

Report of APPU e-Services Working Group Meeting

The APPU EC eService working group meeting was held on 25th Mar 2015 in Islamabad, Pakistan, the chairman reported that since the Sri Lanka EC meeting in 2014, the APPU eService WG is working on the preparation work of the “**Cross Border Online-Shopping Services**” survey, prior to the meeting, drafted version of the survey were distributed to the APPU members for comments, valuable responses and suggestions were received from members, includes **Japan Post, Korea Post, Thailand Post and Australia Post**. The first agenda item is the discussion of drafted **APPU Questionnaire about cross border online-shopping service survey**.

The chairman also introduced the **UPU Postal Registered electronic Mail (PReM)**, PReM provides an end-to-end trusted electronic communication service between authenticated parties, tracing every step and identities of all involved parties in the email exchange process, hence providing security, evidentiary, and delivery services; Transformation of physical registered mail service to the electronic version of the service. In accordance with UPU Convention, PReM is a postal service involving the electronic transmission of message; Designated Operator may enhance electronic mail by offering **Postal Registered electronic Mail**, which supplements electronic mail by providing **Proof of Sending, Proof of Delivery** and a **Secure Communication Channel** between **authenticated users**.

Furthermore, the **UPU PReM S52 compatibility test suite** was presented by the chairman, in order to ensure compatibility of a system against the UPU S52 PReM standard, a test suite is developed and deployed in UPU, any Designated Operator interested to proof that their PReM system is compliance with UPU S52 standard, a compatibility test could be conducted, these facilities assist the postal community in the creation of an interoperable and secure electronic postal communications network. Currently **China Post, Macao Post** and **Poste Italiane** have completed their S52 compliance PReM systems, while **POS Indonesia** is conducting the compatibility test. The chairman encourages APPU members to develop their PReM system and be compatible with the UPU S52 standard. Finally, there is no any other business, and the meeting was adjourned.

Gregory Sun
Chair, APPU e-Services Working Group
Thursday 26th March 2015

APPU eService Working Group

Wednesday 24 March 2015 13:30 to 17:00 hrs.

Provisional Agenda

- 1 Opening of the meeting and adoption of the agenda
- 2 Confirmation of last meeting minute
- 3 Chairman report
- 4 eService survey drafting and discussion
- 5 Introduction to UPU Postal Registered electronic Mail and S52 standard
- 6 UPU PReM compatibility testing service
- 7 Any other business
- 8 Closing of the meeting

Sun Kuan leong, Gregory
Chairman

Asian-Pacific Postal Union Executive Council Meeting

Report of the e-Services Working Group

Gregory Sun (Macao, China)

Islamabad, Pakistan 25th Mar 2015



Agenda

No.	Agenda items
1.	Opening
2.	Agenda adoption
3.	Chairman report
4.	Survey drafting and discussion
5.	Introduction to UPU Postal Registered electronic Mail and S52 standard
6.	UPU PReM S52 compatibility test suite
7.	AOB
8.	Closing

Cross Border Online-Shopping Service survey drafting and discussion

(APPU Questionnaire about cross border online-shopping service.doc)

Introduction to UPU Postal Registered electronic Mail and S52 standard

Postal Registered electronic Mail



Postal registered electronic mail (PREM) provides an **end to end trusted electronic communication service** between **authenticated parties**, **tracing** every step and identities of all involved parties in the email exchange process, hence providing **security, evidentiary, and delivery** services; Transformation of physical registered mail service to the electronic version of the service.

PREM consists in the acceptance, by Macao Post, of electronic messages sent through electronic means by an authenticated sender, in order to be delivered, also through electronic means, to one or more authenticated addressees, indicated by the sender. PREM uses secure electronic means, and the proofs of sending and delivery are certified by Macao Post.

