - Harmonised Standard for ElectroMagnetic Compatibility	Under development ETSI EN 301 489-52 V1.2.0 (2021-09)
16.-E-Roaming		
IEC 63119-1:2019	Information exchange for electric vehicle charging roaming service - Part 1: General	Under development IEC 63119-1 ED2
IEC 63119-2 ED1	Information exchange for electric vehicle charging roaming service - Part 2: Use cases	Under development
IEC 63119-3 ED1	Information exchange for electric vehicle charging roaming service - Part 3: Message structure	Under development
IEC 63119-4 ED1	Information exchange for electric vehicle charging roaming service - Part 4: Cybersecurity and information privacy	Under development
17.-Smart Charging		
IEC 61980-1:2015	Electric vehicle wireless power transfer (WPT) systems - Part 1: General requirement	Updated IEC 61980-1:2020 ED2
18.-Dynamic charge management		
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC	Published

Standard code	Standard Title	Status
	requirements for conductive connection to an AC/DC supply	
IEC 61851-1:2017 ED3	Electric vehicle conductive charging system - Part 1: General requirements	Published
IEC 61851-23:2014	Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station	Under development **IEC 61851-23 ED2**
19.-Vehicle-to-Grid (V2G)		
EN ISO 15118-1:2019	Road vehicles - Vehicle to grid communication interface - Part 1: General information and use-case definition (ISO 15118-1:2019)	Published
EN ISO 15118-2:2016	Road vehicles - Vehicle-to-grid communication Interface - Part 2: Network and application protocol requirements (ISO 15118-2:2014)	Under Drafting **prEN ISO 15118-2 rev**
EN ISO 15118-3:2016	Road vehicles - Vehicle to grid Communication interface - Part 3: Physical and data link layer requirements (ISO 15118-3:2015)	Published
EN ISO 15118-4:2019	Road vehicles - Vehicle to grid communication interface - Part 4: Network and application protocol conformance test (ISO 15118-4:2018)	Under Enquiry **prEN ISO 15118-4**
EN ISO 15118-5:2019	Road vehicles - Vehicle to grid communication interface - Part 5: Physical layer and data link layer conformance test (ISO 15118-5:2018)	Published
EN ISO 15118-8:2019	Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2018)	Updated **EN ISO 15118-8:2020**
20.-RFID cards		
EN ISO/IEC 19762-3:2012	Information technology - Automatic identification and data capture (AIDC) techniques - Harmonized vocabulary - Part 3: Radio frequency identification (RFID) (ISO/IEC 19762-3:2008)	Published
ISO/IEC 24791-1:2010	Information technology — Radio frequency identification (RFID) for item management —	Published

Standard code	Standard Title	Status
	Software system infrastructure — Part 1: Architecture	
ISO/IEC 24791-2:2011	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 2: Data management	Published
ISO/IEC 24791-3:2014	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 3: Device management	Under development ISO/IEC DIS 24791-3
ISO/IEC 24791-5:2012	Information technology — Radio frequency identification (RFID) for item management — Software system infrastructure — Part 5: Device interface	Published
ISO/IEC 15961-1:2013	Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 1: Application interface	Under development ISO/IEC 15961-1
ISO/IEC 15961-2:2019	Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 2: Registration of RFID data constructs	Published
ISO/IEC 15961-3:2019	Information technology — Data protocol for radio frequency identification (RFID) for item management — Part 3: RFID data constructs	Published
ISO/IEC 15961-4:2016	Information technology — Radio frequency identification (RFID) for item management: Data protocol — Part 4: Application interface commands for battery assist and sensor functionality	Published
ISO/IEC 15962:2013	Information technology — Radio frequency identification (RFID) for item management — Data protocol: data encoding rules and logical memory functions	Published ISO/IEC 15962
ISO/IEC 15963-1:2020	Information technology — Radio frequency identification for item management — Part 1: Unique identification for RF tags numbering systems	Published

Standard code	Standard Title	Status
ISO/IEC 15963-2:2020	Information technology — Radio frequency identification for item management — Part 2: Unique identification for RF tags registration procedures	Published
ETSI EN 300 330 V2.1.1 (2017-02)	Short Range Devices (SRD)-Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz -Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU	Published
21.-Charging speed		
EN 61851-21-1:2017/AC:2017-11	Electric vehicle conductive charging system - Part 21-1: Electric vehicle on-board charger EMC requirements for conductive connection to an AC/DC supply	Published
IEC 61851-1:2017 ED3	Electric vehicle conductive charging system - Part 1: General requirements	Published
IEC 61851-23:2014	Electric vehicle conductive charging systems - Part 23: DC electric vehicle charging station	Under development IEC 61851-23 ED2
22.-Electric Vehicle Supply Equipment (EVSE)		
EN 62196-1:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements	Under Approval prEN IEC 62196-1:2020
EN 62196-2:2017	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for AC pin and contact-tube accessories	Under Approval prEN IEC 62196-2:2020
EN 62196-3:2014	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for DC and AC/DC pin and contact-tube vehicle couplers	Under Approval prEN IEC 62196-3:2020

9. Other relevant information

9.1 CEN and CENELEC new website

Until now CEN and CENELEC had different and separated websites. Nowadays CEN and CENELEC have a new joint website: faster, more dynamic and user friendly: www.cencenelec.eu

CEN and CENELEC have worked on centralising and providing targeted information to stakeholders and the general public on sectors, news, and events. A video tutorial on all the website's new features and structure can be consulted online.

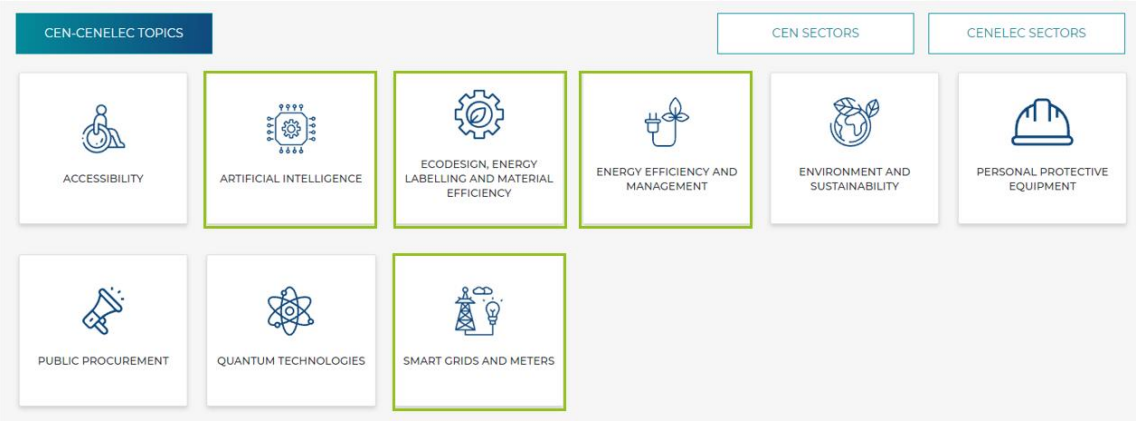
The new website aims to offer an enhanced user experience: it features a refreshed look, improved navigation and a handful of features which will make the overall experience more impactful on either desktop, mobile or tablet.

PICTURE 9-1 – AREAS OF WORK CEN AND CENELEC

With this new division of areas of work it is provided more information about the basckground of the technical committees.

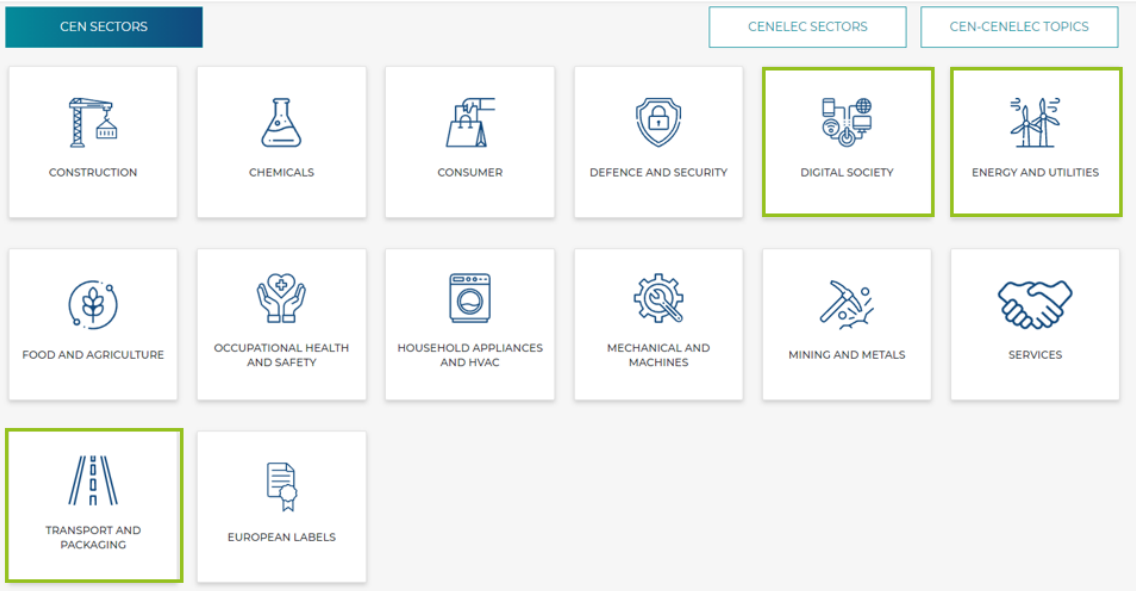
In the next pictures it is shown some examples of the information provided by CEN and CENELEC for each area of work. It has been selected the areas that could be related to USER-CHI Project.

