



Bill Pay Services API – User Guide

(For use with jXchange XSD Version R2018.7.07_XSD)

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PowerOn®; PowerOn2™; PowerOn Marketplace™; PowerOn® Studio™; PROFITability®; Organizational PROFITability® Analysis System™; Product PROFITability® Analysis System™; PROFITability® Budget™; PROFITability® Reporting Service™; PROFITstar®; PROFITstar® ALM Budgeting™; PROFITstar® Budget™; PROFITstar® Classic™; PROFITstar® Reporting Service™; ProfitStars®; ProfitStars® CECL Analysis and ReportingSM; ProfitStars® CECL DataStore and ValidationSM; ProfitStars® Customer Pricing and ProfitabilitySM; ProfitStars® Direct™; ProfitStars® Financial Performance SuiteSM; ProfitStars® Mobile™; ProfitStars® Synergy®; Refi Analyzer™; Regulatory Reporting Solutions™; Relationship 360™; Relationship Profitability Management™ (RPM); RemitCentral™; RemitPlus®; RemitPlus® Express™; RemitPlus® HRCM™; RemitPlus® Remittance/Lockbox™; RemitWeb™; Remote Deposit Anywhere™; Remote Deposit Complete™; Remote Deposit Express™; Remote Deposit Now™; Remote Deposit Scan™; ReportHub™; RPM Reporting Service™; Silhouette Document Imaging®; 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Yellow Hammer Express™; Yellow Hammer ACH Origination™; Yellow Hammer BSA™; Yellow Hammer BSA Express™; Yellow Hammer BSA Regulatory Consulting Service™; Yellow Hammer EFT Fraud Detective™; Yellow Hammer Fraud Detective™; Yellow Hammer SAR Center™; Yellow Hammer Wire Origination™; Xperience™

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List of Tables and Figures	iii
Bill Pay Services API – User Guide	4
Document Tracking	4
About this Guide.....	14
After Reading This Document	14
What is the Bill Pay Services API?	15
Error Handling	15
Fault Behaviors	15
Parallel/Serial Error Message Handling.....	16
Serial Error Message Handling	16
Parallel Error Message Handling	16
Authentication and Identification	16
Authentication	16
Authorization	16
Identification.....	17
Service Behaviors	18
Canonicals	18
Nulls.....	19
Nillable Attribute :	20
Rstr Attribute :	20
Search/Inquiry Behaviors	20
Modification Behaviors	22
Localization/Time Zones	22
Deprecation Policy	23
Business Service Operations.....	24
Business Service Operations – Updates	26
Release 2012.0.01 – Initial release.....	26
Release 2012.0.02 – (06.01.2013)	26
Release 2013.1.00 – (10.15.2013)	27
Release 2013.1.03 – (07.07.2014)	28
Release 2014.0.01 – (07.31.2014)	29
Release 2014.0.06 – (03.31.2015)	30
Release 2014.0.08 – (06.15.2015)	31
Release 2015.0.01 – (08.12.2015)	32
Release 2015.0.03 – (11.02.2015)	32
Release 2015.0.06 – (02.01.2016)	33
Release 2016.0.01 – (06.03.2016)	34
Release 2016.0.09 – (01.30.2017)	34
Release 2017.0.02 – (05.31.2017)	34
Release 2017.2.01 – (08.07.2017)	35
Release 2017.2.03 – (10.27.2017)	35
Release 2017.4.01 – (02.01.2018)	35
Release 2017.4.04 – (04.03.2018)	36
Release 2018.6.01 – (02.21.2019)	36
Release 2018.7.04 – (06.03.2019)	36
Release 2018.7.07 – (09.11.2019)	37
Business Service Operations – General Behaviors	37
Institution Services.....	38

Service Dictionary Search	38
Channel Inquiry	43
Subscriber Services	51
Subscriber Lookup	51
Subscriber Add.....	54
Subscriber Search.....	69
Subscriber Inquiry	77
Subscriber Modify.....	90
Payee Services	106
Payee Add.....	106
Payee Search.....	113
Payee Inquiry	122
Payee Modify	139
Payment Services	153
Payment Add.....	153
Scheduled Payment Search	164
Scheduled Payment Inquiry.....	171
Scheduled Payment Mod	184
Scheduled Payment Approval	194
Payment History Search.....	196
Payment History Inquiry	203
eBill Services	217
eBill Search	217
eBill Inquiry.....	221
eBill Mod	226
Appendix A: Business Service Operation-to-Feature Mapping – Bill Pay Services	229
Appendix B: Subscriber’s Associated User – Permission/Caps specifications example	232
Appendix C: Payment Statuses and Definitions	235
Appendix D: eBill Account Setup and Error Resolution Flows	236
eBill Account Setup Flow.....	236
eBill Account Info/Error Resolution Flow.....	237
Appendix E: eBill Account Errors – Subscriber remediation required	238
Glossary	239
Bibliography	242
Index	243

List of Tables and Figures

Table 1 – UTC Time Adjustments	23
Table 2 – Bill Pay Services Operations List.....	24
Table 3 – eBill Account Eligibility Options – Payee Search	117
Table 4 – eBill Account Eligibility Options – Payee Inquiry	126
Table 5 - eBill Auto Payment Options - Payee Inquiry	134
Table 6 - eBill Auto Payment Options - Payee Mod.....	146

Bill Pay Services API – User Guide

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

Document Tracking

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	<ul style="list-style-type: none"> • Payment Services: <ul style="list-style-type: none"> ○ Payment History Srch; ○ Payment History Inquiry 	<ul style="list-style-type: none"> • Add missed Payment Status of: Resubmitted
01.15.2013	<ul style="list-style-type: none"> ○ Identification ○ Business Service Operations: <ul style="list-style-type: none"> ○ Subscriber Services ○ Glossary 	<ul style="list-style-type: none"> ○ Add reference to Subscriber Lookup service – which will return the iPay Subscriber Identifier needed for all subscriber-level service requests. ○ New Subscriber Lookup service ○ Two new subscriber identifier elements added to BilPaySubInfo complex, associated with SubInq, SubMod and [future] SubAdd messages. ○ Remove ability to add new MobProvCode; thus eliminating need for MobProvDom element altogether (SubInq; SubMod services) ○ New term added for Stand-Alone Bill Pay Services.
01.17.2013	<ul style="list-style-type: none"> ○ Business Service Operations ○ Payee Services 	<ul style="list-style-type: none"> ○ The following Account Number elements will no longer be masked in the service response: <ul style="list-style-type: none"> ○ PayFromAcctId ○ SubMerAcctId
04.16.2013	<ul style="list-style-type: none"> ○ Business Service Operations: ○ Payee Services 	<ul style="list-style-type: none"> ○ Eliminate the word Individual from the definition for PayeePmtMthd The Payment Method is applicable for all Payees, not just individual.
05.15.2013	<ul style="list-style-type: none"> ○ Version 2012.0.02 ○ Service Behaviors: <ul style="list-style-type: none"> ○ Nulls ○ Modifications ○ Business Service Operations: ○ Glossary 	<ul style="list-style-type: none"> ○ 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 multiple Business Service Operations are detailed in Business Service Operations – Updates section. ○ Includes new Business Service Operation: Subscriber Add ○ New term added for Electronic Risk Limits

