CHAPS ISO 20022 over SWIFT

Getting Started Guide

Version 1.0

This document provides CHAPS direct participants with guidance for implementing CHAPS ISO 20022 over SWIFT.
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1 Introduction

1.1 Purpose of this Document

This Getting Started Guide provides guidance for a CHAPS direct participants (DPs) to connect and exchange CHAPS ISO 20022 messages over SWIFTNet, using InterAct Store-and-Forward Y-Copy messaging. For the sake of brevity and simplicity, the term CHAPS-ISO will be used throughout this guide referencing various aspects of the SWIFT solution for CHAPS ISO 20022, i.e. business message standards, SWIFTNet services, InterAct & Y-Copy messaging, SWIFT interface connectivity and back-office integration.

It is anticipated that all of the DPs’ CHAPS-ISO projects are well underway and that this guide is complimentary to any planning, design and implementation work already in progress. This guide is aimed at the DPs’ business operations, business application development and SWIFT technical staff who are involved in their CHAPS-ISO project. Also, this guide can be used in conjunction with the BoE’s ‘CHAPS & RTGS ISO20022 migration: revised approach and final schemas’ (Oct 2020) and SWIFT’s ‘ISO Programme Customer Adoption Guide’ documents.

N.B. Details of the CHAPS ISO 20022 message standards, or Usage Guidelines / final schemas, are out-of-scope of this guide, but full specifications can be found on the Bank of England’s (BoE) MyStandards page on swift.com - https://www2.swift.com/mystandards/#/group/Bank_of_England

Although primarily aimed at existing CHAPS DPs migrating to the Bank of England’s (BoE) CHAPS-ISO SWIFTNet services, this guide is equally applicable to new CHAPS members.

Section 2 SWIFTNet Service(s) is aimed at staff who are responsible for completing the subscription e-forms on swift.com for the various BoE CHAPS-ISO SWIFTNet services. The BoE will have created five SWIFTNet services and a subscription e-form will need to be completed for each service. Further guidance provided in section 2.

Section 3 Connectivity is aimed at SWIFT technical staff who are responsible for configuring their SWIFT messaging interface to i) exchange CHAPS-ISO messages over SWIFT and ii) exchange CHAPS-ISO messages with their back-office or middleware application(s). Further guidance provided in section 3.

Section 4 Integration is aimed at SWIFT technical staff and business application developers responsible for configuring the connections and exchanging CHAPS-ISO messages between the back-office or middleware application(s) and the SWIFT messaging interface. Note, DPs will have their own specific integration requirements and solutions, which will need to be analysed by their
developers and vendors for the impact of CHAPS-ISO message flows. Further guidance provided in section 4.

1.2 Background

In general, a SWIFTNet service is a *closed user group* consisting of the *Service Administrator*, in this case the Bank of England (BoE) and *Service Participants*, in this case the Direct Participants (DPs) of the CHAPS service. The Service Administrator defines the live service, the pilot (or test) service(s) and various features for each service. A Service Participant submits a *subscription e-form* on swift.com, which must be approved by the Service Administrator, to join a SWIFTNet service.

The CHAPS-ISO SWIFTNet services are an evolution of the current CHAPS-FIN services. The BoE’s *RTGS Renewal Programme* consists of five SWIFTNet services, four pilot services and one production service, see table of service names below. Specific BoE CHAPS-ISO e-forms on swift.com must submitted by the DPs to subscribe to these services. Section 2 describes in detail how to complete these e-forms.

These services include: the adoption of ISO 20022 based messages; InterAct Store-and-Forward messaging; and Y-Copy messaging for exchanging CHAPS-ISO messages over SWIFT, see diagram below.
1.3 The SWIFT Solution for CHAPS ISO 20022

The diagram below highlights the general CHAPS-ISO message flows and an overview of the SWIFT solution for a DP. It shows the three parts of the SWIFT solution, i.e. **SWIFTNet Service(s)**: Connectivity, and Integration with each area having its own section in this guide. The numbered message flows in the diagram are described in the following General Message Flows section.

**CHAPS-ISO Message Flows**

The diagram below highlights the general CHAPS-ISO message flows and an overview of the SWIFT solution for a DP. It shows the three parts of the SWIFT solution, i.e. **SWIFTNet Service(s)**: Connectivity, and Integration with each area having its own section in this guide. The numbered message flows in the diagram are described in the following General Message Flows section.

