



ISO Update

14th October, 2021

**CCUF / SC 27 WG 3 Liaison Officer
Kwangwoo Lee (HP Printing Korea)**

CCUF & ISO/IEC JTC 1/SC 27/WG 3

iso.org/organization/7415274.html



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ORGANIZATIONS IN COOPERATION WITH ISO

CCUF

COMMON CRITERIA USERS FORUM

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United States

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LIAISONS

Liaisons C: Organizations that make a technical contribution to and participate actively in the work of a working group

Total number of liaisons: 1 | A liaisons: 0 | B liaisons: 0 | C liaisons: 1

Filter the list

REFERENCE ↓

TITLE

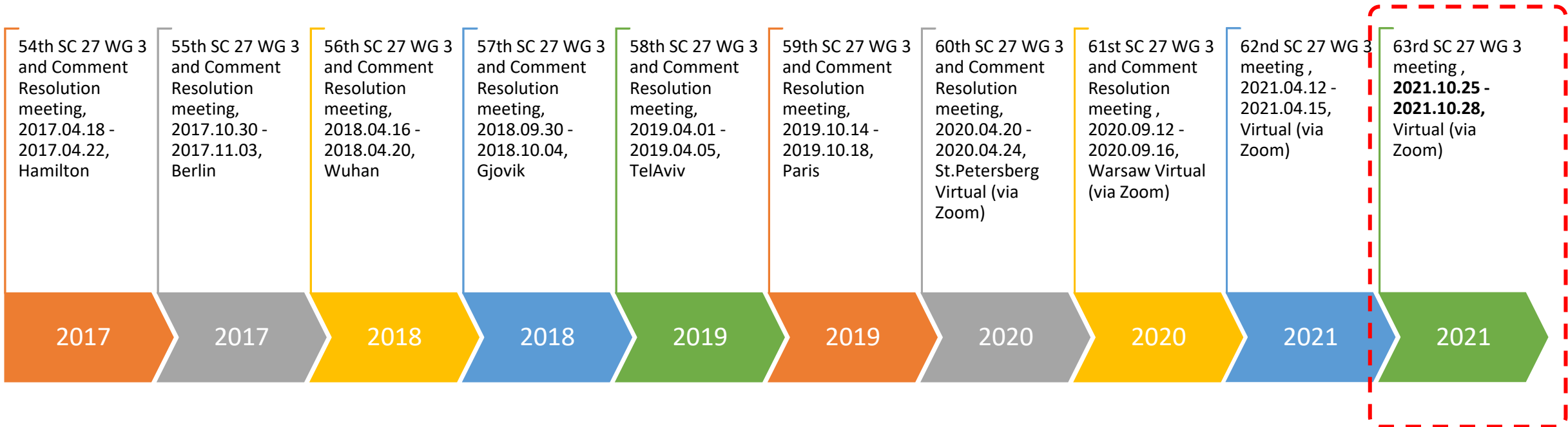
CATEGORY

ISO/IEC JTC 1/SC 27/WG 3

Security evaluation, testing and specification

C

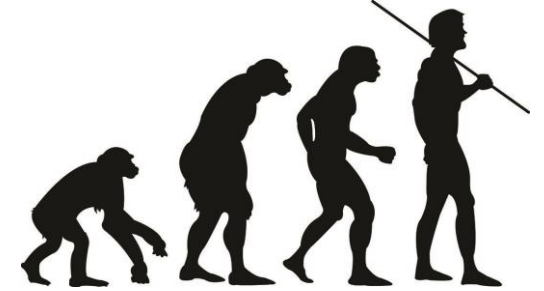
Journey with ISO SC 27 WG 3



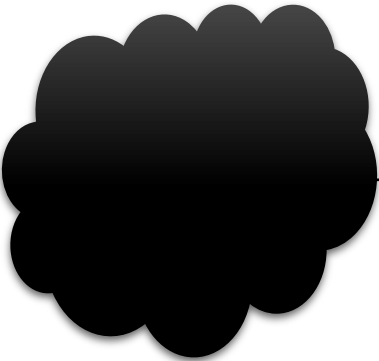
Topics

- History of the standards
- What are the standards?
- What is new in the ISO 4th edition?
- Recent Progress
- **[WG3 N2075]** Liaison Statement from WG3 to CCUF
- **[WG3 N2087]** ISO/IEC JTC 1/SC 27/WG 3
Recommendations 62nd Meeting, Virtual (via Zoom)
April 12th – 15th, 2021
- **[WG 3 N2083]** ToR for PWI Roadmap for the
maintenance of ISO/IEC 15408 and ISO/IEC 18045
- CCUF ISO Standards project

