



Welcome to the World of Standards



ETSI TC ESI WORK ON ELECTRONIC REGISTERED DELIVERY SERVICES AND REGISTERED ELECTRONIC MAIL

Luca Boldrin, Juan Carlos Cruellas, Santino Foti, Paloma Llaneza, Kornél Réti

- 🌐 STF 523 concept and context
- 🌐 STF 523 Goals
- 🌐 STF 523 foreseen calendar
- 🌐 Some details on EN 319 521 and en 319 531
- 🌐 Some details on EN 319 522
- 🌐 Some details on EN 319 532
- 🌐 Some details TS 119 524 and TS 119 534
- 🌐 Some details on TR 119 500 (business guidance)
- 🌐 Stakeholders involvement
- 🌐 STF-523 contacts, comments and more info
- 🌐 Additional Information on ETSI documents

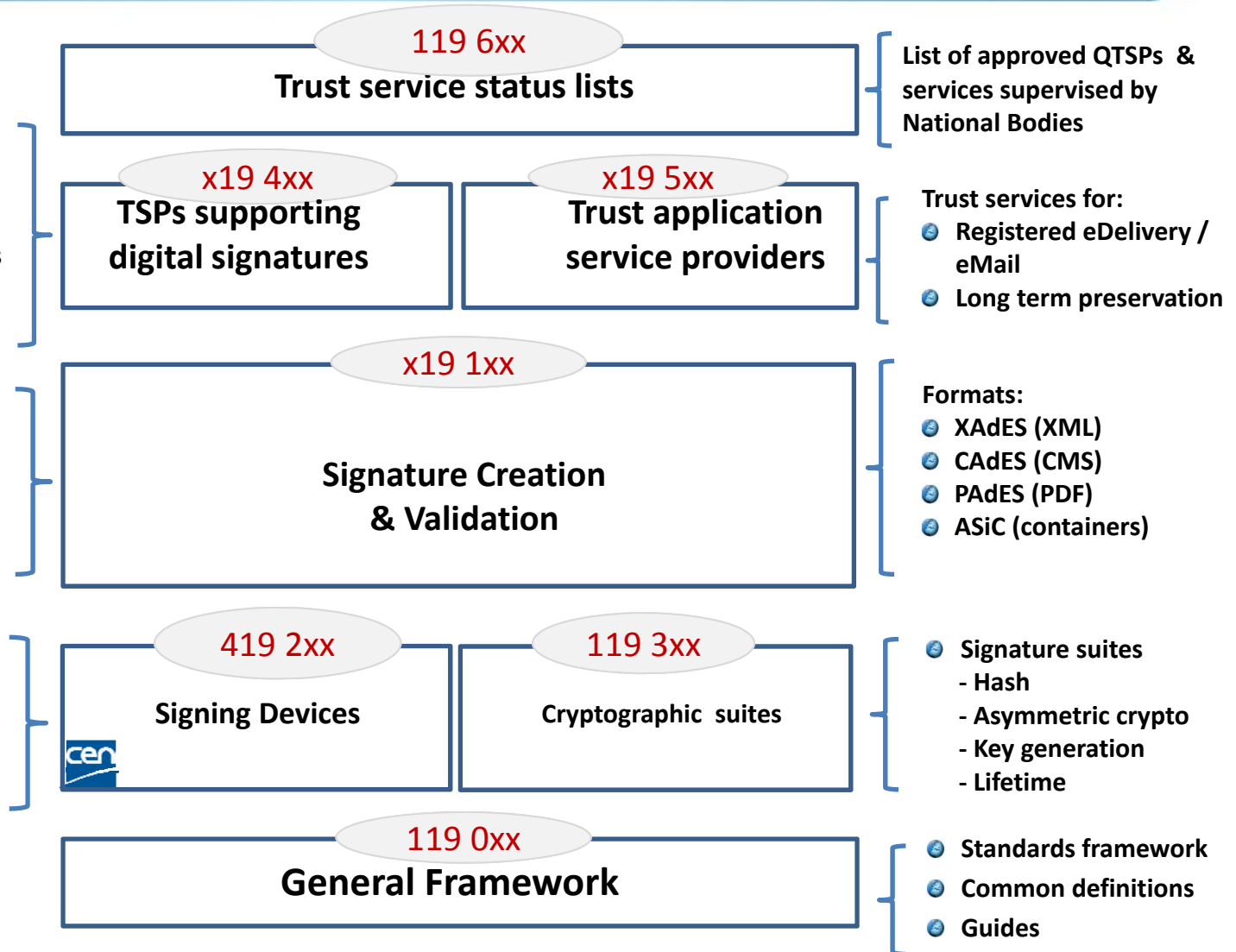
Context (1) eIDAS Standards Framework: Published Standards



