ProfitStars

Bill Pay Services API – User Guide

(For user with jXchange XSD Version R2015.0.01_XSD)

ProfitStars

List of Tables and Figures

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Bill Pay Services API – User Guide

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Bill Pay Services API
Release 2015.0.01

Bill Pay Services API – USER GUIDE

Related Documents

Additional documents related to this User Guide are included in jXchange Vendor Packet:

Document Tracking

Any updates made to this document are outlined below.

Date	Section	Summary of Changes
11.29.2012	**Version 2012.0.01**	Initial Publication
12.20.2012	• Payment Services: o Payment History Srch; o Payment History Inquiry	• Add missed Payment Status of: Resubmitted
01.15.2013	• Identification • Business Service Operations: o Subscriber Services • Glossary	• Add reference to Subscriber Lookup service – which will return the iPay Subscriber Identifier needed for all Subscriber-level service requests. • New 'Subscriber Lookup' service • 2 new subscriber identifier elements added to BilPaySubInfo complex, associated with SubInq, SubMod and [future] SubAdd messages. • Remove ability to add new MobProvdCode; thus elminating need for MobProvDom element altogether (SubInq; SubMod services) • New term added for 'Stand-Alone' Bill Pay Services.
01.17.2013	• Business Service Operations	• The following 'Account Number' elements will no longer be masked in the service response: o PayFromAcctID o SubMerAcctId
04.16.2013	• Business Service Operations: o Payee Services	• Eliminate the word 'Individual' from the definition for PayeePmtMthd (the Payment Method is applicable for ALL Payees, not just Individual).
05.15.2013	• **Version 2012.0.02** • Service Behaviors: o Nulls o Modifications • Business Service Operations: • Glossary	• New Document Version • Added instructions on use of JHANull when deleting elements within an array item, or the array item itself; • Added instructions for modifying items or elements in an array • Modifications to mulitple Business Service Operations are detailed in 'Business Service Operations – Updates' section below. o Includes new Business Service Operation: Subscriber Add • New term added for 'Electronic Risk Limits'
10.15.2013	• **Version 2013.1.03**	• New Document Version o Includes new functionality to expose Bill Pay Services API for **Business Subscribers**, ▪ Includes the ability to add multiple users to

	• **Business Service Operations:**	• Modifications to multiple Business Service Operations to include Business Subscribers are detailed in 'Business Service Operations – Updates' section below. o Includes new Business Service Operation: Scheduled Payment Approval

	• Glossary	• New terms added for:
		   o Primary Account Holder
		   o Subscriber's Associated User (i.e., 'Subuser')

12.03.2013	• Behaviors o Identification: AuthenUsrCrd	• Corrected 'AuthenUsrCred' element to accurately reflect code assertion using claim name of 'RequestingUsrID' (vs 'SubAssocUsrID')

07.07.2014	• **Version 2013.1.03**
	
	• Business Service Operations:
	   o Channel Inquiry
	
	   o Subscriber Add, Subscriber Inquiry, Subscriber Mod
		• User Guide updated to align with jX XSD Version 2013.1.03.
		
		• New element added to BilPayProdTypeInfoArray:
		   o AlwSubType
		
		• Corrected 'PmtApprvReq' element name in the BilPaySubInfo complex to accurately reflect XSD value.
		• Corrected 'PersonName' element name in the SecdPersonArray within the BilPaySubInfo complex to accurately reflect XSD value ('AddlName'):

07.31.2014	• **Version 2014.0.01**
	
	• [NEW] Copyright page:
	
	• About this Guide:
	
	• Service Behaviors:
	   o Nillable attribute
	   o Rstr attribute
	
	• Business Service Operations:
	   o Service Dict Search
	
	   o Payee Inquiry
	
	   o Payee Add
	
	   o Scheduled Pmt Add
	
	   o Payment Search
	
	   o Multiple/Various
		• New Document/XSD Version (R2014.0.01)
		   o Minimum jXchange contract version R2014.0.01 is required.
		• Added 'Copyright' information.
		
		• New email contact for documentation support.
		
		• Added instructions on use of 'nillable' attribute.
		• Added instructions on use of 'Rstr' attribute
		
		• Added 'PhoneType', 'SvcFeeDesc' and 'ElecMerAcctType' to list of Open Enums available.
		
		• Clarification of value returned for 'SubMerAcctId' element when no value exists.
		
		• Clarification of rules for submitting Payee FI Account Information when adding a new Payee.
		
		• Rule change: Payment Add no longer allowed for an 'unactivated' Payee
		
		• Corrected 'PmtStartDt' details to denote that this will always be based on 'Process Date', regardless of Payment Date Model.
		
		• Modifications to multiple Business Service Operations to include Payment Service Fee functionality as detailed in 'Business Service Operations – Updates' section below.

	- New] eBill Search [New] eBill Inquiry [New] eBill Mod	• Modifications to multiple Business Service Operations to include eBills/Bill Presentment functionality are detailed in 'Business Service Operations – Updates' section below.
	• [New] Appendix C: • [New] Appendix D: • [New] Appendix E:	• Added list of Payment Status Definitions • eBill account setup and account error resolution flows • eBill account errors list
	• Glossary:	• New terms added for: o eBill/eBiller
03.31.2015	• **Version 2014.0.06**	• New Document/XSD Version (R2014.0.06) o Minimum jXchange contract version R2014.0.06 is required.
	• [NEW] List of Tables and Figures	• New section.

	• Business Service Operations
	  o Payee Search
		• New elements added to Payee Search response:
		  o FirstAvlProcDt
		  o FirstAvlEstArvDt
		  o EstArvDay
		• Corrected definition of 'NotAct' Payee Status.

	o Payee Inquiry	• Corrected definition of 'NotAct' Payee Status. • Add the following missed element: o SubModMerAcctId

	o Payee Add	• Clarified PayeeEmailArray requirement details
		• Added notes for the following elements to clarify that entered values may not always be used for Company Payees, if superceding information exists on the matched Merchant record:
		  o PhoneNum
		  o EmailAddr

	o Payee Mod	• Corrected element name from ElecMerPayeeAcctID to ElecBilPayeeAcctID under 'eBill Account Setup' instructions.
	o Subscriber Add	• Added instructions for designation of default Pay From Account in 'Subscriber Add Behaviors' section.
	o Multiple/Various	• Clarified example in PmtDayofMonth to include days (1-31).

	• Glossary	• New terms added for:
		  o Activation [Payee]
		  o Non-Activated Payee

	• [NEW] Index	• New section.
06.15.2015	• **Version 2014.0.08**	• New Document/XSD Version (R2014.0.08) o Minimum jXchange contract version R2014.0.08

	• Business Service Operations 　○ Subscriber Inquiry	is required. • Added note for the Pay From Account Array to clarify that this array will be empty if the Subscriber has no active Pay From Accounts at the time of the Inquiry.
	○ Payee Inquiry 　○ Payee Mod	• Added note to element included in response [AuthenQuesDesc] clarifying that element may include HTML or other 'illegal' characters.
	○ Scheduled Payment Add/Inquiry/Mod 　○ Payment History Inquiry	• New element added to Scheduled Payment Add and Mod requests (including future payments for recurring series), as well as Scheduled Payment Inquiry, Mod and Payment History Inquiry responses: 　○ SubCmntToPayee
	○ eBill Search	• New element added to request and response (root): 　○ ElecBilPayeeAcctId • New elements added to eBill Search complex in response: 　○ ElecBilPayeeAcctId 　○ CurrBal 　○ MinPmtAmt
	○ eBill Inquiry	• New element added to eBill Search complex in response: 　○ ElecBilPayeeAcctId
	• Appendix B - Subscriber's Associated User - Permission/Caps examples	• Corrected canonical value name for Subuser 'PerCode' from 'CanScheduleP2PPayments' to 'CanScheduleP2PPayment'
08.18.2015	• **Version 2015.0.01**	• New Document/XSD Version (R2015.0.01) 　○ Minimum jXchange contract version R2015.0.01 is required.
	• Business Service Operations	• New payment feature added: Outbound Transfers
	○ Channel Inquiry	• New canonical value added to FeturType element: 　○ XferToSubFinInst (Outbound Transfers)
	○ Payee Add	• New canonical value added to PayeeClsf element (request and response): 　○ FinInst (Financial Institution) • New element added to BilPayPayeeInfo complex in response: 　○ PmtIntentType (Payee level)
	○ Payee Search	• New elements added to BilPayPayeeSrchInfo complex in response: 　○ PmtIntentType (Payee level) 　○ SubMerAcctID

		o Payee Inquiry o Payee Mod	• New element added to BilPayPayeeInfo complex in response: o PmtIntentType (Payee level)

		o Scheduled Payment Search	• New filter added to search request and response:
			   o XferFilter (Transfer filter)
			• New element added to BilPaySchedPmtSrchInfo complex (request and response):
			   o PmtIntentType (Payment Intention Type)

		o Scheduled Payment Add o Scheduled Payment Mod	• New element added to BilPayPmtInfo complex in request: o PmtIntentType (for Payment)

		o Scheduled Payment Inquiry
		o Payment History Inquiry
			• New element added to BilPayPmtPayeeInfo complex in response:
			   o PmtIntentType (for Payee)
			• New element added to BilPayPmtInfo complex in response:
			   o PmtIntentType (for Payment)

		o Payment History Search	• New filter added to search request and response:
			   o XferFilter (Transfer filter)
			• New element added to BilPayPmtHistSrchInfo complex (request and response):
			   o PmtIntentType (Payment Intention Type)

		o Appendix B: Subuser Permissions/Caps	• New examples added for Transfer permissions and caps.
		o Glossary	• New terms added for Transfer account types.

About this Guide

The *Bill Pay Services API – User Guide* provides information about configuring and working with iPay's Bill Pay Services API.

After Reading This Document

iPay welcomes your comments and suggestions on the quality and usefulness of this technical document. Please share your feedback with the documentation team by submitting your input by email to iPayIntegrationSupport@jackhenry.com.

Purpose

The purpose of this document is to provide the implementation, standards and operations of iPay's Bill Pay Services API.

The information in this manual is instructional in nature and designed for third party vendors to evaluate the interface using a web based messaging system for interfacing with iPay's Bill Pay Services through jXchange.

This document is not designed to be a primer for consuming web services nor a programming teaching tool, as this is beyond the scope of this document.

Overview

What is the Bill Pay Services API?

iPay has created an 'iPay Service Bus' (iSB), which exposes Bill Pay Services API services through jXChange, allowing authorized external service 'consumers' to request bill payment functionality via web service requests for integration into any desired bill pay or other interface.
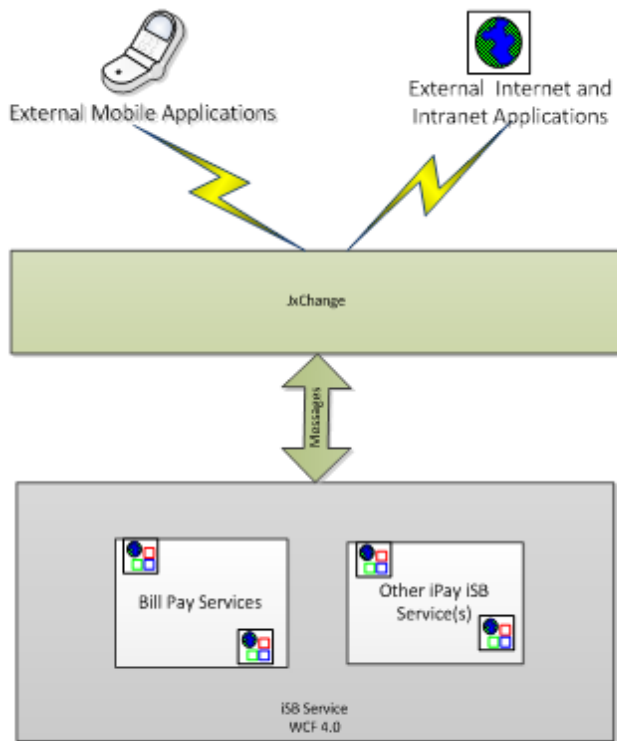
Error Handling

Error handling is covered in detail in the jXchange Error Handling Document that is included in the Vendor Packet.

Fault Behaviors

Error handling for errors has been designed into the messaging structure and involves notification through use of codes, categories and descriptions, as well as options for error overrides for non-fatal errors.

It should be noted that warning and ['override-able'] fault message information is returned in the Message Record Information Array, *<MsgRecInfoArray>* while all unhandled exceptions and errors are thrown as SOAP faults in the Fault Record Information Array *<FaultRecInfoArray>*.

The error values specific to iPay's Bill Pay Services API business operations can be found by performing a Service Dictionary Search, which will return all fault codes by service operation.

Parallel/Serial Error Message Handling

The Bill Pay Services API utilizes Parallel Error Message handling, except for those types of 'critical validation' errors that would prevent ANY forward movement of the request. These 'Serial Error' scenarios include such things as:

- Invalid Institution Identifier
- Invalid Subscriber Identifier
- Insufficient permissions to access a Service Operation
- Invalid PayeeID (for a Payee Inquiry request)
- Invalid PaymentID (for a Payment Inquiry request)

Serial Error Message Handling

In Serial Error Message Handling, the service provider (iPay) will issue an error response message when the first 'critical' error is discovered in a consumer's request. If the consumer resubmits the request with corrected information, the service provider will attempt to process the new request. If a second 'critical' error is discovered, the service provider will return another error response message, which will require correction and resubmission. Back and forth error messaging will continue until the message request can be processed successfully.

Parallel Error Message Handling

In Parallel Error Message Handling, the service provider (iPay) will continue to process a request message after detecting faults or certain types of errors in an attempt to identify all possible errors before returning an error message to the consumer. Once all errors have been detected that prevent successful completion of a request, an error response message will be returned to the consumer that lists all of the errors.

Authentication and Identification

Authentication

The service consumer is expected to perform all Subscriber authentication, while jXchange performs the 'Consumer-level' (e.g., Channel- or Institution-level) authentication. As such, it is assumed that all unique identifiers provided for the Financial Institution and Subscriber have been authenticated prior to receipt of the message request by iPay.

 iPay's Bill Pay Services API will, in turn, perform service authentication to ensure that the service request is called/passed by a valid source (e.g,. jXchange).

Authorization

iPay will authorize the service Consumer via a shared security token generated and passed by jXchange, and will also ensure the Consumer (e.g., Channel) has a valid relationship with the Financial Institution identified in the service request. In addition, the Subscriber, if applicable for the request, must be associated with the specified Institution.

Finally, iPay will validate all message requests to ensure that the requested service operation is available for the Institution and, if applicable, for the Subscriber.

NOTE: At the present time, a Subscriber's 'authorized' set of Bill Pay Service API operations must not exceed the services available from the Subscriber's web-based (iPay) Bill Pay product (for example, a Subscriber that does not have 'Email Payment' capabilities via their iPay-hosted Online Bill Pay will not be allowed to add an Email Payee or an Email Payment via the Bill Pay Services API).

Identification

The Service Provider (iPay) will validate Institution and, if applicable, Subscriber identification for each request message received.

Service Consumers must provide the unique iPay Subscriber identifier required to return a specific Subscriber profile/account. If the Service Consumer does not possess the required iPay subscriber identifier, the 'Subscriber Lookup' service may be utilized to obtain the needed information.

In order to ensure that all required information is included to enable iPay to validate each request message, the following complex elements are required in the Message Request Header (***MsgRqHdr***), in addition to those elements required by jXchange:

> **jXchangeHdr**
> The simple elements contained within the *jXchangeHdr* complex that are required by th Bill Pay Services API(s) are listed below.
>
> > **ConsumerName**
> > This is the name of the service consumer (business name) for the Soap Header. Entries must be in canonical form *as defined by the Service Consumer*.
> >
> > **ConsumerProd**
> > This is the name of the product which is consuming the service (business product name) for the Soap Header. Entries must be in canonical form *as defined by the Service Consumer*.

InstRtId

This is the identification of the entity of the submitted message. A financial institution entity uses the routing transit or nine digit number assigned to financial institutions for the purpose of routing as assigned by the American Bankers Association. Any leading zeros must be provided for a complete routing and transit number. A non-financial institution entity should use a mutually agreed upon identification that must contain at least one non-integer character.

When a record is for a specific Financial Institution within a holding company, the InstRtID is the specific Financial Institution routing identification and not the holding company's identification.

AuthenUsrCred

This *optional* complex element specifies the Service Provider's (iPay's) identifier <*SubAssocUsrID*> for the 'requesting user' (the 'Subscriber's Associated User'). This element is used primarily when the requesting user is not the Subscriber, and is necessary to determine the bill pay permissions available to the requesting user.

If provided, the identifier must be embedded within this complex element, which must be delivered in the form of a WS Security element that contains a single SAML V2.0 Assertion (see http://docs.oasis-open.org/security/saml/v2.0/saml-core-2.0-os.pdf for more information on SAML V2.0). The Service Provider, in turn, will parse the SAML token in order to retrieve the requesting user's identifier.

If NO *SubAssocUsrID* is provided, the Service Provider will assume the request is from a user that possesses full permissions access (such as a Primary Account Holder or [Individual] Subscriber, etc).

Example:

```
<AuthenUsrCred>
    <Security xmlns="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext- 1.0.xsd">
        <Assertion xmlns="urn:oasis:names:tc:SAML:2.0:assertion" ID="c563985c-c095-4bd0-b066-
                e6a3ccda7855" IssueInstant="2013-01-02T16:30:16.328Z" Version="2.0">
            <AttributeStatement>
                <AttributeName="http://schemas.xmlsoap.org/ws/2005/05/identity/claims/RequestingUsrID">
                    <AttributeValue>123456</AttributeValue>
                </Attribute>
            </AttributeStatement>
        </Assertion>
    </Security>
</AuthenUsrCred>
```

Service Behaviors

Canonicals

Where canonical values are required within the Bill Pay Service API operations, the value submitted must match the expected canonical value exactly. Any invalid canonical value (as with any invalid data) will cause an error, unless explicit behavior has been defined that indicates we will utilize a default value in the event of invalid data.

The 2 types of canonicals utilized for all service operations in jXchange (and, consequently, the Bill Pay Services API) are:

1. **ClosedEnums** - there is a definite set of values and only those values are to be used on the request and response messages between a consumer and provider.

   The Closed Enumerated values are defined in the jXchange XSD contract in the form of annotations. The fixed values are the only data set that a consumer of these elements needs to understand. An error will be returned when a value is delivered in a message that iPay's Bill Pay Services API services do not understand.

   The Closed enumeration values will be used by the Bill Pay Services API in accordance with the existing jXchange framework to determine how to invoke an operation. Some of the behaviors that go along with this are;
   - if the element is not sent or sent empty, and it is required, a fault error will be returned;
   - if the element is not sent or sent empty, and it is optional, a default will be used and;
   - if the element is sent with an incorrect value, a fault error could be returned.

   The web service call - Service Dictionary Search (SvcDictSrchRq_MType) provides the means for a consumer to query for iPay's closed enumerated values within the Bill Pay Services API. The details for using this request message can be found in the [Service Dictionary Search](#) section below.

2. **OpenEnums** - there is a definite set of values, but those values are not represented (annotated) in the contract. These values have the potential to change over time. If a defined value is sent on the request or response, it will be used. However, if a value that is not defined is sent, then it should be passed as is and the provider or consumer receiving that value would be responsible for understanding it.

   Open enumeration elements are generally suffixed with *Code.* The element that is suffixed with *Code* has a *mate* element that is suffixed with *Desc.* This is because often a service provider field is represented as a code that does not convey its representation thereby the service provider returns the description of the code that is a literal value that can be understood by the consumer.

   The web service call - Service Dictionary Search (SvcDictSrchRq) provides the means for a consumer to query for iPay's open enumerated values within the Bill Pay Services API. The details for using this request message can be found in the [Service Dictionary Search](#) section below.

Nulls

iPay requires an *explicit* declaration of a 'null' value in order to specify when an element needs to be modified to a null value, and therefore *not* modify an existing element if this 'null' value is missing.

The WC3 XML Schema standard mechanism, "xsi:nil= true", can be utilized to *explicitly* assign a value of null to an element rather than using an empty element to *implicitly* assign a value to null.

The use of jXchange's JHANull attribute notifies the business service to ignore the specified element. JHANull must be utilized for all 'add' and 'modification' requests within the Bill Pay Services API.

'JHANull' Attribute:

- The behavior expectation for XML elements in a *modification* service:
  - If the element is not sent at all, is empty, or is sent as xsi:'nil = true', this will convey to the service provider (iPay) to *do nothing*.
  - If the element is sent with 'JHANull=true', this will convey to the service provider (iPay) to clear the stored value and set the element to a null value.

- The behavior expectation for XML elements in an *addition* service:
  - If the element is not sent, is empty, or sent as 'xsi:nil=true', this will convey to the service provider (iPay) to *set a default* value.
  - If the element is sent with 'JHANull=true', this will convey to the service provider (iPay) to set the element to a null value.

- The behavior expectation for *deleting XML elements in an array* in a *modification* service:
  - If the array element is not sent, is empty, or sent as 'xsi:nil=true', this will convey to the service provider (iPay) to *do nothing.*
  - If the array element *key identifier* is sent with 'JHANull=true', this will convey to the service provider (iPay) to *set the entire array item to null values* (i.e., 'delete' the array item).
  - If a [*non-key*] element of the array item is sent with 'JHANull=true', this will convey to the service provide to clear the stored value and *set that element only* in the array item to a null value.
  - If *every* element in the array item is sent with 'JHANull=true', this will also convey to the service provider to *set the entire array item to null values* (i.e., 'delete' the array item).

'Nillable' Attribute:

The 'nillable' attribute is used in jXchange to specify whether an element will be returned in the event there is no value for that element. If the element is specified with the nillable attribute ="true", the element will be returned with no value (i.e., 'blank'). If the element is does not include the nillable attribute, the element will not be returned if the value is not set or is set to null.

'Rstr' Attribute:

The 'Rstr' attribute is used in jXchange to specify the level of restriction(s) that exist at a parent or child node. The full list of canonical values are:

- **ReadWrite** (default)
- **ReadWritePart**
- **ReadOnly**
- **ReadOnlyPart**
- **NoAccess**
- **NoAccessPart**
- **Hid**

iPay currently utilizes only the implied default ('ReadWrite'), as well as the 'NoAccess' and 'Hid' values.

The 'ReadWrite' value indicates that there are no restrictions on the specified element. A value of 'No Access' indicates that the Service Consumer should ensure the end-user has 'no access' to the specified element. A value of 'Hid' indicates that the Service Consumer should ensure the specified element value is 'hidden' from the end-user.

Search/Inquiry Behaviors

The 'Search/Inquiry' process is a basic process in jXchange, and is how all data is retrieved:

- **[object] Search** – This search is performed by the service consumer in order to get a 'subset' list of the desired object (e.g., Subscribers, Payees, Payments, etc), based on client-specific search criteria.
- **[object] Inquiry** – Once the service consumer has the desired list of specific Payee(s), Payment(s), etc., identified, they send the corresponding Inquiry message to get detailed information on an individual Payee, Payment, Subscriber, etc.

If the required individual identifier for an entity is already known (e.g., Subscriber ID or Payee ID), it is not necessary to perform the Search service prior to requesting the Inquiry service for the given entity.

The Bill Pay Services API utilizes the following 'fault' responses for search and inquiry requests:

- All search and inquiry requests will return an 'Error' when the request contains an Identifier (e.g., Institution, Subscriber, etc) that does not exist. The message will indicate which element is invalid (e.g., 'Invalid Subscriber ID', etc).

- All search and inquiry requests will return a 'Warning' when the Institution and/or Subscriber identifiers are valid, but the information requested (e.g., Scheduled Payments in a certain date range, specific Payee Name, etc) does not exist. The message will indicate that 'no records match selection criteria'.

Modification Behaviors

The 'Modification' process is a basic process in jXchange, and is how all eligible data is updated or deleted.

The Activity Intention Key <ActIntentKey>, which is provided by the service provider, is required for every Mod request. Therefore, ***an Inquiry request for the desired data set must always be performed prior to the modification request*** in order to retrieve the Activity Intent Key necessary for modification processes.

Not all available objects and/or elements within the Bill Pay Services API are eligible for update or delete. An element that is a *required* element can be updated, but cannot be deleted. An *optional* element is eligible for either update or delete. For each 'Mod' service operation detailed in the [Business Service Operations](#) section below, only those elements that are eligible for update will be detailed in the Mod service operation, and each of those elements will be designated as required or optional.

The use of [JHANull](#) is expected in a ***modification*** request in order to explicitly indicate whether an element is intended to be deleted or is simply not included in the modification request.

Modification of individual elements ***within an array item***, or update of the array item itself, must be indicated as follows:
- If a _new_ array item is received for an array, it will be inserted into the array;
    - If a new element within an [existing] array item is received, it will be inserted into that array item;
- If an [existing] array item is included in the modification request, _and no changes to the [entire] item are evident_, no updates will be made to that item in the existing array;
- If an [existing] array item is included in the modification request, and one or more changes are noted for individual elements within the array item, updates will be made to those elements (only).
- If an [existing] array item is received that indicates a delete of an element within the array item, or delete of the array item itself, the use of [JHANull](#) is expected in order to explicitly indicate the delete intent.
- If an [existing] array item is NOT explicitly specified in the modification request, no updates will be made to that array item.

NOTE: jXchange's concurrency model is not currently supported within the Bill Pay Services API. However, the Activity Intent Key will be provided by iPay in response to every Inquiry request that is intended for other than 'read-only' activity.

Localization/Time Zones

The Bill Pay Services API services are localized services, based on the English culture (IETF language tag: en-US) and the Eastern time zone.

Handling Time Zones

Since the time zone of the service consumer or end-user may differ from the Bill Pay Services API localized time zone (Eastern), all time elements included in the service operations are required to be converted to 'Universal Time Coordinates' (UTC) –formerly known as Greenwich Mean Time, or GMT-- in order to 'neutralize' these time zone differences.

For example, a service consumer's bill pay application might allow an end-user to select their desired time zone. Any service transactions originated in the chosen time zone must be converted to UTC before the request message is sent.   As an example:

1. Subscriber picks Central time zone and 9am
2. Service consumer converts to UTC (9am + 6 hours =1500 UTC) and sends request message
3. Service provider in Eastern time zone converts UTC time to local time zone (1500 – 5 hrs = 10am).

To convert local time to UTC time, you will need to add hours to get the UTC. To convert UTC to local time, these hours must be subtracted. The following is a table showing time adjustments:

Table 1 - UTC Time Adjustments

Local Time	Add or Subtract from UTC:
Atlantic Standard	Four hours
Atlantic Daylight	Three hours
Eastern Standard	Five hours
Eastern Daylight	Four hours
Central Standard	Six hours
Central Daylight	Five hours
Mountain Standard	Seven hours
Mountain Daylight	Six hours
Pacific Standard	Eight hours
Pacific Daylight	Seven hours
Alaskan Standard	Nine hours
Alaskan Daylight	Eight hours
Hawaiian Standard	Ten hours

Business Service Operations

The Bill Pay Services API supports messaging for the following business service operations:

Table 2 - Bill Pay Service Operations List

Service Operation	Description
Institution	
Service Dictionary Search <SvcDictSrchRq_MType>	Allows a client to request 'closed and open enumerated' canonical element values based on client-specified dictionary criteria, as well as fault codes by service operation.
Channel Inquiry <BilPayChanInq>	Allows a client to retrieve general reference information for the Financial Institution and its Bill Pay Services.
Subscriber	
Subscriber Lookup <BilPaySubConsmCustInq>	Allows a client to retrieve the iPay subscriber ID for a specific subscriber.
Subscriber Add <BilPaySubAdd>	Allows a client to add (i.e., 'enroll') a new Subscriber
Subscriber Search <BilPaySubSrch>	Allows a client to retrieve reference information for subscribers meeting client-specified search criteria.
Subscriber Inquiry <BilPaySubInq>	Allows a client to retrieve current information about a specific subscriber's profile, including all available Pay From Account information.
Subscriber Modification <BilPaySubMod>	Allows a client to modify/change fields within a subscriber's profile.
Payee	
Payee Add <BilPayPayeeAdd>	Allows a client to add a new Payee for a Subscriber.
Payee Search <BilPayPayeeSrch>	Allows a client to retrieve a list of Payees for a Subscriber based on client-specified search criteria.
Payee Inquiry <BilPayPayeeInq>	Allows a client to retrieve current information about a specific Payee for a Subscriber.
Payee Modification <BilPayPayeeMod>	Allows a client to modify/change fields for a specific Payee, or delete a specific Payee for a Subscriber.
Payment	
Payment Add (Single) <BilPaySchedPmtAdd>	Allows a client to schedule a single payment for a Subscriber.
Scheduled Payment Search <BilPaySchedPmtSrch>	Allows a client to retrieve Scheduled Payment information for a Subscriber based on client-specified search criteria.

Scheduled Payment Inquiry <BilPaySchedPmtInq>	Allows a client to retrieve current information about a specific scheduled payment for a Subscriber.
Scheduled Payment Modification <BilPaySchedPmtMod>	Allows a client to modify/change fields for a specific Scheduled Payment, or stop a Scheduled Payment for a Subscriber.
Scheduled Payment Approval <BilPaySchedPmtApprv>	Allows a client to provide a payment approval from an authorized approver for a scheduled payment that requires additional approval.
Payment History Search <BilPayPmtHistSrch>	Allows a client to retrieve Payment History information for a Subscriber based on client-specified search criteria.
Payment History Inquiry <BilPayPmtHistInq>	Allows a client to retrieve current information about a specific processed payment for a Subscriber.
eBills	
eBill [History] Search <BilPayElecBilSchedSrch>	Allows a client to retrieve current and historical information about eBills for a Subscriber (for one or multiple Payees).
eBill Inquiry <BilPayElecBilSchedInq>	Allows a client to retrieve information about a specific eBill for a Subscriber's Payee.
eBill Mod <BilPayElecBilSchedMod>	Allows a client to 'file' a specific eBill for a Subscriber's Payee.

Business Service Operations - Updates

This topic explains the updates to these services.

Release 2012.0.01 - Initial release

- o The following new messages were created for 'Subscriber Lookup' service:
    - BilPaySubConsmCustInqRq_MType
    - BilPaySubConsmCustInqRs_MType

- o The following new subscriber identifier elements added to BilPaySubInfo complex, associated with SubInq, SubMod and [future] SubAdd services:
    - SubConsmCustID
    - SubComID

- o Remove ability to add new MobProvdCode; thus eliminating need for MobProvDom element altogether (SubInq; SubMod services)

- o The following service operations were revised to remove any 'account masking' requirements for service responses:
    - Subscriber Inquiry
    - Payee Search
    - Payee Inquiry
    - Scheduled Payment Search
    - Scheduled Payment Inquiry
    - Payment History Search
    - Payment History Inquiry

The following service operations were updated to reflect the corrected definition of the PayeePmtMthd element:

- ▪ Payee Search
- ▪ Payee Inquiry

Release 2012.0.02 – (06.01.2013)

- o NEW service operation added to the available list of Business Service Operations:
  - ▪ Subscriber Add
- o The following service operation was updated to include the PayeeEmailSharedSecret element in the response:
  - ▪ Payee Inquiry
- o The following service operation was updated to clarify that Payee Address is an optional entry for 'Email' Payees:
  - ▪ Payee Add
- o The following service operation was updated to include the newly added ability to edit the [Primary] Payee Address:
  - ▪ Payee Modification
- o The following service operations were updated to include the newly added ability to schedule and manage a recurring payment series, as well as view recurring series information:
  - ▪ Scheduled Payment Add
  - ▪ Scheduled Payment Inquiry
  - ▪ Scheduled Payment Mod
  - ▪ Payment History Inquiry
- o The following service operations were updated to reflect the corrected element name for the Date Range filter option (by Process Date or Due Date); as well as the inclusion of two new elements and new search filter options to support Recurring Payments:
  - ▪ Scheduled Payments Search
  - ▪ Payment History Search
- o The following service operation was updated to include 2 new elements to provide information on 'Electronic Risk Limits',as well as several new elements needed to assist in the Subscriber Add process:
  - ▪ Channel Inquiry
- o The following service operation was updated to include a new value within the SvcDictName element needed to request dictionary information for the new Subscriber Add process:
  - ▪ Service Dictionary Search
- o The following service operations were updated to include new elements, including Pay From Account elements, needed to assist in the Subscriber Add and ongoing Subscriber management processes:
  - ▪ Subscriber Inquiry
  - ▪ Subscriber Mod
  - ▪ Payee Search
  - ▪ Payee Inquiry
  - ▪ Scheduled Payment Search
  - ▪ Scheduled Payment Inquiry
  - ▪ Payment History Search
  - ▪ Payment History Inquiry

Release 2013.1.00 – (10.15.2013)

- o NEW service operation added to the available list of Business Service Operations:
  - ▪ BilPaySchedPmtApprv
- o The following service operation was updated to include new product configuration elements to support Business Subscribers, where applicable:

- Channel Inquiry

- o The following service operations were updated to include new elements needed to assist in the Subscriber Add and ongoing Subscriber management processes for Business Subscribers, including Pay From Account Owner information, as well as adding and/or managing multiple users – i.e., 'Subscriber's Associated Users' – within the Business Subscriber's account:
  - Subscriber Add
  - Subscriber Search
  - Subscriber Inquiry
  - Subscriber Mod
  - Payee Search
  - Payee Inquiry
  - Scheduled Payment Search
  - Scheduled Payment Inquiry
  - Payment History Search
  - Payment History Inquiry

- o The following service operations were updated to add new RetroToOrigPmtDt and InvoiceInfoArray information into the BilPayPmtInfo complex element:
  - Scheduled Payment Add
  - Scheduled Payment Inquiry
  - Scheduled Payment Mod
  - Payment History Inquiry

- o The following service operations were updated to reflect the correct canonical value for the PmtMthd element (from 'Elect' to 'Elec'):
  - Payee Search – PayeePmtMthd
  - Payee Inquiry – PayeePmtMthd
  - Scheduled Payment Search – PayeePmtMthd & PmtMthd
  - Scheduled Payment Inquiry – PayeePmtMthd & PmtMthd
  - Payment History Search – PayeePmtMthd & PmtMthd
  - Payment History Inquiry – PayeePmtMthd & PmtMthd

- o The following service operations were updated to reflect the correct canonical value for the PayeeClsf element (from 'Indiv' to 'Indv'):
  - Payee Add
  - Payee Search
  - Payee Inquiry
  - Scheduled Payment Inquiry
  - Payment History Inquiry

- o The following service operation was updated to include a new value within the SvcDictName element needed to request dictionary information for the new Scheduled Payment Approval process, as well as two new open enumerated elements:
  - Service Dictionary Search

- o 2 new canonical values have been added to the PmtStat element to support Business Subscribers that require payment approval for scheduled payments:
  - PmtApprvReq - Payment Approval Required
    - Added to Scheduled Payment Search, Scheduled Payment Inquiry
  - PmtApprv - Payment Approved (for processed payment that required Payment Approval)
    - Added to Payment History Search, Payment History Inquiry

Release 2013.1.03 – (07.07.2014)

- o This version to be used in conjunction with jXchange XSD release version R2013.1.03_XSD.
- o The following service operation was updated to include a new element ('AlwSubType') to provide information about what Subscriber Types are allowed for the listed Product:
    - Channel Inquiry
- o The following service operations were updated to reflect the corrected element name for 'PmtApprvReq' (initially listed incorrectly as 'PmtApprvReqd'):
    - BilPaySubAdd
    - BilPaySubInq
    - BilPaySubMod
- o The following service operations were updated to accurately reflect the element name associated with the 'Secondary Account Holder Name' ('AddlName' vs. 'PersonName') within the 'SecdPersonArray' array:
    - BilPaySubAdd
    - BilPaySubInq
    - BilPaySubMod
- o The following service operations were updated to correct the canonical value for the 'PmtDayofWeek' element (from 'Thurs' to 'Thur') within the 'RecurPmtInfo' complex:
    - BilPaySchedPmtAdd
    - BilPaySchedPmtInq
    - BilPaySchedPmtMod
    - BilPayPmtHistInq

Release 2014.0.01– (07.31.2014)

- o This version to be used in conjunction with jXchange XSD release version R2014.0.01_XSD.
- o The following service operation was updated to include 'PhoneType', 'SvcFeeDesc' and 'ElecMerAcctType' in the list of open enums which can be requested:
    - SvcDictSrch
- o The following service operation was updated to include an additional 'Note' for the 'TempPswd' element:
    - BilPaySubAdd
- o The following service operations were updated to clarify the value returned for the SubMerAcctId element within the BilPayPayeeInfo complex when no Payee Account ID exists for the Subscriber:
    - BilPayPayeeAdd
    - BilPayPayeeInq
    - BilPaySchedPmtInq
    - BilPayPmtHistInq
- o The following service operations were updated to clarify the rules for allowing Payee FI Account Information to be added:
    - BilPayPayeeAdd
    - BilPayPayeeMod

- o The following service operation was updated to indicate the rule change regarding Payment Adds for 'unactivated' Payees (no longer allowed):
  - ▪ BilPaySchedPmtAdd
- o The following service operations were updated to correct 'PmtStartDt' details to denote that this will always be based on 'Process Date', regardless of Payment Date Model:
  - ▪ BilPaySchedPmtSrch
  - ▪ BilPayPmtHistSrch
- o The following service operations were updated to include new elements needed to support 'Payment Service Fee' functionality, where applicable:
  - ▪ BilPayPayeeInq
  - ▪ BilPaySchedPmtInq
  - ▪ BilPayPmtHistInq
- o The following service operations were updated to include new elements needed to support 'eBills/Bill Presentment' functionality:
  - ▪ SvcDictSrch
  - ▪ BilPayChanInq
  - ▪ BilPayPayeeSrch
  - ▪ BilPayPayeeInq
  - ▪ BilPayPayeeMod
  - ▪ BilPaySchedPmtSrch
  - ▪ BilPaySchedPmtInq
  - ▪ BilPayPmtHistSrch
  - ▪ BilPayPmtHistInq
- o NEW service operations added to the available list of Business Service Operations to support 'eBills/Bill Presentment' functionality:
  - ▪ BilPayElecBillSchedSrch
  - ▪ BilPayElecBillSchedInq
  - ▪ BilPayElecBillSchedMod

Release 2014.0.06 – (03.31.2015)

- o This version to be used in conjunction with jXchange XSD release version R2014.0.06_XSD.
- o The following service operation was updated to include 'FirstAvlProcDt', 'FirstAvlEstArvDt' and 'EstArvDay' elements in the response message:
  - ▪ BilPayPayeeSrch
- o The following service operations were updated to correct the definition of the 'NotAct' canonical value for the 'PayeeStat' element:
  - ▪ BilPayPayeeSrch
  - ▪ BilPayPayeeInq
- o The following service operation was updated to include the missed element, 'SubModMerAcctId':
  - ▪ BilPayPayeeInq
- o The following service operation was updated to include additional 'Notes' for the Payee 'PhoneNum' and 'EmailAddr' elements:
  - ▪ BilPayPayeeAdd

- o The following service operation was updated to correct the element name under the 'eBill Account Setup' instructions:
  - BilPayPayeeMod

- o The following service operation was updated to include additional instructions for designating a default Pay From Account in the 'Subscriber Add Behaviors' section:
  - BilPaySubAdd

- o The following service operations wer updated to clarify the example for accepted values for the 'PmtDayofMonth' element within the 'PmtDayInfoArray' :
  - BilPaySchedPmtAdd
  - BilPaySchedPmtInq
  - BilPaySchedPmtMod
  - BilPayPmtHistInq

Release 2014.0.08 – (06.15.2015)

- o This version to be used in conjunction with jXchange XSD release version R2014.0.08_XSD.

- o The following service operations were updated to include 'SubCmntToPayee' element in the request and/or response messages:
  - BilPaySchedPmtAdd (request and response)
  - BilPaySchedPmtInq (response message only)
  - BilPaySchedPmtMod (request and response)
  - BilPayPmtHistInq (response message only)

- o The following service operation was updated to include 'ElecBilPayeeAcctId' element in the request message:
  - BilPayElecBilSchedSrch

- o The following service operation was updated to include 'ElecBilPayeeAcctId', 'CurBal' and 'MinPmtAmt' elements in the response message:
  - BilPayElecBilSchedSrch

- o The following service operation was updated to include 'ElecBilPayeeAcctId' element in the response message:
  - BilPayElecBilSchedInq

- o The following service operation was updated to include additional 'Note' regarding the possibility that no active Pay From Accounts may exist for an active Subscriber:
  - BilPaySubscriberInq
- o The following service operations were updated to include 'Note' regarding the 'AuthenQuesDesc' element being returned as a CDATA section, as it may contain HTML and other 'illegal' XML characters:
  - BilPayPayeeInq
  - BilPayPayeeMod

Release 2015.0.01 – (08.12.2015)

- o This version to be used in conjunction with jXchange XSD release version R2015.0.01_XSD.

- o The following service operation was updated to include the new 'XferToSubFinInst' canonical value for the FeturType element:

- ▪ BilPayChanInq (response)

- o The following service operations were updated to include the new 'FinInst' canonical value for the 'PayeeClsf' element:
  - ▪ BilPayPayeeAdd (request)
  - ▪ BilPayPayeeSrch (response)
  - ▪ BilPayPayeeInq (response)
  - ▪ BilPaySchedPmtInq (response)
  - ▪ BilPayPmtHistInq (response)

- o The following service operations were updated to include 'PmtIntentType' element (for the Payee, as well as for the Payment) in the request and/or response messages:
  - ▪ BilPayPayeeAdd
  - ▪ BilPayPayeeSrch
  - ▪ BilPayPayeeInquiry
  - ▪ BilPayPayeeMod
  - ▪ BilPaySchedPmtAdd
  - ▪ BilPaySchedPmtSrch
  - ▪ BilPaySchedPmtInq
  - ▪ BilPaySchedPmtMod
  - ▪ BilPayPmtHistSrch
  - ▪ BilPayPmtHistInq

- o The following service operation was updated to include 'SubMerAcctID' element in the response message:
  - ▪ BilPayPayeeSrch

- o

- o The following service operations were updated to include 'add' and /or 'mod' behaviors for Outbound Transfer Payees and Payments:
  - ▪ BilPayPayeeAdd
  - ▪ BilPayPayeeMod
  - ▪ BilPaySchedPmtAdd
  - ▪ BilPaySchedPmtMod

Business Service Operations – General Behaviors

The jXchange messaging structures and protocols for general utilization of jXchange web services are provided in the documentation included in the Vendor Packet.   The service consumer is expected to adhere to these messaging structures and protocols for all Bill Pay Services API service operations.

The service operation information that follows provides detailed information about expected behaviors specific to each _iPay Bill Pay Service API_ business service operation. As such, this document addresses only those elements and/or protocols that are explicitly required for use within the Bill Pay Services API. It can be assumed that any elements that exist in a given message schema that are NOT referenced in this document are not required for use within the Bill Pay Services API services.

For all elements with closed enumerated canonical values of 'True' and 'False', the default value in every instance will always be 'False'.

Institution Services

Service Dictionary Search

Container: TPG_CustomerMaster.xsd
Message: SvcDictSrch

The Service Dictionary Search is a jXchange messaging service designed to provide the service consumer with a service that can convey a service provider's elements, XSD path, requirements, default values, open and closed enumerated canonical values, help/knowledge content, and fault codes per operation.

The Service Dictionary service is covered in detail in the jXchange *Service Dictionary Service* Document that is included in the Vendor Packet.

At this time, iPay's Bill Pay Services API supports Service Dictionary search requests for the following information only:

- Closed enumerated canonical values (available for all 'closed' enumerated elements)
- Open enumerated canonical values (limited to specific elements)
- fault codes per [service] operation (Service Provider Error Array)

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

Message flow involves the exchange of MType messages between the third party consumer and the service provider.

Service Dictionary Search Request
SvcDictSrchRq_MType

The Third Party sends the **SvcDictSrchRq_MType** message containing the required SvcDictName and SvcDictType elements.

Service Dictionary Search Response
SvcDictSrchRs_MType

The Service Provider returns the **SvcDictSrchRs_MType** message containing an echo of the request: SvcDictName and SvcDictFilterArray_AType.

Request

The third party consumer forwards the *SvcDictSrchRq_MType* **request** message containing:

- *SvcDictName (Required)*
- *SvcDictType (Required)*
- *ElemName (Optional)*
- *SvcDictFilterArray (Optional)*
- *IncXtendElemArray (not currently utilized by Bill Pay Services API services)*

The *SvcDictSrchRq* request message requires valid *SvcDictName* and *SvcDictType* elements.
The simple elements contained within the *SvcDictSrchRq* message request are listed below. They are a part of a documented filter statement. Any or all of the following simple elements can be sent.

