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| ToR TTF T020 (Ref. Body DECT) |
| Version: 0.5 |
| Author: Dr. Günter Kleindl – Date: 2021-08-23 |
| Last updated by: ETSI Secretariat– Date: 2021-11-08 |
| page 1 of |

Terms of Reference –Testing Task Force Proposal

TTF T020 (Ref. Body DECT)

Radio conformance test specifications for DECT (legacy), DECT ULE and DECT Evolution

Summary information

|  |  |  |  |
| --- | --- | --- | --- |
| Approval status | TC DECT approved 9.9.2021 at meeting #91  DECT(21)000210r3 | | **YES** |
| Reference Body | Ref. Body DECT | | |
| ETSI Funding | **Maximum budget : 45 000 EUR** | | |
| Minimum of 4 ETSI Members Support | **YES** | | |
| Time scale | **From** | 2022-01-01 | |
| **To** | 2022-09-30 or 2022-12-31 | |
| Work Items | *The TTF will produce two deliverables: one HEN and one EN. See clause 3.2 below for detailed description* | | |
| TTF Roadmap reference | TTF 2022 Roadmap | | |

Part I –TTF Technical Proposal

# Rationale & Objectives

## Rationale

ETSI TTF#008 is currently ongoing focused on the production of the Harmonised EN and Test specification for DECT-2020. The current scope and budget of this TTF is restricted to DECT-2020 new specifications and does not cover any DECT legacy technology.

In addition to the work in DECT-2020, TC DECT also maintains legacy DECT technology (with more than 1 billion devices in the market), DECT-ULE and DECT-Evolution.

The HEN for legacy DECT (EN 301 406) and the associated radio test specification (EN 300 176-1) require an update due to several aspects of RED directive and to specific comments received from the EC experts. In addition to that, coexistence considerations with the new DECT-2020 NR over the same band and support of DECT-evolution needs to be added to the specifications.

The purpose of the proposed TTF is implementing this task.

The TTF will potentially impact millions of legacy DECT, DECT-ULE and DECT-Evolution devices under production in the next years.

## Objectives of the work to be executed

The objective of the proposed TTF is the production of two following deliverables:

-EN 301 406-1: Harmonized Standard for DECT, DECT-ULE and DECT evolution (based on previous EN 301 406)

-EN 300 176-1: radio test specification for DECT, DECT ULE and DECT-Evolution (update).

The TTF will be structured in a single task.

The required update will implement the following changes:

-New general test approach based on current ETSI practice for RED HENs and feedback received from EC consultants

-Addressing specific comments received from the EC experts regarding current EN 301 406

-Coexistence considerations with the new DECT-2020 NR over the same band

-Addition of DECT Evolution

-New editorial structure

Both deliverables should be consistent regarding the changes

## Previous funded activities in the same domain

No TTF funding has been requested for test specifications of legacy DECT

A TTF (TTF008) is currently producing the HEN and test standard for DECT-2020: Budget allocation: 120 kE.

There were no STF funds allocated to DECT from 2019 and 2020 budgets

## Consequences if not agreed

Test specifications and Harmonized standards for existing DECT technology (legacy DECT) and for DECT/IMT-2000 will also require an update due to several aspects of RED directive, to specific comments received from the EC experts and to coexistence considerations with the new DECT-2020 NR over the same band.

The TTF will potentially impact millions of legacy DECT and DECT-Evolution devices under production in the next years.

The whole technical team of DECT is fully focused on the production of further normative standards for DECT-2020 and other IMT related tasks under own effort.