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Postal Registered electronic Mail(cont'd)

In accordance with PREM Public Service Regulations, approved by the Dispatch of the Chief Executive n.º 186/2013, PREM is equivalent to registered mail with delivery advice. PREM attests:

- 1) The authenticity of the sender, addressee and designated operators of origin and destination;
- 2) The sending, forwarding, delivery, non delivery, rejection and expiry of the electronic message, and its dates and time;
- 3) The confidentiality of the electronic message;
- 4) The integrity of the electronic message.

Postal Registered electronic Mail(cont'd)

In fact, PReM service was created in accordance with Article RL 264 of Letter Post Regulations of Universal Postal Union, and Postal Registered Electronic Mail Functional Specifications (S52), also of Universal Postal Union, and uses internationally recognized cryptographic technologies to generate non-reputable evidences and assure the confidentiality and integrity of electronic messages.

Purpose

The purpose of the functional specification for postal registered electronic mail is to act as a **blue print** for Designated Operators (DOs) to implement PReM service in accordance with the **Article 14 of UPU Convention** and **Article RL264 of the Letter Post Manual**;

In addition, **evidence** of corresponding events and operations within the full cycle of PReM (from Mailer to Addressee/Mailee) will be **generated** and **archived** for future attestation;

Furthermore, defines inter-operability format and rules for PReM communications between different DOs.

UPU Convention

Article 14 – Electronic Mail, EMS, Integrated logistics and new services

1.1 Electronic Mail which is a postal service involving the electronic transmission of message; designated operator may enhance electronic mail by offering registered electronic mail, which supplements electronic mail by providing *Proof of Sending, Proof of Delivery and a Secure Communication Channel* between authenticated users.

Article RL264 of the Letter Post Manuals

1. Postal registered electronic mail provides a secure and trusted exchange of electronic messages, enabling the sending of electronic messages by an authenticated mailer for delivery to an authenticated addressee or addressees with proof of sending and proof of delivery.

2. Postal registered electronic mail:

2.1 ensures the confidentiality and integrity of the message;

2.2 ensures the authenticity and non-repudiation of the users and designated operators;

2.3 generates evidence of operations and all significant events within a complete operational cycle;

2.4 generates notifications that a particular event or operation has occurred and sends them to the corresponding parties; and

2.5 stores the generated evidence for future attestation.

3. Designated operators providing postal registered electronic mail shall be registered in a designated operator trust list which is managed and published by the UPU, acting as the designated operator trust list distribution point.

4. Customer charges for the provision of the postal registered electronic mail service shall be set by the designated operator of origin, taking into consideration the costs and market needs.

5. For the provision of postal registered electronic mail between participating designated operators, bilateral or multilateral agreements shall be established. The postal registered electronic mail operational arrangements, defined in the bilateral or multilateral agreements, shall specify the provisions required to provide the postal registered electronic mail service across borders, including any remuneration conditions between participating designated operators.

6. The interoperability aspects related to the provision of the postal registered electronic mail service shall be based on the relevant UPU standards.

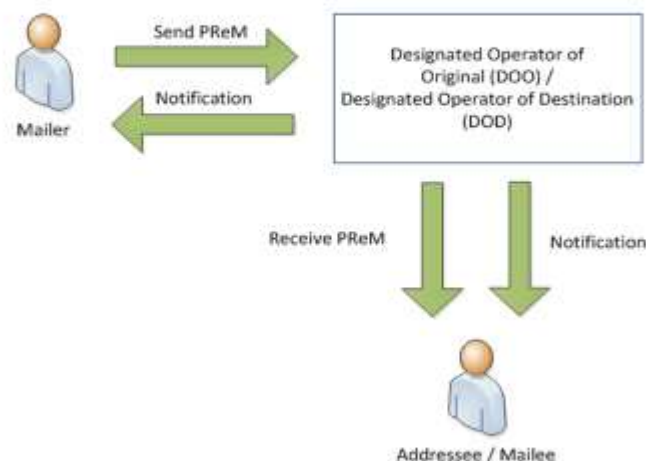
7. Designated operators may decide to identify the postal registered electronic mail by means of a collective brand.

