

Change Request form

General Information (Origin of Request)		
<input type="checkbox"/> User Requirements Document (URD) <input type="checkbox"/> User Detailed Functional Specification (UDFS) <input type="checkbox"/> User Handbook (UHB) <input checked="" type="checkbox"/> Other User Functional or Technical Documentation (SYS)		
Request raised by: ECB	Institution: ECB	Date raised: July 2020
Request title: Payment Transaction Status query in A2A mode		Request ref. no: TIPS 0039 URD
Request type:		
1. Legal/business importance parameter: Medium	2. Market implementation efforts parameter – Stakeholder impact: Low	
3. Operational impact: Medium	4. Financial impact parameter:	
5. Functional/ Technical impact: Medium	6. Interoperability impact: Low	
Requestor Category:		Status: Allocated to a Release

Reason for change and expected benefits/business motivation:

During the discussion about the new framework for the settlement of instant payments and, in particular, the implementation of measure 2 for the pan-European reachability, the need for the introduction of the Payment Transaction Status query in A2A mode has been discussed.

While for the U2A mode this query is already implemented and used in TIPS, the support for the A2A channel has been decommissioned through the TIPS.0003.URD due to the partial overlapping of this query with the existing Investigation functionality mandated by the EPC, as for TIPS-CG discussion.

Out of the gap analysis between the current TARGET2 ASI6-RT features and the scope of TIPS changes, as described in the TIPS 0033 URD and based on the following TSWG discussion, it has been identified the need for TIPS to support the Payment Transaction Status query also in A2A mode for monitoring and reconciliation purposes.

Description of requested change:

TIPS needs to undergo some changes in order to support the Payment Transaction Status query in A2A through the use of camt.005/camt.006 messages, to be made available to all TIPS Actors.

Submitted annexes / related documents:

Proposed wording for the Change request:

Change Request form

TIPS UDFS

1) §1.5.1 General concepts

[...]

Queries are available on a 24/7/365 basis, and allow users to access data in real time. TIPS provides four types of queries:

- Account balance and status query;
- CMB limit and status query;
- Payment transaction status query;
- Liquidity transfer status query.

With the only exception of the Liquidity transfer status query, which is available in U2A only, the remaining queries can be triggered both in U2A and A2A mode.

2) §1.5.5.1 Queries

[...]

In order to manage in a timely manner the liquidity over the accounts and CMBs in the user data scope, the following queries are available in A2A and U2A mode:

- Account balance and status query;
- CMB limit and status query.

In order to check the status of a previously submitted or received Instant Payment transactions or Recall Answers the following query is available both in A2A and U2A modes only:

- Payment transaction status query.

[...]

3) §2.7 Queries

[...]

The section covers the scenarios in which a Participant or Instructing Party queries the system in order to obtain information belonging to the balance and the status of an account or to the limit and the status of a CMB or to the status of previously submitted or received Instant Payment transactions or Recall Answers . This process is characterized by four different types of query:

- Account balance and status query;
- CMB limit and status query;
- Payment transaction status query.

Change Request form

- Liquidity Transfer status query.

The remaining part of this chapter contains steps of the general flow and examples of possible scenarios for the *Account balance and status query* and *CMB limit and status query* and *Payment transaction status query*, with a focus on possible failing ones. Each example shows the relevant messages and how the main fields are filled.

[...]

Involved actors and messages in Account balance and status query and the CMB limit and status query are:

- The Participant or Instructing Party sending the query;
- [GetAccount](#) message in order to instruct query;
- [ReturnAccount](#) message in order to receive the query response.

Involved actors and messages in Payment transaction status query are:

- The Participant or Instructing Party sending the query;
- GetTransaction message in order to instruct query;
- ReturnTransaction message in order to receive the query response.

[...]

The Payment transaction status query allows the authorised actor to get the detailed information for one payment transaction, specifying as input parameter (i) the Originator Participant or Reachable Party BIC and (ii) the payment transaction reference.

