

LIAISON STATEMENT

Title: Coordination between ETSI LTN and 802.15 LPWA

Date: 08th October 2017

From (source): ETSI TC ERM

Contact(s): **Chairman, Mr. Holger Butscheidt** (Holger.Butscheidt@bnetza.de)
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To: IEEE 802.15, Chairman Mr. Bob Heile
(bheile@ieee.org)
IEEE 802.15 LPWA IG, Chairman Joerg Robert
(joerg.robert@fau.de)

Copy to: ETSI ERM TG28, Chairman Mr. Enrico Tosato,
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ETSI Rapporteur for TR 103 249, Mr. John Nickalls
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ETSI Rapporteur for TS 103 357, Mr. Benoît Ponsard
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ETSI Technical Officer TC ERM & ERM TG28, Mr. Igor Minaev
(igor.moneav@etsi.org)

Relevant WI(s), or
deliverable(s):

Attachments: [ERMTG28\(17\)026006r1_LTN26_technical_annex_to_IEEE_LPWAN_liaison_letter](#)
(if applicable)

Dear Bob, dear Joerg,

ETSI would like to thank IEEE 802.15 for sending a liaison letter for adding the LPWA in the list of items covered by the MoU between IEEE and ETSI. ETSI would like to thank you for your liaison letter with questions about LTN and the request for coordination between IEEE 802.15 LPWA IG and ETSI ERM TG28 (LTN).

Low Throughput Networks (LTN) is the name given by ETSI to certain work items and documents relating to Low Power Wide Area Networks. LTN systems may be considered to be a subset of Low Power Wide Area Networks (LPWAN) that may include other systems, already existing and developed in the future.

Three LTN work items have been created in December 2014 to support the standardization work on LTN in ETSI ERM TG28. Covered topics are: use cases, architecture and protocols. The LTN WI outputs are expected to be in a state for consideration for approval by end of this year.

Prior to this standardisation work stream, three documents also dealing with Low Throughput Networks have been issued by a group of companies. They are industry reports, not standards, and can be freely downloaded from the ETSI website (www.etsi.org) .

Concerning the request from IEEE 802.15 for a liaison between IEEE LPWA activity and ETSI ERM TG28, it appears the existing MoU covers cooperation for working groups only. Therefore,



ETSI proposes to consider establishing such cooperation once the Task Group dealing with LPWAN in IEEE 802.15 is formally created.

ETSI notes that the last part of your liaison letter asks general questions about LTN work in ETSI ERM TG28 and is pleased to answer your request for clarification in the annex to this letter.

Best regards,

Holger Butscheidt

Chairman ETSI TC ERM

Date of next meeting of the originator:
ERM#63 17-20 October 2017

Sophia-Antipolis, France

Welcome to the World of Standards



**ERMTG28(17)026 006r1:
Annex to reply to IEEE 802.15 LPWAN**

B. Ponsard, Sigfox

IEEE 802.15

Wireless Specialty Networks



March 15, 2017

To: LTN rapporteurs: Benoit Ponsard benoit.ponsard@sigfox.com, John Nickalls jin@telensa.com
From: 802.15 Chair: Bob Heile bheile@ieee.org
Subject: Coordination between ETSI LTN and 802.15 LPWA

CC:

ERM chair: holger.butscheidt@bnetza.de

TG28 chair: ENRICO.TOSATO@TIES.I TU.INT

LPWA chair: Joerg Robert

Global Affairs Program Director, IEEE-SA: Moira Patterson m.patterson@ieee.org

Dear Benoit and John,

The IEEE 802.15 WG recently established an Interest Group for LPWA (Lower Power Wide Area) Communications. The group's mission is to evaluate different technology options for Low Power Wide Area Networks (LP-WAN) with the goal of defining areas for standards work within IEEE802.

Since ETSI LTN is addressing specifications for LP-WANs in LTN ERM/TG28, it is highly relevant for the future work within the IEEE 802.15 LPWA Interest Group. Likewise, we feel our work may also be relevant to you. IEEE and ETSI already have an MOU to foster collaboration. IEEE 802.15 is therefore requesting that you add a mapping between ETSI LTN and IEEE 802.15 to the existing ETSI-IEEE MOU. This will allow our two groups to share documents and work more closely together as needed.

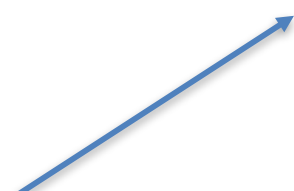
Meanwhile, it would be much appreciated if you could provide answers to the following questions to the extent possible while we are getting added to the MOU:

- What is the schedule of the ETSI LTN? When do you plan to have the final TS?
- What are the scenarios you are designing the specification for?
- What are the technical requirements to fulfill the scenario requirements?
- How do you compare the performance of the different proposals?
- What are the technologies that you are currently discussing? Do you plan profiling?
- Is there any coexistence study plan within ETSI LTN?

Sincerely,



Bob Heile
Chair, IEEE 802.15 Wireless Specialty Networks
bheile@ieee.org



request for
official liaison



questions

- **What is the schedule of the ETSI LTN? When do you plan to have the final TS?**
 - **three WIs (for one TR, two TS) started in January 2015**
 - **target date:**
 - **'Use Case' TR now in publication process,**
 - **'Architecture' TS now stable draft for approval,**
 - **'Protocols' TS to be submitted for TC-ERM TG28 review in January 2018.**
 - **Further releases are possible in the future.**

- **What are the technical requirements to fulfil the scenario requirements?**
 - **MCL \geq 150dB (with Tx 14dBm ERP in EPs)**
 - **1Mmsg/day/BS (10-14 byte APP data)**
 - **shared spectrum**
 - **low power in devices (10 years on 2 AA primary cells)**
 - **star topology on radio interface**
 - **security as good as AES128**
 - **mobility up to 30km/h**

- **What are the scenarios you are designing the specification for?**
 - **several IoT scenarios**
 - **a subset is publicly available in the UNB SRdoc**
(http://www.etsi.org/deliver/etsi_tr/103400_103499/103435/01.01.01_60/tr_103435v010101p.pdf)

- **How do you compare the performance of the different proposals?**
 - no comparison; only go/no go requirements for each included ‘family’

- **What are the technologies that you are currently discussing? Do you plan profiling?**
 - **four families of technologies:**
 - TS-UNB by Fraunhofer,
 - DD-UNB by Telensa,
 - 3D-UNB by Sigfox,
 - Lfour by Sony

- **Is there any coexistence study plan within ETSI LTN?**
 - **spectrum is shared by all kind of systems**
 - **existing non-specific SRDs regulation brings "natural coexistence"**
 - **any changes required to spectrum measures in Europe typically involve studies by CEPT**

thank you.

contact: benoit.ponsard@sigfox.com