FORMATION, TRANSMISSION, AND VALIDATION OF CERTIFIED ELECTRONIC MAIL

PEC: Posta Elettronica Certificata (Certified Electronic Mail)

- What is PEC?
  - Equivalent to the Registered Mail service with Return Receipt.

- Why PEC?
  - In 2000, the Italian Government decided to adopt electronic exchange of docs between its Public Administrations.
  - By the end of 2008, non-compliant administrations will have their postal financing reduced.
Verify that it's a Transport msg Provider: mailbox for take-charge receipts

Access point
- Sender ID verification;
- incoming msg formal checks

Acceptance receipt

Transport Message

Take-charge receipt

Receiver (PEC)

Incoming msg verification:
- Transport msg
- Signature validity

Delivery point
Verify that it's Transport msg

Recipient Mailbox

Sender (PEC)
PEC transport message

Original message ➔ Transport message

Headings and addresses:
X-Reference-Message-ID: <original message-id>
Message-ID: <message ID>
From: “[original sender]” <certified-email@pec-domain>
Reply-to: [original-sender]
Subject: CERTIFIED-MAIL: [original subject]
X-transport: certified-mail
X-ReceiptType: <complete/brief/synthetic>

Human readable certification data
Machine readable XML certification data

Headings and addresses
Message body
Digital signature
PEC receipt

Original message  ➔  Receipt

Headings and addresses:
- X-Reference-Message-ID: <original message-id>
- Message-ID: <message ID>
- From: “[original sender]” <certified-email@pec-domain>
- Subject: [notification type]: [original subject]
- X-Receipt: <notification type>

Message body:

Digital signature

Human readable certification data

Machine readable XML certification data
Characteristics

- Server-to-server interaction
- Client-server authentication
- (server) Non-repudiation, with proof of origin
- Message integrity
- XML data containing certification information
- Digital signature using FIPS 140-2 Hardware Security Module
- Logs for all PEC operations
- Formal syntax and virus checks both on outgoing and incoming messages.
- Used implementations exist.
- ISTI-CNR was asked to handle the testing of interoperability of PEC by CNIPA.
- Intent of request for publication as Informational RFC.
- Interest in further development.