

Change Request form

General Information (Origin of Request)		
<input checked="" type="checkbox"/> User Requirements Document (URD) <input type="checkbox"/> Other User Functional or Technical Documentation (SYS) <input type="checkbox"/> Other TIPS Documentation (OTD) <i>(to be filled in by MIASF)</i>		
Name of institution: Market Infrastructure Board (MIB)	Type of institution:	Date raised: 01/04/2019
Request title: TIPS adoption of a Bulk Payments functionality	Name of Central Bank:	Request ref. no: TIPS 0017 URD
Categorisation of changes		
1. Functional/technical importance parameter: High	4. Legal importance parameter: Medium	
2. Operational importance parameter: Medium	5. Financial importance parameter: Medium	
3. Stakeholder importance parameter: High		
Status: Withdrawn		

Reason for change and expected benefits/business motivation:

TIPS provides settlement in central bank money of Instant Payment Orders on a real-time gross settlement basis. With a 24/7/365 availability, TIPS requires banks to be reachable around the clock as to permit to transfer their customers' funds at any time of day. All the incoming Instant Payments submitted by TIPS Actors are single messages and the settlement should be carried out in a matter of seconds from payment initiation.

All of this represents great opportunities for banks, but also adds technical and operational complexity and affects their existing processes, especially for those using bulk payments.

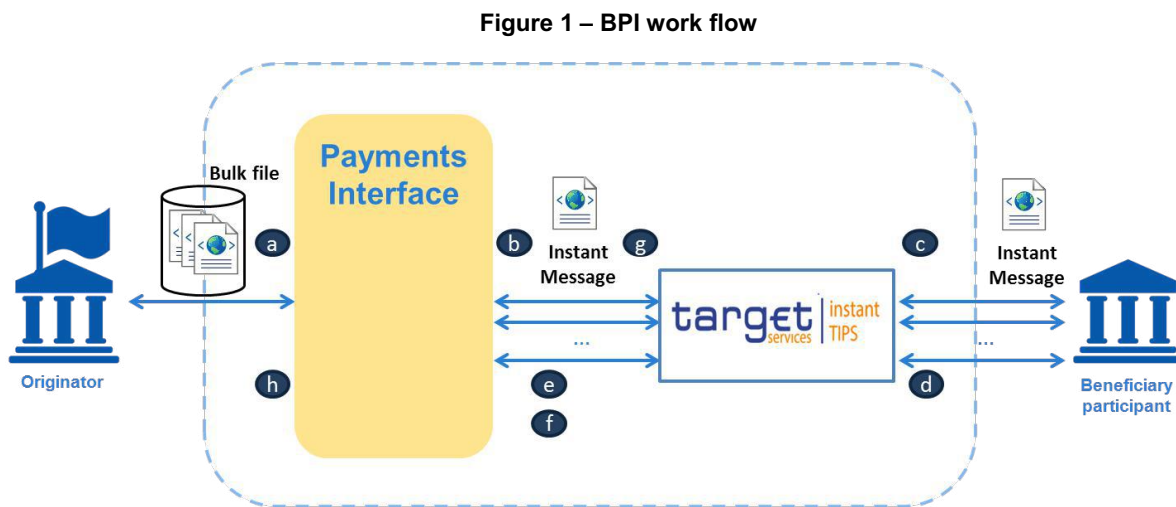
In order to relieve the impact from a technical and operational prospective and to broaden the range of functionalities provided by TIPS, a Bulk Payment Interface (BPI) should be made available together with a full (bi-directional) file-transfer feature. Through this interface, Actors can submit bulk payment files (e.g. payroll), at any time 24/7, without timeout constraints, and expect the payments to be settled instantly when they are processed by TIPS.

Description of requested change:

To clarify the main features of the Bulk Payment Interface, this section is organised in five parts. The first part describes the conceptual work flow of an SCT Inst payment when it is sent to TIPS through the Bulk Payment Interface. The second and the third ones deal respectively with the content of the bulk file and the retry logic used by the BPI to re-submit expired payments to TIPS. The fourth one outlines the fast notification message feature. The last section describes the required reference data configuration in CRDM.

1. Conceptual work flow

The interaction between the Bulk Payments Originator (Originator), the BPI and TIPS is described by the figure below.