10.15.2013	<ul style="list-style-type: none"> ○ Version 2013.1.03 ○ Business Service Operations: ○ Glossary 	<ul style="list-style-type: none"> ○ New Document Version <ul style="list-style-type: none"> ○ Includes new functionality to expose Bill Pay Services API for Business subscribers <ul style="list-style-type: none"> ▪ Includes the ability to add multiple users to the Bill Pay account. ○ Modifications to multiple Business Service Operations to include Business subscribers are detailed in Business Service Operations – Updates section. ○ Includes new Business Service Operation: Scheduled Payment Approval ○ New terms added for: <ul style="list-style-type: none"> ○ Primary Account Holder ○ Subscriber’s Associated User (i.e., Sub user)
12.03.2013	<ul style="list-style-type: none"> ○ Behaviors <ul style="list-style-type: none"> ○ Identification: AuthenUsrCrd 	<ul style="list-style-type: none"> ○ Corrected AuthenUsrCred’element to accurately reflect code assertion using claim name of RequestingUsrID (vs. SubAssocUsrld)
07.07.2014	<ul style="list-style-type: none"> ○ Version 2013.1.03 ○ Business Service Operations: <ul style="list-style-type: none"> ○ Channel Inquiry ○ Subscriber Add, Subscriber Inquiry, Subscriber Mod 	<ul style="list-style-type: none"> ○ User Guide updated to align with jX XSD Version 2013.1.03. ○ New element added to BilPayProdTypeInfoArray: <ul style="list-style-type: none"> ○ 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 (‘AddName’):
07.31.2014	<ul style="list-style-type: none"> ○ Version 2014.0.01 ○ Copyright page: ○ About this Guide: ○ Service Behaviors: <ul style="list-style-type: none"> ○ Nillable attribute ○ Rstr attribute ○ Business Service Operations: <ul style="list-style-type: none"> ○ Service Dict Search ○ Payee Inquiry ○ Payee Add ○ Scheduled Pmt Add 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2014.0.01) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2014.0.01 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 a non-activated Payee

	<ul style="list-style-type: none"> ○ Payment Search ○ Multiple/Various ○ New] eBill Search ○ [New] eBill Inquiry ○ [New] eBill Mod ○ [New] Appendix C: ○ [New] Appendix D: ○ [New] Appendix E: ○ Glossary: 	<ul style="list-style-type: none"> ○ Corrected PmtStartDt details to denote 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. ○ Modifications to multiple Business Service Operations to include eBills/Bill Presentment functionality are detailed in Business Service Operations – Updates section. ○ Added list of Payment Status Definitions ○ eBill account setup and account error resolution flows ○ eBill account errors list ○ New terms added for: <ul style="list-style-type: none"> ○ eBill/eBiller
03.31.2015	<ul style="list-style-type: none"> ○ Version 2014.0.06 ○ List of Tables and Figures ○ Business Service Operations <ul style="list-style-type: none"> ○ Payee Search ○ Payee Inquiry ○ Payee Add ○ Payee Mod ○ Subscriber Add ○ Multiple/Various 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2014.0.06) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2014.0.06 required. ● New section. ○ New elements added to Payee Search response: <ul style="list-style-type: none"> ○ FirstAvIProcDt ○ FirstAvIEstArvDt ○ EstArvDay ○ Corrected definition of NotAct Payee Status. ○ Corrected definition of NotAct Payee Status. ○ Add the following missed element: <ul style="list-style-type: none"> ○ SubModMerAcctId ○ 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: <ul style="list-style-type: none"> ○ PhoneNum ○ EmailAddr ○ Corrected element name from ElecMerPayeeAcctID to ElecBilPayeeAcctID under eBill Account Set up instructions. ○ Added instructions for designation of default funding account in Subscriber Add Behaviors section. ○ Clarified example in PmtDayofMonth to include days (1-31).

	<ul style="list-style-type: none"> ○ Glossary ○ Index 	<ul style="list-style-type: none"> ○ New terms added for: <ul style="list-style-type: none"> ○ Activation [Payee] ○ Non-Activated Payee ○ New section
06.15.2015	<ul style="list-style-type: none"> ○ Version 2014.0.08 ○ Business Service Operations <ul style="list-style-type: none"> ○ Subscriber Inquiry ○ Payee Inquiry ○ Payee Mod ○ Scheduled Payment Add/Inquiry/Mod ○ Payment History Inquiry ○ eBill Search ○ eBill Inquiry ○ Appendix B - Subscriber's Associated User - Permission/Caps examples 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2014.0.08) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2014.0.08 required. ○ Added note for the PayFromAcctInfoArray to clarify that this array will be empty if the subscriber has no active funding account at the time of the inquiry. • Added note to element included in response [AuthenQuesDesc] clarifying that element may include HTML or other prohibited characters. • 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: <ul style="list-style-type: none"> ○ SubCmntToPayee ○ New element added to request and response (root): <ul style="list-style-type: none"> ○ ElecBilPayeeAcctId ○ New elements added to eBill Search complex in response: <ul style="list-style-type: none"> ○ ElecBilPayeeAcctId ○ CurrBal ○ MinPmtAmt ○ New element added to eBill Inquiry complex in response: <ul style="list-style-type: none"> ○ ElecBilPayeeAcctId ○ Corrected canonical value name for Sub user PerCode from CanScheduleP2PPayments to CanScheduleP2PPayment
08.18.2015	<ul style="list-style-type: none"> ○ Version 2015.0.01 ○ Business Service Operations <ul style="list-style-type: none"> ○ Channel Inquiry ○ Payee Add 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2015.0.01) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2015.0.01 required. ○ New payment feature added: Outbound Transfers ○ New canonical value added to FeturType element: <ul style="list-style-type: none"> ○ XferToSubFinInst (Outbound Transfers) ○ New canonical value added to PayeeClsf element (request and response): <ul style="list-style-type: none"> ○ FinInst (Financial Institution)

