FINASTRA

Global PAYplus

CHIPS

Business Guide

Product Version: 4.5
Catalog ID: GPP4.5-00-B38-02-201511

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Version Control

Version	Date	Summary of Changes
1.0		Document Created
2.0	November 2015	Document Updated for D+H Rebranding
3.0	August 2018	Document rebranded to Finastra template

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1 Introduction

1.1 Overview

This document provides a functional overview of Global PAYplus (GPP) support and handling of CHIPS Funds Transfer payments. Processing, reference data and User Interface functions specific to CHIPS Funds Transfer payments is included.

CHIPS is a private real-time net settlement system that allows participant banks to send and receive electronic payments. All payments are USD currency, valued for the current business day, and are settled same-day. There are currently 51 direct CHIPS participants.

Participants interface with CHIPS over a proprietary network using IBM WebSphere® MQ software. The CHIPS software within GPP provides an interface to CHIPS and processing of all CHIPS message types.

1.2 Target Audience

This document is intended to provide technical and business personnel with an understanding of Global PAYplus (GPP) CHIPS payment functionality.

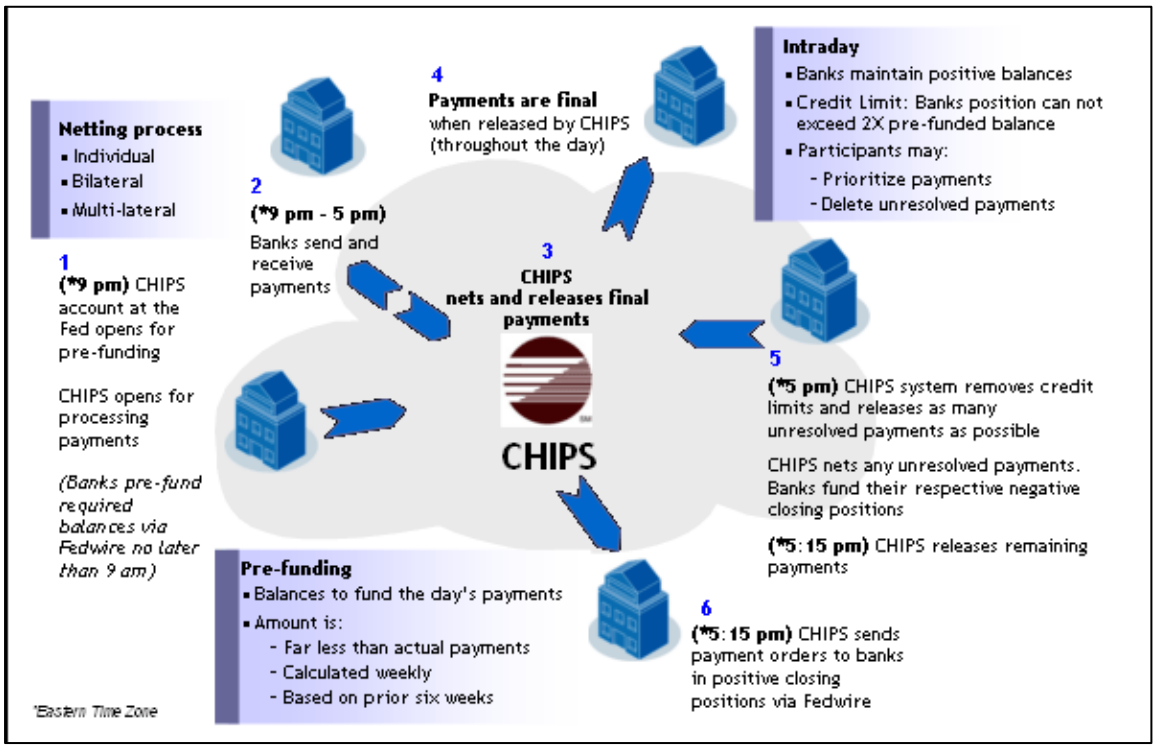
Note: This document assumes that the reader is familiar with generic GPP processing flows and concepts.

1.3 CHIPS Business Day

CHIPS normal business hours are Sunday 9:00 p.m. Eastern Standard Time (EST) through Friday 5:15p.m. EST. At 9:00 p.m. EST the business starts for the following day. The following describes a business day in EST:

- 9:00 pm: Participants send Pre-funding payments to the Federal Reserve Bank to credit the CHIPS account at the FED.
- 9:00 pm – 5:00 pm: Once a participant has pre-funded, they may send and receive payments via CHIPS. CHIPS performs netting of payments throughout the day, allowing the release of as many payments as possible.
- 5:00 pm: Settlement Period. No additional payments may be sent to CHIPS. CHIPS nets remaining payments and sends each participant an ‘Initial End of Day Balance Report’.
- 5:00 pm – 5:15 pm: Participants send additional funding to CHIPS via the FED (if required) to settle all outstanding payments for the day.
- 5:15 pm: CHIPS releases remaining payments, sends each participant a ‘Final End of Day Balance Report’, and sends a funding payment via the FED to each participant in a positive position. All participants end the day with a zero balance.
- CHIPS sends a Closing Report to all participants.

How CHIPS Works @CHIPS.ORG - https://www.chips.org/about/pages/000702.php.