Work flow steps:

- a) Originator sends a bulk file, grouping SCT-Inst messages (pacs.008), to the Bulk Payment Interface (BPI);
- b) The Interface receives the bulk file and then submits each single message contained in the bulk file to TIPS. A throttling process is defined at BPI level to manage the sending of single messages toward the TIPS system;
- c) TIPS reserves the funds and forwards the Instant Payment transactions to the Beneficiary participants;
- d) The Beneficiary participants send confirmation messages (negative or positive confirmations) to TIPS;
- e) The BPI receives confirmation messages from TIPS;
- f) If TIPS does not receive the Beneficiary reply within the standard timeout period, the Instant Payment times out and the transaction moves to status *Expired*. TIPS sends a message to the BPI containing the proper error code.
- g) For every timeout error message the BPI receives, a new SCT-Inst message (containing the same payment details of the expired one) is submitted to TIPS by the BPI;
- h) At the end of a specific lapse of time (the Retry Period), all the pacs.002 with the final status related to the instructions that belong to the bulk file sent in the first place by the Originator, are collected in a file (the Answer File) and it is forwarded by the BPI to the Originator.

The Operator can access information about the processing of bulk files through a Graphical User Interface (GUI). The set of information accessible via GUI includes:

- the list of files currently being processed;
- the number of payments per status (e.g.: accepted, timed-out, settled ok, settled nok)

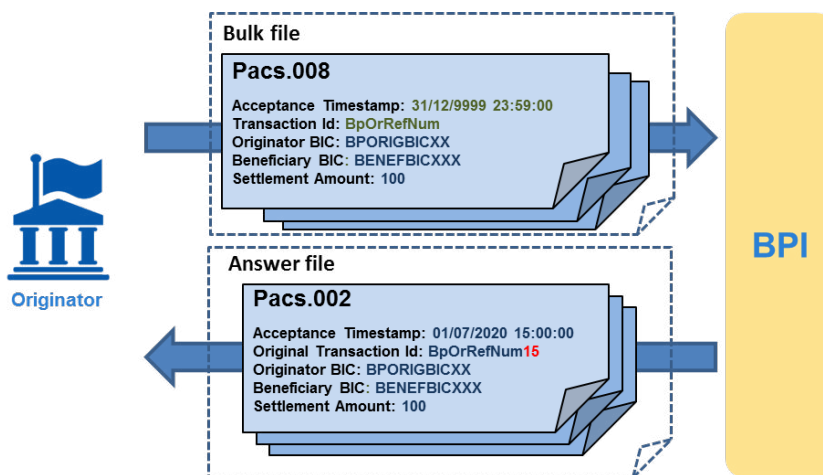
No other information would be provided (i.e. payment details should be searched, as any other payment, using the already existing queries).

2. The Bulk File

The Acceptance Timestamp field (AT-50 DS-02) in the dataset of each pacs.008 included in the bulk file must be filled by the Originator with a dummy value that complies with the XSD schema. The dummy value will be replaced by the BPI in a way that allows the interface to perform the re-submission of each payment in case of rejection because of the Timeout check (see The Retry Logic).

The Originator must use the Transaction Identification (AT-43 DS-02) field of the pacs.008 for reconciliation purpose. The reference number entered by the Originator is replaced by the BPI with a new reference number (see The Retry Logic). The new reference number is composed of: Originator's reference number + a numeric value. The Original Transaction Identification field (AT-43 DS-03) in each pacs.002 contains the new reference number and it can be used by the Originator to identify the relevant single Instant Payment transaction that belongs to the bulk file sent by the Originator itself to the BPI.

Figure 2 - Reference Management



3. The Retry Logic

A configurable time frame named "Retry Period" is defined by the Originator and specified in the file header. It defines the period of time within which the BPI can re-submit the payments included in the bulk file. The Retry Period starts by the time the bulk file is received in the BPI.

If the Retry Period is not provided by the Originator or exceeds the maximum threshold set by the Operator, a default value must be considered. During the Retry Period, a time-based process is continuously acting in background in the BPI taking care of all the timed out payments in order to perform their re-submission. More specifically, when a payment is rejected because of the Timeout check, the BPI retrieves the pacs.008 being rejected and updates the following two fields:

- Transaction Identification (AT-43 DS-02): With the Originator's reference number + a numeric value which is progressively incremented from its previous value onwards:

- Acceptance Timestamp (AT-50 DS-02): It is set as the current date and time (UTC, as always in TIPS).

