

CHAPS Technical Requirements

1. Technical Overview

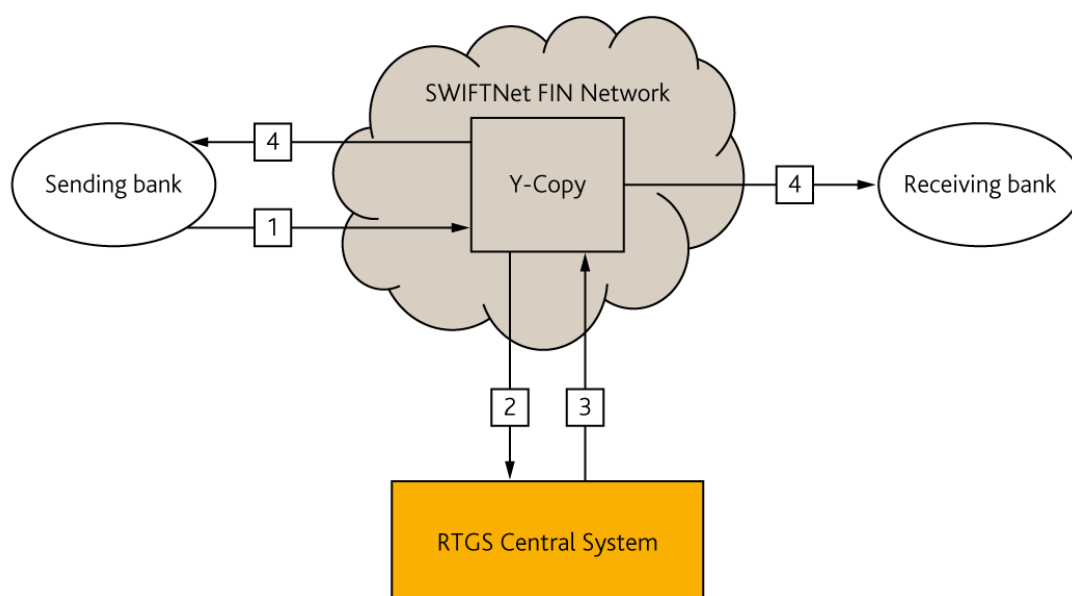
The CHAPS system provides real-time settlement of payments between its Direct Participants across sterling settlement accounts held at the Bank of England (Bank). The key components of the system are:

- A payment messaging network (SWIFT FIN Copy) connecting the CHAPS Direct Participants and the Bank
- SWIFT interfaces, known as CBTs (Computer Based Terminals), located within Direct Participants' systems to connect to the network and process messages to and from Direct Participants' systems. The Bank's RTGS infrastructure also has a CBT, known as the CHAPS Central Bank Interface, to connect to the network to enable settlement to take place.
- Sterling settlement accounts held in the Bank's RTGS infrastructure, also known as the RTGS Processor. Participants in the Bank's Sterling Monetary Framework can access intraday liquidity, secured against collateral, which can be used to fund outgoing payments.
- A browser-based Enquiry Link facility provided by the Bank that RTGS account holders can use to manage their accounts. CHAPS Direct Participants use the Enquiry Link for CHAPS payment queue management (the 'central scheduler').

There is also a link between RTGS and CREST to support settlement in CREST across the separate accounts held by CREST settlement banks at the Bank for that purpose. The net settlement between Direct Participants of several retail schemes also settle across the same accounts used for CHAPS settlement in RTGS.

2. CHAPS Payments

The processing flow for CHAPS payments is set out below.



- 1 Payment instruction
- 2 Settlement request (full payment message)
- 3 Settlement confirmation
- 4 Payment/sender notification

1. Payment messages are sent from one Direct Participant to another.
2. The messages are stored within SWIFT FIN Copy pending settlement confirmation from the Bank's RTGS infrastructure
3. Once the payment is settled in RTGS, a confirmation is returned to the sending Direct Participant and the full payment message is forwarded to the receiving Direct Participant. Finality is achieved when the payment is settled.
4. The receiving Direct Participant processes the payment as required.

SWIFT FIN Copy service provides the transport network and message handling functionality to send a copy to RTGS and receive settlement confirmations.

3. Roles and Responsibilities

The Bank is the payment system operator and the primary infrastructure provider for the CHAPS system.