1.4 General Message Flows

The CHAPS-ISO SWIFTNet services are an evolution of the current CHAPS-FIN services. They use the same Y-Copy concept as shown in the above diagram, i.e.

1. The DP sends a CHAPS-ISO payment message to the CHAPS-ISO SWIFTNet service
2. Settlement Request, the payment is held in SWIFTNet and copied to the BoE for authorisation
3. If Settlement Response is *authorised*, then (4) the payment is delivered to the receiver and the sender is notified (5) Status authorisation, **OR**
4. If Settlement Response is *refused*, then the payment is not delivered to the receiver and the sender is notified (5) Status refusal.

The status or notification messages in (5) are represented by the pacs.002 CHAPS-ISO status messages and **not** by the standard xsys.002 and xsys.003 messages, as documented in standard SWIFTNet Y-Copy flows. Note when a negative/refusal pacs.002 is returned, an xsys.012 abort system message will also be delivered to the sender. **The mechanism for how this pacs.002 notification message is generated and other reasons for receiving the xsys.012 abort system message are described in the Integration section of this guide.** The non-payment messages (6)
are also exchanged within the CHAPS-ISO services, e.g. reporting (camt.*) and administration (admi.*) messages, but not subject to the Y-Copy process.

As well as ISO 20022 standards, InterAct Store-and-Forward and Y-Copy messaging services, the BoE have defined the following features within their CHAPS-ISO SWIFTNet services:

- **Message Validation** – the CHAPS-ISO payment messages will be validated centrally by SWIFT against the CHAPS Usage Guidelines. Notes for developers:
  - the usage guidelines or Usage Identifier of the ISO 20022 message is added into the Request Sub-type field of the InterAct Request Header by the SWIFT messaging interface from the metadata data provided by the business application or middleware.
  - during TS2 CHAPS will only accept Like-for-Like (L4L) format messages and during TS2.1 CHAPS will only accept Enhanced (ENH) format messages. See Integration section for more details.

- **The Sender Notification message is delivered as a pacs.002 status message, not as xsys.002 or xsys.003.** See Integration section for more details on how this pacs.002 notification message is generated.

- **Addressing** – DPs must subscribe with a wildcard Level-3 Distinguished Name (DN) for all the pilot services (*, o=bic8, o=swift) and subscribe with a fixed Level-3 DN for the live service (ou=xxx, o=bic8, o=swift). This is further described in section 2.

- **Requestor DN–Business Application Header (BAH) BIC consistency check** for the live service.

- **Reverse Billing** – the DPs will be invoiced by SWIFT for their Y-Copy messages, the same as in today’s CHAPS-FIN services.

- **RMA is NOT used** for the CHAPS-ISO SWIFTNet services.
1.5 SWIFTNet Service Names for CHAPS ISO 20022

The BoE will deploy the following five CHAPS-ISO SWIFTNet services:

<table>
<thead>
<tr>
<th>Service Name</th>
<th>Purpose</th>
<th>Phase / Transition State (TS)</th>
<th>e-form Availability</th>
<th>Service Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>boe.stg.iast!pu1</td>
<td>UAT 1 pilot</td>
<td>TS2 (L4L) TS2.1 (ENH)</td>
<td>available</td>
<td>Nov 2021</td>
</tr>
<tr>
<td>boe.stg.iast!pe1</td>
<td>Pre-Production 1 pilot</td>
<td>TS2 (L4L) TS2.1 (ENH)</td>
<td>available</td>
<td>Nov 2021</td>
</tr>
<tr>
<td>boe.stg.iast!pu2</td>
<td>UAT 2 pilot</td>
<td>TS3 (ENH)</td>
<td>July 2022</td>
<td>Nov 2022</td>
</tr>
<tr>
<td>boe.stg.iast!pe2</td>
<td>Pre-Production 2 pilot</td>
<td>TS3 (ENH)</td>
<td>July 2022</td>
<td>Nov 2022</td>
</tr>
<tr>
<td>boe.stg.iast</td>
<td>Production live</td>
<td>TS2, TS2.1 TS3</td>
<td>January 2022</td>
<td>Expected March 2022</td>
</tr>
</tbody>
</table>

