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M2.5 Specification certification

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Cover Sheet

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Summary of Changes:

Version	Date	Created by	Short Description of Changes
V0.1	2020-11-03	Karin Bredenberg and Jaime Kaminski	First version created
V0.15	2021-03-19	Karin Bredenberg and Jaime Kaminski	Updates following DILCIS Board input
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V0.9	2021-05-14	Karin Bredenberg and Jaime Kaminski	Finalisation following DILCIS Board input
V1.0	2021-08-31	Karin Bredenberg and Jaime Kaminski	Publication of first version

Glossaries of terms
E-ARK vocabs: http://evoc.dlmforum.eu/E-ARK/group/5568370c3448e76821b3942f/list CEF Glossary https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/CEF+Glossary

M2.5 Specification certification

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Specification certification (version 1.0)

Introduction

Certification is the procedure by which a third party provides written assurance that a specification or service conforms with specific standards. There is a desire for certification to formalise and legalise the eArchiving specifications. The following document considers the options available to the DILCIS Board regarding the certification of eArchiving specifications.

In the grant agreement, the following is stated regarding this milestone:

M2.5	Specification certification	Investigation and creation of action points for registration, certification and/or standardisation of the specifications. This milestone has a waypoint in month 14 where the DILCIS Board will evaluate the suggestions and propose actions.	M24	Actions planned

Figure 1: Milestone 2.5 in the grant agreement.

Our eArchiving specifications and their basics

The eArchiving specifications are strongly reliant on profiles, so they are not standards in their own right.

Standards organisations and options

The following options are available:

ISO

The International Organization for Standardisation (ISO) is an independent, non-governmental, international, standard-setting body composed of representatives from various national standards organisations. Founded in 1947, the organisation promotes worldwide proprietary, industrial, and commercial standards and works in 165 countries. It is the world's largest developer of voluntary international standards with more than twenty thousand standards set.

Based: Geneva, Switzerland

https://www.iso.org/home.html

Advantages

- ISO is the largest, most well-known and well-established international standards organisations.
- ISO has a considerable global reach.
- Standardisation gets a process with a strict revision scheme.

Disadvantages

- The standardisation process requires a dedicated working group.

- The standardisation process requires institutional membership for the participants in the working group.
- The process does not support minor updates.
- The working group takes over control of the standard.
- No free copies would be available, which would incur a cost to the consortium and may reduce adoption by the community.
- It might be possible to publish for free, but ISO's demands to do this are stringent.
- There are complexities regarding standardising eArchiving specifications, which are based upon other standards and de facto standards.
- The eArchiving specifications are strongly reliant on profiles, so they are not standards in their own right.

ETSI

The European Telecommunications Standards Institute (ETSI) is a European Standards Organisation (ESO). ETSI is recognised as a regional standards body dealing with ICT, although its standards are used globally. The organisation supports European regulations and legislation through the creation of Harmonised European Standards.

Based: Sophia Antipolis, France

https://www.etsi.org/

Advantages

- Only standards developed by the three ESOs (CEN, CENELEC and ETSI) are recognised as European Standards.

Disadvantages

- The process of becoming an ETSI standard is not clearly described (making it impossible to evaluate the benefits and challenges of ETSI standards).
- The eArchiving specifications are strongly reliant on profiles, so they are not standards in their own right.

Information from Portugal

Information from the national certification agency in Portugal regarding the involvement in ETSI standards:

> "In response to your question, I inform you that by consulting the ETSI website, it can be concluded that the company will have to be an ETSI member to participate directly in the development of standards. See https://www.etsi.org/about.
> In ETSI, contrary to what happens with the other European Standardisation Bodies, participation is not through its National Standardization Bodies. Participants have the autonomy to interact directly and become members to develop the documents they understand."