SvcDictName

This represents the Bill Pay Services API operations that can be queried to obtain data dictionary definitions. The service operations that are currently applicable to the Bill Pay Services API are:

- **BilPayPayeeSrch**
- **BilPayPayeeInq**
- **BilPayPayeeAdd**
- **BilPayPayeeMod**
- **BilPaySchedPmtSrch**
- **BilPaySchedPmtInq**
- **BilPaySchedPmtAdd**
- **BilPaySchedPmtMod**
- **BilPaySchedPmtApprv**
- **BilPayPmtHistSrch**
- **BilPayPmtHistInq**
- **BilPaySubSrch**
- **BilPaySubInq**
- **BilPaySubAdd**
- **BilPaySubMod**
- **BilPaySubConsmCustInq**
- **BilPayChanInq**
- **BilPayElecBilSchedSrch**
- **BilPayElecBilSchedInq**
- **BilPayElecBilSchedMod**

The *SvcDictName* must be specified in order to receive the list of enumerated canonical values for the desired service operation. *The ability to receive a 'global list' of enumerated values for all elements within the Bill Pay Services API (by leaving the SvcDictName filter blank) is not available at this time.*

SvcDictType

This represents the desired service dictionary operation type. Canonical values are:

- Request **~Rq~**
- Response **~Rs~**

If the value is set to "Rq", the response message will return the enumerated (open and closed) values required for the service consumer's request specified by the SvcDictName . If the value is set to "Rs", the response message will return the enumerated (open and closed) values that would be returned in the service provider's response message specified by the SvcDictName.

NOTES:
1) Enumerated elements with True/False values will not be returned, as these are covered in the Business Service Operations section below.
    a. All enumerated 'True/False' elements will default to 'False' if not specified in the request.

2) Error values would not be sent if the SvcDictName is set to 'Rs' (Response), as errors are applicable only to service requests.

ElemName

The request also includes the optional simple element *ElemName*, so that a consumer could query for the canonical values as related to a specific element.

Canonical values can be requested for *all closed enumerated* elements required for the Bill Pay Services API.

The '*open' enumerated elements* available within the Bill Pay Services API at this time are:

- **MobPrvdCode**

  This is the list of mobile phone providers currently available within the Bill Pay Services API, and is located in the *BilPaySubAdd, BilPaySubInq* and *BilPaySubMod* service operations.

- **PerCode**

  This is the list of currently available permissions that may be applied to Subscriber's Associated Users, and is located in the *BilPaySubAdd, BilPaySubInq* and *BilPaySubMod* service operations.

- **CapCode**

  This is the list of currently available payment caps that may be applied to Subscriber's Associated Users, and is located in the *BilPaySubAdd, BilPaySubInq* and *BilPaySubMod* service operations.

- **PhoneType**

  This is the list of phone types currently supported within the Bill Pay Services API, and is located in the *BilPayPayeeAdd*, *BilPayPayeeInq*, *BilPaySubSrch*, *BillPaySubAdd, BilPaySubInq*, *BilPaySubMod*, *BilPaySchedPmtInq* and *BilPayPmtHistInq* service operations.

- **SvcFeeDesc**

  This is the list of Payment-level Service Fee 'types' currently supported within the Bill Pay Services API, and is located in the *BilPayPayeeInq*, *BilPaySchedPmtInq* and *BilPayPmtHistInq* service operations.

- **ElecMerAcctType**

  This is the list of eBiller account types (returned as a matched pair value including code and corresponding description) currently supported within the Bill Pay Services API, and is located in the *BilPayPayeeInq* and *BilPayeeMod* service operations.

Array(s)

SvcDictFilterArray
The request also includes the optional **array** *SvcDictFilterArray*, containing the *SvcDictFilterInfo* complex element, which includes the *SvcDictFilterCode* and *SvcDictFilterVal* elements.

These two simple elements present a matched pair that provides canonical value(s) that allows a consumer to restrict a query for specific values that have a correlation to an operation.

The only *SvcDictFilterCode* values currently supported for the Bill Pay Services API are:

- **<BilPaySubInq>MobPrvdCode**
- **<BilPaySubMod>MobPrvdCode**

which limit the result set to the supporting information for the *MobPrvdCode* element only.

IncXtendElemArray

The optional *IncXtendElemArray* **array** is an optional array that lists the x_ elements by name which are to be included in the response. This array is required if the consumer would like to have the service provider's Field Information or Service Provider Error Array returned for a specific element.

Response
The service provider (iPay) returns the *SvcDictSrchRs* **response** message to the service consumer, which returns the following:

- Closed enumerated canonical values (available for all 'closed' enumerated elements)

- Open enumerated canonical values (limited to specific elements)

- fault codes per operation (Service Provider Error Array)

The applicable **arrays** contained within the *SvcDictSrchRs* response message applicable for the Bill Pay Services API are:

x_SvcPrvdErrArray

The *x_SvcPrvdErrArray* array <u>included at the root response level</u> provides the consumer with all of the fault/errors that can exist for the named *SvcDictName* submitted in the request. This 'root-level' array of errors will be provided with every *SvcDictSrchRs* message returned by the Bill Pay Services API.

SvcDictInfoArray

This array provides dictionary information for the named service (*SvcDictName*) and includes the *SvcDictInfoRec* complex, which contains dictionary information for each **enumerated** element in the service. At this time, the Bill Pay Services API will return only the following for each enumerated element in this array:

ElemName

This is the name provided to the specified element.

ElemCanocType

This is the service provider's canonical type for the specified element. Canonical values are:
- **Open**
- **Closed**
- **NA**

ElemCanocArray

This array includes the *ElemCanocRec* for each element, which provides the list of canonical values and corresponding descriptions.

ElemCanocVal

This is the canonical value for the specific element.

ElemCanocValDesc

This is the description of the canonical value for the specific element.

CanocValInfoArray

This optional array includes additional information, if applicable, for each canonical value and includes the following complex element:

CanocValInfo

CanocValDetail
The Service Provider's pertinent details related to the canonical value.

CanocValText
Any text related to the canonical value.

An example response for a request for open-enumerated 'PerCode' values might be:

```
<SvcDictInfoArray>
<SvcDictInfoRec>
<ElemName>PerCode</ElemName>
  <ElemCanocType>Open</ElemCanocType>
<ElemCanocArray>
  <ElemCanocRec> (1)
    <ElemCanocVal>CanScheduleBillPayments
    <ElemCanocValDesc>This subscriber's associated user can or cannot schedule bill
                      payments
    <CanocValInfoArray>
      <CanocValInfo>
```

<CanocValDetail>true
<CanonValTxt>True
<CanocValInfo>
<CanocValDetail>false
<CanonValTxt>False
</ElemCanocRec>

The *SvcDictInfoRec* also includes an *x_SvcPrvdErrArray* for the named element. However, the Bill Pay Services API will not be returning errors at the element level at this time.

The elements within the Bill Pay Services API that currently include an *open enumerated list of canonical values* are:

- **MobPrvdCode** (the list of mobile providers currently available within the Bill Pay Services API), which is located in the *BilPaySubInq* and *BilPaySubMod* service operations.

- **PerCode** (the list of currently available permissions that may be applied to Subscriber's Associated Users), which is located in the *BilPaySubAdd, BilPaySubInq* and *BilPaySubMod* service operations.

- **CapCode** (the list of currently available payment caps that may be applied to Subscriber's Associated Users), which is located in the *BilPaySubAdd, BilPaySubInq* and *BilPaySubMod* service operations.

- **Phone Type** (the list of phone types currently supported with the Bill Pay Services API), which is located in the *BilPayPayeeAdd*, *BilPayPayeeInq*, *BilPaySubSrch*, *BillPaySubAdd, BilPaySubInq*, *BilPaySubMod*, *BilPaySchedPmtInq* and *BilPayPmtHistInq* service operations.

- **SvcFeeDesc** (the list of Payment-level Service Fee 'types' currently supported within the Bill Pay Services API), which is located in the *BilPayPayeeInq, BilPaySchedPmtInq* and *BilPayPmtHistInq* service operations.

- **ElecMerAcctType** (the list of eBiller account types (returned as a matched pair value including both code and corresponding description) currently supported within the Bill Pay Services API), which is located in *the BilPayPayeeInq* and *BilPayPayeeMod* service operations.

Channel Inquiry

Container: TPG_BillPayMaster.xsd
Message: BilPayChanInq

Channel Inquiry <BilPayChanInq> is a Bill Pay Services API service designed to allow a consumer to retrieve reference information about a specific financial institution, as well as information about available the Bill Pay Service API operations and supporting information specific to that Institution.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Channel Inquiry service uses a typical exchange of MType messages to retrieve reference information about a specific financial institution and its Bill Pay Service API operations.

Channel Inquiry Request
BilPayChanInqRq_MType

The Third Party sends the **BilPayChanInqRq** message containing the optional *BilPayProd* and *BilPayProdType* elements.

Channel Inquiry Response
BilPayChanInqRs_MType

The Service Provider sends the **BilPayChanInqRs** message containing an echo of the request, plus *BilPayChanInfo* information.
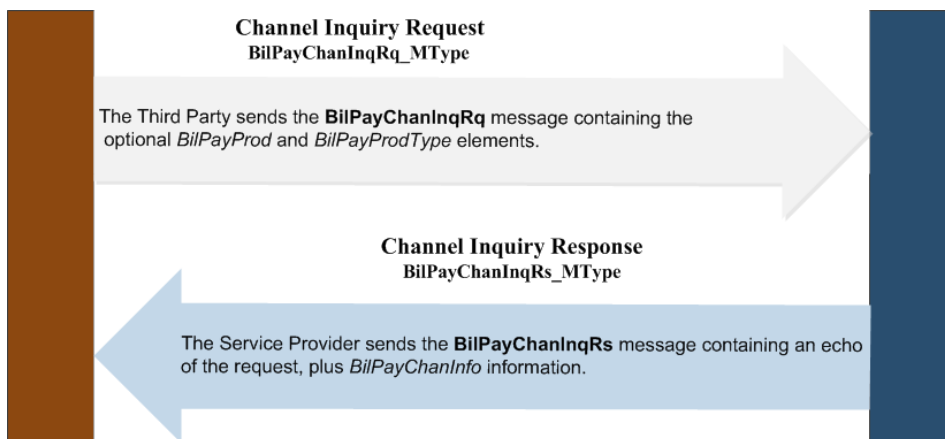
Request

The third party consumer forwards the *BilPayChanInqRq* **request** message to the Service Provider.

The below elements contained within this message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

BilPayProdType

This specifies the 'iPay' Product Type associated with the Product that is utilizing the Bill Pay Service API service operations. Canonical values are:

- **Consm** - Consumer
- **Bus** - Business
- **iSB** - Services Platform *(reserved for future use)*

If no *BilPayProdType* is specified, product information will be returned for all products that include the specified *BilPayProd* (above).

Response

The service provider (iPay) returns the *BilPayChanInqRs* **response** message to the service consumer, which returns a package of product and other reference information for the specified Financial Institution.

The **simple elements** contained within the *BilPayChanInfo* complex element of the *BilPayChanInqRs* response applicable for the Bill Pay Services API are:

FinInstName
This is the depository financial institution name.

PmtCutoffTime
This is the cutoff time (transmitted in UTC or GMT) when payments are no longer eligible for processing on the same day.

This payment cutoff time is based in the Eastern Time Zone, regardless of the location of the Financial Institution (for example, a cutoff time of 3:00 PM Eastern would translate to a cutoff time of 2:00 PM Central for an FI located in the Central Time Zone). All payments scheduled after this time for immediate processing are processed on the next available processing day.

StorMos
This is the number of months that payment information is stored for the financial institution. For example, a value of 18 indicates that a maximum of 18 months' worth of payment data is available for this FI's subscribers.

ChkImgStorMos
This is the number of months that check image information is stored for the financial institution. For example, a value of 18 indicates that check images will be available for 18 months for this FI's subscribers.

ChkFundModel
This represents the check funding model for the Institution. Canonical values are:
- **SubDrft (Subscriber draft; aka 'Risk Model')**
- **BilPayPrvdDrft (aka 'iPay draft' or 'Good Funds' model)**
- **InstDrft (Institution draft)**

The Check Funding Model (i.e., 'Processing Model') determines if an iPay-owned clearing account is used, whether the checks are funded through an iPay account or the Financial Institution's/Agent's account, and when funds are credited to the Payee. It is also used to determine who has responsibility for stopping a check payment, if required. For example, the 'Subscriber draft' is drawn directly from the Subscriber's account, so the Financial Institution must stop the check. The 'iPay Draft' is drawn from iPay's account after subscriber funds are placed in iPay's settlement account, so iPay must be contacted to stop these checks.

Bill Pay Provider/iPay Draft (Good Funds Model)
This simply means that the Subscriber's funds 'are good'. The iPay Draft/Good Funds model utilizes a 'lag period' that provides time to allow an FI to review all potential debits to subscriber accounts before debiting the subscriber and crediting iPay. iPay then forwards the payment electronically to the Payee, or drops the transaction to a check funded from an iPay Account. Funds are removed from the subscriber account before the Payee receives funds.

Subscriber Draft Model (aka 'Risk Model')
This draft model generates transactions funded directly from the Subscriber's account. All electronic payments are processed using the 'iPay Draft' model (i.e., transactions debit from the account as drafts using the Subscriber's financial account information). For check payments, the Subscriber's checking account and routing numbers are printed on the check and funds will not debit from the account until presented by the Payee.

Institution Draft Model
The Institution Draft Model is a variation on the Subscriber Draft model. The major variation is that check payments are not drawn on the Subscriber's account, but are drawn on a central FI account. iPay debits the Subscriber's account, moves funds to the Institution's clearing account and the checks are then drawn on the clearing account.

FundVerif

This indicates whether the financial institution requires that funds are verified before being submitted. If true, the Subscriber's balance is checked and their account is debited before a transaction is processed. This functionality allows the subscriber to avoid overdraft charges, and provides the ability to send payments through consolidators who only accept 'good funds'. Canonical values are:

- **True**
- **False**

The **arrays** contained within the *BilPayChanInfo* response message applicable for the Bill Pay Services API are:

NonProcDtInfoArray

This array contains a list of all non-processing dates (e.g., Federal Reserve holidays, weekend dates, etc) for the next 18 months, and includes the *NonProcDtInfo* complex element. The *NonProcDtInfo* complex includes the following simple element which specifies each non-processing date:

NonProcDt

This is a non-processing date.

BilPayProdTypeInfoArray

This array includes the *BilPayProdTypeInfo* complex element, which contains a package of data for each specified Bill Pay Product and includes following simple and complex elements and array(s):

Simple elements:

BilPayProdType

This represents the Product Type associated with the Product that is utilizing the Bill Pay Service operations. Canonical values are:

- **Consm** - Consumer
- **Bus** - Business
- **iSB** - Services Platform *(reserved for future use)*

PmtDtModel

This represents the Payment Date Model being utilized by the Institution for the specified product. Canonical values are:

- **ProcDtModel** - Process Date - Institution requires the Subscriber to choose a Process Date, and the Estimated Arrival Date of the payment is calculated based on the entered value.
- **DueDtModel** - Due Date (aka 'Estimated Arrival Date') - Institution requires the Subscriber to choose a Due Date, and the Process Date is calculated based on the entered value.

MaxPmtAmt

This is the maximum payment amount that can be requested for a single transaction by any Subscriber on this Institution's account.

MaxEmailPmtAmt

This is the maximum payment amount that can be requested for a single 'Email' (P2P) payment.

MaxEmailDlyAmt

This is the maximum daily amount that can be requested for all 'Email' (P2P) payments in a single day for a given Subscriber.

AlwSecdPerson

This indicates whether a Secondary Account Holder can be specified for all Subscriber/Customer accounts associated with this Product for this Institution. Canonical values are:

- **True**
- **False**

AlwAddPayFromAcct

This indicates whether additional Pay From Accounts (in addition to the 'default' Pay From Account) are allowed for all Subscriber/Customer accounts associated with this Product for this Institution. Canonical values are:

- **True**
- **False**

DlyElecRiskLmt

This is the daily dollar limit for electronic payments that can be requested by a given Subscriber. Electronic payments that exceed this limit will be converted to draft/check.

MthlyElecRiskLmt

This is the monthly dollar limit for electronic payments that can be requested by a given Subscriber. Electronic payments that exceed this limit will be converted to draft/check.

TaxIDReq

This indicates whether a Tax ID (e.g., SSN, EIN) is required to add/enroll the Subscriber. Canonical values are:

- **True**
- **False**

CanSetStartChkNum

This indicates whether the Institution allows the Subscriber to specify the starting check number for a given Pay From Account. Canonical values are:

- **True**
- **False**

CanPayFromSavAcct

This indicates whether the Institution allows the Subscriber to add a savings account as a Pay From Account. Canonical values are:

- **True**
- **False**

DualSignOnReq

This indicates whether Dual Sign On is required when accessing an iPay-hosted 'online' Bill Pay interface (if iPay's 'online' Bill Pay interface is available for use by the Institution's Subscribers). If Dual Sign On is the required login method, a *temporary password* is required (in addition to the LoginID) in order to add/enroll the new Subscriber. Canonical values are:

- **True**
- **False**

CanAddPayFromOwnInfo

This indicates whether the Institution allows specification of Pay From Account 'Owner' information. Canonical values are:

- **True**
- **False**

ConsmOwnSubUsrPer

This indicates whether the Institution/Service Consumer will 'own', or manage, all permissions for Subscriber's Associated Users, and is applicable ONLY if the 'Subuser' feature is available for the Institution's Product. A value of 'False' indicates that the Institution/Service Consumer will utilize the Subuser permission structure provided by the Service Provider (iPay). Canonical values are:

- **True**
- **False**

HidSubAssocUsrConsmCustId
This indicates whether the Institution allows an authorized user to view or modify the
SubAssocUsrConsmCustId (the consumer's customer ID associated with the Subscriber's Associated
User). Canonical values are:
- **True**
- **False**

  NOTE: This element is not currently being used by iPay.

HidSubAssocUsrSubComId
This indicates whether the Institution allows an authorized user to view or modify the *SubAssocUsrComId*
(the Subuser's identifier that is common between the Provider and Consumer, typically the 'Login ID'). If
set to 'True', the Service Consumer should *hide* the *SubAssocUsrComId* (i.e., 'Login ID'), from all
requesting users (except when the requesting user is the Subuser specified in the request). Canonical
values are:
- **True**
- **False**

AlwSubType
This indicates the Subscriber Type(s) that are allowed for the listed Bill Pay Product. Canonical values are:
- **Comp** - Company
- **Indv** - Individual
- **All** – All (both Company and Individual)

  NOTE: This element is not currently being used by iPay.

ElecMerAutoPmtAlw
This indicates whether setup of 'Automatic Payment Schedule(s)' for eBills is allowed for the listed Bill Pay
Product. The Bill Pay Product must include the 'eBills' feature in order to be applicable. Canonical values
are:
- **True**
- **False**

NOTE: Prohibition or enabling of Automatic Payment Schedules is also controlled at the individual
'eBiller' level, so a value of 'true' here does not necessarily guarantee that this feature is available
for the individual eBill account; only that it has been made generally available for Subscribers using
the Product. A Payee Inquiry can be performed to determine whether an Automatic Payment
Schedule can be established for a given Subscriber's Payee.

Complex element(s):

SubLogInIdRstr
This complex element contains the Financial Institution's LoginID parameter information for the specified
Product, which provides an explicit definition of the applicable restrictions that apply when constructing
a Subscriber LoginID. It includes the following simple elements, as well as the *SpecCharRstrArray*
array:

  MinLenCharVal
  This specifies the minimum number of characters (overall) that the credential type should contain.

  MaxLenCharVal
  This specifies the maximum number of characters (overall) that the credential type should contain.

  MinAlphaCharVal
  This specifies the minimum number of alphabetic characters (ASCII chars: a-z and A-Z) that the
  Credential type should contain. So, if the Institution's required maximum LoginID length is specified
  as 20, and the minimum number of alphabetic characters is specified as 20, this would indicate a
  LoginID that must be all alphabetic characters.

MinNumCharVal
This specifies the minimum number of numeric characters (ASCII chars: 0 - 9) that the credential Type should contain. So, if the Institution's required maximum LoginID length is specified as 20, and the minimum number of numeric characters is specified as 20, this would indicate a LoginID that must be all numeric characters.

MinSpecCharVal
This specifies the minimum number of special characters (ASCII chars: [space] ! @ # $ % ^ & * ( ) _ - + = { } [ ] | \ : ; " ' < > ? /) that the credential type should contain.

MinLowCaseVal
This specifies the minimum number of lower case characters (ASCII chars: a-z) that the credential type should contain.

MinUpCaseVal
This specifies the minimum number of upper case characters (ASCII chars: A-Z) that the credential type should contain.

SpecCharRstrArray
This array includes the *SpecCharRstrRec* complex element, which contains data related to the special characters that are not allowed for the credential type. It includes the following simple element(s):

SpecCharRstrType
This specifies the special character that is restricted for the credential type.

Array(s):

The array(s) contained within the *BilPayProdTypeInfo* complex are listed below.

BilPayFeturInfoArray
This array contains a list of Bill Pay Service features (business service operations) that are available for the specified Product, and includes following simple elements and array(s):

Simple elements:

FeturType
This specifies the type of feature(s) available for the specified bill pay Product. Canonical values are:

- **AddSub** - Add/Enroll new Subscriber (includes ability to add Pay From Accounts)
- **ViewSubInfo** - View Subscriber Information
- **MgmtSubInfo** - Manage Subscriber Information
- **ViewPayFromAcct** - View Pay From Accounts
- **MgmtPayFromAcct** - Manage (Add, Edit, Delete) Pay From Accounts
- **Subusers** - Manage (Add, Edit, Delete) multiple Subusers for Bill Pay account
- **AddPayee** - Add Payee
- **ViewPayee** - View Payees
- **MgmtPayee** - Manage Payee
- **SchedSinglePmt** - Schedule a Single Payment
- **SchedRecurPmt** - Schedule a Recurring Series
- **MgmtRecurPmt** - Manage Recurring Series
- **EmailPmt** - Email Payments
- **RushPmt** - Rush Payments
- **ViewPendPmt** - View Pending/Scheduled Payments
- **MgmtPendPmt** - Manage Pending Payments
- **ViewPmtHist** - View Payment History
- **ViewInstInfo** - View Institution Information
- **ElecBilPmt** - Electronic Bill Payment Series
- *[NEW!]* **XferToSubFinInst** - Outbound Transfers

The above features are mapped to specific Business Service Operations (details can be found in Appendix A , below), allowing the service provider (iPay) to ensure the requested business service operation is available for the Institution and, if applicable, for the Subscriber

FeturAct
This indicates whether the specified feature is activated for this Product for this Institution. Canonical values are:

- **True**
- **False**

Only those 'features' that are active for this Product will be available as a Bill Pay service Operation for the specified Institution/Product. Attempts to request a 'non-active' feature will result in a 'permissions' error.

Array(s):

SubTypeAccessFeturInfoArray
This array contains a list of subscriber types that can access the specified feature and includes the *SubTypeAccessFeturInfo* complex element. The *SubTypeAccessFeturInfo* complex specifies a package of data related to the Subscriber Types that can access the specified feature for this Product and includes the following simple element(s):

SubType
This specifies the Subscriber type(s) that can access the specified feature. Canonical values are:
- **Comp** - Company
- **Indv** - Individual

AlwSubAssocUsrMgmtOptInfoArray
This array contains the available options for managing Subscriber's Associated Users (i.e., 'Subusers'), and includes the following element(s):

Simple element(s):

AlwSubAssocUsrMgmtOpt
This specifies the options that are available for managing Subscriber's Associated Users for the specified Bill Pay Product. If 'all' subuser management functions are not available, a value for each available option will be included in the array (e.g., if no 'delete' capability is available, separate 'add', 'mod' values will be provided). Canonical values are:
- **All** - [default] Can do all associated user management functions
- **None** - Can do no associated user management functions
- **Add** - Can add associated users
- **Mod** - Can modify/change associated users' information
- **Delete** - Can delete associated users

Subscriber Services

Subscriber Lookup

Container: TPG_BillPayMaster.xsd
Message: BilPaySubConsmCustInq

The bill pay Subscriber Lookup <BilPaySubConsmCustInq> will return the unique Subscriber identifier <*SubID*> required by the Service Provider (iPay) for all subsequent 'user-specific' service requests, based on the previously-shared 'common' user identifier provided by the Service Consumer.

The Service Consumer has the option of storing the Subscriber identifier <*SubID*> required by iPay for future use in requesting Subscriber-specific Bill Pay services. However, if the consumer chooses NOT to store iPay's Subscriber identifier, this lookup service operation allows the Service Consumer to retrieve the required identifier 'as needed'.

NOTE: Prior to utilization of this lookup service, a common means of uniquely identifying each authorized user of a Subscriber's account (e.g., Subscriber or Subscriber's Associated User) between the two systems must be established.

Therefore, either the Service Consumer's 'customer' identifier for the Subscriber or associated user, or a 'common' user identifier that is known to both entities, must first be provided to the Service Provider (iPay) so it can be associated with iPay's key identifier for the specified Subscriber <*SubID*> or associated user <*SubAssocUsrId*>. At least one of these 'common identifier' elements will be required when *any* new user is added ('enrolled') in Bill Pay services. These elements can be updated for both Subscribers or associated users.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Subscriber Lookup service uses a typical exchange of MType messages to retrieve the Service Provider's 'key' identifier for the specified Subscriber or associated user, based on the 'common identifier' submitted by the Service Consumer.

Subscriber Lookup Request
BilPaySubConsmCustInqRq_MType

The Third Party sends the **BilPaySubConsmCustInqRq** message containing the required BilPayProd element, as well as either (or both) of the 'common identifiers' for the requesting user in *SubConsmCustID* (for user's 'customer Id') or *SubCom*ID (for user's 'loginId')

Subscriber Lookup Response
BilPaySubConsmCustInqRs_MType

The Service Provider sends the **BilPaySubConsmCustInqRs** message , containing an echo of the request, plus *SubID*, *SubAssocUsrId* (if lookup request passed an associated user's identifier), and *PersonName*.

Request

The third party consumer forwards the *BilPaySubConsmCustInqRq* **request** message to the Service Provider.

The below elements contained within the *BilPaySubConsmCustInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd
This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubConsmCustID
This optional element represents the consumer's customer ID associated with the requesting user (either the Subscriber or Subscriber's Associated User).

SubComID
This optional element represents the identification that is common between the provider and consumer associated with the requesting user (either the Subscriber or Subscriber's Associated User). This will typically be the user's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

NOTE: Either user identifier value can be provided on the lookup request (regardless of whether Bill Pay Services are 'Stand-Alone' or 'non-Stand-Alone') *provided* the submitted identifier has previously been supplied to the Service Provider (iPay) and has been associated with the user.

Response

The service provider (iPay) returns the *BilPaySubConsmCustIDRs* **response** message to the Service Consumer, which returns the unique [iPay] 'key' user identifier associated with the provided 'customer ID' or 'common' identifier.

The elements contained within the *BilPaySubConsmCustInqRs* response applicable for the Bill Pay Services API are:

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber. (This element is required for <u>all</u> subsequent Subscriber-specific service requests.)

SubAssocUsrID
This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user'), if the lookup request passed an associated user's 'common identifier'. (This element can be used to specify the 'requesting user' on subsequent Subscriber-specific service requests.)

PersonName
This complex element contains the Subscriber's Name information, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComNam
This represents the [Company] Subscriber's Company Name.

FirstName
This represents the [Individual] Subscriber's First Name.

MiddleName
This represents the [Individual] Subscriber's Middle Name.

LastName
This represents the [Individual] Subscriber's Last Name.

Subscriber Add

Container: TPG_BillPayMaster.xsd
Message: BilPaySubAdd

The bill pay Subscriber Add <BilPaySubAdd> will allow the service consumer to add (i.e. enroll) a new Subscriber for a specific FI and Product. At least one 'common' user identifier element is required on the Add request (for Individual Subscribers: the <SubComID> or <SubConsmCustID>; for Company Subscribers: the Primary Account Holder's <SubAssocUsrComID> or <SubAssocUsrConsmCustID>).

When adding a 'Company' (i.e. 'Business') Subscriber, all _Company-related_ information is passed within the root _BilPaySubInfo_ complex on the Add request, while information pertaining to the _individuals_ who will utilize the Company Subscriber account (such as the Primary Account Holder or any other associated users) is passed within the '_SubAssocUsrInfoArray_', located within the _BilPaySubInfo_ complex.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Subscriber Add service uses a typical exchange of MType messages to allow the service consumer to add a new Subscriber on behalf of a specific FI and Product.

SubscriberAdd Request
BilPaySubAddRq_MType

The Third Party sends the **BilPaySubAddRq** message containing the optional _BilPayProd_ element, as well as required and optional Subscriber information within the _BilPaySubInfo_ complex element for the requested Subscriber, which includes at least one 'common' Subscriber identifier <SubComID> or <SubConsmCustID>.

Subscriber Add Response
BilPaySubAddRs_MType

The Service Provider sends the **BilPaySubAddRs** message containing the response status <RsStat> indicating if the Add was successful. If the add was successful, the _SubID_ assigned to the new Subscriber will also be returned, as well as the _SubAssocUsrID_ assigned to each Subscriber's Associated User that was successfully added. An unsuccessful add request will also return the errors that occurred that prevented the add.

Request

The third party consumer forwards the _BilPaySubAddRq_ **request** message to the Service Provider.

The below elements contained within the _BilPaySubAddRq_ message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** _(reserved for future use)_

The _BilPayProd_ default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.
This element should be left blank for the *add* request, as this information will <u>not</u> be available to the Service Consumer until the Subscriber Add request has been successfully completed.

BilPaySubInfo

This complex element contains a package of data related to the specified bill pay Subscriber, and includes the following simple and complex elements, as well as several arrays:

Simple elements:

SubType
This represents the Subscriber type for the specified subscriber. Canonical values are:
- **Comp** - Company
- **Indv** - Individual

SubConsmCustID
This optional element represents the identification of the consumer's customer associated with an Individual Subscriber (.e.g., the consumer's or FI's 'internal' identifier for the customer/Subscriber).

This element should be left blank for a Company Subscriber *add* request, as identifier information pertaining to <u>users</u> of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

SubComID
This optional element represents the identification that is common between the service provider (iPay) and service consumer associated with an Individual Subscriber. This will typically be the Subscriber's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

This element should be left blank for a Company Subscriber *add* request, as identifier information pertaining to <u>users</u> of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

NOTE: The above Subscriber identifier value(s) provided to the service provider ('iPay') can later be used in Subscriber Lookup requests to obtain the service provider's (iPay's) SubID, which is necessary for all subsequent Subscriber-level requests.

TaxID
This is the Subscriber's tax identifier (e.g., SSN or [Company] EIN).

For Company Subscribers, the Tax ID is always required.
For Individual Subscribers, the Tax ID is required ONLY if the Subscriber's Product explicitly requires it. A Channel Inquiry can be performed to determine if this information is required in order to add a Subscriber.

TempPswd
This is the password specified by the [Individual] Subscriber, which will be used when accessing iPay's 'online' Bill Pay interface (if an iPay-hosted online Bill Pay interface is available for use by the Institution's Individual Subscribers). The value entered is limited to a maximum of 20 [alphanumeric] characters.

This element should be left blank for a Company Subscriber *add* request, as password information pertaining to <u>users</u> of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

NOTES:
1) A Temp Password is required ONLY if the Subscriber's Product explicitly requires it. A Channel Inquiry can be performed to determine if this information is required when adding a Subscriber.
2) The Subuser will be required to change their Temp Password upon initial login to the online Bill Pay application.

PmtApprvReq
This optional element indicates whether new payments scheduled for the specified [Company] Subscriber's account will require approval from another associated user authorized to approve payments in order to be processed. Canonical values are:
- **True**
- **False**

NOTE: This option is not applicable if the Service Consumer manages Subuser permissions. A Channel Inquiry can be performed to determine whether the Servicer Consumer or the Service Provider manages Subuser permissions.

PswdChgFreq
This optional element indicates the frequency at which passwords must be changed for Subscriber's Associated Users. Canonical values are:
- **None** - [default] no password change is required
- **Weekly** – password change is required weekly
- **Mthly** - password change is required monthly
- **Qtr** - password change is required quarterly

NOTE: Specification of this option is not applicable on the *add* request (this can, however, be modified in a subsequent *Subscriber Mod* request). A value entered here will be ignored.

Complex elements:

PersonName

This complex element contains the Subscriber's Name, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the [Company] Subscriber's Company Name.

FirstName
This represents the [Individual] Subscriber's First Name.

MiddleName
This represents the [Individual] Subscriber's Middle Name.

LastName
This represents the [Individual] Subscriber's Last Name.

NOTE: For Company Subscribers, only the 'ComName' should be included in the *add* request. For Individual Subscribers, only the First-, Middle- and LastName elements should be included in the *add* request. Any inappropriate values entered will be ignored.

Addr

This complex element contains the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: For a Company Subscriber, the address provided should be the 'Company' address. For an Individual Subscriber, the address should be the Subscriber's home address.

Arrays:

PhoneArray
This array contains an array of phone information for the specified Subscriber and includes following simple and complex elements:

PhoneNum
This represents a phone number, including area code, for the Subscriber. This can be the Subscriber's Home, Work, Cell or SMS/Text number. This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home**
- **Work**
- **Cell**
- **SMS** - (text)
- **Fax**

PhoneTime
This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).

PhoneExt
This specifies a business phone extension, if one exists.

ConStartTime
This optional element represents the time (in UTC) when contact availability starts.

ConEndTime
This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo
This complex element is an optional element which contains information for the Subscriber's mobile phone, and includes the following simple elements:

MobPrvdCode
This is the provider code for the Subscriber's mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

MobBB
This indicates whether the mobile device is a Blackberry. Canonical values are:
- **True**
- **False** (default value**)**

MobSendTestText
This optional element is valid on a Subscriber Mod request only, and indicates whether the Subscriber would like a 'test text' sent to their mobile device in order to validate an update to device information.

EmailArray
This array contains an array of email information for the specified [Individual] Subscriber, and includes the following simple elements:

> **EmailAddr**
> This element specifies the email address of the Individual Subscriber.

> **EmailType**
> This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:
> - **Prim** – Primary 'owner' (Individual Subscriber)
> - **Secd** – Secondary account holder (for Individual Subscriber accounts only)

> **NOTE**: This complex element should be left blank for a Company Subscriber *add* request, as email Information pertaining to <u>users</u> of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray).* A value entered here for a Company Subscriber will be ignored.

PayFromAcctInfoArray
This array contains the *PayFromAcctInfo* complex element, which specifies a package of data related to the Subscriber's Pay From Account(s) and includes following simple and complex elements:

> **PayFromId**
> This is the Service Provider's identifier for the Pay From Account within the Subscriber's Bill Pay account. This identifier must be included for any request to schedule a payment, unless the default Pay From Account is desired for the payment.

> This element should be left blank for the *add* request, as this information will <u>not</u> be available to the Service Consumer until the Subscriber Add request has been successfully completed.

> **PayFromAcctId**
> This is the account number of the subscriber's Pay From Account at the subscriber's financial Institution (e.g., checking or savings account number).

> **PayFromAcctType**
> The character(s) that categorize the type of Pay From Account. Canonical values are:
> - **D** – Checking (default value)
> - **S** – Savings

> **PayFromAcctName**
> This is the account name (given by the Subscriber) for the Subscriber's Pay From Account.

> **PayFromAcctDft**
> This indicates whether the Pay From Account is the 'default' account, to be used in the event a Pay From Account is not specified when scheduling a payment. There can be only one 'default' Pay From Account. Canonical values are:
> - **True**
> - **False** (default value)

> **NOTE**: The Subscriber's default Pay From Account is also the account that is utilized to bill the Subscriber.

> **StartChkNum**
> This is the check number, specified by the subscriber, that will be used to start check payments from the specified Pay From Account.

> **NOTE**: The Subscriber's Product must allow the inclusion of a Starting Check Number on the Subscriber's Pay From Account(s) in order to accept this value. A Channel Inquiry can be performed to determine if this feature is available in order to include Starting Check Number information.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the Subscriber's Pay From Account resides. Entry is not required unless the Pay From Account resides with an external Institution.

PayFromAcctStat
This is the status of the Pay From Account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

This element should be left blank for the *add* request, as this information will <u>not</u> be available to the Service Consumer until the Subscriber Add request has been successfully completed.

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used by iPay):

> **ComName**
> This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.
>
> **FirstName**
> This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.
>
> **MiddleName**
> This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.
>
> **LastName**
> This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Inclusion of Pay From Account Owner information on the *Subscriber Add* request is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information. A Channel Inquiry can be performed to determine if the Subscriber's Product allows Pay From Account Owner information.

PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

> **StreetAddr1**
> This is the Subscriber's street address.
>
> **StreetAddr2**
> This is the second line of the Subscriber's street address.
>
> **City**
> This is the name of the city in the Subscriber's address.
>
> **StateCode**
> This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or zip code (Zip+4 is supported).

NOTE: Inclusion of Pay From Account Owner information on the *Subscriber Add* request is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information. A Channel Inquiry can be performed to determine if the Subscriber's Product allows Pay From Account Owner information.

SecdPersonArray

This optional array contains the an array of **Secondary Account Holder** information, if a secondary account holder exists for the specified [Individual] Subscriber, and includes the following information necessary for the Bill Pay Services API:

AddlNameStat

This indicates the status of the Secondary Account Holder. Canonical values are:

- **Act** - Active
- **NotAct** - Not Active (Pending)

AddlName

This complex element contains the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

FirstName

This represents the customer's First Name.

MiddleName

This represents the customer's Middle Name.

LastName

This represents the customer's Last Name.

NOTES:
1) The Subscriber's Product must allow the inclusion of a Secondary Account Holder on the [Individual] Subscriber's account in order to add a Secondary Account Holder. A Channel Inquiry can be performed to determine if this feature is available in order to include Secondary Account Holder information.
2) This array should be left blank for a Company Subscriber *add* request, as Secondary Account Holder information is not applicable for a Company bill pay account. A value entered here for a Company Subscriber will be ignored.

MktgOptInfoArray

This array contains the *MktgOpInfo* complex element, which specifies a package of available marketing options that can be chosen by the Subscriber, and includes the following simple elements:

MktgOptType

This indicates the type of marketing communication option(s) that are available to the Subscriber. Canonical values are:

- **Email** - Marketing materials delivered via email

MktgOptVal

This indicates whether the Subscriber agrees to receive marketing materials via the specified Marketing Option Type. Canonical values are:

- **Accept**
- **Decline**

NOTE: The *MktgOptInfoArray* should be left blank for a Company Subscriber *add* request, as marketing options (which pertain to <u>users</u> of a Company bill pay account) must be passed separately (within the *SubAssocUsrInfoArray).* A value entered here for a Company Subscriber will be ignored.

SubAssocUsrInfoArray

This optional array contains the *SubAssocUsrInfo* complex element, which specifies a package of data for each Subscriber's Associated User (i.e. 'Subuser') that will use or have access to the [Company] bill pay account. This complex element contains the following simple and complex elements and arrays:

Simple elements:

SubAssocUsrID

This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user').

This element should be left blank for the *add* request, as this information will <u>not</u> be available to the Service Consumer until the Subscriber Add request has been successfully completed.

SubAssocUsrRole

This optional element indicates the role of the Subscriber's Associated User. Canonical values are:
- **Prim** - Primary Account Holder

NOTE: Only <u>one</u> user can be designated as the 'Primary Account Holder' on a Company Subscriber account.

SubAssocUsrConsmCustID

This optional element represents the Service Consumer's customer identifier associated with a Subscriber's Associated User (.e.g., the consumer's or FI's 'internal' identifier for the Subscriber's Associated User).

SubAssocUsrComID

This optional element represents the identification that is common between the Service Provider (iPay) and Service Consumer associated with a Company Subscriber's Associated User. This will typically be the Subscriber Associated User's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

SubAssocUsrTempPswd

This is the password specified by the Subscriber's Associated User, which will be used when accessing iPay's 'online' Bill Pay interface (if iPay's online Bill Pay interface is available for use by the Institution's Subscribers and Associated Users). The value entered is limited to a maximum of 20 [alphanumeric] characters.
  NOTE: A Temp Password is required ONLY if the Subscriber's Product explicitly requires it. A Channel Inquiry can be performed to determine if this information is required when adding Subscriber's Associated User.

SubAssocUsrCmnt

This optional element represents a comment pertaining to the Subscriber's Associated User.

Complex elements:

SubAssocUsrName

This complex element contains the name of the Subscriber Associated User, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

FirstName

This represents the Subscriber Associated User's First Name.

MiddleName

This represents the Subscriber Associated User's Middle Name.

LastName

This represents the Subscriber Associated User's Last Name.

Arrays:

SubAssocUsrPhoneArray

This array contains an array of phone information for the specified Subscriber's Associated User and includes following simple and complex elements:

PhoneNum

This represents a phone number, including area code, for the associated user. This can be the user's Home, Work, Cell or SMS/Text number.   This is a numeric field that will not accept hyphens.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home**
- **Work**
- **Cell**
- **SMS** - (text)

PhoneTime

This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).

PhoneExt

This specifies a business phone extension, if one exists.

ConStartTime

This optional element represents the time (in UTC) when contact availability starts.

ConEndTime

This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo

This complex element is an optional element which contains information for the associated user's mobile phone, and includes the following simple elements:

> **MobPrvdCode**
>
> This is the provider code for the associated user's mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

> **MobBB**
>
> This indicates whether the mobile device is a Blackberry. Canonical values are:
> - **True**
> - **False** (default value**)**

MobSendTestText

This optional element is valid on a Subscriber Mod request only, and indicates whether the associated user would like a 'test text' sent to their mobile device in order to validate an update to device information.

SubAssocUsrEmailArray

This array contains an array of email information for the specified Subscriber's Associated User, and includes the following simple elements:

EmailAddr

This element specifies the email address of the Subscriber's Associated User.

EmailType

This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:

- **Prim** – [default] – Subscriber's Associated User

MktgOptInfoArray

This array contains the *MktgOpInfo* complex element, which specifies a package of available marketing options that can be chosen by the Subscriber's Associated User, and includes the following simple elements:

MktgOptType

This indicates the type of marketing communication option(s) that are available to the Subscriber's Associated User. Canonical values are:

- **Email** - Marketing materials delivered via email

MktgOptVal

This indicates whether the Subscriber's Associated User agrees to receive marketing materials via the specified Marketing Option Type. Canonical values are:

- **Accept**
- **Decline**

SubAssocUsrPerInfoArray

This optional array contains a list of permission options for the Subscriber's Associated User. It includes the *SubAssocUsrPerInfo* complex element, which specifies the name/value pair for each available permission and includes the following simple elements:

PerCode

This specifies the desired permission code (e.g., 'CanScheduleBillPayments', 'ScheduledBillPaymentExcludedPayeeID, etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available permission codes and corresponding values (if pre-defined values exist).

PerValue

This specifies the desired permission value (e.g., 'true', '<PayeeID>', etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available permission codes and corresponding values (if pre-defined values exist).

SubAssocUsrCapInfoArray

This optional array contains a list of payment cap options for the Subscriber's Associated User. It includes the *SubAssocUsrCapInfo* complex element, which specifies payment cap information for each available payment cap and includes the following simple elements:

CapCode

This specifies the desired payment cap code (e.g., 'Default Payment Cap Amt', 'PayeeSpecificPayment, etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available payment cap codes and corresponding cap details (if pre-defined values exist).

CapAssocPayeeID

This specifies the PayeeID of the Payee associated with the specified payment cap, if a payee-specific payment cap is desired.

CapAmt

This specifies the desired payment cap amount. A 'Service Dictionary Search' request is necessary to obtain the complete list of available payment cap codes and corresponding cap details (if pre-defined values exist).

Subscriber Add Behaviors

- At least one 'common' Subscriber/Primary Account Holder identifier is required in order to add a Subscriber 'account':
  - For *Individual* Subscribers:
    - using a 'StandAlone' version of Bill Pay Services, the *SubConsmCustID* is minimally required.
    - using a 'non-StandAlone' version of Bill Pay Services, the *SubComID* is minimally required.

      - Since this element will typically be used as the Subscriber's 'LoginID' for the corresponding 'online' iPay Bill Pay application, the value entered must adhere to the Institution's LoginID parameters (which can be obtained via a Channel Inquiry request).

  - For *Company* Subscribers:
    - using a 'StandAlone' version of Bill Pay Services, the Primary Account Holder's *SubAssocUsrConsmCustID* is minimally required.

    - using a 'non-StandAlone' version of Bill Pay Services, the Primary Account Holder's *SubAssocUsrComID* is minimally required.
      - Since this element will typically be used as the Primary Account Holder's 'LoginID' for the corresponding 'online' iPay Bill Pay application, the value entered must adhere to the Institution's LoginID parameters (which can be obtained via a Channel Inquiry request).

  - At least one Subscriber or Primary Account Holder identifier is required (as noted above), but *both identifiers can optionally be provided for any Subscriber add request, if desired*.

- At least one Subscriber phone number (Home, Work or Cell) must be included in the request.

- A Primary email address for the [Individual] Subscriber or [Company's] Primary Account Holder must be included in the request.

- Accessibility to marketing materials is applicable only for 'non-StandAlone' Bill Pay Services.

  - Any *MktgOptInfoArray* information received on a *Subscriber Add* request for a Subscriber using 'StandAlone' Bill Pay Services will be ignored.

- Pay From Accounts:
  - At least _one_ Pay From Account is required in order to complete a _Subscriber Add_ request.
    - Designation of a 'default' Pay From Account is required to complete the _Add_ request.
      - If _only one_ Pay From Account is included in the _Subscriber Add_ request, this account will be automatically designated as the default Pay From Account.
      - If _more than one_ Pay From Account is included in the Subscriber Add request, selection of a default account is required.
  - The ability to add multiple Pay From Accounts for a single Subscriber is available ONLY for those Financial Institutions that have included this feature for the specified Product. A Channel Inquiry can be performed to determine if this feature is available.
  - The Subscriber's Product must allow the inclusion of savings accounts in order to add a savings account as a pay from account. A Channel Inquiry can be performed to determine if this feature is available.
  - If Pay From Account Owner information is entered and either the Subscriber's Product does not allow it or the specified Subscriber is not allowed to add Owner information, the _Subscriber Add_ request will be rejected.