The pilot services are described below in sub-section 1.7

1.6 Key Go-live Milestones

<table>
<thead>
<tr>
<th>Date</th>
<th>Transition State (TS)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2022</td>
<td>TS2 - L4L</td>
<td>Like-for-Like message standards</td>
</tr>
<tr>
<td>February 2023</td>
<td>TS2.1 - ENH</td>
<td>ENHanced message standards</td>
</tr>
<tr>
<td>September 2023</td>
<td>TS3</td>
<td>RTGS core ledger live</td>
</tr>
<tr>
<td>2024 onwards</td>
<td>TS4</td>
<td>Further changes</td>
</tr>
</tbody>
</table>
1.7 Key Testing Dates

The following table has been provided by the BoE. Any questions or verification on these dates must be addressed to the BoE RTGS Readiness Team - rtgs.readiness@bankofengland.co.uk

<table>
<thead>
<tr>
<th>Service</th>
<th>Transition State (TS)</th>
<th>Phase</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAT1 (*pu1)</td>
<td>TS2</td>
<td>TS2 Connectivity/Training</td>
<td>15/11/21 – 26/11/21</td>
<td>This will be an opportunity to test connectivity to all TS2 test environments and also offer training for the External Test Simulator (ahead of TS2 Participant Testing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TS2 Participant Acceptance Testing (PAT)</td>
<td>31/01/22 – 04/03/22</td>
<td>The Bank will issue a TS2 mandatory test pack for each DP to complete using the Test Simulator (or ‘buddy banks’ if they wish) alongside any other testing the member may want to execute.</td>
</tr>
<tr>
<td>UAT1 (*pu1)</td>
<td>TS2.1</td>
<td>TS2.1 Participant Acceptance Testing (PAT)</td>
<td>12/09/22 – 14/10/22</td>
<td>The Bank will issue a TS2.1 mandatory test pack for each DP to complete using the Test Simulator (or ‘buddy banks’ if they wish) alongside any other testing the member may want to execute.</td>
</tr>
<tr>
<td>UAT2 (*pu2)</td>
<td>TS3</td>
<td>TS3 Connectivity/Training</td>
<td>01/11/22 – 15/11/22</td>
<td>This will be an opportunity to test connectivity to all TS3 test environments (ahead of TS3 Participant Testing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TS3 Participant Acceptance Testing (PAT)</td>
<td>13/02/23 – 17/03/23</td>
<td>The Bank will issue a TS3 mandatory test pack for each DP to complete using the Test Simulator (or ‘buddy banks’ if they wish) alongside any other testing the member may want to execute.</td>
</tr>
<tr>
<td>Pre-Prod1 (*pe1)</td>
<td>TS2</td>
<td>TS2 Connectivity/Training</td>
<td>01/11/21 – 12/11/21</td>
<td>This will be an opportunity to test connectivity to all TS2 test environments and also offer training for the External Test Simulator (ahead of TS2 Participant Testing)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TS2 Participant Group Testing (PGT)</td>
<td>28/02/22 – 06/05/22</td>
<td>A wider, more structured test phase where DPs test daily RTGS settlement</td>
</tr>
<tr>
<td>Dataset</td>
<td>Pre-Prod1 (*pe1)</td>
<td>Pre-Prod2 (*pe2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TS2.1</td>
<td>TS2.1 Participant Group Testing (PGT)</td>
<td>TS3 Connectivity/Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10/10/22 – 16/12/22</td>
<td>16/11/22 – 30/11/22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A wider, more structured test phase where DPs test daily RTGS settlement processes including multi-lateral message exchange with other DPs based on a live timetable. This may also include ‘scenario’ testing such as volumes, fall-back, contingency.</td>
<td>This will be an opportunity to test connectivity to all TS3 test environments (ahead of TS3 Participant Testing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TS3 Participant Group Testing (PGT)</td>
<td>06/03/23 – 09/06/23</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>06/03/23 – 09/06/23</td>
<td>A wider, more structured test phase where DPs test daily RTGS settlement processes including multi-lateral message exchange with other DPs based on a live timetable. This may also include ‘scenario’ testing such as volumes, fall-back, contingency.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2 SWIFTNet Service(s) for CHAPS ISO 20022

This section is aimed at staff who are responsible for completing the CHAPS-ISO subscription e-forms on swift.com. As previously mentioned, the BoE will deploy five SWIFTNet services for Pilot (Test) and Live operations. Each service will have its own subscription e-form. See previous table of CHAPS-ISO SWIFTNet services showing availability on the SWIFT network.