- As the payment system operator, the Bank is responsible for the key business and operational decisions about the CHAPS payment system, including ownership of the rulebook.
- As infrastructure provider, the Bank controls the settlement account processes and is responsible for the RTGS Processor and the CHAPS Central Bank Interface. The Bank is also responsible for the provision of Enquiry Link facilities.

CHAPS Direct Participants are responsible for managing their payment flows and maintaining their settlement account balances in RTGS. They are also responsible for the ownership, operation and maintenance of their interfaces to the CHAPS network.

The Bank contracts with SWIFT with the provision of the payment messaging network. Direct Participants also have contracts with SWIFT.

4. Settlement

Each CHAPS Direct Participant holds a sterling settlement account at the Bank within RTGS.

5. CHAPS Business Day Definition

The CHAPS business day follows the following high level processing cycle.

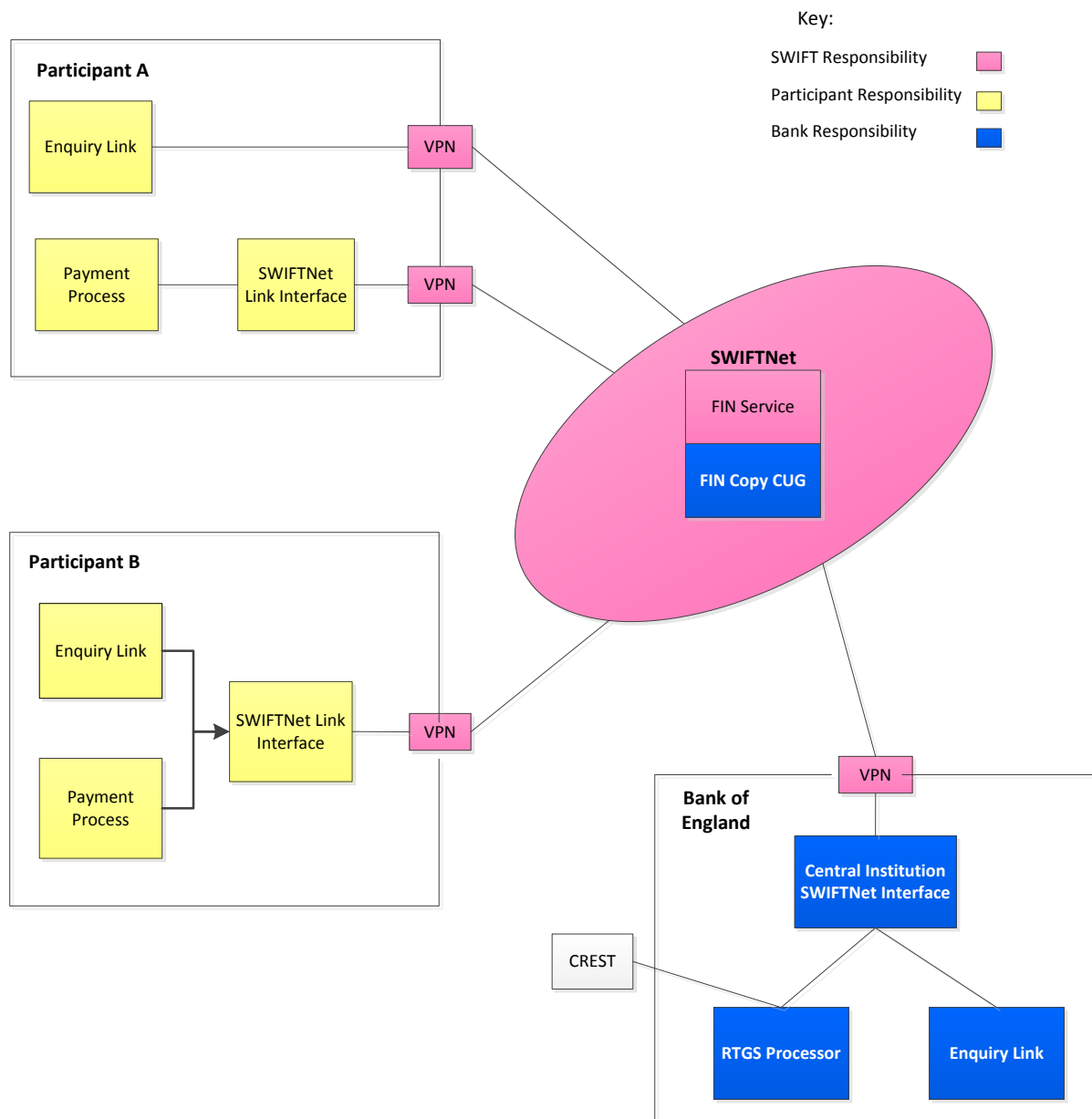
1. RTGS opens for business.
2. Intraday repurchase transactions and any other pre-CHAPS business day transactions are initiated by either the Bank or CHAPS Direct Participants. These provide intraday liquidity that can be used to support CHAPS settlement for certain CHAPS Direct Participants. For CHAPS Direct Participants who are also CREST settlement banks, automated transfers may be made to their 'CREST settlement accounts' to support the CREST DvP service.
3. CHAPS opens for business.
4. CHAPS payments are initiated and settled during the day.
5. CHAPS closes for customer payments.
6. For CREST settlement bank, balances on their CREST settlement accounts are returned to their primary settlement accounts
7. CHAPS closes for 'bank to bank' payments.
8. Intraday repurchase transactions are unwound.
9. Close of RTGS day.

