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| **TSAG** |
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| **TD** |
| **Source:** | Ad Hoc Chairman |
| **Title:** | Updated Terms of Reference of a new Focus Group on digital documentation of COVID-19 certificates based services (FG-DDCC) by ad hoc chairman |
| **Purpose:** | Proposal |
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| **Keywords:** | COVID-19; FG; vaccination certificate; |
| **Abstract:** | This TD contains updated ToR of an ITU-T Focus Group on Digital documentation of COVID-19 Certificates based services (FG-DDCC), reflecting inputs from WHO (via email), comments from SPCG in TD1160, and comments raised in the TSAG plenary on Monday 26 October 2021. |

**Introduction**

WHO was consulted after TSAG-C179 was submitted. WHO suggested updated Terms of References against C179 shown in rev-marks in the Annex of this TD.

At the TSAG plenary discussion of C179, this FG proposal received support as well as objection. The following points were suggested:

* Gap analysis among relevant groups should be conducted first to identify items to be studied by FG
* recommendations from SPCG in TD 1160 (avoiding duplication, engagement of ISO/IEC JTC 1/SCs, build upon existing international standards rather than creating new ones, for example ISO/IEC 18013-5 digital certificate standard is used today in many countries for issuing Covid certificates, inclusion of specific reference to possible joint work with ISO and IEC, include engagement of the above identified Committees into the terms of reference for this Focus Group).

These discussion results in the TSAG plenary were addressed and incorporated as yellow-highlighted updates in the Annex.

**Proposal**

Taking into account the discussion result of TSAG plenary and updated ToR by WHO, the ad hoc is requested to review the draft updated Terms of Reference given in the Annex.

**Annex: Terms of Reference for a Focus Group on Digital Documentation of COVID-19 Certificates (FG-DDCC) based services**

**1. Rationale and Scope**

Digital COVID-19 Certificates provide proof that a person has been vaccinated against COVID-19, tested for the virus, or recovered from COVID-19. The current COVID-19 pandemic has illustrated the urgent need for digital COVID-19 certificates as part of the overall pandemic response effort that could be used in an interoperable fashion across organizations.

WHO (World Health Organization) recently published the [WHO Technical Specifications and Implementation Guidance](https://apps.who.int/iris/rest/bitstreams/1359417/retrieve) on digital Documentation of COVID-19 Certificates: Vaccination Status (DDCC:VS) and a second document, Digital Documentation of Covid Certificates: Lab Results (DDCC:LR) is imminently forthcoming. Collectively, these health content specifications from the WHO are referred to as Digital Documentation of Covid Certificates (DDCC).The WHO DDCC specifications are a normative specification for the health content that should be contained within a certificate.

As a means of establishing a Trust Network, Public Key Infrastructure (PKI) may be used to govern the issuance of digital certificates to protect sensitive data, provide unique digital identities for users, devices and applications and secure end-to-end communications WHO excluded from its scope within the DDCC recommendations on the nature of the PKI (or other types of Trust Networks) as it recognized that Member States are operating at a variety of maturity levels for digital health infrastructure. In addition, WHO did not include in its scope the specifications for Identity Binding of a certificate to an individual. WHO recommends that the development of Trust Networks and Identity Binding that take into account equity issues as outlined in Section 2 of DDCC:VS.

Decentralized identity is an emerging concept that gives back control of identity to consumers using an identity wallet in which they collect verified information about themselves from certified issuers. Digital COVID-19 certificates can be designed using both existing technology, such as QR code and public key infrastructure (PKI); and emerging technologies, such as decentralized identity (DID). Certificates should only include the minimum amount of personal information that is necessary for verification purposes. Member States’ verification processes should respect legal obligations and ethical principles of data protection and privacy within an overall context of appropriate public health restrictions to successfully fight the pandemic. Digital COVID-19 Certificates can assist Member States in facilitating safe free movement, including accessing social and economic activities and travel, while addressing the public health challenges of the COVID-19 pandemic.

The proposed FG-DDCC could provide comprehensive analysis of the various types of emerging implementations of Digital COVID-19 Certificates, applications and services, and governance aspects for interoperable use of digital COVID-19 across multiple domains including the issue for mutual recognition. The interoperability of these certificates is comprised of three main aspects: the health content and data exchanges standards as defined in the normative WHO DDCC; the operationalization of Trust Networks; and Identity Binding. Such an approach would also allow participation from external experts or organizations such as WHO, W3C, HL7, GSMA, ICAO, IEEE, WEF, etc., that do not normally contribute to ITU-T Study Groups.