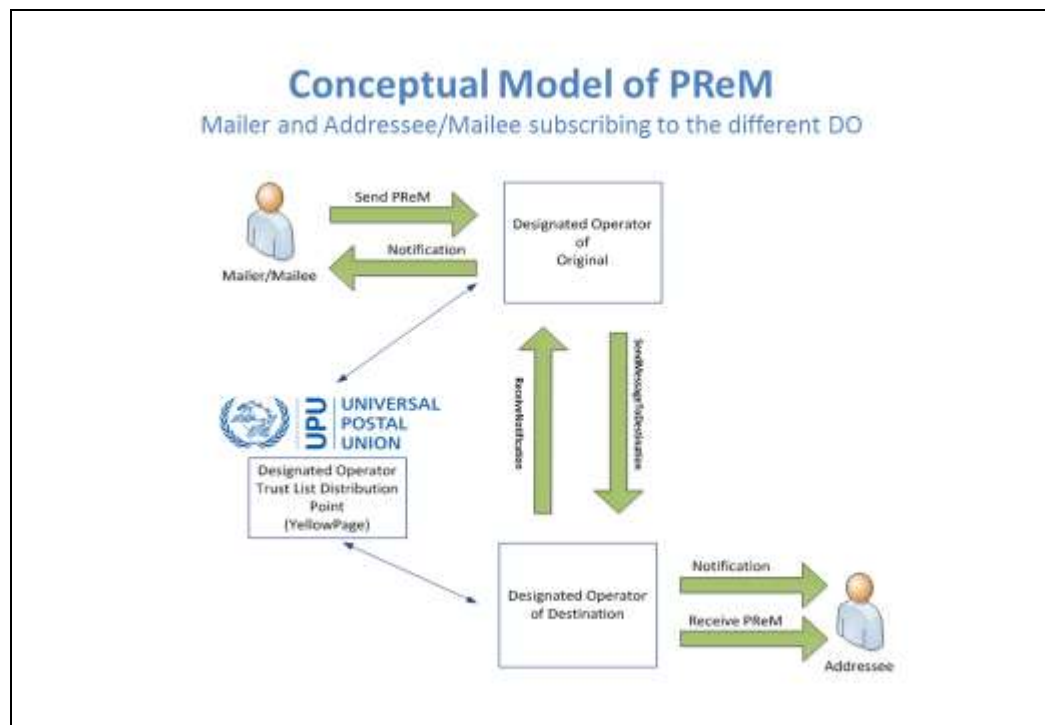
Benefits of functional specification for PReM (S52)

- to provide DOs with a technical guideline to implement postal registered electronic mail service and to regain market share in what is inherently a traditional postal service;
- to encompass inter-operability among DOs, such that registered email sent using one DO's PReM service can be delivered by another DO within the Postal Registered eMail network;
- DOs will be in a position to complement their traditional physical registered mail service by extending their core competency to the digital world;
- DOs will realize new revenue streams, in compensation to the declining of physical mail volumes;

Conceptual Model of PReM

Mailer and Addressee/Mailee subscribing to the same DO





PReM standard and service development history

- The proposal on PReM was first submitted to the UPU Standards Board on 22 April 2008 in San Diego. Status P (new work item proposal) was granted by the UPU Standards Board in the meeting;
- The project lead, Macao Post (China), embarked on further development work with the AESUG on the functional specification for postal registered electronic mail (S52);
- The UPU Standards Board granted status 0 to the S52 in Mar 2009 at the Postal Operation Council meeting;
- China Post, Macao Post and Poste Italiane successfully conducted PReM interoperability test during Doha Congress of UPU in Sept 2012;
- The UPU Standards Board granted status 1 to the S52 in April 2013 at the Postal Operation Council meeting;
- Macao Post officially launched the SEPBox and its related service including PReM on .post platform in Oct 2013.

