FINASTRA

Global PAYplus

Features and Services

Business Guide

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Version Control

Version	Date	Summary of Changes
1.0		Document created
2.0		Added section NLS/Telecode Conversion
3.0	Jun 2015	Added information to Linked Message Submit Service section
4.0	Nov 2015	Updated for rebranding

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1 Introduction

1.1 GPP Overview

Global PAYplus (GPP) is a state-of-the-art global payment services hub. It is designed to extend GPP's market-leading performance, scalability, and reliability to a service-oriented architecture (SOA) compliant platform.

GPP is designed around a broad range of payments industry and SOA standards. GPP uses well-established engineering principles to produce a state-of-the-art solution that is aligned with products and roadmaps of leading infrastructure vendors. GPP offers fast deployments, sustainable technology and interfaces, and economic cost of ownership.

GPP enables banks and financial institutions to:

- Reduce upfront capital expenditures by facilitating targeted deployments or gradual rollouts
- Lower operating expenses through superior Straight-Through Processing (STP) rates
- Increase customer engagement with payment initiation and processing decisions
- Minimize the need for manual intervention

1.2 GPP Design Features

GPP has the following key features:

- **Flexible Operation**: GPP enables deployment across single or multiple physical and logical entities. This enables a bank or financial institution to support multiple countries and separate subsidiaries on a single GPP implementation. GPP also supports outsourced operations as an Application Service Provider (ASP).
- **Channel-Independent Payment Processing**: GPP enables stateless service calls from external channels. A service call can trigger multiple GPP processes, such as to validate payment details, and then transmit a response to the originating channel.
- **Granular Design**: GPP has a granular payment orchestration that implements a wide variety of Web services. GPP is based on fine-grain SOA services, which are linked into the GPP workflows. GPP is configured with a standard workflow that can be tailored to specific system requirements.
- **Interface-Independent Payment Processing**: GPP enables interface-independent payment processing that can be accessed at flexible points during the workflow. The GPP compliance with XML ISO 20022-based standard enables external interfaces to communicate with GPP to access specific application functionality, such as account balance checks and anti-money laundering (AML) verifications.
- **Rules-Based Workflow Management**: GPP Control is a powerful rules-based design that enables quick time to market and aids automated transaction routing across various payment modes.
- **SOA Compliance**: GPP has native support for the ISO 20022 standard, XML specification, and an industry-standard Enterprise Service Bus (ESB).

1.3 Target Audience

This business guide is intended for system administrators, IT personnel, and GPP users who need to know about GPP features, functionality, and services.

2 GPP Application Features

2.1 Overview

Designed around a broad range of payments industry and SOA standards, GPP payment processing is comprised of specialized application features supported by an orchestration of various SOA services. The standard GPP single payment processing business flow is designed to cover all aspects of end-to-end single payment processing.

Note: The processes and SOA services in this document describe the GPP single payment processing business flow, also called the High Value business flow. The implementation of these processes can vary when assessing other business flows.

2.2 GPP Application Features

Feature	Description	Reference
Acknowledgements and Confirmations	Sends appropriate acknowledgment and confirmation messages as configured in the system	Acknowledgements and Confirmations Feature
Advice Messages	Enables banks and financial institutions to create business rules that can cause the system to generate and send advice messages	Advice Messages Feature
Balance Inquiry	Accesses debit party information and contributes to the selection of the appropriate business flow	Balance Inquiry Feature
Business Flow Selection	Determines the most appropriate business flow for each payment transaction message	Business Flow Selection Feature
Correspondent Chain Determination	Builds a correspondent chain according to industry guidelines	Correspondent Chain Determination Feature
Daily System Maintenance Activities	Enable the system to operate efficiently 24 hours a day, 7 days a week	Daily System Maintenance Activities
EBA Priority Payment	Enables banks to offer urgent intra-day, single credit Euro transfers	EBA Priority Payment Support
Fee Assessment	Enables banks and financial institutions to charge fees to the participating parties	Fee Assessment Feature
FX and Currency Conversion	Enables the transfer of funds in any currency for which a profile exists	FX and Currency Conversion Feature
IBAN Validation	Assists in debit and credit IBAN party identification	IBAN Validation Feature
Messaging Interfaces	Converts specific message attributes into the required format	Messaging Interfaces Feature
MOP Selection	Determines the most appropriate MOP for each payment transaction message	MOP Selection Feature
Party Identification	Identifies both the debit (Dr) party and the credit (Cr) party for each payment transaction message	Party Identification Feature
Payment Initiation	Includes the basic and fundamental processing steps for both manually created payments and dropped-in payments	Payment Initiation Feature
Payment Transaction Attributes Identification	Derives and identifies the fundamental payment transaction message attributes	Payment Transaction Attributes Identification Feature