6. Payment Queuing and Scheduling

CHAPS Direct Participants must use the central scheduling facilities provided by the Bank.

To assist Direct Participants with management of their settlement accounts and payment streams, the Bank sends Direct Participants non-payment messages informing them of any change in funds available resulting from any non-CHAPS movements across their accounts.

7. CHAPS Components



8. Direct Participant Interface

Each CHAPS Direct Participant is required to have a SWIFT interface capable of processing FIN Copy messages.

A Direct Participant may choose to locate its payment process and CBT wherever it wishes (not necessarily in the UK), as long as they meet the technical and operational requirements of CHAPS. This means that true remote access is allowed in CHAPS.

9. Bank Identifier Codes (BICs)

The preferred branch identification method used in CHAPS for domestic payments is BICs. However, UK Sort Codes are supported in most domestic payment message formats if no BIC is available.

10. Direct Participant Payment Process and SWIFT Interface

Each CHAPS Direct Participant is responsible for providing its own payment process and for interfacing this payment process to the SWIFT network via a SWIFT computer based terminal (CBT). In this context, the Bank of England is itself a CHAPS Direct Participant, with its own payment process and CBT.

CHAPS supports two types of SWIFT payment (one customer payment type and one interbank payment type). These are the MT103 single customer credit transfer, and the MT202 general financial institution transfer.

A Direct Participant's payment process is responsible for the creation of outward payment messages and for the receipt and processing of inward payment messages. Whilst in theory the payment process could be manual, using terminals and printers attached to the SWIFT CBT, it is expected that all CHAPS Direct Participants will use an automated payment process on computer equipment with a real time link to the SWIFT CBT.

The design of a Direct Participant's payment process is solely a matter for the individual Direct Participant. However, CHAPS provides a central scheduler within the RTGS Processor which Direct Participants must use. A Direct Participant's system must strictly adhere to CHAPS' technical requirements. CHAPS Procedures Documentation specifies what a Direct Participant should do if a message that does not comply with the standards is received.

Each Direct Participant is responsible for providing a SWIFT CBT to interface its payments process to the SWIFT network. The CBT must be capable for supporting the SWIFT FIN Copy service. A Direct Participant will be able to use its existing CBT to access CHAPS, provided this has the required FIN Copy capability. Alternatively, a Direct Participant may choose to have a separate CBT for CHAPS. If a Direct Participant chooses to have a separate CBT for CHAPS, the Direct Participant may wish to register a new 8 character SWIFT destination address for CHAPS, but this is not mandatory.

When a CBT is logged on to the SWIFT network it identifies itself with a destination address modified by a character (Logical Terminal) which must be unique for each CBT which is logged onto the SWIFT network at the same time. The facilities which SWIFT provides to allow Direct Participants to control how incoming SWIFT messages are to be delivered to each such destination are based upon:

- message type/category;
- message priority; and
- FIN Copy Service Identifier.

In either event, the Direct Participant must ensure that its CBT has:

- has sufficient capacity to handle expected CHAPS message traffic; and
- has sufficient resilience to cope with equipment failures.

Each Direct Participant must define the (8 character) SWIFT destination address for intended use within CHAPS. These are needed:

- by SWIFT, to set up the Closed User Groups for CHAPS
- by the Bank, to allow validation in the RTGS Processor.

A Direct Participant may define branch codes for its (8 character) SWIFT destination. Direct Participants may use their existing SWIFT destination address for CHAPS, or register a new address with SWIFT if preferred.

Bank of England

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