	<ul style="list-style-type: none"> ○ Payee Search ○ Payee Inquiry ○ Payee Mod ○ Scheduled Payment Search ○ Scheduled Payment Add ○ Scheduled Payment Mod ○ Scheduled Payment Inquiry ○ Payment History Inquiry ○ Payment History Search ○ Appendix B: Subuser Permissions/Caps ○ Glossary 	<ul style="list-style-type: none"> ○ New element added to BilPayPayeeInfo complex in response: <ul style="list-style-type: none"> ○ PmtIntentType (Payee level) ○ New elements added to BilPayPayeeSrchInfo complex in response: <ul style="list-style-type: none"> ○ PmtIntentType (Payee level) ○ SubMerAcctID ○ New element added to BilPayPayeeInfo complex in response: <ul style="list-style-type: none"> ○ PmtIntentType (Payee level) ○ New filter added to search request and response: <ul style="list-style-type: none"> ○ XferFilter (Transfer filter) ○ New element added to BilPaySchedPmtSrchInfo complex (request and response): <ul style="list-style-type: none"> ○ PmtIntentType (Payment Intention Type) ○ New element added to BilPayPmtInfo complex in request: <ul style="list-style-type: none"> ○ PmtIntentType (for Payment) ○ New element added to BilPayPmtPayeeInfo complex in response: <ul style="list-style-type: none"> ○ PmtIntentType (for Payee) ○ New element added to BilPayPmtInfo complex in response: <ul style="list-style-type: none"> ○ PmtIntentType (for Payment) ○ New filter added to search request and response: <ul style="list-style-type: none"> ○ XferFilter (Transfer filter) ○ New element added to BilPayPmtHistSrchInfo complex (request and response): <ul style="list-style-type: none"> ○ PmtIntentType (Payment Intention Type) • New examples added for Transfer permissions and caps. • New terms added for Transfer account types.
11.02.2015	<ul style="list-style-type: none"> ○ Version 2015.0.03 ○ Business Service Operations ○ Subscriber Search 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2015.0.03) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2015.0.03 required. ○ New filters added to search request and response to provide expanded filter options in order to enhance ability to finite subscriber identification: <ul style="list-style-type: none"> ○ PayFromAcctId ○ TaxId ○ EmailAddr ○ PostalCode ○ New elements added to BilPaySubSrchInfo complex (in SubSrch response):

	<ul style="list-style-type: none"> ○ Subscriber Inquiry ○ Payee Search ○ Subscriber Inquiry ○ Payee Inquiry 	<ul style="list-style-type: none"> ○ PayFromAcctId ○ PayFromAcctType ○ PayFromInstRtId ○ PayFromAcctOwnName ○ PayFromAcctOwnAddr ○ TaxId ○ EmailAddr (array) ○ BirthDt ○ New element added to BilPaySubInfo complex in response: <ul style="list-style-type: none"> ○ BirthDt ○ New Note for Business subscribers regarding retrieval of Payee information on behalf of sub users with limited Payee permissions. ○ New Note regarding Service Consumer's need to support the display and entry of a variable number of login credentials attributes for eBill accounts.
02.01.2016	<ul style="list-style-type: none"> ○ Version 2015.0.06 ○ Service Behaviors: <ul style="list-style-type: none"> ○ <Rstr> Attribute ○ Deprecation Policy ○ Business Service Operations <ul style="list-style-type: none"> ○ Subscriber Inquiry ○ Subscriber Mod ○ Subscriber Add ○ Subscriber Inquiry (Rs) ○ Subscriber Search ○ SubConsmCustInq ○ Subscriber Add ○ Payee Inquiry ○ Payee Mod ○ Payee Search ○ Sched Payment Search 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2015.0.06) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2015.0.06 required. ○ New parameter (ReadOnly) being used by Service Provider (iPay Solutions). ○ Added new section detailing deprecation policy. ○ New elements added to BilPaySubInfo complex to support ability to deactivate or reactivate subscriber: <ul style="list-style-type: none"> ○ SubInActRsnType ○ SubStat ○ Scheduled for DEPRECATION: <ul style="list-style-type: none"> ○ SubStat (encapsulated by BilPaySubInqRs_Mtype) ○ New canonical value added to <SubStat> search filter parameters to enable return of deactivated subscribers: <ul style="list-style-type: none"> ○ InAct (returns only those eligible for reactivation) ○ New element added to BilPaySubInfo complex: <ul style="list-style-type: none"> ○ SubStat ○ Add additional detail around password set up requirements to the following element: <ul style="list-style-type: none"> ○ TempPswd ○ Add <Rstr> instructions to Payee Name and Payee Phone Number for conditional edit availability (elements are ReadOnly in some scenarios) ○ New information added regarding the default sort order applied to search results.

	<ul style="list-style-type: none"> ○ Payment History Search ○ Scheduled Pmt Mod ○ Glossary 	<ul style="list-style-type: none"> ○ Additional information on how to specify desired changes to currently scheduled payment [only] in a recurring series added to the following element: <ul style="list-style-type: none"> ○ FutPmtId ○ New terms added for subscriber Deactivation and Reactivation.
06.03.2016	<ul style="list-style-type: none"> ○ Version 2016.0.01 ○ Payee Search ○ Service Behaviors: Srch/Inquiry Behaviors 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2016.0.01) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2016.0.01 required to leverage updates. ○ New array added to BilPayPayeeSrchInfo complex to support expanded search results: <ul style="list-style-type: none"> ○ RushOptArray ○ Additional information on records management in Srch requests and responses (e.g., MaxRec, Cursor, etc).
01.30.2017	<ul style="list-style-type: none"> ○ Version 2016.0.09 ○ Payee Add ○ Payee Inquiry ○ Payee Mod ○ Scheduled Payment Inquiry ○ Payment History Inquiry 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2016.0.09) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2016.0.09 required to leverage updates. ○ New element added to BilPayPayeeinfo complex to allow the consumer to select the communication method with the P2P recipient: <ul style="list-style-type: none"> ○ PayeeP2PType ○ New canonical value added to [Payee] PhoneType element: <ul style="list-style-type: none"> ○ SMS ○ New Payee Add behaviors added to provide guidance on adding a P2P Payee and designating the desired communication method (Email or SMS). ○ New canonical value added to [Payee] PhoneType element: <ul style="list-style-type: none"> ○ SMS
05.31.2017	<ul style="list-style-type: none"> ○ Version 2017.0.02 ○ Payee Inquiry ○ Payee Search 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2017.0.02) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2017.0.02 required to leverage updates. ○ New element added to BilPayPayeeInfo complex to allow the service consumer to determine the last date a Payee was modified: <ul style="list-style-type: none"> ○ LastMainDt ○ New element added to BilPayPayeeSrchInfo complex to allow the service consumer to determine the last date a Payee was modified: <ul style="list-style-type: none"> ○ LastMainDt ○ New filter(s) added to search request and response to provide expanded filter options in order to enhance ability to finite Payee identification (use of these filters allows a Service Consumer to include only those Payees that were modified within the specified date range):