PICTURE 9-2 –CEN-CENELEC TOPICS



- Artificial Intelligence: https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/artificial-intelligence/
- Ecodesign, energy labelling and material efficiency: https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/ecodesign-energy-labelling-and-material-efficiency/
- Energy Efficiency and Management: https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/energy-efficiency-and-management/
- Smart Grids and Meters: https://www.cencenelec.eu/areas-of-work/cen-cenelec-topics/smart-grids-and-meters/

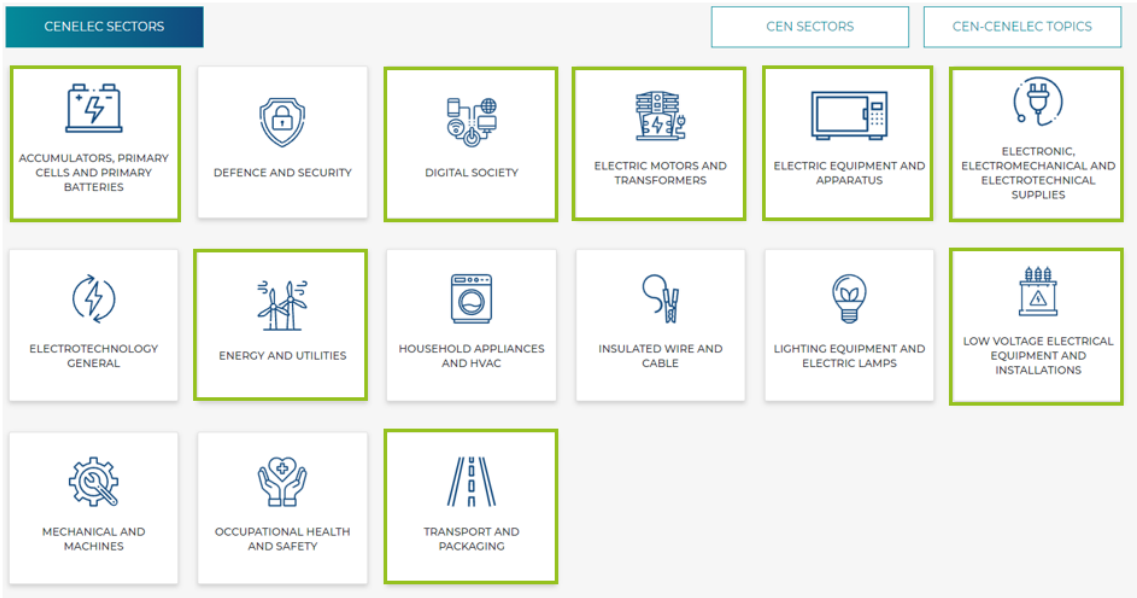
PICTURE 9-3 – CEN SECTORS



- Digital Society: https://www.cencenelec.eu/areas-of-work/cen-sectors/digital-society-cen/

- Energy and Utilities: https://www.cencenelec.eu/areas-of-work/cen-sectors/energy-and-utilities-cen/
- Transport and Packaging: https://www.cencenelec.eu/areas-of-work/cen-sectors/transport-and-packaging-cen/

PICTURE 9-4 –CENELEC SECTORS



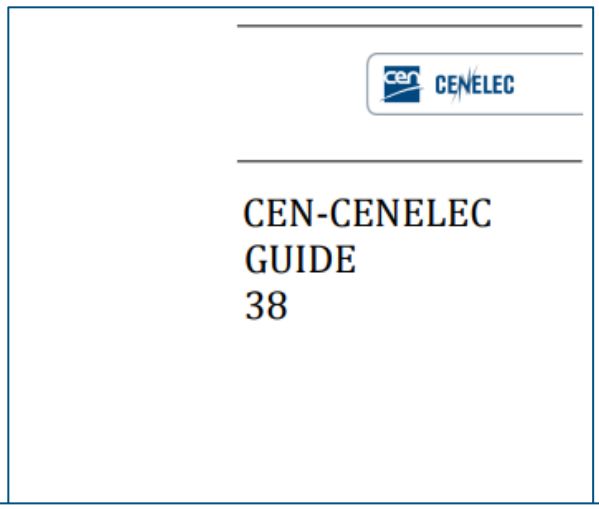
- Accumulators, Primary cells and Primary Batteries: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/accumulators-primary-cells-and-primary-batteries/
- Digital Society: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/digital-society-cenelec/
- Electric Motors and Transformers: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/electric-motors-and-transformers/
- Electric Equipment and Apparatus: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/electric-equipment-and-apparatus/
- Electronic, Electromechanical and Electrotechnical Supplies: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/electronic-electromechanical-and-electrotechnical-supplies/
- Energy and Utilities: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/energy-and-utilities-cenelec/
- Low voltage electrical equipment and installations: https://www.cencenelec.eu/areas-of-work/cenelec-sectors/low-voltage-electrical-equipment-and-installations/

9.2 CEN-CENELEC GUIDE 38- Guide for multifuel stations

CEN and CENELEC have developed a guide (https://www.cencenelec.eu/media/cen-cenelec_guide38.pdf) to facilitate the integration of alternative fuels at existing fuelling stations and to give guidance to design, authorise and operate new multifuel stations in support of the Directive 2014/94/EU on the deployment of alternative fuels infrastructure and of the future Regulation replacing the directive.

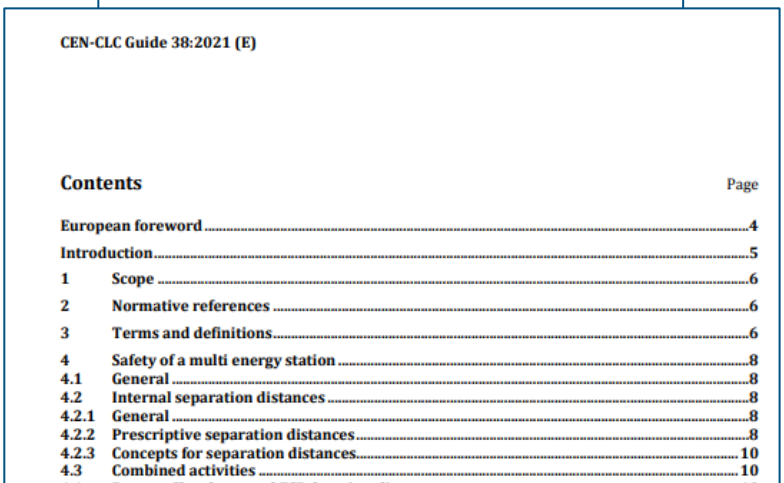
This guide also considers other legislations impacting multifuel stations (ATEX, PED, MID).

PICTURE 9-5 – CEN-CENELEC GUIDE 38


CEN CENELEC

CEN-CENELEC
GUIDE
38

PICTURE 9-6 – TABLE OF CONTENTS CEN-CENELEC GUIDE 38


CEN-CLC Guide 38:2021 (E)

Contents Page

This document compares the terms and definitions used in a selection of standards applicable to each fuel (electricity, hydrogen, compressed and liquefied natural gas, LPG, diesel and petrol) as well as the requirements addressed in these standards for each fuel.

It also describes the internal and external separation distances applied for different fuels and gives guidance on the design and operation of Emergency Shut Down systems and on combined activities.

9.3 ISO/TC 22/SC 37 Electrically propelled vehicles

Within the ISO/TC 22/SC 37 Electrically propelled vehicles it is created a new WG that may be of interest to USER-CHI Project. It is the ISO/TC 22/SC 37/WG 5 *Requirements for energy transfer* and is working on requirements for safety and functionality of power transfer.

ISO/TC 22/SC 37/WG 5 *Requirements for energy transfer* has published the following standard:

- ISO 19363:2020 Electrically propelled vehicles — Magnetic field wireless power transfer — Safety and interoperability requirements
- ISO 17409:2020 Electrically propelled vehicles — Conductive power transfer — Safety requirements

ISO/TC 22/SC 37/WG 5 *Requirements for energy transfer* is working on the development of the following standards:

- ISO 5474 Electrically propelled vehicles — Functional requirements and safety requirements for power transfer
    - Part 1: General
    - Part 2: AC power transfer
    - Part 3: DC power transfer
    - Part 4: Magnetic field wireless power transfer — Safety and interoperability requirements
    - Part 5: Automated conductive power transfer (as TS)

9.4 October WP8 and 9 monthly call- standardisation questions

During the last WP8 and 9 monthly call (held the 5th of November) some questions about standardisation showed up:

- **@Javier:** *does the new ISO WG cover LEVs too?* **@Javier:** *which ISO WG is working on the communication standards between the EV and the CP? What are the advancements on this specific aspect (relevant for SMAC)?*

In order to answer these questions it was prepared a document with the following information:

9.4.1 LEVs

The ISO/TC 22/SC 37/WG 5 - *Requirements for energy transfer* is a WG of the ISO/TC 22/SC 37- *Electrically propelled vehicles* (https://www.iso.org/committee/5391154.html) that is more related to specific aspects of electrically propelled road vehicles, electric propulsion systems, related components and their vehicle integration than to the LEVs.