Use following link to BoE’s dedicated web page on swift.com to access all BoE e-forms –

https://www.swift.com/myswift/ordering/order-products-services/bank-england

2.1 How to access to the subscription e-forms


2. Under the Bank of England section all the BoE’s services will be displayed. Under sub-section “Subscribe to the CHAPS-ISO services” select the required service and click the “Subscribe” button.

3. If not already logged into swift.com, enter your account and password. If the credentials are correct, the relevant e-form (Test or Live) opens.

Ordering

| Ordering | Order Products and Services | Change | Terminate & deactivate |

Bank of England

This page allows you to subscribe to SWIFT services for the Bank of England

Place orders
Select the relevant e-form:

- “BOE CHAPS (Bank UAT Testing 1) (Test)” – for UAT testing in TS2 / TS2.1
- “BOE CHAPS (Pre-production 1) (Test)” - for external member testing in TS2 / TS2.1

The following e-forms will be available at a future date:

- “BOE CHAPS (Pre-production 2) (Test)” - for external member testing in TS3
- “BOE CHAPS (UAT Testing 2) (Test)” - for UAT testing in TS3 UAT
- “BOE CHAPS (Live)” - for the live service

1. Click on Subscribe to select the e-form. If not already logged into swift.com, enter your account and password. N.B. Only registered swift.com users can access the order form and must have the e-ordering profile for being able to submit e-orders.

2. If the credentials are correct, the relevant e-form (Test or Live) opens, showing the SWIFTNet service name, as in the example below.
2.2 How to complete the subscription e-forms

See below details in completing each part of the subscription e-form, applicable for both Test and Live services.

I. Registered Customer Information

This part contains the data related to your swift.com account / BIC and is automatically pre-filled with registered information.

<table>
<thead>
<tr>
<th>Registered customer information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drafted BIC</td>
<td>SWIQ8BBB</td>
</tr>
<tr>
<td>Full legal name</td>
<td>SOCIETY FOR WORLDWIDE INTERBANK</td>
</tr>
<tr>
<td>BIC8</td>
<td>SWIQ8BBB</td>
</tr>
<tr>
<td>The name with which you</td>
<td>Agnes Soltesz</td>
</tr>
<tr>
<td>registered yourself on swift.com</td>
<td></td>
</tr>
<tr>
<td>Registered e-mail</td>
<td><a href="mailto:Agnes.SOLTESZ@swift.com">Agnes.SOLTESZ@swift.com</a></td>
</tr>
<tr>
<td>Registered telephone</td>
<td>+31 +31 683624137</td>
</tr>
<tr>
<td></td>
<td>Update user profile</td>
</tr>
</tbody>
</table>

II. Order Information

- 3.01: enter the reference that SWIFT has to use for communication related to this service (e.g. invoices) Please note that there is no cost for submitting these subscription e-forms
- 3.02: leave the default value "S.W.I.F.T SC"
- 3.03: leave the field empty
- 3.04: enter the email address of your SWIFT account manager

III. Institution that you order for

- 4.01: Specify the BIC8 you use for CHAPS operations. Either it will be the default displayed or select your CHAPS BIC8 from the drop-down list. It will be the same BIC8 as the level-2 BIC8 of your Distinguished Name in field 6.01 of this e-form.
IV. Preferred implementation date

- 5.01: enter implementation date agreed with Bank of England

Notes:
- The Preferred Implementation date must be 16th October 2021 for the UAT 1 and Pre-Production 1 services. The e-forms will be available from June 2021 and will be approved by the BoE in October 2021. Due date to complete the forms is 1st October 2021.
- The Preferred Implementation date must be 15th October 2022 for the UAT 2 and Pre-Production 2 services. The e-forms will be available from July 2022 and will be approved by the BoE in October 2022. Due date to complete the forms is 30 September 2022.
- For the live service the e-form will be available from January 2022. Due date to complete the form is 18th February 2022.