	<ul style="list-style-type: none"> ○ ScheduledPmtAdd ○ ScheduledPmtMod 	<ul style="list-style-type: none"> ○ LastMainStartDt ○ LastMainEndDt ○ Add <Rstr> instructions to PayeeName for conditional <i>Hid</i> value (The Payee should be hidden from the user in some scenarios.) ○ Clarified instructions for adding or modifying a recurring payment or transfer series.
08.07.2017	<ul style="list-style-type: none"> ○ Version 2017.2.01 ○ Service Behaviors: <ul style="list-style-type: none"> ○ Localization/Time Zones ○ Business Service Operations <ul style="list-style-type: none"> ○ Payee Add ○ Payee Mod ○ Payee Inq ○ Payee Mod ○ Payee Search ○ Payee Inquiry 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2017.2.01) ○ Minimum jXchange contract version R2017.2.01 ○ New information to warn that if Service Consumer's servers are configured to auto-adjust any received timestamps for local time zone, this must be taken into account when converting UTC to local time. ○ Change to Payee Address rules for Individual Payees (where bank account information is known) – address is now optional: <ul style="list-style-type: none"> ○ PayeeAddressInfoArray ○ Clarification of the Service Provider's handling of ongoing eBill activity when acceptance of a new eBiller Terms of Service is required for an existing eBill account: <ul style="list-style-type: none"> ○ ElecMerPayeeToSStat ○ New canonical value added to [Payee] ElecBilPayeeType: <ul style="list-style-type: none"> ○ EnrollPend ○ New element added to BilPayPayeeSrchnfo and BilPayPayeeInfo complexes to provide information of the level of eBill detail information available for the Payee's eBill account: <ul style="list-style-type: none"> ○ ElecBilPayeeCatType ○ Table added to illustrate eBill account enrollment/eligibility options: <ul style="list-style-type: none"> ○ Table 3 & 4 – eBill Account Eligibility Options
10.27.2017	<ul style="list-style-type: none"> ○ Version 2017.2.03 ○ Business Service Operations <ul style="list-style-type: none"> ○ eBill Inquiry 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2017.2.03) ○ Minimum jXchange contract version R2017.2.03 ○ New elements added to root request (and response) for entry of mobile device information, if the end user is requesting eBill information via their mobile device: <ul style="list-style-type: none"> ○ MobDevType ○ MobDevResoType ○ Orientation ○ New element added to BilPayElectBilSchedInqInfo complex to return the web page URL to be used by the Service Consumer to retrieve eBill detail information: <ul style="list-style-type: none"> ○ WebPgURL

02.01.18	<ul style="list-style-type: none"> ○ Version 2017.4.01 ○ Business Service Operations <ul style="list-style-type: none"> ○ Channel Inquiry ○ eBill Inquiry 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2017.4.01) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2017.4.01 ○ New elements added to BilPayProdTypeInfo complex in response for new Individual Payee payment Caps: <ul style="list-style-type: none"> ○ MaxIndvPmtAmt ○ MaxIndvDlyAmt ○ New elements added to BilPayElectBilSchedInqInfo complex to return another version of the web page URL WITHOUT an embedded security token (delivered separately) as an alternate option to be used by the Service Consumer to retrieve eBill detail information: <ul style="list-style-type: none"> ○ WebPgURLNoToken ○ WebPgToken ○ TokenExpTimeDt
04.03.18	<ul style="list-style-type: none"> ○ Version 2017.4.04 ○ Business Service Operations <ul style="list-style-type: none"> ○ Payee Search ○ Payee Inquiry ○ Subscriber Inquiry (Rs) ○ Subscriber Mod (Rq) 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2017.4.04) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2017.4.04 ○ New canonical value added to [Payee] <ElecBilPayeeType>: <ul style="list-style-type: none"> ○ EnrollAlw ○ New canonical value added to <SubInActRsnType>: <ul style="list-style-type: none"> ○ AdminFraudAct
02.21.19	<ul style="list-style-type: none"> ○ Version 2018.6.01 ○ Business Service Operations <ul style="list-style-type: none"> ○ Channel Inquiry (Rs) ○ Payee Inquiry (Rq) ○ Payee Inquiry (Rs) ○ Appendix A: Business Service Operation-to-Feature Mapping 	<ul style="list-style-type: none"> ○ New Document/XSD Version (R2018.6.01) <ul style="list-style-type: none"> ○ Minimum jXchange contract version R2018.6.01 ○ Details for the following element were updated to clarify the purpose of the element: <ul style="list-style-type: none"> ○ ChkFundModel ○ New canonical value added to <FeturType> element within <BilPayFeturInfoArray>: <ul style="list-style-type: none"> ○ PaybyCard ○ New <XtendElem> request value added to <IncXtendElemArray> array: <ul style="list-style-type: none"> ○ x_CardFundedPayeeArray ○ New element added to response root: <ul style="list-style-type: none"> ○ AlwCardFundedType ○ New optional array added to response root: <ul style="list-style-type: none"> ○ x_CardFundedPayeeArray ○ Added new Feature under Payee Inquiry: <ul style="list-style-type: none"> ○ PaybyCard ○ Removed obsolete payment statuses:

	<ul style="list-style-type: none"> ○ Appendix C: Payment Statuses and Definitions ○ Appendix E: eBill Account Errors 	<ul style="list-style-type: none"> ○ Returned ○ Settled ○ New eBill errors requiring subscriber action/remediation added to Appendix E: <ul style="list-style-type: none"> ○ E6570 ○ E6571 ○ E6572
06.03.19	<ul style="list-style-type: none"> ○ Version 2018.7.04 ○ Business Service Operations ○ Payee Search 	<ul style="list-style-type: none"> ○ Document/XSD Version (R2018.7.04) ○ Minimum jXchange contract version R2018.7.04 ○ New filter added to search request and response to provide expanded filter options in order to enhance ability to finite Payee identification (use of this filter allows a Service Consumer to include only those Payees that have 'CardPay' enabled) <ul style="list-style-type: none"> ○ CardPayFilter
09.11.19	<ul style="list-style-type: none"> ○ Version 2018.7.07 ○ Business Service Operations ○ Payment History Search 	<ul style="list-style-type: none"> ○ Document/XSD Version (R2018.7.07) ○ Minimum jXchange contract version R2018.7.07 ○ New filter added to search request and response <ul style="list-style-type: none"> ○ CardPayFilter

About this Guide

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

The purpose of this document is to provide the implementation, standards and operations of iPay Solutions' Bill Pay Services API. This information is instructional and designed for third-party vendors to evaluate the interface using a web-based messaging system for connecting with iPay Solutions' Bill Pay Services through jXchange.

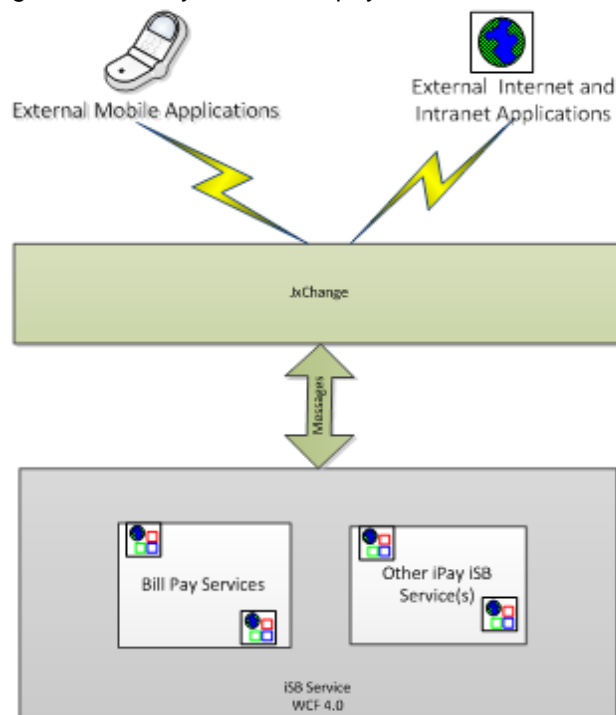
This document is not designed to be a primer for consuming web services, nor a programming teaching tool.

