



**SLOVENSKI STANDARD**  
**SIST EN 319 532-2 V1.1.1:2018**  
**01-november-2018**

---

**Elektronski podpisi in infrastruktura (ESI) - Storitve priporočene elektronske pošte (REM) - 2. del: Semantične vsebine**

Electronic Signatures and Infrastructures (ESI) - Registered Electronic Mail (REM) Services - Part 2: Semantic contents

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

Ta slovenski standard je istoveten z: **ETSI EN 319 532-2 V1.1.1 (2018-09)**  
SIST EN 319 532-2 V1.1.1:2018  
<https://standards.iteh.ai/catalog/standards/sist/8551e181-b519-4a45-8795-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018>

**ICS:**

|           |                                 |                               |
|-----------|---------------------------------|-------------------------------|
| 35.040.01 | Kodiranje informacij na splošno | Information coding in general |
|-----------|---------------------------------|-------------------------------|

**SIST EN 319 532-2 V1.1.1:2018**                      **en**

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

SIST EN 319 532-2 V1.1.1:2018

<https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018>

# ETSI EN 319 532-2 V1.1.1 (2018-09)



## Electronic Signatures and Infrastructures (ESI); Registered Electronic Mail (REM) Services; Part 2: Semantic contents

[SIST EN 319 532-2 V1.1.1:2018](https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018)

<https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018>

---

**Reference**DEN/ESI-0019532-2

---

---

**Keywords**

e-delivery services, registered e-delivery services, registered electronic mail

**ETSI**650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

---

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

---

**Important notice**

<https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b2013671069/sist-en-319-532-2-v1.1.1-2018>  
The present document can be downloaded from:  
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at <https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:  
<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

---

**Copyright Notification**

---

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2018.  
All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.  
**3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

**oneM2M** logo is protected for the benefit of its Members.

**GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

# Contents

|  |    |
|--|----|
| Intellectual Property Rights .....                                   | 4  |
| Foreword.....  | 4  |
| Modal verbs terminology.....   | 4  |
| Introduction .....   | 5  |
| 1 Scope .....  | 7  |
| 2 References .....   | 7  |
| 2.1 Normative references .....                                       | 7  |
| 2.2 Informative references.....                                      | 7  |
| 3 Definitions and abbreviations.....                                 | 8  |
| 3.1 Definitions.....   | 8  |
| 3.2 Abbreviations .....  | 8  |
| 4 Overview .....   | 8  |
| 4.1 ERDS and REM data structures .....                               | 8  |
| 4.2 Typical flows of REM messages.....                               | 10 |
| 4.2.1 Introduction.....  | 10 |
| 4.2.2 Use of data structures in Store and Forward style.....         | 10 |
| 4.2.3 Use of data structures in Store and Notify style.....          | 11 |
| 5 Identification of end entities in REM.....                         | 12 |
| 6 REM metadata content.....  | 13 |
| 6.1 Introduction.....  | 13 |
| 6.2 Metadata components.....   | 13 |
| 6.2.1 Acceptance/rejection interface location.....                   | 13 |
| 7 Digital signatures in REM.....                                     | 13 |
| 8 REM evidence set and components.....                               | 14 |
| 9 Common service interface content.....                              | 14 |
| 9.1 Introduction.....  | 14 |
| 9.2 REM message routing .....  | 14 |
| 9.3 REM trust establishment and governance .....                     | 15 |
| 9.4 Capability management.....                                       | 15 |
| 9.4.1 Introduction.....  | 15 |
| 9.4.2 Resolving recipient identification to ERDS identification..... | 15 |
| 9.4.3 Recipient metadata.....  | 15 |
| 9.4.4 REMS capability metadata .....                                 | 15 |
| History .....  | 16 |

---

## Intellectual Property Rights

### Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

### Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

---

## Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Electronic Signatures and Infrastructures (ESI).

The present document is part 2 of a multi-part deliverable. Full details of the entire series can be found in part 1 [2].

| National transposition dates   |                  |
|--|------------------|
| Date of adoption of this EN:   | 23 August 2018   |
| Date of latest announcement of this EN (doa):  | 30 November 2018 |
| Date of latest publication of new National Standard or endorsement of this EN (dop/e): | 31 May 2019      |
| Date of withdrawal of any conflicting National Standard (dow):                         | 31 May 2019      |

---

## Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

---

## Introduction

Business and administrative relationships among companies, public administrations and private citizens are the more and more implemented electronically. Trust is essential for their success and continued development of electronic services. It is therefore important that any entity using electronic services have suitable security controls and mechanisms in place to protect their transactions and to ensure trust and confidence with their partners.

Electronic signatures are commonly used worldwide to ensure authenticity and integrity of electronic documents, making it possible to transform traditional paper-based processes into electronic ones providing a comparable or even higher level of assurance. As communication is becoming predominantly internet-based, secure and provable exchange of documents is essential to the full digital transformation.

An electronic registered delivery service (ERDS hereinafter) provides secure and reliable delivery of electronic messages between parties, producing evidence of the delivery process for legal accountability. Evidence can be seen as a declaration by a trusted party that a specific event related to the delivery process (submission of a message, relay of a message, delivery of a message, refusal of a message, etc.) happened at a certain time. Evidence can be immediately delivered to the interested party (together with the message or separately) or can be kept in a repository for later access. It is common practice to implement evidence as digitally signed data. Registered electronic mail (REM hereinafter) is a specific type of electronic registered delivery, which builds on the formats, protocols and mechanisms used in ordinary e-mail messaging.