Feature	Description	Reference
Posting Interface	Enables GPP to communicate with external banking interfaces for posting	Posting Interface Feature
Request for Charges Messages Validation	Validates incoming Request for Charges messages	Request for Charges Messages Validation
Special Processing	Enables a GPP user to manually implement specific non-customary instructions	Special Processing Feature
STP Validation	Increases STP rates for payment transaction messages	STP Validation Feature
Transaction Generation	Enables the system to generate a message that is related to an original payment transaction message	Transaction Generation Feature

2.3 Acknowledgements and Confirmations Feature

The GPP Acknowledgements and Confirmations feature sends appropriate acknowledgment and confirmation messages as configured in the system.

For example, if a payment is returned, GPP sends the message sender a Reject/Abort message (MT019) that includes a reason for the return.

A payment can be returned to the sending agent for the following reasons:

- Invalid SWIFT syntax of the application header
- Insufficient EOD balance in the debit-side bank account
- Attained thresholds for other participants (receivers)

GPP matches the original message to the rejection message, updates the original message with a relevant error code, and triggers an appropriate error message. The error message includes a description of the error, which enables a GPP user to take any required action.

2.4 Advice Messages Feature

GPP enables banks and financial institutions to create business rules that can cause the system to generate and send advice messages. GPP evaluates these business rules during the graceful termination subflow that concludes every processing flow during payment processing. If the business rule determines that GPP must generate and send an advice, the system sends the advice as defined in the Advising profile.

GPP has the following primary advice types:

- Electronic advices created by GPP
- Electronic advices generated by a GPP interface

2.5 Balance Inquiry Feature

The GPP Balance Inquiry feature does the following:

- Checks the available funds of the debit party
- Posts the identification of the debit party
- Contributes to the selection of the appropriate business flow (depending on system configuration)

2.6 Business Flow Selection Feature

Using the GPP Business Flow Selection feature, GPP determines the most appropriate business flow for each payment transaction message that enters the system.

The Business Flow feature is rules based, allowing the workflow to be modified quickly and easily.

GPP is delivered to the client with all the key workflows pre-defined. These may be modified during the project phase, upon consultation with the D+H and integration teams.

GPP has the following business flows:

- **High Value Flow**: This is the primary single payment processing flow, and includes the following processes:
  - Payment Initiation: Identifies and enriches payment transaction attributes.
  - Party Identification: Includes identifying both the debit party and the credit party.
  - Method of Payment (MOP) Selection: Determines the most appropriate MOP for each payment transaction.
  - Fee Assessment: Determines the relevant fees for each party.
  - Foreign Exchange (FX) and Currency Conversion: Enables the transfer of funds in any currency for which a profile exists.
  - Posting: Enables GPP to communicate with external banking interfaces.
- **Mass Payments Flow:**
  - File receipt and de-bulk
  - File validations
  - Pre-processing
  - Return/Rejects
  - MOP selection
  - Converting to HV payment
  - Fees
  - Bulking parameters
  - File construction and transmission
- **Incoming Reject/Return Flow**: This flow executes the incoming reject and return process that matches a reject/return message with an original message.
- **N Messages Flow**: This flow processes the following SWIFT message types:
  - MTn92
  - MTn95
  - MTn96
  - MTn99
- **Request for Charges Flow**: This flow executes the Request for Charges process for SWIFT MT191 messages.
- **Approve/Refuse Cancel Flow**: This flow executes the approval and refusal process for a message cancellation action.
- **After Posting Response Flow**: In cases of an asynchronous interface with an accounting system, this flow executes the After Posting Response process to completion.

- **NAK/RJCT Flow**: This flow executes the process for incoming SWIFT NAK and rejection messages.
- **Resend Flow**: This flow executes the resend process flow following incoming SWIFT NAK and rejection messages.
- **Termination Flow**: This flow is accessed at the conclusion of each main flow. It includes the definition of all required advices and notifications, and generates the final message status.
- **Notifications Flow:** This flow is accessed at the conclusion of each main flow. It determines which advices and/or notifications to be sent.

