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|  | **Doc. ECC/SE(14)006** |
| Working Group SE |  |
| 66th Meeting of WG SESesimbra, Portugal, 27 – 31 January 2014 |  |
|  |  |
| Date issued:  | 13 January 2014 |
| Source: | SE24 Chairman |
| Subject: | SE24 progress report |

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| Password protection required? (Y/N) | **N** |
| Summary: | This document provides the Report of SE24 activities to WG SE, including the list of suggested actions. |
| Proposal: | WG SE is invited to note the current on-going activities, and WGSE is especially asked to * Finally adopt ECC Report 206 on WI39 (see Annex 4)
* Finally adopt ECC Report 207 on WI42 (see Annex 5)
* Finally adopt ECC Report 208 on WI45 (see Annex 1)
* Note the preliminary report on 5 GHz RLAN extension bands (see Annex 2)
* Merge WI42 with WI47 and to close WI47
* Extend the deadlines for WI37 until May 2015
* Note the SE24 comments to the list of harmonised standards (see Annex 6)
* Note the Liaison Statement send to ETSI ERM on RFID antenna beamwidth (see Annex 3).
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| Background: | See the WG SE work program  |

**1. Introduction**

SE24 had two regular meetings since the previous WG SE meeting (24-25 October 2013 Copenhagen and 9-11 December 2013 Nijmegen). In addition several drafting groups were active between the physical meetings in order to progress on various work items.

The following sections are providing the status of the ongoing work of SE24 for consideration within WG SE:

* Section 2: Results of public consultation
* Section 3: SE24 work items
* Section 4: Other issues
* Section 5: SE24 work program and time schedule
* Section 6: Future meetings
* Section 7: List of annex’s

#### 2. Public Consultation

* Draft ECC Report 206 was in public consultation until the 20th of November 2013. See details under 3.2.
* Draft ECC Report 207 was in public consultation until the 20th of November 2013. See details under 3.3.
* Draft ECC Report 208 was in public consultation until the 20th of November 2013. See details under 3.6.

**3. Review of SE24 work items**

**3.1 Studies relating to LDC (SE24\_37)**

SE24 just started this activity. Dr. Michael Mahler (Robert Bosch) is leading this activity in SE24.

The main issue seems to be the impact of UWB on military radars in the band 3.1-3.4 GHz.

Deadline needs to be extended from May 2014 to May 2015.

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| WGSE is requested to change the deadline for WI37 from May 2014 to May 2015. |

# 3.2 Industrial wireless applications (SE24\_39)

Draft ECC Report 206 was in public consultation until the 20th of November 2013. Comments were provided by Germany, Sweden and Kapsch.

SE24 discussed the comments and prepared a resolution proposal. The changed draft ECC Report 206 together with the consolidated table of comments and the package of files are attached as **Annex 4**.

The main change occurred in the RTTT section with higher separation distances due to changed RTTT antenna characteristics. The majority of other changes are editorial.

It should be noted that studies relating to the possible introduction of Digital Air To Ground Communications (DA2GC) system in the frequency bands 1900-1920 MHz, 2010-2025 MHz and 5855-5875 MHz were not completed at the time this report was prepared and therefore, DA2GC was not considered.

In addition, the EC has issued a Mandate calling for studies in the 5 GHz frequency range. Since those studies are still at an initial stage, this case was not considered in this report (see 3.12).

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| WG SE is invited to finally adopt ECC Report 206 (**Annex 4**). |

# 3.3 Improvements for SRD in 863-870 MHz (SE24\_42)

**Part 1: LTE impact**

Draft ECC Report 207 was in public consultation until the 20th of November 2013. Comments were provided by Sweden, Germany, Ericsson, NSN-Nokia-Qualcomm, Analog Devices, Hydrometer Electronic and France.

SE24 discussed the comments and prepared a resolution proposal. It was not possible to resolve all comments at the last physical SE24 meeting, but after two Gotomeetings (17 December 2013, 10 January 2014). The changed draft ECC Report 207 together with the consolidated table of comments and the package of files are attached as **Annex 5**.