V. SWIFTNet Closed User Group
6.01: The SWIFTNet Address is the Distinguished Name (DN) that is used as Requestor DN to send messages. By default, your Level-2 DN will be displayed in the e-form, **but a Level-3 DN must be specified**.

To do this, **please specify a Level-3 DN in field 6.01**, as defined below

For the Test services, the Level-3 DN must be specified as: 
*contact email:*, o=BIC8, o=swift

For the Live service, the Level-3 DN must be specified as: 
*ou=xxx, o=BIC8, o=swift*

6.02: keep the default value for 'CUG Category' - "Member".

Additional step is required: Please click on "Advanced", update the number of entries to “1” and click on “update”:

![Select number of entries](Image)
VI. Traffic Routing for Store and Forward Service

Specify your Store and Forward queues for the TEST services as follows:

In this section you are able to specify the queue for your incoming InterAct Store and Forward (SnF) messages.

- 7.01: the default value of the ‘Full Queue Name’ will be automatically filled in the e-form. This needs to be customized as per your own preferred SnF queue name in field 7.02.01. For the customization please click on “Advanced” and specify your own preferred SnF queue name in 7.02.01.

- 7.02.01: in this section you need to specify your preferred ‘Full Queue Name’. Please note that the Responder DN, i.e. your receiving address must be identical with the Level-3 DN indicated under 6.03.002 (*,o=bic8,o=swift)

- 7.03: in this section you can indicate (if required) a separate queue (other than the SnF queue specified under 7.01 and 7.02.01) for the reception of the Delivery Notification messages. If no separate queue is required for the Delivery Notification messages, this section can remain empty.
Specify your Store and Forward queues for the **LIVE** service as follows:

In this section you are able to specify the queue for your **incoming** InterAct Store and Forward (SnF) messages

- **7.01:** the default value of the ‘Full queue name’ will be automatically filled in the order form in 7.01. This needs to be customized as per your own preferred SnF queue name in field 7.02.01. For the customization please click on “Advanced” and specify your own preferred SnF queue name in 7.02.01.

- **7.02.01:** in this section you need to specify your preferred SnF queue name(s). Please note that the Responder DN, i.e. your receiving address must be identical with the Level-3 DN indicated under 6.03.002 (**ou=xxx,o=bic8,o=swift**)

- **Question 7.03:** in this section you can indicate (if required) a separate queue (other than the SnF queue specified under 7.01 and 7.02.01) for the reception of the delivery notification messages. If no separate queue is required for the delivery notification messages, this section can remain empty.

### VII. Forms Validation and Subscription

Once the e-form has been completed scroll down and click on the “**Continue**” button for initial validation of the e-form.

If valid, then confirm your subscription request and click on “**Order now**”.

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Your e-form will be further validated by SWIFT, before forwarding to the Bank of England for approval.

Your subscription status can be monitored using the order tracking tool of swift.com.
3 Connectivity

3.1 Introduction

This section is aimed at SWIFT technical staff who are responsible for configuring i) their SWIFT messaging interface to exchange CHAPS-ISO messages over SWIFTNet, and ii) their SWIFT messaging interface to exchange CHAPS-ISO messages with their back-office or middleware application(s).

Further details can be obtained from your SWIFT messaging interface provider, but as the CBPR+ ISO solution (FINplus) also uses InterAct Store & Forward like CHAPS-ISO, then the ‘ISO Programme Customer Adoption Guide’ (ISO-CAG) can be used by DPs for further guidance on configuring their SWIFT messaging interfaces for CHAPS-ISO.

In FIN, Logical Terminals are used to ‘connect to SWIFTNet’ for sending / receiving MT messages and MT messages are received via FIN Delivery-Subsets.

In InterAct, Input Channels/Sessions are used to ‘connect to SWIFT’ for sending MX-ISO messages and Store and Forward Queues/Output Channels/Sessions are used for receiving MX-ISO messages. Both FIN and InterAct operate in Store-and-Forward mode. Further details on these concepts can be found in section 4.1 of the ISO-CAG document.

See below general guidance for these flows and connections, as taken from the ISO-CAG.

3.2 Configuring the Sending to SWIFTNet Flow

The below steps have been taken from the ISO-CAG document section 4.1 and where applicable CHAPS-ISO specific terms and comments have been made in bold italics.