- For _Company_ Subscribers:
  - The ability to add multiple users (i.e., 'Subscriber's Associated Users') to a Subscriber account is applicable only if explicitly indicated for the Subscriber. At this time, only Company Subscribers are enabled for multiple users.
  - At least <u>one set</u> of Subscriber's Associated User information must be included in a _Subscriber Add_ request (that of the Primary Account Holder).
    - One (and only one) Primary Account Holder (role) **_must_** be specified in order to complete the _Subscriber Add_ request. If no Primary Account Holder is specified, or more than one Primary Account Holder is specified, the _Subscriber Add_ request will be rejected.
  - Subscriber's Associated User Permissions and Caps:
    - Specification of permissions and payee payment caps for Subscriber's Associated Users is not applicable if the Service Consumer manages Subuser permissions, or if the associated user is the Primary Account Holder (in this instance, 'Superuser' permissions are always assigned).
      - A Channel Inquiry can be performed to determine whether the Servicer Consumer or the Service Provider manages Subuser permissions.
    - **Permissions** must be granted explicitly; that is, each Subscriber's Associated User (with the exception of the Primary Account Holder) is given <u>NO</u> user permissions, unless explicitly indicated, as below.
      - Permission codes that _allow_ the user to perform a certain bill payment activity will typically begin with the word 'Can' (as in, 'CanScheduleBillPayments'), whose paired 'Value' will be either 'true' or 'false'. The default value for any permission of this type is 'false'.
        - Specification of each individual permission is optional; however, any available permissions not included in the _add_ request will default to 'off' or 'false'.
      - Permission codes that are utilized to limit otherwise-permissible activity by _prohibiting_ that activity for specific Payees or Pay From Accounts, etc, will typically include the word 'Excluded' (as in, 'ScheduleBillPaymentExcludedPayeeId'). The paired 'Value' for this element is the ID of the entity that is being excluded (such as the PayeeID or the PayFromID). The initial Value for the specified 'exclusionary' permission must be provided by the Service Consumer on the _add_ request.

- 'Exclusionary' permissions are optional, and should be provided only if the Subscriber's Associated User is permitted to perform the corresponding function, but is restricted from performing that function for the specified entity (such as scheduling a bill payment for a specific Payee). Any 'exclusionary' permissions entered that don't have a corresponding 'Can' permission will be ignored.

  For example, if the 'CanScheduleBillPayments' permission is set to 'false', but a 'ScheduleBillPaymentsExcludedPayeeID' is specified on the add request, the 'Excluded Payee ID' value will be ignored.

- An 'exclusionary' permission should be included for EVERY Payee or Pay From Account where a restriction is desired.

- **Payment caps** must defined explicitly; that is, each Subscriber's Associated User will be subject to the payment caps specified for the Subscriber, unless user-specific payment caps are explicitly set.

  - A specified 'default' payment cap will apply to all payments scheduled by the Subscriber's Associated User, while Payee-specific payment caps will apply only to payments scheduled for the specified Payee.

    - A Payee-specific payment cap should be included for EVERY Payee where an individual cap restriction is desired.

- For an illustration of an 'associated user'-specific set of permissions/caps, please refer to the example in 'Appendix B' at the end of this document.

Response

The service provider (iPay) returns the *BilPaySubAddRs* **response** message to the service consumer.

The **simple elements and array(s**) contained within the *BilPaySubAddRs* response applicable for the Bill Pay Services API is/are:

Simple elements:

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber.

RsStat
This specifies the status of the add request. Canonical values are:

- **Success**
- **Fail**

Array(s)

SubAssocUsrIdInfoArray
This optional array contains the *SubAssocUsrIdInfo* complex element, which includes a list of all Subscriber's Associated User ID's (i.e. 'Subusers') that were successfully added with the *add* request. This complex element contains the following simple element(s):

SubAssocUsrID
This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user').

The Service Provider will return the new Subscriber ID <SubId> generated by the Bill Pay Services API for the accepted new Subscriber, as well as the ID's for all additional users (Subscriber's Associated Users) that were successfully added in the '*Subscriber Add'* request.

Subscriber Search

Container: TPG_BillPayMaster.xsd
Message: BilPaySubSrch

The bill pay Subscriber Search <BilPaySubSrch> will return all *users* (Subscribers and all active Subscriber's Associated Users) for a particular bill pay product, based on client-specified filter criteria. The request provides the following optional filters:

- **Name of the subscriber < PersonName >**
- **Phone number <PhoneNum>**
- **Address <SrchAddr>**
- **City <SrchCity>**
- **Subscriber Type <SubType>**
- **Subscriber Status <SubStat>**
- **Subscriber ID <SubId>**

When there exists more than one filter on the request, the resulting selection is based on the combined effect of the filters (i.e., 'and' operator). Each added filter option will further restrict the result set. The search process supports only the 'Exact match' search attribute at this time (meaning an 'exact match' must be found in order to satisfy the entered search criteria).

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Subscriber Search service uses a typical exchange of MType messages to retrieve Subscriber information for the specified Bill Pay product, based on optional filters.

Subscriber Search Request
BilPaySubSrchRq_MType

The Third Party sends the **BilPaySubSrchRq** message containing the optional *BilPayProd* element, as well as optional search filter elements: *PersonName, PhoneNum, SrchAddr, SrchCity, SubType, SubStat* and *SubId*.

Subscriber Search Response
BilPaySubSrchRs_MType

The Service Provider sends the **BilPaySubSrchRs** message containing an echo of the request, plus *BilPaySubSrchArray*.

Request

The third party consumer forwards the *BilPaySubSrchRq* **request** message to the Service Provider.

The below elements contained within the *BilPaySubSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

PhoneNum

This represents a phone number, including area code, for the Subscriber. This can be the Subscriber's home, work, cell or SMS/Text number.   This is a numeric field that will not accept hyphens.

SrchAddr

This is the Subscriber's street address.

SrchCity

This is the Subscriber's city.

SubType

This specifies the Subscriber type(s) that can access the specified feature. Canonical values are:
- **Comp**   - Company
- **Indv**   - Individual

SubStat

This represents the Subscribers' status. Canonical values are:
- **Act**   - If selected, will return all 'active' Subscribers
- **Pend** – If selected, will return all 'Pending' Subscribers (those that are awaiting approval)
- **Cls**   – Includes all rejected and/or 'deleted' Subscribers.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

> **NOTE:** Inclusion of the SubId will limit the result set to all users (Subscriber, Secondary Account Holders and Subscriber's Associated Users) that satisfy all other entered filter criteria *within the specified Subscriber record only*.
>
> For example, if both *PersonName* and a *SubId* are entered, the system will return ONLY those users (Subscriber, Secondary Account Holders and Subscriber's Associated Users) that match the entered name *within* the Subscriber account specified on the request.

PersonName

This optional complex element contains the following simple elements which allow the service consumer to specify identifying information for the person(s) being searched for. The Name information supplied will be used to search for the Subscriber, Secondary Account Holder, and also all Subscriber's Associated Users, if applicable.

ComName
This represents the [Company] Subscriber's Company Name.

FirstName
This represents the person's First Name (Subscriber, Secondary Account Holder or Subscriber's Associated User).

MiddleName
This represents the person's Middle Name (Subscriber, Secondary Account Holder or Subscriber's Associated User).

LastName
This represents the person's Last Name (Subscriber, Secondary Account Holder or Subscriber's Associated User).

Response

The service provider (iPay) returns the *BilPaySubSrchRs* **response** message to the service consumer, which returns a list of Subscribers that meet the specified search criteria.

The **array(s)** contained within the *BilPaySubSrchRs* response applicable for the Bill Pay Services API are:

BilPaySubSrchArray

This array, which returns an array of responses for the subscriber search and includes the *BilPaySubSrchInfo* complex element for each subscriber or Subscriber's Associated User returned. The *BilPaySubSrchInfo* complex contains a package of data related to a bill pay Subscriber or Subscriber's Associated User and includes the following simple and complex elements and arrays:

Simple elements:

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber. (This element is required for all subsequent Subscriber-level service requests.)

SubAssocUsrID
This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user'), if the result record is for a Subscriber's Associated User.

EnrollDt
This is the enrollment date for the Subscriber.

SubType
This represents the Subscriber type for the specified Subscriber. Canonical values are:
- **Comp** - Company
- **Indv** - Individual

SubStat
This represents the Subscriber's status. Canonical values are:
- **Act** - Active
- **Pend** - Pending
- **Cls** - Deleted or rejected ('Closed')

Complex elements:

PersonName

This complex element contains the Subscriber's Name information, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the [Company] Subscriber's Company Name.

FirstName
This represents the user's (Subscriber's or Subscriber's Associated User) First Name.

MiddleName
This represents the user's (Subscriber's or Subscriber's Associated User) Middle Name.

LastName
This represents the user's (Subscriber's or Subscriber's Associated User) Last Name.

Addr
This complex element contains the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: For Company Subscribers, the above PersonName and Addr complex elements, are considered 'Company Profile' information and are eligible for viewing ONLY if the requesting user has been granted permission to view/update Company information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ___*hide*___ these elements from the requesting user.

Arrays:

SecdPersonArray
This optional array contains an array of **Secondary Account Holder** information, if a secondary account holder exists for the specified Subscriber, and includes following complex elements applicable for the Bill Pay Services API:

AddlName
This complex element includes the name of the Secondary Account Holder, and includes the following simple elements:

> **FirstName**
> This represents the Secondary Account Holder's First Name.
>
> **MiddleName**
> This represents the Secondary Account Holder's Middle Name.
>
> **LastName**
> This represents the Secondary Account Holder's Last Name.

PhoneArray
This array contains an array of phone information for the specified Subscriber or Subscriber's Associated User and includes following simple and complex elements:

PhoneNum
This represents a phone number, including area code, for the Subscriber or associated user. This can be a Home, Work, Cell or SMS/Text number.   This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:

- **Home**
- **Work**
- **Cell**
- **SMS** - (text)
- **Fax**

PhoneTime
This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).

PhoneExt
This specifies a business phone extension, if one exists.

ConStartTime
This optional element represents the time (in UTC) when contact availability starts.

ConEndTime
This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo
This complex element is an optional element which contains information for the Subscriber's or associated user's mobile phone, and includes the following simple elements:

> **MobPrvdCode**
> This is the provider code for the mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

> **MobBB**
> This indicates whether the mobile device is a Blackberry. Canonical values are:
> - **True**
> - **False** (default value**)**

> **MobSendTestText**
> This optional element is valid on a Subscriber Mod request only, and indicates whether the Subscriber or associated user would like a 'test text' sent to their mobile device in order to validate an update to device information.

NOTE: For Company Subscribers, the above Phone Array information is considered 'Company Profile' information and is eligible for viewing ONLY if the requesting user has been granted permission to view/update Company information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should *__hide__* these elements from the requesting user.

Subscriber Inquiry

Container: TPG_BillPayMaster.xsd
Message: BilPaySubInq

The bill pay Subscriber Inquiry <BilPaySubInq> will return element details for a specific Subscriber as related to the Bill Pay Services API product. The subscriber identification element <SubID> is required on the request.

Optionally, a Subscriber's Associated User ID <SubAssocUsrId> can also be included on the request. If provided, the response will return the specified Subscriber's information, as well as Subscriber's Associated User information for the specified [active] associated user only. (If not provided, the response will include user information for *all* active users associated with the specified Subscriber.)

The design of the inquiry was created in a manner that facilitates addition and modification requests.
The activity intention element <ActIntent> was added to support the concurrency model for future modifications made to Subscriber or Subscriber's Associated User information.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

NOTE: Subscriber-specific 'payment cap' data (e.g., Email Payment caps, Transfer Caps, Business Caps, warn/notify limits) will not be transmitted to the Consumer via the Subscriber Inquiry operation at this time, as these will be accounted for automatically via Fault processes within the 'Submit Payment' feature

Message Flow

The Subscriber Inquiry service uses a typical exchange of MType messages to retrieve Subscriber profile information for a specific Subscriber and Subscriber's Associated User(s), if applicable, based on the required Subscriber ID. If the Subscriber ID is not known, the Service Consumer must first perform a Subscriber Search or, if the requesting user's 'common identifier' information is known, a Subscriber Lookup to obtain the Subscriber ID for the desired Subscriber.

Using Subscriber Search:

Using Subscriber Lookup:

Subscriber Lookup Request
BilPaySubConsmCustInqRq_MType

The Third Party sends the **BilPaySubConsmCustInqRq** message containing the required BilPayProd element, as well as either (or both) of the 'common identifiers' for the <u>requesting user</u> in *SubConsmCustID* (for user's 'customer Id') or *SubCom*ID (for user's 'loginId')

Subscriber Lookup Response
BilPaySubConsmCustInqRs_MType

The Service Provider sends the **BilPaySubConsmCustInqRs** message , containing an echo of the request, plus *SubID, SubAssocUsrId* (if lookup request passed an associated user's identifier), and *PersonName*.

Subscriber Inquiry Request
BilPaySubInqRq_MType

The Third Party sends the **BilPaySubInqRq** message containing the optional *BilPayProd* element, as well as the required *SubID* element for the desired Subscriber. If the inquiry is intened for a specific Subscriber's Associated User, the *SubAssocUsrId* must also be included.

Subscriber Inquiry Response
BilPaySubInqRs_MType

The Service Provider sends the **BilPaySubInqRs** message containing an echo of the request, plus *BilPaySubInfo* (which includes information for all Subscriber's Associated Users). If the inquiry is for a specific Subscriber's Associated User, only that user's information will additionally be included in the response.

Request

The third party consumer forwards the *BilPaySubInqRq* **request** message to the Service Provider.

The below elements contained within this message request are necessary for the Bill Pay Services API.

BilPayProd
This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber.

SubAssocUsrID
This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user'), if the inquiry is for a Subscriber's Associated User.

NOTE: This element is required if the inquiry request is intended to facilitate a subsequent *Mod* request for a specific Subscriber's Associated User.

ActIntent
This indicator conveys the service consumer's intention for a subsequent operation for the data set included in the response. Canonical values are:

- **ReadOnly** – indicates a *view* intent only for the data set included in the Inquiry response. This is the default value.
- **Upd** – indicates the intention to perform a subsequent update ('Mod') to the data set included in the Inquiry response.
- **Dlt** – indicates the intention to perform a subsequent delete of the data set included in the Inquiry response. *This action is not available for Subscriber inquiries.*

Response

The Service Provider (iPay) returns the *BilPaySubInqRs* **response** message to the service consumer, which returns a package of Subscriber profile information for the specified Subscriber, as well as an array of information for the Subscriber's Associated Users, if multiple users exist for the Subscriber's account.

The simple and complex elements and arrays contained within the *BilPaySubInqRs* response applicable for the Bill Pay Services API are:

EnrollDt
This is the enrollment date for the Subscriber.

SubStat
This represents the Subscriber's status. Canonical values are:
- **Act**   - Active
- **Pend** - Pending
- **Cls**   - Deleted or rejected ('Closed')

ActIntentKey
This is the key (provided by the Service Provider) delivered to the consumer to be submitted in the subsequent modification (update or delete) operation for the data set returned in the inquiry response.

BilPaySubInfo

This complex element contains a package of data related to the specified bill pay Subscriber, and includes the following simple and complex elements, as well as several arrays:

Simple elements:

SubType
This represents the Subscriber type for the specified Subscriber. Canonical values are:
- **Comp** - Company
- **Indv**   - Individual

SubConsmCustID
This optional element represents the consumer's customer identifier associated with an Individual Subscriber (e.g., the consumer's or FI's 'internal' identifier for the customer/Subscriber).

 NOTE: This element is not applicable for a Company Subscriber, as identifier information pertaining to <u>users</u> of a Company bill pay account is passed separately (within the *SubAssocUsrInfoArray)*.

SubComID
This optional element represents the identifier that is common between the Service Provider (iPay) and Service Consumer associated with an Individual Subscriber. This will typically be the Subscriber's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

 NOTE: This element is not applicable for a Company Subscriber, as identifier information pertaining to <u>users</u> of a Company bill pay account is passed separately (within the *SubAssocUsrInfoArray)*.

TaxID
This is the Subscriber's tax identifier (e.g., SSN or [Company] EIN).

TempPswd
This is the password specified by the [Individual] Subscriber, which is used to initially access an iPay-hosted 'online' Bill Pay Interface, if available for use by the Institution's Subscribers. (The Subscriber is required to change their password immediately upon accessing iPay's online Bill Pay interface for the first time.)

   NOTE: This element will ***NOT*** be returned on the Subscriber Inquiry response.

PmtApprvReq
This optional element indicates whether new payments scheduled for the specified Subscriber's account will require approval from another 'Subscriber's Associated User' (authorized to approve payments) in order to be processed.

> **NOTE**: This option is not applicable if the Service Consumer manages Subuser permissions.

PswdChgFreq
This optional element indicates the frequency at which passwords must be changed for Subscriber's Associated Users. Canonical values are:
- **None** - [default] no password change is required
- **Weekly** – password change is required weekly
- **Mthly** - password change is required monthly
- **Qtr** - password change is required quarterly

Complex elements:

PersonName
This complex element contains the Subscriber's Name, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

> **ComName**
> This represents the [Company] Subscriber's Company Name.
>
> **FirstName**
> This represents the [Individual] Subscriber's First Name.
>
> **MiddleName**
> This represents the [Individual] Subscriber's Middle Name.
>
> **LastName**
> This represents the [Individual] Subscriber's Last Name.

> **NOTE:** Only the ComNam will be available for a Company Subscriber. Likewise, only the First/Middle/Last Name elements will be available for an Individual Subscriber.

Addr
This complex element contains the following simple elements:

> **StreetAddr1**
> This is the Subscriber's street address.
>
> **StreetAddr2**
> This is the second line of the Subscriber's street address.
>
> **City**
> This is the name of the city in the Subscriber's address.
>
> **StateCode**
> This is the 2-character alpha code approved by the USPS which represents a state.
>
> **PostalCode**
> This is the postal or zip code (Zip+4 is supported).

NOTE: For Company Subscribers, the above TaxID, PmtApprvRedq and PswdChgFreq elements, as well as PersonName and Addr complex elements, are considered 'Company Profile' information and are eligible for viewing ONLY if the requesting user has been granted permission to update Company information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be to 'Hid', which indicates that the Service Consumer should **_hide_** these elements from the requesting user.

Arrays:

PhoneArray

This array contains an array of phone information for the specified Subscriber and includes following simple and complex elements:

PhoneNum

This represents a phone number, including area code, for the Subscriber. This can be the Subscriber's Home, Work, Cell or SMS/Text number. This is a numeric field that will not accept hyphens.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home**
- **Work**
- **Cell**
- **SMS** - (text)
- **Fax**

PhoneTime

This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).

PhoneExt

This specifies a business phone extension, if one exists.

ConStartTime

This optional element represents the time (in UTC) when contact availability starts.

ConEndTime

This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo

This complex element is an optional element which contains information for the Subscriber's mobile phone, and includes the following simple elements:

MobPrvdCode

This is the provider code for the Subscriber's mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

MobBB

This indicates whether the mobile device is a Blackberry. Canonical values are:
- **True**
- **False** (default value**)**

MobSendTestText

This optional element is valid on a Subscriber Mod request only, and indicates whether the Subscriber would like a 'test text' sent to their mobile device in order to validate an update to device information.

NOTE: For Company Subscribers, the above Phone Array is considered 'Company Profile' information and is eligible for viewing ONLY if the requesting user has been granted permission to update Company information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should _**hide**_ these elements from the requesting user.

EmailArray
This array contains an array of email information for the specified [Individual] Subscriber, and includes the following simple elements:

EmailAddr
This element specifies the email address of the customer.

EmailType
This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:
- **Prim** – Primary account holder (Subscriber)
- **Secd** – Secondary account holder

NOTE: This complex element is not applicable for a Company Subscriber, as email Information pertaining to *users* of a Company bill pay account is passed separately (within the *SubAssocUsrInfoArray)*.

PayFromAcctInfoArray
This array contains the *PayFromAcctInfo* complex element, which specifies a package of data related to the Subscriber's Pay From Account(s) and includes following simple and complex elements:

PayFromId
This is the Service Provider's identifier for the Pay From Account within the Subscriber's Bill Pay account. This identifier must be included for any request to schedule a payment, unless the default Pay From Account is desired for the payment.

PayFromAcctId
This is the account number of the subscriber's Pay From Account at the subscriber's financial Institution (e.g., checking or savings account number).

PayFromAcctType
The number(s) or character(s) that categorize the type of Pay From Account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name (given by the Subscriber) for the Subscriber's Pay From Account.

PayFromAcctDft
This indicates whether the Pay From Account is the 'default' account, to be used in the event a Pay From Account is not specified when scheduling a payment. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number (specified by the Subscriber) that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat

This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:

- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName

This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName

This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName

This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName

This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

LastName

This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1

This is the Subscriber's street address.

StreetAddr2

This is the second line of the Subscriber's street address.

City

This is the name of the city in the Subscriber's address.

StateCode

This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

NOTES:

    1) For Company Subscribers, the above Pay From Account Info Array is eligible for viewing ONLY if the requesting user has been granted permission to Manage Pay From Account information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***<u>hide</u>*** these elements from the requesting user.

    2) It is possible for an active Subscriber to have *NO active* Pay From Accounts. In that event, *no* Pay From Account information will be returned in the above Pay From Account Info Array. (A small 'grace period' is provided to a Subscriber whose Pay From Account(s) have been closed to allow them to resolve any issues and re-open the account without having to re-enroll in Bill Pay.)

SecdPersonArray

This optional array contains an array of **Secondary Account Holder** information, if a secondary account holder exists for the specified Subscriber, and includes the following information necessary for the Bill Pay Services API:

AddlNameStat

This indicates the status of the Secondary Account Holder. Canonical values are:

- **Act** - Active
- **NotAct** - Not Active (Pending)

AddlName

This complex element contains the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

FirstName

This represents the customer's First Name.

MiddleName

This represents the customer's Middle Name.

LastName

This represents the customer's Last Name.

NOTES:

    1) The [Individual] Subscriber's Product must allow the inclusion of a Secondary Account Holder on the Subscriber's account in order to add a Secondary Account Holder.

    2) This array is not available for a Company Subscriber, as Secondary Account Holder information is not applicable for a Company bill pay account.

MktgOptInfoArray

This array contains the *MktgOpInfo* complex element, which specifies a package of available marketing communication options that are available to the [Individual] Subscriber, and includes the following simple elements:

MktgOptType

This indicates the type of marketing communication options that are available to the Subscriber. Canonical values are:

- **Email** - Marketing materials delivered via email

MktgOptVal

This indicates whether the Subscriber has agreed to receive marketing materials via the specified Marketing Option Type. Canonical values are:

- **Accept**
- **Decline**

NOTE: The *MktgOptInfoArray* is not applicable for a Company Subscriber *add* request, as marketing options (which pertain to <u>users</u> of a Company bill pay account) are passed separately (within the *SubAssocUsrInfoArray)*.

SubAssocUsrInfoArray

This optional array contains the *SubAssocUsrInfo* complex element, which specifies a package of data for each *active* Subscriber's Associated User (i.e. 'Subuser') that will use or have access to the Company bill pay account. If a *SubAssocUsrID* was included in the inquiry request, this array will return Subscriber's Associated User information <u>for that associated user only</u>. This complex element contains the following simple and complex elements and arrays:

Simple elements:

SubAssocUsrID

This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user').

SubAssocUsrRole

This optional element indicates the role of the Subscriber's Associated User. Canonical values are:

- **Prim** - Primary Account Holder

NOTE: Only <u>one</u> user can be designated as the 'Primary Account Holder' on a Company Subscriber account.

SubAssocUsrConsmCustID

This optional element represents the Service Consumer's customer identifier associated with a Subscriber's Associated User (.e.g., the consumer's or FI's 'internal' identifier for the Subscriber's Associated User).

SubAssocUsrComID

This optional element represents the identification that is common between the Service Provider (iPay) and Service Consumer associated with a Company Subscriber's Associated User. This will typically be the associated user's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

NOTE: This element can be viewed by requesting users only if the Subscriber's Product explicitly allows it. A Channel Inquiry can be performed to determine if the Service Consumer should <u>*hide*</u> this element from requesting users. Additionally, the <Rstr> attribute will be set to 'NoAccess', which indicates that the Service Consumer should not allow the requesting user to view this element.

SubAssocUsrTempPswd

This is the password specified by the Subscriber's Associated User, which will be used when accessing an iPay-hosted 'online' Bill Pay interface (if iPay's online Bill Pay interface is available for use by the Institution's Subscribers and Associated Users).

NOTE: This element will ***NOT*** be returned on the Subscriber Inquiry response.

SubAssocUsrCmnt

This optional element represents a comment pertaining to the Subscriber's Associated User.

Complex elements:

SubAssocUsrName
This complex element contains the name of the Subscriber Associated User, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

FirstName
This represents the Subscriber Associated User's First Name.

MiddleName
This represents the Subscriber Associated User's Middle Name.

LastName
This represents the Subscriber Associated User's Last Name.

Arrays:

SubAssocUsrPhoneArray
This array contains an array of phone information for the specified user and includes following simple and complex elements:

PhoneNum
This represents a phone number, including area code, for the Subscriber's Associated User. This can be a Home, Work, Cell or SMS/Text number.   This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home**
- **Work**
- **Cell**
- **SMS** - (text)

PhoneTime
This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).
PhoneExt
This specifies a business phone extension, if one exists.

ConStartTime
This optional element represents the time (in UTC) when contact availability starts.

ConEndTime
This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo
This complex element is an optional element which contains information for the associated user's mobile phone, and includes the following simple elements:

MobPrvdCode
This is the provider code for the associated user's mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

MobBB
This indicates whether the mobile device is a Blackberry. Canonical values are:
- **True**
- **False** (default value**)**

MobSendTestText
This optional element is valid on a Subscriber Mod request only, and indicates whether the associated user would like a 'test text' sent to their mobile device in order to validate an update to device information.

NOTE: The above Phone Array is considered 'personal profile' information for the associated user, and are viewable ONLY by the actual Subscriber's Associated User who _owns_ the information. Personal profile information will not be returned for any Subscriber's Associated User except that of the associated user making the inquiry request.

SubAssocUsrEmailArray
This array contains an array of email information for the specified Subscriber's Associated User, and includes the following simple elements:

EmailAddr
This element specifies the email address of the Subscriber's Associated User.

EmailType
This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:
- **Prim** – [default] – Subscriber's Associated User

SubAssocUsrMktgOptInfoArray
This optional array contains the *MktgOpInfo* complex element, which specifies a package of available marketing options that were chosen by the Subscriber's Associated User, and includes the following simple elements:

MktgOptType
This indicates the type of marketing communication option(s) that are available to the Subscriber's Associated User. Canonical values are:
- **Email** - Marketing materials delivered via email

MktgOptVal
This indicates whether the Subscriber's Associated User agrees to receive marketing materials via the specified Marketing Option Type. Canonical values are:
- **Accept**
- **Decline**

SubAssocUsrPerInfoArray
This optional array contains a list of permission options for the Subscriber's Associated User. It includes the *SubAssocUsrPerInfo* complex element, which specifies the name/value pair for each available permission and includes the following simple elements:

PerCode
This specifies the designated permission code (e.g., 'CanScheduleBillPayments', 'ScheduledBillPaymentExcludedPayeeID, etc).

PerValue
This specifies the permission value (e.g., 'true', '<PayeeID>', etc).

SubAssocUsrCapInfoArray
This optional array contains a list of payment cap options for the Subscriber's Associated User. It includes the *SubAssocUsrCapInfo* complex element, which specifies payment cap information for each available payment cap and includes the following simple elements:

> **CapCode**
> This specifies the designated payment cap code (e.g., 'Default Payment Cap Amt', 'PayeeSpecificPayment, etc).
>
> **CapAssocPayeeID**
> This specifies the PayeeID of the Payee associated with the specified payment cap, if a payee-specific payment cap exists.
>
> **CapAmt**
> This specifies the payment cap amount for the designated payment cap.

NOTE: For Company Subscribers, the above SubAssocUsrInfoArray is eligible for viewing ONLY if the requesting user has been granted permission to Manage Subusers. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***hide*** these elements from the requesting user.

Subscriber Modify

Container: TPG_BillPayMaster.xsd
Message: BilPaySubMod

The bill pay Subscriber Modification <BilPaySubMod> will allow the service consumer to update (modify) certain elements for a specific Subscriber or Subscriber's Associated User. The subscriber identification element <SubID> and Activity Intent Key <ActIntenKey> is required on the Mod request.

The ability to delete a Subscriber is not available within the Bill Pay Services API service operations.
A delete of a Subscriber's Associated User <u>***can***</u> ***be completed via a Subscriber Mod request, provided the Subscriber's Product includes this feature.***

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Subscriber Modification service uses a typical exchange of MType messages to allow updates to Subscriber or associated user information for a specific Subscriber or Subscriber's Associated User, based on the required <SubID> (and <SubAssocUsrId>, if the update is for a Subscriber's Associated User). A Subscriber Inquiry must always be performed prior to the modification request in order to retrieve the Activity Intent Key necessary for modification operations.

Subscriber Inquiry Request
BilPaySubInsRq_MType

The Third Party sends the **BilPaySubInqRq** message containing the optional *BilPayProd* element, as well as the required *SubID* element for the desired Subscriber and the *SubAssocUsrId* for the desired Subscriber's Associated User, if the modification will be for a specific associated user..

Subscriber Inquiry Response
BilPaySubInsRs_MType

The Service Provider sends the **BilPaySubInqRs** message containing an echo of the request, plus *BilPaySubInfo*, as well as the *Activity Intent Key* required for modification operations.

Subscriber Mod Request
BilPaySubModRq_MType

The Third Party sends the **BilPaySubModRq** message containing the required *SubID* and *ActIntentKey* elements, as well as the modified elements within the *BilPaySubInfo* complex element for the desired Subscriber or Subscriber's Associated User.

Subscriber Mod Response
BilPaySubModRs_MType

The Service Provider sends the **BilPaySubModRs** message containing the response status <RsStat> indicating if the Mod was successful. An unsuccessful Mod request will also return the errors that occurred that prevented the Mod.

Request

The third party consumer forwards the *BilPaySubModRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPaySubModRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

ActIntentKey

This is the Service Provider key delivered to the Service Consumer via a preceding inquiry request, to be submitted in the modification request operation.

Dlt

This indicates a desire for deletion of the specified entity. Canonical values are:
- **True**
- **False** (default)

This element is not currently eligible for use with a Subscriber Mod request.

BilPaySubInfo

This complex element contains a package of data related to the specified bill pay Subscriber, and may include all of the simple and complex elements and arrays returned in the preceding Subscriber Inquiry response. *However, the following are the **only** elements within this complex that are eligible for modification (add, update or delete) for a Subscriber Modification request:*

Simple elements:

SubConsmCustID

This optional element represents the consumer's customer identifier associated with an Individual Subscriber. (.e.g., the consumer's or FI's 'internal' identifier for the customer/Subscriber).

This element is a required element for Subscribers utilizing 'StandAlone' Bill Pay Services, and therefore cannot be deleted (i.e., cannot be set to 'Null').

This element should be left blank for a Company Subscriber *mod* request, as identifier information pertaining to *users* of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

SubComID

This optional element represents the identification that is common between the provider and consumer associated with an Individual Subscriber. This will typically be the Subscriber's 'LoginID', and is used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

This element is a required element for Subscribers utilizing Bill Pay Services that are not considered 'Stand-Alone', and therefore cannot be deleted (i.e., cannot be set to 'Null').

This element should be left blank for a Company Subscriber *mod* request, as identifier information pertaining to *users* of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

TaxID
This is the Subscriber's tax identifier (e.g., SSN or [Company] EIN).

This element is a required element for certain Subscribers, and therefore cannot be deleted (i.e., cannot be set to 'Null') for those Subscribers. A Channel Inquiry can be performed to determine if this information is required for the Subscriber's Product.

PmtApprvReq
This optional element indicates whether new payments scheduled for the specified [Company] Subscriber's account will require approval from another 'Subscriber's Associated User' in order to be processed. Canonical values are:
- **True**
- **False**

  NOTE: This option is not applicable if the Service Consumer manages Subuser permissions. A Channel Inquiry can be performed to determine whether the Servicer Consumer or the Service Provider manages Subuser permissions.

PswdChgFreq
This optional element indicates the frequency at which passwords must be changed for Subscriber's Associated Users. Canonical values are:
- **None**   - [default] no password change is required
- **Weekly** – password change is required weekly
- **Mthly**   - password change is required monthly
- **Qtr**   - password change is required quarterly

Complex elements:

PersonName
This complex element contains elements representing the Subscriber's name. Only the following simple elements within this complex are eligible for modification:

> **ComName**
> This represents the [Company] Subscriber's Company Name.
>
> **FirstName** (required element)
> This represents the [Individual] Subscriber's First Name.
>
> **MiddleName** (optional)
> This represents the [Individual] Subscriber's Middle Name.
>
> **LastName** (required element)
> This represents the [Individual] Subscriber's Last Name.

  NOTES:
  1) For Company Subscribers, only the 'ComName' is editable in the *mod* request.
     For Individual Subscribers, only the First-, Middle- and LastName elements are editable in the *mod* request. Any inappropriate values entered will be ignored.
  2) This element is a required element for Subscribers, and therefore cannot be deleted (i.e., cannot be set to 'Null').

Addr
This complex element contains elements representing the Subscriber's address. Only the following simple elements within this complex are eligible for modification:

StreetAddr1 (required element)
This is the customer's street address.

StreetAddr2 (optional)
This is the second line of the customer's street address.

City (required element)
This is the name of the city in the customer's address.

StateCode (required element)
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode (required element)
This is the postal or zip code (Zip+4 is supported).

This complex element is a required element for Subscribers, and therefore cannot be deleted (i.e., cannot be set to 'Null').

NOTE: For Company Subscribers, the above TaxID, PmtApprvRedq and PswdChgFreq elements, as well as PersonName and Addr complex elements, are considered 'Company Profile' information and are eligible for update ONLY if the requesting user has been granted permission to update Company information.

Arrays

The below arrays contained within the *BilPaySubModRq* message request complex are necessary for the Bill Pay Services API. *Only those arrays that contain elements that are eligible for modification are listed, and only those 'modification-eligible' elements within the array will be addressed.*

PhoneArray

This array contains an array of phone information for the specified Subscriber. At least one phone number is required for every Subscriber.

Only the following elements within this array are eligible for modification:

PhoneNum
This represents a phone number, including area code, for the Subscriber. This can be the Subscriber's Home, Work, Cell or SMS/Text number. This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home** (required element)
- **Work** (optional)
- **Cell** (optional)
- **SMS** (optional)
- **Fax** (optional)

Use of the 'SMS' Phone Type requires additional entry for Mobile Phone information (below).

ConStartTime (optional)
This optional element represents the time (in UTC) when phone contact availability starts.

ConEndTime (optional)
This optional element represents the time (in UTC) when phone contact availability ends.

MobPhoneInfo (conditional)
This complex element is an optional element which contains information for the Subscriber's mobile phone. However, this information is *required* for the SMS Phone Type (above), as this supporting information is necessary to send text messages to the Subscriber.

NOTE: Updates are allowed only for mobile device providers that are in 'approved status.

Only the following simple elements within this complex are eligible for modification (add/update/delete):

> **MobPrvdCode** (optional, unless PhoneType = SMS)
> This is the provider code for the Subscriber's mobile device (e.g., AT&T, Verizon, Sprint, etc).
>
> This entry can be selected from a list of available providers. A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.
>
> **MobBB** (optional)
> This indicates whether the mobile device is a Blackberry. Canonical values are:
> - **True**
> - **False** (default value**)**
>
> **MobSendTestText** (optional)
> This optional element is valid on a Subscriber Mod request only, and indicates whether the Subscriber would like a 'test text' sent to their mobile device in order to validate an update to device information. Canonical values are:
> - **True**
> - **False** (default value)
>
> **NOTE:** A request to send a Test text message is not persisted by the service provider (iPay). Therefore, there is no record that the message was sent. However, a new request can be sent at any time.

NOTE: For Company Subscribers, the above Phone array is considered 'Company Profile' information and is eligible for update ONLY if the requesting user has been granted permission to update Company information.

EmailArray
This array contains the *EmailInfo* complex element, which includes a package of email data for the [Individual] Subscriber. Only the following elements within the *EmailInfo* complex are eligible for modification:

> **EmailAddr** (Primary Email is required)
> This element specifies the email address of the Individual Subscriber.
> A 'Primary' email address is required for the Subscriber. A Secondary email address is optional, and can be specified *only* if the Subscriber's account allows a Secondary Account Holder.
>
> **EmailType** (required element)
> This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:
> - **Prim** – Primary account holder (Subscriber)
> - **Secd** – Secondary account holder

NOTE: This complex element should be left blank for a Company Subscriber *mod* request, as email Information pertaining to *users* of a Company bill pay account must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

PayFromAcctInfoArray

This array contains the *PayFromAcctInfo* complex element, which specifies a package of data related to the Subscriber's Pay From Account(s) and includes following simple and complex elements:

PayFromId

This is the service provider's identifier for the Pay From Account within the Subscriber's Bill Pay account. This identifier must be included for any request to update or delete a Pay From Account.

This element should be left blank for a request to *add* a Pay From Account, as this information will *not* be available to the service consumer until the 'add' request has been successfully completed.

PayFromAcctId

This is the account number of the Subscriber's pay from account at the Subscriber's financial institution (e.g., checking or savings account number).

PayFromAcctType

The number(s) or character(s) that categorize the type of pay from account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the Subscriber's pay from account.

PayFromAcctDft

This indicates whether the pay from account is the 'default' account, to be used in the event a Pay From Account is not specified when scheduling a payment. Canonical values are:
- **True**
- **False** (default value)

  NOTE: The Subscriber's default Pay From Account is the account that is utilized to bill the Subscriber.

StartChkNum

This is the check number that will be used to start check payments from the specified Pay From Account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId

This is the routing transit number or ABA number of the financial institution where the Subscriber's Pay From Account resides.

PayFromAcctOwnName

This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used by iPay):

ComName

This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName

This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName

This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

LastName
This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Inclusion of new or update of existing Pay From Account Owner information on the *Subscriber Mod* request is allowed only if the Subscriber's Product allows this information on the Subscriber's Pay From Account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information. A Channel Inquiry can be performed to determine if the Subscriber's Product allows Pay From Account Owner information.

PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Inclusion of new or update of existing Pay From Account Owner information on the *Subscriber Mod* request is allowed only if the Subscriber's Product allows this information on the Subscriber's Pay From Account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information. A Channel Inquiry can be performed to determine if the Subscriber's Product allows Pay From Account Owner information.

NOTE: For Company Subscribers, the above Pay From Account Info Array is eligible for update ONLY if the requesting user has been granted permission to Manage Pay From Account information.

SecdPersonArray
This optional array includes a package of **Secondary Account Holder** information, if a secondary account holder is allowed for the specified [Individual] Subscriber's account.

Only the following complex elements within this array are eligible for modification:

AddlName
Only the following simple elements within this complex are eligible for modification (add/update/delete):

FirstName (optional)
This represents the Secondary Account Holder's First Name.

MiddleName (optional)
This represents the Secondary Account Holder's Middle Name.

> **LastName** (optional)
> This represents the Secondary Account Holder's Last Name.

NOTES:
1) The [Individual] Subscriber's Product must allow the addition of a Secondary Account Holder in order to include a Secondary Account Holder on the Subscriber's account.
2) Adding or updating a Secondary Account Holder requires approval by Subscriber's Financial Institution. This has the effect of setting the Secondary Account Holder's status to 'Not Active' (or 'pending'). Upon approval by the Financial Institution, the Secondary Account Holder's status will be set to 'Active'. Only 'Active' Secondary Account Holders are eligible for modification (update or delete).
3) This array should be left blank for a Company Subscriber *mod* request, as Secondary Account Holder information is not applicable for a Company bill pay account. A value entered here for a Company Subscriber will be ignored.

MktgOptInfoArray

This array contains the *MktgOpInfo* complex element, which specifies a package of available marketing communication options that are available to the [Individual] Subscriber, and includes the following simple elements:

MktgOptType
This indicates the type of marketing communication options that are available to the Subscriber. Canonical values are:
- **Email** - Marketing materials delivered via email

MktgOptVal
This indicates whether the Subscriber has agreed to receive marketing materials via the specified Marketing Option Type. Canonical values are:
- **Accept**
- **Decline**

NOTE: This array should be left blank for a Company Subscriber *mod* request, as marketing options (which pertain to _users_ of a Company bill pay account) must be passed separately (within the *SubAssocUsrInfoArray)*. A value entered here for a Company Subscriber will be ignored.

SubAssocUsrInfoArray

This optional array contains the *SubAssocUsrInfo* complex element, which specifies a package of data for each Subscriber's Associated User (i.e. 'Subuser') that will use or have access to the [Company] bill pay account. This complex element contains the following simple and complex elements and arrays:

Simple elements:
SubAssocUsrID
This is the Service Provider's (iPay's) identifier for the Subscriber's Associated User (or 'end-user').

This element is required on the mod request for identification purposes only, and cannot be modified.

This element should be left blank if adding a new associated user via the *mod* request, as this information will _not_ be available to the Service Consumer until the user has been successfully added to the Subscriber's account.

SubAssocUsrRole

This optional element indicates the role of the Subscriber's Associated User. Canonical values are:

- **Prim** - Primary Account Holder

NOTE: This element is not currently eligible for update with a Subscriber Mod request.

SubAssocUsrConsmCustID

This optional element represents the Service Consumer's customer identifier associated with a Subscriber's Associated User (.e.g., the consumer's or FI's 'internal' identifier for the Subscriber's Associated User).

This element is a required element for associated user utilizing Bill Pay Services that are not considered 'Stand-Alone', and therefore cannot be deleted (i.e., cannot be set to 'Null') on a *mod* request.

SubAssocUsrComID

This optional element represents the identification that is common between the Service Provider (iPay) and Service Consumer associated with a Company Subscriber's Associated User. This will typically be the Subscriber Associated User's 'LoginID' used to gain access to a corresponding iPay-hosted 'online' Bill Pay application.

This element is a required element for associated user utilizing Bill Pay Services that are not considered 'Stand-Alone', and therefore cannot be deleted (i.e., cannot be set to 'Null') on a *mod* request

NOTE: The ability to update this element is allowed only if the Subscriber's Product explicitly allows it. A Channel Inquiry can be performed to determine if the Service Consumer should ***hide*** this element from requesting users.

SubAssocUsrTempPswd

This is the password specified by the Subscriber's Associated User, which will be used when accessing iPay's 'online' Bill Pay interface (if iPay's online Bill Pay interface is available for use by the Institution's Subscribers and Associated Users). The value entered is limited to a maximum of 20 [alphanumeric] characters.

NOTE: A Temp Password is required only when adding a new associated user, and ONLY if the Subscriber's Product explicitly requires it. A Channel Inquiry can be performed to determine if this information is required when adding Subscriber's Associated User.

SubAssocUsrCmnt

This optional element represents a comment pertaining to the Subscriber's Associated User.

Complex elements:

SubAssocUsrName

This complex element contains the name of the Subscriber's Associated User, and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

FirstName

This represents the associated user's First Name.

MiddleName
This represents the associated user's Middle Name.
LastName
This represents the associated user's Last Name.

NOTE: This complex element is required for associated users, and therefore cannot be deleted (i.e., cannot be set to 'Null').

Arrays:

SubAssocUsrPhoneArray
This array contains an array of phone information for the specified Subscriber's Associated User (at least one is required) and includes following simple and complex elements:

PhoneNum
This represents a phone number, including area code, for the associated user. This can be a Home, Work, Cell or SMS/Text number. This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Canonical values required for the Bill Pay Services API are:
- **Home**
- **Work**
- **Cell**
- **SMS** - (text)

PhoneTime
This indicates the best usage time – Day or Evening.

This optional element will not be utilized for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements (below).

PhoneExt
This specifies a business phone extension, if one exists.

ConStartTime
This optional element represents the time (in UTC) when contact availability starts.

ConEndTime
This optional element represents the time (in UTC) when contact availability ends.

MobPhoneInfo
This complex element is an optional element which contains information for the associated user's mobile phone, and includes the following simple elements:

MobPrvdCode
This is the provider code for the associated user's mobile device (e.g., Verizon, Sprint, etc). A 'Service Dictionary Search' request is necessary to obtain the current list of available mobile providers and associated codes.

MobBB
This indicates whether the mobile device is a Blackberry. Canonical values are:
- **True**
- **False** (default value**)**

MobSendTestText

This optional element is valid on a Subscriber Mod request only, and indicates whether the associated user would like a 'test text' sent to their mobile device in order to validate an update to device information.

NOTE: The above SubAssocUsr Phone Array is considered 'personal profile' information for the associated user, and is editable ONLY by the actual Subscriber's Associated User who *owns* the information.

SubAssocUsrEmailArray

This array contains an array of email information for the specified Subscriber's Associated User, and includes the following simple elements:

EmailAddr

This element specifies the email address of the Subscriber's Associated User.