History of Criteria for IT Security



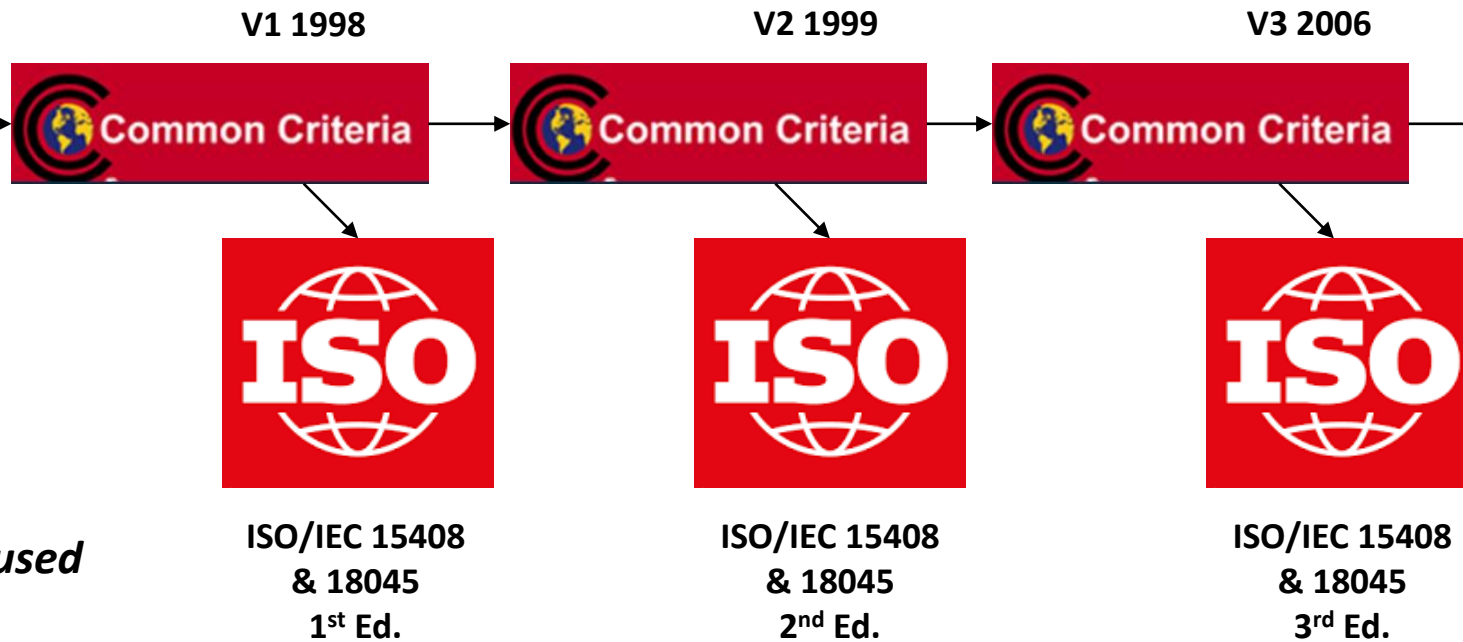
“Common Criteria” under CCRA



*different nations
different strengths
process-focused
Technical input-focused*



*Various Security Evaluation &
Testing Standards*



 **ISO IPRs**

CCUF & CCDB → ISO/IEC SC 27



OTHER PUBLICATIONS

Publications

The member organisations of the CCRA declare that defined assurance levels (EALs) between versions of the criteria are equivalent and can therefore be used without restrictions for composition activities.