2.7 Correspondent Chain Determination Feature

GPP automatically builds a correspondent chain according to industry guidelines.

After identifying both debit and credit parties, GPP builds a correspondent chain if the following occurs:

- **MOP Failure**: Funds cannot be transferred via a clearing system.
- **No Accounting Relationship**: The first party in the credit chain has no accounting relationship with the debit party.

GPP assesses various routing levels to arrive at a valid correspondent agent, which GPP uses to build a correspondent chain. GPP then automatically selects a MOP through which the payment can be executed.

The following GPP services implement this functionality:

- Generate a Direct Message Service
- Perform a Transfer Service
- Retrieve a Correspondent Service

2.7.1 Generate a Direct Message Service

If Direct and Cover is selected, this GPP service transforms the original payment transaction message in an MT202COV Cover message and generates a Direct message.

2.7.2 Perform a Transfer Service

This GPP service determines if a Serial message or a Direct and Cover message is used for the selected correspondent.

2.7.3 Retrieve a Correspondent Service

This GPP service attempts to reach the first party (correspondent agent) in the credit chain. The service uses the Standard Settlement Instructions to identify the **Their** correspondent agent. If the **Their** agent is not found, the service selects the **Our** correspondent agent, which is based on one of the following:

- A business rule
- A default selection of a country or currency correspondent

2.8 Daily System Maintenance Activities

GPP has a specific set of daily system maintenance activities that enable the system to operate efficiently 24 hours a day, 7 days a week.

GPP supports multiple offices that share a single application server, as such, daily maintenance activities are done per office, at local office time, and only for office-specific data.

At the end of each business day, GPP executes sequential Start of Day (SOD) activities to prepare the system for the next business day. These SOD activities include generic maintenance tasks essential for proper application operation.

GPP supports tailored scripts to run SOD maintenance activities according to specific bank operational and functional requirements. These scripts invoke the GPP Tasks Service, as described in **Error! Reference source not found.Error! Reference source not found.**.

GPP can run SOD tasks at the end of the current business day or at the beginning of the next business day.

Note: The time of day can also vary. For example, GPP can perform End of Day (EOD) maintenance activities at 18:00, which causes all subsequent actions to be on the next business day. Relevant messages are only sent on the following calendar day.

The order that the tasks are executed is crucial to the proper functioning of GPP. The tasks, which are performed using SOA services, can be run in the following ways:

- **Manually**: An authorized GPP user runs tasks.
- **Automatically**: An external scheduling or monitoring application runs tasks.

GPP also supports online database backup, which enables backing up the database without interrupting normal banking operations.

2.9 EBA Priority Payment Support

GPP supports the EBA Priority Payment scheme, which enables banks to offer urgent intra-day, single credit Euro transfers to their customers.

The EBA Priority Payment scheme stipulates the following:

- The transferred funds must be available to the payment beneficiary on the day of acceptance by the sending bank.
- The transferred funds must be available within four hours of acceptance by the sending bank.
- The originating bank must process and route the payment to the selected channel within 90 minutes of the time of acceptance by the sending bank.
- The originating bank must process and route the payment to the selected channel before 13:30 CET.

EBA Priority Payments can be sent through any channel that meets these stipulations.

EBA Priority payments are sent with SWIFT message MT103+ that has field 23B set to **SPRI**.

2.10 Fee Assessment Feature

GPP enables banks and financial institutions to charge fees to the participating parties of each payment transaction processed by the system.

GPP determines the relevant fees for each party:

- **Debit Party**: Charged to the sender or initiator of the payment
- **Credit Party**: Charged to a fee account or deducted from the payment amount

GPP can deduct fees from the actual payment or can charge fees to principal accounts and fee account. Optionally, GPP can also transmit relevant fee data to external billing engines for additional processing.

Fees can also be waived upon a specific business request.

GPP can also charge agent fees, for example, when sending a payment with charge bearer **DEBT** for which GPP has identified the charge model.

GPP separates the fee processing flow as follows:

- **Core Processing**: Defines internal fees
- **Sender and Receiver Charges**: Handles incoming and outgoing agent fees
- **Request for Charges**: Handles incoming and outgoing Requests for Charges, as described in Request for Charges Messages Validation.