# ETSI Members Support

more may be added.

|  |  |  |
| --- | --- | --- |
| **#** | **ETSI Member** | **Supporting delegate** |
| 1 | DSPG | Heinz Thuerauf |
| 2 | Gigaset | Peter Scholz |
| 3 | Nordic Semiconductor | Heikki Berg |
| 4 | OVE | Dr. Guenter Kleindl |
| 5 | RTX | Jens Toftgaard Petersen |
| 6 | Sennheiser | Dr. Andreas Wilzeck |
| 7 | Shure | Ronnie MacPherson |
| 8 | Wireless Partners | Angel Boveda |
| 9 | Wirepas | Jussi Numminen |
| 10 | BMWi | Bernd Wolf |
|  |  |  |

# Deliverables

## Base documents

|  |  |  |
| --- | --- | --- |
| **Document** | **Title** | **Status** |
| ETSI EN 300 175 part 1 to 8 | Digital Enhanced Cordless Telecommunications (DECT) ; Common Interface (CI) | published |
| ETSI EN 300 176-1 | Digital Enhanced Cordless Telecommunications (DECT); Test specification ; part 1 : radio | published |
| ETSI EN 301 406 | Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU | published |

## New deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliv.** | **Work Item code**  **Standard number** | **Working title** | **Expected date for publication** |
| D1 | REN-DECT-00365-  EN 300 176-1 | Digital Enhanced Cordless Telecommunications (DECT); Test specification ; part 1 : radio |  |
| D2 | REN-DECT-00359-1  EN 301 406-1 | Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; part 1: TDMA/FDMA interface (legacy DECT) |  |

# Maximum budget

## Task summary/Manpower Budget

The work of the TTF is structured into one task that includes overall project management:

* Task 1 – Legacy DECT radio conformance and HEN (deliverables D1 and D2)

Task 1 covers the production of updated versions of the harmonized EN (deliverable D1) and the radio test specification (deliverable D2) for existing DECT (legacy DECT) interface.

This task is legacy DECT related and consequence of technology evolution, several aspects of RED directive not considered in current HEN and specific feedback received by EC RED experts.

This update impacts potentially a huge number of DECT devices to be placed in the market in the next years.

The budged estimate for the task is provided in the following table:

|  |  |
| --- | --- |
| **Task short description** | Budget (EUR) |
|
| Task 1: Legacy DECT (including DECT-ULE and DECT-Evolution) radio conformance and HEN (deliverables D1 and D2) | 45 000 |
| **TOTAL** | 45 000 |

Several subtasks have been envisioned for better describing the progress of the work. They are used for calculating the time effort at milestones and are described in section 6.3.

The tasks, subtasks and overall timing have been designed to allow some degree of work optimization by parallel execution of this TTF and the final steps of TTF008. It will also allow continuous progress of the work filling the gaps resulting of time windows for ENAP and EC expert consultations processes

## Travel budget

Due to the relative small size of this TTF, no travel budget has been considered.

Part II – Details on TTF Technical Proposal

# Tasks, Technical Bodies and other stakeholders

## Organization of the work

The work will be steered by the TC DECT chair, and the TC DECT members. TTF leader is expected to participate regularly in all DECT F2F and e-meetings. There will be about 3 TC DECT meetings and about 15 online meetings during the TTF schedule.

The task requires perfect understanding of the work previously done at TC DECT on DECT (EN 300 175) and previous update done to the DECT Harmonised Standard (EN 301 406).

The task requires perfect understanding of the work currently ongoing on the production of DECT-2020 Harmonized EN.

## Other interested ETSI Technical Bodies

TC ERM

* The TTF includes the production of a Harmonized EN under RED directive

## Other stakeholders

None.

Part III: Execution of Work

# Work plan, time scale and resources

## Task description

The work of the TTF is structured into one main task.

