



Peppol

The future is open

Message Level Status

WG Meeting – xx Aug 2023

www.peppol.eu

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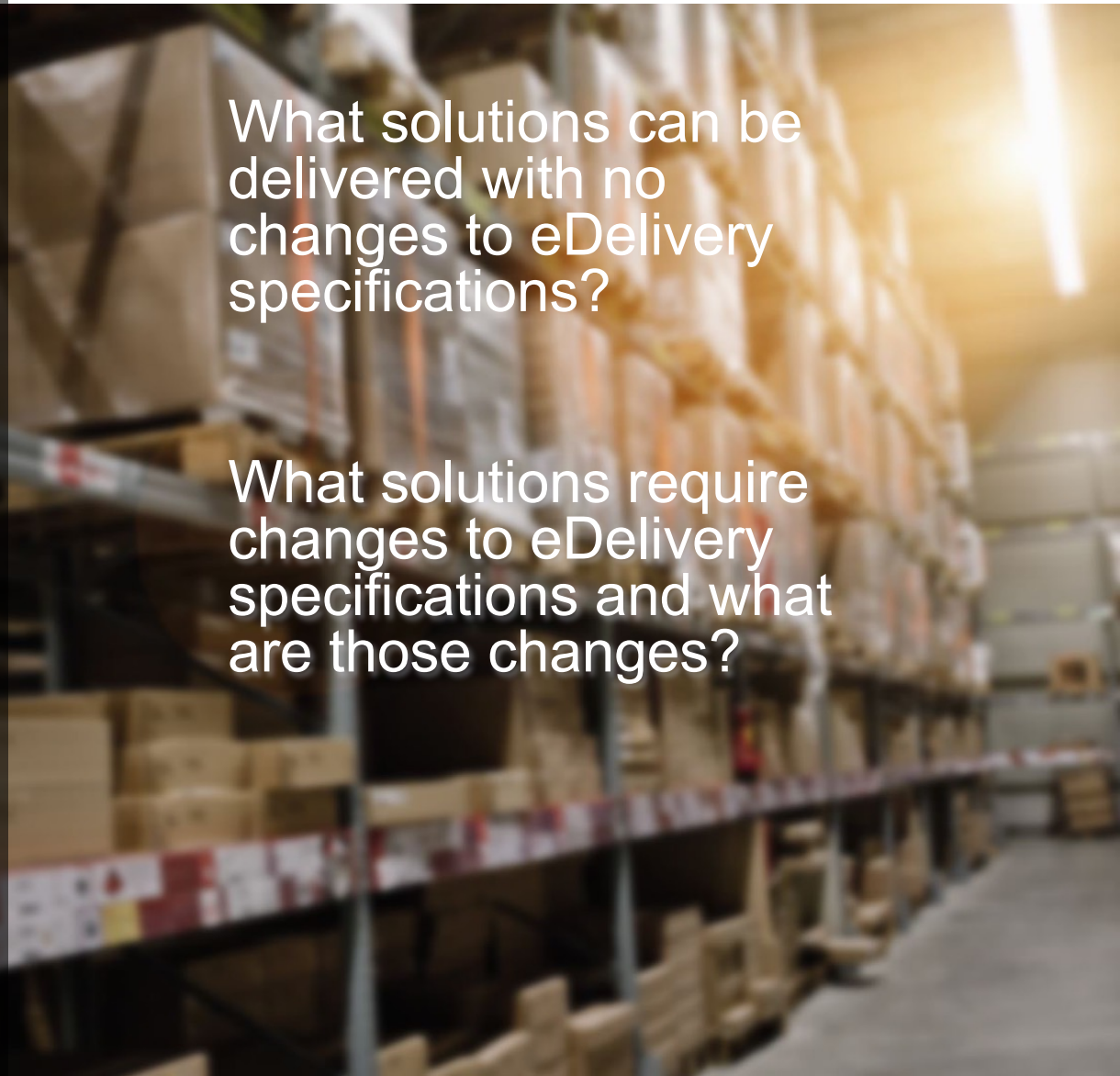
Problem Statement 1

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Service providers want increased information about the status of messages after delivery to C3

What solutions can be delivered with no changes to eDelivery specifications?