Information from Estonia

Information from Estonia collected by DILCIS Board member Kuldar Aas regarding ETSI standards:

- Confirmation of the information from Portugal that ETSI standardisation is "organisational" not "national", individual organisations can join ETSI and work in the working groups of their

choice. From this perspective, an organisation like the DLM Forum or the National Archives of X should join ETSI to start the standardisation of E-ARK specs.
- There is a difference between ETSI Technical Specifications (like the trust preservation ones from BSI) and ETSI standards. The first is just an agreement between the members (i.e., organisations) within the specific working group; ETSI standards are also confirmed by country coordinators (which in Estonia is the Technical Supervisory Agency), there is no connection to the national Standardisation Agency as stated from Portugal;
- ETSI technical specifications or standards are industry agreements; by themselves, they do not have legal power (i.e. are not mandatory like CEN standards are). Instead, if the EU passes high-level regulations or directives, then these reference to appropriate ETSI specifications or documents etc.; this seems to be also the case with eIDAS (as a regulation) and applicable ETSI standards (as mandated by eIDAS).
- There are currently no suitable working groups for our specs. The Estonians I talked to had a tough time fitting the whole Information Packages concept into ETSI and recommended strongly against using ETSI for E-ARK IP standardisation.

CEN

CEN is the European Committee for Standardisation, bringing together the National Standardisation Bodies of 34 European countries. CEN is one of three European Standardisation Organisations (together with CENELEC [electrotechnical engineering] and ETSI) that have been officially recognised by the European Union and by the European Free Trade Association (EFTA) as being responsible for developing and defining European voluntary standards. CEN provides a platform for developing European Standards and other technical documents concerning various products, materials, services and processes.

Based: Brussels, Belgium.

https://www.cen.eu/Pages/default.aspx

Advantages

- Only standards developed by the three ESOs (CEN, CENELEC and ETSI) are recognised as European Standards (ENs).

Disadvantages

- CEN does not have a strong user community in ICT.
- The eArchiving specifications are strongly reliant on profiles, so they are not standards in their own right.

CEN TC 468 “Management and preservation of digital content”

The CEN TC 468, led by AFNOR (Association Française de Normalisation) was created in December 2020. The group had its first meeting in April 2021. The group have expressed interest in working with the DILCIS Board and the eArchiving Building Block.

Advantages

- CEN/TC468 will focus on European needs while considering existing structuring models such as OAIS.
- An interest to cooperate have been expressed.

- Members of the EU CEF programme on “e-Archiving” will be invited to participate in the committee.
- Relevant documents could be referenced in the bibliography of standards/deliverables.

Disadvantages

- How the cooperation should be formed other than participation and reference of documents is not clear.
- It is unclear how the cooperation will be financed and what efforts are needed from the members of the DILCIS Board.
- Referencing documents in a bibliography is not certification.
- The future of the eArchiving Building Block is not known today, and the cooperation is focused on the building block.

Information from Portugal

Information from the national certification agency in Portugal regarding the involvement in CEN TC 468 standards:

> “The situation is different and more complex in CEN because we are talking about genuine European Standards.
> TC 468, which has already been created by CEN and the secretariat is by AFNOR (France).
> This TC will eventually fall (but has not yet been decided) within the scope of our Sectorial Standardisation Body - ItSMF. To accompany it, you will have to be part of the Technical Committee of our ONS.
> Documents are not edited as standards only by the decision of the entities. You have to understand if they fall within the scope of the Technical Commissions standardisation program if their members agree and are still subject to comments and changes by these members, whether at the national or European level.”

ISA²

The ISA² Programme supports the development of digital solutions that enable public administrations, businesses and citizens in Europe to benefit from interoperable cross-border and cross-sector public services. The ISA programme was adopted in November 2015 by the European Parliament and the Council of the European Union. ISA² runs from 2016 until 2020.

Advantages

- ISA² runs the validation service for the eArchiving Building Block.
- Will be part of the Digital Europe Programme alongside the building blocks

Disadvantages

- ISA² is a rolling program of work, and so its long term existence cannot be relied on.
- It is unclear if ISA² can keep a register of ‘true’ specifications.
- The future of the eArchiving Building Block is not known today.

OGC

The Open Geospatial Consortium (OGC) is an international consortium of more than 500 businesses, government agencies, research, and academic organisations focusing on making geospatial information and services FAIR (Findable, Accessible, Interoperable, and Reusable). OGC members form a global forum of experts and communities that develop and create publicly available, royalty-free, open geospatial standards.

Based: Wayland, USA

https://www.ogc.org/

Advantages

- OGC geospatial standards are publicly available, royalty-free, and open.
- Such standards would be an effective means of disseminating the geo-based CITS to the appropriate community.

Disadvantages

- OGC only works with geospatial standards (i.e. CITS GIS).
- It would hand over control of the specification to OGC, but the eArchiving Building Block would still need to maintain it.