1.4 CHIPS Message Types

GPP processes the following CHIPS Messages:

Msg Type	Description	Comments
01	CHIPS Delete Payment request	Sent to CHIPS to request that a previously sent message be deleted. Can be created from the browser for CHIPS payments in Wait Confirmation status
02	CHIPS Payment preference message request	Sent to CHIPS to update the preference of a message that has already been sent to CHIPS. Can be created from the browser for CHIPS payments in Wait Confirmation status.
05	Participant Ack	Interface use only, not displayed in the browser.
08	CHIPS Participant Enquiry	Outgoing only - created automatically by GPP on a user defined time interval in order to update the CHIPs position, can also be created from the browser.
10	CHIPS Outgoing payment message	Generated by GPP from an incoming message, or manually created from the browser.
15	CHIPS Ack	Interface use only, not displayed in the browser.
19	CHIPS Invalid Ack	Interface use only, not displayed in the browser.
22	CHIPS Service Message Notification Retrieval	Support for inbound notifications only (type 27). Browser does not support the sending of this message type.
25	CHIPS Payment Message Stored Response (Value in tag 25 is “2”) or CHIPS Payment	CHIPS Message ACK or NAK - Inbound only. GPP matches to an outgoing message and updates the outgoing message status to Rejected or Wait Confirmation.

Msg Type	Description	Comments
	Message System Cancelled/Deleted/Expired Response	
27	Service Message Response	Incoming only, can be viewed in the browser.
29	CHIPS Payment Preference response	Incoming only, matched to outbound payment for which the request was made.
31	CHIPS Incoming receive notification	Incoming Payment. Processed through GPP high value payment flow.
36	CHIPS Service Message Notification	Message is incoming only - Non-accounting service message. Can be viewed from the browser.
37	CHIPS Invalid Delete Response	Message is incoming only. GPP matches to outbound payment for which the request was made.
38	CHIPS Payment resolver notification	Message is incoming only. GPP matches to outgoing message and completes payment processing.
39	CHIPS Payment Message Retrieval Request	Manually created from the browser.
40	CHIPS Receive Retrieval Request	Automatically created by GPP to close gaps in incoming payments. Can be manually created from the browser.
41	CHIPS Receive Retrieval Response	Message is incoming only. Treated as a service message if the incoming payment already exists, treated as a new incoming message if the incoming message does not exist.
42	CHIPS Reserve for Preference Request	Manually created from the browser to request that a specific amount of supplemental funding be reserved for Urgent and Preference messages.
43	CHIPS Participant Withdrawal Request	Manually created from the browser to request the return of a specific amount of supplemental funds sent to CHIPS during the day.
44	CHIPS Payment Resolver Retrieval Request	Automatically created by GPP to close gaps. Can be manually created from the browser.
45	CHIPS Payment Resolver Retrieval Response	Message is incoming only. Used to update the status of a payment that is in Wait Confirmation status.
51	CHIPS Payment Message Retrieval Response	Message is incoming only - can be viewed in the browser.
52	Unresolved Payment Message Report Request	Manually created from the browser.
54	CHIPS Participant Enquiry Response	Message is incoming only, can be viewed in the browser. Used by GPP to update CHIPS position.
55	CHIPS Supervisory Response	Message is incoming only - can be viewed in the browser.
56	CHIPS Supervisory message Request	Manually created from the browser.
59	CHIPS Status Recovery / Closing Report	Message is incoming only, can be viewed in the browser. Used by GPP to update CHIPS position and create initial funding payment for next business day.

Msg Type	Description	Comments
70,71	CHIPS Cutoff / Expired Multipart Reports	Message is incoming only, can be viewed in the browser.
72,73	CHIPS Initial and Final Balance Reports	Message is incoming only, can be viewed in the browser. Used by GPP to update CHIPS position and to create final funding payment if needed.
74,75	CHIPS Initial and Final Bilateral Position Reports	Message is incoming only - can be viewed in the browser.
80	Unresolved Payment Message Report	Incoming only - can be viewed in the browser.
85	Heartbeat Message	Interface use only, not displayed in the browser.
91	CHIPS Bilateral Enquiry Request	Manually created from the browser.
92,93	CHIPS Bilateral Enquiry Response	Message is incoming only - can be viewed in the browser.
98	CHIPS Bilateral Error Response	Message is incoming only - can be viewed in the browser.