ISO/TC 22/SC 37- *Electrically propelled vehicles* has 5 WGs that are working on:

- Safety aspects and terminology
- Performance and energy consumption
- Rechargeable energy storage
- Systems and components connected to electric propulsion systems
- Requirements for energy transfer

Also, the ISO/TC 22/SC 38- *Motorcycles and mopeds* (https://www.iso.org/committee/5384008.html) has a WGs that is working on electric mopeds and motorcycles (ISO/TC 22/SC 38/WG 2) especially on safety aspects, terminology, classification, performance and energy consumption.

Regarding the LEVs, there is no especific technical committee that covers all kind of these vehicles nor all the aspects of them. Following, there are some committees that are related to the LEVs:

- **CEN/TC 333 - *Cycles***:

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:6314&cs=11B2171F46D25372BA356D4D2C91ECEB9

Scope

Standardisation in the field of cycles, their components and acessories with particular reference to requirements for safety, testing methods and terminology, excluding toy cycles (covered by CEN/TC 52). "Cycle" means any vehicle which has at least two wheels and is propelled by means of pedals and or hand-cranks.

Within CEN/TC 333 - *Cycles* there are 6 WGs and one of them is related to electrically power assisted cycles (EPACs), **CEN/TC 333/WG 5 - *Electric power assisted cycles***.

CEN/TC 333/WG 5 - *Electric power assisted cycles* has published the following standard:

- EN 15194:2017 Cycles - Electrically power assisted cycles - EPAC Bicycles

CEN/TC 333/WG 5 - *Electric power assisted cycles* is working on the development of the following standards:

- EN 15194:2017/prA1 (WI=00333060) Cycles - Electrically power assisted cycles - EPAC Bicycles
- EN 15194:2017/prA2 (WI=00333070) Cycles - Electrically power assisted cycles - EPAC Bicycles
- FprEN 17404 (WI=00333043) Cycles - Electrically power assisted cycles - EPAC Mountain bikes
- (WI=00333068) Cycles - Electrically power assisted cycles - Anti tampering measures – Reproducible tests aiming at fighting counterfeiting

Related to the cycles, ISO also has a technical committee, ISO/TC 149 – *Cycles* (https://www.iso.org/committee/53030.html) but it has no especific WG that is working on electrically power assisted cycles. Within ISO/TC 149 there is only one standard related to electrically power assisted cycles:

- ISO/TS 4210-10:2020 Cycles — Safety requirements for bicycles — Part 10: Safety requirements for electrically power assisted cycles (EPACs)

- **CEN/TC 354 - *Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use***

https://standards.cencenelec.eu/dyn/www/f?p=205:7:0::::FSP_ORG_ID:616722&cs=1149D3C83EC73FA7B7DCD4131502F541F

Scope

Standardisation concerning safety, testing and performance requirements in the field of light motorized vehicles (with combustion engine or electric motor) intended for the transportation of

persons and goods: go-karts, recreational and utility quads, mini quads, powered two wheelers, mini-motorcycles, dirt bikes, side-by-side vehicles, light electric vehicles and self-balancing vehicles when not subject to type-approval (i.e. covered by Machinery Directive 2006/42/EC). This Technical Committee also covers safety requirements for infrastructures when these vehicles are used, for leisure, in specific environments and protected under the responsibility of circuit operator (e.g. karting facilities).

With the exclusion of:

- Vehicles intended exclusively for competition,
- Vehicles subject to a type-approval,
- Amusement devices (e.g. rollercoasters) and toys vehicles (CEN/TC 52 "Safety of toys" and CEN/TC 152 "Fairground and amusement park machinery and structures - Safety"),
- Playground equipment (CEN/TC 136 "Sports, playground and other recreational facilities and equipment"),
- Vehicles designed for medical use or under medical supervision,
- Cycles, their components and accessories (covered by CEN/TC 333 "Cycles").

Within CEN/TC 354 there are 4 WGs and one of them is related to light electric vehicles and self-balancing vehicles, **CEN/TC 354/WG 4 - *Light electric vehicles and self-balancing vehicles***.

CEN/TC 354/WG 4 - *Light electric vehicles and self-balancing vehicles* has published the following standard:

- EN 17128:2020 Light motorized vehicles for the transportation of persons and goods and related facilities and not subject to type-approval for on-road use - Personal light electric vehicles (PLEV) - Requirements and test methods

- **CLC/SR 125 - *Personal e-Transporters (PeTs)***

https://standards.cencenelec.eu/dyn/www/f?p=305:7:0::::FSP_ORG_ID:2616250

Scope

To mirror activities of IEC/TC 125

As this committe is a mirror committee of IEC/TC 125,the information is given in the next point.

- **IEC/TC 125 - *Personal e-Transporters (PeTs)***

https://www.iec.ch/dyn/www/f?p=103:7:::::FSP_ORG_ID:23165

Scope

Standardisation of electrically powered transport devices where the speed control and/or steering is electrical/electronic ('personal e-transporters') for use on the road or in public spaces. This means, standardisation in the field of personal e-Transporters, including but not limited to:

- Electrical and mechanical Safety
- Reliability
- Functional safety
- EMC
- Maintenance
- Docking stations for public use
- Recycling

Exclusions:

Standardisation of electrically powered bicycles, mopeds, motorcycles and passenger cars are excluded from the scope because they are handled by other TCs:

- IEC/TC 69
- ISO/TC 149
- ISO/TC 22

This technical committe has 2 WGs that are working on general requirements, terminology and classification (WG 1) as well as on performance test method for e-Transporters (WG 4).

As IEC/TC 125 was created recently it has no published standrards yet but it is working on the development of the following standards:

- PWI 125-1 Safety and performance requirements of series hybrid transporters
- PWI 125-2 Safety and performance of light personal e-transporters with or without a seat
- PWI 125-3
- Safety and performance of electric trailers
- IEC 63281-0 ED1 Personal e-Transporters - Terminology and classification
- IEC 63281-1 ED1 Personal e-Transporters - Safety requirements and test methods

- IEC 63281-2-1 ED1 Personal e-Transporters – Part 2-1: Test method for total run time of e-scooter with consideration to environmental conditions of actual use

9.4.2 Communication between the EV and the CP

The communication between the vehicle, the local installation and the grid is covered by the ISO 15118 series that have been prepared jointly by ISO/TC 22- *Road vehicles*, subcommittee ISO/TC 22/ SC 31- *Data communication* (https://www.iso.org/committee/5383568.html) and IEC/TC 69 – *Electric road vehicles and electric industrial trucks*.

ISO/TC 22/ SC 31- *Data communication* has published the following standards:

- ISO 15118-1:2019 Road vehicles — Vehicle to grid communication interface — Part 1: General information and use-case definition
- ISO 15118-2:2014 Road vehicles — Vehicle-to-Grid Communication Interface — Part 2: Network and application protocol requirements
- ISO 15118-3:2015 Road vehicles — Vehicle to grid communication interface — Part 3: Physical and data link layer requirements
- ISO 15118-4:2018 Road vehicles — Vehicle to grid communication interface — Part 4: Network and application protocol conformance test
- ISO 15118-5:2018 Road vehicles — Vehicle to grid communication interface — Part 5: Physical layer and data link layer conformance test
- ISO 15118-8:2020 Road vehicles — Vehicle to grid communication interface — Part 8: Physical layer and data link layer requirements for wireless communication

ISO/TC 22/ SC 31- *Data communication* is working on the development of the following standards:

- ISO/DIS 15118-4 Road vehicles — Vehicle to grid communication interface — Part 4: Network and application protocol conformance test
- ISO/DIS 15118-9 Road vehicles — Vehicle to grid communication interface — Part 9: Physical and data link layer conformance test for wireless communication
- ISO/FDIS 15118-20 Road vehicles — Vehicle to grid communication interface — Part 20: 2nd generation network layer and application layer requirements
- ISO/PWI 15118-21 Road vehicles — Vehicle to grid communication interface — Part 21: Common 2nd generation network layer and application layer requirements conformance test plan

Acronyms

In this document the following abbreviations and acronyms are used, and in this list they are indicated with its meaning:

Acronym	Description
AC	Alternating Current
AFNOR	Association Française de Normalisation (in English: French Standarisation Association)
BSI	British Standards Institution
CEN	European Committee for Standarisation
CENELEC (CLC)	European Committee for Standarisation in the Electrical field
CWA	CEN or CENELEC Workshop Agreement
DC	Direct Current
DIN	Deutsches Institut für Normung (in English: German Institute for Standarisation)
EN	European Standard
ETSI	European Telecommunications Standards Institute
EV	Electric Vehicle
HEN	Harmonised European Standard
ICE	Internal Combustion Engine
IEC	International Electrotechnical Commission
ISO	International Organization for Standarisation; International Standard
ITS	Intelligent Transport System
JTC	Joint Technical Committee
NSB	National Standarisation Body
NWI	New Work Item
PAS	Publicly Available Specification
SC	Subcommittee
TC	Technical Committee
TEN-T	Trans European Transport Network
TR	Technical Report
TS	Technical Specification
UNE	Asociación Española de Normalización (in English: Spanish Association for Standardisation)