The following data shall be displayed on the screen:

- Originator BIC of the payment transaction;
- Beneficiary BIC of the payment transaction;
- Payment transaction reference;
- Payment transaction status;
- Amount of the payment transaction;
- Settlement timestamp (if available);
- Acceptance timestamp;
- Payment transaction reception timestamp¹ (the timestamp when the payment transaction is received by TIPS from the originator participant);

¹ This timestamp contains the time of last update for payment accepted by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is received).

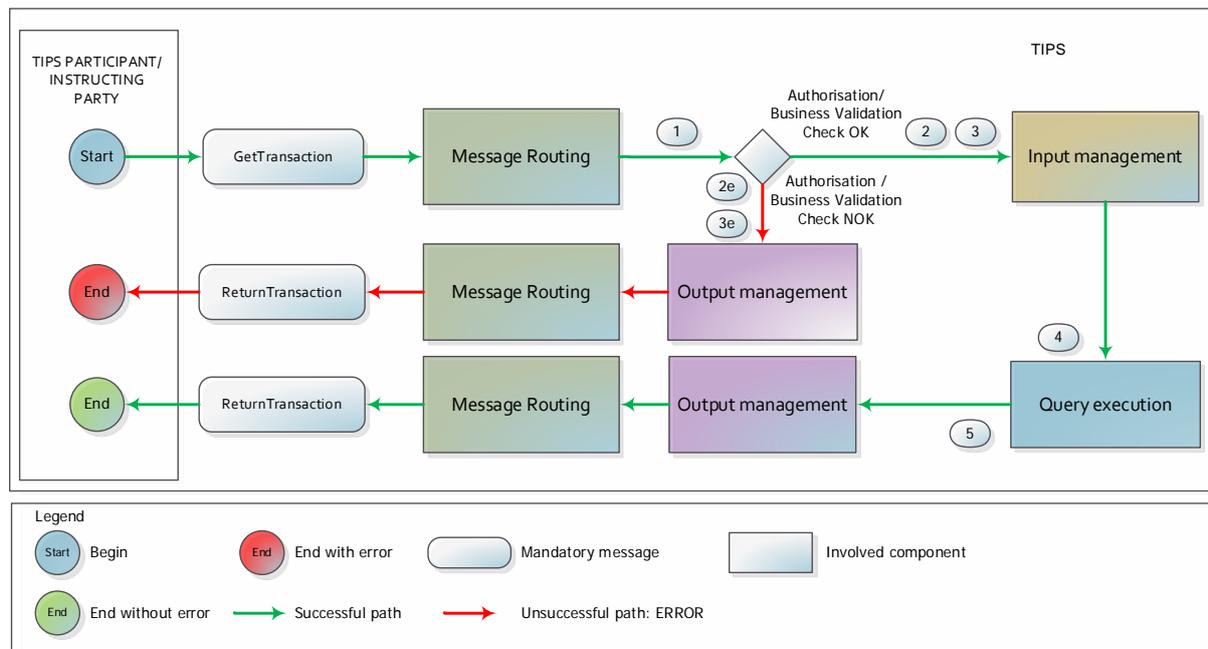
Change Request form

- Payment transaction forwarding timestamp², if available (the timestamp when the payment transaction is forwarded to the beneficiary participant);
- Confirmation reception timestamp³, if available (the timestamp when the confirmation for a payment transaction is received by TIPS from the beneficiary participant);
- Confirmation to the originator timestamp⁴, if available (the timestamp when the confirmation for a payment transaction is forwarded by TIPS to the counterpart);

[...]

The diagram below describes the process and the involved actors.

Figure xx – Payment transaction status query flow



The details of the steps are described in the following table.

² This timestamp contains the time of last update for payment forwarded by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is sent out).

³ This timestamp contains the time of last update for payment confirmed by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is received).

⁴ This timestamp contains the time of last update for payment notified by TIPS (TIPS network is “stateless” and there is no evidence of the time a message is sent out).