What solutions require changes to eDelivery specifications and what are those changes?



Proposed Model

New ICD/EAS to be used for certified APs only

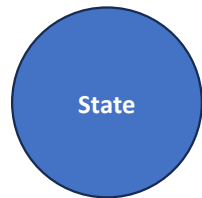
Identifier will be Seat ID (CN Subject) from the Peppol AP cert (eg POP000999) + “X” and optional extra three digit suffix which can be used by the AP to identify separate instances

eg 02???:POP000999 or 02???:POP000999X002

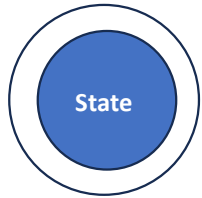
MLX is registered in SMP to this new identifier

	Identifiers	How to identify C2	Mandatory MLS
Release	No suffix 9876:POP000999 only	AS4 From/PartyID. If MLS is registered then send it	NO – If implementing MLS you must send & receive.
Release + 6 months	Optionally with suffix 9876:POP000999X002	MLS-TO in SBDH, if not available then AS4 From/PartyID (no suffix)	YES – everybody. Even you.

Legend



Initial State



Final State



Intermediate State



State-to-State Process

States Explained

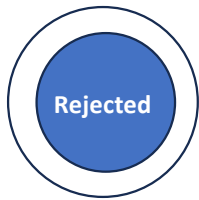


This is the initial state, right after the document was sent and the AS4 response message was received and validated by C2. This means there is now non-repudiation information available for both C2 and C3 indicating

- The message was sent by C2. C2 cannot deny having sent this message;
- The message was received by C3. C3 cannot deny having received the message.

Depending on the local jurisdiction rules, this may or may not be interpreted as a legal confirmation of receipt.

States Explained



The document was rejected. The MLS message allows for four grounds of rejection:

- Schema(tron) conformance rules [this is the coverage of current MLR]
- Other conformance rules, e.g.
 - XML File Size exceeds specifications
 - XML Elements too long
 - Virus or malware detected
 - Mime-type mismatch [e.g. PDF specified, but image supplied]
 - Malformed content [e.g. corrupt PDF]
- Final recipient's system is permanently unavailable.
- Business Rule violation where Business Response message cannot be sent, e.g.
 - Order reference missing or invalid
 - Buyer reference missing or invalid

States Explained



C3 has fulfilled its contractual obligation towards its customer. The document may or may not have been received by its customer, there is no way to tell.



C3 has fulfilled its contractual obligation towards its customer. C3 has received some form of response from its customer that the document was received. However, note that

- C3's customer may or may not be C4*;
- Even when C3's customer is C4, this message is not and must never be interpreted to be a non-repudiatable communication from C4. For such a communication, a Business Response message (e.g. Invoice Response) must be sent by C4 to C1. C4 MAY instruct C3 to send such a message, however that is not part of this specification.

*ie an intermediary as defined by the Peppol Service Provider Agreement

States Explained

**PRESUMED
DELIVERED**

In case an AP/AB(/AJ) message is not mandatory, C2 needs to assume that C3 has forwarded the received document on to its customer (C4 or an intermediary). This requires C2 to trust C3 to always either (1) send an RE or (2) forward the document. Basic interoperability rules require this, but a level of trust is involved.

