

CEN Reference:

CENELEC Reference:

BT N 13141 Draft BT C156/2022 BT172/DG12774/DV

Simultaneous circulation to CEN and CENELEC TECHNICAL BOARDS BT by correspondence CENELEC Agenda item: 5.1.16 For decision 2022-07-13 Deadline: 2022-10-04 SUBJECT New CEN-CLC/JTC on Quantum Technologies Subalter Subalter

BACKGROUND

Quantum Technologies (QT) is one of the most promising key technologies bringing transformative advances to science, economy and society and creating new commercial opportunities worldwide. Novel quantum technologies are emerging in a number of sectors, namely communication, computing, sensing and measuring.

In some sectors already, several companies - including the whole range of small, medium and large enterprises - have started to develop quantum devices or have begun to integrate them into their products. In other sectors, further development and great improvement is yet needed. Also, further technologies or applications might emerge in the future that have not even been thought of so far.

On 2022-05-23, DIN submitted a proposal to CCMC for the creation of a new Joint CEN and CENELEC Technical Committee (CEN-CLC/JTC) on Quantum Technologies (QT). DIN's proposal is provided in Annex 1. DIN is committed to provide the secretariat of the proposed JTC.

The intention to propose the creation of a CEN-CLC/JTC on Quantum Technologies was presented by DIN at the CEN-CLC Focus Group on Quantum Technologies (CEN-CLC FGQT) meeting, which took place from 18 to 20 May 2022. The FGQT members (including the European Commission) fully supported the creation of a JTC on Quantum Technologies and expressed their willingness to participate in the future JTC.

It should be noted that the CEN-CLC FGQT is currently finalising the development of a European standardization roadmap for Quantum Technologies. The release of the first version is expected in December 2022. While the work on the roadmap has demonstrated the need for quantum standardization in Europe, DIN has highlighted, with the support of the CEN-CLC FGQT, that the creation of the JTC will allow to set up the necessary standardization infrastructure to implement the roadmap without delay.

The proposed Joint Technical Committee will be responsible for standardization in the field of quantum technologies including quantum enabling technologies, quantum sub-systems, quantum platforms & systems, quantum composite systems as well as quantum applications covering the following areas:

- Quantum metrology, sensing and enhanced imaging;
- Quantum computing and simulation;
- Quantum communication and cryptography.

Leading to creation of 4 working groups inspired by the structure of the CEN-CLC FGQT (draft) road map. Details of the scope of each working group is mentioned in Annex 1.

The initial work programme will include identification and possible adoption of relevant International Standards such as ISO/IEC JTC 1 and other TCs at ISO, IEC or ITU-T in an effort to address European market needs, as well as underpinning EU legislation and policies. Where relevant, the work programme will include the development of CEN and CENELEC deliverables that address European needs and requirements.

The Joint Technical Committee will build on the work, projects and suggestions of the CEN-CLC FGQT. The Joint Technical Committee would be created in October 2022 while the standardization roadmap will be finalised in December 2022. It is expected that, during this period, a transition phase is ensured between the JTC and the FG, so that the JTC can start implementing the roadmap without delay.

The draft roadmap is currently available at CEN Documents.

The JTC will submit its final title and scope for CEN and CENELEC BTs approval, after its kick-off meeting.

By BT 49/2017 and D157/041, CEN and CENELEC BTs respectively, decided that the following criteria are to be met for creation a CEN-CLC/JTC:

- 12 weeks consultation by correspondence;
- Vote according to IR2 clause 6.1.4 in CEN and a synchronized 12-Week BT consultation in CENELEC;
- At least 5 countries committed to participate

Consequently, **members are requested to state explicitly whether or not they are committed to participate in the work:**

- CEN by means of the commenting field provided in the BT-balloting tool;
- CENELEC on the Collaboration Platform under the relevant item.

PROPOSAL(S)

BT,

- having considered the proposal for a new field of technical activity submitted by DIN , as included in Annex 1;
- having considered that the following members have expressed commitment to participate: <members>
- decided to create a new CEN-CLC/JTC 22 on 'Quantum Technologies' with the following preliminary scope:

The JTC shall produce standardization deliverables in the field of Quantum Technologies including quantum enabling technologies, quantum sub-systems, quantum platforms & systems, quantum composite systems as well as quantum applications covering the following areas: Quantum metrology, sensing and enhanced imaging, Quantum computing and simulation; Quantum communication and cryptography, as well as provide guidance to other technical committees concerned with Quantum Technologies. The JTC shall also consider the adoption of relevant international standards and standards from other organisations, like ISO/IEC JTC 1 and its subcommittees. The JTC shall produce standardization deliverables to address European market and societal needs, as well as underpinning EU legislation, policies, principles, and values.

- allocated the secretariat of CEN-CLC/JTC 22 to DIN;

- asked the new CEN-CLC/JTC 22 to submit its final title and scope for BT approval after its kick-off meeting.
- Invited CEN-CLC Focus Group on Quantum Technologies to finalize its roadmap by December 2022.

2022-07-05 - NA