- Trust services for:
- Issuing certificates
 - Time Stamping
 - Signature creation services
 - Validation services

- Procedures for AdES creation & validation

- CC Protection Profiles
- QSCD - Smart Cards
 - HSM used as QSCD
 - HSM used by TSPs
 - Remote QSCD



Context (2) STF-523 Specific context: ERDS



- To support articles 43 and 44 of eIDAS Regulation, TC ESI started working on standards for
 - Electronic registered delivery
 - Registered electronic email
- This work is funded by an EC/EFTA grant (SA/ETSI/ENTR/000/2015-08)
- TC ESI is assisted by a Specialist Task Force (STF 523) to perform the work.
 - A Specialist Task Force is a team “established to support the ETSI Technical structure to accelerate the production of standards urgently required by the ETSI Members or the European Commission (EC) and the European Free Trade Association (EFTA)”.

STF-523 Goals (1)

- Produce the following standards (1):
 - EN 319 522: Electronic Registered Delivery Services.
 - Four parts: Framework and architecture, semantic contents, formats, and bindings.
 - EN 319 532: Registered Electronic Mail (REM) Services.
 - Four parts: Framework and architecture, semantic contents, formats, and interoperability profiles
 - EN 319 521: Policy and security requirements for Electronic Registered Delivery Service Providers.
 - EN 319 531: Policy and security requirements for Registered Electronic Mail Service Providers.
 - TS 119 524: Testing Conformance and Interoperability of Electronic Registered Delivery Services.
 - Two parts: testing conformance, and test suites for interoperability testing.
 - TS 119 534: Testing Conformance and Interoperability of Registered Electronic Mail Services.
 - Two parts: testing conformance, and test suites for interoperability testing.

STF-523 Goals (and 2)

- Produce the following standards (and 2):
 - TR 119 500: Guidance on the use of standards for Trust Application Service Providers.
- Conduct this open workshop for presenting to stakeholders mature versions of the aforementioned documents and get their feedback.
- These activities will be done in liaison with a number of relevant stakeholders in the area.

- Started 31/10/2016.


- End scheduled for 28/02/2019.

STF 523 foreseen calendar

- Calendar for EN 319 521, EN 319 531, EN 319 522, and EN 319 532:
 - **Stable drafts ready for public review: 31/10/2017**
 - **Final drafts approved by ETSI ESI for EN Approval Process (ENAP): 30/4/2018.**
 - **Start voting for ENs: 1/12/2018.**
 - **End voting for ENs: 31/1/2019.**
- Calendar for ETSI TS 119 524, ETSI TS 119 534:
 - **Final drafts approved by ETSI ESI: 30/11/2018.**
- Calendar for ETSI TR 119 500:
 - **Final draft approved by ETSI ESI: 30/11/2018.**
- **ALL DELIVERABLES PUBLISHED: 28/2/2019**

**SOME DETAILS ON
ETSI EN 319 521
AND
ETSI EN 319 531**



-  STF-523 is producing, among others, the following standards:
 - EN 319 521: Policy and security requirements for Electronic Registered Delivery Service Providers: **stable draft**
 - EN 319 531: Policy and security requirements for Registered Electronic Mail Service Providers: **pending**
 - TR 119 500: Guidance on the use of standards for Trust Application Service Providers: **pending**

- One standing-along provider scheme
- Aligned with EN 319 401
- Conformity assessment requirements for QERDSP and QERDS.
 - Contains ERDSP specifics requirements based on Section 7 of EN 319 401
 - Contains cumulative requirements for NonQERDSP and QERDSP
 - Addressed legal requirements from article 44 eIDAS Regulation: conformity assessment criteria