The following main items were discussed:

* Occurrence probability of band C usage: After very controversial discussions SE24 agreed on the existing wording in the executive summary and to add a new paragraph in section 4 to explain the issue.
* SRD wanted signal distribution: It was not possible to agree on one representative distribution and thus SE24 decided to keep both distributions (dRSS 1 with lower values and dRSS 2 with higher values)
* Power control LTE: The used APC strategy in SEAMCAT simulations seems to be relevant in interference limited network and thus the results should be still valid and no new simulations are expected to be required. However, a more aggressive power control strategy is possible (e.g. in noise limited network in rural environments) and could lead to higher interference probabilities (almost doubling the results of existing studies). SE24 prepared a new Annex 4 and a paragraph for section 3 and the conclusion.
* Additional SEAMCAT simulations for rural environment:
	+ A simple Rural scenario has been proposed during the public consultation showing a marginal higher interference risk as in the urban scenario (e.g. 30% instead of 25 %).
	+ Concerns were raised by Qualcomm and Ericsson on the assumptions for that scenario; further detailed and time consuming discussions would be required to agree on the settings for that rural scenario.
	+ SE24 noted that it is not a usual practice to provide new studies during the public consultation.
	+ Based on the above considerations, SE24 decided
		- Not to consider a detailed rural scenario simulation, because it is expected that the main difference to the existing urban scenario will be due the potential different APC strategy (see power control discussions above).
		- to add a Paragraph to section 3 and the conclusion explaining the expected difference of a rural scenario which has not been studied in detail (e.g. a more aggressive APC strategy)
		- to raise the issue at WGSE, that it was not possible to agree on a rural scenario which has been suggested during the public consultation

A concern was raised by Qualcomm/Ericsson on the last paragraph in the conclusions:

*“This may be seen as an issue of general importance and should be further discussed in CEPT and ETSI [in order to develop improved specifications and rules for OOB and spurious emissions (e.g. ERC/REC 74-01 [14] and applicable ETSI specifications). One additional observation to feed into this review is that the general 250% rule as border between OOB and spurious emissions may not be applicable for wideband digital systems and thus modernised OOB rules may need to take this into consideration. ].”*

Qualcomm/Ericsson could agree on the first sentence (“This may be seen as an issue of general importance and should be further discussed in CEPT and ETSI”, but the second part was not agreed by Qualcomm/Ericsson. As this is a more general issue, WGSE is asked for guidance.

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| WG SE is invited to finally adopt ECC Report 207 (**Annex 5**). |

# Part 2: Intra SRD considerations

After part 1 of this work items is finalised now, SE24 will start with the detailed consideration of part 2. Based on the proposal from ETSI ERM (SE(14)Info8), WGSE is invited to merge WI42-2 and WI47 and to close WI47.

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| WGSE is invited to merge WI42-2 and WI47 to one work item. |

# 3.4 174-216 MHz (SE24\_43)

SE24 considered a contribution from Brian Copsey, which included the updated working document and two test reports from OFCOM/UK. Below is a summary of the main issues which are under discussion:

* Proposal to be checked: ALD with 10 mW should be allowed on a license exempt basis if a 32 dBµV/m DAB signal is not exceeded around the building where ALDs are intended to be used;
* Rational for 32 dBµV/m?
* Frequency Offset from DAB channel?
* Protection of Radio microphones (based on tuning range)?
* Requirements for the measurement procedure?

Finalisation at SE24 planned at the April meeting 2014 of SE24.

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| WG SE is invited to note the progress. |

# 3.5 ALDs UHF (SE24\_44)

The status within SE24 and WGSE is still, that either a study for new bands will be requested in near future or the WI can be closed.

Note: the identification of new frequencies is still ongoing.

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| WGSE is invited to keep the WI on hold; either studies for new bands will be requested in near future or the WI can be closed. |

# 3.6 RFID 13.56 MHz (SE24\_45)

Draft ECC Report 208 was in public consultation until the 20th of November 2013.