Change Request form

Table 1 – Payment transaction status query steps

<u>Step</u>	<u>Involved messages</u>	<u>Involved actors</u>	<u>Description</u>
1	<u>GetTransaction</u>	<u>Participant or Instructing Party as sender</u> <u>TIPS as receiver</u>	<u>TIPS receives an incoming Query from the Participant or Instructing Party.</u> <u>Technical validation, check of mandatory fields and authentication checks have already been successfully executed.</u>
2	-	<u>TIPS</u>	<u>TIPS successfully executes the checks:</u> <u>- Access Rights check:</u> <u>See 4.1- Business Rules for details.</u>
2e	<u>ReturnTransaction</u>	<u>TIPS as sender</u> <u>Participant or Instructing Party as receiver</u>	<u>TIPS unsuccessfully executes one of the checks of step 2.</u> <u>At the first negative check the system stops and sends a message to the Participant or Instructing Party – same DN of the sender – containing the proper error code.</u>
3	-	<u>TIPS</u>	<u>TIPS successfully executes the checks:</u> <u>- Payment Transaction existence for query</u> <u>See 4.1- Business Rules for details.</u>
3e	<u>ReturnTransaction</u>	<u>TIPS as sender</u> <u>Participant or Instructing Party as receiver</u>	<u>TIPS unsuccessfully executes one of the checks of step 3.</u> <u>At the first negative check the system stops and sends a message to the Participant or Instructing Party – same DN of the sender – containing the proper error code.</u>
4	-	<u>TIPS</u>	<u>TIPS retrieves the data corresponding to the submitted query and its input parameters.</u>
5	<u>ReturnTransaction</u>	<u>TIPS as sender</u> <u>Participant or Instructing Party as receiver</u>	<u>The system sends a message to the Participant or Instructing Party – same DN of the query sender – containing the query results.</u>

4) §2.7.1 Examples

This sub-section presents different examples of the possible different scenarios related to the queries on Account/CMB and on Payment Transaction. Scenarios and examples are not exhaustive.

The first one provides the example of a non-empty answer to an Account balance and status query.

The second one describes a non-empty answer to a CMB limit and status query.

Change Request form

The third one provides an example of a TIPS rejection for the TIPS Account/CMB not found.

The fourth one describes a non-empty answer to a Payment transaction status query.

The last one-provides an example of a TIPS rejection for a not existing Payment transaction.

For a detailed description of the Liquidity Transfer status query U2A screen, the reader may refer to the User Handbook (see [TARGET Instant Payment Settlement User Handbook](#)).

5) §2.7.1 Examples

A positive and a negative example of a Payment transaction status query shall be added.

6) §3.3.2.2.12 GetTransaction (camt.005.001.07)

GetTransaction (camt.005.001.07)

This message is sent by the TIPS actor to TIPS to instruct a Payment transaction status query.

The following table describes the message elements to be filled.

Table xx – GetTransaction (camt.005.001.07)

<u>Field Name</u>	<u>Description</u>	<u>XML path</u>	<u>Mand.</u>	<u>TIPS Usage</u>
<u>Message Identifier</u>	<u>Identification of the message</u>	<u>GetTx/MsgHdr/Msgld</u>	<u>Yes</u>	<u>This information will be included in the resulting camt.006</u>
<u>Request Type</u>	<u>Type of the request</u>	<u>GetTx/MsgHdr/ReqTp/Prtry/Id</u>	<u>Yes</u>	<u>Allowed value: "INPA" for Payment transaction status query</u>
<u>Debtor</u>	<u>BIC of the debtor of the searched IP Transaction</u>	<u>GetTx/TxQryDef/TxCrit/NewCrit/SchCrit/PmtFr/Mmbld/FinInstnId/BICFI</u>	<u>Yes</u>	
<u>Transaction Identification</u>	<u>Identification of the Instant Payment Transaction to be found.</u>	<u>GetTx/TxQryDef/TxCrit/NewCrit/SchCrit/PmtSch/TxId</u>	<u>Yes</u>	<u>paces.008 Transaction Identification or paces.004 Return Identification</u>