SOME DETAILS ON ETSI EN 319 522

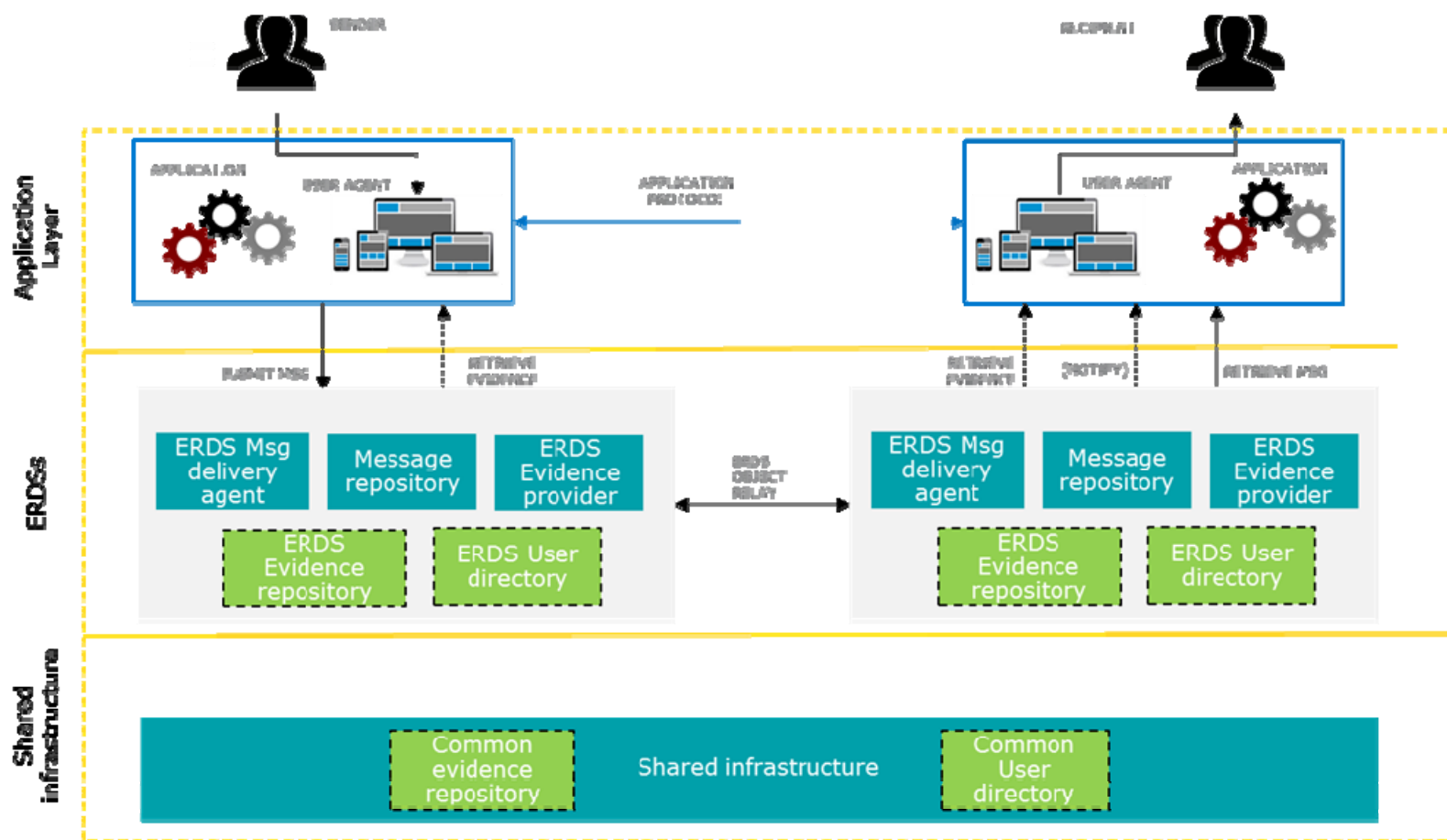


Some details on EN 319 522

- Technical specifications for (Qualified) Electronic Registered Delivery Services
- Includes technical specifications for
 - Conformance
 - interoperability
- Structure:
 - Part 1: Framework and Architecture
 - Part 2: Semantic Contents
 - Part 3: Formats
 - Part 4-1: Bindings
 - **Sub-part 1: message delivery binding**
 - **Sub-part 2: evidence and identification binding**
 - **Sub-part 3: capability/requirements binding**