new CC v3.1. Release 5

CC v3.1 Release 5 consists of three parts. Make sure to download and use these files:

Part 1: Introduction and general model

- PDF [CCPART1V3.1R5.pdf](#)
- [CCPART1V3.1R5 marked changes.pdf](#)

Part 2: Security functional requirements

- PDF [CCPART2V3.1R5.pdf](#)
- [CCPART2V3.1R5 marked changes.pdf](#)

Part 3: Security assurance requirements

- PDF [CCPART3V3.1R5.pdf](#)
- [CCPART3V3.1R5 marked changes.pdf](#)

- XML [CC3R3.dtd](#)
- [cc3R5.XML.zip](#)

CEM v3.1 consists of one part:

CEM
CEM

- PDF [CEMV3.1R5.pdf](#)
- [CEMV3.1R5 marked changes.pdf](#)

Addenda to the CC and CEM

- PDF [CCDB-2017-05-17-CCaddenda-Exact Conformance.pdf](#)



Common Criteria for Information Technology Security Evaluation

Part 1: Introduction and general model

April 2017

Version 3.1
Revision 5

CCMB-2017-04-001

Legal Notice:

The governmental organisations listed below contributed to the development of this version of the Common Criteria for Information Technology Security Evaluation. As the joint holders of the copyright in the Common Criteria for Information Technology Security Evaluation, version 3.1 Parts 1 through 3 (called “CC 3.1”), they hereby grant non-exclusive license to ISO/IEC to use CC 3.1 in the continued development/maintenance of the ISO/IEC 15408 international standard. However, these governmental organisations retain the right to use, copy, distribute, translate or modify CC 3.1 as they see fit.

<i>Australia:</i>	<i>The Australian Signals Directorate;</i>
<i>Canada:</i>	<i>Communications Security Establishment;</i>
<i>France:</i>	<i>Agence Nationale de la Sécurité des Systèmes d'Information;</i>
<i>Germany:</i>	<i>Bundesamt für Sicherheit in der Informationstechnik;</i>
<i>Japan:</i>	<i>Information Technology Promotion Agency;</i>
<i>Netherlands:</i>	<i>Netherlands National Communications Security Agency;</i>
<i>New Zealand:</i>	<i>Government Communications Security Bureau;</i>
<i>Republic of Korea:</i>	<i>National Security Research Institute;</i>
<i>Spain:</i>	<i>Ministerio de Administraciones Públicas and Centro Criptológico Nacional;</i>
<i>Sweden:</i>	<i>Swedish Defence Materiel Administration;</i>
<i>United Kingdom:</i>	<i>National Cyber Security Centre;</i>
<i>United States:</i>	<i>The National Security Agency and the National Institute of Standards and Technology.</i>

 **ISO IPRs**

<https://www.commoncriteriaportal.org/files/ccfiles/CCPART1V3.1R5.pdf>



What are these Standards?

- A framework (ISO/IEC 15408 Part 1) that explains how to generate specifications that can be evaluated by Labs under scheme policies
 - Protection Profiles (PP) (product-type specification of requirements)
 - Security Targets (ST) (product-level specification of requirements)
- Catalogues of security requirements
 - Functional security requirements (Part 2)
 - Assurance security requirements (Part 3)
- How to evaluate a Security Target or PP
 - Core methodology for evaluation (ISO/IEC 18045)
 - Specifying methodologies for specific product-type evaluations

Specification-based approach

Keywords: exact conformance, direct rationale PPs, TOE-specific evaluation methods

All evaluated TOEs are compliant to a given list of requirements: nothing more and nothing less

All tests are set and known beforehand

Attack-based approach

Keywords: strict/demonstrable conformance, EALs, TOE type-specific evaluation methods

All evaluated TOEs are protected against a given set of threats

The attacker strength is set and known beforehand; the tests themselves may be fine-tuned (penetration testing)

What is new in the ISO 4th Edition? (1/2)