7) §3.3.2.2.13 ReturnTransaction (camt.006.001.07)

ReturnTransaction (camt.006.001.07)

Change Request form

This message is sent by TIPS to the interested TIPS Actor as an answer to a previously received Payment transaction status query

Table xx – ReturnTransaction (camt.006.001.07)

Field Name	Description	XML path	Mand.	TIPS Usage
<u>Message Identifier</u>	<u>Identification of the message assigned by TIPS</u>	<u>Document/RtrTx/MsgHdr/Msgld</u>	<u>Yes</u>	
<u>Original Query Message Identifier</u>	<u>Identification of the originating query message</u>	<u>Document/RtrTx/MsgHdr/OrqnlBizQry/Msgld</u>	<u>Yes</u>	<u>Field is filled with originating Message Identifier.</u>
<u>Request Type</u>	<u>Type of the request</u>	<u>Document/RtrTx/MsgHdr/ReqTp/Prtry/ld</u>	<u>Yes</u>	<u>Possible value:</u> <u>“INPA” for Payment transaction status query</u>
<u>Originator BIC</u>	<u>Originator of the Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/PmtFr/Mmbld/FinInstnld/BICFI</u>	<u>No</u>	
<u>Beneficiary BIC</u>	<u>Beneficiary of the Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/PmtTo/Mmbld/FinInstnld/BICFI</u>	<u>No</u>	
<u>Payment Transaction reference</u>	<u>Identification of the Instant Payment Transaction.</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Txld</u>	<u>Yes</u>	<u>pac.008 Transaction Identification or pac.004 Return Identification</u>
<u>Transaction Type</u>	<u>Type of the reported payment</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Tp/Cd</u>	<u>Yes</u>	<u>Possible value:</u> <u>“EXP” for Instant Payment Transaction</u>
<u>Payment transaction amount</u>	<u>Amount of the reported Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/IntrBkSttlmAmt/AmtWthCcy</u>	<u>Yes</u>	
<u>Payment</u>	<u>Status of the Instant Payment</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/</u>	<u>Yes</u>	

Change Request form

Field Name	Description	XML path	Mand.	TIPS Usage
<u>status code</u>	<u>Transaction and codes of related timestamps.</u>	<u>Cd</u>		
<u>Payment status code</u> + Final	<u>Status of the Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/Cd/Fnl</u>	<u>Yes</u>	Used to report the following statuses: - "STLD" for Settled; - "CAND" for Cancelled; - "FNLD" for Expired.
<u>Payment status code</u> + RTGS	<u>Status of the Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/Cd/RTGS</u>	<u>Yes</u>	Used to report the status "FAIL" for Failed.
<u>Payment status code</u> + Pending	<u>Status of the Instant Payment Transaction</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/Cd/Pdg</u>		Used to report the status "PSTL" for Reserved.
<u>Payment status code</u> ± Proprietary	<u>Proprietary code of the reported timestamp.</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/Cd/Prtry</u>	<u>Yes</u>	In combination with the Timestamp field, it identifies the reported timestamps related to the Instant Payment Transaction. Possible values: - "ACCP" for acceptance timestamp; - "ORCV" for payment transaction reception timestamp (from the originator); - "BFWD" for payment transaction forwarding timestamp (to the beneficiary); - "BRCV" for confirmation reception timestamp (from the beneficiary); - "OFWD" for confirmation to the originator