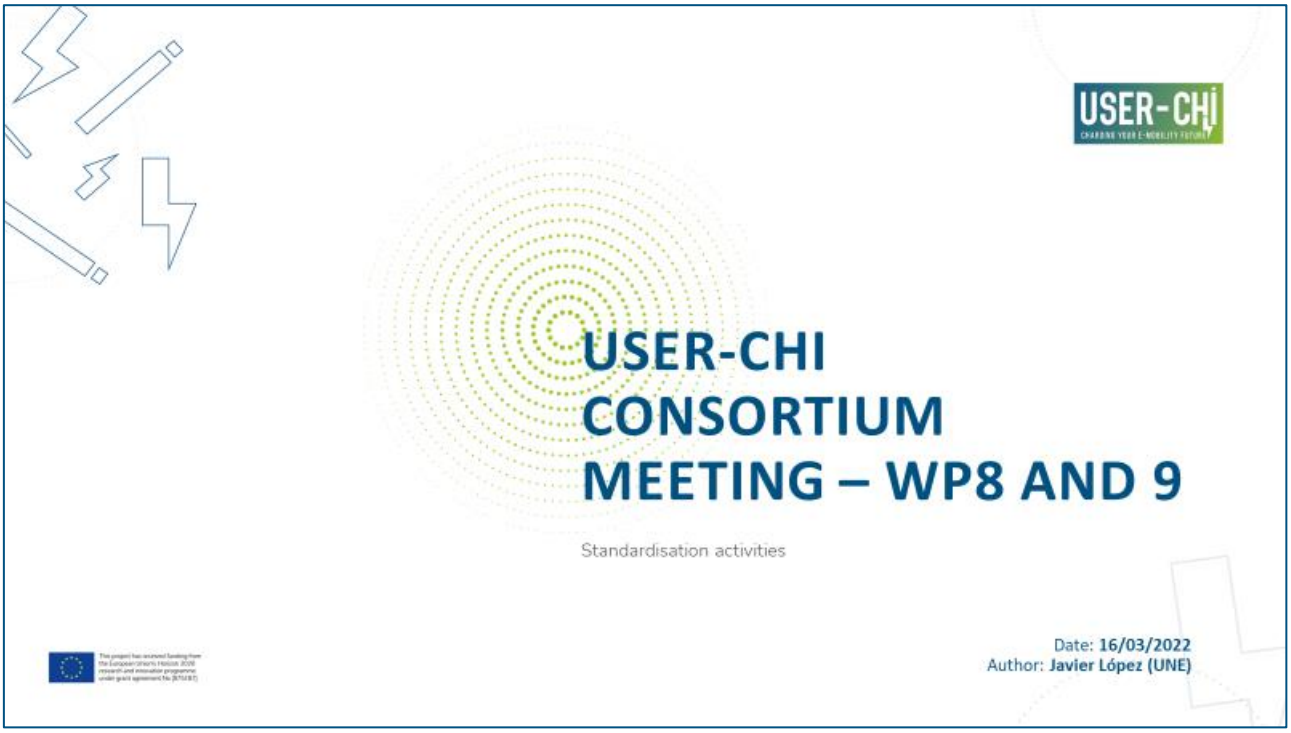
VA	Vienna Agreement
WG	Working Group
WI	Work Item
WP	Work Package

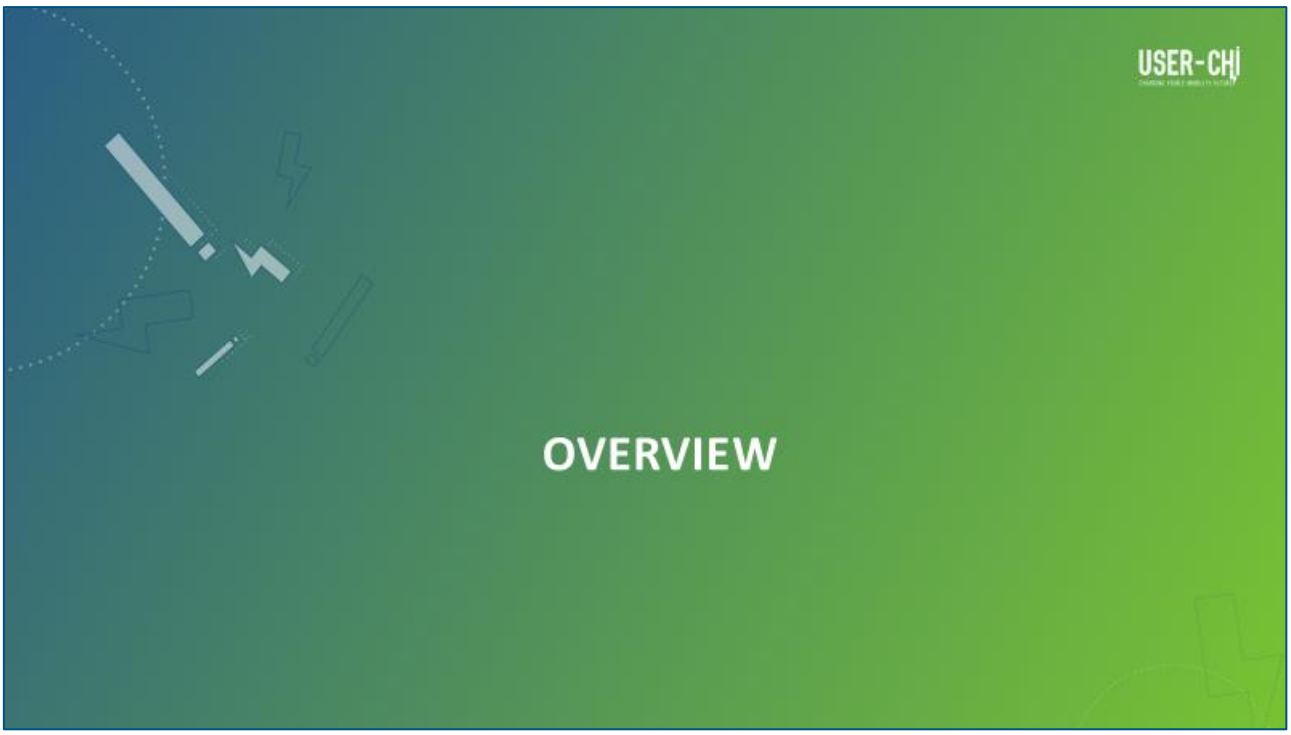
References

For the elaboration of this report, the following sources have been consulted:

- CEN Website (www.cen.eu)
- CENELEC Website (www.cenelec.eu)
- CEN/CENELEC Projex Online database (projex.cen.eu) (restricted to authorized users)
- ETSI Website (www.etsi.org)
- ISO Website (www.iso.org)
- ISO Project Portal (isotc.iso.org) (restricted to authorized users)
- IEC Website (www.iec.ch)