- Input from stakeholders for the 21st Century
 - ~~Terms and definitions consolidated, reviewed and revised~~
 - Security evaluation approaches allowing both:
 - Specification-based : Exact Conformance added
 - Attack-based : “Traditional EAL approach”
 - Addition of modularity and composition techniques to the model
 - Enhanced specification for packages
 - Updated Security Policy definition
 - Updated to include state-of-the art for the highest levels of evaluation (EAL 6 and EAL 7)

4th Ed transition Guidance describing the changes more fully is in ISO/IEC 22216

What is new in the ISO 4th Edition? (2/2)

- The general model has been significantly revised (Part 1)
- New & changed security functional requirements (Part 2)
- Updated security assurance requirements (Part 3)
- Adds support in developing evaluation methodologies for specific technologies/product types (New part 4)
- All pre-defined packages of assurance packages moved to a (new) part 5
 - For example this is where the evaluation assurance level (EALs) are now found
 - (To facilitate use by scheme/MRA policies)
- Updated the common evaluation methodology (ISO/IEC 18045 aka “CEM”)



4th Ed transition Guidance describing the changes more fully is in ISO/IEC 22216



Progress with the 4th Edition

- Draft International Standard (DIS) ballots completed
 - 27 nations approved. 5 nations had mostly editorial comments
- The Final Draft International Standard (FDIS) stage where nations indicate their Final Approval before publishing was initiated and approved by SC 27.
- The standards are expected be published before the end of 2021(?).

WG Recommendation 19. Document for 1st FDIS

ISO/IEC JTC 1/SC 27/WG 3 resolves to request the SC 27 Secretariat to register the following documents as 1st FDIS to circulate for balloting.

Document	Project	Title
WG 3 N1958	15408-1	Evaluation criteria for IT security – Part 1: Vocabulary, introduction and general model #
WG 3 N1959	15408-2	Evaluation criteria for IT security – Part 2: Security functional components
WG 3 N1960	15408-3	Evaluation criteria for IT security – Part 3: Security assurance components
WG 3 N1961	15408-4	Evaluation criteria for IT security – Part 4: Framework for the specification of evaluation methods and activities
WG 3 N1962	15408-5	Evaluation criteria for IT security – Part 5: Pre-defined packages of security requirements
WG 3 N1963	18045	Methodology for IT security evaluation

Subject to approval of WG Recommendation 13

Began	2017
Working Drafts (2)	2017
Committee Drafts (3)	2018-2019
Draft International Standard	2020 Spring
Final Draft International Standard	2021 Spring
Publish	2021 (?)



ISO/IEC JTC 1/SC 27/WG 3 N 2087

ISO/IEC JTC 1/SC 27/WG 3 "Security evaluation, testing and specification"

Convenorship: **UNE**

Convenor: **Bañón Miguel Mr**



ISO/IEC JTC 1/SC 27/WG 3 Recommendations 62nd Meeting, Virtual (via Zoom) April 12th – 15th, 2021

Document type	Related content	Document date	Expected action
Meeting / Other	Meeting: VIRTUAL 12 Apr 2021	2021-04-27	INFO



<https://ccusersforum.onlyoffice.com/Products/Projects/TMDocs.aspx?prjID=534176#2402615>

>> [ISO-IECJTC1-SC27-WG3_N2075_LS_to_CCUF.zip](#)

>> [ISO-IECJTC1-SC27-](#)

[WG3_N2087_ISOIEC_JTC_1SC_27WG_3_Recommendations_62nd_Meeting_Virtual_via_Zoom_April_12th__15th_2021.pdf](#)

ISO/IEC JTC 1/SC 27/WG 3 Recommendations

62nd Meeting, Virtual (via Zoom)

April 12th – 15th, 2021

All recommendations are approved **UNANIMOUSLY** unless otherwise noted.

WG Recommendation 1. Acceptance of minutes

ISO/IEC JTC 1/SC 27/WG 3 resolves to accept the minutes of ISO/IEC JTC 1/SC 27/WG 3 of the 61st virtual meeting, September 12th – 16th 2020, in document WG 3 N2006.

