

TIPS A2A Workshop in view of the migration to ISO20022 MR Version2019 - New Suffix Usage

29 SEPTEMBER 2023

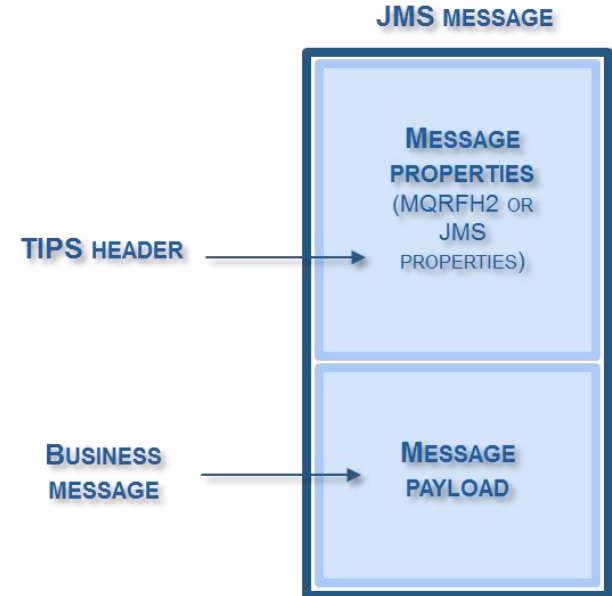
- The upcoming **TIPS R2023.NOV** release will bring a significant **change of A2A configuration** due to the **migration to ISO 20022 MR version 2019** and the deployment of, among others, the following change requests:
 - [TIPS-0052-SYS - Alignment of TIPS to the 2023 Version of the SCTInst specifications and MyStandards migration](#)
 - [TIPS-0055-SYS - Update of TIPS non-Euro message specifications](#)
 - [TIPS-0056-SYS - Additional EPC requirements on migration aspects](#)
- The content of these change requests has been incorporated in the **Scope Defining Documents** relevant for TIPS Users. The updated versions can be found below:
 - [TIPS - User Detailed Functional Specifications \(UDFS\) Version R2023.NOV](#)
 - [TIPS MEPT Implementation Guide R2023.NOV](#)

- Instant Payment messages are transmitted using the Instant messaging network service and the Message Exchange Processing for TIPS (MEPT) protocol, described in the related document [TIPS Connectivity - Message exchange processing](#).

- According to the MEPT protocol, a generic TIPS message is made of two main sections:

- **The message header at transport level**, containing all the information that enrich the message but are not strictly related to the message content (routing, signature, etc.)

- **The business message payload**, containing the ISO business message.



Since June 2021 (TIPS R3.1), TIPS supports **two message sets** for both (i) the settlement of Instant Payments and (ii) the related business cases such as Recall and Investigation:

- One set of messages for **SCT^{Inst} scheme**

- pacs.002.001.03
- pacs.008.001.02
- pacs.004.001.02
- camt.056.001.01
- camt.029.001.03
- pacs.028.001.01

- A new set of messages for **non-Euro schemes**

- pacs.002.001.10
- pacs.008.001.08
- pacs.004.001.09 (from R4.0 on)
- camt.056.001.08 (from R4.0 on)
- camt.029.001.09 (from R4.0 on)
- pacs.028.001.03 (from R4.0 on)

Different customizations (XSD) have been applied to the two sets, according to the related requirements.

When a message is delivered to TIPS, the message router uses the **message type** in order to select the proper schema for the schema validation process.

With the alignment to the 2023 version of the EPC specifications and the migration to ISO MR2019 for messages dedicated to the euro community, the two message sets (SCTInst and non-EURO) will **share the same message types**, including **version**, as both will be aligned to ISO MR2019 (e.g. pacs.008 **V08** for SCTInst and pacs.008 **V08** for non-EURO).

The message type will be no longer sufficient for the completion of the schema validation process: an **additional information** is needed.

Moreover, since the message payload is not accessible before the schema validation check, this information should be present **at transport protocol level** (Message Exchange Processing for TIPS (**MEPT**) protocol), considering also that the *message payload cannot be changed* in order not to lose compliance with the requirements underlying the two sets and with the ISO20022 standard.