EmailType

This element specifies to whom the email address applies. Canonical values required for the Bill Pay Services API are:
* **Prim** – [default] – Subscriber's Associated User

This complex element is required for associated users, and therefore cannot be deleted (i.e., cannot be set to 'Null').

MktgOptInfoArray

This array contains the *MktgOpInfo* complex element, which specifies a package of available marketing options that can be chosen by the Subscriber's Associated User, and includes the following simple elements:

MktgOptType

This indicates the type of marketing communication option(s) that are available to the Subscriber's Associated User. Canonical values are:
* **Email** - Marketing materials delivered via email

MktgOptVal

This indicates whether the Subscriber's Associated User agrees to receive marketing materials via the specified Marketing Option Type. Canonical values are:
* **Accept**
* **Decline**

SubAssocUsrPerInfoArray

This optional array contains a list of permission options for the Subscriber's Associated User. It includes the *SubAssocUsrPerInfo* complex element, which specifies the name/value pair for each available permission and includes the following simple elements:

PerCode

This specifies the desired permission code (e.g., 'CanScheduleBillPayments', 'ScheduledBillPaymentExcludedPayeeID', etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available permission codes and corresponding values (if pre-defined values exist).

PerValue

This specifies the desired permission value (e.g., 'true', '<PayeeID>', etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available permission codes and corresponding values (if pre-defined values exist).

SubAssocUsrCapInfoArray

This optional array contains a list of payment cap options for the Subscriber's Associated User. It includes the *SubAssocUsrCapInfo* complex element, which specifies payment cap information for each available payment cap and includes the following simple elements:

CapCode

This specifies the desired payment cap code (e.g., 'Default Payment Cap Amt', 'PayeeSpecificPayment, etc). A 'Service Dictionary Search' request is necessary to obtain the complete list of available payment cap codes and corresponding cap details (if pre-defined values exist).

CapAssocPayeeID

This specifies the PayeeID of the Payee associated with the specified payment cap, if a payee-specific payment cap is desired.

CapAmt

This specifies the desired payment cap amount. A 'Service Dictionary Search' request is necessary to obtain the complete list of available payment cap codes and corresponding cap details (if pre-defined values exist).

NOTE: For Company Subscribers, the above SubAssocUsrInfo Array is eligible for update ONLY if the requesting user has been granted permission to manage Subusers.

Subscriber Mod Behaviors

- The Service Provider (iPay) will generate a 'change notification' email to the Subscriber, as well as a SMS/Text message, for the following updates:
  - when the SMS/Text message address is updated;
  - the Subscriber's [Primary] email address is modified;

- The service provider (iPay) also posts an alert on the Financial Institution's Bill Pay administration portal ('MASTER') when any of the following Subscriber profile information is updated:
  - Subscriber Address
  - Subscriber Phone numbers (Home, Work or Cell)
  - Email Addresses (Primary and Secondary)

- Pay From Accounts:
  - Adding or deleting an additional pay from account:
    - At least *one* pay from account must be available for a Subscriber's account at all times.
    - The ability to add additional pay from accounts for a single Subscriber is available via the SubMod request, but ONLY for those Financial Institutions that have included this feature for the specified Product. A Channel Inquiry can be performed to determine if this feature is available in order to add additional pay from accounts.

- Required entries for adding an additional pay from account are specified in the 'Subscriber Add' request above.

  - Deletes of pay from account(s) are allowed via the SubMod request (provided at least one pay from account continues to be available for a Subscriber's account at all times).
    - Delete of the Subscriber's *default* pay from account is prohibited.
    - If there are pending payments associated with the pay from account being deleted, a fault override is required in order to complete the delete request.
    - Deleting a Pay From Account also causes any 'automatic eBill payment schedule(s)' that utilize the specified Pay From Account to be permanently stopped.

  o Modifying an existing pay from account:
    - Only the following elements are editable when modifying an existing pay from account:
      - Account Name
      - Starting Check Number
      - Pay From Account Default
      - Pay From Account Owner information (if applicable)

    - If Pay From Account Owner information is entered when adding a new or modifying an existing Pay From Account, and either the Subscriber's Product does not allow it or the specified Subscriber is not allowed to add Owner information, the *Subscriber Mod* request will be rejected.

  o For *Company Subscribers*, Pay From Account information can be added or modified ONLY if the requesting user has been granted permission to Manage Pay From Account information.

- Accessibility to marketing materials is applicable only for 'non-StandAlone' Bill Pay Services.

  o Any *MktgOptInfoArray* information received on a SubMod request for a Subscriber using 'StandAlone' Bill Pay Services will be ignored.

- For *Company* Subscribers:

  o Company Profile information: The TaxID, PmtApprvRedq and PswdChgFreq elements, as well as PersonName and Addr complex elements, are considered 'Company Profile' information and are eligible for update via the *SubMod* request ONLY if the requesting user has been granted permission to update Company information.

  o Pay From Account information: The entire Pay From Account complex element is eligible for update via the *SubMod* request ONLY if the requesting user has been granted permission to Manage Pay From Account information.

  o The ability to add multiple users (i.e., 'Subscriber's Associated Users') to a Subscriber account is applicable only if explicitly indicated for the Subscriber. At this time, only Company Subscribers are enabled for multiple users.

  o Subscriber's Associated Users:

    - Associated User information can be added or modified via a *SubMod* request ONLY if the requesting user has been granted permission to 'Manage Subuser' information.

    - One (and only one) Primary Account Holder (role) is allowed for a Company Subscriber. The ability to change the Primary Account Holder is not available at this time.

    - The ability to *add* additional associated users is available via the *SubMod* request, but ONLY if the Subscriber's Product includes the ability to add 'multiple-users'.

- Required entries for adding an additional associated user are specified in the 'Subscriber Add' request above.

- Multiple associated users can be added via a single *SubMod* request.

▪ The ability to delete associated user(s) is available via the *SubMod* request (provided the ability to delete an associated user is available for the Subscriber'sProduct). A Channel Inquiry can be performed to determine if the ability to delete associated users is available for this Subscriber.

- Delete of the Subscriber's *Primary Account Holder* is prohibited.

▪ When *modifying* associated user information via a *Subscriber Mod* request, the *SubAssocUsrInfo* array should contain only **ONE** Subscriber's Associated User entry, that of the associated user being modified.

- If more than one associated user is included in the *mod* request, the request will be rejected.

- Permissions for Subscribers/'Primary' Subuser cannot be modified ('Superuser' role is permanent).

- Associated users' Phone and Email Arrays are considered 'personal profile' information, and are editable ONLY by the actual Subscriber's Associated User who *owns* the information. Update of user 'personal profile' information will not be allowed for any Subscriber's Associated User except that of the associated user making the *mod* request.

▪ Permissions and Caps:

- Specification of permissions and payee payment caps for Subscriber's Associated Users is not applicable if the Service Consumer manages Subuser permissions, or if the associated user is the Primary Account Holder (in this instance, 'Superuser' permissions are always assigned).
  - A Channel Inquiry can be performed to determine whether the Servicer Consumer or the Service Provider manages Subuser permissions.

- **Permissions** must be granted explicitly; that is, each Subscriber's Associated User (with the exception of the Primary Account Holder) is given *NO* user permissions, unless explicitly indicated, as below.
  - Permission codes that *allow* the user to perform a certain bill payment activity will typically begin with the word 'Can' (as in, 'CanScheduleBillPayments'), whose paired 'Value' will be either 'true' or 'false'. The default value for any permission of this type is 'false'.
    - Specification of each individual permission is optional; however, any available permissions not included in the *add* request will default to 'off' or 'false'.
  - Permission codes that are utilized to limit otherwise-permissible activity by *prohibiting* that activity for specific Payees or Pay From Accounts, etc, will typically include the word 'Excluded' (as in, 'ScheduleBillPaymentExcludedPayeeId'). The paired 'Value' for this element is the ID of the entity that is being excluded (such as the PayeeID or the PayFromID). The initial Value for the specified 'exclusionary' permission must be provided by the Service Consumer on the *add* request.
    - 'Exclusionary' permissions are optional, and should be provided only if the Subscriber's Associated User is permitted to perform the corresponding function, but is restricted from performing that function for the specified entity (such as scheduling a bill payment for a specific Payee). Any 'exclusionary' permissions entered that don't have a corresponding 'Can' permission will be ignored.

      For example, if the 'CanScheduleBillPayments' permission is set to 'false', but a 'ScheduleBillPaymentsExcludedPayeeID' is specified on the add

request, the 'Excluded Payee ID' value will be ignored.

- An 'exclusionary' permission should be included for EVERY Payee or Pay From Account where a restriction is desired.

- **Payment caps** must defined explicitly; that is, each Subscriber's Associated User will be subject to the payment caps specified for the Subscriber, unless user-specific payment caps are explicitly set.

  o A specified 'default' payment cap will apply to all payments scheduled by the Subscriber's Associated User, while Payee-specific payment caps will apply only to payments scheduled for the specified Payee.

    - A Payee-specific payment cap should be included for EVERY Payee where an individual cap restriction is desired.

- For an illustration of an 'associated user'-specific set of permissions/caps, please refer to the example in 'Appendix B' at the end of this document.

Response

The service provider (iPay) returns the *BilPaySubModRs* **response** message to the service consumer.

The element(s) contained within the *BilPaySubModRs* response applicable for the Bill Pay Services API is/are:

RsStat

This specifies the status of the mod request. Canonical values are:

- **Success**
- **Fail**

Payee Services

Payee Add

Container: TPG_BillPayMaster.xsd
Message: BilPayPayeeAdd

The bill pay Payee Add <BilPayPayeeAdd> will allow the service consumer to add a new Payee or Transfer account for a specific Subscriber. The subscriber identification element <SubID> is required on the Add request.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Payee Add service uses a typical exchange of MType messages to allow the subscriber to add a new Payee or Transfer account to their bill pay account.

Subscriber Inquiry Request
BilPaySubInsRq_MType

The Third Party sends the **BilPaySubInqRq** message containing the optional *BilPayProd* element, as well as the required *SubID* element for the desired Subscriber.

Subscriber Inquiry Response
BilPaySubInsRs_MType

The Service Provider sends the **BilPaySubInqRs** message containing an echo of the request, plus *BilPaySubInfo,* which includes the *Pay From Account* information [optionally] required for Payee Add operations.

PayeeAdd Request
BilPayPayeeAddRq_MType

The Third Party sends the **BilPayPayeeAddRq** message containing the required *SubID* and optional *BilPayProd* elements, as well as the required Payee elements (and optional *PayFromID*) within the *BilPayPayeeInfo* complex element for the requested Payee.

Payee Add Response
BilPayPayeeAddRs_MType

The Service Provider sends the **BilPayPayeeAddRs** message containing the response status <RsStat> indicating if the Add was successful. If the add was successful, the *PayeeID* assigned to the new Payee will also be returned. An unsuccessful add request will also return the errors that occurred that prevented the add.

Request
The third party consumer forwards the *BilPayPayeeAddRq* **request** message to the Service Provider.
The below elements and arrays contained within the *BilPayPayeeAddRq* message request are necessary for the Bill Pay Services API.

Simple elements:

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

Complex elements:

BilPayPayeeInfo

This complex element contains a package of data related to a bill pay Payee or Transfer account, and includes the below simple and complex elements and arrays necessary to add a Payee or Transfer account via the Bill Pay Services API. This complex is required for the request; however, many of the child nodes encapsulated are optional.

PayeeName

This is the name of the Payee. Entry of this value is not allowed for Transfer accounts.

PayeeNickname

This represents the Subscriber's 'nickname' for the Payee or Transfer account. If not specified, this will default to the PayeeName for Company or Individual Payees. For Transfer accounts, this will default to the Subscriber's name (for Company Subscribers, this will be the Company Name) if not specified.

PayeeClsf

This specifies the classification of a Payee. Canonical values are:

- **Comp** (Company)
- **Indv**   (Individual/Person)
- *[NEW!]* **FinInst** (Financial Institution) – to be used for Transfer accounts

[NEW!] [Payee] PmtIntentType

This represents the payment intention of the Payee. Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

The Payee's *PmtIntentType* must be appropriate for the specified Payee Classification (e.g., for 'Financial Institution' Payees (i.e., 'Transfer Accounts), only 'Xfer'-type values are appropriate).

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee. A value is required for a Company payee.
If no value is passed for this element for an Individual payee, it will be defaulted based on the Payee's Payment Method. For a Check or Electronic payee, this will default to the Subscriber's name. For an Email payee, the value will default to 'N/A'. Entry of this value is not allowed for Transfer accounts.

SubMerPayerName

This is the Subscriber's name understood by the merchant and is used to override the Subscriber's name on record.

If no value is passed for this element for an Individual payee, it will be defaulted with the Subscriber's name. Entry of this value is not allowed for Transfer accounts.

PayeeCatName *(reserved for future use)*

The name of the category assigned to the Payee or Transfer account.

PayeeEmailSharedSecret

A shared secret word or code provided by the Subscriber to a desired 'Email' Payee, used to confirm the Email Payee's identity when providing their financial deposit information. This is a required element when adding an 'Email' (P2P) Payee.

PayeeFIAcctInfo

This optional complex element contains a package of financial deposit account information for the Individual Payee or Transfer account.

FIRtId

The Bank Routing Number (ABA number) of the Individual Payee's Bank (deposit) account or, for Transfer accounts, the Subscriber's external Financial Institution.

FIAcctID

Individual Payee's Bank Account Number or, for Transfer accounts, Subscriber's (checking or savings) account number at their Financial Institution.

FIAcctType

This represents the type of deposit account for the Payee or Transfer account. Canonical values are:

- **D** – Checking
- **S** – Savings

If the above information is included in the 'Add Payee' request for an Individual Payee, the Individual Payee will be considered an **'Electronic' Payee**. ALL of the above information is required in order to set up an Individual 'Electronic' Payee or Transfer account. This information is not allowed for a Company Payee.

PayFromAcctInfo

This optional complex element contains information on the 'default' bill pay Pay From Account to be used to make payments to the specified Payee or Transfer account.

PayFromID

The identifier for the Pay From account.

This is the only element necessary to identify the desired 'default' bill pay Pay From Account for the specified Payee.

If the Payee's Pay From Account is not specified, the Pay From Account designated as the Subscriber's *default* Pay From Account will be used.

NOTE: For <u>Company Subscribers</u>, Pay From Account information (other than the Subscriber's default account) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

Arrays:

PayeeAddrInfoArray

This array provides the ability to send an array of payee addresses. However, only the Payee's *primary* address is required for a Payee Add request. (The payee's address is an optional entry for 'Email' Payees.) Entry of this value is not allowed for Transfer accounts.

This array includes the following simple and complex elements:

PayeeAddrType

This specifies the type of payee address. The Payee's Primary (i.e., 'payment remittance') address is required when adding a new Payee.   Canonical values are:

- **Prim** – Primary (default)
- **Rush** - Rush

NOTE: The specification of a Rush Address is required only for a Payment Add (see details below in 'Payment Add' section). A Rush address provided for a Payee Add request will be ignored at this time.

PayeeAddr

This complex element contains elements representing the Payee's [Primary] address, and is required when adding a Payee.

StreetAddr1
This is the Payee's street address.

StreetAddr2 (optional)
This is the second line of the Payee's street address.

City
This is the name of the city in the Payee's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: It should be noted that, in order to leverage check processing efficiencies gained from iPay's Merchant Management process for Company Payees, the Payee Address provided may not always be the address used for a check.

PayeePhoneArray

This array contains an array of phone information for the specified Payee. A Work (Business) phone number is required for every Payee. Entry of this value is not allowed for Transfer accounts.

PhoneNum
This represents a phone number, including area code, for the Payee. This must be the Payee's Work (Business) number.   This is a numeric field that will not accept hyphens.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Only the Work phone number is required for Payees. Canonical values required for the Bill Pay Services API are:

- **Work**

NOTE: It should be noted that, in order to leverage payment processing efficiencies gained from iPay's Merchant Management process for Company Payees, the Payee *PhoneNum* provided may not always be the phone number returned on subsequent Payee inquiries.

PayeeEmailArray

This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee. Entry of this value is not allowed for Transfer accounts. If submitted, only a 'primary' email address is applicable for the Payee:

> **EmailAddr**
> This element specifies the email address of the Payee. *This is a required element if the Payee's Payment Method Type = 'Email'.*
>
> **EmailType**
> This element specifies to whom the email address applies. Applicable canonical values required adding a Payee for the Bill Pay Services API are:
> - **Prim** – Primary (default)

NOTES:
1) If the above information is included in the 'Add Payee' request for an Individual Payee, the Individual Payee will be considered an **'Email' Payee**. ALL information in the *PayeeEmailArray* is required in order to set up an Email Payee.
2) The above 'Email Address' information is an optional entry for a Company Payee. If entered, it should be noted that, in order to leverage payment processing efficiencies gained from iPay's Merchant Management process for Company Payees, the Payee *EmailAddr* provided may not always be the email address returned on subsequent Payee inquiries.

Payee Add Behaviors

- For *Company Subscribers*:
  - Payees can be added only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Payees'.

  - *[NEW!]* Transfer accounts can be added only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Transfer Accounts'.

  - Pay From Account information (other than the Subscriber's default account) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

- For Individual Payees (*PayeeClsf* = Individual)
  - If *no* Payee Deposit information *or* Payee Email information is included in the request, the Payee will be considered a **'check' payee**. (Payments will be sent via check to the 'Primary' Payee address specified.)

  - iPay will fault an Add Payee request if *both* Payee's deposit account information *and* Payee's email shared secret/email information is passed at the same time, as the intended payment method is unclear.

  - *Design tip:*
    The service consumer may want to guide the Subscriber through the Payee setup experience by using explicit indicators for setting up individual Payees, such as:
    - 'Set up a Payee using bank account information'
      - the Subscriber wants to add an Individual payee where payments can be sent 'electronically' using the provided account information
    - 'Set up an Email Payee'
      - the Subscriber wants to add an Individual as a 'P2P' payee, and wants iPay to initiate the 'email' procedures for obtaining the Payee's financial account information
    - 'Set up a Payee using Payee's address'
      - the Subscriber wants to add an Individual payee where payments are sent by check using the provided Payee address.
    - 'Set up a Transfer account'
      - the Subscriber wants to add a Transfer account where funds are transferred electronically using the provided account information

- o Email Payees:
  - ▪ The ability to add an Email Payee is available ONLY for those Financial Institutions that possess the Email Payments feature within the Bill Pay Services API.   A Channel Inquiry can be performed to determine if this feature is available in order to add an Email Payee.

  - ▪ The *PayeeEmailSharedSecret* element only works in conjunction with the *PayeeEmailArray.* iPay will ignore this element when delivered by the service consumer without a completed *PayeeEmailArray.*

  - ▪ The Payee's *EmailAddr* is required for 'Email' (P2P) Payees in order to send an email communication to the Payee directing them to a Bill Pay website to provide their financial deposit information. In order to confirm the identity of the email payee, the email recipient must enter the *PayeeEmailSharedSecret,* which has been communicated to them by the Subscriber, before account information will be accepted.

    Note: Financial deposit account information provided by an 'Email' Payee is never shared with the Subscriber.

Response

The service provider (iPay) returns the *BilPayPayeeAddRs* **response** message to the service consumer.

The **simple elements** contained within the *BilPayPayeeAddRs* response applicable for the Bill Pay Services API is/are:

PayeeID
This is the Payee identifier associated with the Payee or Transfer account for the Bill Pay Services API.

RsStat
This specifies the status of the add request. Canonical values are:

- • **Success**
- • **Fail**

The service provider will return the new Payee ID <PayeeId> generated by the Bill Pay Services API service application for the accepted new payee or Transfer account.

Payee Search

Container: TPG_BillPayMaster.xsd
Message: BilPayPayeeSrch

The bill pay Payee Search <BilPayPayeeSrch> will return all Payees and Transfer accounts for a particular bill pay product and Subscriber.
The request provides the following optional filters:

- **Payee Category Name < PayeeCatName>** *(Reserved for future use)*
- **Exclude non-activated <ExclNonAct> - Default = false**
- **Include deleted <InclDlt> - Default = false**
- **'eBill' Payees Only <ElecMerPayeeOnly> - Default = false**

When there exists more than one filter on the request, the resulting selection is based on the combined effect of the filters (i.e., 'and' operator). Each added filter option will further restrict the result set.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Payee Search service uses a typical exchange of MType messages to retrieve Payee and Transfer account information for a specified product and Subscriber, based on optional filters.

Payee Search Request
BilPayPayeeSrchRq_MType

The Third Party sends the **BilPayPayeeSrchRq** *message containing the optional BilPayProd element, as well as optional search filter elements: PayeeCatName, ExclNotAct, InclDlt and ElecMerPayeeOnly.*

Payee Search Response
BilPayPayeeSrchRs_MType

The Service Provider sends the **BilPayPayeeSrchRs** *message containing an echo of the request, plus BilPayPayeeSrchArray.*
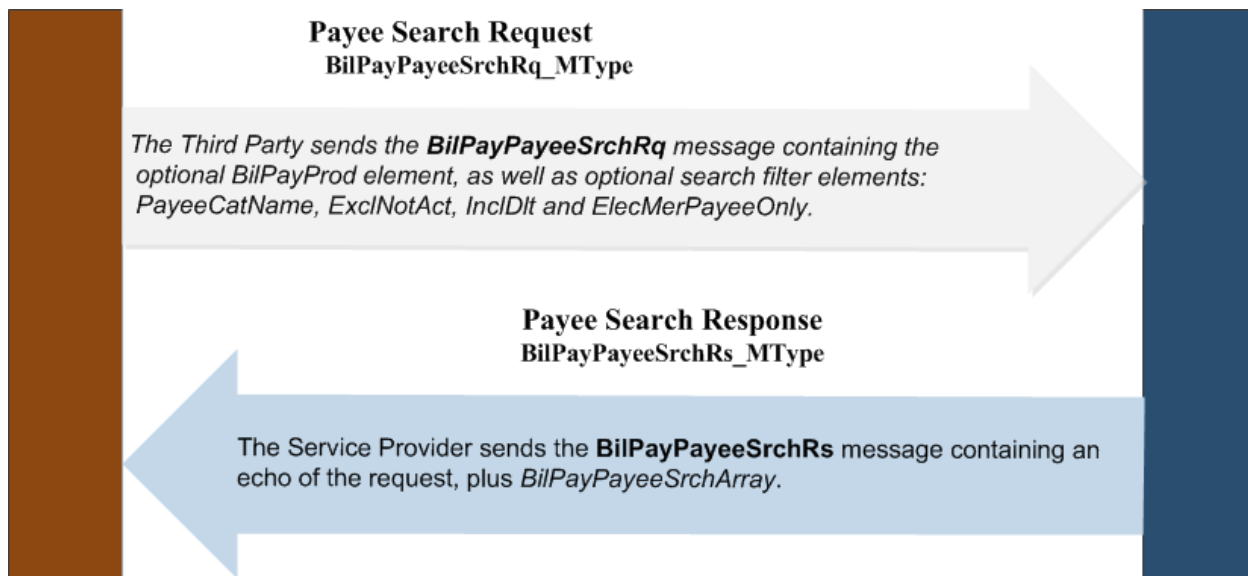
Request

The third party consumer forwards the *BilPayPayeeSrchRq* **request** message to the Service Provider.

The below elements contained within the *BilPayPayeeSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operation being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PayeeCatName

This is the name of the category assigned to the Payee or Transfer account.

This element is reserved for future use by the Bill Pay Services API and is not a valid search filter option at this time. A value submitted for this element will be ignored by the Bill Pay Services API.

ExclNonAct

This is used to exclude non-activated (i.e., 'awaiting activation') Payees or Transfer accounts from the search results. Canonical values are:

- **True**
- **False**

   NOTE: Payments can no longer be scheduled for non-activated Payees.

InclDlt

This is used to include deleted Payees and Transfer accounts in search results. Canonical values are:

- **True**
- **False**

Note: 'Deleted' Payees are required ONLY when the Payee Search request is being utilized as a precursor to requesting Payment or Transfer History for specific Payees. This is necessary to ensure the complete history for a specific Payee or Transfer account is received (Payee management processes require a Payee or Transfer account to be deleted and 're-added' as a new Payee in order to modify certain Payee information.)

For example, if a Payee (e.g., 'AT&T') is deleted and re-added 3 times for a given Subscriber, the Payee Search request with InclDlt set to True will return 3 'AT&T' Payee records (each with a different PayeeID; one would have a Payee Status of 'Active' and two would be 'Deleted'). However, all three are necessary to provide a complete picture of payment history for this particular Payee.

Deleted Payees are NOT required for a Payee Search requested as a precursor to making a payment.

ElecMerPayeeOnly

This is used to include only 'eBill' Payees (i.e., both eBill-eligible Payees, as well as Payees with registered eBill accounts) in search results. If set to 'true', only eBill Payees will be included in search results. Canonical values are:

- **True**
- **False**

Response

The service provider (iPay) returns the *BilPayPayeeSrchRs* **response** message to the service consumer, which returns a list of Company and Individual Payees, as well as Transfer accounts, if available, for the specified product and Subscriber that meet the given search criteria.

Notes:

1) Other types of Payees, such as Gift Payees, etc, will not be included in the result set at this time.
2) For *Company Subscribers*, Payee information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Payees' or, for Transfer accounts, the requesting user has been granted permission to 'Manage Transfer Accounts'.

The **array(s)** contained within the *BilPayPayeeSrchRs* response applicable for the Bill Pay Services API are:
BilPayPayeeSrchArray

This array returns an array of responses for the Payee search and includes the *BilPayPayeeSrchInfo* complex element for each Payee and Transfer account returned. The *BilPayPayeeSrchInfo* complex contains a package of data related to a Subscriber's Payee and includes the following simple and complex elements and arrays:

The below elements contained within the ***BilPayPayeeSrchInfo*** complex are included for the Bill Pay Services API.

PayeeID
This is the ID of the Payee or Transfer account.

PayeeName
This is the name of the Payee. For Transfer accounts, this will be the Subscriber's name or, for Company Subscribers, the Company Name.

PayeeNickname
This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PayeeCatName *(reserved for future use)*
The name of the category assigned to the Payee or Transfer account.

PayeeClsf
This specifies the classification of a Payee. Canonical values are:

- **Comp** (Company)
- **Indv** (Individual/Person)
- *[NEW!]* **FinInst** (Financial Institution) – indicates a Transfer account

[NEW!] [Payee] PmtIntentType
This represents the payment intention of the Payee. Valid canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

PayeePmtMthd
This is the payment method for the Payee. Transfer accounts will always be 'Elec'. Canonical values are:
- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

[NEW!] SubMerAcctId
This is the Subscriber's account number with the Merchant/Payee. For Transfer accounts, this value will be the Account Holder's account number (of the Transfer account).

PayeeLastPdAmt
This is the amount of the last payment or transfer paid to the Payee by the Subscriber.

PayeeLastPdDt
This is the date of the last payment or transfer paid to the Payee by the Subscriber.

CanRush

This indicator is used to show if Payee offers expedited (rush) payment options. Not applicable for Transfer accounts. Canonical values are:

- **True**
- **False**

PayeeStat

This indicates the status of the Payee or Transfer account. Canonical values are:

- **Act** – Activated (payments can be scheduled and processed for this Payee)
- **NotAct** – Not activated (Pending) – (payments cannot be scheduled)
- **Dlt** – Deleted (Payee is not available scheduling payments)

ElecBilPayeeType

This indicates whether or not the Payee is eligible for eBills and, if so, whether enrolled. Not applicable for Transfer accounts. Canonical values are*:*

- **NotAlw** – (default) Payee is not eligible for eBills.
- **Alw** – Payee is eligible for eBills (but the Subscriber has not yet registered for an eBill account).
- **Enroll** – Payee is actively registered for eBills (i.e., has an 'established' eBill account).

ElecBilAcctErrExist

This indicator is used to show whether an eBill-enrolled Payee has any outstanding eBill account errors that require Subscriber action to resolve. If an account error exists for an eBill account, no new eBill activity can occur until the error is resolved. Canonical values are:

- **True**
- **False**

FirstAvlProcDt

This is the first available process or transfer date for a payment to the Payee. This date is affected by the Institution's Payment Cutoff Time and required 'Lag Days', as well as applicable Non-Processing days.

FirstAvlEstArvDt

This is the first available estimated arrival date for a payment or Transfer to the Payee. This date is affected by the Payee's Payment Method, as well as 'transit days'.

EstArvDay

This is the number of 'transit' days required for a check payment to be delivered to this Payee. This value is affected by the Payee's Payment Method and Zip Code, as well as applicable Non-Processing Days. This value is added to the First Available Process Date to determine an Estimated Arrival Date.

This element has a 'default' value that utilizes the 'Standard' payment delivery method (non-Rush payment). Selecting a 'Rush' payment option when scheduling a payment, which has the potential to change the Payment Method, will change the time required for transit.

PayFromAcctInfo

This optional complex element contains information on the Pay From Account designated for the specified Payee or Transfer account.

> **NOTE**: For <u>Company Subscribers</u>, *PayFromAcctInfo* is eligible for viewing ONLY if the requesting user has been granted permission to Designate Pay From Account information. Therefore, if the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***<u>hide</u>*** these elements from the requesting user.

PayFromID
This is the Bill Pay Services API identifier for the Payee's designated Pay From account.

PayFromAcctID
The bank account number of the Pay From Account designated for this Payee.

PayFromAcctType
 The number(s) or character(s) that categorize the type of pay from account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name for the Subscriber's pay from account.

PayFromAcctDft
This indicates whether the pay from account is the 'default' account, to be used in the event a pay from account is not specified when scheduling a payment or transfer. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName
This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName
This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

LastName

This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

The PayFromAcctInfo complex element may be empty if no 'default' Pay From Account has been specified for the Payee or Transfer account.

Payee Inquiry

Container: TPG_BillPayMaster.xsd
Message: BilPayPayeeInq

The bill pay Payee Inquiry <BilPayPayeeInq> will return element details for a specific Payee or Transfer account for a given Subscriber. The subscriber identification element <SubID> is required on the request.

The design of the inquiry was created in a manner that facilitates addition and modification requests.
The activity intention element <ActIntent> was added to support the concurrency model for future modifications made to payee information.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Payee Inquiry service uses a typical exchange of MType messages to retrieve Payee information for a specific Payee or Transfer account for a given Subscriber, based on the required Subscriber ID. If the Payee ID is not known, the third party consumer must first perform a Payee Search to obtain the Payee ID for the desired Payee.

Payee Search Request
BilPayPayeeSrchRq_MType

The Third Party sends the **BilPayPayeeSrchRq** message containing the required *SubID*, and optional *BilPayProd* element, as well as optional search filter elements: *PayeeCatName*, *ExclNotAct*, *InclDlt* and *ElecMerPayeeOnly*.

Payee Search Response
BilPayPayeeSrchRs_MType

The Service Provider sends the **BilPayPayeeSrchRs** message containing an echo of the request, as well as the required *PayeeID* element for the desired Payee.

Payee Inquiry Request
BilPayPayeeInqRq_MType

The Third Party sends the **BilPayPayeeInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PayeeID* element (and optional *IncXtendElemArray* for eBill account information) for the desired Payee.

Payee Inquiry Response
BilPayPayeeInqRs_MType

The Service Provider sends the **BilPayPayeeInqRs** message containing an echo of the request, plus *BilPayPayeeInfo*.

Request

The third party consumer forwards the *BilPayPayeeInqRq* **request** message to the Service Provider.

The below elements contained within the *BilPayPayeeInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd
This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber.

PayeeID
This is the Bill Pay Services API identifier for the Subscriber's Payee or Transfer account.

ActIntent
This indicator conveys the service consumer's intention for a subsequent operation for the data set included in the response. Canonical values are:

- **ReadOnly** – indicates a 'view' intent only for the data set included in the Inquiry response. This is the default value.
- **Upd** – indicates the intention to perform a subsequent update ('Mod') to the data set included in the Inquiry response.
- **Dlt** – indicates the intention to perform a subsequent delete of the data set included in the Inquiry response.

IncXtendElemArray
This optional array conveys the list of 'x_' elements by name which are to be included in the response. At this time, the inclusion of this array is necessary only if eBill information associated with the Payee is desired in the response. The complex element contained in this array, *IncXtendElemInfo*, includes the following simple element(s):

XtendElem
This is the extended element (by name) which the service consumer is requesting be included in the response. The only Extended Element that is currently available for the BilPayPayeeInqRq is:

- **x_ElecMerPayeeInfo** – returns the Payee's eBill information (not applicable for Transfer accounts)

Response

The service provider (iPay) returns the *BilPayPayeeInqRs* **response** message to the service consumer, which returns a package of Payee information for the Subscriber's specified Payee or Transfer account.

NOTE: For *Company Subscribers*, Payee information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Payees' or, for Transfer accounts, the requesting user has been granted permission to 'Manage Transfer Accounts'.

The simple and complex elements contained within the *BilPayPayeeInqRs* response applicable for the Bill Pay Services API are:

PayeePmtMthd
This is the payment method for the Payee or Transfer account. Transfer accounts will always be 'Elec'. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

PayeeLastPdAmt

This is the amount of the last payment or Transfer paid to the Payee by the Subscriber.

PayeeLastPdDt

This is the date of the last payment or Transfer paid to the Payee by the Subscriber.

FirstAvlProcDt

This is the first available process date for a payment or Transfer to the Payee. This date is affected by the Institution's Payment Cutoff Time and required 'Lag Days', as well as applicable Non-Processing days.

FirstAvlEstArvDt

This is the first available estimated arrival date for a payment or Transfer to the Payee. This date is affected by the Payee's Payment Method, as well as 'transit days'.

EstArvDay

This is the number of 'transit' days required for a check payment to be delivered to this Payee. This value is affected by the Payee's Payment Method and Zip Code, as well as applicable Non-Processing Days. This value is added to the First Available Process Date to determine an Estimated Arrival Date.

This element has a 'default' value that utilizes the 'Standard' payment delivery method (non-Rush payment). Selecting a 'Rush' payment option when scheduling a payment, which has the potential to change the Payment Method, will change the time required for transit.

PayeeStat

This indicates the status of the Payee or Transfer account. Canonical values are:

- **Act** – Activated (payments can be scheduled and processed for this payee)
- **NotAct** – Not activated (Pending) – (payments cannot be scheduled)
- **Dlt** – Deleted (payee is not available scheduling payments)

ActIntentKey

This is the key (provided by the service provider) delivered to the consumer to be submitted in the subsequent modification (update or delete) operation for the data set returned in the inquiry response.

SubModMerAcctId

This is the 'iPay', or 'internal', version of the Subscriber's account number with the Merchant/Payee. In this version, all 'special characters' have been eliminated from the account number in order to fit the format required for successful payment disbursement to the Merchant.

This element is included in the Payee Inquiry response *for informational purposes only*, in the event it may be required for comparison to the 'user-submitted' version of the Subscriber's account number with the Merchant/Payee. The 'user-submitted' version [SubMerAcctId] should be utilized for display on all Subscriber transactions.

BilPayPayeeInfo

This complex element contains a package of data related to a bill pay Payee or Transfer account, and includes the below simple and complex elements and arrays for the Bill Pay Services API.

Simple elements:

PayeeName

This is the name of the Payee. For Transfer accounts, this will be the Subscriber's name or, for Company Subscribers, the Company Name.

PayeeNickname

This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PayeeEmailSharedSecret

This represents the shared secret word or code provided by the Subscriber for the specified 'Email' Payee, used to confirm the Email Payee's identity when providing their financial deposit information.

PayeeClsf

This specifies the classification of a Payee. Canonical values are:

- **Comp** (Company)
- **Indv** (Individual/Person)
- *[NEW!]* **FinInst** (Financial Institution) – indicates a Transfer account

[NEW!] **[Payee] PmtIntentType**

This represents the payment intention of the Payee. Canonical values are:

- **PayBill** - Payment for a bill (default)
- **XferToSubFinInst** - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo** - *not supported by iPay at this time*
- **XferFrom** - *not supported by iPay at this time*

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee. For Transfer accounts, this value will be the Account Holder's account number (of the Transfer account). If the Subscriber's name (Last Name, First Name) is being used for this element, the value will be truncated at 50 characters.

SubMerPayerName

This is the Subscriber's name understood by the merchant and is used to override the Subscriber's name on record.

PayeeCatName *(reserved for future use)*

The name of the category assigned to the Payee or Transfer account.

ElecBilPayeeType

This indicates whether or not the Payee is eligible for eBills and, if so, whether enrolled. Not applicable for Transfer accounts. Canonical values are*:*

- **NotAlw** – (default) Payee is not eligible for eBills.
- **Alw** – Payee is eligible for eBills (but the Subscriber has not yet registered for an eBill account).
- **Enroll** – Payee is actively registered for eBills (i.e., has an 'established' eBill account).

ElecBilAcctErrExist

This indicator is used to show whether an eBill-enrolled Payee has any outstanding eBill account errors that require Subscriber action to resolve. If an account error exists for an eBill account, no new eBill activity can occur until the error is resolved. Canonical values are:

- **True**
- **False**

Complex elements:

PayeeFIAcctInfo

This complex element contains a package of financial deposit account information (available only for the Individual Payee with an 'Electronic' Payment Method, and for Transfer accounts).

FIRtId

The Bank Routing Number (ABA number) of the Payee's Bank (deposit) or Transfer account.

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FIAcctID

Payee's Bank Account Number.   For Transfer accounts, this value will be the Subscriber's account number at the designated Financial Institution.

FIAcctType

This represents the type of deposit account for the Payee or Transfer account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctInfo

This optional complex element contains information on the 'default' Pay From Account designated for the specified Payee or Transfer account.

NOTE: For <u>Company Subscribers</u>, *PayFromAcctInfo* is eligible for viewing ONLY if the requesting user has been granted permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should **_hide_** these elements from the requesting user.

PayFromID

This is the Bill Pay Services API identifier for the Payee's or Transfer account's designated Pay From account.

PayFromAcctID

The bank account number of the Pay From Account designated for this Payee or Transfer account.

PayFromAcctType

The number(s) or character(s) that categorize the type of pay from account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the Subscriber's bill pay pay from account.

PayFromAcctDft

This indicates whether the pay from account is the 'default' account, to be used in the event a pay from account is not specified when scheduling a payment or Transfer. Canonical values are:

- **True**
- **False**

This complex element may be empty if no 'default' Pay From Account has been specified for the Payee or Transfer account. If no Pay From Account has been specified for the Payee, the Pay From Account designated as the Subscriber's *default* Pay From Account will be used to make payments to this Payee or Transfer account.

StartChkNum

This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId

This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

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PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName
This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName
This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

LastName
This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

Arrays:

PayeeAddrInfoArray

This array provides a list of available Payee addresses. Not applicable for Transfer accounts. All available Payee addresses (including both Primary and Rush address, if one is on file for this Payee), will be included in this array. This array includes the following simple and complex elements:

PayeeAddrID

This is the Bill Pay Services API identifier for the specified address for the Payee.

PayeeAddrType

This specifies the type of payee address. Canonical values are:

- **Prim** – Primary (default)
- **Rush** - Rush

PayeeAddr

This complex element contains elements representing the Payee's address for the specified Address Type.

StreetAddr1

This is the Payee's street address.

StreetAddr2 (optional)

This is the second line of the Payee's street address.

City

This is the name of the city in the Payee's address.

StateCode

This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or zip code (Zip+4 is supported).

PayeePhoneArray

This array contains an array of phone information for the specified Payee. Not applicable for Transfer accounts.

PhoneNum

This represents a phone number, including area code, for the Payee. This must be the Payee's Work (Business) number.   This is a numeric field that will not accept hyphens.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Only the Work phone number is available for Payees. Canonical values required for the Bill Pay Services API are:

- **Work**

PayeeEmailArray

This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee. An email address is available <u>only</u> for Individual Payees with a Payment Method = 'Email'. If available, only a 'primary' email address is applicable for the Payee:

EmailAddr

This element specifies the email address of the Payee.

EmailType

This element specifies to whom the email address applies. Applicable canonical values required adding a Payee for the Bill Pay Services API are:

- **Prim** – Primary (default)

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BilPaySvcFeeArray

This optional array contains the *BilPaySvcFeeInfoRec* complex element, which includes a package of Payment-level Service Fees, or 'payment surcharges', applicable for certain types of payments (such as Email payments) made to the Payee. The Service Fee will be automatically applied to any payment that requires a surcharge (as determined by the SvcFeeDesc).

> **SvcFeeDesc**
> This element specifies the type of payment or Transfer to which the service fee is applied. A 'Service Dictionary Search' request is necessary to obtain the current list of available Service Fee Descriptions.

> **SvcFeeAmt**
> This element specifies the amount of the Service Fee that will be applied to a Payment or Transfer matching the SvcFeeDesc for the specified Payee.

x_ElecMerPayeeInfo

(As with all 'x_' elements, this Payee eBill x_ element will be included in the response only if explicitly requested in the IncXtendElemArray within the *BilPayPayeeInqRq* message.)

Not applicable for Transfer accounts.

This optional complex contained within the root *BilPayPayeeInqRs* contains an array of eBill information for the specified Payee (the *ElecMerPayeeInfoArray).* This array contains the *ElecMerPayeeInfoRec*, a complex element containing a package of data for each 'eBiller' associated with the Payee.

For a Payee who is 'Eligible' (but not yet enrolled) for eBills, this array will contain a package of data <u>for each</u> <u>eligible</u> 'eBiller' (or 'product/line of business' that allows eBills) associated with the Payee. In most cases, there will be only one eBiller associated with a given Payee. However, for some Payees several types of 'product lines' may exist, and each will have its own package of eBill information. For example, a large financial services company may have multiple types of financial 'products' available to its customers (e.g., personal and business credit cards, a bank, an insurance company, etc). In those instances, all available products must be made available to the Subscriber so the correct product can be selected when setting up the eBill account for a given Payee.

For a Payee who is 'Enrolled' (i.e., has a registered eBill account), this array will contain a [single] package of data for the registered eBill account associated with the Payee.

See Appendix D for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

The *ElecMerPayeeInfoRec* complex includes the following simple elements and arrays for the Bill Pay Services API:

Simple elements:

ElecMerPayeeID

This is the identifier for the 'eBiller' (i.e., 'eBill product'). Each eBiller has its own 'eBiller ID'.

This element is applicable, and will be returned, <u>only</u> when the Payee's *ElecBilPayeeType* ('eBill status') is set to 'Alw', meaning the Payee is eligible for eBills, but the Subscriber has not yet registered for an eBill account. An ElectMerPayeeID will be provided for each eBiller ('eBill product') available for the specified Payee. Once an eBill account has been set up for the Payee, only the [below] *ElecBilPayeeAcctId* ('eBill Account ID') is necessary to identify the eBill account.

ElecBilPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

This element is applicable when the Payee's *ElecBilPayeeType* ('eBill status') is set to 'Enroll',

meaning the Payee is actively registered for eBills (i.e., has an 'established' eBill account). Once an eBill account has been set up for the Payee, only the eBill Account ID for the registered eBill account will be returned in the Payee Inquiry response.

ElecMerPayeeURL

This is the URL that contains the eBiller's electronic address (for the biller's, or 'Payee's', website). This may be specific to the given 'product'.

ElecBilPayeeName

This is the name for the 'eBiller' (i.e., the name of the 'product' for the Payee) that is often used for GUI representation understandable to the end-user.

ElecMerPayeeToSStat

This is the status of the eBill Terms of Service acceptance for the given eBill account. Canonical values are:

- **NotActp** – not accepted (default value)
- **Actp** – accepted
- **ReqNewActp** – requires new acceptance

Acceptance of the eBill Terms of Service is required in order to set up an eBill account.

For a Payee currently registered for eBills where a new Terms of Service acceptance is required by the eBiller, the new acceptance must be received (via Payee Mod) before any further eBill activity is allowed.

ElecMerPayeeToS

This specifies the entire Terms of Service applicable for the given 'eBiller'.

The Subscriber must agree to the eBiller's Terms of Service in order to set up ('register') an eBill account for the specified Payee.

> **NOTE:** This element may be delivered as a CDATA section, as it could include (but is not limited to) HTML and 'illegal' XML characters.

ElecMerAcctStat

This is the current status of the eBill account for the Payee. Canonical values are:

- **Act** (default) – Active
- **Susp** – Temporarily Suspended
- **PendTer** – Pending Termination

This element is applicable (and will be available) *only* when the Payee's *ElecBilPayeeType* (i.e., 'eBill status') is set to 'Enroll', meaning the Payee is actively registered for eBills (i.e., has an 'established' eBill account).

> **Notes:**
> 1) An eBill account in 'temporary suspension' is temporarily unavailable for eBill updates or account error resolution. If known, the date the temporary suspension expires will be provided (*ElecMerSuspExpDt*). Typically, the eBill account will be returned to 'active' status after the temporary suspension expires.
> 2) An eBill account that is 'pending termination' will become permanently unavailable on the Pending Termination Date (*ElecMerPendTerDt*). The eBill account will be 'unregistered' on this date.

ElecMerSuspExpDt

This is the date that a 'temporary suspension' of an eBill account will expire.   This value may not be available if the date the temporary suspension expires has not been provided by the eBiller.

ElecMerPendTerDt

This is the date that an eBill account will become permanently unavailable for the Payee. The eBill account will be automatically 'unregistered' on this date.