### Task 1 – Legacy DECT radio conformance and HEN (deliverables D1 and D2)

|  |  |
| --- | --- |
| **Task 1** | **Project management** |
| **Objectives** | * Production of an updated version of the HEN EN 301 406, taking into account the evolution in DECT technology, the new RED directive, HEN process and the requests received from EC HEN experts * Production of an updated version of the EN 300 176-1, taking into account the evolution in DECT technology and the changes introduced in the EN 301 406 * Introduction of a new multipart structure for EN 301 406 * Additional introductory part and alignment in EN 301 406-1 to consider the introduction of DECT-2020 and EN 301 406-2 * Planning interaction with EC HEN consultants * Project management |
| **Input** | * The latest version of DECT base standard EN 300 175 (1 to 8) series * The previous version of the HEN EN 301 406 * The previous version of the EN 300 176-1 |
| **Output** | * A new version of HEN EN 301 406, that will be renumbered as EN 301 406-1 * A new version of EN 300 176-1 * Planning, organisation, and preparation of TTF meetings * On-going reporting * Delivery of the TTF reports |
| **Interactions** | * With the TC by regular reporting and participation in all TC plenary meetings and conference calls * With the EC HEN consultants |
| **Resources required** | * One expert, part time: This task is legacy DECT related and requires full knowledge of traditional DECT (legacy DECT) radio interface and the previous history of radio test (EN 300 176-1) and harmonized EN (EN 301 406) specifications. It requires knowledge of previous history of interaction with EC experts regarding the EN 301 406 deliverable * Costs: 45 000 EUR |

## Milestones

Milestone A – Progress Report A

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **A** | Deliverable D2 ready to be sent to EC for initial assessment. Progress Report A | 2022-03-31 |
| Reference Body Deliverable | Stable draft D1 for TC review  Stable draft of deliverable D2 with enough content to be sent for pre-assessment to the EC experts |
| ETSI Deliverable | Progress Report A approved by Reference Body at DECT#93 |

Milestone B – Progress Report B

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **B** | Deliverables D1 and D2 ready to be sent for ENAP.  Progress Report B | 2022-06-30 |
| Reference Body Deliverable | Final draft of deliverables D1 and D2 to be approved by TC DECT and to be sent to ENAP. |
| ETSI Deliverable | Progress Report B approved by Reference Body |

Milestone C – Final Report C

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **C1** | Deliverables D1, D2 returned from ENAP,  Final Report C1 | 2022-09-30 |
| Reference Body Deliverable | D1 and D2 published after a successful ENAP  Final Report approved by TC DECT |
| ETSI Deliverable | Final Report C1 approved by Reference Body  TTF Closed |

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **C2** | Deliverables D1, D2 returned from ENAP,  Progress Report C2 | 2022-10-31 |
| Reference Body Deliverable | If ENAP of D1 or/and D2 is unsuccessful, revised D1 or D2 approved by TC DECT to be sent on National Vote |
| ETSI Deliverable | Progress Report C2 approved by Reference Body |

Milestone D – Completion of all tasks – Final Report

|  |  |  |
| --- | --- | --- |
| **Milestone** | **Description** | **Cut-Off Date** |
| **D** | All deliverables approved. Final report. | 2022-12-31 |
| Reference Body Deliverable | All deliverables approved  Deliverables D1 and D2 approved during National Vote and sent to publication  TTF Closed |
| ETSI Deliverable | Final Report approved by Reference Body |

## Sub-tasks

Several subtasks have been envisioned for better describing the progress of the work. They are used for calculating the time effort at milestones.

A list of sub-tasks and an estimation of efforts by sub-task is provided in the following table:

## Task summary

|  |  |  |
| --- | --- | --- |
| **Code** | **Task / Milestone** | Estimated Cost (EUR) |
|
|  | Start of work |  |
| T1.1 | Stable draft of D1 and D2 | 18 000 |
| Milestone A | Stable draft D1 for TC review  Stable draft of deliverable D2 with enough content to be sent for pre-assessment to the EC experts  Progress Report A approved by Reference Body at DECT#93 | 2022-03-31 |
| T1.2 | Final draft of D1 and D2 to be sent to ENAP | 10 000 |
| Milestone B | Final draft of deliverables D1 and D2 to be approved by TC DECT and to be sent to ENAP.  Progress Report B approved by Reference Body | 2022-06-30 |
| T1.3 | D1 & D2 publication/ Final report | 17 000 |
| Milestone C1 | D1 and D2 published after a successful ENAP  Final Report approved by TC DECT  TTF Closed | 2022-09-30 |
| Milestone C2 | If ENAP of D1 or/and D2 is unsuccessful, revised D1 or D2 approved by TC DECT to be sent on National Vote  Progress Report C approved by Reference Body | 2022-10-31 |
| Milestone D | Deliverables D1 and D2 approved and sent to publication  Final Report approved by TC DECT  TTF Closed | 2022-12-31 |
|  |  | 45 000 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Task/ Mil.** | **O** | **N** | **D** |  | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** |
| T1.1 |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| MA |  |  |  |  |  |  | X |  |  |  |  |  |  |  |  |  |
| T1.2 |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| MB |  |  |  |  |  |  |  |  |  | X |  |  |  |  |  |  |
| T1.3 |  |  |  |  |  |  |  |  |  |  |  |  | X | X |  | X |
| MC1 |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |  |
| MC2 |  |  |  |  |  |  |  |  |  |  |  |  |  | X |  |  |
| MD |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | X |

