

Source: EP eHEALTH

Title: Proposal for the creation of a TC Smart Body Area Network and evolution of EP eHEALTH

Agenda item:

Document for:

1 Decision/action requested

The Board is requested to approve:

1). the creation and Terms of Reference for a TC Smart BAN and to appoint John Farserotu (CSEM) as convenor for the first meeting;

2 References

ETSI SR 002 564 "Applicability of existing ETSI and ETSI/3GPP deliverables to eHealth"

B60_18a1 ICT standards for eHEALTH - A major topic

3 Rationale

Pursuant to discussions in the Board and EP eHealth and following the Workshop on BAN organised by Hermes Partnership with support of ETSI in Oslo, Norway on 26 September, this document contains the elements required under the Technical Working Procedures Annex D for the creation of a new Technical Body.

The Board is requested to approve the creation and Terms of Reference for a new TC BAN and to appoint John Farserotu (CSEM) as a convenor for the first meeting.

4 Terms of Reference for ETSI Technical Committee on Body Area Network AN [TWP D.1, Part Aa]

Responsibility

TC Smart BAN is a vertical technical committee and shall have primarily responsibilities for development and maintenance of ETSI Standards, Specifications, Reports, Guides and other deliverables to support the development and implementation of Smart Body Area Network technologies (Wireless BAN, Personal BAN, Personal Networks etc.) in health, wellness, leisure, sport and other relevant domains.

TC Smart BAN's scope includes communication media, and associated physical layer, network layer, security, QoS and lawful intercept, and also provision of generic applications and services (e.g. web) for standardisation in the area of Body Network Area technologies.

TC Smart BAN scope will not include radio matters (HENs for market access) and EMC.

Areas of activity

The activities of TC Smart BAN will be performed in close co-operation with relevant standards activities within and outside ETSI. The activities of TC BAN include the:

- standardisation activities in all relevant areas to and preparation of ETSI deliverables for the wireless Body Area Network for personal welfare;
- close liaison with ETSI TC ERM, TC M2M, 3GPP and other relevant ETSI TBs;
- co-ordination of Health ICT related requirements in order to produce a consistent set of ETSI deliverables and to undertake measures to efficiently continue and stimulate further Health ICT related work within ETSI;
- provision of mechanisms for the effective liaison between ETSI TBs and with relevant external organisations such as SDOs, professionals from the areas of BAN applications, end-user representatives, local, national and regional Government Authorities, the European Commission, EU projects and Emergency Authorities/Organisations;
- organisation of regular meetings/workshops with appropriate wireless Body Area Network for personal welfare stakeholders.
- establishment of external relationships (and joint working groups) where and when ever needed, including co-operation with CONTINUA Alliance, Bluetooth SIG, CEN, CENELEC, ISO, HL7, IHE etc. Formal relationships will be established using the normal processes via the ETSI Secretariat (Partnerships).

Organisation and working methods

TC Smart BAN shall work in accordance with the normal rules as given in the ETSI Directives and, in particular, the Technical Working Procedures.

Existing related work and subsequent updates should remain in the current Technical Bodies (i.e. such as ERM (e.g. TG30 - Wireless Medical Devices), 3GPP, M2M, SCP, EMTEL, OCG Security, HF, etc.) and be co-ordinated with TC Smart BAN where relevant. New standards should only be prepared within TC Smart BAN where no appropriate ETSI Technical Body exists.

Existing related work items should remain in current Technical Bodies. Updates to existing ETSI standard deliverables should be done within the appropriate Technical Bodies and be co-ordinated with TC Smart BAN where relevant. New standards should only be prepared within TC Smart BAN where no appropriate ETSI Technical Body exists.

Where appropriate, joint working groups with other Technical Bodies may be created to develop deliverables for submission to the lead body.

It is expected that TC Smart BAN members attending international standardisation meetings and fora as delegates will handle any necessary informal liaison with those group.

Participation

Participation in TC Smart BAN is open to all ETSI members in accordance with the Technical Working Procedures. Observers and non-members may participate at the discretion of the Chairman in-line with clause 1.4 of the Technical Working Procedures.

5 ETSI field of interest [TWP D.1, Part Ab)]

Main field of interest for ETSI would be standardisation of main parts of the Smart BAN like body devices, sensors and control units, their interoperability aspects to provide secure, seamless data transfer across technologies and networks. The interest covers end-to-end personal welfare related, devices, sensors and information validation. It also includes reduction in the risk of interference and enhanced coexistence to provide large scale implementation of BANs across different sectors.

6 Why any overlapping or complementary elements (with reference to existing work or Terms of Reference of any existing Technical Committee or Project) is regarded as desirable [TWP D.1, Part Ac]

Existing related work items should remain in current Technical Bodies. Updates to existing ETSI standard deliverables should be done within the appropriate Technical Bodies and be co-ordinated with TC Smart BAN where relevant. New standards should only be prepared within TC Smart BAN where no appropriate ETSI Technical Body exists.

TC Smart BAN related work is already being done in several ETSI Technical Bodies where it is linked to specific technologies or services already under the responsibility of those bodies (e.g. TG30 - Wireless Medical Devices), M2M, 3GPP, SCP, EMTEL, OCG Security, HF, etc.).

7 Time plan [TWP D.1, Part Ad]

It is proposed that TC Smart BAN should be created for an initial period of two years.

8 Chairmanship [TWP D.1, Part Ae]

Mr John Farserotu (CSEM) has accepted to stand as convenor for the first meeting. The Collective Letter announcing the first meeting should include a call for candidates for the Chairmanship. If it is not possible to appoint a permanent Chairman at the first meeting then the meeting shall appoint a convenor for the second meeting.