ElecMerAutoPmtAlw

This indicator specifies whether setup of an automatic payment schedule for eBills is allowed for the given eBiller. Canonical values are:

- **True**
- **False**

[Automatic eBill Payment Schedule Options]:

ElecBilPmtAmtType

This specifies the payment amount option selected for the automatic eBill payment schedule set up for the Payee. This value is used in combination with the <*ElecBilPmtRuleAlgSymb*> to determine the actual intent of the selected payment option. Canonical values are:

- **StmtBal** – Payment based on statement balance
- **MinDue** – Pay the minimum due
- **AmtDue** – Payment based on amount due
- **FixedAmt** – Pay   a fixed amount

> **NOTE:** If the 'StmtBal/EQ' option is selected, this will be the amount paid, even if a Current Balance exists that is different from the Statement Balance.

ElecBilPmtRuleAlgSymb

This is the algebraic symbol for the eBill payment amount option selection, which determines how the selected eBill payment amount option will be applied. Canonical values used by the Bill Pay Services API are:

- **EQ** – Equal to
- **LE** – Less than or equal to

ElecBilPmtAmt

This is amount of the payment (specified by the Subscriber) that will be paid for the automatically scheduled eBill.

This value will be available only if the selected Payment Amount Option requires a specified value (and a value exists).

The following Payment Amount Options are available, based on the specified combinations of <*ElecBilPmtAmtType*>, <*ElecBilPmtRulAlgSymb*> and <*ElecBilPmtAmt*>:

Table 3 - eBill Auto Payment Options - Payee Inquiry

ElecBil PmtAmtType	ElecBil PmtRuleAlgSymb	ElecBil PmtAmt	Payment Amount Option
StmtBal	EQ	N/A	Always pay [full] Statement Balance
StmtBal	LE	<Amt value>	Only pay Statement Balance if LE $<PmtAmt>
MinDue	EQ	N/A	Always pay Minimum Due
FixedAmt	EQ	<Amt value>	Always pay $<PmtAmt>
AmtDue	EQ	N/A	Always pay [full] Amount Due
AmtDue	LE	<Amt value>	Only pay Amount Due if LE $<PmtAmt>

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ElecBilPmtInstrType

This specifies the payment instruction for the automatically scheduled eBill payment. Canonical values are:

- **ElecMerStmt** – Pay immediately when eBill arrives (is received) from eBiller
- **ElecBilDueDt** – Deliver payment by the [Statement] Due Date

 NOTES:
1) The [four] elements above can contain values ONLY if the *ElecMerAutoPmtAlw* indicator is set to 'true'.
2) Automatic Payment Schedule details will be available ONLY for registered eBill accounts, if previously specified by the Subscriber.

Arrays:

ElecMerAcctTypeInfoArray

This array contains a list of 'account types' that exist for the eBiller.

In most cases, there will be only one 'account type' associated with a given eBiller. However, for some eBillers, several different account types may exist. For example, as one of many 'product lines' available through a large financial services company, a 'bank' (i.e., 'eBiller') could offer several different types of accounts: Credit Card, Mortgage, Home Equity, Auto Loan, etc.

For a Payee who is 'Eligible' (but not yet enrolled) for eBills, this array will contain a package of data for each applicable 'account type' for the given eBiller.

For a Payee who is 'Enrolled' (i.e., has a registered eBill account), this array will contain a [single] package of data for the account type previously designated by the Subscriber during the eBill account registration process.

This 'matched pair value' array includes the following simple elements:

> **ElecMerAcctType**
> This represents the code for the eBiller account type.

> **ElecMerAcctTypeDesc**
> This is the description of the eBiller Account Type code, as denoted above.

> A 'Service Dictionary Search' request is necessary to obtain the current list of available eBiller account type codes and descriptions.

ElecMerPayeeCredInfoArray

This array contains a list of the eBiller's 'end-user' credentialing requirements, or 'connection parameters', used to identify and authenticate the Subscriber. In order to retrieve eBill account information on behalf of the Subscriber, the Subscriber's credentialing information must be provided to the eBiller.

This array contains the *ElecMerPayeeCredInfoRec*, a complex element containing a package of data for each 'credentialing parameter' required by the eBiller, and includes the following simple elements:

> **ElecMerCredType**
> This specifies the credential type. Canonical values currently utilized by the Bill Pay Services API are:
>> - **UsrName** – User Name
>> - **Pswd** – Password

ElecMerCredTypeDesc

This specifies the eBiller's preferred 'name' (or 'label') for the credentialing parameter. For example, if a given eBiller requires a 'UserName' credential, this may be displayed on the eBiller's website as 'Login ID', or 'UserName' or 'Email Address', or 'Phone Number', etc.

ElecMerCredRegEx

This specifies the variable 'RegEx' (Regular Expression) validation for the specified credential. It represents a sequence of characters that convey the pattern requirements, including (but not necessarily limited to) maximum length and case sensitivity requirements. Examples are:

- For case sensitivity (Lower Case):   ^[a-z0-9]{minlength,maxLength}$
- For case sensitivity (Upper Case):   ^[A-Z0-9] {minlength,maxLength}$
- For case sensitivity (Case Insensitive): ^[a-zA-Z0-9] {minlength,maxLength}$

ElecMerAcctErrInfoArray

This optional array provides a list of eBill account errors that require remediation by the Subscriber, and contains the *ElecMerAcctErrInfoRec* complex element, which includes a package of data for each applicable eBill account error. It includes the following simple elements:

ElecMerAcctErrCode

This specifies the eBill account error code for the eBill account error currently associated with the Payee's registered eBill account.

ElecMerAcctErrDesc

This provides the description of the eBill account error.

NOTES:
1) If an account error exists for an eBill account, no new eBill activity can occur until the error is resolved. Resolution of eBill account errors regarding incorrect Login credentials or MFA (Multi-Factor Authentication) issues will require additional information from the Subscriber. This information must be provided via a Payee Mod request. (See Payee Mod section for additional details.) Other eBill account errors may require Subscriber remediation directly via the Payee's website.

2) See Appendix E for a complete list of possible eBill account errors that require remediation by the Subscriber.

AuthenQuesArray

This optional array provides a list of additional eBill account authentication requirements required by the eBiller to complete authentication of the Subscriber, and corresponds to eBill account errors regarding 'MFA Failure' (as noted in *ElecMerAcctErrInfoArray*, above). This array contains the *AuthenQuesRec* complex element, which includes a package of data for each MFA authentication requirement for the Subscriber. It includes the following simple element(s):

AuthenQuesDesc

This specifies the Subscriber-specific MFA authentication requirement from the eBiller. This is often in the form of a 'randomized' security challenge question, but can include any type of additional authentication requirement, as defined by the eBiller.

NOTE: This element may be delivered as a CDATA section, as it could include (but is not limited to) HTML and 'illegal' XML characters.

NOTE: Since Subscriber-specific MFA Authentication requirements are often 'dynamic' (e.g., a randomized 'security challenge question' is presented to a user each time a connection is attempted on the biller's website), it is possible that a specific authentication requirement will 'time

out' (i.e., become 'invalid') if too much time passes between the *PayeeInquiry* response that provides the MFA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the Subscriber's 'answer' (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the response to the *PayeeMod* request will indicate that a 'time out' error has occurred, and another *PayeeInquiry* request will be required in order to 'trigger' the receipt of a new, 'randomized' MFA Authentication requirement from the eBiller.

See Appendix D for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

Arrays

The arrays contained within *BilPayPayeeInqRs* response message applicable for the Bill Pay Services API are:

RushOptArray

This array contains an array of possible rush options that are available for the specified Payee and includes the following simple elements:

RushOpt

This represents the desired option for expediting (rushing) a payment to the specified Payee. Canonical values are:

- **Std** – Standard (default) – this specifies a 'non-expedited' payment
- **Ovrngt** – Overnight
- **2ndDay** – Second Day
- **2ndDayEc** – Second Day Economy

Not all options may be available for the specified Payee. Only those options that are appropriate for the specified Payee will be returned in the Rush Option Array.

RushOptFeeAmt

This specifies the fee associated with the Rush Option.

RushOptSurChg

This specifies the surcharge that is applicable for Rush payments sent to Puerto Rico. This surcharge will be automatically applied to any Rush payment request to Puerto Rico.

NOTE: Not applicable for Transfer accounts.

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Payee Modify

Container: TPG_BillPayMaster.xsd
Message: BilPayPayeeMod

The bill pay Payee Modification <BilPayPayeeMod> will allow the service consumer to update (modify) certain elements for a Subscriber's specified Payee or Transfer account, or delete the Payee or Transfer account entirely. The <SubID>, <PayeeID> and Activity Intent Key <ActIntenKey> are required on the Mod request.

A request that provides the SubID, PayeeID and ActIntentKey along with the delete element (<Dlt>) that is set to 'True' will convey to the service provider to remove (delete) the Payee or Transfer account for the specified Subscriber.

For Payee eBill account management activities (e.g., setting up/registering a new eBill account, managing eBill account details or error resolution, deleting/unregistering an eBill account, etc), inclusion of the *ElecMerPayeeInfoRec* is required.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Payee Modification service uses a typical exchange of MType messages to allow updates to Payee or Transfer account information for a specific Subscriber, based on the required Subscriber ID and Payee ID. A Payee Inquiry must always be performed prior to the modification request in order to retrieve the Activity Intent Key necessary for modification operations.

Payee Inquiry Request
BilPayPayeeInqRq_MType

The Third Party sends the **BilPayPayeeInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PayeeID* element (and optional *IncXtendElemArray* for eBill account information) for the desired Payee.

Payee Inquiry Response
BilPayPayeeInqRs_MType

The Service Provider sends the **BilPayPayeeInqRs** message containing an echo of the request, plus *BilPayPayeeInfo,* as well as the *Activity Intent Key* required for modification operations.

Payee Mod Request
BilPayPayeeModRq_MType

The Third Party sends the **BilPayPayeeModRq** message containing the required *SubID, PayeeID* and *ActIntentKey* elements, as well as the modified elements within the *BilPayPayeeInfo* (and optional *ElecMerPayeeInfo*) complex elements for the desired Payee.

Payee Mod Response
BilPayPayeeModRs_MType

The Service Provider sends the **BilPayPayeeModRs** message containing the response status <RsStat> indicating if the Mod was successful. An unsuccessful Mod request will also return the errors that occurred that prevented the Mod. For unsuccessful eBill activity requests, the response may also include information on additional detail required from the Subscriber in order to complete the requested action.

Request

The third party consumer forwards the *BilPayPayeeModRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPayPayeeModRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PayeeID

This is the Bill Pay Services API identifier for the Subscriber's Payee or Transfer account.

ActIntentKey

This is the service provider key delivered to the service consumer via a preceding inquiry request, to be submitted in the modification request operation.

Dlt

This indicates a desire for deletion of the specified [Payee] entity. Canonical values are:

- **True**
- **False**

ElecMerAcctErrCode

This specifies the eBill account error code for the eBill error currently associated with the Payee. This value must be included in a subsequent *Payee Mod* request by the Service Consumer when submitting additional information needed to resolve an eBill setup or eBill account error, as specified in the preceding *Payee Inquiry* or *Payee Mod* response.

A *Payee Inquiry* response will return eBill account error(s) in the *ElecMerAcctErrInfoArray,* while a *Payee Mod* response will return eBill setup or eBill account error(s) in the *MsgRsHdr.*

NOTES:
1) If an eBill account <u>setup</u> error (that specifies additional Subscriber information is required) is returned from a *preceding Payee Mod* request to register an eBill account, the error code returned in that original response must be included here, along with the additional information needed to complete setup.

2) If an account error exists for an <u>existing</u> eBill account, no new eBill activity can occur until the error is resolved. Resolution of eBill account errors regarding incorrect Login credentials or MFA (Multi-Factor Authentication) issues require additional information from the Subscriber, and can be provided via the *Payee Mod* request, which must include the eBill account error code returned in the previous response. (Other eBill account errors may require Subscriber remediation directly via the Payee's website.)

3) See Appendix D for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

4) See Appendix E for a complete list of possible eBill account errors that require remediation by the Subscriber.

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BilPayPayeeInfo

This complex element contains a package of data related to the Subscriber's specified Payee or Transfer account, and may include all of the simple and complex elements and arrays returned in the preceding Payee Inquiry response. *However, the following are the only elements within this complex that are eligible for modification (add, update or delete) for a Payee Modification request:*

PayeeNickname

This represents the Subscriber's 'nickname' for the Payee or Transfer account.

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee.

The entered value must pass the Payee's 'Account Mask Validation', if one exists in iPay's Payee record for this Payee. If this validation fails, the Subscriber must either correct the Account Number to match the Payee's specified account mask, or delete this Payee and re-add as a new Payee.

This element is not available for modification for 'Email' Payees or Transfer accounts.

SubMerPayerName

This is the Subscriber's name understood by the merchant and is used to override the Subscriber's name on record.

This element is not available for modification for 'Email' Payees or Transfer accounts.

PayeeCatName *(reserved for future use)*

The name of the category assigned to the Payee or Transfer account

[NEW!] [Payee] PmtIntentType

This represents the payment intention of the Payee. Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

The Payee's *PmtIntentType* must be appropriate for the specified Payee Classification (e.g., for 'Financial Institution' Payees (i.e., 'Transfer Accounts), only 'Xfer'-type values are appropriate).

PayFromAcctInfo

This optional complex element contains information on the 'default' Pay From Account designated for the specified Payee or Transfer account.

PayFromID

This is the Bill Pay Services API identifier for the Payee's designated Pay From account.

This is the only element necessary to specify the desired 'default' Pay From Account for the Payee or Transfer account.

If the Payee's Pay From Account is not specified, the Pay From Account designated as the Subscriber's *default* Pay From Account will be used.

> **NOTE**: Pay From Account information (other than the Subscriber's default account) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

PayeeFIAcctInfo

This optional complex element contains a package of financial deposit account information (allowed only for the Individual Payee with an 'Electronic' Payment Method and for Transfer accounts).

> **FIRtId**
> The Bank Routing Number (ABA number) of the Payee's Bank (deposit) account.
>
> **FIAcctID**
> Payee's Bank Account Number or, for Transfer accounts, Subscriber's account number at Financial Institution.
>
> **FIAcctType**
> This represents the type of deposit account for the Payee or Transfer account. Canonical values are:
> - **D** – Checking
> - **S** – Savings

This complex element is not available for modification for Transfer accounts.

PayeeAddrInfoArray

This array provides a list of available payee addresses. Not applicable for Transfer accounts. All available Payee addresses (including both Primary and Rush address, if one is on file for this Payee), will be included in this array. This array includes the following (optionally editable) simple and complex elements:

> **PayeeAddrType**
> This specifies the type of payee address. Canonical values are:
> - **Prim** – Primary (default)
> - **Rush** - Rush
>
> **PayeeAddr**
> This complex element contains elements representing the Payee's address for the specified Address Type.
>
>> **StreetAddr1**
>> This is the Payee's street address.
>>
>> **StreetAddr2** (optional)
>> This is the second line of the Payee's street address.
>>
>> **City**
>> This is the name of the city in the Payee's address.
>>
>> **StateCode**
>> This is the 2-character alpha code approved by the USPS which represents a state.
>>
>> **PostalCode**
>> This is the postal or zip code (Zip+4 is supported).

> **NOTE:** It should be noted that, in order to leverage check processing efficiencies gained from iPay's Merchant Management process, the [primary] Payee Address provided may not always be the address used for a check.

PayeeEmailArray

This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee. An email address is available <u>only</u> for Individual Payees with a Payment Method = 'Email'. If available, only a 'primary' email address is applicable for the Payee:

> **EmailAddr**
> This element specifies the email address of the Payee.

EmailType

This element specifies to whom the email address applies. Applicable canonical values required adding a Payee for the Bill Pay Services API are:

- **Prim** – Primary (default)

ElecMerPayeeInfoRec

Not applicable for Transfer accounts.

This optional complex element contains a package of data related to the Subscriber's selected eBiller for the Payee (in the case of a request to set up, or 'register', an eBill account for the Payee), or eBill Account information (if the Payee is already enrolled, or 'registered', for eBills), and may include all of the simple and complex elements and arrays returned in the preceding Payee Inquiry response. *However, the following are the only elements within this complex that are eligible for modification (add, update or delete) for a Payee Modification request:*

Simple elements:

ElecMerPayeeID

This is the identifier for the 'eBiller' selected by the Subscriber when electing to set up an eBill account for the Payee, and is required in order to complete eBill account setup.

Once an eBill account has been set up for the Payee, only the [below] *ElecBilPayeeAcctId* ('eBill Account ID') is necessary to identify the eBill account.

ElecBilPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

This element is applicable when the Payee's *ElecBilPayeeType* (i.e., 'eBill status') is set to 'Enroll', meaning the Payee is actively registered for eBills (i.e., has an 'established' eBill account). Once an eBill account has been set up for the Payee, only the eBill Account ID is necessary to identify the eBill account associated with the Payee.

ElecMerPayeeToSStat

This is the status of the eBill Terms of Service acceptance for the given eBill account. Canonical values are:

- **NotActp** – not accepted (default value)
- **Actp** – accepted
- **ReqNewActp** – requires new acceptance

Acceptance ('Actp') of the eBill Terms of Service is required in order to set up an eBill account.

For a Payee currently registered for eBills where a new Terms of Service acceptance is required by the eBiller, the new acceptance must be received before any further eBill activity is allowed.

NOTE: It is assumed that submission of a ToS 'Acceptance' implies that all required Terms of Service have been presented by the Service Consumer to the end-user, and that the Service Consumer has received explicit acceptance from the end-user.

[Automatic eBill Payment Schedule Options]:

ElecMerAutoSuspType

This indicates the Subscriber's desire to stop an automatic eBill payment schedule, and allows the Subscriber to choose to stop the automated schedule immediately, or after any currently scheduled automatic eBill payment(s) for the associated Payee are processed. Canonical values are:

- **Perm** – This stops the automatic eBill payment schedule immediately, and stops any currently-scheduled eBill payments for the associated Payee.
- **NxtBil** – This stops the automatic eBill payment schedule immediately, but processes all currently-scheduled eBill payment(s) for the associated Payee.

ElecBilPmtAmtType

This specifies the payment amount option selected for the automatic eBill payment schedule set up for the Payee. This value is used in combination with the *<ElecBilPmtRuleAlgSymb>* to determine the actual intent of the selected payment option. Canonical values are:

- **StmtBal** – Payment based on statement balance
- **MinDue** – Pay the minimum due
- **AmtDue** – Payment based on amount due
- **FixedAmt** – Pay   a fixed amount

   NOTES:
   1) The 'AmtDue' option is not a valid selection for 'CCA' (Credit Card) account types.
   2) The 'StmtBal' and 'MinDue' options are valid selections <u>ONLY</u> for 'CCA' (Credit Card) account types.
   3) If the 'StmtBal/EQ' option is selected, this will be the amount paid, even if a Current Balance exists that is different from the Statement Balance.

ElecBilPmtRuleAlgSymb

This is the algebraic symbol for the automatic eBill payment option selection, which determines how the selected eBill payment option will be applied. Canonical values used by the Bill Pay Services API are:

- **EQ** – Equal to
- **LE** – Less than or equal to

ElecBilPmtAmt

This is amount of the payment (specified by the Subscriber) that will be paid for the automatically scheduled eBill.

Entry of this value is allowed only if the selected Payment Amount Option and 'algebraic symbol' combination requires a specified value.

The following Payment Amount Options are available, based on the specified combinations of *<ElecBilPmtAmtType>*, *<ElecBilPmtRulAlgSymb>* and *<ElecBilPmtAmt>*:

Table 4 - eBill Auto Payment Options - Payee Mod

ElecBil PmtAmtType	ElecBil PmtRuleAlgSymb	ElecBil PmtAmt	Payment Amount Option	Valid for Acct Type(s)
StmtBal	EQ	N/A	Always pay Statement Balance	CCA
StmtBal	LE	<Amt value>	Only pay Statement Balance if LE $<PmtAmt>	CCA
MinDue	EQ	N/A	Always pay Minimum Due	CCA
FixedAmt	EQ	<Amt value>	Always pay $<PmtAmt>	All
AmtDue	EQ	N/A	Always pay [full] Amount Due	'non-CCA'
AmtDue	LE	<Amt value>	Only pay Amount Due if LE $<PmtAmt>	'non-CCA'

ElecBilPmtInstrType
This specifies the desired payment instruction for the automatically scheduled eBill payment. Canonical values are:

- **ElecMerStmt** – Pay immediately when eBill arrives (is received) from eBiller
- **ElecBilDueDt** – Deliver payment by the [Statement] Due Date

NOTE: Entry of any/all of the above 'automatic eBill payment schedule' elements is allowed ONLY if the *ElecMerAutoPmtAlw* indicator is set to 'true' for the specified eBiller (see preceding Payee Inquiry response).

Arrays:

ElecMerAcctTypeInfoArray
This array contains a single *ElecMerAcctTypeInfoRec* denoting the 'account type' specified for the selected eBiller. In the case where multiple account types are applicable for a given eBiller, the Subscriber must select the account type that is desired when setting up the Payee's eBill account.

For a Payee who is 'Enrolled' (i.e., has a registered eBill account), this array will contain a [single] package of data for the account type previously selected by the Subscriber during the eBill account registration process.

This array includes the following simple elements:

ElecMerAcctType
This represents the account type specified by the Subscriber for the eBill account.

NOTE: The list of available 'account types' applicable for a given eBiller (or eBill account) will be returned in the preceding Payee Inquiry response.

ElecMerPayeeCredInfoArray
This optional array contains a list of the Subscriber's credentialing requirements, or 'connection parameters', for the specified eBiller or eBill account (if already registered). In order to retrieve eBill account information on behalf of the Subscriber, the Subscriber's credentialing information must be provided to the eBiller to gain access to the specified eBill account.

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This information is required upon initial setup of the eBill account, and updated credentials must be provided periodically if the Subscriber's credentials for the specified eBiller are changed or updated. (For example, if an eBill account is currently unavailable due to a 'Login Failure', the Subscriber's updated credentials must be submitted in order to regain access to eBill account information.)

This array contains the *ElecMerPayeeCredInfoRec*, a complex element containing a package of data for each 'credentialing parameter' provided by the Subscriber, and includes the following simple elements:

> **ElecMerCredType**
> This specifies the credential type for the entered value. Canonical values currently utilized by the Bill Pay Services API are:
>
> - **UsrName** – User Name
> - **Pswd** – Password
>
> **ElecMerCredValue**
> This specifies the Subscriber's actual value for the specified credential type, and is subject to the limits provided in the *ElecMerCredRegEx* expression returned in the preceding Payee Inquiry response.

AuthenQuesArray

This optional array contains a list of the Subscriber's response(s) to additional authentication requirements required by the eBiller in order to complete authentication of the Subscriber, and corresponds to eBill errors regarding 'MFA Failure' that were provided in the preceding Payee Inquiry or Payee Mod response. This array contains the *AuthenQuesRec* complex element, which includes the Subscriber's response for each MFA authentication requirement by the eBiller. It includes the following simple element(s):

> **AuthenAnswDesc**
> This specifies the Subscriber-provided answer to the MFA authentication requirement from the eBiller.

NOTE: Since Subscriber-specific MFA Authentication requirements are often 'dynamic' (e.g., a randomized 'security challenge question' is presented to a user each time a connection is attempted on the biller's website), it is possible that a specific authentication requirement will 'time out' (i.e., become 'invalid') if too much time passes between the *PayeeInquiry* or *PayeeMod* response that provides the MFA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the Subscriber's 'answer' (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the response to the *PayeeMod* request providing the MFA authentication answer(s) will indicate that a 'time out' error has occurred, and the original request (e.g., *PayeeInquiry* for eBill account information, or *PayeeMod* request for initial eBill account setup or account error resolution) must be retried in order to 'trigger' the receipt of a new, 'randomized' MFA Authentication requirement from the eBiller.

See Appendix D for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

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Payee Mod Behaviors

- For *Company Subscribers:*

    o Payees can be added or modified only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Payees'.

    o *[NEW!]* Transfer accounts can be modified only if the requesting user (Subscriber's Associated User) has been granted permission to 'Manage Transfer Accounts'.

    o Pay From Account information can be modified for the Payee only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

- To select a new 'default' Pay From Account for a Payee, the third party consumer must first perform a **Subscriber Inquiry** in order to obtain the available list of Pay From Accounts from which to choose.

- iPay will ignore all element values other than those specified above, if passed on a Payee Mod request.

- In order to change any Payee elements *other* than those specified above, a delete of the existing Payee record and a 're-add' of the Payee with the new values is required. For Email Payees, a new Email Setup process will be required.

- For a 'Payee Delete' request, a 'Pending Payments Exist' fault will be returned if pending payments exist for the specified Payee. This error specifies that "Pending payments are associated with this Payee. Deleting Payee will stop all associated pending payments.".

    o The third party consumer can override this fault by providing an error override. If provided, iPay will stop all pending payments associated with the Payee to be deleted and move them to Payment History. The Payee will then be deleted as requested.

- NOTE: While the Payee Address can be updated at any time, the updated address will be utilized only for future scheduled payments that must be sent by check for Merchants whose 'preferred' payment method is 'electronic'. Any newly scheduled or recurring 'electronic-to-check' payment added after a successful Payee Mod to add or update the address will use the new address; all previously scheduled 'electronic-to-check' payments will continue to use the Payee Address that was available at the time the payment was added.

- eBill Accounts:
    o Setting up ('registering') an eBill account:
        ▪ The following elements are required when initially requesting to set up an eBill account:
            - ElecMerPayeeId ('eBiller ID')
            - ElecMerPayeeToSStat
                o Must be set to 'Actp' in order to complete eBIll account registration
                o It is assumed that submission of a ToS 'Acceptance' implies that all required Terms of Service have been presented by the Service Consumer to the end-user, and that the Service Consumer has received explicit acceptance from the end-user.
            - ElecMerAcctType (within ElecMerAcctTypeInfoArray)
            - ElecMerPayeeCredInfoArray
            - Automatic eBill payment schedule details (optional)

        ▪ The following elements are required when a subsequent modification request is submitted, supplying additional information needed to complete the setup of an eBill account (based on preceding *Payee Mod* response):
            - ElecMerPayeeID ('eBiller ID')

- ElecMerAcctErrCode (returned in preceding *Payee Mod* response)
- Additional information:
    - ElecMerPayeeCredInfoArray (required for 'Login Failure' error E6513)
        - <u>All</u> applicable ElecMerCredVal elements must be returned in the response.
    - AuthenQuesArray (required for 'MFA Authentication' error E6518 or E6519)
        - Entries here will be ignored for any other error condition
    - ElecBilPayeeAcctId (matched eBill account ID) – (required for 'account match' error code E6521)
        - Must be returned in the *ElecBilPayeeAcctId* field on subsequent PayeeModRq
        - Entries here will be ignored for any other error condition
- The ability to add an eBill account for a Payee is available via the PayeeMod request, but ONLY for those Financial Institutions that have included this feature for the specified Product.

- Resolving an eBill account error condition:
    - The following elements are required when a subsequent modification request is submitted, supplying additional information needed to resolve an eBill account error condition (based on preceding *Payee Inquiry* or *Payee Mod* response):
        - ElecBilPayeeAcctId
        - ElecMerAcctErrCode (returned in preceding *Payee Inq* or *Payee Mod* response)
        - Additional information:
            - ElecMerPayeeCredInfoArray (required for 'Login Failure' error E6551)
                - <u>All</u> applicable ElecMerCredVal elements must be returned in the response.
            - AuthenQuesArray (required for 'MFA Authentication' errors E6550 or E6519)
                - Entries here will be ignored for any other error condition
    - Requests to resolve eBill account error conditions should be executed within a short period of time after a Payee Inquiry specifies an eBill Account Error that requires Subscriber remediation. Delays may result in a 'session time out' error, which requires that the process be restarted.
- See [Appendix D](#) for additional detail on eBill Account Setup and eBill Account Error Resolution flows.
- See [Appendix E](#) for a complete list of possible eBill account errors that require remediation by the Subscriber.

- Modifying existing eBill account details:
    - Only the following elements are editable when modifying an existing eBill account:
        - ElecMerPayeeToSStat
        - ElecMerPayeeCredInfoArray
            - If updated, *all* applicable ElecMerCredVal elements must be returned in the response.
        - ElecMerAutoSuspType
        - Automated eBill payment schedule details:
            - ElecBilPmtAmtType
            - ElecBilPmtRuleAlgSymb
            - ElecBilPmtAmt
            - ElecBilPmtInstrType

- o Deleting ('unregistering') an existing eBill account:
    - ▪ Deletes of eBill account(s) are allowed via the PayeeMod request.
        - Existing eBill history for the deleted eBill account will continue to be made available to the Subscriber.
        - Any associated automatic eBill payment schedule for the Payee will be stopped immediately upon delete of the eBill account.

Response

The service provider (iPay) returns the *BilPayPayeeModRs* **response** message to the service consumer.

The **simple element(s)** contained within the *BilPayPayeeModRs* response applicable for the Bill Pay Services API is/are:

RsStat
This specifies the status of the mod request. Canonical values are:

- **Success**
- **Fail**

NOTE: Any modification request errors associated with eBill account setup or account remediation activities will be returned in the *MsgRsHdr* with an Error Category <ErrCat> canonical value as ~Fault~ in order to be able to provide the consumer with information related to the error. This could optionally include the Authentication Question Array (*AuthenQuesArray*) or the Electronic Merchant Account Identification Array (*ElecMerAcctIdArray*) (see below).

The **array(s)** contained within the *BilPayPayeeModRs* response for the Bill Pay Services API (that are applicable for eBill account activity) are:

AuthenQuesArray
This optional array provides a list of additional authentication requirements required by the eBiller to complete authentication of the Subscriber, and corresponds to eBill setup or eBill account errors regarding 'MFA Failure'. This array contains the *AuthenQuesRec* complex element, which includes a package of data for each MFA authentication requirement for the Subscriber. It includes the following simple element(s):

AuthenQuesDesc
This specifies the Subscriber-specific MFA authentication requirement from the eBiller. This is often in the form of a 'randomized' security challenge question, but can include any type of additional authentication requirement, as defined by the eBiller.

NOTE: This element may be delivered as a CDATA section, as it could include (but is not limited to) HTML and 'illegal' XML characters.

NOTE: Since Subscriber-specific MFA Authentication requirements are often 'dynamic' (e.g., a randomized 'security challenge question' is presented to a user each time a connection is attempted on the biller's website), it is possible that a specific authentication requirement will 'time out' (i.e., become 'invalid') if too much time passes between the *PayeeInquiry* response that provides the MFA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the Subscriber's 'answer' (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the response to the *PayeeMod* request will indicate that a 'time out' error has occurred, and another *PayeeInquiry* request will be required in order to 'trigger' the receipt of a new, 'randomized' MFA Authentication requirement from the eBiller.

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ElecMerAcctIdArray

This optional array provides a list of the Subscriber's accounts with the eBiller, and is returned when an exact match cannot be determined for an account identification being registered for the Subscriber. Return of this information permits the Service Consumer to present the accounts so the Subscrier may register the correct account identification.

This array corresponds to eBill setup error number E6521, and contains the *ElecMerAcctIdInfoRec* complex element, which includes a package of data for each Subscriber account found with the specified eBIller. It includes the following simple element(s):

ElecMerAcctId

This specifies the identifier for the eBill account generated by the Service Provider to be returned in a subsequent Payee Mod, enabling the Service Consumer to submit the correct account identification to be registered once the Subscriber has selected the appropriate account to complete eBill account setup.

NOTE: The selected value must be returned in a subsequent Payee Mod request in the *ElecBilPayeeAcctId* field, along with the *ElecMerAcctErrCode* returned in the preceding *Payee Mod* response.

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee, returned from the eBiller (and is often presented as a 'masked' account number).

ElecMerAcctAliasName

This is the name for the 'eBiller's account' that is often used for GUI representation understandable to the end-consumer.

See Appendix E for a complete list of possible eBill account errors that require remediation by the Subscriber.

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Payment Services

Payment Add

Container: TPG_BillPayMaster.xsd
Message: BilPaySchedPmtAdd

The bill pay Payment Add <BilPaySchedPmtAdd> will allow the service consumer to schedule (add) a single or recurring Payment or Transfer for a specific Subscriber. The subscriber identification element <SubID> is required on the Payment Add request.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Scheduled Payment Add service uses a typical exchange of MType messages to allow the subscriber to schedule a single or recurring Payment or Transfer from their bill pay account.

Subscriber Inquiry Request
BilPaySubInsRq_MType

The Third Party sends the **BilPaySubInqRq** message containing the optional *BilPayProd* element, as well as the required *SubID* element for the desired Subscriber.

Subscriber Inquiry Response
BilPaySubInsRs_MType

The Service Provider sends the **BilPaySubInqRs** message containing an echo of the request, plus *BilPaySubInfo*, which includes the *Pay From Account* information [optionally] required for Payment Add operations.

Payee Inquiry Request
BilPayPayeeInqRq_MType

The Third Party sends the **BilPayPayeeInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PayeeID* element for the desired Payee.

Payee Inquiry Response
BilPayPayeeInqRs_MType

The Service Provider sends the **BilPayPayeeInqRs** message containing an echo of the request, plus *BilPayPayeeInfo*, *w*hich includes the *PayeeID* and [optional] Rush Address information required for Payment Add operations .

Scheduled Payment Add Request
BilPaySchedPmtAddRq_MType

The Third Party sends the **BilPaySchedPmtAddRq** message containing the required *SubID* and optional *BilPayProd* elements, as well as the required Pay From Account, Payee and Payment elements required for the requested Payment.

Scheduled Payment Add Response
BilPaySchedPmtAddRs_MType

The Service Provider sends the **BilPaySchedPmtAddRs** message containing the response status <RsStat> indicating if the Add was successful. If the add was successful, the *PaymentID* assigned to the new accepted Payment will also be returned. An unsuccessful add request will also return the errors that occurred that prevented the add.

Request

The third party consumer forwards the *BilPaySchedPmtAddRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPaySchedPmtAddRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

BilPaySchedPmtInfo

This complex element contains a package of data related to a scheduled single or recurring Payment or Transfer, and includes the below simple and complex elements and arrays necessary to add a scheduled single or recurring payment or Transfer using the Bill Pay Services API. This complex is required for the request; however, many of the child nodes encapsulated are optional.

Simple elements:

PmtProcDt

This is the Process Date for a *single* payment or Transfer. This date cannot be less than the First Available Process Date for the specified Payee or Transfer account. (For recurring series dates, see the RecurPmtInfo complex below.)

This date is required for all *single* payments or Transfers for Financial Institutions that utilize the 'Process Date' payment date model. iPay will ignore a value submitted for this element for Financial Institutions that utilize the 'Due Date' payment date model.

PmtEstArvDt

This is the Estimated Arrival Date (i.e. 'Due Date') for a *single* payment or Transfer to the Payee or Transfer account.   This date cannot be less than the First Available Estimated Arrival Date for the specified Payee or Transfer account. (For recurring series dates, see the RecurPmtInfo complex below.)

This date is required for all *single* payments or Transfers for Financial Institutions that utilize the 'Due Date' payment date model. iPay will ignore a value submitted for this element for Financial Institutions that utilize the 'Process Date' payment date model.

PmtAmt

This is the amount of the single scheduled payment or Transfer or, for a recurring series, the amount of each payment or Transfer in the series.

PmtCmnt

This is the comment that will be stored with the payment(s) or Transfer(s). This is for the Subscriber's internal use only and is not included with the Payment.   Entry is limited to a 1000-character string.

PmtChkMemo

This is the memo to be added to a check associated with a check payment. Entry is limited to 25 characters.

iPay will ignore a value submitted for this element for any 'non-check' payments (including Transfers).

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SubCmntToPayee

This is the personalized message that will be added to the email or text sent to a P2P payment recipient notifying them that a payment has been made. Entry is limited to 500 characters for email notification (25 characters for text messages).

[NEW!] **[Payment] PmtIntentType**

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:
- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

 NOTE: Until such time as additional Transfer options are available, the PmtIntentType of the Payment or Transfer will be automatically set to match the PmtIntentType of the Payee or Transfer account. iPay will ignore a value submitted for this element.

Complex elements:

PmtPayeeInfo

This required complex element contains a package of data related to the intended Payee or Transfer account who will receive the payment(s) or Transfer(s).

PayeeID

This is the Bill Pay Services API identifier for the Subscriber's Payee or Transfer account.

This is the only element necessary to identify the desired Payee for the Scheduled or recurring payment(s) or Transfer(s).

PayeeAddrInfo

This complex is required for Rush payments (only), and provides the ability to specify the Payee's Rush Address to be used for the payment.   An address is required only for Overnight and 2nd Day rush payment options, as these payments are always sent via check. This complex includes the following simple and complex elements:

PayeeAddrID

This is the Bill Pay Services API identifier for the specified Rush address for the Payee.

This is the only element required if the Rush Address provided via the preceding Payee Inquiry is the desired address to be used for the Rush payment.

PayeeAddrType

This specifies the type of payee address being submitted. For Rush payments, the only applicable Payee Address Type is 'Rush'. Canonical values are:
- **Prim** – Primary (default)
- **Rush** - Rush

PayeeAddr

This complex element contains elements representing the Payee's Rush address, and is required for the Rush payment if no Rush Address exists for the Payee (i.e., no Rush Address information was returned in the preceding Payee Inquiry), or the Subscriber chooses not to use the Rush Address provided via the Payee Inquiry.

StreetAddr1

This is the Payee's street address for Rush payments.

StreetAddr2 (optional)
This is the second line of the Payee's street address for Rush payments.

City
This is the name of the city in the Payee's Rush payment address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

PmtRushOptInfo

This optional complex element contains information on the Rush payment options desired for the specified payment. Not applicable for Transfers.

RushOpt
This represents the desired option for expediting (rushing) the payment to the Payee. Canonical values are:

- **Std** – Standard (default) – this specifies a 'non-expedited' payment.
- **Ovrngt** – Overnight
- **2ndDay** – Second Day
- **2ndDayEc** – Second Day Economy

Not all options may be available for the specified Payee. Only those options that are appropriate for the specified Payee may be utilized for a Rush payment to this Payee. Eligible Rush options the Payee can be obtained from the preceding Payee Inquiry request.

This is the only element necessary to identify the desired Rush payment option for the Scheduled payment.

PmtPayFromAcctInfo

This optional complex element contains information on the Pay From Account to be used for the specified Payment(s) or Transfer(s).

PayFromID
This is the Bill Pay Services API identifier for the Pay From account.

This is the only element necessary to specify the desired Pay From Account for the Payment or Transfer.

If the Pay From Account for the payment or Transfer is not specified, the Pay From Account designated as the Payee's *default* Pay From Account will be used.

NOTE: Pay From Account information (other than the default account previously designated for the Payee) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

RecurPmtInfo

This optional complex element contains a package of data related to a recurring payment or recurring Transfer series, and includes the below simple elements and arrays necessary to add a recurring payment or recurring Transfer series using the Bill Pay Services API.

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StartPmtProcDt

This is the starting date for processing a recurring payment or Transfer series. This date cannot be less than the First Available Process Date for the specified Payee that would be available based on Frequency and Payment Day selections.

This date is required for all recurring payments for Financial Institutions that utilize the 'Process Date' payment date model. iPay will ignore a value submitted for this element for Financial Institutions that utilize the 'Due Date' payment date model.

StartPmtEstArvDt

This is the starting estimated arrival date (i.e., 'due date') for a recurring payment or recurring Transfer series. This date cannot be less than the First Available Estimated Arrival Date for the specified Payee that would be available based on Frequency and Payment Day selections.

This date is required for all recurring payments for Financial Institutions that utilize the 'Due Date' payment date model. iPay will ignore a value submitted for this element for Financial Institutions that utilize the 'Process Date' payment date model.

PmtFreqUnits

This is the payment frequency for a recurring payment or recurring Transfer series. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**
- **Every6Months**
- **Annual**

PmtDayOfWeek

This is the desired day of the week when recurring payments or Transfers will be made if the specified payment frequency is: 'Weekly', 'EveryOtherWeek' or 'Every4Weeks'. Canonical values are:

- **Mon** - Monday
- **Tues** - Tuesday
- **Wed** - Wednesday
- **Thur** - Thursday
- **Fri** - Friday

PmtDayInfoArray

This optional array contains the *PmtDayInfo* complex element, which includes a package of data related to the day(s) of the month a recurring payment or Transfer should be made if the payment frequency has been specified as 'Monthly', 'TwiceMonthly', 'EveryOtherMonth', 'Every3Months', 'Every6Months' or 'Annual'. It includes the following simple elements:

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PmtDayofMonth

This is the day of the month when the recurring payment or Transfer will be made (e.g., 1 - 31). This value is not required if the desired payment day is to be the last business day of each month.

PmtUseLastBusDay

This indicates that the payment or Transfer should be made on the last business day of the month. Canonical values are:

- **True**
- **False** (default)

PayDtInstr

This is the payment date instruction when a recurring payment or Transfer date falls on a non-processing date (such as a weekend or holiday). Canonical values are:

- **Before** – Pay before (default)
- **After** – Pay after

PmtOccur

This is the number of desired payment occurrences for the recurring payment or recurring Transfer series. Valid values are between 1 and 9999.

PmtSerExpDt

This is the expiration date for the recurring payment or recurring Transfer series. The final payment in the series will be made on this date. This date can be any date in the future, but cannot be less than the Starting Payment Date.

PmtSerFinite

This indicates whether the payment or Transfer series is finite or 'has no end'. If the series is *not* finite, recurring payments or Transfers will continue to be made until the series is terminated by the Subscriber. This value will automatically be set to 'True' if either the PmtOccur or PmtSerExpDt is included in the recurring payment request. Canonical values are:

- **True**
- **False** (default)

PmtFinalAmt

This is the amount of the final payment on a loan, which may often differ from the other payment installments on the loan. *The use of this element within the Bill Pay Services API is not available at this time.*

RetroToOrigPmtDt

This optional element is available for a recurring payment or recurring Transfer series that may be pended for additional payment approval, and specifies the desired action to be taken in the event a scheduled recurring payment or Transfer is missed while awaiting payment approval. A Subscriber Inquiry can be performed to determine if payment/Transfer approvals are required for this Subscriber. Canonical values are:

- **True**
- **False** (default)

NOTE: Setting this value to 'false' will ignore a missed payment or Transfer and schedule the next [second] payment or Transfer in the series, once payment approval is received. A response of 'true' will reschedule the original [first] payment or Transfer (with the originally specified amount) in order to catch up the series, as well as schedule the next [second] payment or Transfer in the series.

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Array(s):

InvoiceInfoArray

This array is applicable for **Company Subscribers only** at this time and can include a list of invoices, if applicable for the scheduled payment, and includes the *InvoiceInfo* complex element <u>for each line item needed for the Invoice</u>, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay's) identifier for the Invoice.

This element should be left blank for the *add* request, as this information will <u>not</u> be available to the Service Consumer until the Payment Add request has been successfully completed.

InvoiceNum

This is the invoice number assigned to the invoice by the Payee. A maximum of 20 alphanumeric characters is allowed.

InvoiceCat

This indicates the invoice category for the entered line item. Canonical values are:

- **Invoice** - Invoice
- **Adj** – Adjustment
- **Disc** - Discount
- **Oth** - Other

InvoiceDesc

This optional element specifies a free-form text description of the invoice line item. A maximum of 100 alphanumeric characters is allowed.

InvoiceAmtPos

This optional element indicates a positive amount value for the invoice line item.

InvoiceAmtNeg

This optional element indicates a negative amount value for the invoice line item (such as for an adjustment or discount).

NOTE: Invoice information is not applicable for Transfers.

Payment Add Behaviors

- Prior to the utilization of any payment-related function, the third party consumer must first perform:

  - a *Subscriber Inquiry* - in order to obtain the available list of Pay From Accounts from which to choose

  - a *Payee Inquiry* - in order to obtain the most accurate, up-to-date Payee information required to schedule the payment.

    NOTE: PayeeID values are subject to change with notice, so inquiry for current Payee IDs should always be completed before actual use

- For *Company Subscribers:*

  - 'Standard' Bill payments can be added only if the requesting user (Subscriber's Associated User) has been granted permission to 'schedule bill payments', and for the specified Payee.

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- o P2P/Email Payments can be added only if the requesting user has been granted permission to 'schedule email payments', and for the specified Email Payee.

- o ***[NEW!]*** Transfer payments can be added only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Transfers' (i.e., 'CanTransfer'), and for the specified Transfer account.

- o Pay From Account information (other than the Payee's designated default account) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

- o Scheduled Payments or Transfers requiring additional payment approval from another associated user authorized to approve payments/Transfers will be be pended (Payment Status = 'PmtApprvReq').   The Service Provider ('iPay') will notify the Subscriber whenever payment approval is required.

  - ▪ A separate 'Scheduled Payment Approval' request must be submitted in order to execute the payment or Transfer approval.

- o Invoice information can be added to the scheduled payment.

  - ▪ There is no limit to the number of invoice line items that can be added to a single payment.
  - ▪ Multiple Invoice Numbers can be included in a single payment.
  - ▪ Only one amount (either Pos or Neg) can be entered per invoice line item.
  - ▪ Invoice information is NOT allowed for recurring payments or Transfers.

- The Process Date will be adjusted automatically by the service provider ('iPay') to the First Available Process Date if the entered value is equal to today's date, but the payment or Transfer request is received after the Financial Institution's Payment Cutoff Time.

- Payments cannot be scheduled for 'Pending' Payees or Transfers (those awaiting Activation), and payment add requests for 'non-Activated' Payees or Transfer accounts will be rejected.

- A fault will be returned for a 'check' payment request if the Subscriber's home address is not on file.