WG Recommendation 2. Appointment of the Drafting Committee

ISO/IEC JTC 1/SC 27/WG 3 resolves to appoint Kwangwoo Lee and Philippe Magnabosco as Drafting Committee of the meeting and instructs them to prepare the draft WG recommendations document for WG 3.

WG Recommendation 3. Appointment of Acting Liaison Officers

ISO/IEC JTC 1/SC 27/WG 3 resolves to appoint the following acting liaison officers through the end of the meeting.

Liaison Officer	Liaison Institution
Hao Qin	to ITU-T SG 17
Martin Ward	to ETSI ISG QKD
Hao Qin	to ITU-T FG-QIT4N

WG Recommendation 4. PWI registration requests

ISO/IEC JTC 1/SC 27/WG 3 resolves to request SC 27 to register the following PWIs listed below.

Title (and N-Nr, if any)	Project Editors: Name (Country) *
Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045 (WG3 N2083)	Carolina Lavatelli (FR) * Christian Noetzel (DE) * David Martin (GB) Elzbieta Andrukiewicz (PL) * Fiona Pattinson (US) * Guillaume Têtu (FR) * Heebong Choi (KR) * Hongsong SHI (CN) * Kwangwoo Lee (KR) * Nicholas Muthambi (ZA) * Philippe Magnabosco (FR) * Tony Boswell (GB) *

WG Recommendation 22. Acknowledgement of new Liaison Officer

ISO/IEC JTC 1/SC 27/WG 3 resolves to acknowledge the following new liaison officer.

Organization	Liaison Officer
Common Criteria Development Board (CCDB)	From the CCDB to ISO/IEC JTC 1/SC 27/WG 3 Elzbieta Andrukiewicz (PL)

WG Recommendation 23. Approval of external Liaison

ISO/IEC JTC 1/SC 27/WG 3 resolves to approve the request from the following external organization as well as the appointment of the below mentioned expert as Liaison Officer:

Organization	Cat (A, B or C)	Document (N-Nr.)	Liaison Officer
Cryptographic Module Users Forum (CMUF)	C	WG 3 N2002	Yi Mao



Resolution A Thanks to the liaison officer from the CCDB to ISO/IEC JTC 1/SC 27/WG 3

ISO/IEC JTC 1/SC 27/WG 3 thanks to the liaison officer David Martin for his efficient and professional work and support for efficient liaison channel from the CCDB to ISO/IEC JTC 1/SC 27/WG 3. ISO/IEC JTC 1/SC 27/WG 3 also thanks him for his continuing support for liaison channel from ISO/IEC JTC 1/SC 27/WG 3 to the CCDB.

Acclamation

LIAISON STATEMENT

FROM: ISO/IEC JTC 1/SC 27/WG 3
TO: The CCUF

<https://ccusersforum.onlyoffice.com/Products/Projects/TMDocs.aspx?prjID=534176#2402615>

>> [ISO-IECJTC1-SC27-WG3_N2075_LS_to_CCUF.zip](#)

>> [WG3_LIAISON_STATEMENT_TO_CCUF_Virtual_April_2021_final.pdf](#)

Expression of Thanks

ISO/IEC JTC 1/SC 27/WG 3 thanks the CCUF for their liaison statement circulated as ISO/IEC JTC 1/SC 27/WG 3 N2026 dated April 12, 2021.

The WG 3 thanks to the CCUF for the updates of organization status, scope of interesting, and the dates of its forthcoming meetings. These are noted and WG 3 requests that the CCUF continue to include information about their future meetings in their future liaison statements.

General

The WG3 experts considered the IPR and usage points made in the liaison statement. The experts fully supported those points and asked the convenor to raise the concerns, through the SC 27 plenary, in order to expedite the discussions and swiftly reach a suitable conclusion. The group has expended a great deal of time in the development, editing, and review of the ISO/IEC 15408 and 18045 standards and are very keen to ensure that these can continue to be used as widely as possible.