GPP implements the fees functionality using the following services:

- Fees Calculation Service
- Anticipated Funds Service

2.10.1 Fees Calculation Service

This service uses a business rule to determine if fee charges for a payment transaction should be waived.

This GPP service determines the following:

- **Fee Type**: Using a set of business rules, GPP determines the relevant type of fee to charge for each payment transaction.
- **Fee Amount**: Using a set of business rules, GPP calculates an amount to charge for every relevant Fee Type. Fee amounts for each type are calculated using a defined fee formula, which is based on one of the following:
  - Fixed amount
  - Percentage of a payment transaction (including minimum and maximum limits)
- **Fee Account**: GPP derives the fee account from one of the following:
  - Customer-level setup
  - Account-level setup
  - Business rule setup

2.10.2 Anticipated Funds Service

This GPP service does the following:

- Calculates anticipated funds for a payment transaction
- Handles Request for Charges that are associated with a request

2.11 FX and Currency Conversion Feature

GPP has extensive foreign exchange (FX) and currency conversion functionality. The system enables the transfer of funds in any currency for which a profile exists.

GPP implements this feature using the SOA FX and Currency Conversion services, as described in **Error! Reference source not found.**.

2.12 IBAN Validation Feature

GPP uses the IBAN Validation feature to assist in debit and credit party identification if an International Bank Account Number (IBAN) is provided.

GPP implements this feature using the SOA IBAN Validation service, as described in **Error! Reference source not found.**.

2.13 Messaging Interfaces Feature

GPP has various messaging interfaces that enable transmitting messages according to specific message types. GPP can convert specific message attributes into the required format that is compatible with each message type.

This table lists the messages and message types supported by the GPP messaging interfaces.

Message	Message Types
SWIFT	MT101, MT102, and MT103 MT202, MT202COV, and MT203 MTn91 and MTn92 MTn95 and MTn96 MTn99 MT900 and MT910 MT400
ISO	ACMT_023 ACMT_024 CAMT_052 pacs 002 pacs 004 pacs 008 pain 001
Proprietary	Any combination of message attributes

Note: The GPP Posting Interface can be configured to execute posting either before or after the messaging phase of payment processing. For more information, see Posting Interface Feature.

2.14 MOP Selection Feature

The Method of Payment (MOP) is the means by which a payment is executed and delivered. Book Transfer, SWIFT, Real Time Gross Settlement (RTGS), and Draft are examples of MOPs. GPP uses MOP selection rules to determine the most appropriate MOP for each payment transaction message.

GPP supports the following types of MOP selection:

- **Automatic**: GPP uses MOP selection rules, which are defined by the bank or financial institution, to determine the MOP. This enables the bank to determine its own preferences in MOP selection while maintaining integrity of usage.

  GPP scans all MOP selection rules in the defined order of priority, and selects the rule with the following characteristics:

  - Highest priority of all compatible rules
  - Valid for the both the payment and the MOP
  - Earliest valid value date of all compatible rules
- **Manual**: The transaction initiator (manual or electronic) determines the MOP, in which case GPP validates the requested MOP against various validation parameters.

GPP implements this feature using the MOP Selection services, as described in **Error! Reference source not found.**.

2.15 Party Identification Feature

The GPP Party Identification feature enables GPP to identify both the debit party and the credit party for each payment transaction message entering the system.

GPP also identifies the first party in the debit or credit chain, and loads the party information and the party-related account details. If a party is identified by an account number, GPP can derive the account owner.

Using information retrieved during this process, GPP sets the debit and credit parties and their corresponding account numbers.

2.16 Payment Initiation Feature

GPP implements the Payment Initiation feature using the SOA Party Identification services, as described in **Error! Reference source not found.**. The GPP Payment Initiation feature includes the basic and fundamental processing steps for both manually created payments and dropped-in payments.

Payments can be dropped into GPP by a variety of feeding systems and channels.

Payment initiation also enables the enrichment of additional payment attributes, including D+H add-on attributes, which are extension attributes that are defined by D+H and are used by GPP to support GPP core processing, GPP services and interfaces, and the GPP user interface.

GPP implements this feature using SOA Payment Initiation services, as described in **Error! Reference source not found.**.

2.17 Payment Transaction Attributes Identification Feature

This GPP feature enables GPP to derive and identify fundamental payment transaction message attributes during the initial process in the business flow.