- A fault will also be returned for *any* payment or Transfer request if no Subscriber phone number is on file.

  - o A Subscriber Mod request must be performed to add the Subscriber's phone number (Home, Work or Cell) or address prior to attempting another 'Payment Add' request.

- A fault will also be returned for a payment request that is subject to Electronic Risk Limits if no primary payee address is on file.

  - o A Payee Mod request must be performed to add the Payee's primary address prior to attempting another 'Payment Add' request.

- A 'Duplicate Payment Alert' warning will be returned for any payment or Transfer scheduled where a possible duplicate payment or Transfer exists. The existence of a payment or Transfer to the same Payee processed within the preceding 14 days (that has not been stopped or cancelled), or ANY scheduled payment or Transfer to the same Payee will trigger this warning.

- For Rush Payments:

  - o The Rush payment option is available ONLY for those Financial Institutions that possess the Rush Payments feature within the Bill Pay Services API.   A Channel Inquiry can be performed to determine if this feature is available in order to request a Rush Payment.

  - o iPay will fault an Add Payment request if *both* the Payee's Rush Address ID and Payee's Rush Address are passed at the same time, as the intended Rush payment Address is unclear.

  - o iPay will also fault an Add Payment request if a Rush Option other than 'standard' has been specified, but *no* Payee Rush Address information is included.

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- The Process Date and/or Estimated Arrival Date will be adjusted by the service provider to accommodate the specified Rush Option.

- For Overnight and Second Day rush options:

  - The payment method for the payment is set to 'Check' regardless of the Payee's designated Payment Method.

  - The selected Pay From Account must be a 'checking' account (in order to facilitate the 'check' payment method).

  - Upon acceptance of the payment request, the payment is placed immediately in 'Paid' status, and cannot be updated or stopped.

- It is assumed that any fees associated with Rush payments have been presented by the Consumer to the Subscriber/end-user, and that submission of a Rush payment implies fee acceptance.

  - A Payee Inquiry can be performed to determine available Rush Options and associated Rush Payment Fee amounts.

- For <u>Email Payments</u>:

  - The Email payment option is available ONLY for those Financial Institutions that possess the Email Payments feature within the Bill Pay Services API.   A Channel Inquiry can be performed to determine if this feature is available in order to request an Email Payment.

  - If an Email payment requires a Service Fee (or 'surcharge'), it is assumed that the service fee applicable to the Email payment has been presented by the Service Consumer to the Subscriber/end-user, and that submission of the Email payment implies fee acceptance.

    - A Payee Inquiry can be performed to determine if a Service Fee is applicable and the Fee amount.

- For <u>Recurring Payments</u>:

  - The 'Standard' RushOpt is the only valid Payment Rush Option for Recurring payments or Transfers.

  - For all payment frequencies except 'TwiceMonthly', only one PmtDayInfo entry is required.

    - A second PmtDayInfo entry will be *ignored* for all payment frequency units except 'TwiceMonthly'.

    - For a specified payment frequency of '**TwiceMonthly'**, a second PmtDayInfo entry is required.

      - Values can be entered in any order, but there must be at least 6 days' difference between the two values.

  - The Starting Payment Date must be valid for the specified Frequency and Payment Day of Week or Payment Day specified. For example, if a recurring payment or recurring Transfer series is requested on the 23rd of the current month, and a Frequency of 'Monthly' is specified along with a Payment Day of the 18th, the Starting Payment Date cannot be less than the 18th of the following month.

  - The PmtProcDt and PmtEstArvDt will be set automatically by the Service Provider (iPay) for the *first scheduled payment or Transfer in a recurring series*, based on the entered Starting Payment Date.

    - A 'Pay Before' PayDtInstr is required for Financial Institutions using the 'Due Date' Payment Model. The Service Provider (iPay) will automatically reset this value if any value other than 'Pay Before' is received for a 'Due Date' Payment Model.

- For '<u>eBill</u>' Payments:

  - When a scheduled payment associated with an eBill is processed, the corresponding eBill will be marked 'Paid'.

Response

The service provider (iPay) returns the *BilPaySchedPmtAddRs* **response** message to the service consumer.

The elements contained within the *BilPaySchedPmtAddRs* response applicable for the Bill Pay Services API is/are:

PmtID
This is the Payment identifier associated with the Payment or Transfer for the Bill Pay Services API.

RsStat
This specifies the status of the add request. Canonical values are:

- **Success**
- **Fail**

The Service Provider (iPay) will return the Payment ID <PmtID> generated by the Bill Pay Services API for the accepted new scheduled payment or Transfer.

Scheduled Payment Search

Container: TPG_BillPayMaster.xsd
Message: BilPaySchedPmtSrch

The bill pay Scheduled Payment Search <BilPaySchedPmtSrch> will return all scheduled payments or Transfers for a particular bill pay product and Subscriber.

The request provides the following optional filters:

- **Payment Start Date <PmtStartDt>**
- **Payment End Date <PmtEndDt>**
- **Payment Low Amount <PmtLowAmt>**
- **Payment High Amount <PmtHightAmt>**
- **Payment Status <PmtStat> - default = All**
- *[NEW!]* **Payment Intention Type <PmtIntentType> - default = All**
- **Payee ID <PayeeID>**
- **Payee Payment Method <PayeePmtMthd>**
- **P2P Payees <P2PFilter>**
- **Recurring Payments <RecurFilter>**
- *[NEW!]* **Transfers <XferFilter>**

When there exists more than one filter on the request, the resulting selection is based on the combined effect of the filters (i.e., 'and' operator). Each added filter option will further restrict the result set.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Scheduled Payment Search service uses a typical exchange of MType messages to retrieve Scheduled Payment and/or Transfer information for a specified product and Subscriber, based on optional filters.

Scheduled Payment Search Request
BilPaySchedPmtSrchRq_MType

The Third Party sends the **BilPaySchedPmtSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *PmtStartDt, PmtEndDt, PmtLowAmt, PmtHightAmt, PmtStat, PayeeID, PayeePmtMthd, P2PFilter* and *RecurFilter*

Scheduled Payment Search Response
BilPaySchedPmtSrchRs_MType

The Service Provider sends the **BilPaySchedPmtSrchRs** message containing an echo of the request, plus *BilPaySchedPmtSrchArray*.

Request

The third party consumer forwards the *BilPaySchedPmtSrchRq* **request** message to the Service Provider.

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The below elements contained within the *BilPaySchedPmtSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtStartDt

The date that designates the starting point for Scheduled Payment or Transfer [Process] date selections. If no Start Date is specified, the Bill Pay Services API will return all available pending payments and/or pending Transfers that have a Process Date that is less than the specified End Date.

PmtEndDt

The date that designates the ending point for Scheduled Payment or Transfer [Process] date selections. If no End Date is specified, the Bill Pay Services API will return all available pending payments and/or pending Transfers that have a Process Date that is greater than the specified Start Date.

NOTE: If no Date range is specified, the Bill Pay Services API will return all available pending payments and/or Transfers that satisfy all other filter requirements.

PmtLowAmt

This is the value that designates a starting point for payment/Transfer amount selections.

This value is the lowest amount to begin searching when a range of amounts is used to refine the scheduled payment search. If no value is specified, the Bill Pay Services API will utilize a default value of $0 for this filter parameter.

PmtHighAmt

This is the value that designates an ending point for payment/Transfer amount selections.

This value is the highest amount to begin searching when a range of amounts is used to refine the scheduled payment search. If no value is specified, the Bill Pay Services API will utilize a default value of 'null' (i.e., no upper payment amount limit) for this filter parameter.

PmtStat

The status of the payment or Transfer. Valid canonical values for all *pending* payments/Transfers are:
- **All** – All (default)
- **Sched** – Scheduled
- **Pend** – Pending
- **PendSkip** - Pending Skip
- **PmtApprvReq** - Payment Approval Required

NOTE: See Appendix C for Payment Status definitions.

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[NEW!] **[Payment] PmtIntentType**

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill** - Payment for a bill (default)
- **XferToSubFinInst** - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo** - *not supported by iPay at this time*
- **XferFrom** - *not supported by iPay at this time*

If no Payment Intent Type is specified, the Bill Pay Services API will return all available pending payments and/or Transfers that satisfy all other filter requirements

PayeeID

This is the Bill Pay Services API identifier for the Payee or Transfer account to whom the payment or Transfer has been scheduled.

If no Payee is specified, the Bill Pay Services API will return pending payments and/or Transfers for all Payees and/or Transfer accounts that satisfy all other specified filters.

PayeePmtMthd

This is the payment method for the Payee or Transfer account associated with the scheduled payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

P2PFilter

This is used to filter payments associated with P2P (i.e., 'Email') Payees into (or from) the search results. Canonical values are:

- **Incl** – Include P2P payments (default)
- **OnlyP2P** – Only return P2P payments
- **Excl** - Exclude P2P payments

RecurFilter

This is used to filter recurring payments and/or Transfers into (or from) the search results. Canonical values are:

- **Incl** – Include recurring payments (default)
- **OnlyRecur** – Only return recurring payments
- **Excl** - Exclude recurring payments

[NEW!] **XferFilter**

This is used to filter Transfer payments into (or from) the search results. Canonical values are:

- **Incl** – Include Transfers (default)
- **OnlyXfer** – Only return Transfer payments
- **Excl** - Exclude Transfer payments

NOTE: If any value entered directly conflicts with another entered filter parameter (i.e., the parameters are 'mutually exclusive'), NO results will be returned.

Response

The service provider (iPay) returns the *BilPaySchedPmtSrchRs* **response** message to the service consumer, which returns a list of all Scheduled (single and/or recurring) Payments and/or Transfers for the specified product and Subscriber that meet the given search criteria.

Notes:
1) Other types of Payments, such as Gift Payments, etc, will not be included in the result set at this time.
2) For *Company Subscribers:*
    a. Scheduled [Bill] Payment information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Scheduled Bill Payments'.
    b. Email/P2P Payments can be viewed only if the requesting user has been granted permission to 'Schedule Email Payments'.
    c. *[NEW!]* Scheduled Transfer information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Transfers'.

    To summarize, ONLY those payment types for which the requesting user has permissions will be eligible to be returned in the search results.

The **array(s)** contained within the *BilPaySchedPmtSrchRs* response applicable for the Bill Pay Services API are:

BilPaySchedPmtSrchArray

This array returns an array of responses for the Scheduled Payment search and includes the *BilPaySchedPmtSrchInfo* complex element for each Scheduled (single or recurring) Payment or Transfer returned, and includes the following simple and complex elements:

PmtID
This is the Bill Pay Services API identifier for the Payment or Transfer.

PayeeID
This is the ID of the Payee or Transfer account.

PayeeName
This is the name of the Payee or Transfer account.

PayeeNickname
This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PmtProcDt
This is the date the payment or Transfer is scheduled to be processed.

PmtEstArvDt
This is the date the scheduled payment or Transfer is estimated to be delivered to the Payee.

PmtAmt
The amount of the scheduled payment or Transfer.

PmtStat
The status of the payment or Transfer. Valid canonical values for all *pending* payments/Transfers are:
- **Sched** – Scheduled
- **Pend** – Pending
- **PendSkip** - Pending Skip
- **PmtApprvReq** - Payment Approval Required

   NOTE: See Appendix C for Payment Status definitions.

PmtMthd

This is the payment method used for the Payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

PmtFreqUnits

This is the payment frequency for a _recurring payment or recurring Transfer series_. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment or Transfer. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**
- **Every6Months**
- **Annual**

P2PType

This indicates whether the payment is 'P2P payment' (for a 'P2P/Email payee type'). Canonical values are:

- **True**
- **False** (default)

ElecMerBilPmt

This indicates whether the payment is an 'eBill payment' (i.e., has an associated eBill). Canonical values are:

- **True**
- **False**

[NEW!] [Payment] PmtIntentType

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - _not supported by iPay at this time_
- **XferTo**   - _not supported by iPay at this time_
- **XferFrom**   - _not supported by iPay at this time_

PayFromAcctInfo

This optional complex element contains information on the Pay From Account designated for the specified Payment or Transfer.

NOTE: For Company Subscribers, Pay From Account Info is eligible for viewing ONLY if the requesting user has been granted permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should _**hide**_ these elements from the requesting user.

PayFromID
This is the Bill Pay Services API identifier for the Pay From account specified for the Payment or Transfer.

PayFromAcctID
The bank account number of the Pay From Account designated for this Payment or Transfer.

PayFromAcctType
The number(s) or character(s) that categorize the type of pay from account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name for the Subscriber's Pay From Account.

PayFromAcctDft
This indicates whether the Pay From Account is the 'default' account, to be used in the event a pay from account is not specified when scheduling a payment or Transfer. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName
This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName
This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

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LastName
This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

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Scheduled Payment Inquiry

Container: TPG_BillPayMaster.xsd
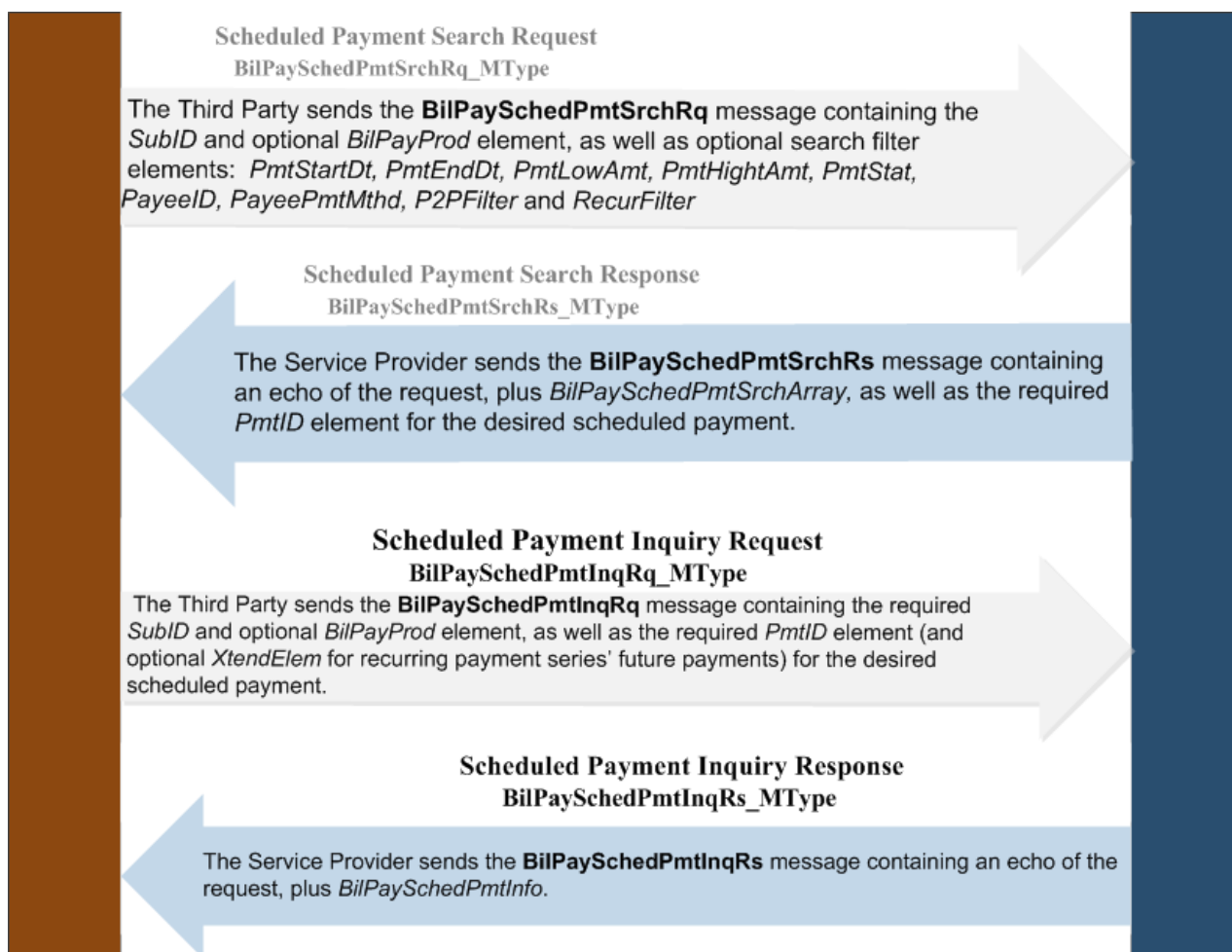**Message: BilPaySchedPmtInq**

The bill pay Scheduled Payment Inquiry <BilPaySchedPmtInq> will return element details for a specific scheduled (Pending) single or recurring payment or Transfer for a given Subscriber. The subscriber identification element <SubID> and Payment ID <PmtID> are required on the request.

The design of the inquiry was created in a manner that facilitates addition and modification requests.
The activity intention element <ActIntent> was added to support the concurrency model for future modifications made to scheduled single or recurring payments or Transfers.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Scheduled Payment Inquiry service uses a typical exchange of MType messages to retrieve scheduled payment or scheduled Transfer information for a given Subscriber, based on the required Subscriber ID and Payment ID.   If the Payment ID is not known, the third party consumer must first perform a Scheduled Payment Search to obtain the Payment ID for the desired scheduled payment or Transfer.

Scheduled Payment Search Request
BilPaySchedPmtSrchRq_MType
The Third Party sends the **BilPaySchedPmtSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *PmtStartDt, PmtEndDt, PmtLowAmt, PmtHightAmt, PmtStat, PayeeID, PayeePmtMthd, P2PFilter* and *RecurFilter*

Scheduled Payment Search Response
BilPaySchedPmtSrchRs_MType
The Service Provider sends the **BilPaySchedPmtSrchRs** message containing an echo of the request, plus *BilPaySchedPmtSrchArray*, as well as the required *PmtID* element for the desired scheduled payment.

Scheduled Payment Inquiry Request
BilPaySchedPmtInqRq_MType
The Third Party sends the **BilPaySchedPmtInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PmtID* element (and optional *XtendElem* for recurring payment series' future payments) for the desired scheduled payment.

Scheduled Payment Inquiry Response
BilPaySchedPmtInqRs_MType
The Service Provider sends the **BilPaySchedPmtInqRs** message containing an echo of the request, plus *BilPaySchedPmtInfo*.

Request

The third party consumer forwards the *BilPaySchedPmtInqRq* **request** message to the Service Provider.

The below elements and array(s) contained within the *BilPaySchedPmtInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd
This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtID
This is the Bill Pay Services API identifier for the scheduled payment or Transfer.

ActIntent
This indicator conveys the service consumer's intention for a subsequent operation for the data set included in the response. Canonical values are:
- **ReadOnly** – indicates a 'view' intent only for the data set included in the Inquiry response. This is the default value.
- **Upd** – indicates the intention to perform a subsequent update ('Mod') to the data set included in the Inquiry response.
- **Dlt** – indicates the intention to perform a subsequent delete of the data set included in the Inquiry response.

IncXtendElemArray
This array conveys the list of 'x_' elements by name which are to be included in the response. At this time, the inclusion of this array is necessary only if future payments or Transfers associated with a recurring payment or recurring Transfer series are desired in the response. The complex element contained in this array, *IncXtendElemInfo*, includes the following simple element(s):

XtendElem
This is the extended element (by name) which the service consumer is requesting be included in the response. At this time, the only Extended Element that is available for the BilPaySchedPmtInqRq is:

- **x_FutPmtInfoArray**

Response

The service provider (iPay) returns the *BilPaySchedPmtInqRs* **response** message to the service consumer, which returns a package of payment or Transfer information for the specified scheduled single or recurring payment or Transfer.

NOTE: For *Company Subscribers:*
- o Scheduled Payment information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Bill Payments'.
- o Email/P2P Payments can be viewed only if the requesting user has been granted permission to 'Schedule Email Payments'.
- o *[NEW!]* Scheduled Transfer information can be viewed only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Transfers'.

The simple and complex elements and array(s) contained within the *BilPaySchedPmtInqRs* response applicable for the Bill Pay Services API are:

PmtCrtDt

The date a payment or Transfer was created by the Subscriber.

PmtStat

The status of the scheduled payment or Transfer. Valid canonical values for all *pending* payments/Transfers are:

- **Sched** – Scheduled
- **Pend** – Pending
- **PendSkip** - Pending Skip
- **PmtApprvReq** - Payment Approval Required

NOTE: See Appendix C for Payment Status definitions.

PmtMthd

This is the payment method used for the scheduled payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

ActIntentKey

This is the key (provided by the service provider) delivered to the consumer to be submitted in the subsequent modification (update or delete) operation for the data set returned in the inquiry response.

BilPaySchedPmtInfo

This complex element contains a package of data related to a scheduled single or recurring payment or Transfer and includes the below simple and complex elements and arrays for the Bill Pay Services API.

PmtProcDt

This is the date the payment or Transfer is scheduled to be processed. For a recurring payment or recurring Tranfer series, this will be the date associated with the currently scheduled payment or Transfer in the series.

PmtEstArvDt

This is the date the scheduled payment or Transfer is estimated to be delivered to the Payee. For a recurring payment or recurring Transfer series, this will be the date associated with the currently scheduled payment or Transfer in the series.

PmtAmt

The amount of the scheduled payment or Transfer.

PmtCmnt

This is the comment that will be stored with the payment or Transfer. This is for the Subscriber's internal use only and is not included with the Payment.

PmtChkMemo

This is the memo to be added to a check associated with a check payment. (Not applicable for Transfers.)

SubCmntToPayee

This is the personalized message that will be added to the email or text sent to a P2P payment recipient notifying them that a payment has been made. Message is limited to 500 characters for email notification (25 characters for text messages).

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[NEW!] **[Payment] PmtIntentType**

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   *- not supported by iPay at this time*
- **XferFrom**   *- not supported by iPay at this time*

NOTE: Until such time as additional Transfer options are available, the PmtIntentType of the Payment or Transfer will match the PmtIntentType of the Payee.

PmtPayeeInfo

This required complex contains the package of data related to the Payee or intended Transfer account of the scheduled single or recurring payment or Transfer and includes the following simple and complex elements and arrays:

PayeeID

This is the ID of the Payee or Transfer account.

PayeeName

This is the name of the Payee or Transfer account.

PayeeNickname

This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PayeeClsf

This specifies the classification of a Payee. Canonical values are:

- **Comp** (Company)
- **Indv**   (Individual/Person)
- *[NEW!]* **FinInst** (Financial Institution) – indicates a Transfer account

[NEW!] **[Payee] PmtIntentType**

This represents the payment intention of the Payee or Transfer account. Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   *- not supported by iPay at this time*
- **XferFrom**   *- not supported by iPay at this time*

PayeePmtMthd

This is the 'default' payment method for the Payee or Transfer account. This may *not* be the actual Payment method utilized for the scheduled payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee. For Transfer accounts, this value will be the Account Holder's account number (of the Transfer account).

If the Subscriber's name (Last Name, First Name) is being used for this element, the value will be truncated at 50 characters.

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SubMerPayerName

This is the Subscriber's name understood by the merchant and is used to override the Subscriber's name on record.

PayeeCatName *(reserved for future use)*

The name of the category assigned to the Payee or Transfer account.

PayeeAddrInfo

This complex contains a package of data related to the Payee's address specified for the scheduled single or recurring payment. Not applicable for Transfer accounts. In the case of an electronic payment, this will simply be the Payee's 'primary' or 'standard' address. This complex includes the following simple and complex elements:

PayeeAddrID

This is the Bill Pay Services API identifier for the specified address for the Payee.

PayeeAddrType

This specifies the type of payee address being utilized for the scheduled payment. Canonical values are:
- **Prim** – Primary (default)
- **Rush** - Rush

PayeeAddr

This complex element contains elements representing the Payee's address utilized for the scheduled payment.

StreetAddr1
This is the Payee's street address for Rush payments.

StreetAddr2 (optional)
This is the second line of the Payee's street address for Rush payments.

City
This is the name of the city in the Payee's Rush payment address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: It should be noted that, in order to leverage check processing efficiencies gained from iPay's Merchant Management process, the [primary] Payee Address listed may not always be the address used for a check payment.

BilPaySvcFeeInfoRec

This complex contains a package of Service Fee (or 'payment surcharge') information applicable to the Payment or Transfer.

SvcFeeDesc

This element specifies the type of payment or Transfer to which the service fee is applicable. A 'Service Dictionary Search' request is necessary to obtain the current list of available Service Fee Descriptions.

SvcFeeAmt

This element specifies the amount of the Service Fee that was applied to the Payment or Transfer.

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PayeePhoneArray
This array contains an array of phone information for the specified Payee. Not applicable for Transfer accounts.

PhoneNum
This represents a phone number, including area code, for the Payee. This is the Payee's Work (Business) number.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Only the Work phone number is required for Payees. Canonical values for the Bill Pay Services API are:
- **Work**

PayeeEmailArray
This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee. Not applicable for Transfer accounts.

EmailAddr
This element specifies the email address of the Payee. *This is a required element only if the Payee's Payment Method Type = 'Email'.*

EmailType
This element specifies to whom the email address applies. Applicable canonical values for a Payee for the Bill Pay Services API are:
- **Prim** – Primary (default)

PmtRushOptInfo
This optional complex contains the rush payment details that were specified for the given scheduled [single] payment and includes the following simple elements:

RushOpt
This represents the desired option for expediting (rushing) the payment to the specified Payee. Canonical values are:

- **Std** – Standard (default) – this specifies a 'non-expedited' payment
- **Ovrngt** – Overnight
- **2ndDay** – Second Day
- **2ndDayEc** – Second Day Economy

RushOptFeeAmt
This specifies the fee associated with the selected Rush Option.

RushOptSurChg
This specifies the surcharge that is applicable for Rush payments sent to Puerto Rico. This surcharge is automatically applied to any Rush payment request to Puerto Rico.

NOTE: Not applicable for Transfers.

PmtPayFromAcctInfo

This required complex element contains information on the Pay From Account to be used to make the payment or Transfer to specified the Payee for this scheduled payment or Transfer.

NOTE: For <u>Company Subscribers</u>, Pay From Account Info is eligible for viewing ONLY if the requesting user has been granted permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***hide*** these elements from the requesting user.

PayFromID
This is the Bill Pay Services API identifier for the Pay From account specified for the scheduled payment or Transfer.

PayFromAcctID
The bank account number of the Pay From Account designated for this Payment or Transfer.

PayFromAcctType
The number(s) or character(s) that categorize the type of Pay From Account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name for the specified Pay From Account.

PayFromAcctDft
This indicates whether the Pay From Account is the Subscriber's designated 'default' account, which is the Pay From Account that is used in the event a Pay From Account is not specified when scheduling a payment or Transfer. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

> **ComName**
> This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

> **FirstName**
> This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

> **MiddleName**
> This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

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LastName

This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1

This is the Subscriber's street address.

StreetAddr2

This is the second line of the Subscriber's street address.

City

This is the name of the city in the Subscriber's address.

StateCode

This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

RecurPmtInfo

This optional complex element contains a package of data related to the recurring payment or recurring Transfer series (if the scheduled payment inquiry is for a recurring payment or Transfer) and includes the below simple elements and arrays necessary to support a recurring payment or Transfer series using the Bill Pay Services API.

StartPmtProcDt

This is the starting date for processing a recurring payment or recurring Transfer series.

StartPmtEstArvDt

This is the starting estimated arrival date (i.e., 'due date') for a recurring payment or recurring Transfer series.

PmtFreqUnits

This is the payment frequency for a recurring payment or recurring Transfer series. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment or Transfer. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**

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- **Every6Months**
- **Annual**

PmtDayOfWeek

This is the desired day of the week when recurring payments or Transfers will be made if the specified payment frequency is: 'Weekly', 'EveryOtherWeek' or 'Every4Weeks'. Canonical values are:

- **Mon** - Monday
- **Tues** - Tuesday
- **Wed** - Wednesday
- **Thur** - Thursday
- **Fri** - Friday

PmtDayInfoArray

This optional array contains the *PmtDayInfo* complex element, which includes a package of data related to the day(s) of the month a recurring payment or recurring Transfer should be made if the payment frequency has been specified as 'Monthly', 'TwiceMonthly', 'EveryOtherMonth', 'Every3Months', 'Every6Months' or 'Annual'. It includes the following simple elements:

PmtDayofMonth

This is the day of the month when the recurring payment or Transfer will be made (e.g., 1 - 31). This value will not be present if the desired payment day is the last business day of each month.

PmtUseLastBusDay

This indicates that payment or Transfer should be made on the last business day of the month. Canonical values are:

- **True**
- **False** (default)

PayDtInstr

This is the payment date instruction when a recurring payment or recurring Transfer date falls on a non-processing date (such as a weekend or holiday). Canonical values are:

- **Before** – Pay before (default)
- **After** – Pay after

PmtOccur

This is the number of <u>remaining</u> payment or Transfer occurrences for the recurring payment or recurring Transfer series.

PmtSerExpDt

This is the expiration date for the recurring payment or recurring Transfer series.

PmtSerFinite

This indicates whether the payment or Transfer series is finite or 'has no end'. If the series is <u>not</u> finite, recurring payments or Transfers will continue to be made until the series is terminated by the Subscriber. Canonical values are:

- **True**
- **False** (default)

PmtFinalAmt

This is the amount of the final payment on a loan. *The use of this element within the Bill Pay Services API is not available at this time.*

NOTE: For subscribers using 'non-StandAlone' Bill Pay Services, an email from the service provider ('iPay') is generated to the subscriber when a recurring payment series is about to expire (when one payment remains in the series). This email provides notification of the expiration of the series in the event the subscriber would like to extend the series if additional payments are needed.

No email notification is provided by the service provider ('iPay') to subscribers using 'StandAlone' Bill Pay Services. However, a BilPaySchedPmtInq request will provide all necessary information about the impending end of the series, in the event the service consumer opts to provide similar notification to the subscriber.

RetroToOrigPmtDt

This optional element is available for recurring payments or recurring Transfers that may be pended for additional payment approval, and specifies the desired action to be taken in the event a scheduled recurring payment or recurring Transfer is missed while awaiting payment approval. Canonical values are:

- **True**
- **False** (default)

NOTE: A value of 'false' will ignore a missed payment or Transfer and schedule the next [second] payment or Transfer in the series once payment approval is received. A value of 'true' will reschedule the original [first] payment or Transfer (with the originally specified amount) in order to catch up the series, as well as schedule the next [second] payment or Transfer in the series.

BilPayeeElecPmtInfo

This complex element contains a package of data related to the eBill that corresponds to the scheduled payment and includes the below simple elements and arrays for the Bill Pay Services API.

StmtDt

This is the statement date for the associated eBill.

PmtDueDt

This is the date the payment is due for the associated eBill.

StmtBal

This is the statement balance for the associated eBill. A 'statement balance' amount is available only for credit card ('CCA') account types.

CurBal

This is the total [outstanding] current balance of the Subscriber's account with the Payee. This amount may be different than the Statement Balance for the corresponding eBill. A 'current balance' amount is available only for credit card ('CCA') account types.

PmtAmtDue

This is the payment amount due for the associated eBill. This value is available only for 'non-credit card' accounts (account type not = 'CCA').

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MinPmtAmt

This is the minimum amount due for the associated eBill. A minimum amount due is available only for credit card ('CCA') account types.

ElecBilPmtAuto

This indicates whether the [eBill] payment was scheduled based on an automatic eBill payment schedule for the Payee. Canonical values are:

- **True**
- **False**

NOTE: Not applicable for Transfer accounts.

Array(s):

InvoiceInfoArray

This array can include a list of invoices, if applicable for the scheduled payment, and includes the *InvoiceInfo* complex element <u>for each line item entered for the Invoice</u>, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay's) identifier for the Invoice.

InvoiceNum

This is the invoice number assigned to the invoice by the Payee.

InvoiceCat

This indicates the invoice category for the entered line item. Canonical values are:

- **Invoice** - Invoice
- **Adj** – Adjustment
- **Disc** - Discount
- **Oth** - Other

InvoiceDesc

This optional element specifies a free-form text description of the invoice line item.

InvoiceAmtPos

This optional element indicates a positive amount value for the invoice line item.

InvoiceAmtNeg

This optional element indicates a negative amount value for the invoice line item (such as for an adjustment or discount).

NOTE: Not applicable for Transfers.

x_FutPmtInfoArray

This optional array contains a [limited] list of future payments or Transfers in the recurring payment or recurring Transfer series and includes the *FutPmtInfo* complex, which contains a package of data related to each future scheduled payment or Transfer in the recurring series. In order to optimize system performance, the number of future payments or Transfers returned in the future payment array will be limited and may not include all possible future payments or Transfers in the series.

(As with all 'x_' elements), this x_ array must be explicitly requested in the IncXtendElemArray included in the *BilPaySchedPmtInqRq* message (above), if future payment or future Transfer detail is desired in the response.

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The complex includes the following simple and complex elements for the Bill Pay Services API:

FutPmtID

This is the Bill Pay Services API identifier for the specified future payment or Transfer in the recurring payment or recurring Transfer series.

FutPmtStat

The status of the specified future payment or Transfer in the recurring payment or recurring Transfer series. Valid canonical values for all *future* payments/Transfers are:

- **Sched** – Scheduled
- **Pend** – Pending
- **Skip** - Skipped

NOTE: See Appendix C for Payment Status definitions.

FutPmtOrigProcDt

This is the 'original' or 'calculated' process date for the specified future payment or Transfer based solely on the specified frequency and payment day(s) specified for the recurring payment or recurring Transfer series.

FutPmtActualProcDt

This is the actual date the future payment or Transfer is scheduled to be processed, adjusted for non-processing dates.

FutPmtAmt

This is the amount of the specified future payment or Transfer.

FutPmtCmnt

This is the comment that will be stored with the specified future payment or Transfer. This is for the Subscriber's internal use only and is not included with the Payment.

FutPmtChkMemo

This is the memo to be added to a check associated with the specified future [check] payment.

FutPmtModUsrID

This is the user id of the individual who modified the specified future payment (if modification occurred).

FutPmtLastMainDt

This is the last date maintenance was performed on the specified future payment or Transfer. A date will be present only if the specified future payment or Transfer was previously modified.

SubCmntToPayee

This is the personalized message that will be added to the email or text sent to a P2P payment recipient notifying them that a payment has been made. Not applicable for Transfers. Message is limited to 500 characters for email notification (25 characters for text messages).

FutPmtPayFromAcctInfo

This required complex element contains information on the Pay From Account to be used to make the specified future payment or Transfer in the recurring payment or recurring Transfer series.

NOTE: For Company Subscribers, Pay From Account Info is eligible for viewing ONLY if the requesting user has been granted permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***hide*** these elements from the requesting user.

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PayFromID

This is the Bill Pay Services API identifier for the Pay From account specified for the specified future payment or Transfer.

PayFromAcctID

The bank account number of the Pay From Account designated for the specified future Payment orTransfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of Pay From Account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the specified Pay From Account.

PayFromAcctDft

This indicates whether the Pay From Account is the Subscriber's designated 'default' account, which is the Pay From Account that is used in the event a Pay From Account is not specified when scheduling a payment or Transfer. Canonical values are:

- **True**
- **False** (default value)

StartChkNum

This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId

This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat

This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:

- **Pend** - Pending
- **Apprv** - Approved

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Scheduled Payment Mod

Container: TPG_BillPayMaster.xsd
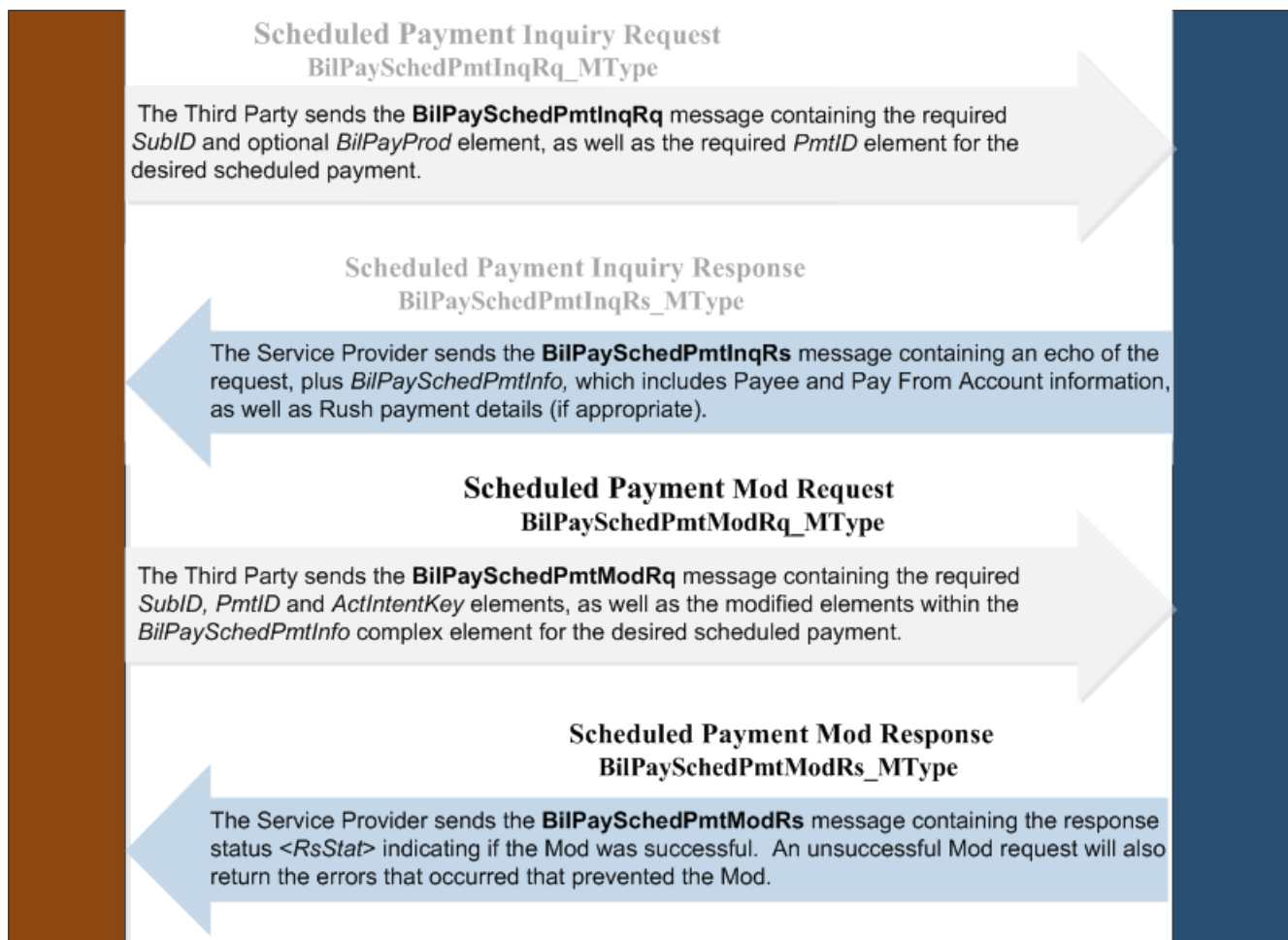**Message: BilPaySchedPmtMod**

The bill pay Scheduled Payment Modification <BilPaySchedPmtMod> will allow the service consumer to update (modify) certain elements for a Subscriber's scheduled single or recurring payment or Transfer, or delete (stop) the payment or Transfer entirely. For a recurring payment or recurring Transfer series, an option to delete (i.e., 'skip') a specific payment or Transfer, or delete the entire series, is available. The <SubID>, <PmtID> and Activity Intent Key <ActIntenKey> are required on the Mod request.

A request that provides the SubID, PmtID and ActIntentKey along with the delete element (<Dlt>) that is set to 'True' will convey to the service provider to remove (stop) the Scheduled Payment or Transfer for the specified Subscriber.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Scheduled Payment Modification service uses a typical exchange of MType messages to allow updates to scheduled single or recurring payment or Transfer information for a specific Subscriber, based on the required Subscriber ID and Payment ID. A Scheduled Payment Inquiry must always be performed prior to the modification request in order to retrieve the Activity Intent Key necessary for modification operations, as well as to ensure that the most up-to-date Payee information is reflected on the Scheduled Payment or Transfer.

Scheduled Payment Inquiry Request
BilPaySchedPmtInqRq_MType

The Third Party sends the **BilPaySchedPmtInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PmtID* element for the desired scheduled payment.

Scheduled Payment Inquiry Response
BilPaySchedPmtInqRs_MType

The Service Provider sends the **BilPaySchedPmtInqRs** message containing an echo of the request, plus *BilPaySchedPmtInfo,* which includes Payee and Pay From Account information, as well as Rush payment details (if appropriate).

Scheduled Payment Mod Request
BilPaySchedPmtModRq_MType

The Third Party sends the **BilPaySchedPmtModRq** message containing the required *SubID, PmtID* and *ActIntentKey* elements, as well as the modified elements within the *BilPaySchedPmtInfo* complex element for the desired scheduled payment.

Scheduled Payment Mod Response
BilPaySchedPmtModRs_MType

The Service Provider sends the **BilPaySchedPmtModRs** message containing the response status <RsStat> indicating if the Mod was successful. An unsuccessful Mod request will also return the errors that occurred that prevented the Mod.

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Request

The third party consumer forwards the *BilPaySchedPmtModRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPaySchedPmtModRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtID

This is the Bill Pay Services API identifier for the scheduled payment or Transfer.

ActIntentKey

This is the service provider key delivered to the service consumer via a preceding inquiry request, to be submitted in the modification request operation.

Dlt

This indicates a desire for deletion of the specified entity. For recurring payments/Transfers, a value of 'true' indicates a desire to delete (i.e. 'stop') the entire recurring payment or Transfer series immediately. Canonical values are:

- **True**
- **False** (default)

DltRecur

This element is applicable for recurring payments or recurring Transfer series' only and indicates a desire for deletion (i.e., 'stop') of the specified recurring payment or recurring Transfer series, but only after the currently scheduled payment or Transfer has been processed. Canonical values are:

- **True**
- **False** (default)

FutPmtID

This is the Bill Pay Services API identifier for the specified future payment or Transfer. If entered, eligible recurring payment or recurring Transfer updates will be applied to *that specified payment or Transfer* only.   If the mod request is for an update to the entire recurring payment or Transfer series, a value should not be entered.

SkipPmtOccur

This indicates whether the specified future payment or Transfer (above) in the recurring payment or recurring Transfer series should be skipped. Canonical values are:

- **True**
- **False** (default)

BilPaySchedPmtInfo

This complex element contains a package of data related to the Subscriber's specified scheduled payment or Transfer, and may include all of the simple and complex elements and arrays returned in the preceding Scheduled Payment Inquiry response. *However, the following are the only elements within this complex that are eligible for modification (add, update or delete) for a Scheduled Payment Modification request:*

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PmtProcDt

This is the date the *single* payment or Transfer is scheduled to be processed. (For recurring series dates, see the RecurPmtInfo complex below.)

PmtEstArvDt

This is the date the scheduled *single* payment or Transfer is estimated to be delivered to the Payee. (For recurring series dates, see the RecurPmtInfo complex below.)

PmtAmt

This is the amount of the scheduled single or recurring payment(s) or Transfer(s). If a FutPmtID is specified for this 'mod' request, only the amount of the specified future payment or Transfer in the recurring payment or recurring Transfer series will be updated. The recurring series information will remain unchanged.

PmtCmnt

This is the comment that will be stored with the single or recurring payment(s) or Transfer(s). This is for the Subscriber's internal use only and is not included with the Payment. If a FutPmtID is specified for this 'mod' request, only the comment associated with the specified future payment or Transfer in the recurring payment or recurring Transfer series will be updated. The recurring series information will remain unchanged.

PmtChkMemo

This is the memo to be added to a check associated with a single or recurring check payment. If a FutPmtID is specified for this 'mod' request, only the ChkMemo value associated with the specified future payment in the recurring payment series will be updated. The recurring series information will remain unchanged.

[NEW!] [Payment] PmtIntentType

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill** - Payment for a bill (default)
- **XferToSubFinInst** - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo** - *not supported by iPay at this time*
- **XferFrom** - *not supported by iPay at this time*

 NOTE: Until such time as additional Transfer options are available, the PmtIntentType of the Payment or Transfer will be automatically set to match the PmtIntentType of the Payee or Transfer account. iPay will ignore a value submitted for this element.

SubCmntToPayee

This is the personalized message that will be added to the email or text sent to a P2P payment recipient notifying them that a payment has been made. Entry is limited to 500 characters for email notification (25 characters for text messages).

PmtPayeeInfo

This optional complex contains the package of data related to the Payee of the scheduled payment or Transfer and includes the following simple and complex elements and arrays:

PayeeID

This is the Bill Pay Services API identifier for the Payee to whom the single or recurring payment or Transfer is scheduled. This element is not modifiable for a scheduled payment or Transfer, but is necessary for the Mod request if newly specified Rush payment options are included (below).

PayeeAddrInfo

This complex is required for Rush payments (only), and provides the ability to specify the Payee's Rush Address to be used for the scheduled payment. An address is required only for Overnight and 2nd Day rush payment options, as these payments are always sent via check. This complex includes the following simple and complex elements:

PayeeAddrID

This is the Bill Pay Services API identifier for the specified Rush address for the Payee.

This is the only element required if the Rush Address provided via the preceding Payee Inquiry is the desired address to be used for the Rush payment.