2 Processing

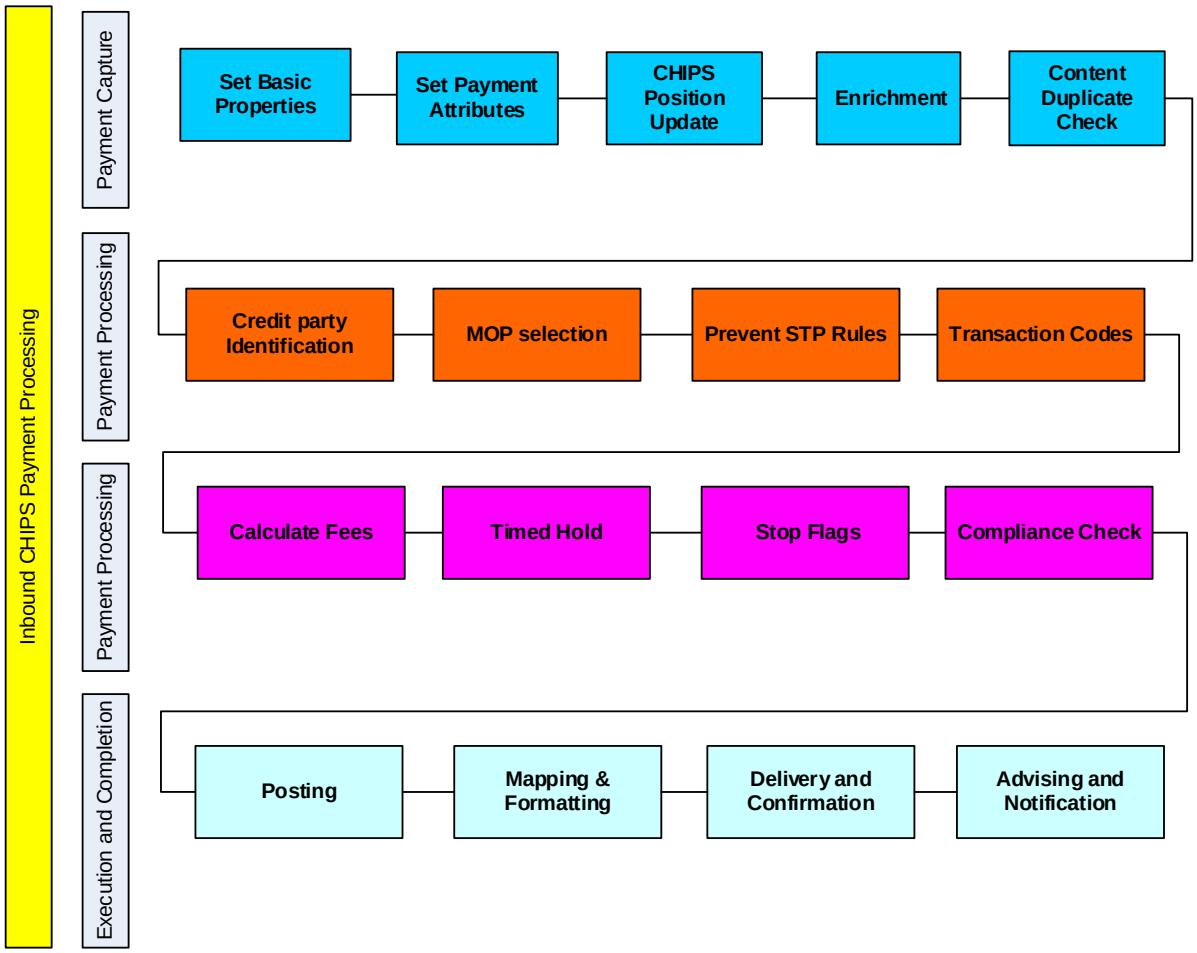
2.1 Workflow

CHIPS message workflow in GPP is described in the following categories:

- Incoming Payments
- Outgoing Payments and Responses
- Return of Funds
- CHIPS Delete and Preference Requests
- Report Requests

2.1.1 Incoming Payments

The following displays the high level workflow for incoming CHIPS payments.



2.1.1.1 Payment Capture

- The GPP CHIPS interface receives messages in native CHIPS format.
- GPP parses the CHIPS message, and stores each of the message attributes in the relevant message database (named MINF).
- GPP stores a copy of each incoming message in its original format. This copy is viewable by the user, and exportable to other systems.
- The CHIPS position is updated in GPP.
- CHIPS payment messages go through the standard GPP High value workflow. As a first step, this includes Repair and Enrichment, duplicate checks, and a sanctions/compliance check. The sanctions check is performed to ensure that no payment instructions are processed if any data on the incoming payment contains data that is flagged by the sanctions engine. The workflow includes applying rules for the MOP selection, straight through processing, transaction codes, and calculation of fees, timed hold and stop flags.

2.1.1.2 Payment Processing

- Before a message is released, a second compliance check can be performed to revalidate any key fields that may have changed during processing in GPP. This check is performed after a payment is processed through any queue where a user has an opportunity to modify the payment

instruction, before being sent externally or completed internally. Payments that are stored in the Future or Scheduled queues may also be passed through the sanction engine before being released.