Post meeting note: The WG 3 convenor presented a well argued case at the SC 27 plenary, pointing out the widespread adoption and success of common criteria, and the significant commitment made by members of the Common Criteria Recognition Arrangement, both in handing over current development, and in supplying experts (particularly those with certification body knowledge) to work on that development. He stressed the urgent need to find a practical solution which would allow the current usage model, or an acceptable equivalent, to continue. The WG 5 vice-convenor (who has a background in copyright law) said that this was also an important point for many other standards/related open-source tools. It was therefore agreed by the meeting that the whole subject should be explored in depth, but that the imminent ISO/IEC 15408 and ISO/IEC 18045 publication made this specific use case most urgent. That was confirmed by a special SC 27 Plenary resolution supporting the position of WG3. Charles-Pierre Bazin de Caix, as the ISO technical program manager, said that, following receipt of the letter attached to the liaison statement, he was awaiting legal advice regarding options, and he undertook to discuss those with the WG 3 convenor and others within a few weeks.



Preliminary work item: Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045

A preliminary work item that titled as “Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045” was initiated which will examine a range of improvements that could be made to ISO/IEC 15408 and ISO/IEC 18045 based upon recent editing experience, previous calls for contributions, experience of use, etc. This will result in a roadmap for the future WG 3 work around these standards. Details are provided in the attached PWI document (WG3 N2083). The CCUF is invited to note the call for inputs especially in regard to the operation of schemes and recognition arrangements. Input from the CCUF, via liaison, will be most welcome, particularly if it contains some level of implementation detail.

WG Recommendation 25. Request to the WG 3 convenor

ISO/IEC JTC 1/SC 27/WG 3 resolves to ask the WG 3 convenor to raise the following request at the SC 27 Plenary to be held on 16th April 2021.

“The WG3 experts considered the points made in the liaison statements from the CCDB and CCUF. The experts fully supported those points and asked the convenor to raise the concerns, through the SC27 plenary, in order to expedite the discussions and swiftly reach a suitable conclusion. The group has expended a great deal of time in the development, editing, and review of the ISO/IEC 15408 and 18045 standards and are very keen to ensure that these can continue to be used as widely as possible.”

Publication progress - ISO/IEC 15408, ISO/IEC 18045, and ISO/IEC TR 22216

A number of comments had been received from the DIS voting, with the comments from ISO publication editors requiring some fairly substantial changes such as splitting the vocabulary between all the parts (and the two standards) rather than holding this within ISO/IEC 15408:1 alone. These changes are almost complete and are expected to complete by the end of April for issue for FDIS ballot (8 weeks). If successful, the work will enter the publication phase where the ISO editors and the WG 3 editors work on the formatting etc. The duration of this is hard to predict but the WG 3 editors believe that publication can still take place before the end of 2021.



Other items highlighted as likely to be of particular interest to the CCUF

Connected Vehicles

A new work item that titled as “Security requirements and evaluation activities for connected vehicle devices” was initiated which will provide common security requirements and evaluation methods based on ISO/IEC 15408 and 18045 for components in connected vehicle devices such as road vehicles or self-driving cars, especially those ones that provide network connection through which an attacker can gain access to the internal network.

Multi-Party Coordinated Vulnerability Disclosure and Handling

This work had resulted in a draft technical report. Comments were resolved during the meeting and a further update was scheduled.

Introduction of new assurance requirements in ISO/IEC 15408-3 covering patch management and deployment activities

This work had resulted in a draft technical report. Comments were resolved during the meeting and a further update was scheduled.

Preliminary work item: Cybersecurity assurance of complex systems based on ISO/IEC 15408

Existing work was extended to cover “using models for ISO/IEC 15408 protection profiles”, “extensions to ISO/IEC 15408 protection profiles” (to cover complex systems) and “Scoping further the work”.

Preliminary work item: Requirements for the competence of IT security certification bodies

A call for contributions was made which may be of interest to CCUF members.

Preliminary work item: ISO/IEC 15408 in the cloud

A call for contributions was made which may be of interest to CCUF members.