Some details on EN 319 522

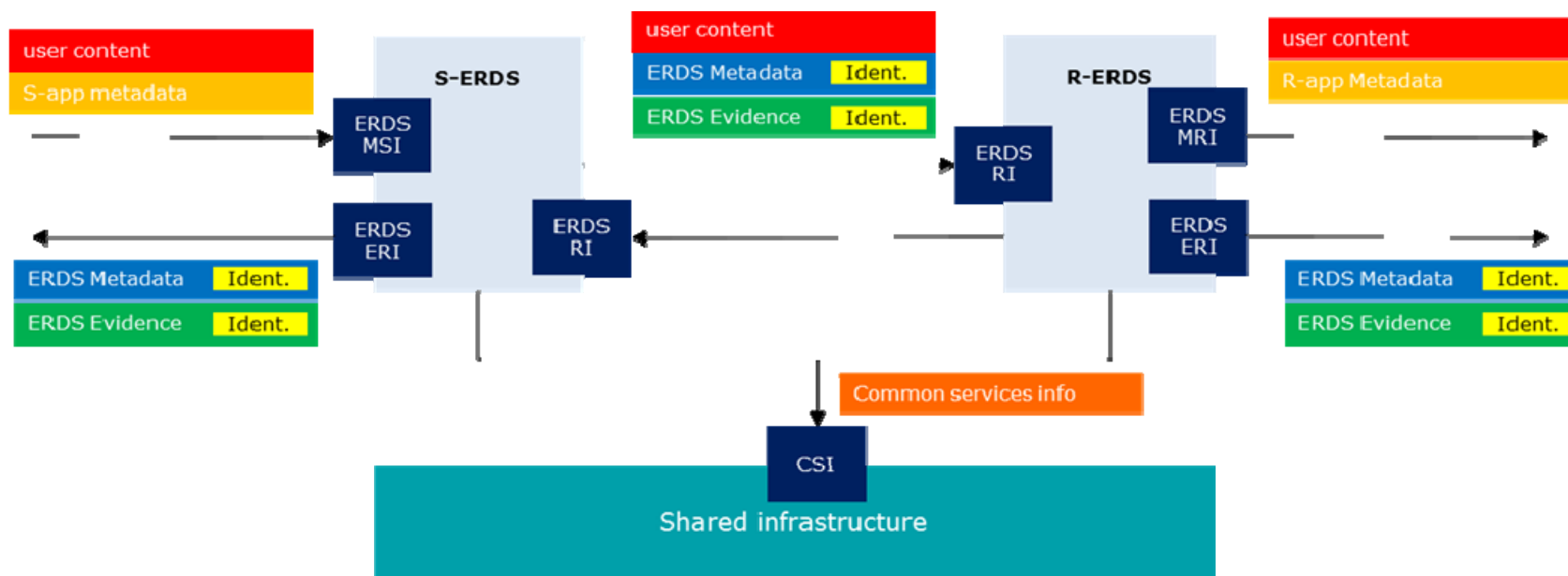
- Part 1: Framework and Architecture: Overview and general model for (Q)ERDS - components, data, abstract APIs



Some details on EN 319 522



- Part 2: Semantic Contents: detailed description of data managed by ERDS
 - Metadata
 - Evidences
 - Service discovery metadata



Some details on EN 319 522

- Part 3: Formats: specific formats for data
 - RFC 5322, S/MIME formats for metadata → pointer to EN 319 532
 - ebMS AS4 formats for metadata
 - XML format for evidences
 - SMP format for service discovery metadata

Semantic content (from EN 319 522-2)	Mapping to AS4 header elements
Submit date and time	SubmissionTimestamp
Relay date and time	//eb:Messaging/eb:UserMessage/eb3:MessageInfo/eb3:Timestamp
Expiration date	ExpirationTimestamp
Recipient authentication level	RequiredRecipientAuthenticationLevel
Applicable policy	Policy
Sender's identity data	
Sender's address	SenderAddress