For example, this process derives the Office, which is the processing bank or financial institution. The Office enables GPP to determine the correct business flow for the transaction. GPP uses these attributes to assess the business flow selection rules to determine the required orchestration of services that are relevant for the transaction. GPP implements this feature using an SOA Payment Transaction Attributes Identification service, as described in **Error! Reference source not found.**.

2.18 Posting Interface Feature

The GPP Posting Interface feature enables GPP to communicate with external banking interfaces to transmit and receive essential payment processing information.

The interface enables GPP to interact with proprietary banking systems to retrieve information, such as:

- **Payment Transaction Messages**: GPP captures the message from a bank interface.
- **Account Information**: GPP retrieves account information if an account is not in the GPP repository.

At the end of the payment processing flow, the Posting Interface can activate a call to an ad-hoc interface that updates a bank's ledger books with the relevant data. Common payment information includes:

- **Debit-Side**: Includes account ID, amount, currency, and value date
- **Credit-Side**: Includes account ID, amount, currency, and value date
- **Applicable Fees**: Includes debit account and Profit and Loss credit account

The Posting Interface can return the following responses:

- **Success**: Indicates that posting was successfully completed.
- **Failure**: Indicates that posting was not successfully completed.
- **Error**: Indicates that an error occurred during the posting process. The error response contains an error code, which can trigger an action in GPP, and an error description. For example, insufficient funds in the debit account can cause GPP to route the message to a designated queue for further processing.

2.19 Request for Charges Messages Validation

This GPP feature enables GPP to ensure that incoming Request for Charges messages (SWIFT MTn91) are valid, reasonable, and have not been previously claimed. GPP then populates a valid transaction message with relevant data from the Request for Charges message and the original transaction message, which creates a funds transfer message that can be paid to the sender of the Request for Charges.

If GPP cannot automatically process a Request for Charges message, it is routed to a queue for manual processing by a GPP user. Possible manual actions include paying the request or terminating the message.

Reasons that can prevent GPP from automatically processing a Request for Charges message include:

- Failure to match the request for charges message to the original transaction
- A Request for Charges message was previously paid

GPP implements this functionality using the following services:

- **Request for Charges Service**: Calculates the amount of a Request for Charges message.
- **Outgoing Request for Charges Service**: Generates a Request for Charges message and matches and validates the incoming request for charges. It is performed after payment classification on the debit-side processing.

2.20 Special Processing Feature

The GPP Special Processing feature enables GPP users to manually implement specific non-customary instructions during payment processing.

The following services implement the Special Processing functionality:

- Special Instructions Service
- Stop Flags Service

2.20.1 Special Instructions Service

This GPP service assesses a business rule and generates an error message if a matching business rule is found. The error message contains special instructions and recommended actions.

2.20.2 Stop Flags Service

This GPP service checks for debit and credit party stop flags, and debit and credit country stop flags. If found, GPP changes the transaction message status to **Repair** and a relevant reason for the stop flag is viewable.

2.20.3 NLS/Telecode Conversion

Incoming payments containing NLS characters will be identified by GPP using a validation mechanism validation. Such payments will be moved to REPAIR for manual intervention by an operator.

In manually created payments a validation mechanism validation checks the presence of illegal characters upon Submit/Save Draft. If illegal characters are found, an error message will be displayed in a pop-up window and the operator will need to remove any NLS characters from the payment before re-trying to Submit/Save Draft.

2.21 STP Validation Feature

The GPP STP Validation feature increases STP rates for payment transaction messages. This feature validates message attributes for completeness and correctness before message transmission, which eliminates errors and omissions that can cause processing delays.

GPP implements this feature using the SOA STP Validation service, as described in **Error! Reference source not found.**.

2.22 Transaction Generation Feature

The GPP Transaction Generation feature enables the system to generate a message that is related to an original payment transaction message.

For example, as part of the message processing flow, GPP can generate an answer message (SWIFT MTn96) in response to a query message (SWIFT MTn96).

3 GPP SOA Services

GPP includes SOA standalone services that enable specific GPP functionality. The SOA services also enable third-party applications to interface with GPP to retrieve specific information and access GPP functionality.

For details of the services, see GPP SOA List of Services document.

4 GPP User Interface Features

GPP includes a user-friendly user interface that integrates security and access control mechanisms that are designed to guarantee application data integrity and confidentiality.

The GPP user interface also enables users to create and manage the profiles and processes that constitute the payment transaction messaging process.

This table describes the primary features and functionality of the GPP user interface.