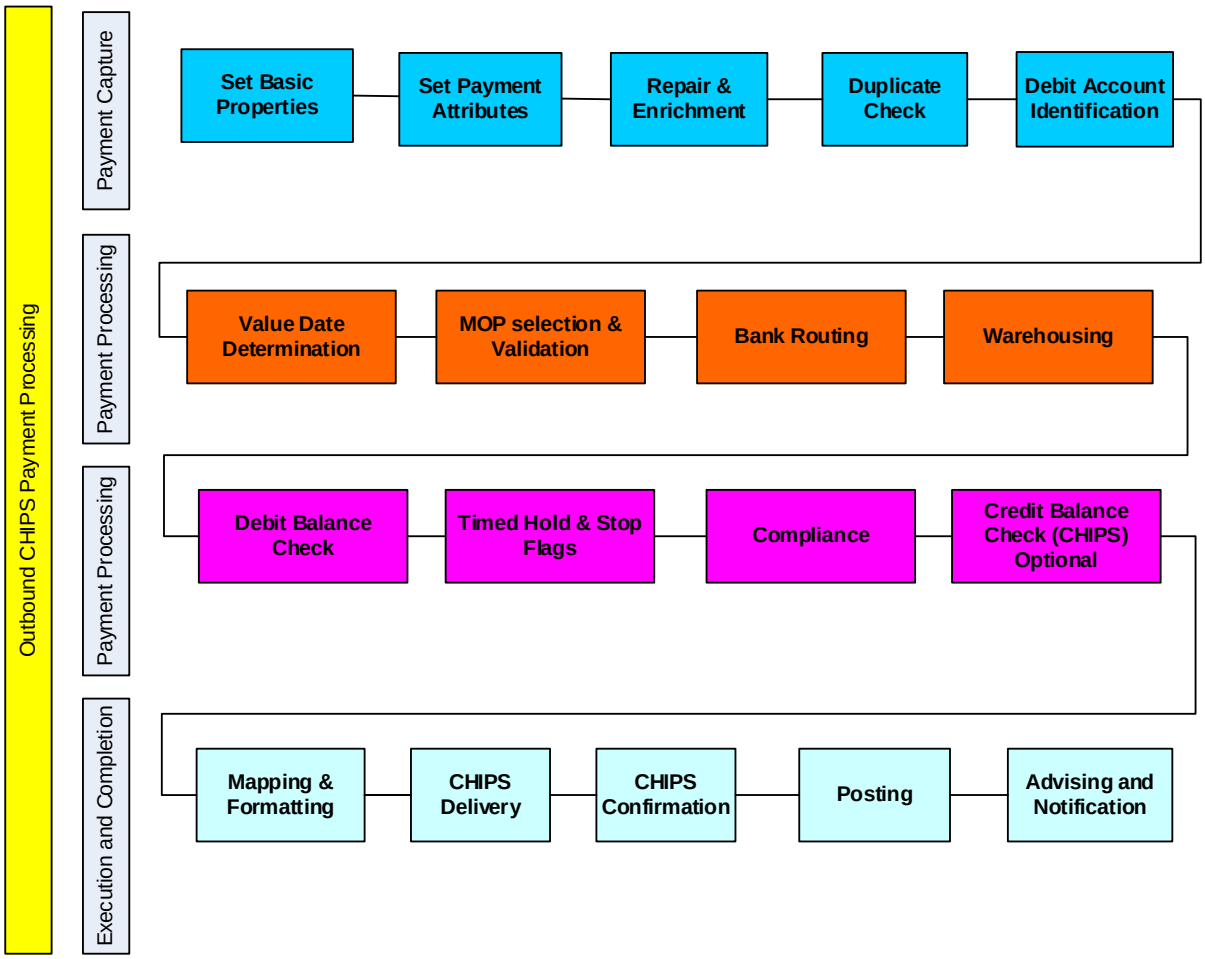
- If no CHIPS payment data has been changed, there is an option to skip the second check via rule setup. If the second check does not bring in any new Stop Words, then the approvals from the first check allow the payment to continue processing. If new Stop Words have been identified, the payment is routed to the relevant queue and only the new hits are presented for operator's review and action.
- GPP includes a facility that allows the bank to filter which payments are eligible for compliance checking using Compliance Validation rules. For example, non-accounting messages may not need to be scanned against a sanctions engine so these payment classes can be excluded from the interface call.

2.1.1.3 Execution and Completion

- The Execution and Completion phase has the final steps for processing an incoming payment:
  - Post to the accounts.
  - Map and format the payment.
  - Deliver and confirm payment.
  - Provide any advices and notifications.

2.1.2 Outgoing Payments and Responses

The following displays the workflow for outgoing CHIPS payments and responses.



2.1.2.1 Payment Capture

CHIPS payments are manually created from the GPP browser, generated from incoming SWIFT or FED messages, or generated from messages received from backend systems.

2.1.2.2 Selecting a CHIPS Participant

GPP utilizes the NCC and UIDACCT profiles to determine if CHIPS can be used as a method of payment for a transaction. The NCC and UIDACCT profiles are loaded and maintained using the CHIPS NATS upload task in GPP. For Profile descriptions, see Business Setup.

GPP uses these methods to determine if a payment can be sent via CHIPS based on the first in credit chain identifier:

- UID: If the first in credit chain identifier is a 6 digit UID, GPP performs a lookup for this UID in the NCC profile.
  - If the UID exists, GPP looks for a CHIPS participant for this UID in the UIDACCT profile.
    - › If a single participant is found for the UID, then this participant can be used to send a qualified payment to CHIPS.
    - › If multiple participants are found, GPP selects the participant marked as preferred. If none of the participants are marked as preferred, GPP selects the first valid participant from a list of ordered participants defined by the bank in the system parameter CHIPSDEFPN.
- BIC: If the first in credit chain identifier is a BIC, GPP performs a lookup for this BIC in the Parties Profile.
  - If the BIC exists in the Parties profile, and the party also has a CHIPS participant, then the payment can be made directly via CHIPs using that participant.
  - If the BIC exists in the Parties profile, but does not have a CHIPS participant, GPP performs a lookup for this BIC in the UIDACCT profile.
    - › If a single participant is found for the UID, then this participant can be used to send a qualified payment to CHIPS.
    - › If multiple participants are found, GPP selects the participant marked as preferred. If none of the participants are marked as preferred, GPP selects the first valid participant from a list of ordered participants defined by the bank in the system parameter CHIPSDEFPN.
- ABA: If the first in credit chain identifier is an ABA, GPP performs a lookup for this ABA in the Parties Profile. If the ABA exists on the Parties profile, and the party also has a CHIPS participant, then this payment can be made directly via CHIPs using that participant.
- CHIPS PN: If the first in credit chain identifier is a CHIPS PN, then this payment can be made via CHIPS.