Some details on EN 319 522

- Part 4-1: Bindings
 - Sub-part 1: message delivery binding
 - Sub-part 2: evidence and identification binding
 - Sub-part 3: capability/requirements binding
- Message flow
 - Identification of specific protocols for ERDS RI interface
 - packaging of content, metadata, evidence in protocol specific constructs
- Capability flow
 - Identification of specific protocol for CSI interface
 - packaging of discovery metadata in protocol specific constructs

SOME DETAILS ON ETSI EN 319 532



Some details on EN 319 532



- Definition of a registered e-delivery service, which builds on the protocols used in regular email messaging (SMTP, IMAP, POP)
- All general requirements of EN 319 522 apply to REM. The EN 319 532 only defines the specifics.
- TS 102 640 was taken as a basis, although full compatibility is not ensured.
- Structure:
 - Part-1 - Framework and architecture: explains how the general model defined in EN 319 522-1 applies to the specific case of REM
 - Part-2 - Semantic content: defines the types and content of the objects that flow through the interfaces of REM services
 - Part-3 - Formats: defines the format of messages and metadata based on the MIME structure and SMTP transport protocol
 - Part-4 - Interoperability profiles: defines the interoperability requirements between REM providers and a gateway approach of interoperability with PReM services.

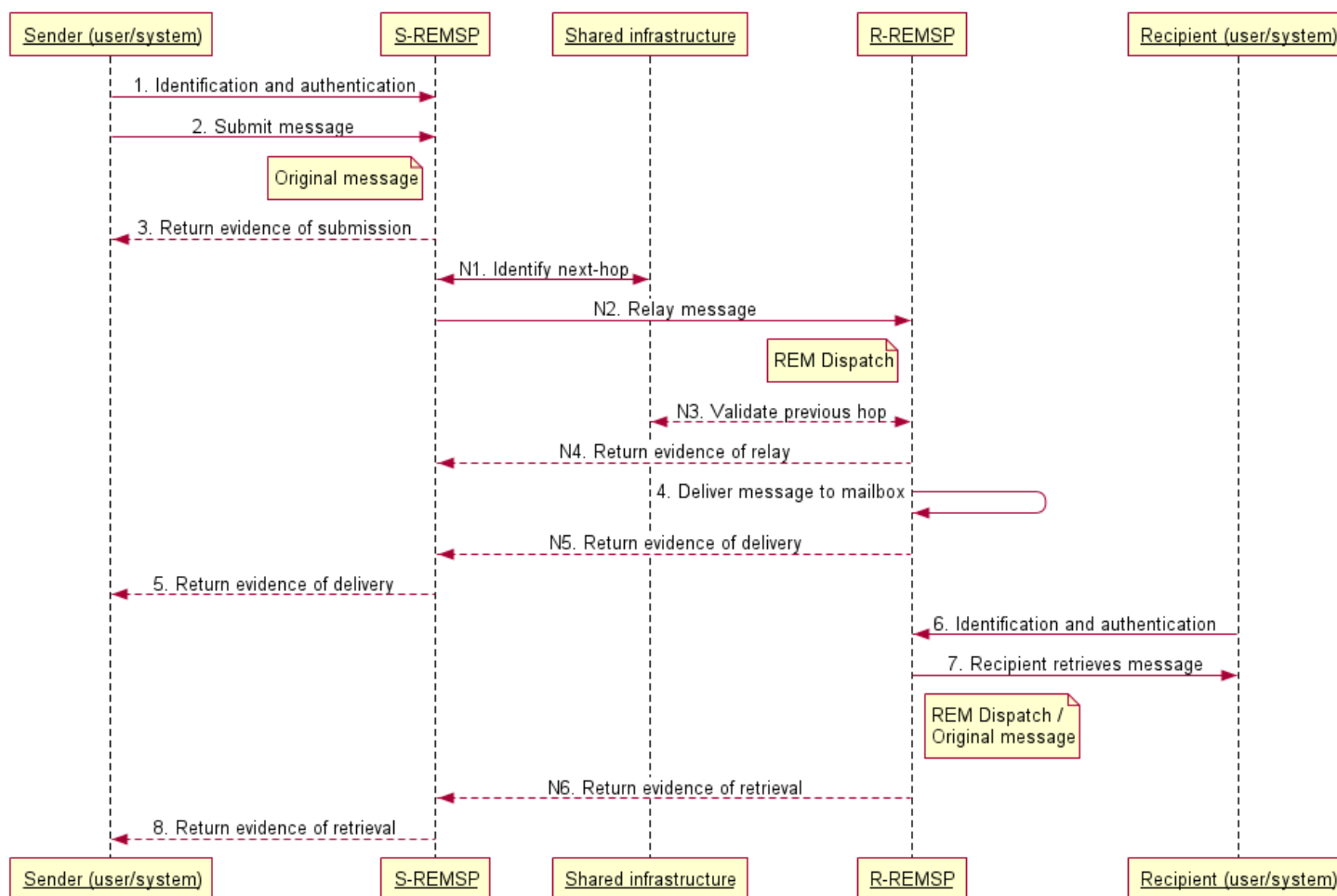
Some details on EN 319 532

- Multi-hop forwarding is allowed to facilitate protocol gateway, policy gateway or trust gateway (in general eDelivery)
- Outer interface of the service is the same regardless of the number of Service Providers in the chain: 1, 2, 5, etc. (in general eDelivery)
- REM goal: Email user-agent (+browser) should be usable as client (address format is email, email protocols, DNS-based routing, etc.)
- Acceptance/rejection of a message prior to delivery in general eDelivery
 - S&F, S&N styles of operation are kept in REM (as in TS 102 640)
 - If acceptance/rejection is not supported by R-REMSP, in REM it can be S&N to S&F interaction
- Evidence format and evidence set (event types) will be exactly the same as in general eDelivery
- Message structures: Original message, REM Dispatch, REMS Notification, REMS Receipt
- ASN.1 evidence format will not be specified

Some details on EN 319 532



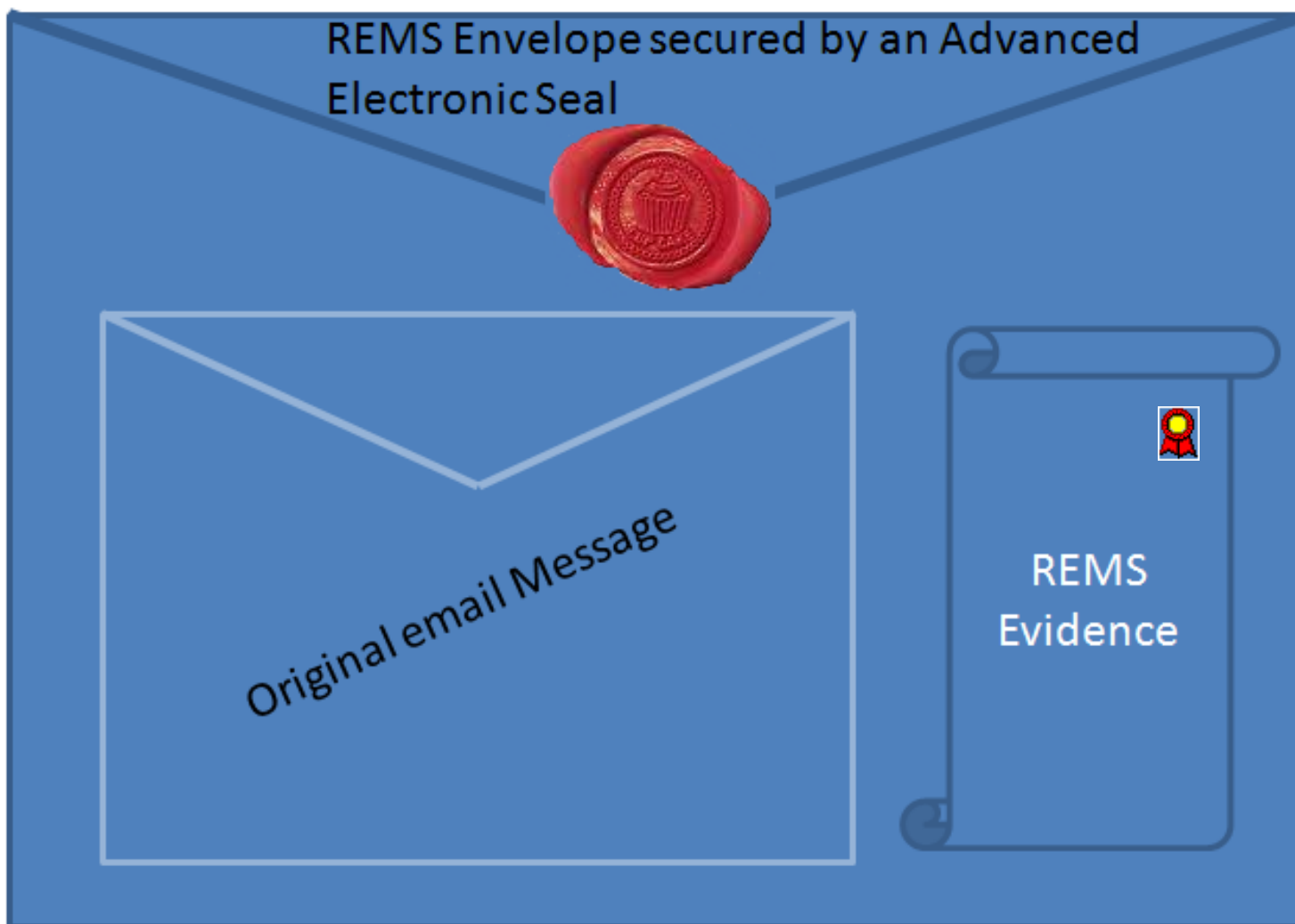
Sequence Diagram with messages and evidence