The FG-DCC would be an open platform for relevant stakeholders – such as public health authorities, telecom regulators, healthcare delivery organizations, services providers, platform providers, network operators, travelers’ organizations, international organizations, and industry forums and consortia – to share knowledge, best practices and lessons learned in the field – with the objective of identifying the standardized frameworks needed to support the scaling up of applications and services based on digital COVID-19 certificates globally.

The FG-DDCC , as proposed under the auspices of TSAG and WHO, could address several topics of a digital COVID-19 certificate: use-cases and applications, various aspects of technical framework and requirements for the implementation of Digital COVID-19 Certificate based services, regulatory, governance and policy aspects, and security and data protection aspects of digital COVID-19 certificate based services. The FG-DDCC could consist of several Working Groups that deal with those issues and topics mentioned above.

**2. Focus Group on Digital COVID-19 Certificate based services (FG-DCC)**

The ITU-T FG-DDCC will analyze applications and services based on digital COVID-19 certificates that can be standardized by ITU-T study groups, identify best practices and guidance which could support the implementation of such applications and services on a global scale and identify a way forward that ITU-T SGs need to study to meet the urgent needs from all sectors, including the travel sector.

It will develop a comprehensive standardization roadmap for interoperable services based on digital COVID-19 certificates taking into consideration the normative specification of health content by the WHO in the DDCC and of the activities currently undertaken by various relevant groups (see 2.2 below) and forums and a regulatory toolkit which may be used by national policymakers and regulatory authorities from ITU and WHO Member States.

This FG will work closely with relevant study groups with ITU-T and will also invite non ITU-T members, including public health authorities from WHO and ITU Member States, to participate in its work.

**2.1 Objectives**

To meet an urgent need for international standards of Digital COVID-19 Certificate to overcome the difficulties from COVID-19 pandemic and for the development of base materials for global standards for applications and Identity Binding and Trust Network services based on digital COVID-19 certificates, the objectives of this focus group include:

* Take as a foundation the normative specifications and the design principles, within the WHO DDCC documents for the health content of Digital Covid-19 Certificates
* Establish liaisons and relationships with other organizations which could contribute to the standardization activities based on different digital COVID-19 certificates for Identity Binding and Trust Networks.
* Describe the ecosystem for applications and services based on different digital COVID-19 certificates and identify the respective roles and responsibilities of the stakeholders in the ecosystem.
* Identify successful use cases for implementation of applications and services based on different digital COVID-19 certificates.
* Suggest future ITU-T study items and related actions for various ITU-T study groups for example on:
	+ Conduct gap analysis and identify new work items for standardization;
	+ Concepts, coverage, vision and use cases of services based on different digital COVID-19 certificates;
	+ Analyse and evaluate the status of different digital COVID-19 certificates and their maturity;
	+ Characteristics and requirements for services based on different digital COVID-19 certificates;
	+ Architectural framework and network infrastructure for providing services based on different digital COVID-19 certificates;
	+ Analysis of compliance of the various data models for services based on digital COVID-19 certificates with the WHO DDCC;
	+ Business models and service architectures based on different digital COVID-19 certificates;
	+ A set of specifications ensuring interoperability for different digital COVID-19 certificates across the countries and domains and providing user friendly operation;
	+ Security, data protection, and trust aspects related to applications and services based on different digital COVID-19 certificates;
	+ Provision of a platform to share findings and to share dialogue on policy and regulatory implications of different digital COVID-19 certificates between enterprises working on applications and regulators from various industrial/economic sectors; and
	+ Identify stakeholders with whom ITU-T could collaborate further on and potential collective action and specific next steps.

**2.2 Relationships**

FG-DDCC will work in close collaboration with all ITU-T study groups, especially SG16, SG17 and SG20. This FG-DDCC will collaborate with relevant entities including financial institutions, telecommunications regulators, international health organizations, health regulators, non-governmental organizations (NGOs), policy makers, SDOs, industry forums and consortia, ICT companies, academic institutions, research institutions and other relevant organizations, in accordance with Recommendation ITU-T A.7.