The proposed solution is to **add a suffix** to the value of the existing MsgType MEPT property to distinguish the two sets, as shown in the following example:

- MsgType=**pacs.008.001.08.EPC** for messages sent in EUR compliant with the **SCTInst** specifications
- MsgType=**pacs.008.001.08.NPC** for messages sent e.g. in SEK compliant with the **non-Euro** specifications

4 Message Types/ Flow Types

This is the list of message types and related flows that have to be **allowed between the TIPS Platform and the Actors**.
The “ISO Message Type” column shows the permitted values that can be assigned to the *MsgType* header field.

.....

4.4 Message Types for TIPS 6.0 ➔ R2023.NOV

The following message types are added as part of TIPS 6.0:

ISO Message Type (MsgType)	Sender	Receiver	Technical service
pac.008.001.08.EPC	Actor	Platform	Instant Messaging
pac.008.001.08.EPC	Platform	Actor	Instant Messaging
pac.002.001.10.EPC	Actor	Platform	Instant Messaging
pac.002.001.10.EPC	Platform	Actor	Instant Messaging
pac.028.001.03.EPC	Actor	Platform	Instant Messaging
pac.028.001.03.EPC	Platform	Actor	Instant Messaging
camt.056.001.08.EPC	Actor	Platform	Instant Messaging
camt.056.001.08.EPC	Platform	Actor	Instant Messaging
camt.029.001.09.EPC	Actor	Platform	Instant Messaging
camt.029.001.09.EPC	Platform	Actor	Instant Messaging
pac.004.001.09.EPC	Actor	Platform	Instant Messaging
pac.004.001.09.EPC	Platform	Actor	Instant Messaging
pac.008.001.08.NPC	Actor	Platform	Instant Messaging
pac.008.001.08.NPC	Platform	Actor	Instant Messaging
pac.002.001.10.NPC	Actor	Platform	Instant Messaging
pac.002.001.10.NPC	Platform	Actor	Instant Messaging
pac.028.001.03.NPC	Actor	Platform	Instant Messaging
pac.028.001.03.NPC	Platform	Actor	Instant Messaging
camt.056.001.08.NPC	Actor	Platform	Instant Messaging
camt.056.001.08.NPC	Platform	Actor	Instant Messaging
camt.029.001.09.NPC	Actor	Platform	Instant Messaging
camt.029.001.09.NPC	Platform	Actor	Instant Messaging
pac.004.001.09.NPC	Actor	Platform	Instant Messaging
pac.004.001.09.NPC	Platform	Actor	Instant Messaging

4.4 Message Types for TIPS 6.0 (TIPS R2023.NOV)

After completion of the TIPS 6.0 deployment, the following message types can be safely removed:

ISO Message Type (MsgType)	Sender	Receiver	Technical service
pac.008.001.02	Actor	Platform	Instant Messaging
pac.008.001.02	Platform	Actor	Instant Messaging
pac.002.001.03	Actor	Platform	Instant Messaging
pac.002.001.03	Platform	Actor	Instant Messaging
pac.028.001.01	Actor	Platform	Instant Messaging
pac.028.001.01	Platform	Actor	Instant Messaging
camt.056.001.01	Actor	Platform	Instant Messaging
camt.056.001.01	Platform	Actor	Instant Messaging
camt.029.001.03	Actor	Platform	Instant Messaging
camt.029.001.03	Platform	Actor	Instant Messaging
pac.004.001.02	Actor	Platform	Instant Messaging
pac.004.001.02	Platform	Actor	Instant Messaging
pac.008.001.08	Actor	Platform	Instant Messaging
pac.008.001.08	Platform	Actor	Instant Messaging
pac.002.001.10	Actor	Platform	Instant Messaging
pac.002.001.10	Platform	Actor	Instant Messaging
pac.028.001.03	Actor	Platform	Instant Messaging
pac.028.001.03	Platform	Actor	Instant Messaging
camt.056.001.08	Actor	Platform	Instant Messaging
camt.056.001.08	Platform	Actor	Instant Messaging
camt.029.001.09	Actor	Platform	Instant Messaging
camt.029.001.09	Platform	Actor	Instant Messaging
pac.004.001.09	Actor	Platform	Instant Messaging
pac.004.001.09	Platform	Actor	Instant Messaging



Same information is also reflected as 'Dropped in 6.0' under NOTE column in sections:

