

## Central platform for exchange of postal accounting forms – business requirements

### 1 Context

In every international exchange of postal items, at least two designated operators (DOs) are involved: one in the sending country and one in the receiving country. Given that only the sending DO receives payment from the user of the services (e.g. through the purchase of postage stamps), the UPU Acts provide for an accounting mechanism to ensure that the sending DO pays the receiving DO for its role in the process of delivering the postal item to the recipient. The accounting mechanism also covers international postal exchanges with a higher degree of complexity (e.g. scenarios where a postal item is handled in transit through an intermediary DO before reaching the receiving DO, thus generating the need to remunerate the transit DO).

The accounting process takes into consideration various factors relating to international postal exchanges, including the mail type and weight. In order to accomplish this accounting process, DOs share summary information on these exchanges on a quarterly basis, as well as annual accounts (in which mail volumes are converted to pecuniary amounts to be settled between the DOs concerned). The summary information and accounts are prepared separately for the different types of postal item and mail flow, based on forms contained in the annexes to the UPU Convention Regulations.

At present, DOs exchange these forms on a bilateral basis, usually as PDF files sent via e-mail. In total, there are 192 UPU member countries and 215 associated DOs. In theory, each DO can exchange accounting forms with all others.

### 2 Overview

It is proposed that a web-based platform be implemented to facilitate the exchange of accounting documents among DOs. This transition does not in any way relate to the automation of accounting; the content of the accounting documents is not relevant to this work.

The solution will replace the current exchange of documents, which is performed mostly via e-mail. DOs will upload the accounting documents to the platform, indicating the partner DO. The accounting documents will then be made available to the relevant DO for download.

The main advantages of a central platform are as follows:

- Simplified process, eliminating the need to obtain the e-mail addresses of DOs and to keep track of changes thereto;
- Greater flexibility regarding the size of documents exchanged: the size of attachments sent via e-mail is limited (often to 5 MB) and can also vary depending on the DO. It is intended that the central platform will enable this limit to be increased;
- Improved security: only authorized persons will have access to the platform. Recently, several fraud attempts have been detected whereby false accounts were sent by e-mail with a request for payment. Such fraud attempts will be rendered more difficult via a secured central platform;
- Proof of receipt: e-mails can be lost, transmission issues can occur and sometimes e-mails sent are not received. When such issues arise with regard to e-mails containing accounting forms, the accounting process is affected. The central platform will provide the guarantee that a document posted on the platform is immediately available to the relevant DO;
- Greater user-friendliness in dealing with exchanged documents: the solution will ensure ease of use, with centralized visibility per DO as to the status of each form, both for documents sent and received.

### 3 System requirements

#### 3.1 Overview

The web-based solution will be a platform for the exchange of accounting documents among DOs. Its functionality and appearance must be similar to an e-mail management solution, but – unlike an e-mail platform – exchanges are to be conducted only with clearly defined partners, in a secure environment. Furthermore, the system should serve to monitor the status of documents exchanged.

#### 3.2 Posting an accounting document

When posting a document, the accountant enters the following information:

<i>Information</i>	<i>Explanation</i>	<i>Mandatory?</i>
DO	Selection of the relevant DO from a list	Yes
Document type	Selection from a list (official CN forms) or free text to allow for bilateral agreements and special cases	Yes
Period	Selection from a list – the period is a month, quarter, half-year or year	Yes
Attachment	At least one document must be attached – no restriction on document type, but a virus check should be performed as part of the upload process if possible	Yes
Additional information	Free text	No

In the event of potential duplication, i.e. a document for the same period and for the same DO has already been posted, a confirmation pop-up should be displayed to assist users and prevent errors. However, the system should not prevent such postings, in order to provide for special situations such as supplementary accounts.

Once a document has been sent, the sender should have the option to mark it as cancelled.

The solution should also provide the option to generate proof of delivery with the exact date and time, which can then be used between DOs as proof that an accounting form was sent through the central platform.

#### 3.3 Posting multiple accounting documents

The solution must enable the sending of multiple documents, possibly to multiple DOs, in one action. To this end, a file naming convention may be established, whereby users select the folder containing the files to be sent and the system picks the files matching the naming convention and sends them one by one, indicating which were uploaded correctly and which failed.

A typical usage scenario would be to send CN 56 forms (quarterly accounting statement for letter mail) to numerous partners simultaneously. In this and similar cases, the forms are to be generated by the accounting solution and the resulting files stored in a local folder, following which they should be uploaded to the central platform and distributed in a single action.