Only BNetzA provided comments to draft ECC Report 208. All comments from BNetzA were of editorial nature and were agreed.

The changed draft ECC Report 208 together with the consolidated table of comments is attached as **Annex 1**.

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| WG SE is invited to finally adopt ECC Report 208 (**Annex 1**) |

# 3.7 SEAMCAT (SE24\_46)

SE24 started with detailed considerations. A fist version of a working document was prepared. The next step will be to run objective tests with simple time domain scenarios to identify for which time domain considerations SEAMCAT could be used. The plan is to involve STG here.

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| WG SE is invited to note the progress for this work item. |

**3.8 WI47: 862-863 MHz**

Based on the proposal from ETSI ERM (SE(14)Info8), WGSE is invited to merge WI42-2 and WI47 and to close WI47 (see 3.3).

## 3.9 WI48: Low Power Cochlear Implant Systems (LP-CIS) operating in the band 2483.5 – 2500 MHz

SE24 started with a comparison between LP-CIS, MBANS and LP-AMI. It is not clear at this stage for which radio systems further studies are required. The impact from LTE above 2.5 GHz on LP-CIS was also discussed and studies on that issue may be expected for the next meeting.

Finalisation at SE24 planned at the August 2014 meeting of SE24.

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| WG SE is invited to note the progress for this work item. |

## 3.10 WI49: TTT/DSRC

No detailed consideration has been given to this work item. Some concerns were raised on the value of studies for a system which is already in the market since 20 years. Are we expecting a compatible situation between RTTT and radiolocation without DFS? Guidance has been requested from SRD/MG on that issue.

Finalisation planned at the August 2014 meeting of SE24

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| WG SE is invited to note the progress for this work item. |

## 3.11 WI50: Helicopter applications in the band 76-79 GHz

From the last WGSE meeting some clarification was requested from WGFM on the frequency band to be studied. The reply from WFM is available now (SE(14)013, M73\_06); WGFM decided that the entire frequency range 76-79 GHz as described in the ETSI SRdoc TR 103 137 should be covered by the technical studies on sharing and compatibility in Project Team SE PT24.

A first working document with initial RAS studies have been considered showing separation distances up to 80 km for a helicopter at 300m altitude. Such an exclusion zone could be acceptable for the helicopter community since a GPS receiver is expected to be available and since only a limited number of RAS stations are using those frequencies.

Finalisation at SE24 planned at the April meeting 2014 of SE24

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| WG SE is invited to note the progress for this work item and to reflect the frequency band 76-79 GHz in the work program. |

## 3.12 5 GHz WLAN

After the last ECC Steering Group and CPG15-3 the WGSE chairman requested SE24 (and other PTs) to deliver preliminary results for the CPG PTD meeting 13-17 January 2014, so that they can use this for WRC'15 AI1.1. These preliminary results are aimed to provide a first, very rough indication of the impact of WLAN on the concerned systems. It is expected that WGSE will streamline at this meeting the organisation with regard to the EC mandate.

Preliminary studies were prepared by SE24 (see Annex 2) on the impact of RLAN used in the band 5725 - 5925 MHz on the three following systems:

* ITS in the band 5855 - 5925 MHz
* RTTT/DSRC in the bands 5795-5805 and 5805 - 5815 MHz
* WIA in the band 5725-5875 MHz

For the three studies, the MCL calculations lead to significant separation distances. Thus, there is a need for further studies. Initial consideration has been made on the potential application of interference avoidance techniques for the protection of ITS.

Guidance is expected from WG SE on the need to conduct studies between RLANs and other radio systems, such as:

* Short Range Devices in the band 5725-5875 MHz (see also SE(14)028), and
* an additional system used by one CEPT administration for public transport automation (like subways) in the band 5915-5935 MHz.

Other compatibility studies related to RLANs in the 5725-5925 MHz band (with radiolocation, FSS and FS (BFWA)) are addressed in other groups.

The WGSE chairman already collected the results from SE24, SE19, SE40 and SE44 together and forward it to CPG PTD (see SE(14)027).