Change Request form

Field Name	Description	XML path	Mand.	TIPS Usage
				<u>timestamp.</u>
<u>Timestamp</u>	<u>Timestamp related to the status code</u>	<u>Document/RtrTx/RptOrErr/BizRpt/TxRpt/TxOrErr/Tx/Pmt/Sts/DtTm/DtTm</u>	No	<p>In case the status is <u>STLD</u>, it reports the <u>time at which Instant Payment Transaction was settled.</u></p> <p>For the <u>Proprietary codes in Sts/Cd/Prtry</u>, it reports the following <u>timestamps:</u></p> <ul style="list-style-type: none"> - for "ACCP", the <u>acceptance timestamp;</u> - for "ORCV", the <u>payment transaction reception timestamp (from the originator);</u> - for "BFWD", the <u>payment transaction forwarding timestamp (to the beneficiary);</u> - for "BRCV", the <u>confirmation reception timestamp (from the beneficiary);</u> - for "OFWD", the <u>confirmation to the originator timestamp.</u> <p>It is not reported otherwise</p>
<u>Reason</u>	<u>Reason of the unsettled status</u>	<u>Document/RtrTx/RptOrErr/OprlErr/Err/Prtry</u>		<u>Not filled in case the Transaction status is settled</u>

Table xx – ReturnTransaction (camt.006.001.07) – error scenario

Field Name	Description	XML path	Mand.	TIPS Usage
<u>Message Identifier</u>	<u>Identification of the message assigned by</u>	<u>Document/RtrTx/MsgHdr/MsgId</u>	Yes	

Change Request form

Field Name	Description	XML path	Mand.	TIPS Usage
	<u>TIPS</u>			
<u>Original Query Message Identifier</u>	<u>Identification of the originating query message</u>	<u>Document/RtrTx/MsgHdr/OrgnBizQry/Msgld</u>	<u>Yes</u>	<u>Field is filled with originating Message Identifier.</u>
<u>Request Type</u>	<u>Type of the request</u>	<u>Document/RtrTx/MsgHdr/ReqTp/Prtry/ld</u>	<u>Yes</u>	<u>Possible value:</u> <u>"INPA" for Payment transaction status query</u>
<u>Operational Error</u>	<u>Specifies the error occurred when processing the originating query message</u>	<u>Document/RtrTx/RptOrErr/OpriErr/Err/Cd</u>	<u>Yes</u>	

8) §4.1 Business Rules

Business process	BR Name	Check ID	Input Fields and parameters	Business check	Error codes	Error Description
[...]	[...]	[...]	[...]	[...]	[...]	[...]
<u>Queries business process</u>	<u>Payment Transaction existence for query</u>	<u>070002</u>	<u>Transaction Identification</u> <u>Originator BIC</u> <u>Sender</u>	<u>The system checks that:</u> <u>- an item related to the Transaction Identification and to the Originator BIC exists in the transactional entity "Instant Payment" (Data retention period not expired)</u> <u>- the TIPS actor is the Originator of the interested Payment transaction or the Instructing Party acting on behalf of the Participant or Reachable Party on the originator side, or Beneficiary Participant and the Instructing Party acting on behalf of the Beneficiary Participant or Reachable Party on the beneficiary side.</u>	<u>If no row is present:</u> <u>- Business error RJCT, error code AG09</u>	
[...]	[...]	[...]	[...]	[...]	[...]	[...]

Change Request form

9) §4.1.4.1 Query Payment transaction – Search screen

[...]

This function is available in both U2A and A2A mode. In case the user is not entitled to view the data on the searched transaction an error code is returned.

[...]

10) §4.1.4.2 Query Payment transaction – Display screen

[...]

This screen displays detailed information on the status of the relevant payment transaction, showing whether the transaction was settled successfully. This function is available in both U2A and A2A mode. In case the user is not entitled to view the data on the searched transaction an error code is returned.

[...]

High level description of Impact:

The implementation of this Change Request will enable all TIPS Actors to the use of Payment Transaction Status query through the A2A mode.