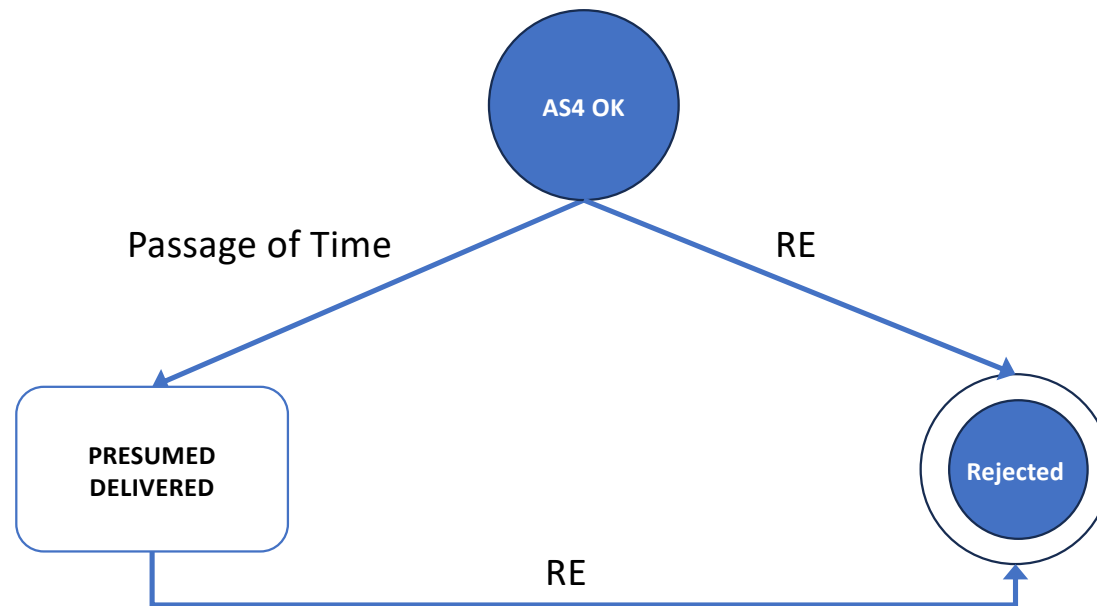
**PRESUMED
NOT
DELIVERED**

In case an AP/AB(/AJ) message is mandatory, but no message was received, C2 needs to assume C3 is negligent in its obligations. Appropriate (manual) action will need to be taken.

Delayed

When a document is in this state, C3 has not yet been able to fulfill its contractual obligation towards its customer and has let C2 know about this.

States – Scenario 1 – Reject Only



C3 MUST send RE message unless it has taken the delivery action agreed upon between C3 and its customer.
C2 MUST support receiving and processing the RE message.