The next SE24 activity will be at a Gotomeeting (10 February 11:00) after WGSE decided on the responsible group(s) to prepare studies for the 5 GHz mandate.

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| WG SE is invited to note the progress. |

# 4. Other issues

**LS from ERM on antenna beamwidth of RFID in the band 915-921 MHZ** (SE(14)Info7)**.** This relates to ECC Report 200 and a reply was send by SE24 (see Annex 3).

**Fixed roadside infrastructure76-77 GHz** (SE(14)Info002, M73\_Info4 SRdoc TR 103 148, SE(14)017, M73\_07 study request WGFM): WGFM asks for compatibility studies. May be the new work item needs to be separated from the helicopter item since the discussions on fixed roadside are expected to be more time consuming.

**List of harmonised standards**: Under Work Item SE\_11, WG SE and its Project Teams are invited to monitor the development of ETSI Harmonised Standards. A spreadsheet listing the draft HS under development is maintained by the ECO and updated after each ETSI ERM meeting. The latest version is available on a dedicated page of the ECC website and takes into account the outcome from the most recent ERM meeting. SE24 prepared a document with comments to this list (see Annex 6).

**5. Work Program of SE24**

Current WGSE target dates:

* January 2014: WI39, WI44 (on hold), WI45
* May 2014: WI37, WI47
* Sep 2014: WI42, WI43, WI50
* Jan 2015: WI48, WI49
* May 2015: WI46

Due to this huge workload SE24 decided to schedule a work plan in order to avoid congestions at certain SE24 and WGSE meetings.

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|  | Finalisation at SE24 | WGSE for PC | SE24 Resolution comments PC | Final approval WGSE |
| WI37 (deadline to be extended) | December 2014 | January 2014 -> January 2015 |  | May 2014 -> May 2015 |
| WI39  | August 2013 | September 2013 | December 2013 | January 2014 |
| WI42-2  | April 2014  | May 2014 | August 2014 | September 2014  |
| WI43  | April 2014  | May 2014 | August 2014 | September 2014  |
| WI44 (on hold) |  |  |  |  |
| WI45  | August 2013 | September 2013 | December 2013 | January 2014 |
| WI46 SEAMCAT | December 2014 | January 2015 | April 2015 | May 2015 |
| WI47 (merging with WI42-2, closing WI47) |  |  |  |  |
| WI48 LP-CIS 2.5 GHz | August 2014 | September 2014 | December 2014 | January 2015 |
| WI49 TTT/DSRC 5.8 GHz | August 2014 | September 2014 | December 2014 | January 2015 |
| WI50 76-77 GHz Helicopter | April 2014 | May 2014 | August 2014 | September 2014 |
| [76-77 fixed roadside |  |  |  |  |
| 5 GHz WLAN | Preliminary studies December 2013 |  |  |  |

The following table shows the focus of discussions between meeting M73 and M82.

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|  | M7412/133 days | M7502/14 | M7604/143 days | M77[06/14] | M7808/143 days | M79[10/14] | M80[12/14]3 days | M81[02/15] | M82[04/15]3 days |
| Reports to be finalised | WI475GHz |  | WI50WI43WI42-2 |  | WI37WI48WI49 |  | WI46 |  |  |
| Essential discussions  | 5GHzWI47WI43WI50WI42-2 | WI50WI43WI42-2WI48WI49WI37 | WI42-2WI50WI48WI49WI37 | WI37WI48WI49 |  |  |  |  |  |
| Results of PC | WI39WI42-1WI45 |  |  |  | WI50WI43WI42-2 |  | WI48WI49 |  | WI46 |