Note: it would be preferable for OGC to ask the eArchiving Building Block to endorse their specifications.

EC endorsement

In some instances, the EC has both endorsed and legislated standards associated with the Building Blocks (e.g. eID and eIDAS). Electronic identification (eID) and electronic Trust Services (eTS) are critical enablers for secure cross-border electronic transactions and central building blocks of the Digital Single Market. The eIDAS Regulation requires that if a Member State offers an online public service to citizens/businesses for which access is granted based on an electronic identification scheme, then they must also recognise the notified eIDs of other Member States. Detailed regulation has been produced to this effect: Regulation (EU) No 910/2014 (eIDAS Regulation).

https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/Legislation+in+a+nutshell

Advantages

- Proven to work.
- Building Block focused.
- Endorsement is cost effective.

Disadvantages

- Development of regulations would require a significant commitment from the EC.
- The future of the eArchiving Building Block is not known today.

Proposal for a Regulation on European data governance (Data Governance Act)

In November 2020, the "Data Governance Act was proposed to become a regulation. It has two clauses relevant to the certification/endorsement processes supporting the eArchiving Building Block's work.

> (40) In order to successfully implement the data governance framework, a European Data Innovation Board should be established, in the form of an expert group. The Board should consist of representatives of the Member States, the Commission and representatives of relevant data spaces and specific sectors (such as health, agriculture, transport and statistics). The European Data Protection Board should be invited to appoint a representative to the European Data Innovation Board.
>
> (41) The Board should support the Commission in coordinating national practices and policies on the topics covered by this Regulation, and in supporting cross-sector data use by adhering to the European Interoperability Framework (EIF) principles and through the utilisation of standards and specifications (such as the Core Vocabularies and the CEF Building Blocks), without prejudice to standardisation work taking place in specific sectors or domains. Work on technical standardisation may include the identification of priorities for the development of standards and establishing and maintaining a set of technical and legal standards for transmitting data between two processing environments that allows data spaces to be organised without making recourse to an intermediary. The Board should cooperate with sectoral bodies, networks or expert groups, or other cross-sectoral organisations dealing with re-use of data. Regarding data altruism, the Board should assist the Commission in the development of the data altruism consent form, in consultation with the European Data Protection Board.

Advantages

- It is clearly stated that the Building Block specifications and standards should be used.
- Building Block focused.
- Endorsement and or certification thus is not needed, which means it is cost effective.

Disadvantages

- The regulation has not yet been ratified.
- The future of the eArchiving Building Block is not known today.

Conclusions

The eArchiving Building Block produces and maintains a variety of essential specifications. Rather than being standards per se, these are profiles that use standards and de facto standards, and they mainly inform about the placement into an information package.

While a variety of standardisation bodies exist, standardisation is complicated by the choice of using other standards and de facto standards in the eArchiving specifications instead of creating competing standards (this was instigated in the E-ARK project). This reliance on profiles means that there is no simple solution for the global standardisation of the eArchiving specifications.

The diversity of eArchiving specifications poses its challenges. It is not as yet clear if any of the standardisation bodies are willing to take on all of the eArchiving specifications as standards or if the focus will be on the information package or one of the Content Information Type Specifications

(CITS). If a single standards organisation adopts all the specifications, then what is currently a coherent body of specifications will most likely be split up across different working groups and domains. Such a scenario will reduce the overall effectiveness and impact of the eArchiving specifications.

Additional new specifications are another area of concern, where each new addition needs to be handled as a new standard within the standardisation body. There is no guarantee that all suggested new specifications will be adopted as standards, further breaking up the eArchiving specification family's cohesion.

Based on the available evidence, it is apparent that a combination of EC endorsement and potentially regulation would be the most effective means of disseminating the eArchiving Building Block specifications to the broadest possible community. A precedent has been set in this area with the regulation for eID and eIDAS.

DILCIS Board actions

The DILCIS Board agreed to accept the content of Milestone 2.5 at a board meeting on the 12th of May, 2021. A key driver for future success is the creation of a better link with the eArchiving Building Block's expert group, the European Archivists Group (EAG, https://ec.europa.eu/info/about-european-commission/service-standards-and-principles/transparency/freedom-information/access-documents/information-and-document-management/archival-policy/european-archives-group_en). Future work will therefore focus on exploring the potential mechanisms for a collaboration with the EAG.