ANNEX D. 4th CONSORTIUM MEETING- STANDARDISATION REPORT

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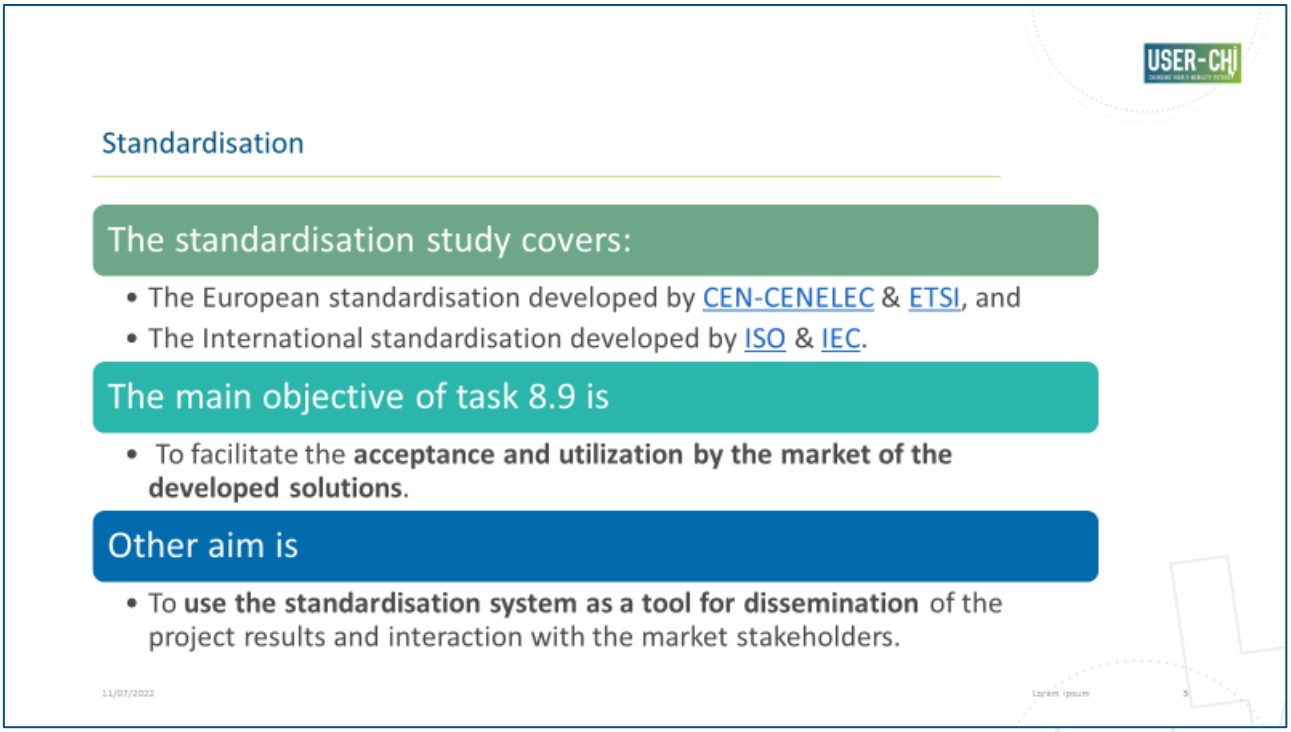
OVERVIEW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Standardisation
The standardisation study covers:
• The European standardisation developed by CEN-CENELEC & ETSI, and
• The International standardisation developed by ISO & IEC.
The main objective of task 8.9 is
• To facilitate the acceptance and utilization by the market of the developed solutions.
Other aim is
• To use the standardisation system as a tool for dissemination of the project results and interaction with the market stakeholders.
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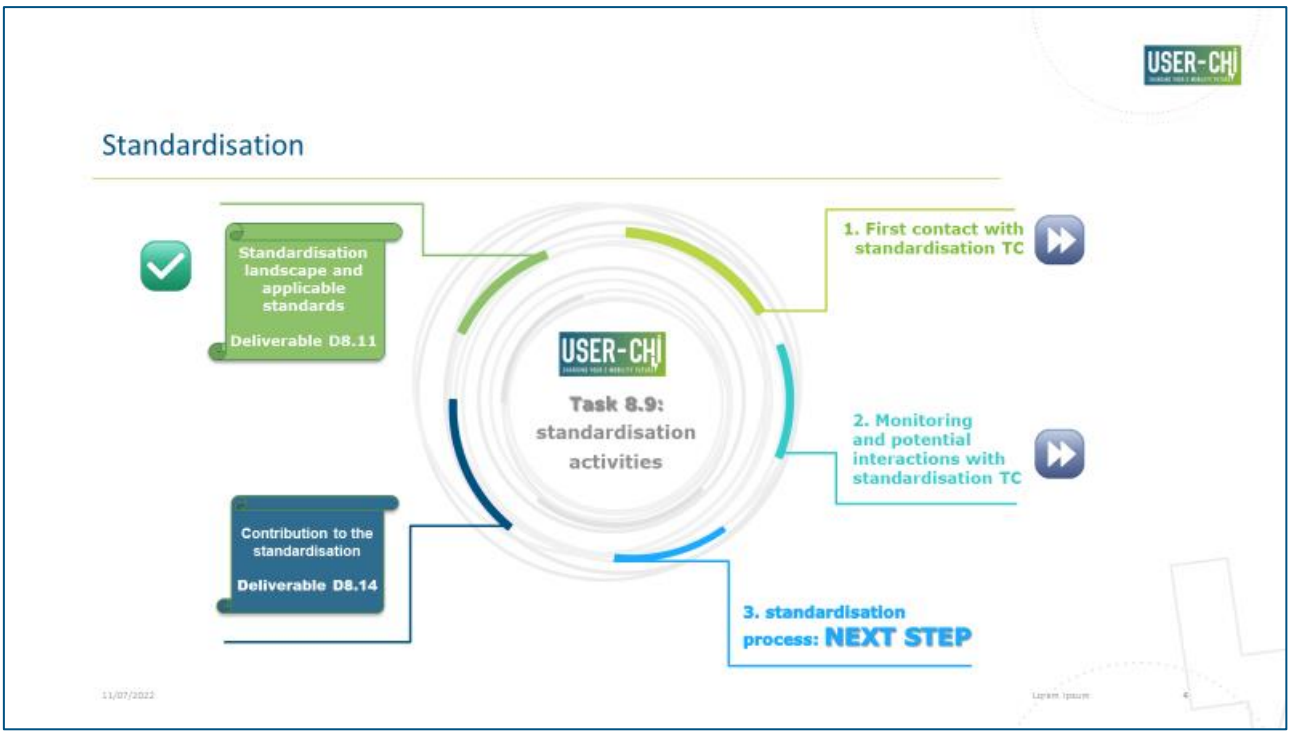
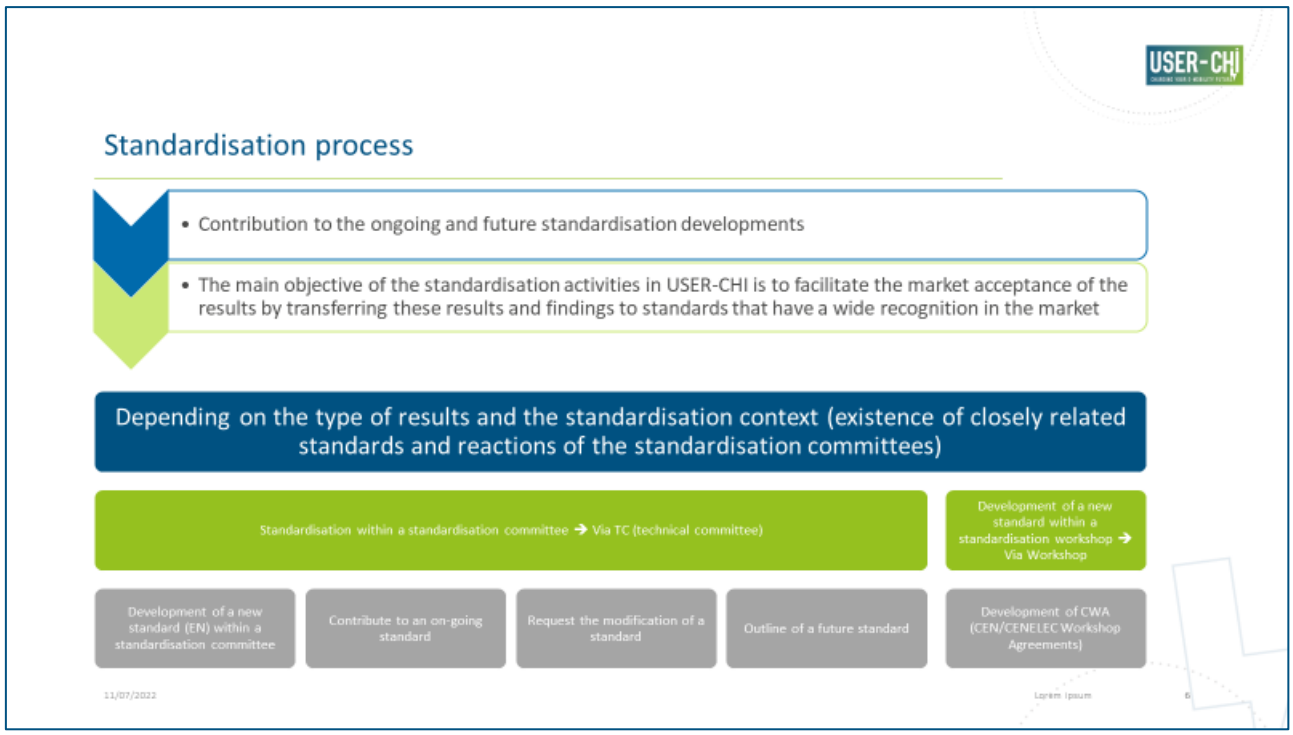
Lorem Ipsum


Standardisation
Standardisation landscape and applicable standards
Deliverable D8.11
Contribution to the standardisation
Deliverable D8.14
Task 8.9: standardisation activities
1. First contact with standardisation TC
2. Monitoring and potential interactions with standardisation TC
3. standardisation process: NEXT STEP


STANDARDISATION PROCESS


Standardisation process
• Contribution to the ongoing and future standardisation developments
• The main objective of the standardisation activities in USER-CHI is to facilitate the market acceptance of the results by transferring these results and findings to standards that have a wide recognition in the market
Depending on the type of results and the standardisation context (existence of closely related standards and reactions of the standardisation committees)
Standardisation within a standardisation committee → Via TC (technical committee)
Development of a new standard within a standardisation workshop → Via Workshop
Development of a new standard (EN) within a standardisation committee
Contribute to an on-going standard
Request the modification of a standard
Outline of a future standard
Development of CWA (CEN/CENELEC Workshop Agreements)
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The European Standardisation Organizations (ESOs)
• CEN
European Committee for Standardization
• CENELEC
European Committee for Electrotechnical Standardization
• ETSI
European Telecommunications Standards Institute
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CEN-CENELEC Deliverables

CEN- CENELEC have four types of deliverables:

Produced in **Technical Committees (TCs)** with national delegations:

- **1) European Standards – EN**
- 2) Technical Specifications - CEN/TS
- 3) Technical Reports - CEN/TR

Produced in **Workshops** with interested parties:

- **4) CEN- CENELEC Workshop Agreements - CWAs**

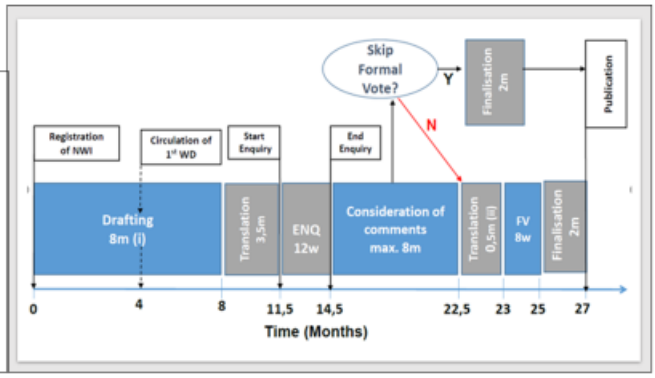
EN development process

EN

Full consensus of all the member countries.

Usually requires **3 years** for its elaboration.