2.1.2.3 Payment Qualification

Outbound CHIPS payments are formatted as per CHIPS specifications, and assigned a PSN number as they are released.

The credit and debit parties on a CHIPS payment must be formatted into tags that indicate to CHIPS, and the receiving participant, whether the parties in the payment are qualified, unqualified or semi-qualified.

- Qualified indicates that the party exists on the NATS database, a lookup by CHIPS is requested and either a UID, BIC or account number is supplied.
- Semi-qualified indicates that an identifier (BIC or account number) is supplied, but the party does not exist on the NATS database and no lookup is to be done by CHIPS.
- Unqualified indicates that no identifier is supplied, only the name and address.

When CHIPS does a database lookup, it validates the identifier(s), ensures that there is a registered relationship with the relevant Participant, and supplies all the identifiers plus the name and address to

the receiving bank. GPP uses the NCC and UID Accounts profiles that are populated via the CHIPS NATs database to correctly format parties on outgoing CHIPS payments with qualified, semi qualified and unqualified tags.

2.1.2.4 Payment Execution and Completion

CHIPS uses a two-step confirmation process. When a payment is sent to CHIPS, CHIPS validates the format of the message and returns either a Payment Store Response or a Payment Cancel Response. GPP matches the response to the outbound payment.

- Payments that receive a Payment Cancel Response are put in a REJECTED status in GPP, and may be repaired and resent.
- Payments that receive a Payment Store Response are put in a Waiting Confirmation status in GPP.

At CHIPS, stored messages are submitted to the payment netting engine and subsequently released to the receiving participant based on funds availability. CHIPS returns a Resolver Notification to the sending participant when the payment is released.

The Resolver Notification contains a Payment Resolver Status Field (field 38) with one of the following values:

- 3 = Released
- 4 = Deleted
- 5 = Expired
- 6 = Rule 13 Inactive

GPP matches the Resolver Notifications from CHIPS to payments in Waiting Confirmation status. The subsequent processing of the original outgoing payment is based on the resolver status as follows:

- Status 3: GPP continues to process the payment
- Status 4: GPP changes the payment to a Canceled status, a Repair status, or resubmits the payment for MOP evaluation (alternate routing).
- Status 5L GPP changes the payment to a Repair status.
- Status 6: GPP changes the payment to a Repair status.

When a payment is unresolved, meaning that it is in Waiting Confirmation status in GPP, a user may opt to send a delete request to CHIPS to recall this message, after which it may be paid another way or canceled. The user may also opt to send a preference request to CHIPS for a message in Waiting Confirmation status, which allows CHIPS to change the release order of the payment in the netting engine, or mark the payment to be released using supplementing funding that the bank has sent to CHIPS.

2.1.3 Return of Funds

2.1.3.1 Sending a Return of Funds Message

Incoming CHIPS messages that have not been completed are eligible for returning.

- Manual queues for these messages have the RETURN button enabled. When the user selects RETURN a new Return payment is created based on the contents of the original incoming payment.
- A new page in GPP is displayed with the formatted RETURN message. The user may enter a RETURN reason from a predefined list.
- The original incoming payment is completed as a book payment debiting the CHIPS settlement account and crediting the CHIPS Return of Funds account.
- As per CHIPS guidelines, GPP sends an outbound payment to the sender with the following mapping:

- Original payment PSN, SSN and value date are mapped to tag [265]
- The CHIPS return of funds same day or priori day UID (200111 or 302333) is mapped to the credit party field.
- The user selected return reason is mapped to tag [610]

2.1.3.2 Receiving a Return of Funds

A return of funds message has the same response code as an incoming receipt (31), however a CHIPS current day return has a UID of 200111 in the credit party field and a previous day return has a UID of 302333 in the credit party field. It is also possible that a CHIPS return can be identified by the presence of field 265.

GPP processes incoming return of funds messages like any other inbound CHIPS payment. In addition, GPP links incoming return of funds messages to original outgoing payment where possible.

2.1.4 CHIPS Delete and Preference Requests

Delete and Preference requests are available as options only for CHIPS payments that are in Wait Confirmation status. These are messages that have been stored at CHIPS, but not yet resolved by CHIPS. Upon selection of a Delete request, the User selects that action that should be taken once a successful delete response has been received from CHIPS. Available options are Cancel, Repair and Re-evaluate MOP.

Upon selection of the Preference button, the user can select No Preference, Preference or Urgent.

2.1.5 Report Requests

Report requests are manually entered using the GPP browser. Responses are displayed in the Service Complete queue. There is special handling of Retrieval Requests and responses, Status Requests and responses and Participant Enquiry requests and responses. For information on Status and Participant Enquiry Requests, see Automated Report Generation.