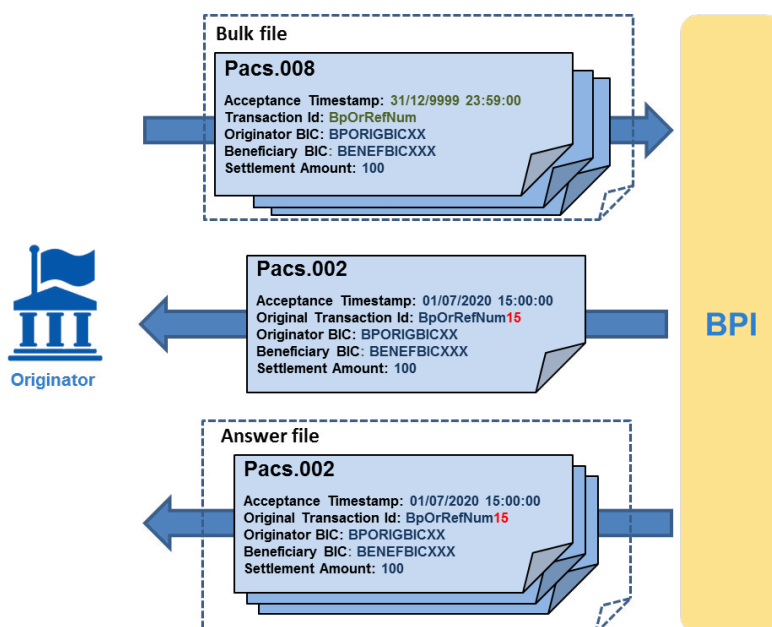
The “Submission Frequency” defines the frequency with which timed out payments are retrieved, updated and sent by the BPI to TIPS. This parameter is setup and maintained by the Operator.

4. Fast Notification Messages

The bulk file Originator can mark the file in order to receive the results of the settlement as soon as the payment instructions reach the final status in TIPS.

Therefore, when a payment instruction reaches the final status (i.e. settled, rejected), the relevant pacs.002 is immediately forwarded by the BPI to the Originator without waiting for the end of the Retry Period (see [Error! Reference source not found.](#)). For reconciliation purpose, the same confirmation message will be included in the “Answer File” containing all the pacs.002 messages that reference the SCT-Inst messages (pacs.008) grouped in the bulk file sent in the first place in TIPS through the BPI.

Figure 3 - Fast Notification Message



5. Reference Data Configuration for the Bulk Payment Interface in CRDM

This section aims at describing the reference data configuration that ensures the correct interaction between the Originator, BPI and TIPS.

Access Rights

The BPI Distinguished Name should be linked, via User-Certificate DN Link, to a User belonging to the TIPS Participant owner of the TIPS Account or CMB designed for settlement. The User should be then granted a Role containing the Privilege to instruct IPs.

DN-BIC Routing

For inbound routing purpose, the BPI Distinguished Name should be linked to the BIC of the Originator authorised by the TIPS Participant to use the related TIPS Account or CMB for settlement.

The BPI is meant to act on behalf of the Originator only for sending (and not receiving) instructions so no BPI outbound routing configuration is foreseen.

Bulk Payment Interface Parameter

The Bulk Payment Interface relies on the following parameters configured and maintained by the Operator.

Parameter name	Description
Default value for Retry Period	If not specified by the Originator in the file header, it defines the period of time within which the BPI can re-submit the payments included in the bulk file.
Threshold for the Retry Period	It specifies the upper threshold for Retry Period. If the value indicated by the Originator exceeds, the default value must be taken into account.
Submission Frequency	The frequency with which timed out payments are retrieved, updated and sent by the BPI to TIPS during the Retry Period.

Based on above reference data configuration requirements, no changes of the CRDM common component are required.

Submitted annexes / related documents:

Proposed wording update to the documentation to address the requested change:

A first proposed wording for the URD and the other TIPS Scope Defining Documents will be provided as an outcome of the detailed assessment. The final and detailed wording will be included in the respective documents following the normal release management process of the TIPS release in which the functionality will be included.

High level description of Impact:

Outcome/Decisions:

Outcome of the 3rd meeting of the TIPS-CG on the CR-17:
<https://darwin.escb.eu/livelink/livelink/app/nodes/269087918>

- *The previously considered CR-0017 on Bulk Payment functionality can be dropped.*