### 3.4 Handling accounting documents sent/received

Users should be able to edit documents received, and view and download attachments. They should also be able to indicate whether the document is to be accepted or rejected, and pose questions to the sender. In all cases, free text information should be associated with the action.

Under this approach, there may be multiple exchanges back and forth between two partners with regard to a document.

The table below summarizes the various possible statuses of a document and the logic behind possible actions:

<i>Status number</i>	<i>New status (= action)</i>	<i>Operator that can assign this status</i>	<i>Allowed previous status(es)</i>
1	Sent	Sender	–
2	Amended	Sender	1 (sent), 6 (question raised), 7 (refusal raised)
3	Cancelled	Sender	All
4	Read	Recipient	1 (sent), 2 (amended)
5	Accepted	Recipient	1 (sent), 2 (amended)
6	Question raised	Recipient	1 (sent), 2 (amended)
7	Refusal raised	Recipient	1 (sent), 2 (amended)
8	Refusal accepted	Sender	7 (refusal raised)

### 3.5 Monitoring of exchanges

One of the primary functions of the system is that it should enable users to view the accounting documents sent and received. The solution should provide an overview of the current situation and allow users to perform actions on documents.

The corresponding screen(s) must be user-friendly and assist users in performing their work efficiently.

It is proposed that provision be made for two ways of monitoring the documents:

- view by accounting document;
- view by action.

Users should be able to select and amend the type of view at any time. In order to improve visibility and given the large number of documents of different types exchanged between various DOs, the system should offer the following features:

#### *i View by document*

There should be two completely separate displays, with documents sent on one side and documents received on the other. This display should provide an overview of the current situation by DO/type of form.

Users should be able to edit a document, so the document attributes should be displayed, and it should be possible to view the attachments. The history of actions should also be displayed, and users should be able to perform new actions (the permitted actions depend on the current status of the document).

#### *ii View by action*

Each event relating to a form is called an “action”. Examples of typical actions include sending the form, accepting the form and raising a question about the form.

There may be multiple actions relating to a form.

As above, actions sent and actions received should be displayed separately. The “view by action” display can be helpful to check recent actions performed by DOs, enabling users to act accordingly.

### iii Filtering

Many DOs organize their systems such that different accountants are responsible for different documents and/or DOs. With this in mind, the system must allow users to create and apply filters by means of a list of DOs and/or a list of forms. A filter is given a free name.

The proposed approach is that DO supervisors maintain the filters and assign them to their accountants (see user definitions below). Supervisors should also indicate whether or not an accountant can remove all filters. It should be possible to assign multiple filters to an accountant, whereby the latter can select one of the filters, or combine or remove all of them, if allowed.

Additional filters should be provided:

- accounting year: only one accounting year is visible at a time, so this filter is mandatory;
- DO: drop-down list – the content of this list is refreshed based on the main filter;
- view only documents not accepted (check box).

### iv Additional display features

Documents/actions not read yet should be displayed differently (possibly in bold) and the left-hand column should indicate the number of such documents/actions.

It must be possible to amend the order of the list according to each column.

An example of the potential display is provided below (for illustration purposes only; the final display may vary):

Accounting year	2022						
Filter	Terminal dues, Arab region		Partner				
	only not accepted <input type="checkbox"/>						
View:	partner	name	form	period	last action	by	status
Per document	AEA	Emirates Post	CN 56	Q1	12-07-22	AEA	accepted
documents sent (1)	AEA	Emirates Post	CN 56	Q2	08-10-22	AEA	accepted
documents received (5)	AEA	Emirates Post	CN 56	Q3	09-02-23	AEA	accepted
Per action	AEA	<b>Emirates Post</b>	<b>CN 56</b>	<b>Q4</b>	<b>01-04-23</b>	<b>AEA</b>	<b>question raised</b>
actions sent	OMA	Oman Post	CN 56	Q1	25-06-22	OMA	accepted
actions received (6)	OMA	Oman Post	CN 56	Q2	15-09-22	OMA	accepted
	OMA	Oman Post	CN 56	Q3	18-12-22	OMA	accepted
	OMA	Oman Post	CN 56	Q4	19-03-23	DKA	sent
	QAA	Qatar Post	CN 56	Q1	25-06-22	QAA	accepted
	QAA	Qatar Post	CN 56	Q2	15-09-22	QAA	accepted
	QAA	Qatar Post	CN 56	Q3	18-12-22	QAA	accepted
	QAA	Qatar Post	CN 56	Q4	04-04-23	DKA	amended
	SAA	Saudi Post	CN 56	Q1	25-06-22	SAA	accepted
	SAA	Saudi Post	CN 56	Q2	15-09-22	SAA	accepted
	SAA	Saudi Post	CN 56	Q3	18-12-22	SAA	accepted
	SAA	Saudi Post	CN 56	Q4	01-05-23	SAA	accepted

### 3.6 Security

The solution must be fully secure, whereby only registered users can access the solution (login and password).