Revised **every 5 years**



In Europe its adoption at the national level is **mandatory.**

CWA development process

CWA

Consensus limited to all the organizations involved in the process

Its elaboration can be **reduced to 12-18 months**

It shall be revised **at 3 years**

Project Plan	Kick-off Meeting	Drafting & adoption of CWA	Publication of CWA
TIMEFRAME: 12 - 18 MONTHS			
Describing – Scope – Objectives – Schedule -Deliverables	**Confirming** – Project Plan – Rules of the Workshop – Financing – Chairperson – Secretariat	**Consensus Process** – Workshop registered participants – Open Commenting phase (60 days)	**Announced** by CEN or CENELEC National Members

Its adoption at the national level is **voluntary.**

11/07/2022 Lorem Ipsum 10

CWA development process

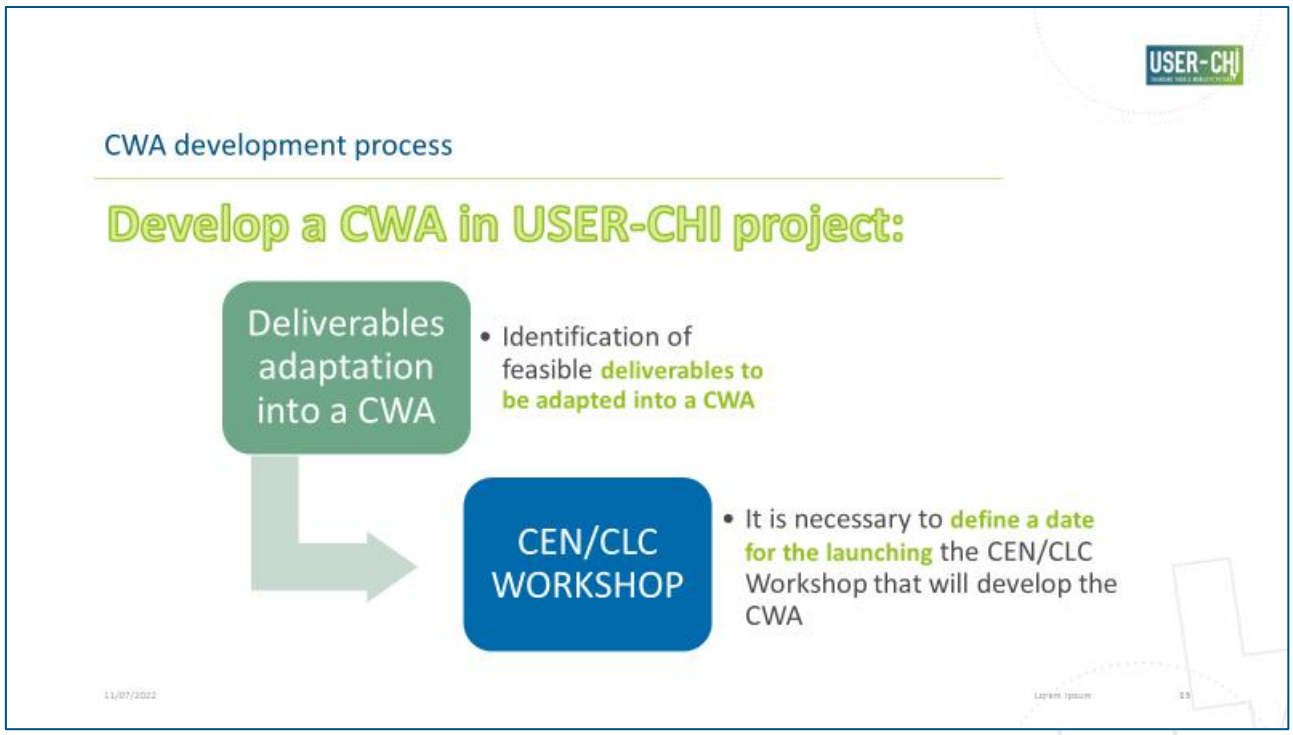
CWA and lifetime

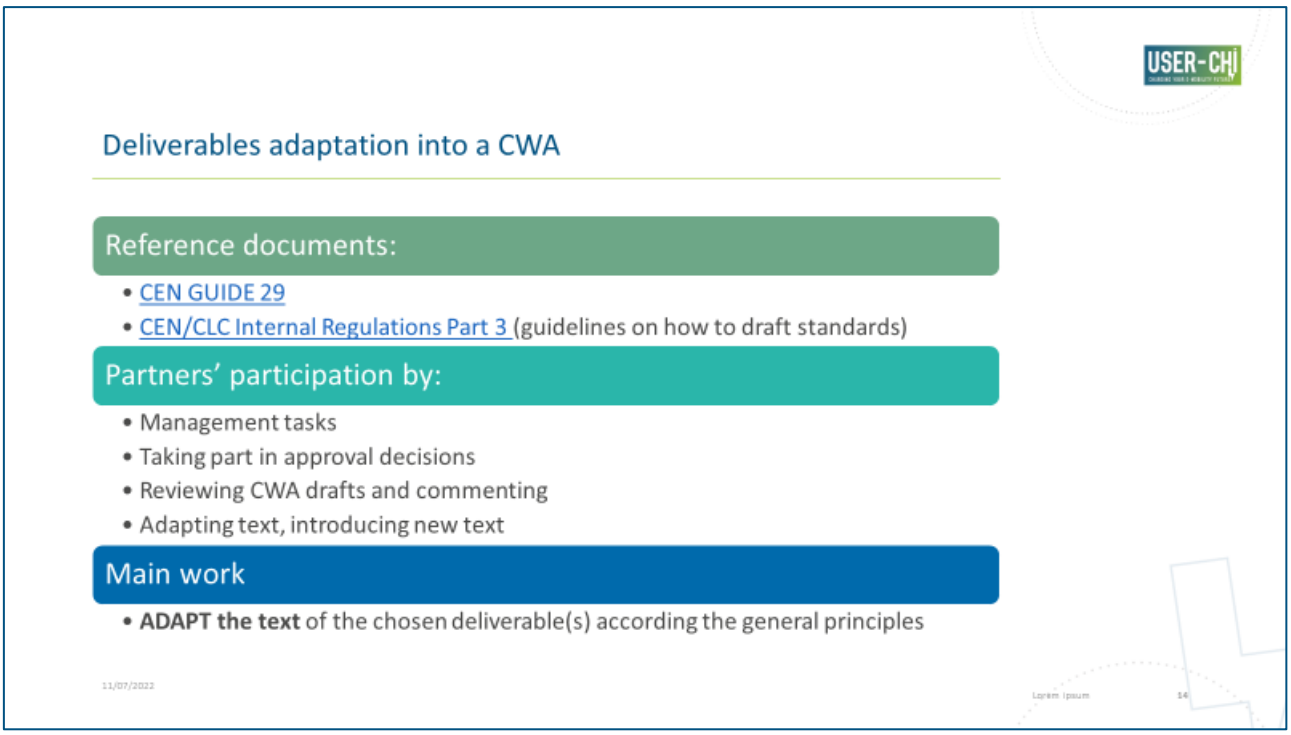
- ✓ **Valid for 3 years, after which the participants are asked to make a choice to:**
  - reconfirm
  - revise;
  - upgrade into a standard/ technical specification
  - withdraw

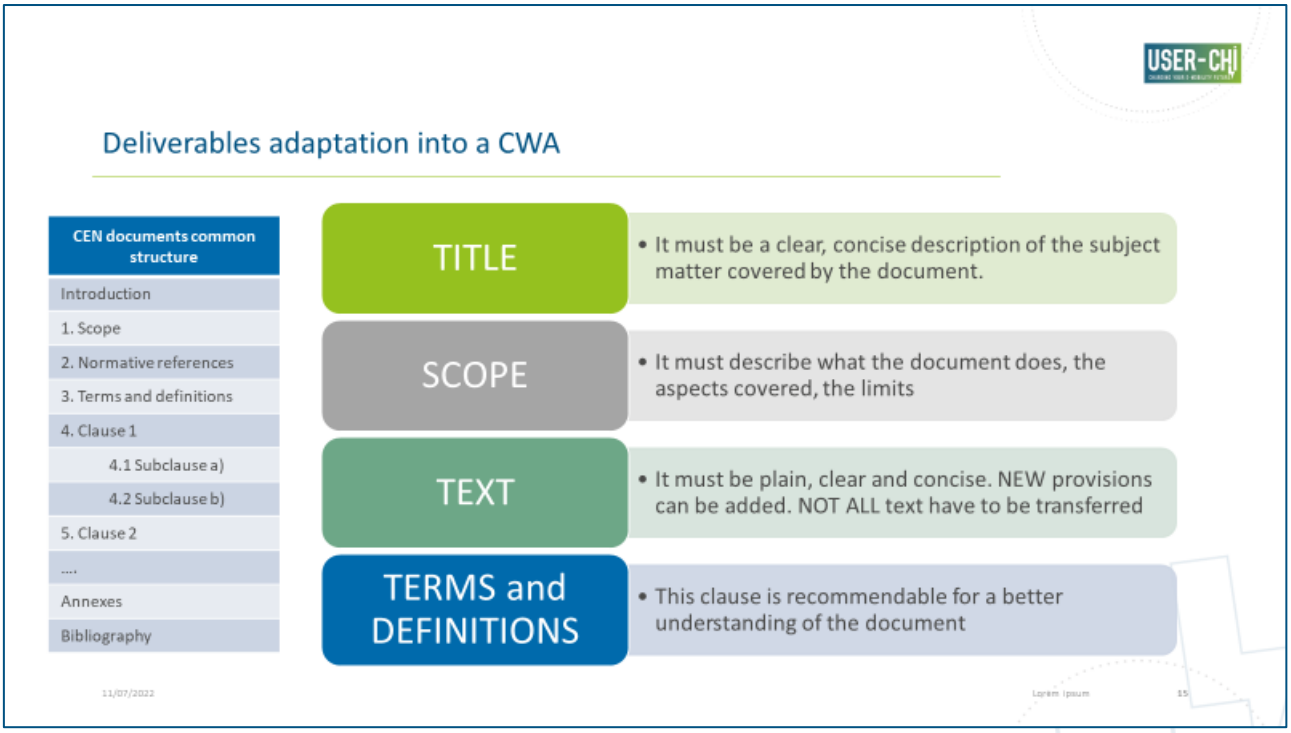
Max 6 years !