4 Message Types/ Flow Types

and

4.3 Message Types for TIPS 3.1 and 4.0

ISO Message Type (MsgType)	Sender	Receiver	Technical service	NOTE
pac.008.001.08	Actor	Platform	Instant Messaging	Dropped in 6.0
pac.008.001.08	Platform	Actor	Instant Messaging	Dropped in 6.0
pac.002.001.10	Actor	Platform	Instant Messaging	Dropped in 6.0
pac.002.001.10	Platform	Actor	Instant Messaging	Dropped in 6.0
pac.004.001.09	Actor	Platform	Instant Messaging	Dropped in 6.0
pac.004.001.09	Platform	Actor	Instant Messaging	Dropped in 6.0
pac.028.001.03	Actor	Platform	Instant Messaging	Dropped in 6.0
pac.028.001.03	Platform	Actor	Instant Messaging	Dropped in 6.0
camt.029.001.09	Actor	Platform	Instant Messaging	Dropped in 6.0
camt.029.001.09	Platform	Actor	Instant Messaging	Dropped in 6.0
camt.056.001.08	Actor	Platform	Instant Messaging	Dropped in 6.0
camt.056.001.08	Platform	Actor	Instant Messaging	Dropped in 6.0

```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeYId>1234</HMACKeYId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacS.008.001.02</MsgType>
  <SendTimestamp>2023-10-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-10-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.02" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <FIToFICstmrCdtTrf>
    <GrpHdr>
      <MsgId>MSG001</MsgId>
      <CreDtTm>2023-10-19T12:00:01.222Z</CreDtTm>
      [...]
    </FIToFICstmrCdtTrf>
  </Document>
```

*Examples are proposed referring to MEPT interface.
DiCoAs should «map» the MsgType field according to
A2A interface of the selected NSP – See Annex I - II*


```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeYid>1234</HMACKeYid>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacS.008.001.08</MsgType>
  <SendTimestamp>2023-10-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-10-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.08" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <FIToFICstmrCdtTrf>
    <GrpHdr>
      <MsgId>MSG001</MsgId>
      <CreDtTm>2023-10-19T12:00:01.222Z</CreDtTm>
      [...]
    </FIToFICstmrCdtTrf>
  </Document>
```

```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeYId>1234</HMACKeYId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacS.008.001.08.EPC</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacS.008.001.08" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <FIToFICstmrCdtTrf>
    <GrpHdr>
      <MsgId>MSG001</MsgId>
      <CreDtTm>2023-12-19T12:00:01.222Z</CreDtTm>
      [...]
    </FIToFICstmrCdtTrf>
  </Document>
```

```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeyId>1234</HMACKeyId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacs.008.001.08.NPC</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.008.001.08" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <FIToFICstmrCdtTrf>
    <GrpHdr>
      <MsgId>MSG001</MsgId>
      <CreDtTm>2023-12-19T12:00:01.222Z</CreDtTm>
      [...]
    </GrpHdr>
  </FIToFICstmrCdtTrf>
</Document>
```

- 1 - Wrong value in **Header *Message Type*** field (i.e. pacs.008 V08 missing **.EPC** suffix)
 - A) Nexi-Colt -> rejection with Nexi-Colt sending a technical Ack back to TIPS Actor**
 - B) SWIFT -> SWIFT forwards XML to TIPS and *admi.007* rejection with Parsing error 'X001'

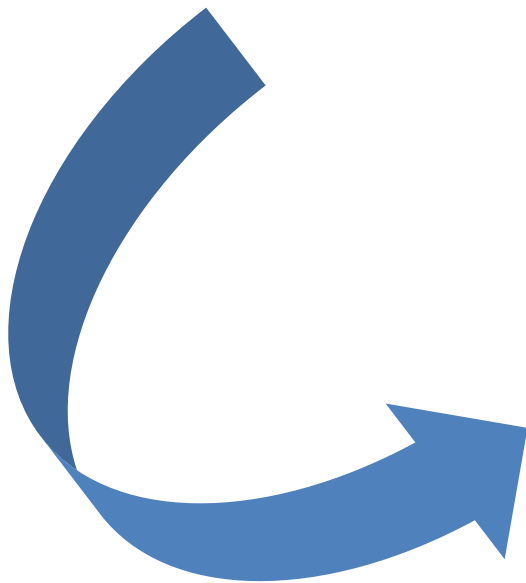
- 2 - Wrong value in **Header *Message Type*** field (i.e. **.EPC** suffix wrongly added - A2A query camt.005)
 - A) Nexi-Colt -> rejection with Nexi-Colt sending a technical Ack back to TIPS Actor
 - B) SWIFT -> SWIFT forwards XML to TIPS and *admi.007* rejection with Parsing error 'X001'