Some details on EN 319 532



- REMS Dispatch - Evidence attachment and Signature using standard email



**SOME DETAILS ON
ETSI TS 119 524
AND
ETSI TS 119 534**





🌐 ETSI TS 119 524:

- Part 1: will specify test assertions for testing technical conformance against relevant parts of ETSI EN 319 522. The STF team will identify these relevant parts and the actual scope of the test assertions set to be defined.
- Part 2: will specify test suites for supporting interoperability tests among providers of Electronic Registered Delivery services. These test suites will not overlap with any already existing test suites but will complement them. The STF team will identify what parts of the EN 319 522 will be the suitable targets for these test suites.

🌐 ETSI TS 119 534:

- Part 1: Same goal and methodology as for ETSI TS 119 524, but now for relevant parts of ETSI EN 319 532.
- Part 2: Same goal and methodology as for ETSI TS 119 534 but for relevant parts of ETSI EN 319 532. This task will start from the already existing ETSI TR 103 071: “Test suite for future REM interoperability test events”

SOME DETAILS ON ETSI TR 119 500




Business Driven Guidance for Trust Application Service Providers



- It takes into consideration previous works on STF 457
- It will provide guidance for the selection of standards for Electronic Registered Delivery services for given business requirements.
- To be completed when the other standards are stabilized or completed.

STAKEHOLDERS INVOLVEMENT



-  ESI intends that the STF work is done in close contact with stakeholders:
 - Contacts and liaisons initiated with relevant stakeholders in the area, including EC-funded Large Scale Projects, and standardisation organisations for ensuring fluent exchange of information and views.
 - Consolidated drafts will go through a public comment phase, where stakeholders will be kindly requested to put their comments, which will be suitably processed by the STF and ESI.
 - Creation of a Steering Group on Electronic Registered Delivery Services for facilitating easy exchange of views with those members of ETSI specially interested in this topic.
 - Invitation to relevant stakeholders to join ETSI and attend ESI and the Steering Group on Electronic Registered Delivery Services meetings and provide feedback to ESI and STF.

Contact Details:

Public web page:

<https://portal.etsi.org/STF/stfs/STFHomePages/STF523>

Electronic mail:

- Juan Carlos Cruellas: cruellas@ac.upc.edu
- Comments also to: E-SIGNATURES_COMMENTS@LIST.ETSI.ORG

Additional information on ETSI documents



ETSI Documents: Free download

<http://www.etsi.org/standards-search>

E-Signature news:

http://list.etsi.org/scripts/wa.exe?SUBED1=e-signatures_news&A=1

Further information:

<https://portal.etsi.org/TBSiteMap/ESI/TrustServiceProviders.aspx>

Thank you!