A user must always be associated with a predefined DO.

There should be three types of user:

- accountants, who can perform all actions relating to the exchange of documents in the system;

- DO supervisors, who have the same rights as accountants, plus management of the DO's user accounts. There may be several supervisors within a DO. Supervisors can change the rights of other users, e.g. make another user a supervisor;
- UPU central administrators, who have all the rights of DO supervisors, and also oversee security and manage DO supervisors.

A user cannot request a new account. Instead, users must be created by supervisors. Once a user has been created, he/she receives an e-mail to set an access password. After this step, the user can access the solution.

Users must be able to reset their password (including if they forget their password) via a mechanism that sends an e-mail to a predefined e-mail address.

In order to ensure a high level of security, it is proposed "public" e-mail addresses (e.g. Gmail) should not be permitted. Instead, e-mail addresses must be associated with DOs. In the event that a DO does not have an e-mail server, UPU .POST e-mail addresses can be used.

DO supervisors and UPU central administrators can block and delete users. DO supervisors can only delete users from their own organization, whereas UPU central administrators can delete any user.

All actions performed in the system should be tracked and recorded in the system for security purposes.

### *3.7 Additional requirements*

#### *3.7.1 Automatic notifications*

The system should generate a daily e-mail to each user, notifying the user of relevant actions received from DOs in the past 24 hours. The filtering of which actions are relevant to a user is based on the filters assigned by supervisors. This daily e-mail notification should include a summary and a list of actions received.

DO supervisors should receive a separate notification summarizing all actions received by the DO in the past 24 hours, indicating the accountants concerned and informed by individual notifications.

#### *3.7.2 Technical interface to facilitate the sending of documents*

Some DOs may have an IT solution in place to automate the generation and sending of accounting documents to other DOs via e-mail.

A solution must therefore be provided to enable such solutions to be interfaced with the new central system, in order to avoid manual entry in the central solution.

#### *3.7.3 Accounting documents generated by the UPU*

For certain accounting flows, the UPU International Bureau generates accounting forms on behalf of DOs and distributes these forms to all DOs. The central solution must allow this. This may be covered by the previous requirement (3.7.2 – Technical interface to facilitate the sending of documents).

Documents distributed by the UPU should be displayed like those sent by each DO, but they must be differentiated in some way so as to indicate that they were sent by the UPU on behalf of the DO.

#### *3.7.4 Data deletion*

It is proposed that all data be kept for 10 years. Therefore, for example, by the end of 2034, assuming that the system is implemented before the end of 2025, the system would contain all data from 2025 to 2034.

At the end of each year, any data that is more than 10 years old should be removed from the central platform, provided that there are no actions pending in relation to any documents (e.g. question or refusal raised) between pairs of DOs.

Therefore, following the above example, the data from 2025 would be deleted at the end of 2035, with the exception of any pairs of DOs with pending accounting documents.

### 3.7.5 Languages

The solution must be provided in English and French. Each user should be able to select their preferred language and the system should retain their preference.

## 4 Sizing/system requirements

It is proposed that the maximum size of a posted file be set at 50 MB per file. The solution should support files in PDF format and possibly other formats, such as Word or image files.

Data size estimates:

- Each DO sends accounting documents to an average of 50 other DOs;
- The average size of each accounting document is 3 MB;
- A DO sends an average of 10 accounting documents per partner DO and year;
- There are 215 DOs.

The total estimated volume of data per year for accounting documents is approximately 300 GB.

In order to keep 10 years of files online, the total data volume is approximately 3 TB. (It is anticipated that many DOs will want to use the platform as their accounting data repository and may not download all documents.)

There will be at least two transactions per document (i.e. sent, accepted). An average of 2.1 transactions per document is anticipated, resulting in an estimated annual total of 210,000 transactions within the system (approximately 1,000 per DO).