- 3 - Correct **.EPC** suffix in Header *Message Type*, but wrong suffix usage in ***Message payload***
 - A) the **.EPC** suffix is wrongly added in the namespace declaration
Both Nexi-Colt and SWIFT -> forward XML to TIPS -> XSD schema validation fails -> *admi.007* rejection with Parsing error X001
 - B) the **.EPC** suffix is wrongly added under a 'business' tag (i.e. under 'Original Message Name ID' tag)
Both Nexi-Colt and SWIFT -> forward XML to TIPS -> TIPS Usage check validation fails -> *pacs.002* rejection with 'business' error *MS01*

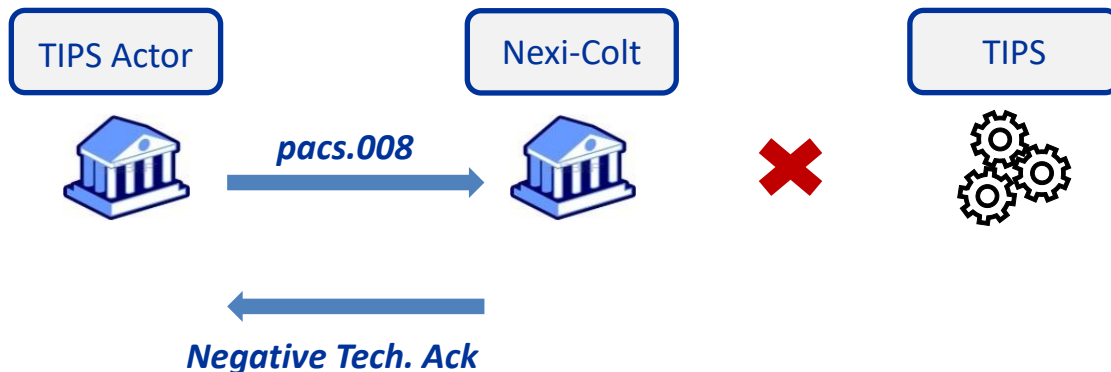
* All Use Cases refer to SCT^{Inst} scenario in PROD environment as of 19 November 2023 03:30 AM CET

**Nexi-Colt will enforce this check only few weeks after 19 November 2023 and will behave as case B in the interim period

TIPS Actor is sending to TIPS a pacs.008 under SCT^{Inst} scheme, but does not add the .EPC suffix in Header *MsgType* field

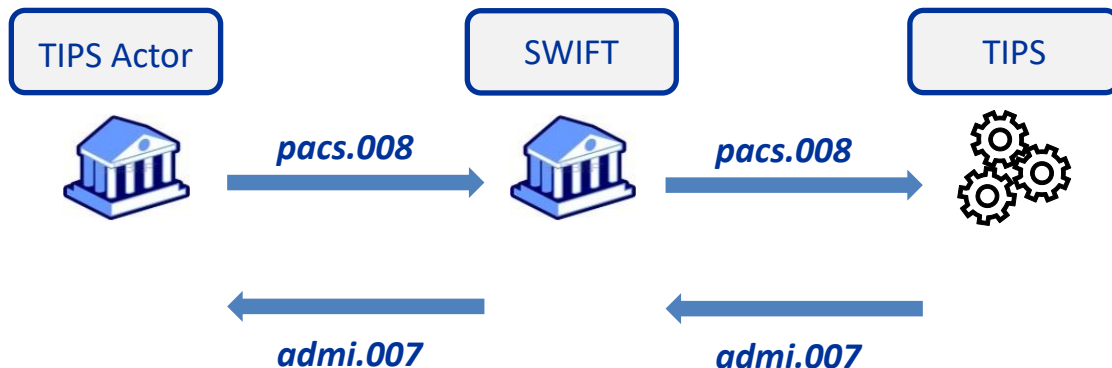


```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeyId>1234</HMACKeyId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacs.008.001.08</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
```



Nexi-Colt directly rejects the XML message via Technical Ack negative response (SendErr)*