After Reading This Document

iPay Solutions 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.

What is the Bill Pay Services API?

iPay Solutions 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 the jXchange Error Handling document that is included in the Vendor Packet.

Fault Behaviors

Error handling for errors has been designed in 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 Solutions' 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 uses 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:

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

Serial Error Message Handling

In Serial Error Message Handling, the service provider (iPay Solutions) 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 Solutions) 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 listing all 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 (FI) and subscriber have been authenticated prior to receipt of the message request by iPay Solutions.

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

Authorization

iPay Solutions 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 FI identified in

the service request. In addition, the subscriber, if applicable for the request, must be associated with the specified institution.

Finally, iPay Solutions will validate all message requests to ensure the requested service operation is available for the institution and, if applicable, for the subscriber.

NOTE: A subscriber's authorized set of Bill Pay Services API operations must not exceed the services available from the subscriber's web-based (iPay Solutions) Bill Pay product. For example, a subscriber who does not have Email Payment capabilities via their iPay Solutions-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 Solutions) will validate institution and, if applicable, subscriber identification for each request message received.

Service Consumers must provide the unique iPay Solutions subscriber identifier required to return a specific subscriber profile/account. If the Service Consumer does not possess the required iPay Solutions subscriber identifier, the Subscriber Lookup service may be used to get it.

To ensure that all required information is included to enable iPay Solutions 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 the 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.

InstRtld

This is the identification of the entity of the submitted message. An FI entity uses the routing transit or nine-digit number assigned to FIs 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 contains at least one non-integer character.

When a record is for a specific FI within a holding company, the InstRtld is the specific FI routing identification and not the holding company's identification.

AuthenUsrCred

This *optional* complex element specifies the Service Provider's (iPay Solutions) 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 will parse the SAML token to retrieve the requesting user's identifier.

If no *SubAssocUsrId* is provided, the Service Provider will assume the request is from a user who 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 Services 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 use a default value in the event of invalid data.

The two 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 Solutions' 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 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 Solutions' 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 Solutions' 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 Solutions 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 used 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 not set (on Add) or delete (on Mod) 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 Solutions) to do nothing.
 - If the element is sent with *JHANull=true*, this will convey to the Service Provider (iPay Solutions) 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 Solutions) to *set a default* value.
 - If the element is sent with *JHANull=true*, this will convey to the Service Provider (iPay Solutions) 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 Solutions) to *do nothing*.

- If the array element *key identifier* is sent with *JHANull=true*, this will convey to the Service Provider (iPay Solutions) 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 Provider 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).

Nullable Attribute :

The nullable 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 nullable attribute = true, the element will be returned with no value (i.e., blank). If the element does not include the nullable 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 Solutions currently uses only the implied default (ReadWrite), as well as the ReadOnly, NoAccess and Hid values.

- The ReadWrite value indicates there are no restrictions on the specified element.
- The ReadOnly value indicates the Service Consumer can allow the end user to view the specified element, but updates are not allowed.
- The No Access value indicates the Service Consumer should ensure the end user has no access to the specified element.
- The Hid value indicates 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 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 uses 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 the selection criteria.

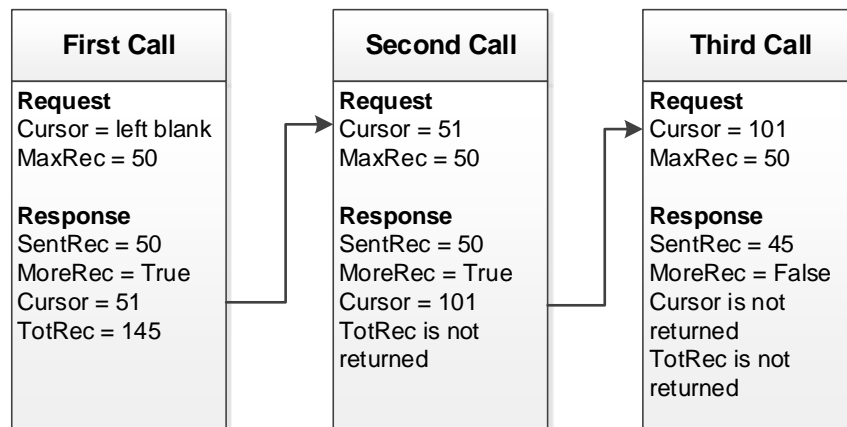
Searches: Record Request/Response Behaviors:

Elements are available with the <SrchMsgRqHdr> and <SrchMsgRsHdr> that pertain strictly to search operations, and are used to control the records, as well as the number of those records that are returned to the Service Consumer.

- **Srch Request:**
 - **MaxRec** – Tells the Service Provider the maximum number of records to return in the response. If no number, or an invalid number, is provided in the search request, the Service Provider (iPay Solutions) will default this value to 50, and return a maximum of 50 records in the response.
 - **Cursor** – Tells the Service Provider at which record (as a number) to begin returning the results. If no number, or an invalid number, is provided in the search request, the Service Provider (iPay Solutions) will default this value to 1. (Records will be returned, starting with the first record available.)
- **Srch Response:**
 - **SentRec** – Tells the Service Consumer how many records were returned in the response (may or may not be equal to the maximum number requested).
 - **MoreRec (True/False)** – Tells the Service Consumer if there are more records available than what was returned.
 - **Cursor** – Tells the Service Consumer which record (as a number) would be next to be returned.
 - **TotRec** – Tells the Service Consumer the total number of records that exist in the file that meet the criteria of the request. (It is not returned if Cursor was included with the request.)

Example:

Subscriber account 1234 has 145 transaction records that could be returned using Payment History Search. The Service Consumer does not know how many records there are, but knows they only want to receive 50 records at a time.



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>, 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 *required* 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 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 only those elements.
- 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 Solutions 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. For example:

1. Subscriber picks Central time zone and 9 a.m.
2. Service Consumer converts to UTC (9 a.m. + 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 = 10 a.m.)