PayeeAddrType

This specifies the type of payee address being submitted. For Rush payments, the only applicable Payee Address Type is 'Rush'. Canonical values are:

o   **Prim** – Primary (default)
o   **Rush** - Rush

PayeeAddr

This complex element contains elements representing the Payee's Rush address, and is required for the Rush payment if no Rush Address exists for the Payee (no Rush Address information was returned in the preceding Payee Inquiry), or the Subscriber chooses not to use the Rush Address provided via the Payee Inquiry.

StreetAddr1
This is the Payee's street address for Rush payments.

StreetAddr2 (optional)
This is the second line of the Payee's street address for Rush payments.

City
This is the name of the city in the Payee's Rush payment address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

PmtPayFromAcctInfo

This required complex element contains information on the Pay From Account to be used to make the payment or Transfer to specified the Payee for this scheduled single or recurring payment or Transfer.

PayFromID

This is the Bill Pay Services API identifier for the Pay From account specified for the scheduled single or recurring payment or Transfer.

If a FutPmtID is specified for this 'mod' request, only the pay from account associated with the specified future payment or Transfer in the recurring payment or recurring Transfer series will be updated. The recurring series information will remain unchanged.

NOTE: Pay From Account information (other than the Subscriber's default account designated for the Payee) can be specified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

PmtRushOptInfo

This optional complex contains the rush payment details that were specified for the given scheduled [single] payment and includes the following simple elements:

RushOpt

This represents the desired option for expediting (rushing) the payment to the specified Payee. Canonical values are:

- **Std** – Standard (default) – this specifies a 'non-expedited' payment
- **Ovrngt** – Overnight
- **2ndDay** – Second Day
- **2ndDayEc** – Second Day Economy

NOTE: Not applicable for Transfers.

RecurPmtInfo

This optional complex element contains a package of data related to the recurring payment or recurring Transfer series (if the scheduled payment mod is for a recurring payment or recurring Transfer) and includes the below simple elements and arrays necessary to support a recurring payment or Transfer series using the Bill Pay Services API.

StartPmtProcDt

If updated, this will be the [new] starting date for processing the recurring payment or recurring Transfer series.

StartPmtEstArvDt

If updated, this will be the [new] starting estimated arrival date (i.e., 'due date') for the recurring payment or recurring Transfer series.

PmtFreqUnits

This is the payment frequency for a recurring payment or recurring Transfer series. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**
- **Every6Months**
- **Annual**

PmtDayOfWeek

This is the desired day of the week when recurring payments or recurring Transfers will be made if the specified payment frequency is: 'Weekly', 'EveryOtherWeek' or 'Every4Weeks'. Canonical values are:

- **Mon** - Monday
- **Tues** - Tuesday
- **Wed** - Wednesday
- **Thur** - Thursday
- **Fri** - Friday

PmtDayInfoArray

This optional array contains the *PmtDayInfo* complex element, which includes a package of data related to the day(s) of the month a recurring payment or recurring Transfer should be made if the payment frequency has been specified as 'Monthly', 'TwiceMonthly', 'EveryOtherMonth', 'Every3Months', 'Every6Months' or 'Annual'. It includes the following simple elements:

PmtDayofMonth

This is the day of the month when the recurring payment or Transfer will be made (e.g., 1 - 31). This value should not be entered if the desired payment/Transfer day is the last business day of each month.

PmtUseLastBusDay

This indicates that payment or Transfer should be made on the last business day of the month. Canonical values are:

- **True**
- **False** (default)

PayDtInstr

This is the payment date instruction when a recurring payment or recurring Transfer date falls on a non-processing date (such as a weekend or holiday). For Institutions using the 'Due Date' Payment Date model, this value must be set to 'Pay Before'. Any other entered value will be ignored. Canonical values are:

- **Before** – Pay before (default)
- **After** – Pay after

PmtOccur

This is the number of payment or Transfer occurrences desired for the recurring payment or recurring Transfer series.

PmtSerExpDt

This is the expiration date for the recurring payment or recurring Transfer series.

PmtSerFinite

This indicates whether the payment or Transfer series is finite or 'has no end'. If the series is *not* finite, recurring payments/Transfers will continue to be made until the series is terminated by the Subscriber. Canonical values are:

- **True**
- **False**

RetroToOrigPmtDt

This optional element is available for recurring payments or recurring Transfers that may be pended for additional payment approval, and specifies the desired action to be taken in the event a scheduled recurring payment or Transfer is missed while awaiting payment approval. A Subscriber Inquiry can be performed to determine if payment approvals are required for the Subscriber. Canonical values are:

- **True**
- **False** (default)

NOTE: Setting this value to 'false' will ignore a missed payment/Transfer and schedule the next [second] payment or Transfer in the series once payment approval is received. A response of 'true' will reschedule the original [first] payment or Transfer (with the originally specified amount) in order to catch up the series, as well as schedule the next [second] payment or Transfer in the series.

Array(s):

InvoiceInfoArray

This array is applicable **for Company Subscribers only** at this time and can include a list of invoices, if applicable for the scheduled payment, and includes the *InvoiceInfo* complex element <u>for each line item needed for the Invoice</u>, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay's) identifier for the Invoice.
This element should be left blank when *adding a* new invoice line item, as this value will <u>not</u> be available to the Service Consumer until the Payment Add request has been successfully completed.

InvoiceNum

This is the invoice number assigned to the invoice by the Payee. A maximum of 20 alphanumeric characters is allowed.

InvoiceCat

This indicates the invoice category for the entered line item. Canonical values are:

- **Invoice** - Invoice
- **Adj** – Adjustment
- **Disc** - Discount
- **Oth** - Other

InvoiceDesc

This optional element specifies a free-form text description of the invoice line item. A maximum of 100 alphanumeric characters is allowed.

InvoiceAmtPos

This optional element indicates a positive amount value for the invoice line item.

InvoiceAmtNeg

This optional element indicates a negative amount value for the invoice line item (such as for an adjustment or discount).

NOTE: Not applicable for Transfers.

Scheduled Payment Mod Behaviors

- iPay will ignore all element values other than those specified above, if passed on a Scheduled Payment Mod request.

- In order to change any Scheduled Payment or Transfer elements <u>other</u> than those specified above, a delete (stop) of the existing scheduled payment or Transfer record is required and the payment or Transfer must be rescheduled with the new values.

- A request to modify a Scheduled Payment or Transfer that is processing today cannot be accommodated after the FI's designated Payment Cutoff Time.

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- If a 'delete' (stop) of the Scheduled Payment or Transfer is requested, any other information that may have been modified within the Mod request will be ignored and no update(s) will occur.

  o The payment or Transfer will be placed in 'Stopped' Payment Status.

- If the scheduled payment or Transfer's Estimated Arrival Date (i.e., 'Due Date') is changed, the Process Date will be adjusted automatically by the service provider.

  o Similarly, if the scheduled payment or Transfer's Process Date is changed, the Estimated Arrival Date will be adjusted automatically by the service provider.

- For *Company Subscribers:*

  o Scheduled [Bill] Payments can be modified only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Bill Payments', and for the specified Payee.

  o Email/P2P Payments can be modified only if the requesting user has been granted permission to 'Schedule Email Payments', and for the specified Email Payee.

  o *[NEW!]* Transfer payments can be modified only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Transfers' (i.e., 'CanTransfer'), and for the specified Transfer account.

  o Pay From Account information (other than the Subscriber's default account designated for the Payee) can be modified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.

  o Modification of the amount or Pay From Account on a Scheduled Payment or Transfer that was previously approved for payment (where additional payment approval is required) will require additional payment approval and will be 're-pended' until new payment approval is obtained.

  o Invoice information for a scheduled payment can be added or modified.

    ▪ There is no limit to the number of invoice line items that can be added to a single payment.
    ▪ Multiple Invoice Numbers can be included in a single payment.
    ▪ Only one amount (either Pos or Neg) can be entered per invoice line item.
    ▪ Invoice information is NOT allowed for recurring payments or Transfers.

- **Rush Payment** modification options:

  o A 'standard' (non-expedited) payment can be modified to a Rush payment using any Rush Option currently available for the specified Payee, *provided* the Process Date has not passed.

    ▪ For Overnight or 2nd Day rush payments (which are delivered via check), the Payee's desired Rush Address must be specified as either of the following:

      • the Payee's *PayeeAddrID,* if the Rush Address provided for the Payee in the preceding Payee Inquiry is the desired address; or

      • a new Rush Address for the Payee (*PayeeAddr*), if no Rush Address exists for the Payee (no Rush Address information was returned in the preceding Payee Inquiry), or the Subscriber chooses not to use the Rush Address provided via the Payee Inquiry.

    ▪ iPay will fault a request to change the scheduled payment to a Rush payment if the payment's specified Process Date has already passed.

  o iPay will fault an Scheduled Payment mod request if _both_ the Payee's Rush Address ID and Payee's Rush Address are passed at the same time, as the intended Rush payment Address is unclear.

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o iPay will also fault a Scheduled Payment Mod request if a Rush Option other than 'standard' has been specified, but *no* Payee Rush Address information is included.

o The Process Date and/or Estimated Arrival Date will be adjusted by the service provider to accommodate the newly specified Rush Option.

o All 'Rush' payments are subject to the same 'Expedited Payment' rules as when initially scheduling a 'Rush' Payment (See Payment Add details).

- A scheduled payment can also be modified to a 'standard' (non-expedited) payment *from* a 2nd Day Economy Rush payment (only).

    NOTE: All corresponding 'Rush' details (e.g., Fees, Rush Address, etc) will be removed from the scheduled payment record.

- **Recurring Payment** modification options:

    o Specification of a Future Payment ID in the 'Mod' request indicates that the user is intending to update a single [current or future] payment or Transfer instance in the recurring payment or recurring Transfer series.

        ▪ Any [eligible] modifications included in the RecurPmtInfo complex will be applied to that payment or Transfer only.

        ▪ If updates to recurring series information is included in the 'Mod' request and NO Future Payment ID is specified, the updates will be applied to the entire recurring series.

    o Modification of any of the elements that affect the Payment Date(s) of the recurring payment or recurring Transfer series (e.g., Starting Payment Date, Frequency, Payment Day(s), etc.) will prompt a recalculation of the payment dates for all currently scheduled and future payments or Transfers associated with the series.

        ▪ Any modifications to specified future payments or Transfers in the original series will be lost.

    o To stop the series, or skip a single payment or Transfer within the series:

        ▪ An entry in the '**Dlt**' element indicates a desire for immediate deletion (i.e., 'stop') of the entire recurring payment or recurring Transfer series. The currently scheduled payment or Transfer and all future payments or Transfers within the series will *NOT* be processed.

        ▪ An entry in the '**DltRecur**' element indicates a desire for deletion (i.e., 'stop') of the specified recurring payment or recurring Transfer series, but only after the currently scheduled payment or Transfer has been processed. (In other words, a delete of the 'recurring' aspect of the series is desired, but not of the currently scheduled payment or Transfer.)

        ▪ An entry in the '**SkipPmtOccur'** element, along with a specification of a FutPmtID, indicates that only the specified future payment or future Transfer should be skipped; all other payments or Transfers within the recurring payment or recurring Transfer series will continue to be processed.

            - Once a future payment or Transfer has been 'skipped', no further modifications are allowed for this future payment/Transfer, including the ability to 'unskip' or 'resume' the payment/Transfer.

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Response

The service provider (iPay) returns the *BilPaySchedPmtModRs* **response** message to the service consumer.

The element(s) contained within the *BilPaySchedPmtModRs* response applicable for the Bill Pay Services API is/are:

RsStat
This specifies the status of the mod request. Canonical values are:
- **Success**
- **Fail**

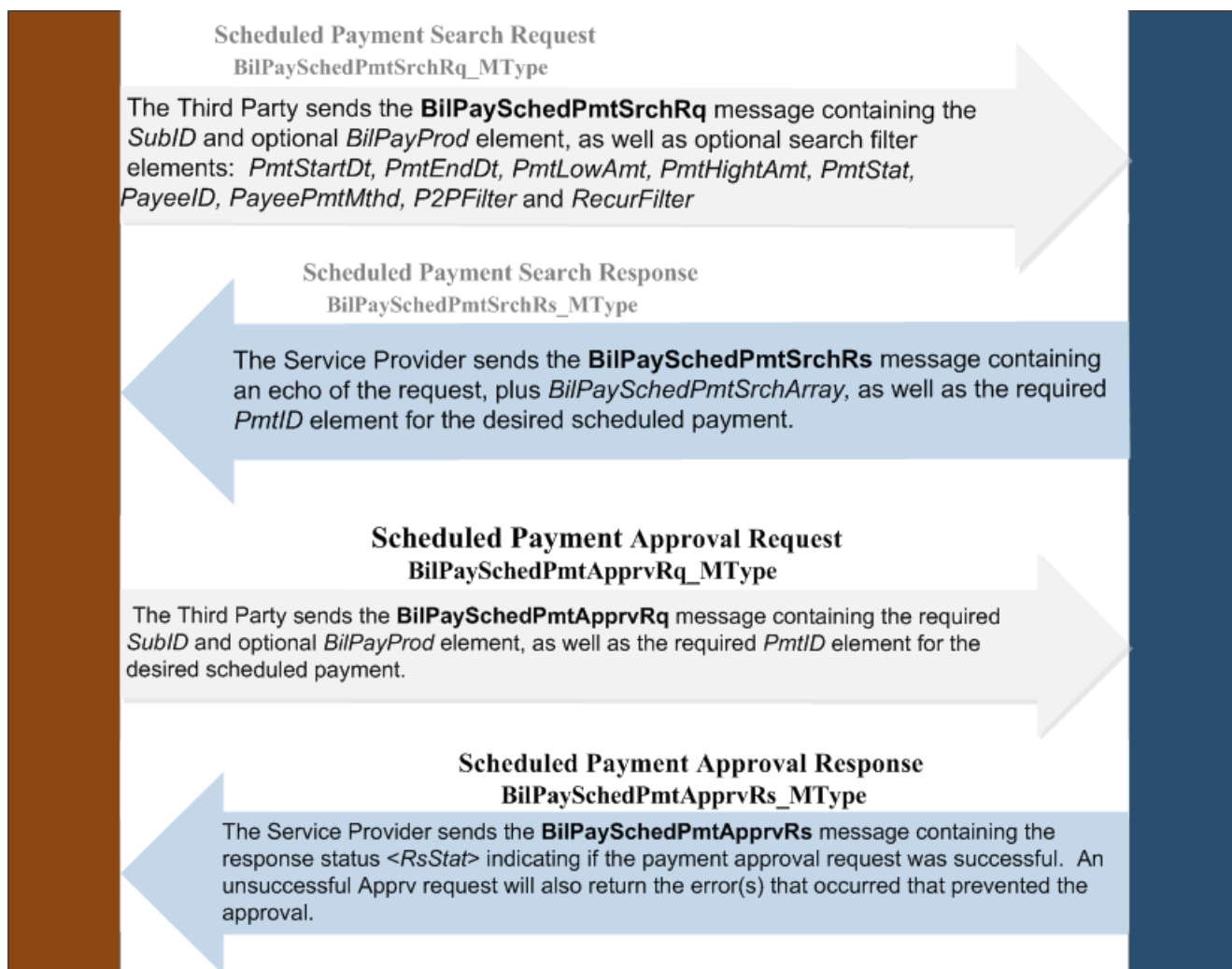# Scheduled Payment Approval

Container: TPG_BillPayMaster.xsd
Message: BilPaySchedPmtApprv

The bill pay Scheduled Payment Approval <BilPaySchedPmtApprv> will allow the Service Consumer to provide a payment approval from an authorized approver for a scheduled payment or Transfer that requires additional approval. The subscriber identifier element <SubID> and Payment ID <PmtID> are required on the Payment Approval request.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Scheduled Payment Approval service uses a typical exchange of MType messages to allow the authorized requesting user to approve a scheduled payment or Transfer that has been pended for additional payment approval. A Scheduled Payment Search is suggested prior to the approval request in order to retrieve the Payment ID <PmtID> necessary for payment approval operations.

Scheduled Payment Search Request
BilPaySchedPmtSrchRq_MType

The Third Party sends the **BilPaySchedPmtSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *PmtStartDt, PmtEndDt, PmtLowAmt, PmtHightAmt, PmtStat, PayeeID, PayeePmtMthd, P2PFilter* and *RecurFilter*

Scheduled Payment Search Response
BilPaySchedPmtSrchRs_MType

The Service Provider sends the **BilPaySchedPmtSrchRs** message containing an echo of the request, plus *BilPaySchedPmtSrchArray*, as well as the required *PmtID* element for the desired scheduled payment.

Scheduled Payment Approval Request
BilPaySchedPmtApprvRq_MType

The Third Party sends the **BilPaySchedPmtApprvRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PmtID* element for the desired scheduled payment.

Scheduled Payment Approval Response
BilPaySchedPmtApprvRs_MType

The Service Provider sends the **BilPaySchedPmtApprvRs** message containing the response status <RsStat> indicating if the payment approval request was successful. An unsuccessful Apprv request will also return the error(s) that occurred that prevented the approval.

Request

The third party consumer forwards the *BilPaySchedPmtApprvRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPaySchedPmtApprvRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtID

This is the Bill Pay Services API identifier for the scheduled payment or Transfer that requires payment approval.

NOTES:

1) The Subscriber Associated User ID <*SubAssocUsrID*> (i.e., 'Subuser ID') of the requestor providing payment approval should be entered in the AuthenUsrCred element in the request Message Header. If NO <*SubAssocUsrID*> is included in this header field, the Service Provider will assume the payment approval request is from the Primary Account Holder.

2) In order to successfully execute a payment approval request, the requesting user must have been granted the 'Approve Transactions' permission.

3) If approval is received for a pending recurring payment or recurring Transfer series, the 'RetroToOrigPmtDate' element for the Scheduled Payment or Transfer will be evaluated to determine if a missed payment should be rescheduled (should a payment or Transfer have been missed); or ignore any missed payment(s) and simply schedule the next available payment or Transfer in the recurring series.

Response

The service provider (iPay) returns the *BilPaySchedPmtApprvRs* **response** message to the service consumer.

The element(s) contained within the *BilPaySchedPmtApprvRs* response applicable for the Bill Pay Services API is/are:

RsStat

This specifies the status of the mod request. Canonical values are:

- **Success**
- **Fail**

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Payment History Search

Container: TPG_BillPayMaster.xsd
Message: BilPayPmtHistSrch

The bill pay Payment History Search <BilPayPmtHistSrch> is designed to allow the consumer to perform searches on payment history and will return all processed single and/or recurring payments and/or Transfers for a particular bill pay product and Subscriber.

The request provides the following optional filters:

- **Payment Start Date <PmtStartDt>**
- **Payment End Date <PmtEndDt>**
- **Payment Low Amount <PmtLowAmt>**
- **Payment High Amount <PmtHightAmt>**
- **Payment Status <PmtStat> - default = All**
- *[NEW!]* **Payment Intention Type <PmtIntentType> - default = All**
- **Payee ID <PayeeID>**
- **Payee Payment Method <PayeePmtMthd>**
- **P2P Payees <P2PFilter>**
- **Recurring Payments <RecurFilter>**
- *[NEW!]* **Transfers <XferFilter>**

When there exists more than one filter on the request, the resulting selection is based on the combined effect of the filters (i.e., 'and' operator). Each added filter option will further restrict the result set.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow

The Payment History Search service uses a typical exchange of MType messages to retrieve processed Payment and/or Transfer information for a specified product and Subscriber, based on optional filters.

Payment History Search Request
BilPayPmtHistSrchRq_MType

The Third Party sends the **BilPayPmtHistSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *PmtStartDt, PmtEndDt, PmtLowAmt, PmtHightAmt, PmtStat. PayeeID, PayeePmtMtdh, P2PFilter* and *RecurFilter*

Payment History Search Response
BilPayPmtHistSrchRs_MType

The Service Provider sends the **BilPayPmtHistSrchRs** message containing an echo of the request, plus *BilPayPmtHistSrchArray*.

Request

The third party consumer forwards the *BilPayPmtHistSrchRq* **request** message to the Service Provider.

The below elements contained within the *BilPayPmtHistSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd
This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID
This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtStartDt
The date that designates the starting point for Payment and/or Transfer [Process] date selections. If no Start Date is specified, the Bill Pay Services API will return all available processed payments and/or Transfers that have a Process Date that is less than the specified End Date.

PmtEndDt
The date that designates the ending point for Payment and/or Transfer [Process] date selections. If no End Date is specified, the Bill Pay Services API will return all available processed payments and/or Transfers that have a Process Date that is greater than the specified Start Date.

NOTE: If no Date range is specified, the Bill Pay Services API will return all available payments and/or Transfers that satisfy all other filter requirements.

PmtLowAmt
This is the value that designates a starting point for payment and/or Transfer amount selections.

This value is the lowest amount to begin searching when a range of amounts is used to refine the payment search.   If no value is specified, the Bill Pay Services API will utilize a default value of $0 for this filter parameter.

PmtHighAmt
This is the value that designates a ending point for payment and/or Transfer amount selections.

This value is the highest amount to begin searching when a range of amounts is used to refine the payment search.   If no value is specified, the Bill Pay Services API will utilize a default value of 'null' (i.e., no upper payment amount limit) for this filter parameter.

PmtStat
The status of the payment or Transfer. Valid canonical values for all *processed* (i.e., 'non-pending') payments are:
- **All** – All (default)
- **Proc** – Processed
- **Pd** – Paid
- **Stop** – Stopped
- **Canc** – Canceled
- **Ret** – Returned
- **Sttl** – Settled
- **ReSbm** - Resubmitted
- **Rfd** - Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that received payment approval)

NOTE: See Appendix C for Payment Status definitions.

[NEW!] [Payment] PmtIntentType

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill** - Payment for a bill (default)
- **XferToSubFinInst** - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo** - *not supported by iPay at this time*
- **XferFrom** - *not supported by iPay at this time*

If no Payment Intent Type is specified, the Bill Pay Services API will return all available processed Payments and/or Transfers that satisfy all other filter requirements

PayeeID

This is the Bill Pay Services API identifier for the Payee to whom the payment(s) and/or Transfer(s) have been made.

If no Payee is specified, the Bill Pay Services API will return processed payments and/or Transfers for all Payees that satisfy all other specified filters.

PayeePmtMthd

This is the payment method for the Payee associated with the processed payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

P2PFilter

This is used to filter payments associated with P2P (i.e., 'Email') Payees into (or from) the search results. Canonical values are:

- **Incl** – Include P2P payments (default)
- **OnlyP2P** – Only return P2P payments
- **Excl** - Exclude P2P payments

RecurFilter

This is used to filter recurring payments/Transfers into (or from) the search results. Canonical values are:

- **Incl** – Include recurring payments (default)
- **OnlyRecur** – Only return recurring payments
- **Excl** - Exclude recurring payments

[NEW!] XferFilter

This is used to filter Transfer payments into (or from) the search results. Canonical values are:

- **Incl** – Include Transfers (default)
- **OnlyXfer** – Only return Transfer payments
- **Excl** - Exclude Transfer payments

NOTE: If any value entered directly conflicts with another entered filter parameter (i.e., the parameters are 'mutually exclusive'), NO results will be returned.

Response

The service provider (iPay) returns the *BilPayPmtHistSrchRs* **response** message to the service consumer, which returns a list of all processed single and/or recurring Payments for the specified product and Subscriber that meet the given search criteria.

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Notes:

1) Other types of Payments, such as Gift Payments, etc, will not be included in the result set at this time.

2) The amount of history that is available to be viewed is determined by the Financial Institution's Extended Storage specification. For instance, if Extended Storage is set at 18 months, the maximum amount of Payment (or Transfer) History available for any Subscriber associated with that FI will be 18 months.

The **array(s)** contained within the *BilPayPmtHistSrchRs* response applicable for the Bill Pay Services API are:

BilPayPmtHistSrchArray

This array returns an array of responses for the Payment History search and includes the *BilPayPmtHistSrchInfo* complex element for each single or recurring Payment and/or Transfers returned, and includes the following simple and complex elements:

PmtID
This is the Bill Pay Services API identifier for the Payment or Transfer.

PayeeID
This is the ID of the Payee or Transfer account.

PayeeName
This is the name of the Payee or Transfer account.

PayeeNickname
This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PmtProcDt
This is the date the payment or Transfer was processed.

PmtEstArvDt
This is the date the payment or Transfer was estimated to be delivered to the Payee.

PmtAmt
This is the amount of the payment or Transfer.

PmtStat
This is the status of the payment or Transfer. Valid canonical values for all *processed* payments/Transfers are:
- **Proc** – Processed
- **Pd** – Paid
- **Stop** – Stopped
- **Canc** – Canceled
- **Ret** – Returned
- **Sttl** – Settled
- **ReSbm** - Resubmitted
- **Rfd** - Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that received payment approval)

NOTE: See Appendix C for Payment Status definitions.

PmtMthd
This is the payment method used for the Payment or Transfer (this may be different than the original Payment Method specified for the Payee). Canonical values are:
- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

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PmtFreqUnits

This is the payment frequency for the *recurring payment or recurring Transfer series* at the time the payment/Transfer was processed. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment or Transfer. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**
- **Every6Months**
- **Annual**

P2PType

This indicates whether the payment is 'P2P payment' (for a 'P2P/Email payee type'). Canonical values are:

- **True**
- **False** (default)

ElecMerBilPmt

This indicates whether the payment is an 'eBill payment' (i.e., has an associated eBill). Canonical values are:

- **True**
- **False**

[NEW!] **[Payment] PmtIntentType**

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

PayFromAcctInfo

This complex element contains information on the Pay From Account designated for the specified Payment or Transfer.

   NOTE: For Company Subscribers, Pay From Account Info is eligible for viewing ONLY if the requesting user has been granted permission to Designate Pay From Account information. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should ***hide*** these elements from the requesting user.

   PayFromID
   This is the Bill Pay Services API identifier for the Pay From account specified for the Payment or Transfer.

   PayFromAcctID
   The bank account number of the Pay From Account designated for this Payment or Transfer.

PayFromAcctType
The number(s) or character(s) that categorize the type of pay from account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name for the Subscriber's Pay From Account.

PayFromAcctDft
This indicates whether the Pay From Account is the 'default' account, to be used in the event a pay from account is not specified when scheduling a payment or Transfer. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

PayFromAcctOwnName
This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

    ComName
    This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

    FirstName
    This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

    MiddleName
    This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

    LastName
    This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

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PayFromAcctOwnAddr
This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

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Payment History Inquiry

Container: TPG_BillPayMaster.xsd
Message: BilPayPmtHistInq

The bill pay Payment History Inquiry <BilPayPmtHistInq> will return element details for a specific single or recurring payment or Transfer made for a given Subscriber. The subscriber identification element <SubID> and Payment ID <PmtID> are required on the request.

The service provider will include the additional payment or Transfer status history, payment check status history, and payment check tracking information elements when the x_PmtStatHistArray, x_PmtChkStatHistArray, and x_PmtChkTrakInfo are included in the extended element array complex request. To receive eBill information pertaining to the payment, the request must include the x_ElecBilPmtInfo complex in the extended element array complex.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The Payment History Inquiry service uses a typical exchange of MType messages to retrieve payment or Transfer information for a given Subscriber, based on the required Subscriber ID and Payment ID.   If the Payment ID is not known, the third party consumer must first perform a Payment History Search to obtain the Payment ID for the desired payment or Transfer.

Payment History Search Request
BilPayPmtHistSrchRq_MType

The Third Party sends the **BilPayPmtHistSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *PmtStartDt, PmtEndDt, PmtLowAmt, PmtHightAmt, PmtStat. PayeeID, PayeePmtMtdh, P2PFilter* and *RecurFilter*

Payment History Search Response
BilPayPmtHistSrchRs_MType

The Service Provider sends the **BilPayPmtHistSrchRs** message containing an echo of the request, plus *BilPayPmtHistSrchArray,* as well as the required Payment ID *<PmtID>* for the desired payment.

Payment History Inquiry Request
BilPayPmtHistInqRq_MType

The Third Party sends the **BilPayPmtHistInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *PmtID* element for the desired payment.

Payment History Inquiry Response
BilPayPmtHistInqRs_MType

The Service Provider sends the **BilPayPmtHistInqRs** message containing an echo of the request, plus *BilPayPMTHistInfo* for the specified payment.

Request

The third party consumer forwards the *BilPayPmtHistInqRq* **request** message to the Service Provider.

The below elements contained within the *BilPayPmtHistInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

PmtID

This is the Bill Pay Services API identifier for the processed payment or Transfer.

IncChkImg

This is used to request check image information. (Not applicable for Transfers.) Canonical values are:

- **True**
- **False**

If the specified payment was not made by check, any entry for this element will be ignored.

IncXtendElemArray

This array contains a list of extended 'x_' elements that are to be included in the response. Valid canonical values for the Bill Pay Services API are:

- **x_PmtStatHistArray**
- **x_PmtChkStatHistArray** (not applicable for Transfers)
- **x_PmtChkTrakInfo**   (not applicable for Transfers)
- **x_ElecBilPmtInfo**   (not applicable for Transfers)

Response

The service provider (iPay) returns the *BilPayPmtHistInqRs* **response** message to the service consumer, which returns a package of payment information for the specified single or recurring payment or Transfer.

The simple and complex elements contained within the *BilPayPmtHistInqRs* response applicable for the Bill Pay Services API are:

PmtCrtDt

The date the payment or Transfer was created by the Subscriber.

PmtStat

The status of the payment or Transfer. Valid canonical values for all *processed* payments are:

- **Proc** – Processed
- **Pd** – Paid
- **Stop** – Stopped
- **Canc** – Canceled
- **Ret** – Returned
- **Sttl** – Settled
- **ReSbm** - Resubmitted
- **Rfd** – Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that required payment approval)

   NOTE: See Appendix C for Payment Status definitions.

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PmtMthd

This is the payment method that was used for the payment or Transfer. Applicable canonical values for the actual payment or Transfer are:

- **Chk** – Check
- **Elec** – Electronic

BilPayPmtInfo

This complex element contains a package of data related to a payment or Transfer and includes the below simple and complex elements and arrays for the Bill Pay Services API.

PmtProcDt

This is the date the payment or Transfer was processed.

PmtEstArvDt

This is the date the payment or Transfer was estimated to be delivered to the Payee.

PmtAmt

This is the amount of the payment or Transfer.

PmtCmnt

This is the comment that was stored with the payment or Transfer. This is for the Subscriber's internal use only and was not included with the Payment.

PmtChkMemo

This is the memo that was added to a check payment, if the payment was made by check.

SubCmntToPayee

This is the personalized message that was added to the email or text sent to a P2P payment recipient notifying them that a payment was made.

[NEW!] **[Payment] PmtIntentType**

This represents the payment intention for the Payment(s) or Transfer(s). Canonical values are:

- **PayBill**   - Payment for a bill (default)
- **XferToSubFinInst**   - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo**   - *not supported by iPay at this time*
- **XferFrom**   - *not supported by iPay at this time*

NOTE: Until such time as additional Transfer options are available, the PmtIntentType of the Payment or Transfer will match the PmtIntentType of the Payee.

PmtPayeeInfo

This complex contains the package of data related to the Payee of the payment or Transfer and includes the following simple and complex elements and arrays:

PayeeID

This is the ID of the Payee to whom the payment or Transfer was made.

PayeeName

This is the name of the Payee to whom the payment or Transfer was made.

PayeeNickname

This represents the Subscriber's 'nickname' for the Payee or Transfer account.

PayeeClsf

This specifies the classification of the Payee or Transfer account. Canonical values are:

- **Comp** (Company)
- **Indv** (Individual/Person)
- *[NEW!]* **FinInst** (Financial Institution) – to be used for Transfer accounts

PayeePmtMthd

This is the 'default' payment method specified for the Payee or Transfer account. This may *not* be the actual Payment method utilized for the payment or Transfer. Canonical values are:

- **Chk** – Check
- **Email** – Email (P2P) – electronic, but set up via an email process
- **Elec** – Electronic

[NEW!] **[Payee] PmtIntentType**

This represents the payment intention of the Payee or Transfer account. Canonical values are:

- **PayBill** - Payment for a bill (default)
- **XferToSubFinInst** - Transfer to Subscriber account at external Financial Institution (Outbound)
- **XferFromSubFinInst** - *not supported by iPay at this time*
- **XferTo** - *not supported by iPay at this time*
- **XferFrom** - *not supported by iPay at this time*

SubMerAcctId

This is the Subscriber's account number with the Merchant/Payee. For Transfer accounts, this value will be the Account Holder's account number (of the Transfer account).

If the Subscriber's name (Last Name, First Name) is being used for this element, the value will be truncated at 50 characters.

If no value exists for this element, the default value returned will be 'N/A'.

SubMerPayerName

This is the Subscriber's name understood by the merchant and is used to override the Subscriber's name on record.

PayeeAddrInfo

This complex contains a package of data related to the Payee's address specified for the payment. In the case of an electronic payment, this will simply be the Payee's 'primary' or 'standard' address. No address will be available for Transfer accounts. This complex includes the following simple and complex elements:

PayeeAddrID

This is the Bill Pay Services API identifier for the specified address for the Payee.

PayeeAddrType

This specifies the type of payee address that was utilized for the payment. Canonical values are:

- o **Prim** – Primary (default)

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     o **Rush** - Rush

PayeeAddr
This complex element contains elements representing the Payee's address utilized for the payment. For Rush payments made by check, this will be the Payee's specified 'Rush' address.

StreetAddr1
This is the Payee's street address.

StreetAddr2 (optional)
This is the second line of the Payee's street address.

City
This is the name of the city in the Payee's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

PayeePhoneArray
This array contains an array of phone information for the specified Payee, if available (not applicable for all Payees).

PhoneNum
This represents a phone number, including area code, for the Payee. This is the Payee's Work (Business) number.

PhoneType
This specifies the type of phone number contained in the PhoneNum element (above). Only the Work phone number is valid for Payees. Canonical values for the Bill Pay Services API are:
- **Work**

PayeeEmailArray
This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee, if available (not applicable for all Payees).

EmailAddr
This element specifies the email address of the Payee. *This is a valid element only if the Payee's Payment Method Type = 'Email'.*

EmailType
This element specifies to whom the email address applies. Applicable canonical values for a Payee for the Bill Pay Services API are:
- **Prim** – Primary (default)

PmtRushOptInfo
This optional complex contains the rush payment details that were specified for the given payment, if the payment was a rush payment, and includes the following simple elements:

RushOpt
This represents the specified option for expediting (rushing) the payment to the specified Payee. Canonical values are:

- **Std** – Standard (default) – this specifies a 'non-expedited' payment
- **Ovrngt** – Overnight

- **2ndDay** – Second Day
- **2ndDayEc** – Second Day Economy

RushOptFeeAmt
This specifies the fee associated with the selected Rush Option.

RushOptSurChg
This specifies the surcharge that was applied for the Rush payment, if the Rush payment was sent to Puerto Rico.

PmtPayFromAcctInfo

This required complex element contains information on the Pay From Account that was used to make the payment or Transfer to the specified Payee or Transfer account.

NOTE: For <u>Company Subscribers</u>, Pay From Account Info is eligible for viewing ONLY if the requesting user has been granted permission to 'Designate Pay From Account' information. Therefore, if the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to 'Hid', which indicates that the Service Consumer should *<u>hide</u>* these elements from the requesting user.

PayFromID
This is the Bill Pay Services API identifier for the Pay From account specified for the payment or Transfer.

PayFromAcctID
The bank account number of the Pay From Account designated for this Payment or Transfer.

PayFromAcctType
The number(s) or character(s) that categorize the type of Pay From Account. Canonical values are:
- **D** – Checking
- **S** – Savings

PayFromAcctName
This is the account name for the specified Pay From Account.

PayFromAcctDft
This indicates whether the Pay From Account is the Subscriber's designated 'default' account, which is the Pay From Account that is used in the event a Pay From Account was not specified when the payment or Transfer was scheduled. Canonical values are:
- **True**
- **False** (default value)

StartChkNum
This is the check number that will be used to start check payments from the specified pay from account. This will be available only if the Subscriber's Product allows specification of a starting check number.

PayFromIntsRtId
This is the routing transit number or ABA number of the financial institution where the subscriber's pay from account resides.

PayFromAcctStat
This is the status of the pay from account as it relates to its potential use within the Subscriber's Bill Pay account. Canonical values are:
- **Pend** - Pending
- **Apprv** - Approved

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PayFromAcctOwnName

This optional complex element contains information for the Pay From Account Owner's Name (if the actual owner of the account is not the Subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (which is not currently used for the Bill Pay Services API):

ComName
This represents the Pay From Account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName
This represents the Pay From Account Owner's First Name, if the 'actual' owner of the account is a person.

MiddleName
This optional element represents the Pay From Account Owner's Middle Name, if the 'actual' owner of the account is a person.

LastName
This optional element represents the Pay From Account Owner's Last Name, if the 'actual' owner of the account is a person.

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the Pay From Account Owner's Address (if the actual owner of the account is not the Subscriber), and includes the following simple elements:

StreetAddr1
This is the Subscriber's street address.

StreetAddr2
This is the second line of the Subscriber's street address.

City
This is the name of the city in the Subscriber's address.

StateCode
This is the 2-character alpha code approved by the USPS which represents a state.

PostalCode
This is the postal or zip code (Zip+4 is supported).

NOTE: Pay From Account Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's pay from account(s), and then only if the specific Subscriber is authorized to include Pay From Account Owner information.

RecurPmtInfo

This optional complex element contains a package of data related to the recurring payment or recurring Transfer series (if the payment history inquiry is for a recurring payment or recurring Transfer) and includes the below simple elements and arrays associated with the recurring payment or Transfer series *at the time*

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the specified payment or Transfer was processed (any modifications to the recurring payment or recurring Transfer series made *after* the specified payment or Transfer was processed will not be represented here).

StartPmtProcDt

This is the [original] starting date for processing the recurring payment or Transfer series.

StartPmtEstArvDt

This is the [original[starting estimated arrival date (i.e., 'due date') for the recurring payment or Transfer series.

PmtFreqUnits

This is the payment frequency for the recurring payment or Transfer series. A specified frequency of 'Once' indicates a 'single' (i.e. not a recurring) payment or Transfer. Canonical values are:

- **Once** (default)
- **Weekly**
- **EveryOtherWeek**
- **Every4Weeks**
- **Monthly**
- **TwiceMonthly**
- **EveryOtherMonth**
- **Every3Months**
- **Every6Months**
- **Annual**

PmtDayOfWeek

This is the specified day of the week when recurring payments or Transfers will be made if the specified payment frequency is: 'Weekly', 'EveryOtherWeek' or 'Every4Weeks'. Canonical values are:

- **Mon** - Monday
- **Tues** - Tuesday
- **Wed** - Wednesday
- **Thur** - Thursday
- **Fri** - Friday

PmtDayInfoArray

This optional array contains the *PmtDayInfo* complex element, which includes a package of data related to the day(s) of the month a recurring payment or recurring Transfer should be made if the payment frequency has been specified as 'Monthly', 'TwiceMonthly', 'EveryOtherMonth', 'Every3Months', 'Every6Months' or 'Annual'. It includes the following simple elements:

PmtDayofMonth

This is the day of the month when the recurring payment or Transfer will be made (e.g., 1 - 31). This value will not be present if the desired payment day is the last business day of each month.

PmtUseLastBusDay

This indicates that the payment or Transfer should be made on the last business day of the month. Canonical values are:

- **True**

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- **False** (default)

PayDtInstr

This is the payment date instruction when a recurring payment or Transfer date falls on a non-processing date (such as a weekend or holiday). Canonical values are:

- **Before** – Pay before (default)
- **After** – Pay after

PmtOccur

This is the number of *remaining* payment or Transfer occurrences for the recurring payment or recurring Transfer series at the time the specified payment or Transfer was processed.

PmtSerExpDt

This is the expiration date for the recurring payment or Transfer series that was indicated at the time the payment or Transfer was processed.

PmtSerFinite

This indicates whether the payment or Transfer series is finite or 'has no end'. If the series is *not* finite, recurring payments/Transfers will continue to be made until the series is terminated by the Subscriber. Canonical values are:

- **True**
- **False** (default)

RetroToOrigPmtDt

This element is for recurring payments or Transfers that may have been pended for additional payment approval, and specifies the desired action taken in the event a scheduled recurring payment or Transfer was missed while awaiting payment approval. Canonical values are:

- **True**
- **False** (default)

NOTE: A value of 'false' ignores a missed payment or Transfer and schedules the next [second] Payment/Transfer in the series once payment approval is received. A value of 'true' reschedules the original [first] payment or Transfer (with the originally specified amount) in order to catch up the series, as well as schedules the next [second] payment or Transfer in the series.

BilPaySvcFeeInfoRec

This complex contains a package of Service Fee (or 'payment surcharge') information applied to the Payment or Transfer.

SvcFeeDesc

This element specifies the type of payment or Transfer to which the service fee is applicable. A 'Service Dictionary Search' request is necessary to obtain the current list of available Service Fee Descriptions.

SvcFeeAmt

This element specifies the amount of the Service Fee that was applied to the Payment or Transfer.

PmtChkNum

This is the check number of the check created for the payment, if the payment was made by check.

PmtChkStat
The status of the check associated with the payment, if the payment was made by check. Canonical values are:
- **Pend** – Pending
- **Prt** – Printed
- **Stop** – Stopped
- **Ri** – Reissued
- **PrtRi** – Printed Reissue
- **PendRi** – Pending Reissue
- **Rfd** – Refunded
- **Prst** – Presented
- **Clr** – Cleared
- **StopRq** – Stop Requested
- **SusNotPd** – Suspect Not Paid

PmtChkImgInfo
An optional complex element containing a package of data related to a payment check image, if the payment was made by check.

ChkImgFormat
This is the value that defines the file format that is used to deliver the check image. Canonical values are:
- **JPG**
- **TIFF**
- **GIF**
- **PNG**
- **IOCA**

FrontChkImgLength
This specifies the length of the front of the check image.

FrontChkImg
The front of the check image.

BakChkImgLength
This specifies the length of the back of the check image.

BakChkImg
The back of the check image.

NOTE: The availability of check image information is based on the following factors:
1) whether the check has cleared (only cleared checks are available for imaging);
2) whether the Subscriber's Financial Institution has the 'Check Image' service (this information is provided in the Channel Inquiry);
3) the payment's processing date falls within the Check Image availability time frame specified for the Financial Institution; and
4) the Check Funding Model utilized by the Financial Institution (e.g., check images are available for the iPay Draft/Good Funds model, but not for Institutions utilizing the Subscriber Draft/Risk model).

x_ElecBilPmtInfo

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This optional complex element contains a package of data related to the eBill that corresponds to the processed payment and includes the below simple elements and arrays for the Bill Pay Services API.

StmtDt

This is the statement date for the eBill associated with the payment.

PmtDueDt

This is the date the payment was due for the eBill associated with the payment.

StmtBal

This is the statement balance for the eBill associated with the payment. A 'statement balance' amount is available only for credit card ('CCA') account types.

CurBal

This is the total [outstanding] current balance of the Subscriber's account with the Payee that was provided on the eBill associated with the payment.. This amount may be different than the Statement Balance for the corresponding eBill. A 'current balance' amount is available only for credit card ('CCA') account types.

PmtAmtDue

This is the payment amount that was due for the eBill associated with the payment. This value is available only for 'non-credit card' accounts (account type not = 'CCA').

MinPmtAmt

This is the minimum amount that was due for the eBill associated with the payment. A minimum amount due is available only for credit card ('CCA') account types.

ElecBilPmtAuto

This indicates whether the [eBill] payment was originally scheduled based on an automatic eBill payment schedule for the Payee. Canonical values are:
- **True**
- **False**

NOTE: Not applicable for Transfers.

x_PmtStatHistArray

An optional array of responses for the payment status changes associated with this payment or Transfer. This will be always be included in the the Bill Pay Services API response, regardless of any entry in the Xtended Element Array in the *BilPayPmtHistInqRq* message.

PmtStat

The status of the payment or Transfer as of the payment's Status Change Date. Valid canonical values for all *processed* payments are:
- **Proc** – Processed
- **Pd** – Paid
- **Stop** – Stopped
- **Canc** – Canceled
- **Ret** – Returned
- **Sttl** – Settled
- **ReSbm** - Resubmitted
- **Rfd** – Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that required payment approval)

NOTE: See Appendix C for Payment Status definitions.

PmtStatChngDt

The date the status of the payment or Transfer was changed.

PmtExcDesc

The exception description associated with a payment or Transfer status change.

PmtChngBy

The entity that made the status change.

x_PmtChkStatHistArray

An optional array of responses for the check status changes associated with this payment, if the payment was made by check. This x_ array must be explicitly requested in the Xtended Element Array in the *BilPayPmtHistInqRq* message, if check status history is desired in the response.

PmtChkStat

The status of the check associated with the payment as of the check's Status Change Date. Canonical values are:

- **Pend** – Pending
- **Prt** – Printed
- **Stop** – Stopped
- **Ri** – Reissued
- **PrtRi** – Printed Reissue
- **PendRi** – Pending Reissue
- **Rfd** – Refunded
- **Prst** – Presented
- **Clr** – Cleared
- **StopRq** – Stop Requested
- **SusNotPd** – Suspect Not Paid

PmtChkStatChngDt

The date the status of the payment check was changed.

NOTE: The availability of check status history information is based on the Check Funding Model utilized by the Financial Institution (e.g., check status timelines are available for both the iPay Draft/Good Funds and Subscriber Draft/Risk models, but not for Institutions utilizing the Institution Draft model).

x_PmtChkTrakInfo

An optional complex which includes a package of data related to a payment's check tracking information, if the payment was made by check. This will be always be included in the Bill Pay Services API response (if available), regardless of any entry in the Xtended Element Array in the *BilPayPmtHistInqRq* message.