1. Complete CHAPS-ISO e-form. *(as described in section 2 of this Getting Started Guide).*
2. Choose a Delivery Notification Queue (existing or create a new one in the e-form).
3. Prepare a SWIFTNet PKI certificate to sign your CHAPS-ISO traffic. *(Authoriser DN)*
4. Configure your store & forward input channels.
5. Configure your SWIFTNet connection on your SWIFT messaging interface.
6. Determine the use of optional features, like delivery notifications and non-delivery warnings.
7. Define your CHAPS-ISO RMA relationships *(IGNORE, CHAPS-ISO SWIFTNet services do not use RMA).*

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1 FINplus is the centrally managed SWIFTNet service used to exchange CBPR+ ISO messages.
8. Configure your CHAPS-ISO addressing rules. *(The BoE has specified that Test DN will be level-3 wildcard, i.e. *, ou=bic8,o=swift and the Live DN will be level-3 fixed, i.e. ou=xxx,o=bic8,o=swift)*

### 3.3 Sending Considerations

See the ISO-CAG section 4.3.1.* for further guidance on the following considerations -

- Send traffic on CHAPS-ISO
- Delivery Notification Queue
- Input Channels / Sessions
- Input Acknowledgement
- Delivery Notifications and Non-delivery Warnings

### 3.4 Additional Sending Considerations

- Message Validation (MVAL)
  
  Further information on MVAL behaviour can be found in the *SWIFTNet Messaging Operations Guide*, section 5.10, dated October 2020
  
  - Header validation
  - Payload validation

- Ensure your SWIFT messaging interface release/version supports ISO and InterAct Store & Forward messaging

- Install Application Service Profiles from the Download Centre on swift.com

- Install the CHAPS-ISO format library / message standards

### 3.5 Configuring the Receiving from SWIFTNet Flow

The below steps have been taken from the ISO-CAG document section 4.1 and CHAPS-ISO specific terms and comments added in bold italics.

1. Create and configure your store-and-forward queues (including delivery notification queues) *(as described in section 2 of this Getting Started Guide).*
2. Define your message routing rules (e-form).
3. Configure your store-and-forward output channel.
4. Prepare the certificate to receive your CHAPS-ISO traffic.
5. Configure your SWIFTNet connection on your SWIFTNet messaging interface.
3.6 Receiving Considerations

If required, use the ISO-CAG section 4.3.2.* for further guidance on the following considerations –

- Store-and-forward Queues
- Message Routing Rules
- Output Channels and Queue Sharing
- Access Control
- Delivery Control
4 Integration

4.1 Introduction
This section is aimed at SWIFT technical staff and business application developers responsible for configuring the connections and exchanging CHAPS-ISO messages between the back-office or middleware application(s) and the SWIFT messaging interface.

DPs will have to re-integrate their business or middleware application(s) with their SWIFT messaging interface to support the CHAPS-ISO message flows. They will have to consult their internal application development team, and/or their application provider / vendor, and/or their SWIFT messaging interface provider to assess and implement their integration solution for CHAPS-ISO messages.

4.2 Integration Considerations
See below high-level diagram showing the different ‘envelopes’ (or wrappers) encapsulating the CHAPS-ISO business message on the business application and on the SWIFT messaging interface. In the ideal case for the sending flow, the business application (or middleware) generates the business message and metadata and encapsulates both within the integration envelope. The SWIFT messaging interface then replaces the integration envelope with the InterAct envelope or InterAct Request message, using the metadata to generate the Request Header within the InterAct message. The reverse happens for the receive flow.

For example, the integration envelope for SWIFT’s Alliance Access interface is called XMLV2 format and for Alliance Messaging Hub it is called the AMP format. For non-SWIFT interfaces, please check with your interface vendor for details of the integration envelope.
The metadata is extra information used for

i) transmission to the SWIFT messaging interface

ii) onward transmission to the CHAPS-ISO service over SWIFTNet.

It includes, as shown above, mandatory fields or elements used to by the SWIFT messaging interface to build the Request Header block of InterAct envelope, such as Requestor DN (sender), Responder DN (receiver), Service Name, Request Type and Request Sub-Template, for transmission to SWIFTNet.