To convert local time to UTC time, you will need to add hours to the local time to get the UTC. To convert UTC to local time, these hours must be subtracted from UTC. The following is a table showing the time adjustments required for both Standard Time and Daylight Saving:

Table 1 – UTC Time Adjustments

Local Time Zone	Add or Subtract from UTC:	
	Standard	Daylight
Atlantic	Four hours	Three hours
Eastern	Five hours	Four hours
Central	Six hours	Five hours
Mountain	Seven hours	Six hours
Pacific	Eight hours	Seven hours
Alaskan	Nine hours	Eight hours
Hawaiian	Ten hours	Not observed

NOTE: Some servers are configured to auto-adjust any received timestamps to the time zone that is local to the server. If your server is configured to perform this action, your local offset from the Eastern time zone must be taken into account when converting UTC to local time.

Deprecation Policy

Deprecation is the future removal of XSD object(s). Objects to be deprecated are clearly marked as obsolete to warn consumers and providers that the object will be phased out. The features of deprecation provide backwards compatibility and give consumers time to bring affected code into compliance with the new standard.

Elements scheduled for deprecation will remain in use for at least three (3) years from the time of the XSD contract change. Any element(s) scheduled for deprecation will be clearly annotated in the XSD contracts, as well as this User Guide. The date of the scheduled deprecation will also be noted.

Business Service Operations

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

Table 2 – Bill Pay Services 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 FI and its Bill Pay services.
Subscriber	
Subscriber Lookup <BilPaySubConsmCustInq>	Allows a client to retrieve the iPay Solutions subscriber ID for a specific subscriber.
Subscriber Add <BilPaySubAdd>	Allows a client to add (enroll) a new subscriber
Subscriber Search <BilPaySubSrchr>	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-FroFA 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 <BilPaySchedPmtAdd>	Allows a client to schedule a single or recurring 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 Modification <BilPayElecBilSchedMod>	Allows a client to file a specific eBill for a subscriber's Payee.

Business Service Operations – Updates

Release 2012.0.01 – Initial release

- The following messages were created for Subscriber Lookup service:
 - BilPaySubConsmCustInqRq_MType
 - BilPaySubConsmCustInqRs_MType
- The following subscriber identifier elements added to BilPaySubInfo complex, associated with SubInq, SubMod and [future] SubAdd services:
 - SubConsmCustId
 - SubComId
- Remove ability to add new MobProvdCode, eliminating need for MobProvDom element (SubInq; SubMod services)
- The following service operations were revised to remove 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)

- New service operation added to the available list of Business Service Operations
 - Subscriber Add
- The following service operation was updated to include the PayeeEmailSharedSecret element in the response:
 - Payee Inquiry
- The following service operation was updated to clarify that Payee Address is an optional entry for Email Payees:
 - Payee Add

- The following service operation was updated to include the newly added ability to edit the [Primary] Payee Address:
 - Payee Modification
- 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
- 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
- The following service operation was updated to include two 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
- 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
- The following service operations were updated to include new elements, including funding 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)

- New service operation added to the available list of Business Service Operations
 - BilPaySchedPmtApprv
- The following service operation was updated to include new product configuration elements to support Business Subscribers, where applicable:
 - Channel Inquiry
- 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 funding account ('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
- 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
 - 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
 - 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
 - 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
 - Two new canonical values have been added to the PmtStat element to support Business subscribers who 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)

- This version to be used in conjunction with jXchange XSD release version R2013.1.03_XSD.

- 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
- The following service operations were updated to reflect the corrected element name for PmtApprvReq (initially listed incorrectly as PmtApprvReqd):
 - BilPaySubAdd
 - BilPaySubInq
 - BilPaySubMod
- 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
- 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)

- This version to be used in conjunction with jXchange XSD release version R2014.0.01_XSD.
- The following service operation was updated to include PhoneType, SvcFeeDesc and ElecMerAcctType in the list of open enums which can be requested:
 - SvcDictSrch
- The following service operation was updated to include an additional Note for the TempPswd element:
 - BilPaySubAdd
- 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
- The following service operations were updated to clarify the rules for allowing Payee FI Account Information to be added:
 - BilPayPayeeAdd
 - BilPayPayeeMod
- The following service operation was updated to indicate the rule change regarding Payment Adds for non-activated Payees (no longer allowed):

- BilPaySchedPmtAdd
- 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
- The following service operations were updated to include new elements needed to support Payment Service Fee functionality, where applicable:
 - BilPayPayeeInq
 - BilPaySchedPmtInq
 - BilPayPmtHistInq
- 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
- 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)

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

- The following service operation was updated to correct the element name under the eBill Account Set up instructions:
 - BilPayPayeeMod
- The following service operation was updated to include additional instructions for designating a default funding account in the Subscriber Add Behaviors section:
 - BilPaySubAdd
- The following service operations were 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)

- This version to be used in conjunction with jXchange XSD release version R2014.0.08_XSD.
- 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)
- The following service operation was updated to include ElecBilPayeeAcctId element in the request message:
 - BilPayElecBilSchedSrch
- The following service operation was updated to include ElecBilPayeeAcctId, CurBal and MinPmtAmt elements in the response message:
 - BilPayElecBilSchedSrch
- The following service operation was updated to include ElecBilPayeeAcctId element in the response message:
 - BilPayElecBilSchedInq
- The following service operation was updated to include additional Note regarding the possibility that no active funding accounts may exist for an active subscriber:
 - BilPaySubscriberInq
- 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 non-permitted XML characters:
 - BilPayPayeeInq
 - BilPayPayeeMod

Release 2015.0.01 – (08.12.2015)

- This version to be used in conjunction with jXchange XSD release version R2015.0.01_XSD.
- The following service operation was updated to include the new XferToSubFinInst canonical value for the FeturType element:
 - BilPayChanInq (response)
- 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)
- 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
- The following service operation was updated to include SubMerAcctID element in the response message:
 - BilPayPayeeSrch
- The following service operations were updated to include add and /or mod behaviors for Outbound Transfer Payees and Payments:
 - BilPayPayeeAdd
 - BilPayPayeeMod
 - BilPaySchedPmtAdd
 - BilPaySchedPmtMod

Release 2015.0.03 – (11.02.2015)

- This version to be used in conjunction with jXchange XSD release version R2015.0.03_XSD.
- The following service operation was updated to include additional filter criteria (PayFromAcctId, TaxId, EmailAddr, PostalCode) in the request and response messages:
 - BilPaySubSrch
- The following service operation was updated to include additional identifying elements (funding account information, TaxId, EmailAddr (array), BirthDt) in the response message:
 - BilPaySubSrch
- The following service operation was updated to include BirthDt element in the response message:

- BilPaySubInquiry
- The following service operations were updated to include new Note regarding retrieval of Payee information for Business subscribers on behalf of sub users with limited Payee permissions:
 - BilPayPayeeSrch
 - BilPaySubInq
- The following service operation was updated to include new Note regarding Service Consumer's need to support the display (and user entry) of a variable number of login credential attributes for eBill accounts:
 - BilPayPayeeInq

Release 2015.0.06 – (02.01.2016)