UPU PReM S52 compatibility test suite

Thank you very much

- If you have any opinion or suggestion, please feel free to contact us:
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 - Manager, Administration and APPU Affairs
 - Araya Prasittiboon
 - Tel: +66 574 0954
 - E-mail: admin@appu-bureau.org

Questionnaire about cross border online-shopping service

Particulars of the person completing the questionnaire

Name of member country/designated operator	
Full name <input type="checkbox"/> Ms <input type="checkbox"/> Mr	
Position/title	
Organization	
Address	
Tel.	Fax
E-mail	

<p>1. Does your organization provide online-shopping service?</p> <p>If yes, please answer the following:</p> <p>1.1 please provide the web address (URL) of the online-shop below:</p> <hr/> <p>1.2 please check the available online-shop features:</p> <table border="1"> <tr><td><input type="checkbox"/> Online philatelic and postal products shop</td></tr> <tr><td><input type="checkbox"/> Online shopping portal or shopping mall</td></tr> <tr><td><input type="checkbox"/> Integration of services with e-merchants' sites</td></tr> <tr><td><input type="checkbox"/> Performance reports and analytics</td></tr> <tr><td><input type="checkbox"/> Delivery address assistant service</td></tr> <tr><td><input type="checkbox"/> Calculation of estimated total landed costs</td></tr> <tr><td><input type="checkbox"/> Online customs declaration</td></tr> <tr><td><input type="checkbox"/> Online management of documents/merchandise delivery options</td></tr> <tr><td><input type="checkbox"/> Online account management</td></tr> <tr><td><input type="checkbox"/> Online payment</td></tr> </table> <p>1.3 What is the percentage of revenue from online-shop compared with your organization's total revenue?</p> <p>1.4 On average, how has your organization's online-shop revenue evolved since 2010?</p> <p><input type="checkbox"/> Increased <input type="checkbox"/> Decreased <input type="checkbox"/> Same in 2014 as in 2010.</p> <p>1.5 Overall, would you say that the online-shop sold by your organization is currently profitable?</p> <p><input type="checkbox"/> Profitable <input type="checkbox"/> Not yet profitable</p> <p><input type="checkbox"/> Profitability is not (or cannot be) measured <input type="checkbox"/> This information is confidential</p> <p>If no, please answer the following:</p> <p>1.6 Does your organization have a plan to provide online shopping service in the near future?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<input type="checkbox"/> Online philatelic and postal products shop	<input type="checkbox"/> Online shopping portal or shopping mall	<input type="checkbox"/> Integration of services with e-merchants' sites	<input type="checkbox"/> Performance reports and analytics	<input type="checkbox"/> Delivery address assistant service	<input type="checkbox"/> Calculation of estimated total landed costs	<input type="checkbox"/> Online customs declaration	<input type="checkbox"/> Online management of documents/merchandise delivery options	<input type="checkbox"/> Online account management	<input type="checkbox"/> Online payment	<p><input type="checkbox"/> Yes</p>	<p><input type="checkbox"/> No</p>
<input type="checkbox"/> Online philatelic and postal products shop												
<input type="checkbox"/> Online shopping portal or shopping mall												
<input type="checkbox"/> Integration of services with e-merchants' sites												
<input type="checkbox"/> Performance reports and analytics												
<input type="checkbox"/> Delivery address assistant service												
<input type="checkbox"/> Calculation of estimated total landed costs												
<input type="checkbox"/> Online customs declaration												
<input type="checkbox"/> Online management of documents/merchandise delivery options												
<input type="checkbox"/> Online account management												
<input type="checkbox"/> Online payment												

2. Are there enough variety products to be sold online in your country?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
3. Do you agree that online shop will increase postal traffic?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
4. Do you find sourcing products (outside your country) is difficult?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
5. Do you agree that if products from different countries could be sold in your online-shop will increase sales volume and postal traffic?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

6. What are the main reasons that lead your organization to launch or plan an online-shop?

For each reason below indicate how important this factor is on a 1 to 5 scale, from 1: this factor did not play any role to 5: this factor was extremely important.