<https://ccusersforum.onlyoffice.com/Products/Projects/TMDocs.aspx?prjID=534176#2402615>

>> [ISO-IEC/JTC1-SC27-WG3_N2075_LS_to_CCUF.zip](#)

>> [WG3_LIAISON_STATEMENT_TO_CCUF_Virtual_April_2021_final.pdf](#)

Standardization process

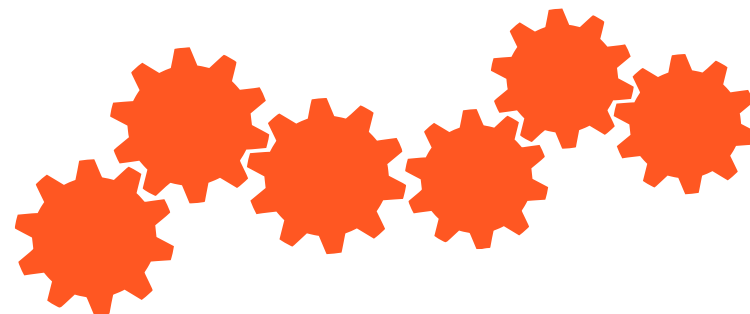
WG 3 is also pleased to inform the CCUF that ISO/IEC 19989-1, ISO/IEC 19989-2, 19989-3, and 20897-1 are in the standardization process. It concerns the criteria and methodology for security evaluation of biometric systems (ISO/IEC 19989-1, ISO/IEC 19989-2, 19989-3) and physically unclonable functions (ISO/IEC 20897-1). CCUF stakeholders for IT security testing and evaluation laboratories can consider these documents for your references.

We look forward to continuing the rewarding relationship with the CCUF and encourage the CCUF to provide any CCUF work items that the working group may consider for review or comment as attachments to the next liaison statement.

Please note that the latest status of all WG 3 projects, the relevant document numbers, and the schedule for updates and comments are all to be found in the WG 3 recommendations document that is attached to this liaison statement. Documents of interest to the CCUF are made available through the liaison channel with SC 27/WG 3.

Attachments

- ISO/IEC JTC 1/SC 27/WG 3 Recommendations, 62nd Meeting
- PWI - Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045





ISO/IEC JTC 1/SC 27/WG 3 N 2083

ISO/IEC JTC 1/SC 27/WG 3 "Security evaluation, testing and specification"
Convenorship: **UNE**
Convenor: **Bañón Miguel Mr**



ToR for PWI Roadmap for the maintenance of ISO/IEC 15408 and ISO/IEC 18045

Document type	Related content	Document date	Expected action
Project / Other	Meeting: VIRTUAL 12 Apr 2021	2021-04-27	COMMENT/REPLY by 2021-09-10

Description

This document was presented and approved at the 2021 April WG 3 meeting. It is being circulated for calling for contributions.

The Proposal

- The group of experts proposes to identify and study the various issues raised and assess the feasibility and level of effort involved in addressing these.
- A **roadmap** (in the form of a technical report) would be the key output from the study.



Motivation

- During the recent revision of ISO/IEC 15408 and ISO/IEC 18045 the editors identified a number of aspects that could benefit from further consideration.
 - Simplification
 - Streamlining
 - Clarification
- A discussion with experts, of these and other items, was held during the WG3 meeting on 12 April 2021 and several topics were noted as to be addressed (in the priority order proposed by the editors):



- **1. Simplification:** Improve the **comprehension** and the **use** of the standard:
 - a. The repetitive/duplicative nature of the documents makes it very hard to maintain their consistency when updating (especially when using a word processor for editing rather than a more structured document production system),
 - b. improvements to the **readability** and **usability** of the standard could be made by simplifying concepts and explanations **without reducing its value, or making fundamental changes**.
- **2. Streamlining:** The documents could also be streamlined so that they are more readily applied by **specification-based** as well as **attack-based approaches** to evaluations (as described in ISO/IEC TR 22216) **supporting both types of use without undesired side effects**.
- **3. Clarification:** **Clearer presentation of requirements** separating them from parts of text containing **guidelines, explanations and examples**, specifically for Part 1. Additionally, work on a **unified terminology for all parts**, possibly creating a separate part following the advice from ISO Editors, and using results from the Study Period that took place in 2019 on Concepts and Terminology in support to ISO/IEC 15408/18045.