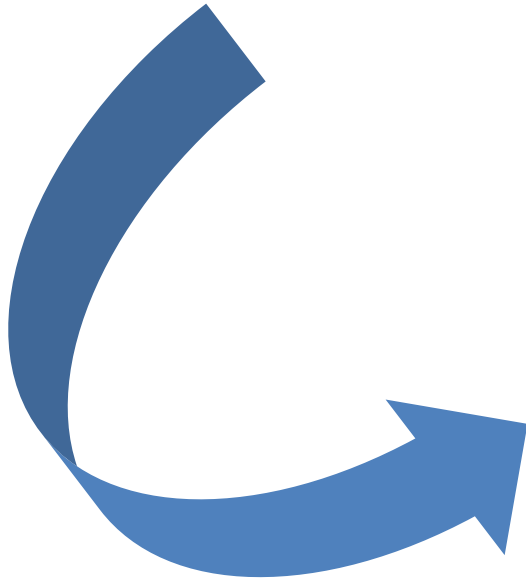
*Nexi-Colt will enforce this check only few weeks after 19 November 2023 and will behave as case B in the interim period



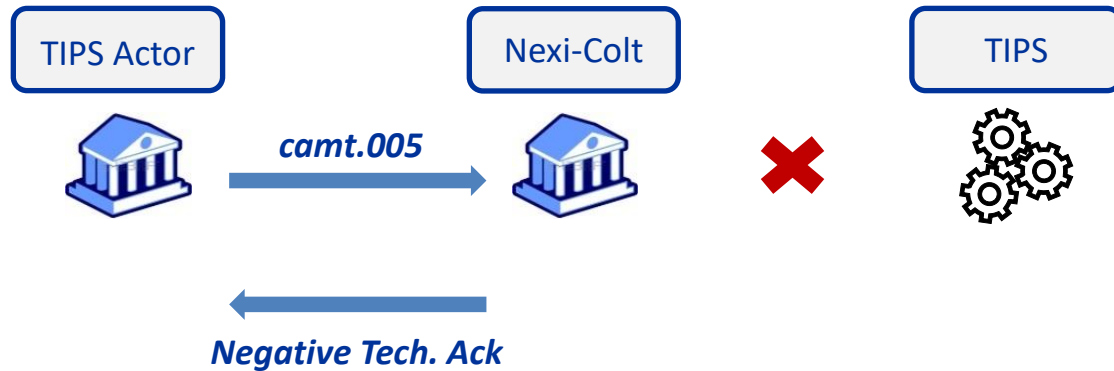
SWIFT forwards the XML messages

TIPS rejects the XML message via *admi.007* with 'X001' parsing error

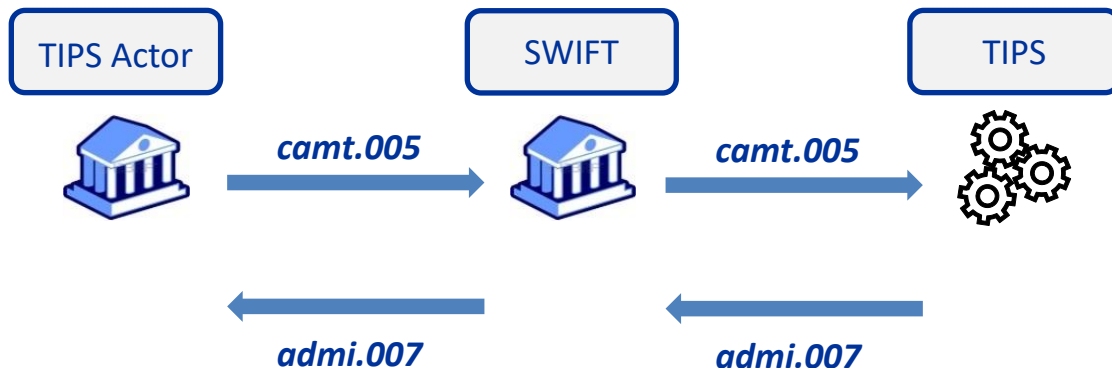
TIPS Actor is sending to TIPS a camt.005 under SCT^{Inst} scheme,
but adds the **.EPC** suffix, which is not required by TIPS, in Header *MsgType* field



```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeyId>1234</HMACKeyId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>DRAFT2camt.005.001.07.EPC</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
```