Feature	Description	Reference
Business Rules	Enable users to tailor the system to specific business requirements	Business Rules
Customized Fields	Enables banks and financial institutions to define payment attributes	Customized Field Attributes
Error Messages and Audit Trail Messages	Used to monitor and track messages during the processing flow	Error Messages and Audit Trail Messages
Message Creation	Enables users to create messages	Message Creation
Message Search Functionality	Enables users to search for specific messages using relevant criteria	Message Search Functionality
Message Status and Filters Tree	Enables users to manage, process, and search for payment transaction messages	Message Status and Filters Tree
Profiles	Define relationships between data items in the system	Profiles
Message Page	Enables users to create and process messages	Message

Feature	Description	Reference
User Entitlement and Access	Enables authorized users to access relevant system data and functionality	User Entitlement and Access

4.1 Business Rules

GPP uses business rules to achieve flexibility in payment processing. By creating and maintaining business rules, a bank or financial institution can tailor system behavior to specific business requirements.

GPP has many types of business rules, and each type is used for a specific purpose. For example, GPP uses Department Determination business rules to automatically determine the department to which a message belongs. This attribute is crucial to user entitlement (see User Entitlement and Access). GPP uses Fee Formula Selection business rules to define an amount for every fee type that is assessed.

GPP supports system rules, which are controlled by D+H, such as Message workflow determination.

A business rule has a set of conditions and a result. The conditions refer to attributes of messages or other data in the system. The result is the action performed by GPP if the conditions are met. For example, a Product Determination rule defines an urgent payment result for a message with the following conditions:

- Payment currency is set to **EUR**
- Message priority is set to **High**

A message that meets both conditions is processed as an urgent message.

4.2 Custom Fields

GPP has the following types of payment attributes, which are used during the payment processing flow:

- **Standard Attributes**: Payment attributes taken from the ISO 20022 and supported by pain and pacs message types.
- **D+H Extension Attributes**: Payment attributes not taken from the ISO 20022 and not supported by pain and pacs message types. There are two types of D+H extension attributes:
  - Add-On Attributes: Payment attributes defined by D+H. Add-on attributes are used by GPP to support GPP core processing, GPP services and interfaces, and the GPP user interface.
  - Customized Field Attributes: Payment or profile attributes defined by D+H clients, such as banks and financial institutions. Customized fields are used by individual clients to store additional information.

4.2.1 Add-On Attributes

Add-on attributes are D+H extension attributes that are defined by D+H and are used by GPP to support GPP core processing, GPP services and interfaces, and the GPP user interface.

The GPP database stores add-on attributes in fields that are explicitly referenced by GPP processes and services.

For example, **Office** is an add-on attribute that GPP derives and attaches to messages. The **Office** attribute is also used by GPP in various business processes.

4.2.2 Customized Field Attributes

Customized fields are D+H extension attributes that are defined by D+H clients and are used to store additional information. Customized fields extend the GPP data model but do not require changes to GPP programming code or database table structures.

GPP enables banks and financial institutions to create the following types of customized fields:

- Payment Message: The customized field is attached to a payment message. For more information, see Custom Fields.
- Static Data: The customized field is attached to specific static data, such as profile data. For more information, see Custom Fields.

For example, a client can define a customized field that contains additional contact information for an account. GPP can make this information accessible to client-specific applications and interfaces.

A client can create customized fields for the following levels:

- System: The customized field is accessible to all offices.
- Office: The customized field is accessible only to the office for which it was created.
- Client: The customized field is accessible only to the specific client for which it was created. This level refers to the client of the bank or financial institution, not the D+H client.

4.3 Error Messages and Audit Trail Messages

GPP generates system error messages and audit trail messages. Both types of messages can be used to monitor and track messages during the processing flow. GPP enables an external system management or monitoring tool to access error and audit trail messages.

The GPP template error table generates the following types of error and audit trail messages:

- **Audit Trail**: Track significant changes to a message, and are viewable in the Audit Trial section of the Message Window.
- **Message Errors**: Track significant errors that prevent straight-through processing or that cause GPP to route a message to a queue for manual intervention. The error message includes a description of the message error.
- **Message Error Log**: Track technical and non-business errors that occur in the system. These errors enable GPP users to monitor the payment processing flow by providing information that can be used to set alerts.