This FG will liaise with the following groups:

* HL7: http://www.hl7.org/implement/standards/index.cfm?ref=nav
* ICAO: https://www.icao.int/Pages/default.aspx
* IEEE: https://standards.ieee.org/covid-19/index.html
* ISO/IEC JTC1/SC 6: [https://www.iso.org/committee/45072.html](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iso.org%2Fcommittee%2F45072.html&data=04%7C01%7CTom.Stack%40bsigroup.com%7Ca72d0f9b4a244542dbd008d98995e42b%7C54946ffc68d34955ac70dca726d445b4%7C0%7C0%7C637692099129236175%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=sbuCY6iS6E%2B7oD1N7HQjQYfDWvZ16pkTV1Mu8uCptrE%3D&reserved=0) on telecommunications and information exchange between systems;
* ISO/IEC JTC1/SC 17: [https://www.iso.org/committee/45144.html](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iso.org%2Fcommittee%2F45144.html&data=04%7C01%7CTom.Stack%40bsigroup.com%7Ca72d0f9b4a244542dbd008d98995e42b%7C54946ffc68d34955ac70dca726d445b4%7C0%7C0%7C637692099129246164%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=7t5ibFUoudH5DmDpLHGF94N68FTuuAna1Q4tQi5Hl%2Bg%3D&reserved=0) on cards and security devices for personal identification who deals with secure identification digital identification has an existing standard that can be used for digital COVID certificates and the committee is now working to prototype such an application. ISO/IEC 18013-5 has been implemented as part of [Europe’s Digital Covid Certificate](https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en). SC 17 is collaborating with ICAO that published [Visible Digital Seals for Non-Constrained Environments (“VDS-NC”) for TravelRelated Public Health Proofs](https://www.icao.int/Security/FAL/TRIP/PublishingImages/Pages/Publications/Guidelines%20-%20VDS%20for%20Travel-Related%20Public%20Health%20Proofs.pdf%22%20%5Cl%20%22search%3DVDS-NC);
* ISO/IEC JTC1/SC 27: [https://www.iso.org/committee/45306.html](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iso.org%2Fcommittee%2F45306.html&data=04%7C01%7CTom.Stack%40bsigroup.com%7Ca72d0f9b4a244542dbd008d98995e42b%7C54946ffc68d34955ac70dca726d445b4%7C0%7C0%7C637692099129256160%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=7Srma%2FSlIjjnMIXkQegogQpL0E8x4WRBNiGQFb715Tk%3D&reserved=0) on information security, cybersecurity and privacy protection;
* ISO/IEC JTC1/SC 31: <https://www.iso.org/committee/45332.html> on automatic identification and data capture techniques (e.g. QR codes);
* ISO/IEC JTC1/SC 35: [https://www.iso.org/committee/45382.html](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iso.org%2Fcommittee%2F45382.html&data=04%7C01%7CTom.Stack%40bsigroup.com%7Ca72d0f9b4a244542dbd008d98995e42b%7C54946ffc68d34955ac70dca726d445b4%7C0%7C0%7C637692099129256160%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=D3l9MAQ%2Bn2ZVjxMyRLt0TmorjTZMEhr%2B12COp%2F1P2o0%3D&reserved=0) on user interfaces;
* ISO/IEC JTC1/SC 37: [https://www.iso.org/committee/313770.html](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.iso.org%2Fcommittee%2F313770.html&data=04%7C01%7CTom.Stack%40bsigroup.com%7Ca72d0f9b4a244542dbd008d98995e42b%7C54946ffc68d34955ac70dca726d445b4%7C0%7C0%7C637692099129266152%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=9BsDL%2FeriT3%2BsWtdn50LSxF3Fyfc%2FPSHl4YDX7Oa4%2Fo%3D&reserved=0) on biometrics;
* ISO/TC 215: <https://www.iso.org/committee/54960.html> on health Informatics dealing with interoperability of health data, datasets, electronic health record, provider identification, data communication, metadata for Healthcare Cloud, Health software and health IT systems safety, effectiveness and security. There is also new work at preliminary stage in ISO/TC 215/WG2 on Guidelines for Integrating self-assessment questionnaire systems for COVID-19 to electronic health records systems. ISO/TC 215 works also in collaboration with IEC/SC 62A and IEEE;
* ISO/PC 317: <https://www.iso.org/committee/6935430.html> on Consumer protection: Privacy by design for consumers goods and services has ISO/CD 31700 under development;
* W3C Verifiable Credentials Working Group: https://www.w3.org/2017/vc/WG/
* WEF: <https://www.weforum.org/agenda/archive/vaccination/>
* ISO/TC 307: <https://www.iso.org/committee/6266604.html> on Blockchain and distributed ledger technologies
* IEEE: ISO/IEEE 11073 Personal Health Data (PHD) Standards
* European Commission: <https://ec.europa.eu/info/live-work-travel-eu/coronavirus-response/safe-covid-19-vaccines-europeans/eu-digital-covid-certificate_en> on EU Digital COVID Certificate
* GSMA: https://www.gsma.com/