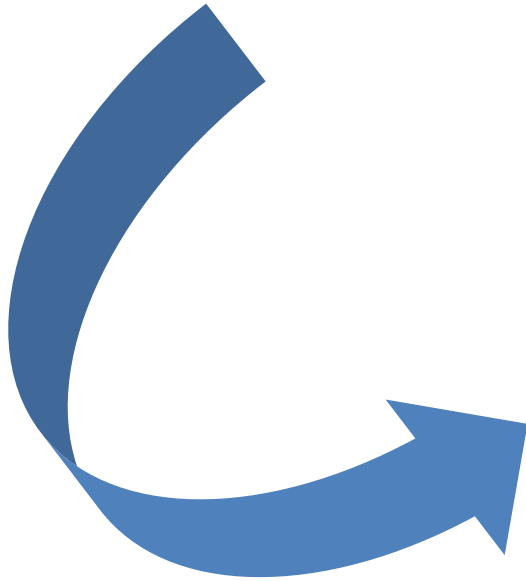
Nexi-Colt directly rejects the XML message via Technical Ack negative response (SendErr)



SWIFT forwards the XML messages

TIPS rejects the XML message via *admi.007* with 'X001' parsing error

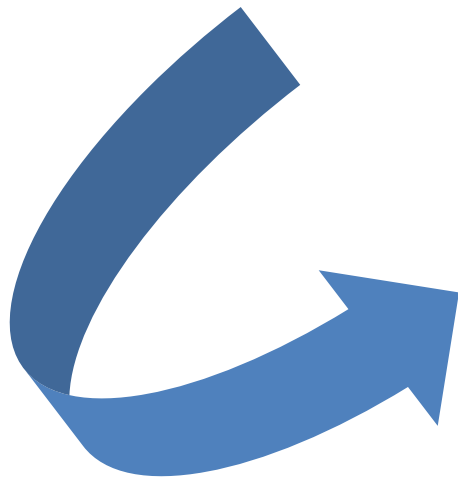
TIPS Actor is sending to TIPS a pacs.008 under SCT^{Inst} scheme and correctly adds the .EPC suffix in Header *MsgType* field...*



```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeyId>1234</HMACKeyId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacs.008.001.08.EPC</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
```

* Both NSPs will forward the XML message to TIPS in this case

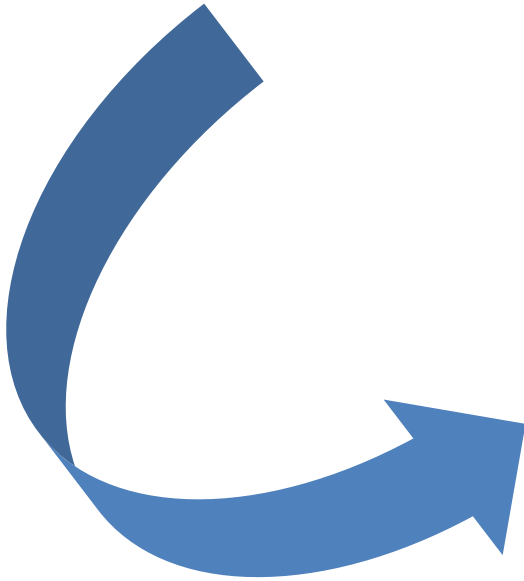
...but adds the **.EPC** suffix, which is not required by TIPS, also in the Message Payload under namespace declaration



```
...
<Document xmlns="urn:iso:std:iso:2002:tech:xsd:pacs.008.001.08.EPC"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" >
<FIToFICstmrCdtTrf>
  <GrpHdr>
    <MsgId>MSG001</MsgId>
    <CreDtTm>2023-12-19T12:00:01.222Z</CreDtTm>
    [...]
  </FIToFICstmrCdtTrf>
</Document>
```