- This version to be used in conjunction with jXchange XSD release version R2015.0.06_XSD.
- The following service operations were updated to include new elements (<SubStat>, <SubInActRsnType>) within the <BilPaySubInfo_CType> complex to enable a Consumer to deactivate or reactivate a subscriber's status:
 - BilPaySubInq (response)
 - BilPaySubMod (request)
- The following service operation was updated to indicate the <SubStat> element encapsulated by the Bill Pay Subscriber Inquiry Response (<BilPaySubInqRs_MType>) has been scheduled for deprecation:
 - BilPaySubInq (response)
- The following service operation was updated to include a new canonical value for the <SubStat> search filter parameter to enable return of deactivated subscribers who are eligible for reactivation:
 - BilPaySubSrch (request)
- The following service operation was updated to include the <SubStat> element in to determine a subscriber's status (required to determine if a deactivated subscriber is eligible for reactivation):
 - BilPaySubConsmCustInq (response)
- The following service operation was updated to include additional detail around <TempPswd> set-up requirements:
 - BilPaySubAdd
- The following service operations were updated to include information about evaluation of the <Rstr> attribute for the <PayeeName> and Payee <PhoneNumber> elements:
 - BilPayPayeeInquiry
 - BilPayPayeeMod
- The following service operations were updated to include additional information about the default sort order applied to search results returned in the response:
 - BilPayPayeeSrch
 - BilPaySchedPaymentSrch
 - BilPayPaymentHistSrch
- The following service operation was updated to include additional information on the value needed in the <FutPmtId> element to specify that changes should be applied to the currently scheduled payment in a recurring series *only*:
 - SchedPmtMod (request)

Release 2016.0.01 – (06.03.2016)

- This version to be used in conjunction with jXchange XSD release version R2016.0.01 XSD.
- The following service operation was updated to include new array (<RushOptArray>) within the <BilPayPayeeSrchInfo_CType> complex to enable a Consumer to view Rush Options (if available) for a Payee without requiring a Payee Inquiry:
 - BilPayPayeeSrch (response)

Release 2016.0.09 – (01.30.2017)

- This version to be used in conjunction with jXchange XSD release version R2016.0.09 XSD.
- The following service operations were updated to include new element <PayeeP2PType> within the <BilPayPayeeInfo_CType> complex to enable a Consumer to select the desired communication method with the P2P recipient:
 - BilPayPayeeAdd (request)
 - BilPayPayeeInquiry (response)
 - BilPayPayeeMod (request)
- The following service operations were updated to include the new SMS canonical value for <PhoneType> within the <PayeePhoneArray> to enable a Consumer to specify a SMS (Mobile) number for Individual Payees.
 - BilPayPayeeAdd (request)
 - BilPayPayeeInquiry (response)
 - BilPayPayeeMod (request)
 - BilPaySchedPmtInq (response)
 - BilPayPmtHistInq (response)
- The following service operation was updated to include new Payee Add Behaviors guidance on adding a P2P Payee and designating the desired communication method (Email or SMS):
 - BilPayPayeeAdd (request)

Release 2017.0.02 – (05.31.2017)

- This version to be used in conjunction with jXchange XSD release version R2017.0.02 XSD.
- The following service operation was updated to include new element <LastMainDt> within the <BilPayPayeeInfo_CType> complex to enable a Service Consumer to determine the last date a Payee was modified:
 - BilPayPayeeInquiry (response)
- The following service operation was updated to include new element <LastMainDt> within the <BilPayPayeeSrchInfo_CType> complex to enable a Service Consumer to determine the last date a Payee was modified:
 - BilPayPayeeSrch (response)
- The following service operation was updated to include additional filter criteria (LastMainStartDt, LastMainEndDt) in the request and response messages:
 - BilPayPayeeSrch

- The following service operation was updated to include instructions about evaluation of the <Rstr> attribute for the <PayeeName> element:
 - BilPayPayeeSrch (response)

Release 2017.2.01 – (08.07.2017)

- This version to be used in conjunction with jXchange XSD release version R2017.2.01 XSD.
- The following service operations were updated to include a new rule making completion of the <PayeeAddress> within the <BilPayPayeeInfo_CType> complex optional for Individual, Electronic Payees:
 - BilPayPayeeAdd (request)
 - BilPayPayeeMod (request)
- The following service operations were updated to clarify the Service Provider's handling of ongoing eBill activity when acceptance of a new eBiller Terms of Service is required for an existing eBill account (<ElecMerPayeeToSStat> within the <ElecMerPayeeInfoRec_CType> complex):
 - BilPayPayeeInq (response)
 - BilPayPayeeMod (request)
- The following service operations were updated to include the new EnrollPend canonical value for <ElecBilPayeeType> within the <BilPayPayeeSrchInfo_CType> and <BilPayPayeeInfo_CType> complexes to indicate a requested eBill registration is being processed, but not yet complete:
 - BilPayPayeeSrch (response)
 - BilPayPayeeInq (response)
- The following service operations were updated to include a new element <ElecBilPayeeCatType> within the <BilPayPayeeSrchInfo_CType> and <BilPayPayeeInfo_CType> complexes to indicate the level of eBill detail information that is available for the eBill account:
 - BilPayPayeeSrch (response)
 - BilPayPayeeInq (response)

Release 2017.2.03 – (10.27.2017)

- This version to be used in conjunction with jXchange XSD release version R2017.2.03 XSD.
- The following service operation was updated to include new elements <MobDevType>, <MobDevResoType> and <Orientation> in the root level request (to provide needed mobile device information so that the correct sizing of media can be delivered for the eBill detail); plus a new element <WebPgURL> within the <BilPayElecBilSchedInqInfo> complex of the response (provides the URL to view full electronic eBill statement and detail for a given eBill):
 - BilPayElecBilSchedInq (request/response)

Release 2017.4.01 – (02.01.2018)

- This version to be used in conjunction with jXchange XSD release version R2017.4.01 XSD.
- The following service operation was updated to include new elements <MaxIndvPmtAmt> and <MaxIndvDlyAmt> in the BilPayProdTypeInfo complex to provide information about new payment caps for Individual Payees:
 - BilPayChanInq (response)

- The following service operation was updated to include new elements <WebPgURLNoToken>, <WebPgToken> and <TokenExpTimeDt> in a new 'Ver_3' complex element in the root level response (to provide an alternate version of the WebPgURL that does NOT include an embedded security token, but rather sends it separately) within the <BilPayElecBilSchedInqInfo> complex of the response:
 - BilPayElecBilSchedInq (response)

Release 2017.4.04 – (04.03.2018)

- This version to be used in conjunction with jXchange XSD release version R2017.4.04 XSD.
- The following service operations were updated to include the new EnrollAlw canonical value for <ElecBilPayeeType> within the <BilPayPayeeSrchInfo_CType> and <BilPayPayeeInfo_CType> complexes to indicate a Payee currently registered for eBills (summary information) is eligible for detailed eBill information (subject to re-enrollment by the Subscriber):
 - BilPayPayeeSrch (response)
 - BilPayPayeeInq (response)
- The following service operations were updated to include the new AdminFraudAct canonical value for <SubInActRsnType> within the <BilPaySubInfo_CType> complex to enable a Consumer to indicate the reason for Subscriber account deactivation is due to potential or confirmed fraudulent activity:
 - BilPaySubInq (response)
 - BilPaySubMod (request)