11/07/2022 Lorem Ipsum 11


CWA development process
REASONS for developing a CWA:
• To give more visibility to USER-CHI project within industry and standardisation system
• Possibility to use already "done Deliverables" as a basis
• A CWA is a document agreed by the participants of a CEN/CLC Workshop (WS), that commonly is composed by a H2020 project partners.
• A CWA normally includes guidelines, recommendations, best practices… and can be converted in a CEN standard in the future.


CWA development process
Develop a CWA in USER-CHI project:
Deliverables adaptation into a CWA
• Identification of feasible deliverables to be adapted into a CWA
CEN/CLC WORKSHOP
• It is necessary to define a date for the launching the CEN/CLC Workshop that will develop the CWA


Deliverables adaptation into a CWA
Reference documents:
• CEN GUIDE 29
• CEN/CLC Internal Regulations Part 3 (guidelines on how to draft standards)
Partners' participation by:
• Management tasks
• Taking part in approval decisions
• Reviewing CWA drafts and commenting
• Adapting text, introducing new text
Main work
• ADAPT the text of the chosen deliverable(s) according the general principles
11/07/2022


Deliverables adaptation into a CWA
CEN documents common structure
Introduction
1. Scope
2. Normative references
3. Terms and definitions
4. Clause 1
4.1 Subclause a)
4.2 Subclause b)
5. Clause 2
....
Annexes
Bibliography
TITLE
• It must be a clear, concise description of the subject matter covered by the document.
SCOPE
• It must describe what the document does, the aspects covered, the limits
TEXT
• It must be plain, clear and concise. NEW provisions can be added. NOT ALL text have to be transferred
TERMS and DEFINITIONS
• This clause is recommendable for a better understanding of the document
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CEN/CLC WORKSHOP

CEN/CENELEC Workshop
- working platform open to the participation of any interested parties for elaboration of CEN/CENELEC Workshop Agreements

CEN/CENELEC Workshop Agreement (CWA)
- CEN/CENELEC deliverable, developed by a Workshop, which reflects an agreement between identified individuals and organizations responsible for its contents, and which is made available by CEN/CENELEC in at least one of the official languages
- The deliverable may take various forms such as text file or computer code.

Source:
- CEN/CENELEC GUIDE 29:2020, 2.1 and 2.2

CEN deliverables development area
- Developing CWA

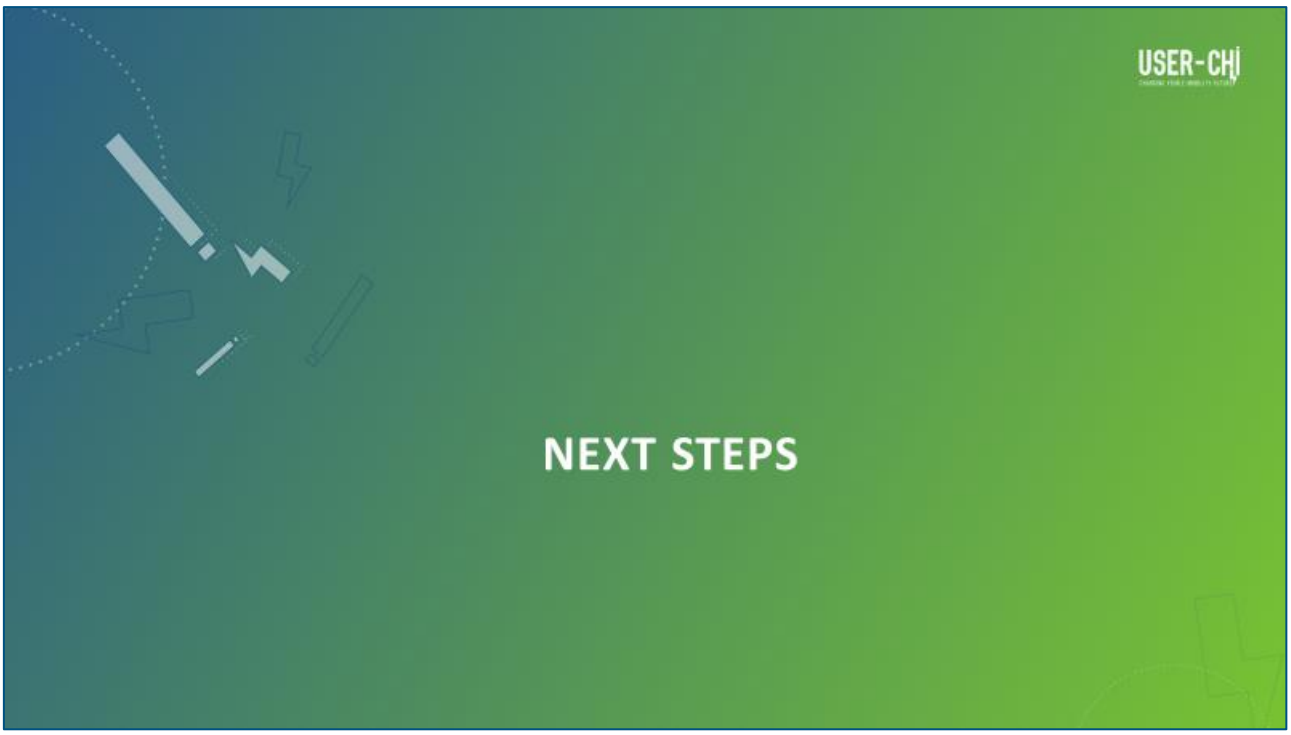
11/07/2022 Lorem Ipsum 16

CEN/CLC WORKSHOP

CWA development Schedule (draft)

		Task	Responsible
A. INICIATION	A.1	Decision on CEN WS and CWA title	All
	A.2	Decision on kick-off date	All
	A.3	Project Plan elaboration	Leader of D, UNE
	A.4	Self assessment	Leader of D, UNE
	A.5	Submision to CEN	UNE
	A.6	Publication on CEN website	CEN
	A.7	Commenting period (30 days)	Other
B. DRAFTING	B.1	Kick-off meeting (on site)	Leader of D, UNE, Other
	B.2	Registration of WS participation	All
	B.3	TEXT DRAFTING (distributed among partners)	All
	B.4	Agreement	All
	B.5	Commenting period (60 days)	Other
	B.6	Revision of comments (if any)	All
	B.7	Final Approval	All
C. FINALIZATION	C.1	Submision to CEN	UNE
	C.2	Formatting	CEN
	C.3	Publication	CEN