- 4. Some changes proposed during **the initial study period** were found to be impractical to implement in the time available and were deferred for later consideration,
- 5. There are already other SC27 standards making use/proposing the use of at least some parts of ISO/IEC 15408 and ISO/IEC 18045 - e.g. **ongoing work on cloud services, QKD, patch management, verification of cryptographic protocols**, etc. - **consideration should be given as to how best to take account of those**, whether that be through adding further requirements/activities to the standards, or by providing a framework that adapts to the differing needs via supporting documents (placing these, which have been used for many years by the smartcard community for example, on a more formal footing).

Project Editors: Name (Country) *
Carolina Lavatelli (FR) *
Christian Noetzel (DE) *
David Martin (GB)
Elzbieta Andrukiewicz (PL) *
Fiona Pattinson (US) *
Guillaume Têtu (FR) *
Heebong Choi (KR) *
Hongsong SHI (CN) *
Kwangwoo Lee (KR) *
Nicholas Muthambi (ZA) *
Philippe Magnabosco (FR) *
Tony Boswell (GB) *

Call for contributions

The call for contributions has the following aims:

- Without reducing its value, or making fundamental changes, what could be done to make the standard simpler/easier to use? (whether by updating content, layout, format, etc.)
- Can the standard be better structured to reflect significant differences in the use of the standard between different technology areas/evaluation/certification approaches?
- For SC27 and other experts developing documents related to ISO/IEC 15408 /18045/Standards, Technical specifications, Technical reports (e.g. QKD, Patch management, Cloud services, etc.); are there any structural/content changes in ISO/IEC 15408/18045 that would ease/improve implementation?
- For users of the standards and resultant outputs, eg Certifying Schemes, recognition arrangement owners, policy/procurement organisations, developers, and Protection Profile/Security Target authors, are there any structural/content changes in ISO/IEC 15408/18045 that would ease/improve implementation?

Contributions would be welcomed from all sources but particularly from the CCDB and EUCC/ENISA (via respective liaisons) regarding scheme/recognition/general implementation aspects, and from the CCUF regarding general implementation aspects and linkages to wider uses of CC.

Contributions would also be welcomed from other stakeholders such as SDOs.

NOTE: Contributions that include examples of implementation detail would be particularly welcome.

Terms of Reference/process

- The 'rapporteurs' group will analyse the contributions, including those made previously, together with the simplification, streamlining, and clarification items seen as essential foundations by the editors, and assess the likely effort involved in each.
- This will result in a draft roadmap for discussion within WG3 (possibly including further consultation with CCDB/CCUF etc.) which would be published as a technical report.
- The report would be updated appropriately as the ecosystem of users gains practical experience in using the new revisions of ISO/IEC 15408 and ISO/IEC 18045, and as the use of the standards by the security evaluation community evolves.

ISO Standards

[Overview](#) | [Tasks](#) | [Milestones](#) | [Discussions \(8\)](#) | [Time Tracking](#) | [Documents \(114\)](#) | [Team \(64\)](#) | [Gantt Chart](#)

Status: Open

Project Title: ISO Standards

Project Manager: Kwangwoo Lee

Creation date: 12/7/2015

Description: Related to work performed in relation to ISO/IEC JTC/1 SC/27 WG/3.

To join this project, please send a request to Kwangwoo Lee or mgmt@ccusersforum.org

Tags: CC, CCUF, ISO

Thank you!

Kwangwoo Lee

CCUF & SC 27 WG 3 Liaison officer

kwangwoo.lee@hp.com

kwsec.lee@gmail.com

About

- Most part of this presentation was made on behalf of the whole editing team working under ISO/IEC JTC 1/SC 27/WG 3
- In editor roles we do not represent our sponsor organizations, or national bodies
- Thanks are due to the many experts who have significantly contributed to the development of the standards
- In addition the editors of ISO/IEC 15408 and ISO/IEC 18405 deserve thanks for the great many hours of their lives dedicated to making these standards evolve