9 Resource requirements [TWP D.1, Part Af]

As well as providing a Chairman, the ETSI members supporting the TC shall provide a Secretary and any necessary Rapporteurs for Work Items agreed by the TC. If no Secretary can be found from the membership the TC may request the ETSI Director-General to consider providing from the ETSI Secretariat.

10 ETSI Secretariat resources [TWP D.1, Part Ag]

“basic administrative support” will be provided by the ETSI Secretariat, e.g. :

- info/meeting/document handling area on the ETSI Portal.
- document storage area on the ETSI DOCBOX server.
- entry of the Work Items into the WPM database (provided by SPA).
- processing/publication of ETSI Deliverables (providing they have respected the ETSI Drafting Rules).
- a support officer will be allocated to provide guidance and assistance to the TC.

Support for meetings will be provided when the meeting is held at the ETSI Headquarters, e.g.:

- meeting rooms in ETSI premises.
- meeting support for invitations, badges, etc in ETSI premises.
- tea/coffee in ETSI premises.

Meetings held outside of the ETSI Headquarters shall be supported by the hosting member organization.

11 ETSI full and/or associate members having declared their willingness to provide resources and /or support creation of the TC [TWP D.1, Part Ba]

The following ETSI members have indicated that they are willing to support the creation of TC Smart BAN (at least four required):

- **Confirmed ETSI member support**

- Toshiba Research Europe
- CSEM
- Medtronic Bakken Research
- CNIT (University of Florence)
- Cybernetic Medical Systems Ltd
- IMT/Telecom Sud Paris
- IMEC
- iMinds
- University of Oulu (CWC) *has applied for ETSI membership*
- **ETSI members that basically support the initiative / have expressed interest**
 - Phonak
 - Thales
- **Non-ETSI members that have expressed potential interest to join**
 - GEHealthcare
 - Lund University

Additionally, the Hermes Partnership (currently non-ETSI member), representing a network of cooperating academic and industrial research institutions (ETSI members and non-ETSI members) is willing to support the TC.

12 Planned deliverables and their delivery dates shall be identified [TWP D.1, Part Bb)]

At the Smart BAN workshop in Oslo, Norway, a number of key issues were identified that may require further standardisation to help open the market for Smart BAN, ensure co-existence, dependability, security and user acceptance. The key issues identified include:

- Radio co-existence, robustness, QoS, security
- ULP multi-radio PHY and enhancements
- Low complexity, ULP MAC
- Multi-layer (PHY-MAC through API and applications)
- Heterogeneous networks
- End-to-end system, handling and presentation of data
- Interoperability
- Security / privacy (low complexity means)
- Smart control, coordination and management
- Implant communication

At the ETSI eHealth meeting held in Geneva on 23 November 2012, six “Smart BAN projects” were proposed as shown in the table below.

No.	Proposed Smart BAN projects
1	Heterogeneity management, data representation and transfer - Service, application and data representation
2	Smart control, network MGT, interoperability and security
3	Multi-layer, co-existence and dependability for Smart BAN - Work item 1: 2.4 GHz band coexistence
4	Low complexity MAC and routing for Smart BAN
5	Enhanced, ultra-low power PHY for Smart BAN
6	Smart BAN implant communication

In order to make the work efficiently and use the experience from other ETSI groups and non-ETSI organizations, TC Smart BAN for personal welfare will specifically:

- Leverage the frequency bands as proposed in the IEEE802.15.6 standard
- Cooperate with ARIB (Japan)
- Cooperate with Continua Alliance, HL7, IHE, ITU

- Liaise with IEEE802, 11073
- Liaise with Ecma (Personal Networks)
- Collaborate with IEC 65C (WG17) on co-existence

TC Smart BAN has identified the following initial work items:

- Project 1: Heterogeneity management, data representation and transfer
Lead: IMT/Telecom SudParis
 - Work item 1.1 - Service, application and data representation
To define service and application enablers, data representation and transfer formats.
To identify the required management and control information
- Project 3: Multi-layer, co-existence and dependability for Smart BAN
Lead: TBD
 - Work item 3.1: 2.4 GHz band coexistence
To study Smart BAN coexistence with all the users in the 2.4 GHz band
- Project 4: Low complexity MAC and routing for Smart BAN
Lead: Toshiba
 - Work Item 4.1: Low complexity MAC and routing requirements for Smart BAN
To study the requirements for low complexity MAC and routing for Smart BAN

Smart BAN will address these work items in a set of technical reports (TR). The reports are intended to be stand-alone documents, but may also be viewed as chapters in “living document” on Smart BAN for personal welfare. New work items (chapters) shall be added as appropriate. Additional information will be on the portal.

13 Requirement for Standstill shall be described [TWP D.1, Part Bc]

At present no specific national activities which would be covered by new EN Work Items to be created by the TC have been identified. Therefore there are no standstill requirements at the time of writing.

14 Internal organisation [TWP D.1, Part Bd]

No internal organisation or Working Groups have yet been identified. This will depend on the results of the initial work of the TC.

15 Specialist Task Force resources [TWP D.1, Part Bg]

For the present no STF requirements have been identified, but may be requested in the future..

16 maintenance arrangements for deliverables shall be specified [TWP D.1, Part Bf]

The maintenance of any deliverables will be assured by the TC or by the relevant TB where the deliverable is technology specific. At the end of the work the TC shall define the follow-on responsibility for any required maintenance.