Retrieval requests (requests for copies of incoming payments) may be created from the browser. GPP may also issue a retrieval request to close a gap that has been detected in incoming payment sequence numbers. A Retrieval response is treated as a new incoming payment if the message has not been received by GPP previously. If GPP has already received this message, then this response is treated as a service message.

2.2 CHIPS Liquidity

2.2.1 Funding

2.2.1.1 Business Overview

CHIPS is a payment netting system. Participants deposit a pre-determined amount of money in the CHIPS account at the FED at start of day in order to participate. Throughout the day participants transfer funds to each other through the CHIPS payment system. The CHIPS system processes payments in 2 steps. Submitted payments that pass syntax validation checks are stored at CHIPS and are submitted to the CHIPS netting engine. The netting engine releases payments based on available funds. Participants may choose to add funds to their account at CHIPS by sending supplemental funding payments to CHIPS via FEDWIRE during the day.

At CHIPS cutoff, each participant receives an Initial End of Day Balance Report notifying them of the amount of additional funding, if any, required to settle all outstanding payments for the day, i.e., to return the available balance of the prefunded account to zero.

After all participants have been funded, CHIPS releases all remaining payments, and each participant receives a Final End of Day Balance Report, notifying them of their final position with CHIPS. Participant's that ended the day in a credit position with CHIPS receive a payment from CHIPS

through the Federal Reserve Bank to zero out the participant's available balance in the prefunded account. Because all participants end the day with a zero balance, all participants are required to make a deposit to the Prefunded Balance Account at the start of the next business day. CHIPS calculates the Initial Prefunded Balance amount for each participant on a weekly basis. Participants are notified of current and projected funding requirements through CHIPS status and balance reports.

Participants that do not have accounts with the FRB must have a correspondent send the required FED payments for them.

2.2.1.2 Initial Funding

The Closing Report sent by CHIPS at end-of-day is processed as follows to create an initial funding payment for the next business day.

- Receive CHIPS Closing status report (transaction code = 59, tag 163, element 2 = 3 = Closing).
- Create a payment using the template defined in System parameter INITIAL_ FUNDING_TEMPLATE.
  Note: the template used should have a relevant receiver and BBI fields as per CHIPS regulations for pre-funding payments.
- Map the payment amount from the Closing report (tag 163, field 25 - NEXT REQUIRED FUNDING AMOUNT)
- Map the payment date as the next business date on the CHIPS/FED calendar.
- Payment is sent to the schedule queue for the next business day.
- This payment is released at Start-of-day with the Release Scheduled Payments task. If the bank wants to hold the funding payment until later in the day, a timed hold rule may be used.

2.2.1.3 Final Funding

The Initial End of Day Balance Report sent by CHIPS at the start of the CHIPS settlement period is processed as follows to create an a final funding payment for the current day (if required).

- Receive Initial End of Day Balance Report (transaction code = 73, tag 130, element 18 = net balance amount, element 19 = net balance sign).
- If element 19 is negative and element 18 is greater than 0, create a payment using the template defined in System parameter FINAL_ FUNDING_TEMPLATE.
  Note: the template used should have a relevant receiver and BBI fields as per CHIPS regulations for final-funding payments.
- Map the payment amount from element 18 (NET BALANCE AMOUNT).
- Map the payment date as today's business date.

GPP can automatically create a minimal number of Fedwire payments in the case when a funding payment exceeds the dollar limit for a single fed payment. This feature is controlled by the Maximum Amount allowed as defined in the Fedwire MOP profile.

2.2.2 CHIPS Position Monitoring

GPP collects position information as payments are sent and received through CHIPS. GPP also requests and stores position data provided by CHIPS on status and participant enquiry reports throughout the business day. Data from these reports is displayed on the Liquidity Tab.

2.2.2.1 Automated Report Generation

Status Report (transaction code 56) and Participant Enquiry Report (transaction code 08) requests are sent to CHIPS on regular intervals. These requests are configured as events in the EVENT DEFINITIONS table. This event is managed by an Event Handler, and uses the SWIFT ID table to identify CHIPS Participant that is defined for CHIPS. A timer mechanism is used for the user to set the time interval to request these reports. This timer requests reports only when the CHIPS VTERMs are active; report requests are not generated when a VTERM is down.

2.2.2.2 Liquidity Position Page

The Liquidity Intra-day Position page allows users to view summary information to monitor settlement accounts. It provides information on the payment messages delivered to and received from CHIPS on a single page. It includes both calculated and reported values to obtain the most accurate balance information.

Information is provided for the Debit and Credit amounts along with the Total amount, Volume Out and Volume In.

The Liquidity Intra-day Position page is divided into these sections:

- **Calculated:** Includes the Opening balance and calculated balance. The Settled balance represents what GPP knows it has sent and received with CHIPS for the business day.
- **Projected:** Displays the settlement status values.
- **Liquidity Desk:** Displays the FI limits, bands and the pre-defined caps.
- **Anticipated Funds:** Displays the pre-advices and adjustments and calculated projected balance.
- **CHIPS RTGS Report:** Displays balance information as provided by the status and participant enquiry reports.