PmtChkTrakCarr

The tracking carrier of the check created for the payment.

PmtChkTrakId

The tracking identifier of the check created for the payment.

PmtChkTrakArray

This is an array of the individual responses for payment check tracking records, and includes the following complex element for each available tracking record:

PmtChkTrakRecInfo

PmtChkTrakDt
This is the tracking date of the check.

PmtChkTrakLoc
This is the tracking location of the check created for the payment as of the specified tracking date.

PmtChkTrakStat
The tracking status description provided by the tracking carrier of the check created for the payment.

PmtChkTrakCmnt
The tracking comment provided by the tracking carrier of the check created for the payment.

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eBill Services

eBill Search

Container: TPG_BillPayMaster.xsd
Message: BilPayElecBillSchedSrch

The bill pay eBill Search <BilPayElecBillSchedSrch> is designed to allow the consumer to perform searches on eBills (both current and historical) and will return all eBills for a particular bill pay product and Subscriber.

The request provides the following optional filters:

- **eBill Start Date <StartDt>**
- **eBill End Date <EndDt>**
- **Payee Name <PayeeName>**
- **eBill Status <ElecBilStat>**

When there exists more than one filter on the request, the resulting selection is based on the combined effect of the filters (i.e., 'and' operator). Each added filter option will further restrict the result set.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The eBill Search service uses a typical exchange of MType messages to retrieve eBill information for a specified product and Subscriber, based on optional filters.

eBill Search Request
BilPayElecBillSchedSrchRq_MType

The Third Party sends the **BilPayElecBillSchedSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *StartDt, EndDt, PayeeName* and *ElecBilStat*

eBill Search Response
BilPayElecBillSchedSrchRs_MType

The Service Provider sends the **BilPayElecBillSchedSrchRs** message containing an echo of the request, plus *BilPayElecBilSchedSrchArray.*
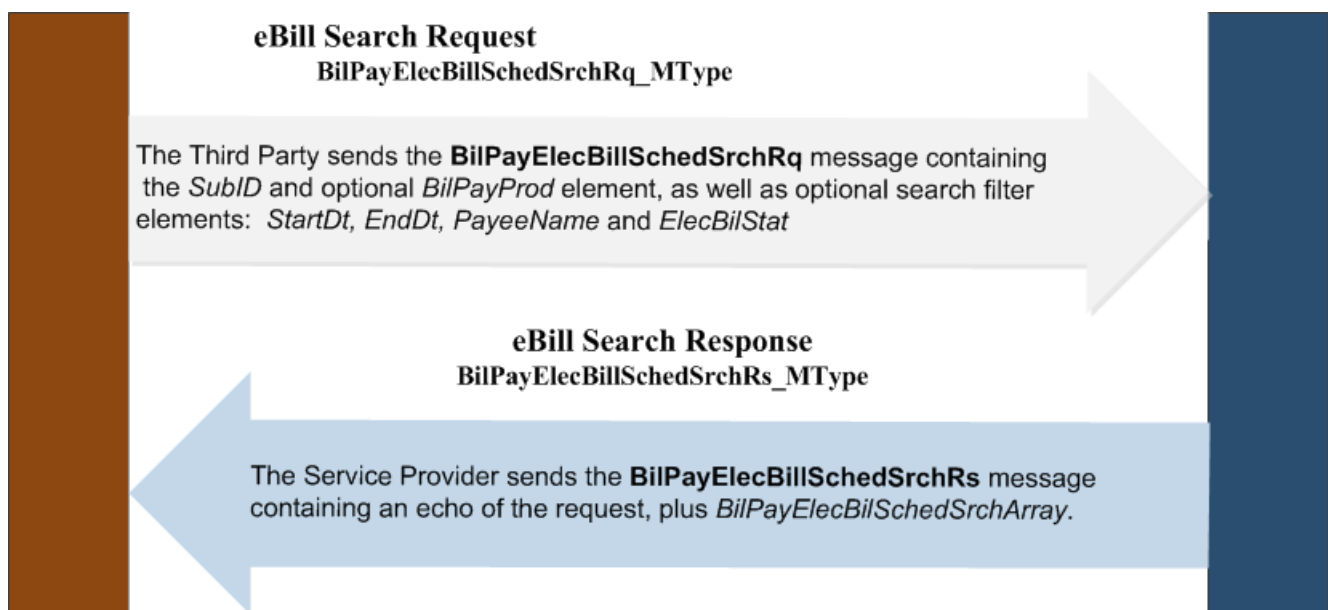
Request

The third party consumer forwards the *BilPayElecBilSchedSrchRq* **request** message to the Service Provider.

The below elements contained within the *BilPayElecBilSchedSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

StartDt

This is the date that designates the starting point for eBill [Due] date selections. If no Start Date is specified, the Bill Pay Services API will return all available eBills that have a Due Date that is less than the specified End Date.

EndDt

This is the date that designates the ending point for eBill [Due] date selections. If no End Date is specified, the Bill Pay Services API will return all available eBills that have a Due Date that is greater than the specified Start Date.

  NOTE: If no Date range is specified, the Bill Pay Services API will return all available eBills that satisfy all other filter requirements.

PayeeName

This is the name of the Payee.

If no Payee Name is specified, the Bill Pay Services API will return eBills for all 'eBill-enrolled' Payees (i.e., Payees with registered eBill accounts) that satisfy all other specified filters.

If entered, the 'SrchType' attribute entered for this element will be evaluated to determine the type of 'Name' search (i.e., 'wildcard' search) to execute. Valid canonical values are:
- **Exact** – (default)
- **StartsWith**
- **Contains**

ElecBilStat

This is the status of the eBill. Valid canonical values are:
- **ComingDue** – eBill with a Due Date that has not yet passed (may be associated with a currently scheduled payment)
- **UnPd** – Unpaid (eBill's Due Date is in the past, but eBill is not associated with a processed payment on the Subscriber's bill pay account and has not been 'filed')
- **Pd** – Paid (eBill is associated with a processed payment on the Subscriber's bill pay account)
- **SubProc** – eBill has been 'filed' by the Subscriber

If no eBill Status is specified, the Bill Pay Services API service will return all eBills that satisfy all other specified filters**,** regardless of status.

ElecBilPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

If entered, the Bill Pay Services API will return only those eBills received for the specified Payee eBill Account that also satisfy all other specified filters.

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Response

The service provider (iPay) returns the *BilPayElecBilSchedSrchRs* **response** message to the service consumer, which returns a list of all eBills for the specified product and Subscriber that meet the given search criteria.

NOTE: The amount of history that is available to be viewed is determined by the Financial Institution's Extended Storage specification. For instance, if Extended Storage is set at 18 months, the maximum amount of eBill history available for any Subscriber associated with that FI will be 18 months.

The **array(s)** contained within the *BilPayElecBilSchedSrchRs* response applicable for the Bill Pay Services API are:

BilPayElecBilSchedSrchArray

This array returns an array of responses for the eBill search and includes the *BilPayElecBilSchedSrchInfo* complex element for each eBill returned, which includes the following simple elements:

ElecBilId
This is the Bill Pay Services API identifier for the eBill.

ElecBilPayeeName
This is the name of the Payee for the specified eBill.

ElecBilPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

ElecBilStat
This is the status of the eBill. Valid canonical values are:
- **ComingDue** – eBill with a Due Date that has not yet passed (may be associated with a currently scheduled payment)
- **UnPd** – Unpaid (eBill's Due Date is in the past, but eBill is not associated with a processed payment on the Subscriber's bill pay account and has not been 'filed')
- **Pd** – Paid (eBill is associated with a processed payment on the Subscriber's bill pay account)
- **SubProc** – eBill has been 'filed' by the Subscriber

PmtDueDt

This is the date the payment is/was due for the specified eBill.

StmtDt

This is the statement date for the specified eBill.

StmtBal

This is the statement balance for the specified eBill. A 'statement balance' amount is available only for credit card ('CCA') account types.

PmtAmtDue

This is the payment amount that is/was due for the specified eBill. This value is available only for 'non-credit card' accounts (account type not = 'CCA').

CurrBal

This is the total [outstanding] current balance of the Subscriber's account with the Payee. This amount may be different than the Statement Balance for the corresponding eBill. A 'current balance' amount is available only for credit card ('CCA') account types.

MinPmtAmt

This is the minimum amount due for the specified eBill. A minimum amount due is available only for credit card ('CCA') account types.

eBill Inquiry

Container: TPG_BillPayMaster.xsd
Message: BilPayElecBilSchedInq

The bill pay eBill Inquiry <BilPayElecBilSchedInq> will return element details for a specific eBill for a given Subscriber. The subscriber identification element <SubID> and eBill ID <ElecBilId> are required on the request.

The design of the inquiry was created in a manner that facilitates modification requests. The activity intention element <ActIntent> was added to support the concurrency model for future modifications made to eBills.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The eBill Inquiry service uses a typical exchange of MType messages to retrieve eBill information for a given Subscriber, based on the required Subscriber ID and eBill ID.   If the eBill ID is not known, the third party consumer must first perform an eBill Search to obtain the eBill ID for the desired eBill.

eBill Search Request
BilPayElecBillSchedSrchRq_MType

The Third Party sends the **BilPayElecBillSchedSrchRq** message containing the *SubID* and optional *BilPayProd* element, as well as optional search filter elements: *StartDt, EndDt, PayeeName* and *ElecBilStat*

eBill Search Response
BilPayElecBillSchedSrchRs_MType

The Service Provider sends the **BilPayElecBillSchedSrchRs** message containing an echo of the request, plus *BilPayElecBilSchedSrchArray*.

eBill Inquiry Request
BilPayElecBilSchedInqRq_MType

The Third Party sends the **BilPayElecBillSchedInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *eBilId* element for the desired eBill.

eBill Inquiry Response
BilPayElecBilSchedInqRs_MType

The Service Provider sends the **BilPayElecBilSchedInqRs** message containing an echo of the request, plus *BilPayElecBilSchedInqInfo* for the specified eBill.

Request

The third party consumer forwards the *BilPayElecBilSchedInqRq* **request** message to the Service Provider.

The below elements contained within the *BilPayElecBilSchedInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

ElecBilId

This is the Bill Pay Services API identifier for the eBill.

ActIntent

This indicator conveys the service consumer's intention for a subsequent operation for the data set included in the response. Canonical values are:

- **ReadOnly** – indicates a *view* intent only for the data set included in the Inquiry response. This is the default value.
- **Upd** – indicates the intention to perform a subsequent update ('Mod') to the data set included in the Inquiry response
- **Dlt** – indicates the intention to perform a subsequent delete of the data set included in the Inquiry response. *This action is not available for eBill inquiries.*

Response

The service provider (iPay) returns the *BilPayElecBilSchedInqRs* **response** message to the service consumer, which returns a package of eBill statement information for the specified eBill.

The simple and complex elements contained within the *BilPayElecBilSchedInqRs* response applicable for the Bill Pay Services API are:

ElecBilId

This is the Bill Pay Services API identifier for the eBill.

ActIntentKey

This is the key (provided by the service provider) delivered to the consumer to be submitted in the subsequent modification (update) operation for the data set returned in the Inquiry response.

BilPayElecBilSchedInqInfo

This complex element contains a package of data related to a specific eBill and includes the below simple elements for the Bill Pay Services API.

ElecBilPayeeName

This is the name of the Payee for the specified eBill.

ElecBilPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

ElecBilStat

This is the status of the eBill. Valid canonical values are:

- **ComingDue** – eBill with a Due Date that has not yet passed (may be associated with a currently scheduled payment)
- **UnPd** – Unpaid (eBill's Due Date is in the past, but eBill is not associated with a processed payment on the Subscriber's bill pay account and has not been 'filed')
- **Pd** – Paid (eBill is associated with a processed payment on the Subscriber's bill pay account)
- **SubProc** – eBill has been 'filed' by the Subscriber

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ElecBilPmtMthd

This is the filing method specified for the eBill, if the eBill was filed by the Subscriber. Canonical values are:

- **SubPdDir** – eBill was paid 'directly' by the Subscriber (by cash or check), outside of the Subscriber's bill pay account.
- **SubPdElecDir** – eBill was paid 'directly' by the Subscriber ('electronically': e.g., on biller's website, or via bank transfer, etc), outside of the Subscriber's bill pay account.
- **NotPd** – eBill was not paid

ElecBilPmtAuto

This indicates whether the [eBill] payment was included in an automatic eBill payment schedule for the Payee. Canonical values are:

- **True**
- **False**

PmtCmnt

This optional element represents a comment entered by the Subscriber that will be stored with a filed eBill.

StmtDt

This is the statement date for the specified eBill.

PmtDueDt

This is the date the payment is/was due for the specified eBill.

StmtBal

This is the statement balance for the specified eBill. A 'statement balance' amount is available only for credit card ('CCA') account types.

CurrBal

This is the total [outstanding] current balance of the Subscriber's account with the Payee. This amount may be different than the Statement Balance for the corresponding eBill. A 'current balance' amount is available only for credit card ('CCA') account types.

PmtAmtDue

This is the payment amount that is/was due for the specified eBill. This value is available only for 'non-credit card' accounts (account type not = 'CCA').

MinPmtAmt

This is the minimum amount due for the specified eBill. A minimum amount due is available only for credit card ('CCA') account types.

NOTE: Only the current (i.e., 'Due') eBill can be paid by scheduling a payment for the specified Payee. All historical 'Unpaid' eBills can only be 'filed', or remain in 'Unpaid' status.

eBill Mod

Container: TPG_BillPayMaster.xsd
Message: BilPayElecBilSchedMod

The bill pay eBill Modification <BilPayElecBilSchedMod> will allow the service consumer to update (modify) certain elements for a Subscriber's eBill. The <SubID>, <eBilId> and Activity Intent Key <ActIntenKey> are required on the Mod request.

The ability to 'file' an eBill is currently the only update (modify) process available for an eBill within the Bill Pay Services API.

The ability to delete an eBill is not available within the Bill Pay Service API operations.

The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

Message Flow
The eBill Modification service uses a typical exchange of MType messages to allow updates to eBill information for a specific Subscriber, based on the required Subscriber ID and eBill ID. An eBill Inquiry must always be performed prior to the modification request in order to retrieve the Activity Intent Key necessary for modification operations, as well as to ensure that the most up-to-date eBill information is reflected on the eBill Inquiry.

eBill Inquiry Request
BilPayElecBilSchedInqRq_MType

The Third Party sends the **BilPayElecBilSchedInqRq** message containing the required *SubID* and optional *BilPayProd* element, as well as the required *eBilId* element for the desired eBill.

eBill Inquiry Response
BilPayElecBilSchedInqRs_MType

The Service Provider sends the **BilPayElecBilSchedInqRs** message containing an echo of the request plus an *ActIntentKey*, if requested, and the *BilPayElecBilSchedInqInfo* for the specified eBill.

eBill Mod Request
BilPayElecBilSchedModRq_MType

The Third Party sends the **BilPayElecBilSchedModRq** message containing the required *SubID, eBilID* and *ActIntentKey* elements, as well as the modified elements within the *BilPayElecBilSchedModInfo* complex element for the desired eBill.

eBill Mod Response
BilPayElecBilSchedModRs_MType

The Service Provider sends the **BilPayElecBilSchedModRs** message containing the response status <RsStat> indicating if the Mod was successful. An unsuccessful Mod request will also return the errors that occurred that prevented the Mod.

Request

The third party consumer forwards the *BilPaySchedPmtModRq* **request** message to the Service Provider.

The below simple and complex elements contained within the *BilPaySchedPmtModRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay service operations being requested. Canonical values are:

- **BilPay**
- **Remit** *(reserved for future use)*

The *BilPayProd* default value is '**BilPay**'.

SubID

This is the Service Provider's (iPay's) identifier for the Subscriber.

ElecBilId

This is the Bill Pay Services API identifier for the eBill.

ActIntentKey

This is the service provider key delivered to the service consumer via a preceding inquiry request, to be submitted in the modification request operation.

Dlt

This indicates a desire for deletion of the specified entity. For recurring payments, a value of 'true' indicates a desire to delete (i.e. 'stop') the entire recurring payment series immediately. Canonical values are:

- **True**
- **False** (default)

This element is not currently eligible for use with an eBill Mod request.

BilPayElecBilSchedModInfo

This complex element contains a package of data related to the Subscriber's specified eBill, and may include all of the simple and complex elements returned in the preceding eBill Inquiry response. *However, the following are the only elements within this complex that are eligible for modification (add or update) for an eBill Modification request:*

ElecBilStat

This is the status of the eBill. Valid canonical values for eBill Mod are:
- **SubProc** – eBill has been 'filed' by the Subscriber

ElecBilPmtMthd

This is the filing method for the eBill, as selected by the Subscriber when filing the eBill. The filing method is required when filing an eBill. Canonical values are:
- **SubPdDir** – eBill was paid 'directly' by the Subscriber (by cash or check), outside of the Subscriber's bill pay account.
- **SubPdElecDir** – eBill was paid 'directly' by the Subscriber ('electronically': e.g., on biller's website, or via bank transfer, etc), outside of the Subscriber's bill pay account.
- **NotPd** – eBill was not paid

PmtCmnt

This optional element represents a comment entered by the Subscriber that will be stored with a filed eBill.

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eBill Mod Behaviors

- iPay will ignore all element values other than those specified above, if passed on an eBill Mod request.

- Only an eBill that is currently in a 'Due' or 'Unpaid' status can be filed.

- For *Company* Subscribers:

  o eBills can be modified ('filed') only if the requesting user (Subscriber's Associated User) has been granted permission to 'Schedule Bill Payments'.

Response

The service provider (iPay) returns the *BilPaySchedPmtModRs* **response** message to the service consumer.

The element(s) contained within the *BilPaySchedPmtModRs* response applicable for the Bill Pay Services API is/are:

RsStat
This specifies the status of the mod request. Canonical values are:

- **Success**
- **Fail**

Appendix A: Business Service Operation-to-Feature Mapping – Bill Pay Services

Service Operation (by Message Set)	Functionality Name	Feature Required	Additional Feature Required
Payees			
Add Payee	Add Payee	AddPayee	
	Add Email Payee	AddPayee	EmailPmt
	Add Outbound Transfer Payee	Outbound Transfers	
Edit Payee	Edit Payee	MgmtPayee	
	Edit Email Payee	MgmtPayee	EmailPmt
	Edit Outbound Transfer Payee	Outbound Transfers	
	Edit Payee with Add eBill Acct	MgmtPayee	eBills/Bill Presentment
	Edit Payee with Edit eBill Acct	MgmtPayee	eBills/Bill Presentment
Payee Search	Payee Search	ViewPayee	
	Payee Srch/Incl Outbound Transfers	View Payees	Outbound Transfers
	Payee Srch/Only Outbound Transfers	Outbound Transfers	
	Payee Search with eBill Info	ViewPayee	eBills/Bill Presentment
Payee Inquiry	Payee Inquiry	ViewPayee	
	Outbound Transfer Payee Inquiry	Outbound Transfers	
	Payee Inquiry with eBill Info	ViewPayee	eBills/Bill Presentment
Payments			
Scheduled Payment Add	Add Payment	SchedSinglePmt	
	Add Email Payment	SchedSinglePmt	EmailPmt
	Add Rush Payment	SchedSinglePmt	RushPmt
	Add Recurring Pmt Series	SchedSinglePmt	SchedRecurPmt
	Add Outbound Transfer	Outbound Transfers	
	Add Recurring Outbound Transfer Series	Outbound Transfers	Add Recurring Payment Series
Schedule Payment Mod	Edit Payment	MgmtPendPmt	
	Edit Email Payment	MgmtPendPmt	EmailPmt
	Edit Rush Payment	MgmtPendPmt	RushPmt
	Edit Recurring Pmt Series	MgmtPendPmt	MgmtRecurPmt
	Edit Outbound Transfer Payment	Outbound Transfers	
	Edit Recurring Outbound Transfer Series	Outbound Transfers	Add Recurring Payment Series

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Scheduled Payment Inquiry	Scheduled Payment Inquiry	ViewPendPmt (includes Recurring Pmts)	
	Scheduled Outbound Transfer Inquiry`	Outbound Transfers	
Scheduled Payment Search	Scheduled Payment Search	ViewPendPmt (includes Recurring Pmts)	
	Scheduled Payment Srch/INCL Outbound Transfers	ViewPendPmt (includes Recurring Pmts)	Outbound Transfers
	Scheduled Payment Srch/ONLY Outbound Transfers	Outbound Transfers	
Scheduled Payment Approval	Scheduled Payment Approval	Manage Pending Payments	
	Scheduled Recurring Payment Approval	Manage Pending Payments	Manage Recurring Payment Series
	Scheduled Outbound Transfer Approval	Outbound Transfers	
	Scheduled Recurring Outbound Transfer Approval	Outbound Transfers	Manage Recurring Payment Series
Payment History Inquiry	Payment History Inquiry	ViewPmtHist (includes Recurring Pmts)	
	Outbound Transfer History Inquiry	Outbound Transfers	
Payment History Search	Payment History Search	ViewPmtHist (includes Recurring Pmts)	
	Pmt History Srch/INCL Outbound Transfers	View Payment History (includes Recurring Pmts)	Outbound Transfers
	Pmt History Srch/ONLY Outbound Transfers	Outbound Transfers	
eBills			
eBill Search	View eBills [eBill History]	eBills/Bill Presentment	
eBill Inquiry	eBill Inquiry	eBills/Bill Presentment	
eBIll Mod	File eBill	eBills/Bill Presentment	
Subscribers			
Subscriber Add	Add (Enroll) Subscriber	AddSub	
	Add (Enroll) Subscriber with Add of Subusers	AddSub	Subusers
Subscriber Search	Subscriber Search	ViewSubInfo	
Subscriber Inquiry	Subscriber Inquiry	ViewSubInfo	
	Subscriber Inquiry with PayFromAccount Info	ViewSubInfo	ViewPayFromAcct
Subscriber Mod	Subscriber Mod	MgmtSubInfo	
	Subscriber Mod with Edit (existing) Pay From Account	MgmtSubInfo	MgmtPayFromAcct
	Subscriber Mod with Add (additional) Pay From Account(s)	MgmtSubInfo	MgmtPayFromAcct

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	Subscriber Mod with edit Subuser (profile/contact info)	MgmtSubInfo	Subusers (requesting user must be actual Subuser)
	Subscriber Mod with Add/Edit/Delete Subuser	MgmtSubInfo	Subusers (requesting user must have 'Manage Users' permission)
Institutions			
Channel Inquiry	Channel Inquiry	ViewInstInfo	
Service Dictionary Search	Service Dictionary Search	Available for all Institutions / No special permission required	

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Appendix B: Subscriber's Associated User – Permission/Caps specifications example

Subscriber's Associated User Information Array
<SubAssocUsrName>
    :
<PermissionsArray>
  <Permission>
     <PermissionCode>CanManagePayees
     <PermissionValue>true
  <Permission>
     <PermissionCode>CanManageTransferAccounts
     <PermissionValue>true
  <Permission>
     <PermissionCode>CanManagePayFromAccounts
     <PermissionValue>true
  <Permission>
     <PermissionCode>CanScheduleBillPayments
     <PermissionValue>true
  <Permission>
     <PermissionCode>ScheduleBillPaymentExcludedPayeeId
     <PermissionValue>123
  <Permission>
     <PermissionCode>ScheduleBillPaymentExcludedPayeeId
     <PermissionValue>456
  <Permission>
     <PermissionCode>CanScheduleP2PPayment
     <PermissionValue>true
  <Permission>
     <PermissionCode>ScheduleP2PPaymentExcludedPayeeId
     <PermissionValue>123
  <Permission>
     <PermissionCode>ScheduleP2PPaymentExcludedPayeeId
     <PermissionValue>456
  <Permission>
     <PermissionCode>ScheduleP2PPaymentExcludedPayeeId
     <PermissionValue>789
  <Permission>
     <PermissionCode>CanDesignatePayFromAccounts
     <PermissionValue>true
  <Permission>
     <PermissionCode>ExcludedPayFromAccountIdThatTheSubUserCannotDesignate
     <PermissionValue>111
  <Permission>
     <PermissionCode>ExcludedPayFromAccountIdThatTheSubUserCannotDesignate
     <PermissionValue>222
  <Permission>
     <PermissionCode>CanEstablishPaymentCaps
     <PremissionValue>true

```
    <Permission>
        <PermissionCode>CanViewPaymentHistory
        <PermissionValue> false
    <Permission>
        <PermissionCode>CanTransfer
        <PermissionValue>true
    <Permission>
        <PermissionCode>TransferExcludedPayeeId
        <PermissionValue>562
    <Permission>
        <PermissionCode>CanViewTransferHistory
        <PermissionValue> false
    <Permission>
        <PermissionCode>EstablishTransferCaps
        <PermissionValue> true
            <Permission>
        <PermissionCode>CanUpdateCompanyInformation
        <PermissionValue> false
    <Permission>
        <PermissionCode>CanManageSubUsers
        <PermissionValue>true
    <Permission>
        <PermissionCode>CanApproveTransactions
        <PermissionValue>false
    <Permission>
        <PermissionCode>CanAccessReports     (Not applicable for 'StandAlone' Bill Pay Svcs)
        <PermissionValue>true
    <Permission>
        <PermissionCode>CanScheduleReminders  (Not applicable for 'StandAlone' Bill Pay Svcs)
        <PermissionValue>true
    <Permission>
        <PermissionCode>CanAccessMessageCenter  (Not applicable for 'StandAlone' Bill Pay Svcs)
        <PermissionValue>true
</PermissionsArray>

<CapsArray>
    <Cap>
        <CapFor>DefaultPaymentCap
        <PayeeID><Null>
        <CapAmount>$5,000
    <Cap>
        <CapFor>PayeeSpecificPaymentCap
        <PayeeId>321
        <CapAmount>$1,000
     <Cap>
        <CapFor>PayeeSpecificPaymentCap
        <PayeeId>654
        <CapAmount>$2,000
    <Cap>
        <CapFor>PayeeSpecificPaymentCap
        <PayeeId>987
        <CapAmount>$3,000
```

```
<Cap>
    <CapFor>DefaultTransferCap
    <PayeeID><Null>
    <CapAmount>$4,000
<Cap>
    <CapFor>PayeeSpecificTransferCap
    <PayeeId>3375
    <CapAmount>$1,500
```
</CapsArray>

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Appendix C: Payment Statuses and Definitions

The following table includes the bill payment status ('PmtStat') values used in iPay's Bill Pay Services, as well as the canonical value and a definition for each status.

Payment Status	Canonical Value	Definition
Scheduled	**Sched**	A payment or Transfer that has been submitted by the subscriber, but has not yet been processed.
Pending	**Pend**	A payment or Transfer that has been submitted by the subscriber, but will not process until requirements are met to move the transaction into scheduled status. *Example:* a P2P transaction that has been submitted by the subscriber, but the P2P payee has not provided their bank account information.
Pending Skip	**PendSkip**	An instance of a recurring payment or Transfer that is selected by the subscriber and scheduled by the system to be skipped when its processing date occurs. *This payment/Transfer will be reflected in Pending Payments until it is skipped.*
Processed	**Proc**	A payment or Transfer for which the funds have been debited from the subscriber's account.
Paid	**Pd**	A payment or Transfer that has been processed and sent to the payee.
Stopped	**Stop**	1. A payment or Transfer that has been stopped by the subscriber before the payment cutoff time on the scheduled processing date. 2. A pending payment or Transfer that has been stopped by the system when requirements to move the payment/Transfer into scheduled status have not been met.
Cancelled	**Canc**	A payment or Transfer that has been processed by iPay but was cancelled by the FI before the subscriber's funding account was debited. *Example:* the FI cancels a payment because the subscriber does not have sufficient funds for the payment.
Returned	**Ret**	A payment transaction that has been returned to iPay by the payee.
Refunded	**Rfd**	A returned payment that has been refunded to the subscriber.
Resubmitted	**ReSbm**	A returned payment that has been resubmitted to the payee.
Settled	**Sttl**	A returned payment transaction that has been refunded to the subscriber or resubmitted to the payee.
Skipped	**Skip**	An instance of a recurring payment or Transfer that was selected by the subscriber and skipped by the system on its processing date. *This status will be reflected as Skipped in Transaction History after the processing date for the instance has passed.*
Payment Approval Required	**PmtApprvReq**	A payment or Transfer that has been scheduled but requires a user's approval before being submitted for processing. *This status only applies to payments/Transfers made by Business Subscribers or Subusers.*
Payment Approved	**PmtApprv**	A payment or Transfer that has received the required user approval to be processed. *This status only applies to payments/Transfers made by Business Subscribers or Subusers.*

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Appendix D: eBill Account Setup and Error Resolution Flows

eBill Account Setup Flow

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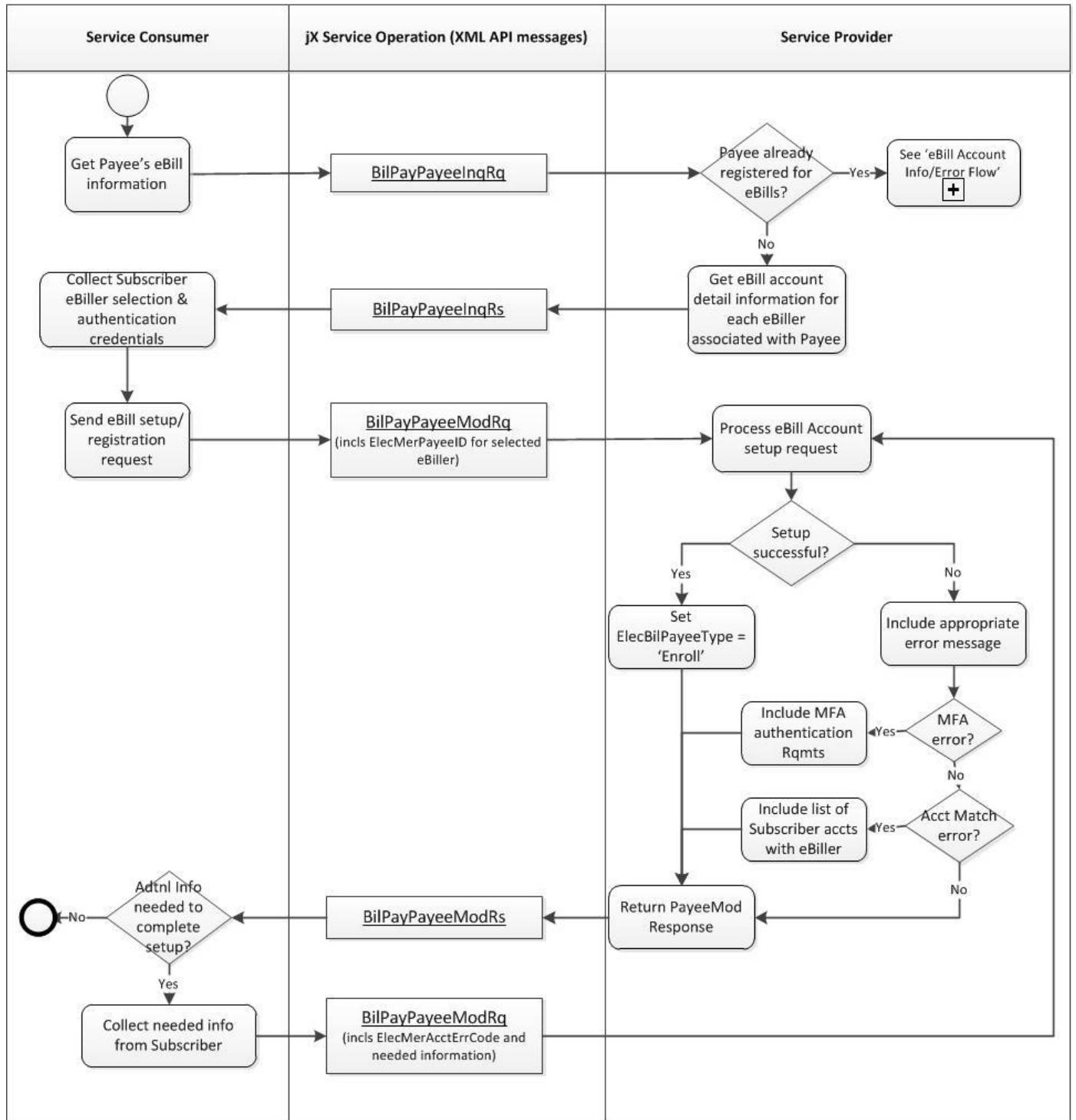
eBill Account Info/Error Resolution Flow

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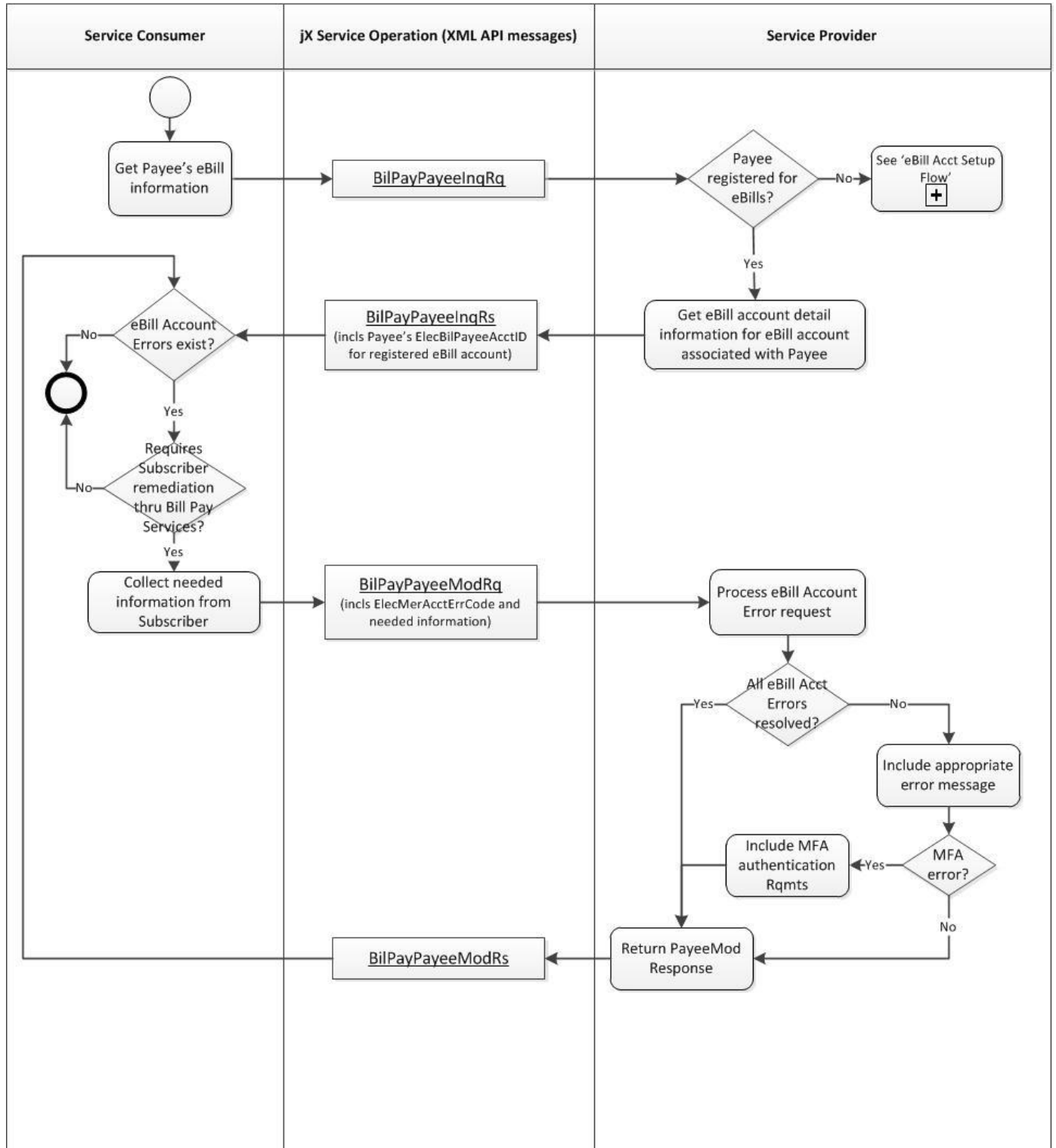
Appendix E: eBill Account Errors – Subscriber remediation required

The following table includes the full list of possible eBill account error codes and descriptions that require remediation by the Subscriber in order to complete eBill setup or continue receiving eBills.

Error Code	Error Description – for eBill Setup/Registration or Account Error Resolution
E6513	Login Failure. Request must be resubmitted with valid login credentials for payee website.
E6515	Payee requires Subscriber action directly via Payee website. Request may be retried after corrective action taken.
E6516	User account no longer found on payee website. eBill account has been deleted. eBill Account setup process must be repeated to reactivate account.
E6517	User account locked on payee website. Corrective action required on payee website. Request may be retried after account unlocked.
E6518	MFA Failure – Additional eBill account authentication information required. Request must be resubmitted with valid security authentication response.
E6519	MFA Failure – Invalid response to requested eBill account authentication information. Request must be resubmitted with valid security authentication response.
E6521	Ambiguous results encountered on attempt to match Subscriber's account number on Payee website. Request must be resubmitted with confirmed account match.
E6551	Login Failure. Valid login credentials for payee website must be submitted via Payee Mod request.
E6550	MFA Failure – Additional eBill account authentication information required. Payee Mod request must be submitted with valid security authentication response.

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Glossary

Term	Definition
ABA Number	An identification number consisting of a two-part code assigned to banks and savings associations. The first part shows the location and the second identifies the bank.
Account ID	Unique identifier for Payee attached to Subscriber. Equivalent to Payee ID in web interface.
Account [Payee]	The account created for the Subscriber which represents the Merchant they're trying to pay. A Merchant can have one or more subscriber [Payee] Accounts attached to it, each of which haas its own Merchant Account Number.
Activation [Payee]	The process where a Subscriber enters an activation code (provided by iPay) in order to complete Payee setup. This process is required for Payees added via Online Bill Pay as an added security measure to ensure Payee setup is completed by authorized account users.
Authentication	The process of identifying an individual, usually based on a user name and password. In security systems, authentication is distinct from authorization, which is the process of giving individuals access to system objects based on their identity. Authentication ensures that the individual is who he or she claims to be, but says nothing about the access rights of the individual.
Authorization	The process of granting or denying access to a network resource. Most computer security systems are based on a two-step process. The first stage is authentication, which ensures that a user is who he or she claims to be. The second stage is authorization, which allows the user access to various resources based on the user's identity.
Bill Pay Services API	iPay's 'web service'-based bill payment solution ('product').
Bus	A subsystem that transfers data between components (i.e., a 'data highway').
Business Service Provider	A Business Services Provider (BSP) is an application service provider that focuses on providing and hosting applications related exclusively to business functions.
Consumer	A network application that uses Internet protocols to access information and functionality provided by a Service Provider. Aka 'Requestor' or 'Client'. The channel partner, institution, Remittance partner or application making the request for bill payment services from the Bill Pay Services API.
[Service] Contract	A 'communication agreement' to which service(s) must adhere.
Due Date	The date the payment is expected to be delivered, or the date the Subscriber would like the Payee to receive the payment. (Estimated Arrival Date)
eBill	Digital (i.e., 'electronic') version of a bill being sent by an 'eBiller' to a Subscriber.
eBiller	The Subscriber-facing [Payee] product or line of business that Subscribers connect with to receive digital billing information (e.g. AT&T or American Express). Also referred to as "Biller" or "Payee".
Electronic Risk Limits	Daily and monthly dollar limits (by Subscriber) on 'electronic' payments. Used by Institutions using the 'Subscriber Draft' (i.e., 'Risk') funding model who want to mitigate their financial exposure on electronic payments that settle on the same day as

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Term	Definition
	processed.
Enterprise Service Bus	A modular and component-based software architecture model used for designing and implementing the interaction and communication between mutually-interacting software applications in Service Oriented Architecture (SOA). Promotes 'message-oriented' design.
Feature	A defined 'function' that is available for a specific 'Service' (i.e., 'sub-product' of a Product). Examples are: Enroll Subscriber, Add Pay Anyone Payee, Submit Email Payment, Submit Transfer, etc.
FI	Financial Institution
IB	Internet Banking
Identification	The process of determining the 'unique identity' of a particular person or entity (e.g., Institution, etc). From an iPay perspective, this involves identifying the unique Institution or Subscriber record in the Bill Pay system that is associated with the specified entity.
iSB [iPay Service Bus]	A framework that exposes a comprehensive 'suite' of iPay's core Bill Pay (and other) services) through web services to JHA's jXchange and other external or internal systems.
Institution Routing ID	The identification of the entity of the submitted message. A financial institution entity will utilize the routing transit or ABA nine (9) digit number assigned to financial institutions for the purpose of routing as assigned by the American Bankers Association. Any leading zeros must be provided for a complete routing and transit number. A non-financial institution entity will use a mutually agreed upon identification that must contain at least one non-integer character. When a record is directed to a specific Financial Institution within a holding company, the institution routing identification is the specific Financial Institution routing identification and not the holding company identification.
Module	See Feature.
Non-Activated Payee	A Payee who has not yet been 'activated' (see Payee Activation above).
Payee	The entity (business, person, or account) to which the subscriber is trying to pay for goods or services provided.
Pay From Account	The Subscriber's checking or savings account(s) used to fund payments.
Payment Cutoff	A configuration set at the Institution level which depicts the latest available time for which a subscriber can schedule a payment for processing that same day.
Primary Account Holder	The 'primary individual' associated with the Company Subscriber account. This is typically the 'owner' or 'primary user' for the company.
Process Date	The day the funds will be removed and sent to the payee for electronic payments and checks are printed for draft checks (funds are removed when payee cashes the check).
Product	Any of iPay's online or service-based bill payment solutions, such as th-'Bill Pay Services', Consumer (includes Classic, Plus, etc), Business, PayCenter, etc.

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Term	Definition
[iPay] Service	Any of a defined set of features that is available for a specific FI or for an iPay Product (such as the 'Bill Pay Services API', Mobile API,etc).
	Services can be configured at the FI-level (e.g., Extendend Storage, Bill Pay Services API), or at the Product level (e.g., Bill Pay Services API, Transfer services, Mobile API, Email Payments, etc).
[Web] Service	A mechanism to enable access to one or more well-defined business functionalities, where the access is provided using a prescribed interface and is exercised consistent with constraints and policies as specified by the service description.
	Loosely coupled, re-usable software components that are expected to be independently deployed, running heterogeneously and disparately within a network.
Service Consumer	The channel partner, institution, remittance partner or application making the request for bill payment services from the Bill Pay Services API.
Service Provider	The 'creator/publisher' of the Bill Pay Services API web services. (e.g., iPay).
Service Oriented Architecture (SOA)	An architectural style for building systems based on interacting coarse grained autonomous components called services. Each service expose processes and behavior through contracts, which are composed of messages at discoverable address called endpoints. Services' behavior is governed by policies which are set externally to the service itself.
Email 'Shared Secret' Keyword	Utilized when setting up an 'Email' Payee. A keyword is simply a single word, specified by Subscriber, known only to the subscriber and the designated email payee, and is required in order to authenticate the email recipient prior to requesting deposit account information. Prior to setting up a new email payee, subscriber must share the Keyword with the email 'Payee' (i.e., recipient).
'StandAlone' Bill Pay Services	Bill Pay Services API services that are not utilized in conjunction with a corresponding *iPay-hosted* 'Online' Bill Pay website. Bill Pay Services API services are considered 'StandAlone' if the FI is utilizing iPay's Bill Pay processes ONLY via the API services, and has not also purchased Bill Pay access via any of iPay's Online Bill Pay applications.
Subscriber	The owner of the bill pay account. In the case of a Company Subscriber, the notion of 'Subscriber' is intended to represent the 'Company' bill pay account.
Subscriber Identifier	Any of the accepted identifiers that will be used to uniquely identify the Individual Subscriber for each Service request. (e.g., login ID, token/GUID, Partner ID, etc)
[Company] Subscriber's Associated User	AKA 'Subuser'. Any authorized *user* of a bill pay account that allows multiple users, including the Primary Account Holder. The Subuser can be authorized by the Primary Account Holder or by another Subuser authorized to add Subusers to the bill pay account.
Subscriber's Associated User Identifier	Any of the accepted identifiers that will be used to uniquely identify the Company Subscriber's Associated User for each Service request. (e.g., login ID, token/GUID, Partner ID, etc).
Transfer	A 'direct deposit' payment from (or to) a Subscriber's bill payment account to (or from) a checking or savings account owned by the Subscriber at another financial institution.

Term	Definition
Transfer, Inbound	Monies originating from an external account (not a bill pay account) that is being transferred into the Subscriber's bill pay account (i.e., transfer is from remote account to [bill pay] FI account).
Transfer, IntraBank	Monies originating from an account at the same institution as the bill pay account that is being transferred to a different account within the institution. A transfer is considered an intra-bank transfer only when the routing numbers are the same.
Transfer, Outbound	Monies originating from the Subscriber's bill pay account that is being transferred to an external account that is not the bill pay account (i.e., transfer is to a remote account from a [bill pay] FI account). This is the most common type of Transfer.
User	Individual Subscriber or Subuser on behalf of which bill payment services are being requested.

Bibliography

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