	Not applicable	1	2	3	4	5
We want to enter the market before competitors (first mover advantage)						
We respond to competitive threats						
We want to leverage the post's image and reputation as a trusted provider						
Our organization is looking to diversify into online services to stay relevant						
There are synergies between online-shop and our other activities						
Government sector policies (such as e-government, ICT, or digital sector policies) assign a role to our organization in the provision of online-shop						
Our organization has approached (or was approached by) technology or logistics partners with a view to joining forces to offer online-shop						
We solicit ideas of new online-shop from consumers and other stakeholders						
Online-shop is a very effective channel to add value to postal delivery channel						
Posts can make money from selling online						
We expect new revenue from postal online-shop						

Other significant reasons, please specify below:

7. What are at the major obstacles to the growth of online-shopping service provided by your organization?

Please rate each obstacle on a 1 to 5 scale, from 1 = no negative impact on growth to 5 = very high obstacle to growth

	Not applicable	1	2	3	4	5
Overall customers' adoption of online-shopping is not as fast as anticipated						
Our investment resources are not yet sufficient to ensure full deployment of services						
The legal framework restricts the scope of online-shop the designated postal operator is allowed to provide, or of the business models it can use						
Competitors have decreased the value to users of our organization's online-shop						
Other companies have started (or may start) to offer online-shop						
Our organization's online-shop are not always priced at a level that guarantees sufficient revenue or profitability						
It takes time for our organization to move towards a digital "culture"						
Our staff is not properly trained to develop, implement and support online-shop						
The limitations of our IT infrastructure restrict our ability to launch new online-shop						
It can be difficult for our organization to find the right external partner						
Our organization does not yet have all the experts it needs to develop online-shop at a faster pace						
Due to fast-changing technologies and customers behaviors it is difficult to develop a sustainable business model for online-shop						
There are few best practices from other countries we can re-use in our country						

Other significant obstacles , please specify below:



8. Do you expect any of the following technological trends to impact your organization's online-shopping service offerings in the coming years?

For each factor below indicate on a 1 to 5 scale its expected impact, from 1 (no impact) to 5 (very large impact).

	Not applicable	1	2	3	4	5
Virtual currencies (such as bitcoins)						
Big data, data analytics and cloud computing technologies						
New generations of hand held terminals for use by letter carriers						
Sensors applied to the postal infrastructure (postal vehicles, mail boxes...) – also known as the Internet of Things						
New payment technologies such as mobile wallets						
New developments in e-health and services for the ageing						
New delivery technologies such as drones						
Crowd shipping						
Cyber attacks, cyber-security standards and technologies						
3-D printing technologies						
Adoption of .POST as a secure and trusted interconnected platform						

Other significant trends , please specify below:

9. Which category is the best seller in the online shop, such as food, clothes, cosmetics, electronics, etc?

10. Do you think you are ready for cross border e-Commerce through your online shop, especially in payment, language (English version of website) and various delivery options (return service, no signature delivery, etc)?

11. What will you suggest to increase cross border eService including but not limited to online shopping service among APPU members?




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POC C4 Interconnectivity Group