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| Reference | Subject | Chairman, Rapporteur | Status | Start DateTarget date | Reflector |
|  | [76-77 fixed roadside |  |  |  |  |
|  | 5 GHz RLAN extension | Bruno.espinosa@eco.cept.org  | Preliminary studies were send to WGSE at M74 |  |  |
| SE24\_50 | Surveillance Radar equipment operating in the 76 to 77 GHz range for helicopter application | Tim.Waanders@eurocopter.com | WGFM request is available as SE(13(010) and the draft ETSI TR 103 137 as SE(13)Info26. WGFM will be requested to clarify the frequency range to be considered. Close cooperation with SRD/MG. | S: Sep 2013T: Sep 2014 |  |
| SE24\_49 | TTT/DSRC in the frequency band 5805-5815 MHz | Hans.johansson@kapsch.net  | Compatibility studies between TTT/DSRC systems and radio services operating within 5805-5815 MHz in order to clarify limits and operational conditions for TTT/DSRC in this frequency band. More information’s in SE(13)103. Close cooperation with SRD/MG. | S: Sep 2013T: Jan 2015 |  |
| SE24\_48 | Low Power Cochlear Implant Systems (LP-CIS) operating in the band 2483.5 – 2500 MHz | wmeskens@cochlear.com | The existing reports on similar medical applications using the same frequency band should be considered (ECC Report 149 on LP-AMI and ECC Report 201 on MBANS); duplication of work should be avoided. System information’s in ETSI TR 103 069. More information’s in SE(13)101. Close cooperation with SRD/MG. | S: Sep 2013T: Jan 2015 |  |
| SE24\_47 | SRD applications used in the band 862-863 MHz |  | To support SRD/MG on the impact of SRD applications used in the band 862-863 MHz on applications in the band below 862 MHz (LTE) and on the cordless audio applications operating in 863-865 MHz. Priority on existing WI42. Further information in SE(13)007. Close cooperation with SRD/MG. | S: Feb 2013T: May 2014 |  |
| SE24\_46 | Time domain dynamics for SRD in SEAMCAT | Ben Witvliet | Guidance document for the implementation in SEAMCAT of system dynamics and system interrelations for SRD in the time domain. These will include adaptive interference mitigation mechanisms (LBT, AFH, etc.) and Duty Cycle random access. To be undertaken in collaboration with STG. | S: Feb 2013T: May 2015 |  |
| SE24\_45 | RFID 13.56 MHz | Josef Schürmann | To conduct compatibility studies on the impact of the relaxed emission mask for RFIDs as proposed in ETSI TR 103 059 on existing radio services. Cooperation with SE21 if necessary.Draft ECC Report 208 sent for public consultation | S: Sep 2012T: Jan 2014 |  |
| SE24\_44 | Assistive Listening devices (ALD) in the bands 870-876 MHz, 915-921 MHz and 960-1164 MHz | Brian Copsey | WGFM requested WGSE in January 2013 (SE(13)11) to stop studies in the band 960-1215 MHzThe band 870-876/915-921 MHz is already considered in ECC Report 200.. Either studies for new bands will be requested by WGFM or the WI can be closed.WI is currently on hold. | S: Sep 2012T: On hold |  |
| SE24\_43 | Support in the revision of the regulations at 169 MHz  | Nick Long (Task 1)Neviana Nikolesku (Task 2) | CEPT Report 43 and Decision 2005/928/EC. Work related to the EC Mandate on 169 MHz. WGFM split the activity into 2 tasks. Task 1 deals with LDC limit in the 169 MHz band and task 2 deals with studies including 174-216 MHz. Task 1 is already finalised. | S: 30.03.2012T: Sept 2014 |  |
| SE24\_42 | Improvements for SRD in 863-870 MHz | Enrico TosatoLTE vs SRD: Bruno Espinosa | See item 3.2 in [Annex 1 to SE(11)073](http://www.cept.org/Documents/wg-se/319/SE_11_073_Annex_1_Annex_1_to_SE_11_073___Request_for_studies_under_the_Roadmap_for_future_UHF_Spectrum_Requirements_for_UHF_SRD__RFID__Smart_Metering_and_Smart_Grid_Applications) (intra-SRD compatibility situation and sharing in 863-865 MHz and 865-868 MHz). Should also take into account impact of the MS Uplink below 862 MHz.The Issue will be separated in two different ECC reports:Part1: LTE impact and improvementsPart2: Intra SRD Draft ECC Report 207 for part 1 is sent for public consultation | S: 14.10.2011T: Sept 2014 | Se24-wi42@list.cept.org |
| SE24\_39 | Non-UWB industrial applications 5.725-5.875 GHz) |  Marc Le Devendec | To conduct compatibility studies relating to non-UWB industrial applications (see document [SE(11)070](http://www.cept.org/Documents/wg-se/315/SE_11_070_LS_to_WG_SE_on_non-UWB_Wireless_Industrial_Applications)) in the frequency range 5.725-5.875 GHz. ECC Report 206 is sent for PC | S: 14.10.2011T: Jan 2014 |   |
| SE24\_37 | Analyses of UWB LDC mitigation technique with respect to incumbent radiocommunication services in the band 2.69 to 5 GHz | Michael.Mahler@de.bosch.com  | The report should take into account existing studies (ECC Report 94 and ECC Report 123 and ECC report 170). Studies in ECC Report 94 addresses only the impact of LDC on WiMAX.Further studies should address in particular the following services: Radionavigation, RAS, MS…Cooperation with ETSI STF 411and TG UWB. | S: May 2011T: May 2015 |   |