11/07/2022 Lorem Ipsum 17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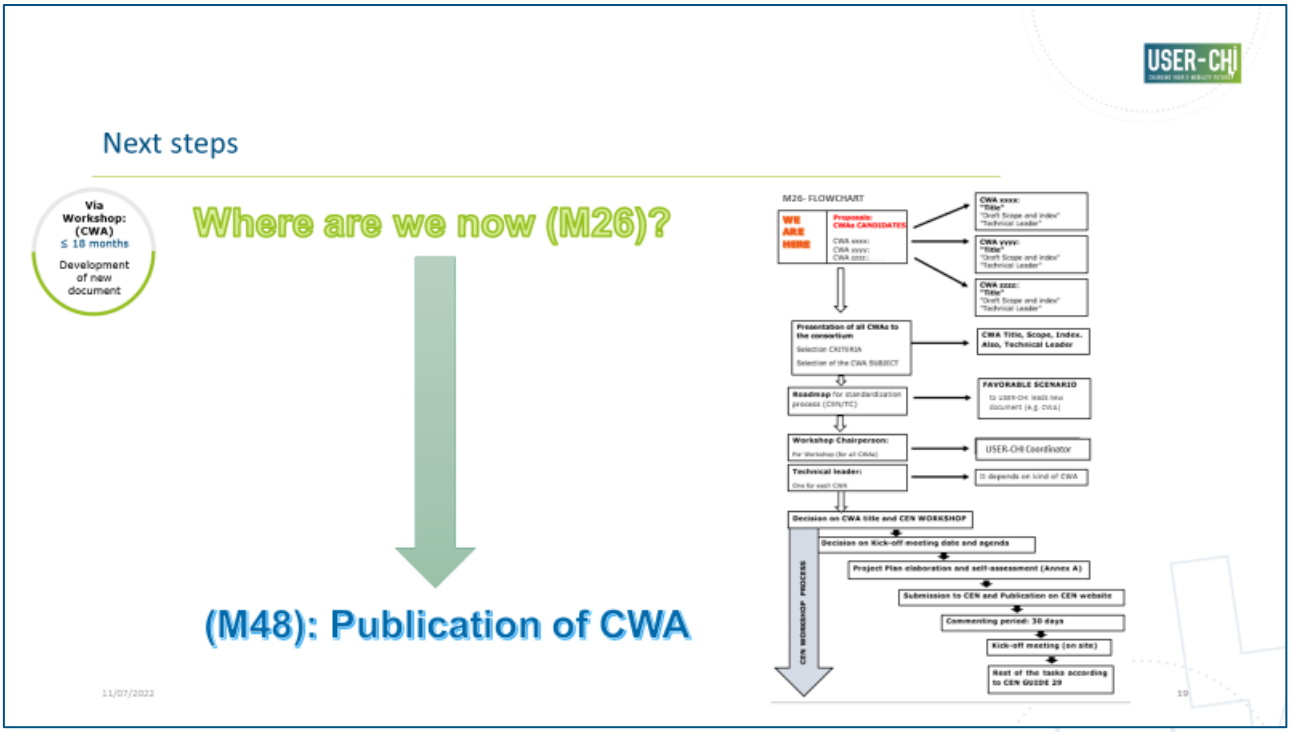
NEXT STEPS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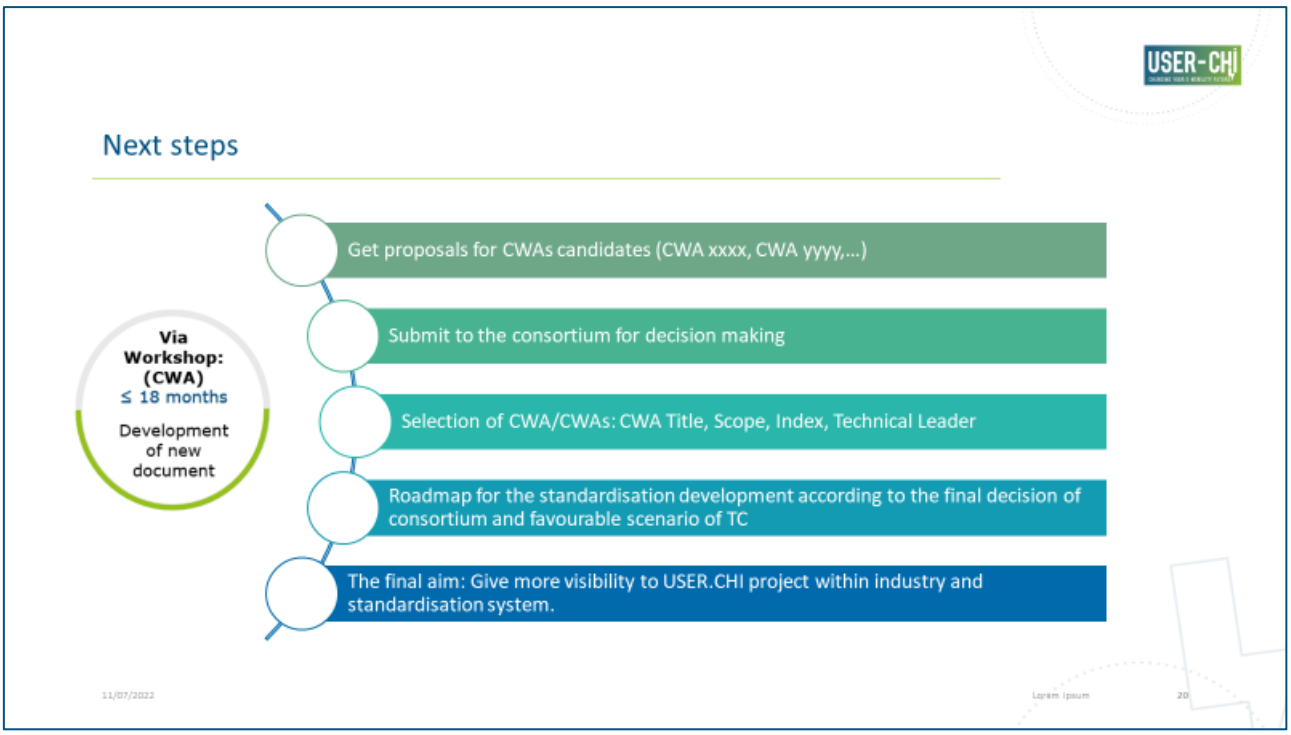
Next steps
Via Workshop: (CWA)
≤ 18 months
Development of new document
Where are we now (M26)?
(M48): Publication of CWA
M26- FLOWCHART
WE ARE HERE
Proposals: CWAs CANDIDATES
CWA xxxx:
CWA yyyy:
CWA zzzz:
Presentation of all CWAs to the consortium
Selection CRITERIA
Selection of the CWA SUBJECT
CWA Title, Scope, Index. Also, Technical Leader
Roadmap for standardization process (CEN/TC)
FAVORABLE SCENARIO
Workshop Chairperson:
USER-CHI Coordinator
Technical leader:
Decision on CWA title and CEN WORKSHOP
Decision on Kick-off meeting date and agenda
Project Plan elaboration and self-assessment (Annex A)
Submission to CEN and Publication on CEN website
Commenting period: 30 days
Kick-off meeting (on site)
Rest of the tasks according to CEN GUIDE 29
CEN WORKSHOP PROCESS


Next steps
Via Workshop: (CWA)
≤ 18 months
Development of new document
Get proposals for CWAs candidates (CWA xxxx, CWA yyyy,…)
Submit to the consortium for decision making
Selection of CWA/CWAs: CWA Title, Scope, Index, Technical Leader
Roadmap for the standardisation development according to the final decision of consortium and favourable scenario of TC
The final aim: Give more visibility to USER.CHI project within industry and standardisation system.
11/07/2022
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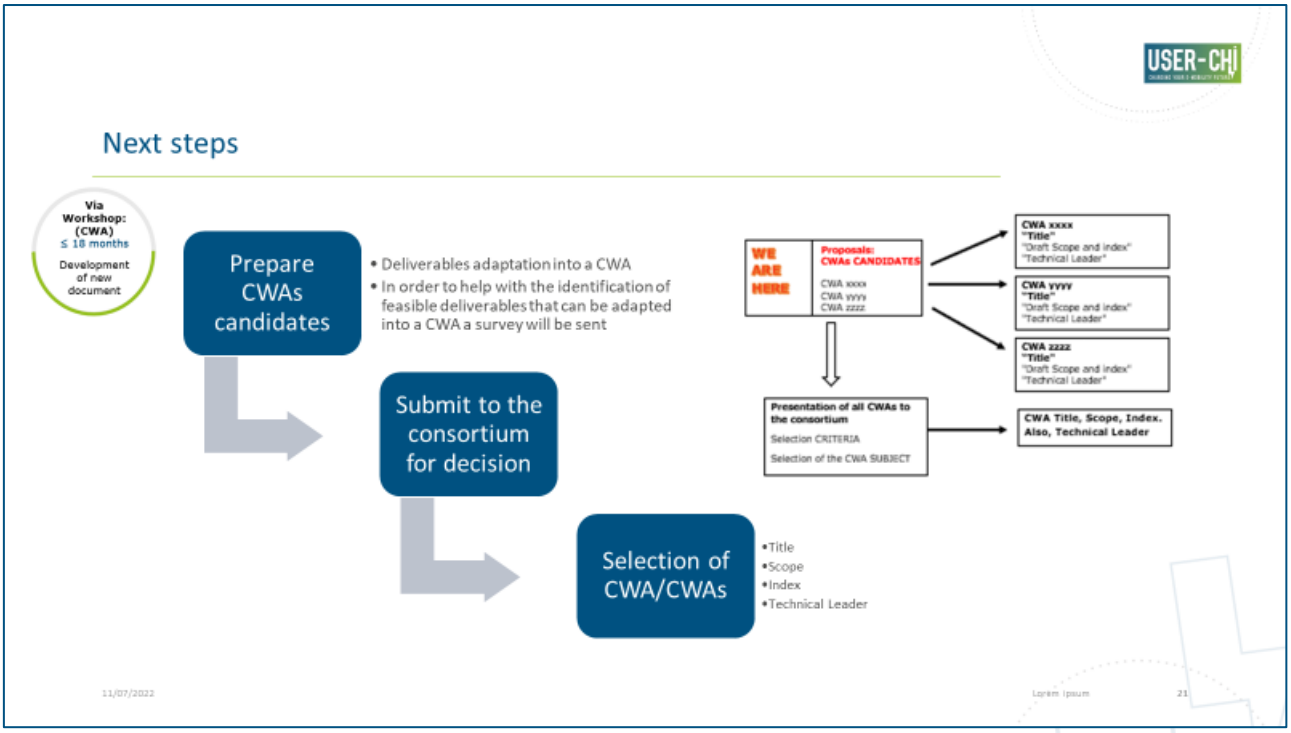
20


Next steps
Via Workshop: (CWA)
≤ 18 months
Development of new document
Prepare CWAs candidates
• Deliverables adaptation into a CWA
• In order to help with the identification of feasible deliverables that can be adapted into a CWA a survey will be sent
Submit to the consortium for decision
Selection of CWA/CWAs
•Title
•Scope
•Index
•Technical Leader
WE ARE HERE
Proposals: CWAs CANDIDATES
CWA xxxx
CWA yyyy
CWA zzzz
Presentation of all CWAs to the consortium
Selection CRITERIA
Selection of the CWA SUBJECT
CWA xxxx "Title" "Draft Scope and index" "Technical Leader"
CWA yyyy "Title" "Draft Scope and index" "Technical Leader"
CWA zzzz "Title" "Draft Scope and index" "Technical Leader"
CWA Title, Scope, Index. Also, Technical Leader
11/07/2022
Lorem Ipsum
21