Scenario 1 – Reject Only - Pros and Cons

PRO

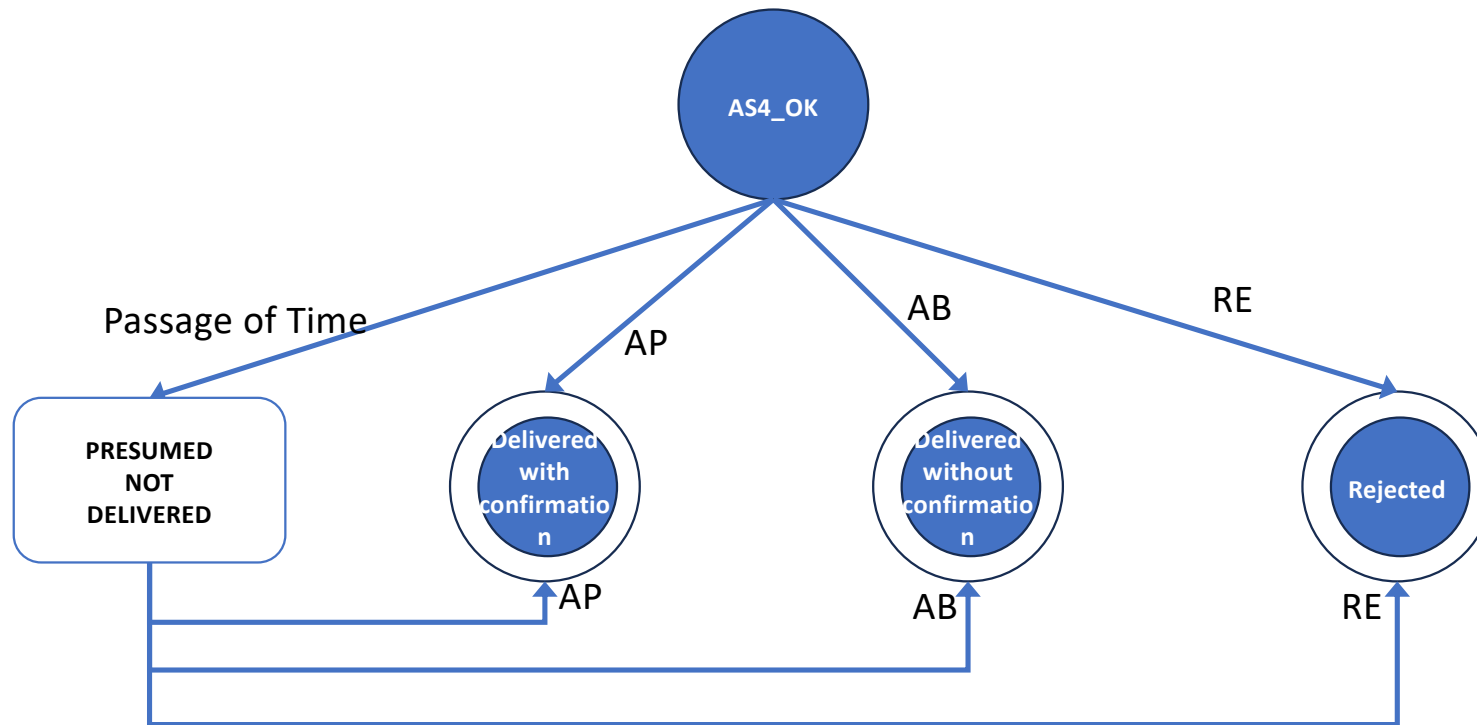
- Addresses unknown rejection/failures in current spec, solving vast majority of current issues.
- Tiny increase in the current Peppol volume, equivalent only to payload rejection rate*

CON

- Assumes C3 will always send a RE when required
- Undetected failures by C3 will be interpreted as success
- Failure to deliver MLS will be interpreted as success.

* Core group assumes a payload rejection rate of 0.1%

States – Scenario 2 – Always a Response



C3 MUST send an AP, AB or RE message.

C2 MUST support receiving AP, AB & RE message and processing the RE message.