Impacts on other projects and products:

Not detected

Outcome/Decisions:

General Information
Impact on TIPS
Business Interface

Change Request form

X	A2A Interface
	U2A Interface
Settlement Engine	
	Payment Transaction
	Liquidity Transfer
	Recall
Queries and Reports	
X	Queries
	Reports
Others	
	Testing tool
	Contingency message application
Common Components	
	ESMIG
	CRDM
	Archiving
	Billing
	DMT
Operational Tools	
	SLA Reporting
	TMS
	Technical Monitoring
	Change Management
	Capacity Management
Infrastructure request	

Change Request form

	Application components impacted	
	Application components not impacted	
Operational activities		
	Business activities impacted	
	Technical activities impacted	
New functionalities		
Impact on documentation		
Document	Chapter	Change
TIPS UDFS	- §1.5.1 General concepts	- Wording amended for the Payment transaction query allowed also in A2A mode.
	- §1.5.5.1 Queries	- Wording amended for the Payment transaction query allowed also in A2A mode.
	- §2.7 Queries	- Payment transaction query allowed also in A2A mode: description of messages used, involved actors and returned fields. A new query flow and a table describing the detailed steps have been added.
	- §2.7.1 Examples	- A positive and a negative example for Payment transaction query have been added.
	- §3.3.2.2.12 GetTransaction (camt.005.001.07)	- New section for camt.005 message.
	- §3.3.2.2.13 ReturnTransaction (camt.006.001.07)	- New section for camt.006 message.
	- §4.1 Business Rules	- One additional Business Rule added.
CRDM UDFS		

Change Request form

ESMIG UDFS		
Training documentation	<ul style="list-style-type: none"> - 08. FN.070_Queries, reports and notifications_v1.3_0 – FINAL - 03. FN.020_Access to TIPS_v1.3_0 - FINAL 	<ul style="list-style-type: none"> - Payment transaction query in A2A mode. - Payment transaction query in A2A mode.
Other documents	<ul style="list-style-type: none"> - TIPS UHB - §4.1.4.1 Query Payment transaction – Search screen - TIPS UHB - §4.1.4.1 Query Payment transaction – Search screen - xsd specifications and examples: <ul style="list-style-type: none"> - camt.005.001.07 - camt.006.001.07 	<ul style="list-style-type: none"> - Wording amended for the Payment transaction query allowed also in A2A mode. - Wording amended for the Payment transaction query allowed also in A2A mode. - Message schema and xml example. - Message schema and xml example.

Overview of the impact of the request on TIPS
Summary of functional, development, infrastructure, operational and security impacts
<p><u>Summary of functional impact:</u></p> <p>In order to support the ACHs on their monitoring and reconciliation activities, TIPS should be adapted in order to support the Payment Transaction Status query also in A2A mode via camt.005/camt.006 messages.</p> <p>An update of the TIPS functional documentation is required in the following areas:</p> <ul style="list-style-type: none"> - TIPS UDFS;

Change Request form

- TIPS UHB;
- Message schema for camt.005, camt.006;
- TIPS Training material.

Summary of application development impact:

TIPS application shall be enhanced in order to accept camt.005 from NSP, parse and validate it, get all the needed information from Operational Database, build the answer message camt.006 and send it to the recipient.

More in detail:

1. TIPS.
 - 1.1. TIPS Network adapter
 - NW adapter shall make it possible to receive a signed camt.005 from the NSP gateway; such a message shall be parsed and properly rejected (admi.007) in case of parsing error.
 - At the end of the processing chain, the answer message camt.006 shall be passed to the NSP gateway with all the information to sign the message on behalf of the platform.
 - Technical confirmation messages (ack/nack) related to the transmission of camt.006 shall be processed as for any other message sent.
 - 1.2. TIPS Router
 - The TIPS Router shall be able to validate and process the camt.005 incoming message arriving from participants and perform the authorisation checks
 - The TIPS Router shall be able to get all the information needed to prepare the answer, accessing to the Operational database and handle the error conditions (both technical and business, e.g. for payment not found).
 - The TIPS Router shall be able to produce the camt.006 reply message.
 - 1.3. TIPS Testing tool
 - Possibility to simulate the arrival of camt.005 and sending of camt.006.

Summary of infrastructure impact:

Although conceptually this change has a modest infrastructural impacts, some tunings and additional configurations to be applied on top of the existing infrastructures will be necessary.

Summary of operational impact:

Change Request form

No operational impact.

Summary of security impact:

See Change Request analysis.