For more information on the specific fields on the position page, see GPP Business Guide Liquidity & Risk Management.

3 Manual Handling

3.1 Manual Message Entry

From the GPP Browser the user is able to create CHIPS payment messages from the Create Payment main menu:

- Create CHIPS payment
- Create CHIPS Report Request

GPP allows the user to specify whether the CHIPS payment is for a customer or a bank via the use of the Bank/Non-Bank flag on the page.

3.1.1 CHIPS Payment Entry

The Create CHIPS Payment page is used to create a CHIPS payment. The required fields include the Bank/Non-Bank flag, amount and value date. The CHIPS Info tab is where the user can enter Bank to Bank information that corresponds to one of the parties, such as Beneficiary and Intermediary information.

3.1.2 Delete and Preference Request

Delete and Preference requests are available as options only for CHIPS payments that are in Wait Confirmation status. These are messages that have been stored at CHIPS, but not yet resolved by CHIPS. Upon selection of a Delete request, the User selects the action that should be taken once a successful delete response has been received from CHIPS. Available options are Cancel, Repair and Re-evaluate MOP.

Upon selection of the Preference button, the user can select No Preference, Preference or Urgent.

3.1.3 Create Reports

The CHIPS Report Request Entry page is used to request the following CHIPS reports.

Report Name	Report Description
Participant Enquiry	Used to request balance and payment information for one or more participants.
Status	Used to request status information for the participant. This category of report includes: • Cutoff Time Message • Status Report • Queue Status • Rule 13 Status • Recovery Status Report • Funded Participants Status Report • Active Participants Status Report • Warning Report • Free Text Message • Error Notification Message
Bilateral Enquiry Request	Used to position information on the participant relative to all other participants.
Reserve for Preference Request	Request to reserve a specific amount of supplemental funding for payments marked as Preference or Urgent.
Withdrawal Request	Request for the return of a specific amount of supplemental funds that have been sent to CHIPS during the day.

Report Name	Report Description
Receive Retrieval Request	Used to obtain a copy of a message received from CHIPS.
Payment Retrieval Request	Used to obtain a copy of a message sent to CHIPS.
Resolver Retrieval Request	Used to obtain a copy of a resolver notification sent by CHIPS.
Unresolved Payment Report request	A report of incoming messages that are currently stored at CHIPS for the participant.

4 Interfaces

The following Interfaces are used specifically to support CHIPS processing in GPP.

Type	Name	Data Source	Affected Data	Usage	Description
File Import	NATs Upload	CHIPS	Customers NCC UIDACCT	Determine eligibility for CHIPS method of Payment. Allow search/insertion of UID identifier in payment messages. Set CHIPS payment tags as Qualified/Unqualified/Semi-Qualified	CHIPS provides a database of corporations and financial institutions with Participant/Account relationships registered at CHIPS
Event	CHIPS position report requests	GPP/ CHIPS	Liquidity Position data	Populate data in the RTGS_REPORT table to display on the CHIPS RTGS REPORT section of the Intraday Position page	GPP sends Participant Enquiry and Status reports to CHIPS throughout the business day
Interface	CHIPS Link	GPP/ CHIPS	Message Data	Manage the sending and receiving of all valid CHIPS messages	CHIPS uses proprietary message formats that are sent and received using IBM's Websphere™ MQ software.

4.1 CHIPS Link - High Level Description

GPP interfaces with CHIPS using the Clearing House TCP/IP Interface. The Clearing House network is a proprietary network using IBM WebSphere MQ as the application middleware using TCP/IP protocol via Frame Relay. GPP meets all the connection requirements as defined by the US Clearing House for Interbank Payment System.

The CHIPS link is built around the concept of the VTERM (Virtual Terminal). VTERM is a processing unit (not an actual hardware terminal) that has been designated by the New York Clearing House to be an interface (or gateway) between a financial institution and the CHIPS payment network. A VTERM Name is assigned to each processing unit by CHIPS.

Multiple VTERMs can be designated for an individual process allowing a financial institution to transfer messages between the institution and the CHIPS network more efficiently. Financial institutions that maintain more than one VTERM can establish multiple links with CHIPS.

Messages simultaneously flow in both directions on each VTERM, with funds transfer messages interspersed with acknowledgments, administrative and service messages, and reports.

Because CHIPS is a real time netting system, every transaction is first stored (which generates an acknowledgment) and then released as per the parameters of CHIPS matching/netting algorithm (which generates a resolver acknowledgment).

CHIPS MQ configuration requires a single companion partner pair to handle both the INBOUND and the OUTBOUND traffic for a connection. The logical connection is controlled via the VTERM. Each VTERM session is made up of 2 MQ partners each connected to one of the 2 US CHIPS defined message queues; Send, or Receive.

5 System Configuration and Business Setup

This section provides the details of the required setup in GPP to process CHIPS messages.

Note: For a detailed description of all the fields in the profiles, see the GPP Online Help.

5.1 Business Setup

5.1.1 Accounts Profile

In order to view CHIPS settlement Account information on the Intraday Position page (accessed from the Liquidity tab on the GPP home page), the CHIPS Settlement Account must exist, and be flagged as follows.