**6. Date and place of future meetings**

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| SE24 meeting no. | Date |  | Host | Location |
| **M75** | **19-21 February**(starting at 10:00, closing 16:00) | **SE24** |  | **Stuttgart** |
|  | 11-14 March 2014 | ECC |  |  |
|  | 24-28 March 2014 | ETSI ERM |  | Sofia Antipolis |
| **M76** | **31 March (9:00) -2 April 2014** (starting at 9:00, closing at lunch time | **SE24** |  | **Antalya, Turkey** |
|  | 2 (after lunch) -4 April 2014  | SRD/MG |  | Antalya, Turkey |
|  | 12-16 May 2014 | WGSE |  | Antalya, Turkey |
|  | 26-30 May 2014 | WGFM |  | Norway |
|  | 16-20 June 2014 | ETSI ERM |  | Sofia Antipolis |
| **M77** | **11 - 13 June, 2014**(starting after lunch, closing not later than 16:00; coordination of agenda with people attending ITU-R SG1) | **SE24** |  | **Mainz** |
|  | 24-27 June 2014 | ECC |  |  |
| **M78** | **25-26 August 2014**[starting at 10:00, closing at 18:00] | **SE24** |  | **Biel** |
|  | 27 August 2014 (until lunch) | **joint SE24/SRDMG meeting** |  | Biel |
|  | 27 (after lunch)- 29 August 2014 | SRD/MG |  | Biel |
|  | 15-19 September 2014 | WGSE |  | Ireland |
|  | 6-10 October 2014 | WGFM |  |  |
| M79 | [13-15 October 2014][Starting at 11:00, closing at lunch time; ITS considerations to be avoided] | SE24 |  | [London] |
|  | 25-28 November 2014 | ECC |  |  |
|  | 1-5 December 2014 | ETSI ERM  |  | Sofia Antipolis |
| M80 | [8-10 December 2014] | SE24 |  |  |
|  | [10-12 December 2014] | SRD/MG |  |  |
|  | January 2015 | WGSE |  |  |
|  | February 2015 | WGFM |  |  |
| M81 | February 2015 | SE24 |  |  |
|  |  |  |  |  |
| M82 | April 2015 | SE24 |  |  |

**7. List of Annex’s**

* *Annex 1: Resolution draft ECC Report 208 (SE(14)006A1)*
* *Annex 2: 5GHz preliminary studies (SE(14)006A2)*
* *Annex 3: LS to ERM on RFID beam width (SE(14)006A3)*
* *Annex 4: Resolution draft ECC Report 206, (SE(14)006A4)*
* *Annex 5: Resolution draft ECC Report 207, (SE(14)006A5)*
* *Annex 6: Monitoring of ETSI Harmonised Standards (SE(14)006A6)*