
**Proposal for a CEN Workshop
on "Raman devices calibration,
verification and twinning
protocols"**

1 Proposal Form for the Workshop proposer

Details of the Workshop proposer:

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Already known partners:

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- HALDOR TOPSOE AS(Denmark): Pablo BEATO
- ENCAPSULAE S.L. (Spain): Javier MENENDEZ
- FABRICA NACIONAL DE MONEDA Y TIMBRE-REAL CASA DE LA MONEDA (Spain): Vincente GARCIA JUEZ
- NATIONAL TECHNICAL UNIVERSITY OF ATHENS (Greece): Afroditi NTZIOUNI
- UNIVERSITA DEGLI STUDI DI MILANO (Italy): Sara LIMBO
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- ELODIZ LIMITED (United Kingdom): Enrique LOZANO, James THOMSON
- IDEACONSULT LIMITED LIABILITY COMPANY (Bulgaria): Nina JELIAZKOVA
- ASOCIACION ESPANOLA DE NORMALIZACION (Spain): Iván MOYA
- YORDAS GMBH (Germany): Yasemin ERTUGRUL
- EUROPEAN RESEARCH SERVICES GMBH (Germany): Hildegard LUHMANN

Title of the proposed Workshop:

Raman devices calibration and verification protocols

Background/Objectives:

Standardisation of Raman devices and Raman data spectroscopy is receiving strong interest in recent years due to the broad expansion in number and type of Raman devices and the need to assure data exchange and data consistency along devices and the across different units and sampling configurations.

Raman spectroscopy is very sensitive to the actual device configuration and physical characteristics of the spectrum acquisition. A bigger differentiation in device performance and the capability to reproduce data and transfer information between devices has been recognised by the users and institutions; for these reasons there is a raising interest to find ways to harmonise data sharing and protocols to calibrate and validate Raman devices.

Scope of the proposed Workshop (planned area of application):

The planned Workshop will develop harmonization protocols for Raman devices that will allow:

- Recalibration of devices already calibrated by the manufacturer;
- Calibration of devices without any previous calibration;
- Verification of the calibration for devices that were calibrated with this protocol in the past;

The protocols will consist of the next harmonisation stages: x-axis positions, x-axis resolution, y-axis intensity correction and volume of analysis for quantification.

The protocols will be applicable to the Raman devices within certain specification and withing defined boundaries that will be described in the document.

Are the following aspects potentially affected?

	YES	NO
Safety matters	<input type="checkbox"/> ¹	<input checked="" type="checkbox"/>
Management system aspects	<input type="checkbox"/> ²	<input checked="" type="checkbox"/>
Conformity assessment aspects	<input type="checkbox"/> ³	<input checked="" type="checkbox"/>
Security matters	<input type="checkbox"/> ⁴	<input checked="" type="checkbox"/>

<Add information/explanations to the points marked „yes“>

Theme related standardization Technical Bodies, standards or regulations, if applicable:

<Add technical committees, standards, etc. (national, European, international)>

- There is no standard covering the intended objective. A dedicated paper deeply analysing the standardization landscape (international and national) on the topic was published (Ntziouni, A. *et al.* Review of Existing Standards, Guides, and Practices for Raman Spectroscopy. *Appl. Spectrosc.* 76, 747–772 (2022). Despite some standards exist (being the most relevant national standards like ASTM E1840-96, ASTM E2911-13 or ATSM E2529-06) they do not cover the whole process intended in this Workshop.

Optional attachments:

<List optional information, e.g. estimated project duration and date of the Kick-off, manuscript, short description, presentation, etc.>

¹ For CEN: The CEN/CENELEC Workshop proposal shall be submitted to CEN/BT for decision. For CENELEC: Work on the proposed CEN/CENELEC Workshop shall not be initiated.

² The CEN/CENELEC Workshop proposal shall be submitted to the CEN/CENELEC BT(s) for decision.

³ CEN/CENELEC Internal Regulations - Part 3, 33 applies.

⁴ For projects dealing with security matters the security risk analysis provided below (item 3) shall be carried out.

2 Proposal Form for the Workshop secretariat

Choose organisation. Workshop on Raman devices calibration and verification protocols

Details of the Workshop secretary:

Name: Iván Moya Alcón
Organization: UNE, Spanish Association for Standardization
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Finance:

The workshop is planned under European Union's Horizon 2020 research and innovation program funded project CHARISMA (grant agreement No. 952921)

Drafting and Dissemination:

Two CWAs are expected to be developed under the Workshop describing protocols for the calibration and verification of Raman devices. It is expected to be ready for publication in seven months after the kick-off meeting.

UNE will assume the fee for the CWA to be free downloadable from CEN-CENELEC website so that it can be properly disseminated through potential interested stakeholders and in events focusing on characterization techniques, where different partners of CHARISMA have a strong participation.

Does the proposed CWA conflict with an EN or an HD?

	YES	NO
EN	<input type="checkbox"/> ⁵	<input checked="" type="checkbox"/>
HD (CENELEC)	<input type="checkbox"/> ⁵	<input checked="" type="checkbox"/>

<please add information/explanations to the points marked „yes“>

Is the proposed CWA within the domain of an existing CEN and/or CENELEC Technical Body?

No. A detailed standardization landscape analysis was performed, and it was concluded that the proposed CWA does not fall in the domain of existing technical bodies.

CEN/CENELEC Management Centre (to be completed by CCMC):

Name of the CCMC project manager:
Organization: CCMC
Postal address: Rue de la Science 23, 1040 Brussels
Email:
Phone: +32 2 550 xxxx
Webpage: <https://www.cencenelec.eu/aboutus/MgtCentre/Pages/default.aspx>

Response of identified potentially affected CEN/CENELEC TCs

	YES	NO
Is there an active work item covering the scope of the planned CWA?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁵ Work on the proposed CWA shall not be initiated.

Are there arguments against the topic of the planned CWA?

<Add information/explanations to the points marked „yes“>

3 Security risk analysis

3.1 General

Security risk analysis is a process of identifying and analysing the main negative factors that may affect a standardization project's objectives. The following is targeted at secretariats of CEN/CENELEC Workshop Agreements (CWA) dealing with security issues. Its purpose is to help them identify and mitigate the risks associated with their project. It is structured around two main security threats that can affect the success of the work: major diverging interests among stakeholders and sensitive information.

3.2 Risk analysis on major diverging interest among stakeholders

Diverging interests among stakeholders can impede the process in reaching agreement on the CWA and even lead to failure to deliver the planned CWA. In order to identify and possibly mitigate the risks, the following questions should be reviewed:

- Is the planned CWA expected to have a major impact on the security policy/strategy of the core stakeholders?
- Does the scope of the CWA cover products or services with a clear dual-use purpose (i.e. which can be used for military purposes)?

3.3 Risk analysis on sensitive information

- In light of the scope of the CWA, is it likely that it may deal with sensitive information? If so, what is the information sensitivity level?
- Is there a need for a (non-)disclosure agreement?
- Is there any conflict of interest for stakeholders involved in the CEN/CENELEC Workshop, regarding especially the use they may make of any information they receive during the development of the CWA?
- What steps should be taken to manage information dissemination and storage (e.g. memory stick, emailing, storage) during the development process of the CWA?

The proposed work will not deal with security issues.