- Asset box: checked
- Local (balance): checked
- Position keeping account: checked
- Position Type: STL (settlement)
- Position Screen Frame: CHIPS

5.1.2 Parties Profile

CHIPS Participant numbers are stored in the Party Profiles as well as the NCC profiles. GPP customers that connect directly to CHIPS should have CHIPS participant numbers in the Party Profiles as well as the NCC Profiles. GPP customers that do not connect directly to CHIPS should have CHIPS participant numbers only in the NCC profiles.

Field	Description
Clearing Participant ID CUSTOMRS.ALIAS	CHIPS participant number Four digit identifier for direct participants in the CHIPS network There are approximately 50 participants.

5.1.3 National Clearing Codes Profile

Note: The USCHP records of the NCC profile are refreshed automatically by the NATs upload task.

Field	Description
NCC Type, Clearing System ID	4 digits CHIPS participant numbers are stored in this table with an NCC type of CP and a Clearing System ID of USPID
NCC Type, Clearing	CHIPS UIDs are stored in this table with an NCC type of CH and a Clearing

Field	Description
System ID	System ID of USCHP

5.1.4 Methods of Payment Profile

In order to send CHIPS payments, a CHIPS Method of Payment profile must exist. This profile is used as per GPP standard processing. The following fields in the profile are relevant for CHIPS.

Field	Description
Calendar	US calendar with FED/CHIPS holidays should be used
Earliest value date	0 - CHIPS does not allow back valued payments
Latest value date	0 - CHIPS does not allow future valued payments
Type	Group
Group	CHIPS
Max amount	9,999,999,999.99 (current maximum amount per payment allowed by CHIPS
Sender/Receiver type	USPID
Communication preferences	Wait for Confirmation
Return of Funds Account	Used to automatically populate the credit/debit account fields when an incoming CHIPS payment is returned via the RETURN button on the browser. The original incoming payment is credited to the Return of Funds Account, and the generated Return payment is debited from the Return of Funds Account.

5.1.5 Identifiers Profile

The identifiers may be accessed from the Methods of Payments Profile. This profile should contain a record for the CHIPS settlement account. The following fields in the profile are relevant for CHIPS.

Field	Description
Identifier	4 digit CHIPS participant number of the bank
Settlement Account	Office/account/currency for the CHIPS settlement Account for this participant. Payments sent/received for this participant update the position of this account

5.1.6 UID Accounts Profile

Note: The UIDACCT profile records are refreshed automatically by the NATs upload task.

Field	Description	Comments
UID	Unique 6 digit number assigned to corporations and institutions that send and receive CHIPS payments through CHIPS participants	Required. A single UID may have multiple records in this table.
BIC	Unique SWIFT identifier for this UID	optional
Participant number	4 digit CHIPS participant number registered with CHIPS for this UID	Required. While there may be multiple records for a single UID in this table, the combination of UID and Participant number for each record must be unique
Account	Account number registered with CHIPS for this UID and Participant	required

Field	Description	Comments
	combination	
Preferred	Indicates that this Participant is preferred for this UID. Only one record may be flagged as preferred for each UID	optional

5.2 System Configuration

5.2.1 System Parameters

System Parameter	Description
CHIPS_NATS_PATH	Specifies the path for the NATs upload.

5.2.2 Entitlement Classes

5.2.2.1 Access Entitlement Class

In the Access Entitlement Class page there are four entitlements of type Access class for accessing CHIPS message entry pages, which are listed in the following table. All of these entry pages are accessed in the browser under the Create Payment menu that is displayed when the Transaction tab is selected from the GPP home page.

Field	Description
Create CHIPS payment	Used for entry of CHIPS payments
Create CHIPS report request	Used to request all available CHIPS Reports

5.2.2.2 Message Types Entitlement Class

The Message Type Entitlement Class contains entries for all CHIPS message types. Specific access should be granted for the CHIPS message types to which a user will have access. This access is needed for payment entry/repair as well as for viewing.

5.2.3 Reject/Return Codes

Return codes should be setup for entry in the Reasons section of the return page. Note that the Reject/Return codes are setup per MOP.

Field	Description
Code	4 character code, assigned by the user, must be unique
Description	Free form text. This text is added to the Bank to Bank information on a returned payment
MOP	CHIPS Mop should be entered

5.3 Advanced Setup

A certain number of Generate Transaction profiles and Transaction generating mapping rules are required for the processing of CHIPS returns. These setups are standard, and should not require modification unless the bank has some specific processing that is not covered by the default setup.

5.3.1 Generate Transaction Profile

Message Type	Name	Description	Relation Type

Message Type	Name	Description	Relation Type
10	CHIPS_RETURN	Return of incoming CHIPS payment on the same day.	Original Payment^Outgoing Reject Return
10	CHIPS_NEXT_DAY_RETURN	Return of an incoming CHIPS customer payment – next day	Original Payment^Outgoing Reject Return

5.3.2 Transaction Generation Mapping Rules

Rule Sub Type	Rule Name	Description
Original Payment^Outgoing Reject Return	CHIPS_RETURN	Return of incoming CHIPS payment on the same day.
Original Payment^Outgoing Reject Return	CHIPS_NEXT_DAY_RETURN	Return of an incoming CHIPS payment – next day

Appendix A: Glossary

Term	Description
CHIPS	The Clearing House Interbank Payments System

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