Notes:

- The CHAPS-ISO DNs have specific formats for Live (ou=xxx,o=bic8,o=swift) and Pilot (*,o=bic8,o=swift) services.
- See sub-section 1.5 for table of the CHAPS-ISO service names.
- Keep Sw:AuthNotifInd field empty. Should this field be set to "TRUE", SWIFT will nak the message.
- During TS2 CHAPS will only accept Like-for-Like (L4L) format messages and during TS2.1 CHAPS will only accept Enhanced (ENH) format messages.
- See table below for all the CHAPS-ISO Request Types and Request Sub-types
  - the 'l4l' and 'enh' Request Sub-types are for the payment messages only
  - some other Request Types have multiple Request Sub-types, i.e. camt.054 and admi.004

<table>
<thead>
<tr>
<th>Request Type</th>
<th>Request Sub-type</th>
<th>TS2</th>
<th>TS2.1</th>
<th>TS3</th>
</tr>
</thead>
<tbody>
<tr>
<td>pacs.008.001.08</td>
<td>boe.chaps.l4l.01</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>pacs.008.001.08</td>
<td>boe.chaps.enh.01</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>pacs.009.001.08</td>
<td>boe.chaps.l4l.01</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>pacs.009.001.08</td>
<td>boe.chaps.enh.01</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>pacs.009.001.08</td>
<td>boe.chaps.l4l.cov.01</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>pacs.009.001.08</td>
<td>boe.chaps.enh.cov.01</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>pacs.009.001.08</td>
<td>boe.chaps.l4l.01</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>pacs.004.001.09</td>
<td>boe.chaps.l4l.01</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>pacs.004.001.09</td>
<td>boe.chaps.enh.01</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.052.001.08</td>
<td>boe.chaps.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.053.001.08</td>
<td>boe.rtgs.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.054.001.08</td>
<td>boe.chaps.can.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.054.001.08</td>
<td>boe.chaps.dbt.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.054.001.08</td>
<td>boe.chaps.cdt.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.054.001.08</td>
<td>boe.chaps.pre.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>camt.060.001.05</td>
<td>boe.rtgs.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>admi.004.001.02</td>
<td>boe.chaps.qbk.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>admi.004.001.02</td>
<td>boe.chaps.sts.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>pacs.002.001.10</td>
<td>boe.chaps.01</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

Different terminology is used to define the Request Type and Request Sub-type as shown below –

<table>
<thead>
<tr>
<th>InterAct</th>
<th>BAH</th>
<th>MyStandards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Type</td>
<td>Message Definition Identifier</td>
<td>Message Identifier</td>
</tr>
<tr>
<td>Request Sub-type</td>
<td>Business Service</td>
<td>Usage Identifier</td>
</tr>
</tbody>
</table>
Mechanism for pacs.002 status message generation

As mentioned in 1.4 General Message Flows, the sender notification message takes the form of a pacs.002 message and not an xsys.002 or xys.003, as for standard SWIFTNet Y-Copy flows. This pacs.002 is generated by the BoE and added within the xsys.001 message as part of the Y-Copy flow. SWIFT delivers the pacs.002 from within the xsys.001 message to the sender. The pacs.002 message can either be an Authorisation notification or a Refusal notification, see below diagrams.

Other reasons for receiving xsys.012 failed delivery notifications are:

- Copy delivery time-out
- Delivery to receiver time-out

See below diagrams.
If copy destination is unable to receive the copy or send back the xsys.001, SWIFT sends an xsys.012.

Other reasons for xsys.012 - Copy delivery time-out

**Comments:**
- If the RoE is unable to receive the copy or send back the xsys.001, SWIFT sends an xsys.012.

If receiver is unable to receive the copy after 14 days in Live (or 4 days in Pilot), SWIFT aborts the transaction and sends an xsys.012 failed delivery notification to the sender.