TIPS rejects the XML message via *admi.007* with 'X001' parsing error

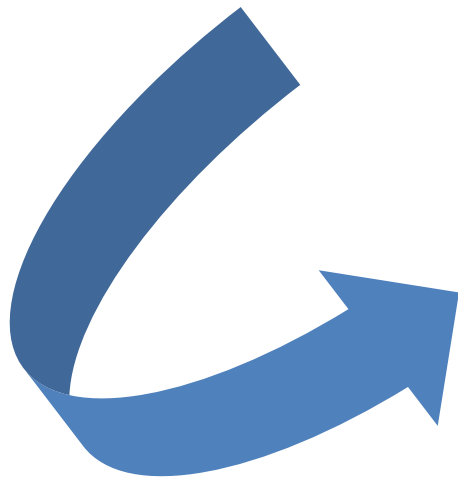
TIPS Beneficiary Actor is sending to TIPS a pacs.002 under SCT^{Inst} scheme to accept/reject an IP, correctly adding the .EPC suffix in Header *MsgType* field...*



```
<rfh2>
  <HMAC>dGhpcyBpcyBub3QgYSBzaWduYXR1cmUK...</HMAC>
  <HMACKeyId>1234</HMACKeyId>
  [...]
  <PrimitiveType>ReceiveIndication</PrimitiveType>
  <MsgType>pacs.002.001.10.EPC</MsgType>
  <SendTimestamp>2023-12-19T12:00:01.222Z</SendTimestamp>
  <ReceiveTimestamp>2023-12-19T12:00:01.777Z</ReceiveTimestamp>
  <MsgBizIdentifier>MSG001</MsgBizIdentifier>
  <MsgNetworkIdentifier>NWX000001</MsgNetworkIdentifier>
</rfh2>
```

* Both NSPs will forward the XML message to TIPS in this case

...but adds the **.EPC** suffix, which is not required by TIPS, also in the Message Payload under the *Original Message Name Identification* tag `<OrgnlMsgNmId>`



```
[...]  
<Document xmlns="urn:iso:std:iso:20022:tech:xsd:pacs.002.001.10"  
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xsi:schemaLocation="urn:iso:std:iso:20022:tech:xsd:pacs.002.001.10">  
  <FIToFICstmrCdtTrf>  
    <GrpHdr>  
      <MsgId>MSG001</MsgId>  
      <CreDtTm>2023-12-19T12:00:01.222Z</CreDtTm>  
      [...]  
      <OrgnlMsgNmId>pacs.008.001.08.EPC</OrgnlMsgNmId>  
      [...]  
    </FIToFICstmrCdtTrf>  
  </Document>
```

TIPS rejects the XML message via *pacs.002* with 'MS01' business error code

Thank you for the attention!

New values with “.EPC” or “.NPC” suffixes to be used in field <Flow>



Nexi-Colt	MEPT
<ImxSendReq>/<ImxServiceHeader>/<NetAddressing>/<From>	Sender
<ImxSendReq>/<ImxServiceHeader>/<NetAddressing>/<To>	Receiver
<ImxSendReq>/<ImxServiceHeader>/<NetAddressing>/<Flow>	MsgType
<ImxSendReq>/<ImxServiceHeader>/<End2EndData>/<MsgId>	MsgBizIdentifier
<ImxSendReq>/<ImxServiceHeader>/<End2EndData>/<SubmissionTs>	SendTimestamp

Example :

```
<ImxSendReq>
  <ImxServiceHeader>
    <NetAddressing>
      <From>cn=dicoata,ou=tips,o=12431,dc=sianet,dc=sia,dc=eu</From>
      <To>cn=platform,ou=tips,o=88020,dc=sianet,dc=sia,dc=eu</To>
      <Domain>IMX.PRD.TIPS</Domain>
      <App>PAY</App>
      <Flow>pacs.008.001.08.EPC</Flow>
    </NetAddressing>
    <End2EndData>
      <MsgId>9615783986a440a089d3a90aaf3266a2</MsgId>
      <SubmissionTs>2023-09-25T14:39:16.307Z</SubmissionTs>
    </End2EndData>
  </ImxServiceHeader>
</ImxSendReq>
```


Swift's Solution for ESMIG supports the upcoming TIPS R2023.NOV version

- Including specifying the correct Header Message Type in the TIPS Header

How does it work in practice?

- Alliance Gateway Instant (AGI) supports all message types and related flows between TIPS Platform and Actors
- Routing rules criteria can optionally be defined in AGI configuration for the <MsgType> suffix
- More information can be found in the link below:
[AGI User Guide](#) > Section "Generic Configuration Data when Using Message Broker"

Swift Customer Support teams are on hand 24/7 to answer specific queries if you don't find the information resources you are looking for.