Scenario 2 – Always a Response - Pros and Cons

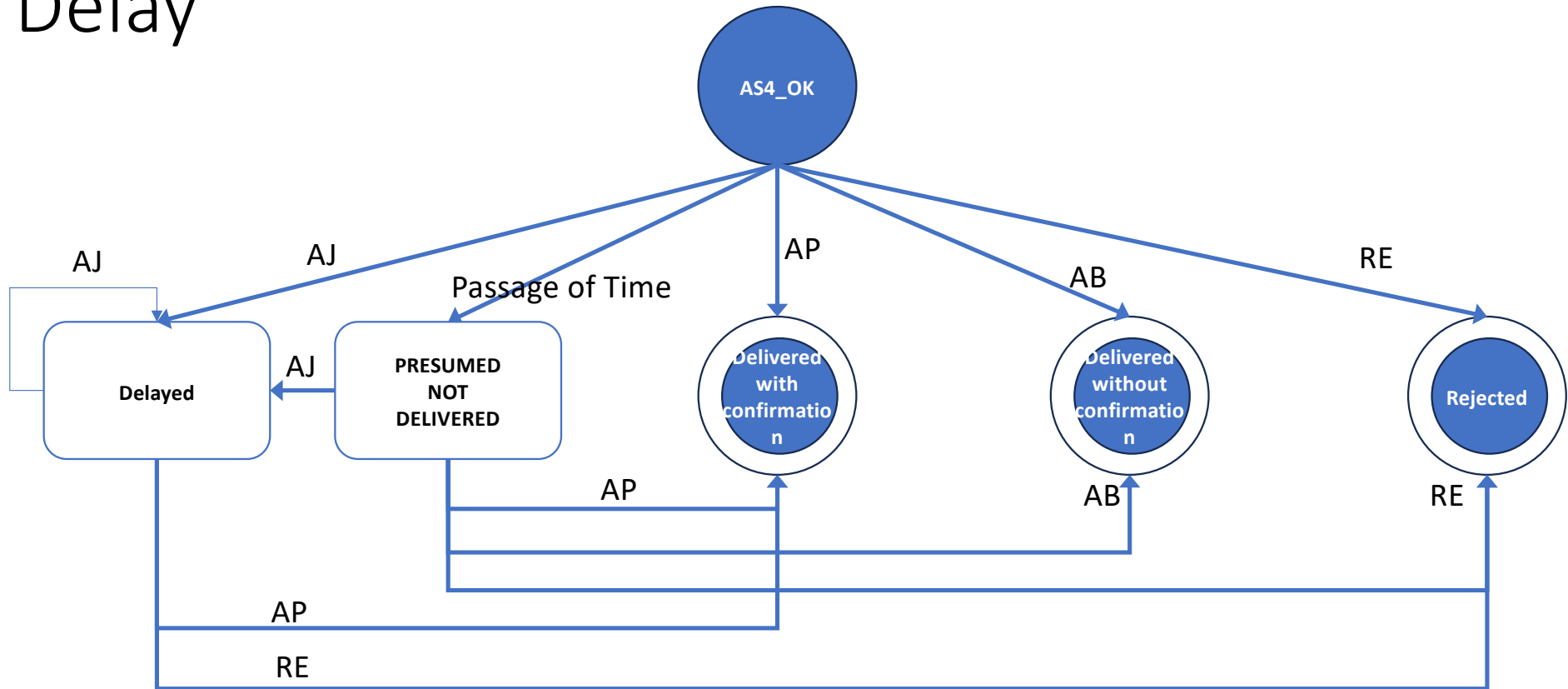
PRO

- More certainty that C3 has fulfilled its contractual obligations.
- Optional information about how C3 has delivered the AS4 message to their customer.

CON

- Doubles Peppol AS4 message volume.
- Manual intervention for the state “Presumed not delivered” is still required.
- Failure to deliver MLS will be interpreted as “Presumed not delivered”

States – Scenario 3 – Always a Response with Delay



C3 MUST send an AP, AB or RE message. AJ is optional, but if sent it MUST be followed by an AP or RE.

C2 MUST support receiving AP, AB & RE message and processing the RE message. Support for AJ is optional.

Scenario 3 – Always a Response with Delay (in Addition to Scenario 2) - Pros and Cons

PRO

- Ability to communicate delays.

CON

- Increased workflow complexity, especially for the receiver.
- More than double Peppol AS4 message volume.
- For batch processing from C3 to customer, may result in triple or more message volume.

SP Cost Considerations

Each of the three scenarios have different volume impacts in order to allow for additional status information. Increased volume will certainly increase service provider costs, and this may not be entirely offset by savings generated from reduced support costs provided by extra delivery status information.

	Scenario 1	Scenario 2	Scenario 3
Response types supported	Rejected	Rejected Delivered without confirmation Delivered with confirmation	Rejected Delivered without confirmation Delivered with confirmation Delayed
Problem coverage	Rejected response addresses vast majority of current issues. Additional information in scenario 2 & 3 is difficult to quantify, but likely only a small improvement.		
AS4 Message Volume impact	Small increase ~0.1% - depending on volume of rejections	Double All AS4 messages will have a corresponding MLS	More than double All AS4 messages will have at least one corresponding MLS. Delayed delivery will result in additional MLS message
How are MLS failures or delays handled?	Assumed successful delivery - same as today.	Presumed not delivered. Investigation required in all instances.	Failures are presumed not delivered. Delays should be notified, reduced investigation requirement.
Complexity	Low	Low	(Optionally) High C3 must maintain state of delayed messages; as does C2, if they wish to gain benefit of delay notification