4.4 Message Creation

The GPP user interface enables GPP users to create messages in the following ways:

- From scratch: A GPP user creates a message by entering all message details.
- From a template: A GPP user creates a message using a previously defined template which contains reusable data. Additional data is provided by the GPP user.

4.5 Message Search Functionality

The GPP user interface enables GPP users to search for specific messages using relevant search criteria.

Messages can be retrieved from the following:

- **Active Database**: Holds ongoing and completed transactions

- **History Database**: Holds old transactions
- **Template Messages**: Holds messages created by a user-defined template

4.6 Message Status and Filters Tree

The Messages and Filters tree in the main application window is the primary GPP organizational and navigational tool. GPP users can use the Messages and Filters tree to manage, process, and search for payment transaction messages.

Payment transaction message are organized into a hierarchal tree by flow type, message status, and customized filters.

The highest branch of the tree sorts messages by flow type:

- **Batch Payment**: Mass payment processing.
- **Single Payment**: High value payment processing. These messages are additionally sorted by:
  - Message Status: Assigned by GPP during the processing flow.
  - Customized Filters: Created by user-defined criteria.

The Messages and Filters tree also organizes messages into groups of messages that have a similar status or require a similar action. These groups can be divided into subgroups.

These groups include:

- **Exception**: This group contains incoming or outgoing messages that have exceptions. For example, possible duplicate payments and payments that have authentication or compliance exceptions.
- **Final**: This group contains messages that have completed the processing flow. This group includes the **Cancelled**, **Completed**, **Rejected**, **Rejected Duplicate**, and **Returned** queues.
- **Inactive**: This group contains the **Inactive Compliance**, **Inactive Account Lookup**, and **Inactive Posting** queues.
- **Internal**: This group contains messages that are waiting for initialization. No other user operations can be performed on these messages. This group includes the **Received** queue.
- **Manual Process**: This group contains incoming or outgoing messages that require manual intervention.
- **Service**: This group contains the **Service Complete**, **Service Rejected**, **Service Wait**, and **Service Wait ACK** queues.
- **Waiting**: This group contains messages waiting for acknowledgment, confirmation, posting, or approval.
- **Warehouse**: This group contains messages that are waiting for a specific system occurrence, such as a future date or updated exchange rate.

The Messages and Filters tree stores messages by office and processing date. It can also display information, such as total number messages in the queue and total number of messages in the base currency.

4.7 Profiles

GPP enables GPP users to define profiles, which are used to define relationships between data items in the system. These relationships determine how GPP processes messages.

Profiles are made up of static or configuration data and are managed via the GPP user interface. All GPP profiles share common management and editing features, such as user interface buttons and fields.

4.8 Message Page

The GPP Message page enables GPP users to create and process messages.

Message attributes are grouped into meaningful categories that facilitate finding relevant attributes.

The Message Window enables customization to meet specific system requirements, various message formats (such as pacs, pain, or SWIFT), and various message types (such as customer messages or bank messages).

Each window layout can define specific mandatory and optional fields, field attributes, and restrictions. After creation, message windows are dynamically selected based on GPP user-defined rules.

The actions that can be performed on messages vary by message type and message status.

4.9 User Entitlement and Access

GPP system administrators assign each GPP user an Entitlement profile, which enables a user to access only relevant system data and functionality.

The Entitlement profile is composed of a group of Entitlement Class profiles that define the entities and functionality a user can access. A user can have read-only access or full access to application, as defined in the Entitlement Class profiles.

GPP application functionality is controlled by enabling or disabling the menu options and buttons that the system displays, as defined in the Entitlement Class profiles.

The Entitlement Class profiles include:

- **Access Classes Profile**: Determines the business functions and operations a user can access
- **Message Types Classes Profile**: Determines the message types a user can access
- **Messages and Filters Classes Profile**: Determines the statuses and the customized filters a user can access
- **Department Classes Profile**: Determines the departments and offices a user can access
- **Rule Types Classes Profile**: Determines the business rules a user can access
- **Alerts Classes Profile**: determines the alerts a use can access

GPP enables creating groups of users, who have similar roles, to authorize access to application data and functionality.

Appendix A: Glossary

Term/Acronym	Description
ASO	Application Service Provider
EOD	End of Day
ESB	Enterprise Service Bus
GPF	Accuity Global Payment File
MID	Message ID
MOP	Method of Payment
RTGS	Real Time Gross Settlement
SOA	Service-Oriented Architecture
SOD	Start of Day