In a number of national, regional or sector-specific communities electronic registered delivery and registered electronic mail services are already in place, and even more are being developed. Without the definition of common standards there will be no consistency in the services provided, making it difficult for users to compare them. Under these circumstances, users might be prevented from easily changing to alternative providers, damaging free competition. Lack of standardization might also adversely affect interoperability between implementations which are based on different models.

The present document is one of a set of interrelated documents (framework of ERDS standards hereinafter) ETSI has produced to facilitate a consistent form of electronic registered delivery service inside and outside Europe, especially with regard to the form of evidence provided, in order to maximize interoperability even between domains governed by different policy rules. This set of documents includes the following deliverables:

- ETSI EN 319 522 [i.10]: a multi-part deliverable providing technical specifications for Electronic Registered Delivery Services.
- ETSI EN 319 532 [i.11]: a multi-part deliverable providing technical specifications for Registered Electronic Mail Services.
- ETSI EN 319 521 [i.12]: providing Policy and Security Requirements for Electronic Registered Delivery Service Providers.
- ETSI EN 319 531 [i.13]: providing Policy and Security Requirements for Registered Electronic Mail Service Providers.
- ETSI TS 119 524 [i.14]: a multi-part deliverable providing requirements for Testing Conformance and Interoperability of Electronic Registered Delivery Services.
- ETSI TS 119 534 [i.15]: a multi-part deliverable providing requirements for Testing Conformance and Interoperability of Registered Electronic Mail Services.

The documents covering ERDS contain the general concepts and requirements which apply to all kinds of electronic registered delivery services. Since REM is a specific type of electronic registered delivery, the documents covering REM service build on the corresponding documents covering ERDS by referencing the necessary provisions, and define the interpretation and specific requirements which apply only to registered electronic mail.

Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC [i.2] (Regulation (EU) No 910/2014, or Regulation hereinafter) provides a legal framework to facilitate cross-border recognition between existing national legal systems related to electronic registered delivery services. That framework aims to open new market opportunities for European Union trust service providers to offer new pan-European electronic registered delivery services. The Regulation defines the so-called qualified electronic registered delivery service (QERDS hereinafter), which is a special type of ERDS, where both the service and its provider need to meet a number of additional requirements that the regular ERDSs and their providers do not need to meet.

The framework of ERDS standards aims to cover the common and worldwide-recognized requirements to address electronic registered delivery in a secure and reliable way, independent of the applicable legislative framework. The documents contain generic requirements which can be applied in any geographic region. At the same time, the framework of ERDS standards aims to support demonstrating compliance to the Regulation (EU) No 910/2014 (and related secondary legislation), both for non-qualified and qualified electronic registered delivery services. Specific clauses are included defining requirements for qualified services only, especially in the documents covering policy and security requirements. However, the legal effects of services implemented according to the framework of ERDS standards are outside the scope of the documents [i.10] to [i.15].

The present document is part 2 of ETSI EN 319 532 [i.11], which is a multi-part deliverable covering Registered Electronic Mail (REM) Services, as detailed in the Foreword. ETSI EN 319 522 [i.10] contains the general concepts and requirements which apply to all kinds of ERDSs. Since registered electronic mail is a specific type of electronic registered delivery, the general provisions given in ETSI EN 319 522 [i.10] apply to registered electronic mail as well. Hence, parts 1 and 2 of ETSI EN 319 532 [i.11] are aligned with ETSI EN 319 522 [i.11], and they reference the necessary provisions of the corresponding part.

## **iTeh STANDARD PREVIEW** **(standards.iteh.ai)**

[SIST EN 319 532-2 V1.1.1:2018](https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018)

<https://standards.iteh.ai/catalog/standards/sist/8551ef81-f3f9-4a45-8793-b26f28671dc9/sist-en-319-532-2-v1-1-1-2018>



---

# 1 Scope

The present document defines the semantic content of messages and evidence used in registered electronic mail (REM) service.

The present document relies on ETSI EN 319 522-2 [1] for all semantic contents and requirements which are generally applicable to all electronic registered delivery services, and defines the interpretation and specific requirements which apply only to registered electronic mail.

---

## 2 References

### 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 319 522-2: "Electronic Signatures and Infrastructures (ESI); Electronic Registered Delivery Services; Part 2: Semantic contents".
- [2] ETSI EN 319 532-1: "Electronic Signatures and Infrastructures (ESI); Registered Electronic Mail (REM) Services; Part 1: Framework and Architecture".

### 2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI EN 319 532-3: "Electronic Signatures and Infrastructures (ESI); Registered Electronic Mail (REM) Services; Part 3: Formats".
- [i.2] Regulation (EU) No 910/2014 of the European Parliament and of the Council on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.
- [i.3] ETSI TS 119 612: "Electronic Signatures and Infrastructures (ESI); Trusted Lists".
- [i.4] IETF RFC 5321: "Simple Mail Transfer Protocol".
- [i.5] IETF RFC 1939: "Post Office Protocol - Version 3".
- [i.6] IETF RFC 3501: "INTERNET MESSAGE ACCESS PROTOCOL - VERSION 4rev1".
- [i.7] IETF RFC 5246: "The Transport Layer Security (TLS) Protocol Version 1.2".