PReM S52 compliance test suite

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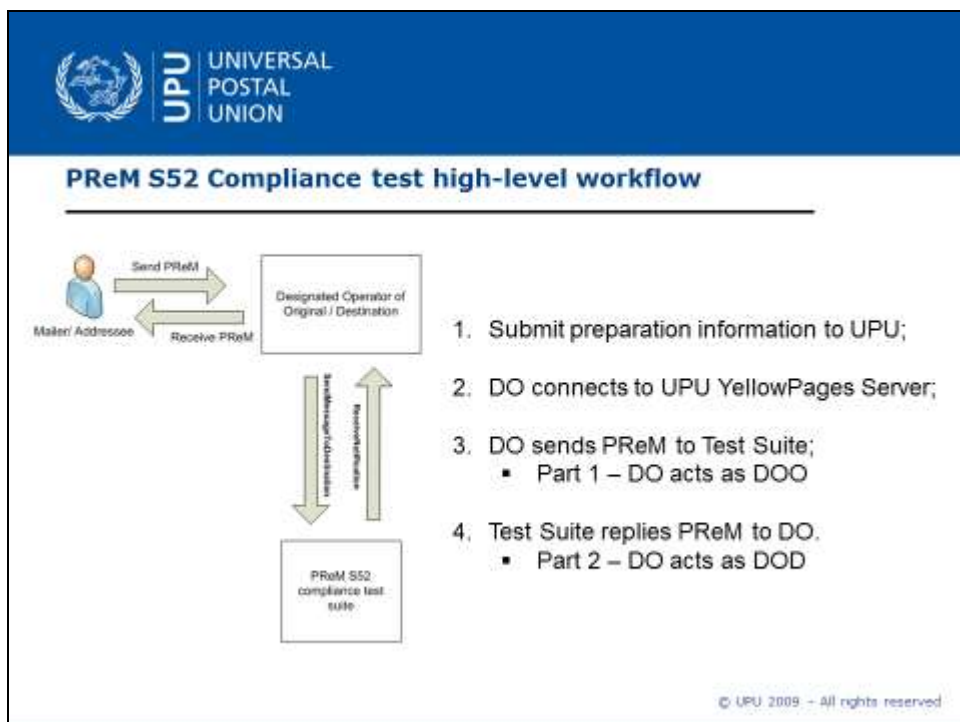
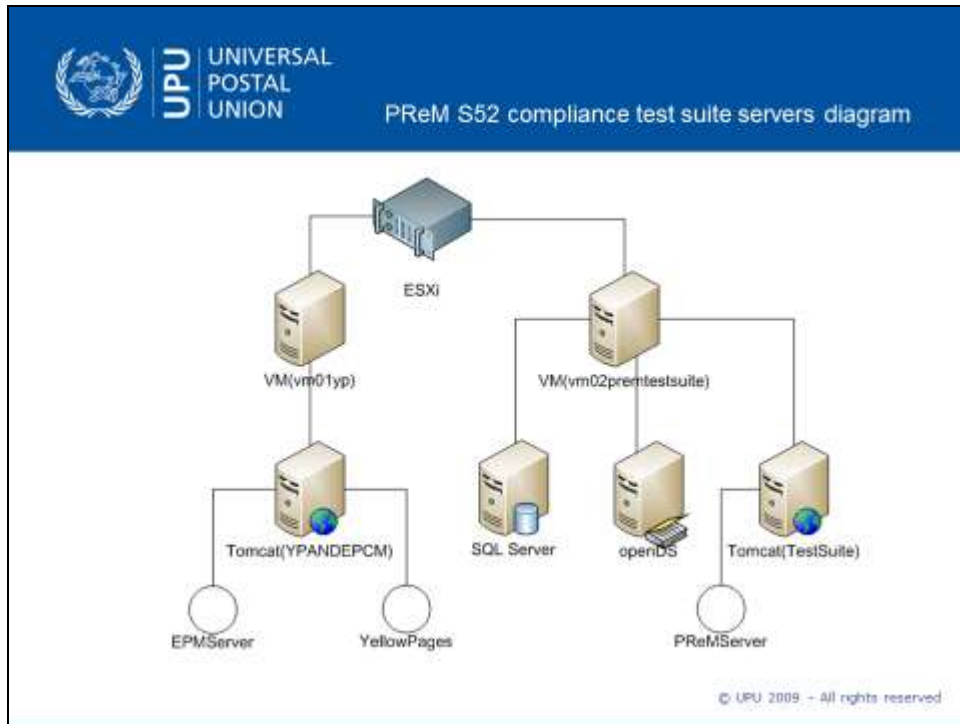


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Introduction of the system

1. In order to ensure compatibility of a system against the **UPU S52 Postal Registered electronic Mail (PReM)** functional specifications, this test suite is developed and deployed, any organization interested to proof that their PReM system is compliance with UPU S52 standard, a compatibility test could be conducted with a single DO at a time.
2. A number of test cases are required to be executed successfully and testing results will be send to the testing email address registered with UPU by the testing organization in the YellowPage Server,
3. In addition, testing log generated will be the proof of S52 compatibility and could be published publicly for verification purpose. The test suite consists of ESXi virtual machine guest OS(s) which host a PReM test suite server, a YellowPage Server and an EPCM Server.