Other reasons for xsys.012 - Delivery to receiver time-out

**Comments:**
- If receiver is unable to receive the copy after 14 days in Live (or 4 days in Pilot), SWIFT aborts the transaction and sends an xsys.012 failed delivery notification to the sender.
## 5 Checklist

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responsible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section 2:</strong></td>
<td></td>
</tr>
<tr>
<td>Subscribe to BoE CHAPS-ISO SWIFTNet services (Pilot and Live)</td>
<td>swift.com registered user with e-order rights</td>
</tr>
<tr>
<td><strong>Section 3:</strong></td>
<td></td>
</tr>
<tr>
<td>Configure send &amp; receive connections between SWIFT messaging interface and SWIFT</td>
<td>SWIFT interface administrator (see ISO-CAG document)</td>
</tr>
<tr>
<td>Routing of CHAPS-ISO messages on SWIFT messaging interface to / from business application</td>
<td>SWIFT interface administrator</td>
</tr>
<tr>
<td><strong>Section 4:</strong></td>
<td></td>
</tr>
<tr>
<td>Configure connection between SWIFT messaging interface and business application</td>
<td>SWIFT interface administrator</td>
</tr>
<tr>
<td>Integration of the CHAPS-ISO message flows</td>
<td>Business application administrator / developer</td>
</tr>
</tbody>
</table>
## 6 Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPS-FIN</td>
<td>Existing CHAPS FIN Y-Copy service(s), identified in field 103 in block 3 of the FIN-MT message, e.g. STG</td>
</tr>
<tr>
<td>CHAPS-ISO</td>
<td>New BoE SWIFTNet services, identified by Service Name in Request Header block of the InterAct message, e.g. boe.stg.iastpe1 Live and test CHAPS-ISO services have been created.</td>
</tr>
<tr>
<td>CUG</td>
<td>Closed User Group, same as a SWIFTNet Service</td>
</tr>
<tr>
<td>e-form</td>
<td>electronic form to subscribe to a SWIFTNet Service</td>
</tr>
<tr>
<td>FIN</td>
<td>Central SWIFT MT-based messaging service, store-and-forward based</td>
</tr>
<tr>
<td>FINplus</td>
<td>Central SWIFT MX/ISO-based InterAct Store-and-Forward based messaging service, e.g. for CBPR+ messages</td>
</tr>
<tr>
<td>FIN Y-Copy</td>
<td>Central SWIFT MT-based message copy service</td>
</tr>
<tr>
<td>InterAct Y-Copy</td>
<td>Central SWIFT MX-based message copy service</td>
</tr>
<tr>
<td>InterAct Store &amp; Forward</td>
<td>SWIFTNet messaging protocol used for CHAPS-ISO messaging</td>
</tr>
<tr>
<td>ISO-CAG</td>
<td>ISO Programme Customer Adoption Guide for FINplus &amp; CBPR+, store-and-forward based</td>
</tr>
<tr>
<td>MT</td>
<td>FIN message format (Message Type)</td>
</tr>
<tr>
<td>MX</td>
<td>InterAct XML message format XML supporting ISO 20022</td>
</tr>
<tr>
<td>MVAL</td>
<td>Central SWIFT message validation service</td>
</tr>
<tr>
<td>TS2</td>
<td>Transition State 2, BoE's Like-for-Like formats phase</td>
</tr>
<tr>
<td>TS2.1</td>
<td>Transition State 2.1, BoE's Enhanced formats phase</td>
</tr>
<tr>
<td>TS3</td>
<td>Transition State 3, BoE's RTGS core ledger go-live date</td>
</tr>
<tr>
<td>SWIFTNet Service</td>
<td>Same as CUG, consisting of a Service Administrator (BoE) and Service Participants (DPs)</td>
</tr>
</tbody>
</table>
7 Reference Documents

SWIFT Reference Documents:
ISO Programme Customer Adoption Guide
https://www2.swift.com/knowledgecentre/publications/iso_20022_prog_cust_adopt_guid/8.0

SWIFTNet Messaging Operations Guide
https://www2.swift.com/knowledgecentre/publications/sn_msg_op_guid/3.0?protected=true&reload-date=1622825559138

Bank of England Reference Documents:
CHAPS & RTGS ISO20022 migration: revised approach and final schemas (Oct 2020)

This document and other related material on the BoE’s RTGS Renewal Programme page:
https://www.bankofengland.co.uk/payment-and-settlement/rtgs-renewal-programme/consultation-on-a-new-messaging-standard-for-uk-payments-iso20022

BoE’s MyStandards page for ISO 20022 formats:
https://www2.swift.com/mystandards/#/group/Bank_of_England
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