# Expertise required

## Team structure

This TTF is intended to be executed by one service provider with the following mix of skills:

|  |  |
| --- | --- |
| **Priority** | **Qualifications and competences** |
| High | Authority expert knowledge of traditional DECT (legacy DECT) radio interface and the previous history of radio test (EN 300 176-1) and harmonized EN (EN 301 406) specifications. It requires knowledge of Red and previous history of interaction with EC experts regarding the EN 301 406 deliverable |
| High | Knowledge of the previous history of radio test (EN 300 176-1) and harmonized EN (EN 301 406) specifications, including knowledge of RED and previous history of interaction with EC experts regarding the EN 301 406 deliverable |
| High | Expert knowledge of DECT-2020 radio test specification and Harmonized EN |
|  |  |

Part IV: TTF performance evaluation criteria

# Performance Indicators

In this section you must identify indicators to assess the quality of the result and the interest of ETSI Members and other stakeholders.

In the course of the activity, the TTF Leader will collect the relevant information, as necessary to measure the performance indicators. The result must be presented in the Final Report.

After the conclusion of the TTF, the Reference Body Chair will report to the D-G on the actual achievement of the performance indicators set in these ToRs. This information will be used to assess further requests from the Reference Body.

The performance indicators must include qualitative and quantitative assessment of the following elements, as applicable:

|  |  |
| --- | --- |
| **Select relevant Performance indicators applicable for these ToR (X)** | |
| Contribution from ETSI Members to TTF work | |
| Direct financial contribution (co-funding) | N/A |
| Support to the TTF work (e.g., provision of test–beds, organization of workshops, events) | X |
| Steering Group meetings (number of meetings / participants / duration) | X |
| Number of delegates directly involved in the review of the deliverables | X |
| Contributions/comments received from the Reference Bodies | X |
| Contributions/comments received from other Reference Bodies | X |
|  |  |
| **Contribution from the TTF to ETSI work** | |
| Contributions to Reference Body meetings (number of documents / meetings / participants) | X |
| Contributions to other Reference Bodies |  |
| Presentations in workshops, conferences, stakeholder meetings | X |
|  |  |
| **Liaison with other stakeholders** | |
| Stakeholder participation in the project (category, business area) | X |
| Cooperation with other standardization bodies | X |
| Potential interest of new members to join ETSI |  |
| Liaison to identify requirements and raise awareness on ETSI deliverables | X |
| Comments received on drafts (e.g. on WEB site, mailing lists, etc.) | X |
|  |  |
| **Quality of deliverables** | |
| Approval of deliverables according to schedule | X |
| Respect of time scale, with reference to start/end dates in the approved ToR | X |
| Comments from Quality review by Reference Body | X |
| Comments from Quality review by ETSI Secretariat | X |
|  |  |

# Document history

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Date** | **Author** | **Status** | **Comments** |
| 0.1 | 2021-08-23 | Dr. Günter Kleindl | Initial draft |  |
| 0.2 | 2021-08-26 | Dr. Günter Kleindl | Editorial update | Some supporting members added |
| 0.3 | 2021-08-27 | Dr. Günter Kleindl | Editorial update | More supporting members added |
| 0.4 | 2021-09-09 | Dr. Günter Kleindl | TB approved |  |
| 0.5 | 2021-11-08 | ETSI Secretariat | Board#134 approved | Update before CL publication |