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Testing procedure

1. Submit the prepared information to UPU

UPU will create a DO record on UPU YellowPages server , and configure the report email receiver of the DO so that, DO could establish a SSL communication with Test Suite, and receive the testing report via email.

2. Connecting to UPU YellowPagesServer

Testing DO must connect to the central YellowPagesServer provided by UPU to get the Test Suite attributes using the Web Service (Retrieve Postal Attributes).

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Testing procedure (cont'd)


3. DO send PReM to Test Suite (verify send PReM capability)

After retrieving UPU Test Suite attributes, DO could send a PReM by calling WebService - *sendMessageTODOO()* provided by Test Suite. Test suite will analysis the PReM Dispatch if the function called successfully and then generate the analysis report (part 1 – DO acts as DOO) and email it to DO registered email address;

4. Test suite reply a new PReM to DO (verify receive PReM capability)

After the part 1 report sent, Test suite will reply a new PReM to DO. If DO accept, reject, or wait for the message expire, Test suite will generate the analysis report (part2 – DO acts as DOD) and send to DO via email.

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Test cases – case #1

DO send PReM to Test Suite, and accept Test Suite reply

Part 1 DO(DOO) sends PReM to Test Suite	
Description	DO sends a PReM message to Test suite user [testsuit@prem.upu.post]; PReM message subject: (DO country code) testcase#1 yyyy/mm/dd
Expected evidence	At least the following LV1 evidence should be generated: - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOD
Expected results	PReM dispatch is verified, Evidences are generated; Part 1 report sent;
Part 2 DO(DOD) user accepts Test suite's reply	
Description	Test suite reply a PReM message to DO user; And DO user accepts the reply;
Expected evidence	At least the following LV1 evidence should be generated: - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOD - (1) E-MSG-ADR-DIV-DOD
Expected results	DO user accepts the reply, Evidences are generated; Part 2 report sent;

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Test cases – case #2

DO send PReM to Test Suite, and reject Test Suite reply

Part 1 DO(DOO) sends PReM to Test Suite	
Description	DO sends a PReM message to Test Suite user [testsuit@prem.upu.post]; PReM message subject: (DO country code) testcase#2 yyyy/mm/dd
Expected evidence	At least the following LV1 evidence should be generated: - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOD
Expected results	PReM dispatch is verified, Evidences are generated; Part 1 report sent;
Part 2 DO(DOD) user rejects Test Suite's reply	
Description	Test suite reply a PReM message to DO user And DO user rejects the reply;
Expected evidence	At least the following LV1 evidence should be generated: - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOD - (1) E-MSG-ADR-REJ-DOD
Expected results	DO user reject the reply, Evidences are generated; Part 2 report sent;

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Test cases – case #3

DO send PReM to Test Suite, and wait Test Suite PReM message to expire

Part 1 DO(DOO) sends PReM to Test Suite	
Description	DO sends a PReM message to Test Suite user (testsuit@prem.upu.post); PReM message subject: (DO country code) testcase#3 yyyy/mm/dd
Expected evidence	At least the following LV1 evidence should be generated: <ul style="list-style-type: none"> - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOO
Expected results	PReM dispatch is verified. Evidences are generated; Part 1 report sent;
Part 2 DO(DOD) user wait for Test Suite's reply expire	
Description	Test Suite reply a PReM message to DO user; DO user wait for the PReM message to expired (for testing purpose expiration is set to 24 hours after sent);
Expected evidence	At least the following LV1 evidence should be generated: <ul style="list-style-type: none"> - (1) EST-MLR-MSG-ACC-DOO - (1) E-DSP-TIC-SUC-DOO - (1) E-MSG-ADR-EXP-DOO
Expected results	DO user wait for the reply message to become expired. Evidences are generated; Part 2 report sent;

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Thank you very much



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