**2.3 Specific Tasks and deliverables**

* Collect and document information on current initiatives and activities from the stakeholders involved in applications and services based on different digital COVID-19 certificates, especially the technical specification on Digital Documentation of COVID-19 Certificates. This will involve developing use cases and identifying standards and documents related to services based on different digital COVID-19 certificates across the world.
* Conduct gap analysis and identify potential joint work so as to build upon existing international standards rather than creating new ones and avoid duplication of works and conflicting standards.
* Invite experts to this FG from relevant organizations (see 2.2 above).
* Develop documents which reflect how technologies enable applications and services by the underlying nature of the ecosystem including best practices of policy and regulatory framework, risk assessment methodologies and business models being used.
* Develop technical reports on the definitions of terminologies and taxonomy for applications and services based on different digital COVID-19 certificates and its ecosystem.
* Develop a report on the potential barriers for the deployment of services based on different digital COVID-19 certificates and on the impacts of digital maturity (e.g. the “digital divide”), especially in low-resource settings.
* Study and analyse the implications of mandating interoperability and interconnection of services based on different digital COVID-19 certificates. This will include the development of a security standardization roadmap for interoperable services based on different digital COVID-19 certificates taking into consideration the interoperability challenges and best practices.
* Study and analyse the implications of standards for cross border transactions .
* Study and analyse technology competitiveness issues that may hinder the deployment of services based on different digital COVID-19 certificates and highlight equity concerns that may exist with specific technology choices as outlined in Section 2 of DDCC:VS
* Organise regional thematic workshops to collect inputs from various stakeholders. The workshops will be a platform to investigate best practices for the harmonization of legal and regulatory framework for applications and services based on digital COVID-19 certificates globally, including testing and certification for interoperability of COVID-19 certificate-based services. The workshops will bring together the Telecommunication Regulators, Policy makers and other relevant parties to identify issues and priorities, exchange information and best practices through peer learning and knowledge dissemination processes and identifying possible policy interventions enabling ICT inclusion. Deliberate efforts will be made to ensure workshop attendees from low-and middle-income countries are well represented.
* Draft technical reports describing and addressing the standardization gaps and identifying future standardization work for ITU-T study groups in services based on different digital COVID-19 certificates.
* Send the final deliverables copied with relevant SGs to the parent group, at least four calendar weeks before the parent group meeting.

**2.4 Parent group**

The parent group is TSAG.

**2.5** **Leadership**

See clause 2.3 of Recommendation ITU-T A.7.

**2.6 Participation**

See clause 3 of Recommendation ITU-T A.7. A list of participants will be maintained for reference purposes and reported to the parent group.

It is important to mention that the participation in this Focus Group has to be based on contributions and active participation.

**2.7 Administrative support**

See clause 5 of Recommendation ITU-T A.7.

**2.8 General financing**

See clauses 4 and 10.2 of Recommendation ITU-T A.7. Some degree of financial funding could be supported by advocators.

**2.9 Meetings**

The frequency and location of meetings will be determined by the Focus Group and the overall meetings plan will be announced as soon as possible. The Focus Group will mostly use remote collaboration tools and with possible face-to-face meetings. Meetings will be held as determined by the Focus Group and the meetings will be announced by electronic means (e.g., e-mail and website, etc.) at least two weeks in advance. Any potential in person meetings will need to ensure there can be significant participation of individuals from low- and middle-income countries.

**2.10 Technical contributions**

Contributions are to be submitted at least seven calendar days before the meeting takes place.

**2.11 Working language**

The working language is English.

**2.12 Approval of deliverables**

Approval of deliverables shall be taken by consensus.

**2.13 Working guidelines**

See clause 13 of Recommendation ITU-T A.7.

**2.14 Progress reports**

See clause 11 of Recommendation ITU-T A.7.

**2.15 Announcement of Focus Group formation**

The formation of the Focus Group will be announced via TSB Circular to all ITU membership, via the ITU-T Newslog and other means, including communication with the other involved organizations.

**2.16 Milestones and duration of the Focus Group**

The Focus Group lifetime is one and half year from the first meeting, but extensible by decision of the parent group if necessary.

A preliminary set of milestones includes:

* First Focus Group meeting: Fourth quarter of 2021

**2.17 Patent policy**

See clause 9 of Recommendation ITU-T A.7.

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