Release 2018.6.01 – (02.21.2019)

- This version to be used in conjunction with jXchange XSD release version R2018.6.01.
- The following service operation was updated to include the new <PaybyCard> canonical value for the FeturType element:
 - BilPayChanInq (response)
- The following service operation was updated to include the new <AlwCardFundedType> element to indicate if the allows card funded payments:
 - BilPayPayeeInq (response) – within the root response
- The following service operation was updated to include a new optional <x_CardFundedPayeeArray> array which encapsulates the new <CardFundedPayeeInfo_CType> complex that includes the Payee's (biller's) URL for the card funded payment:
 - BilPayPayeeInq (request and response)

Release 2018.7.04 – (06.03.2019)

- This version is to be used in conjunction with jXChange XSD release version R2018.7.04
- The following service operation was updated to include additional filter criteria (CardPayFilter) in the request and response messages:
 - BilPayPayeeSrch

Release 2018.7.07 – (09.11.2019)

- This version is to be used in conjunction with jXChange XSD release version R2018.7.07
- The following service operation was updated to include additional filter criteria (CardPayFilter) in the request and response messages:
 - BillPayPmtHistSrch

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 Solutions Bill Pay Service API_business service operation. As such, this document addresses only those elements and/or protocols that are 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 within the Bill Pay Services API services.

For all elements with closed enumerated canonical values of True and False, the default value 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 included in the Vendor Packet.

iPay Solutions' Bill Pay Services API supports Service Dictionary search requests for the following:

- 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.



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)

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 operations that can be queried to obtain data dictionary definitions. The service operations that are 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 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.

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 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 are:

- **MobPrvdCode**
This is the list of mobile phone providers available within the Bill Pay Services API. It is located in the *BilPaySubAdd*, *BilPaySubInq* and *BilPaySubMod* service operations.
- **PerCode**
This is the list of permissions that may be applied to subscriber's associated users. It is located in the *BilPaySubAdd*, *BilPaySubInq* and *BilPaySubMod* service operations.
- **CapCode**
This is the list of payment caps that may be applied to a subscriber's associated users. It is located in the *BilPaySubAdd*, *BilPaySubInq* and *BilPaySubMod* service operations.
- **PhoneType**
This is the list of phone types supported within the Bill Pay Services API. It is located in the *BilPayPayeeAdd*, *BilPayPayeeInq*, *BilPaySubSrch*, *BilPaySubAdd*, *BilPaySubInq*, *BilPaySubMod*, *BilPaySchedPmtInq* and *BilPayPmtHistInq* service operations.
- **SvcFeeDesc**
This is the list of payment-level service fee types supported within the Bill Pay Services API. It 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) supported within the Bill Pay Services API. It 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 allow 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**

Use of these Filter Codes limits the result set to the supporting information for the *MobPrvdCode* element only.

IncXtendElemArray

The optional *IncXtendElemArray* **array** 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 Solutions) returns the *SvcDictSrchrRs* 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 arrays within the *SvcDictSrchrRs* response message applicable for the Bill Pay Services API are:

x_SvcPrvdErrArray

The *x_SvcPrvdErrArray* array included at the root response level provides the consumer with all 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 *SvcDictSrchrRs* 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. The Bill Pay Services API returns 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.

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 available within the Bill Pay Services API, located in the *BillPaySubInq* and *BillPaySubMod* service operations.
- **PerCode** The list of permissions that may be applied to subscriber's associated users, located in the *BillPaySubAdd*, *BillPaySubInq* and *BillPaySubMod* service operations.
- **CapCode** The list of payment caps that may be applied to subscriber's associated users, located in the *BillPaySubAdd*, *BillPaySubInq* and *BillPaySubMod* service operations.
- **Phone Type** The list of phone types supported within the Bill Pay Services API, located in the *BillPayPayeeAdd*, *BillPayPayeeInq*, *BillPaySubSrch*, *BillPaySubAdd*, *BillPaySubInq*, *BillPaySubMod*, *BillPaySchedPmtInq* and *BillPayPmtHistInq* service operations.
- **SvcFeeDesc** The list of Payment-level Service Fee types supported within the Bill Pay Services API, located in the *BillPayPayeeInq*, *BillPaySchedPmtInq* and *BillPayPmtHistInq* service operations.
- **ElecMerAcctType** The list of eBiller account types, returned as a matched pair value including both code and corresponding description, supported within the Bill Pay Services API. Located in the *BillPayPayeeInq* and *BillPayPayeeMod* service operations.

Channel Inquiry

Container: TPG_BillPayMaster.xsd

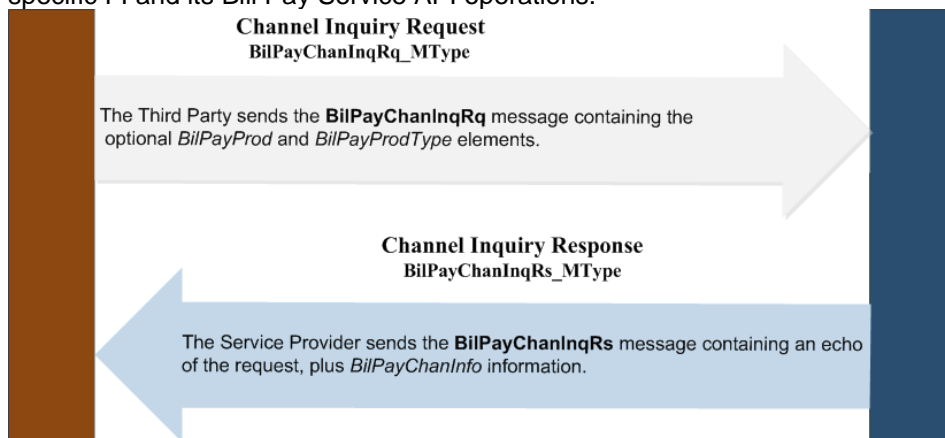
Message: BilPayChanInq

Channel Inquiry <BilPayChanInq> is a Bill Pay Services API service designed to allow a consumer to retrieve reference information about a specific FI, as well as information about available 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 FI and its Bill Pay Service API operations.



Request

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

These elements, contained within this request, are necessary for the Bill Pay Services API.

BilPayProd

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

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

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

BilPayProdType

This specifies the iPay Solutions Product Type associated with the product using 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 Solutions) returns the *BillPayChanInqRs* response message to the Service Consumer, which returns a package of product and other reference information for the specified FI.

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

FinInstName

This is the depository FI name.

PmtCutoffTime

This is the cutoff time (transmitted in UTC) 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 FI (for example, a cutoff time of 3 p.m. ET would translate to a cutoff time of 2 p.m. CT for an FI located in the Central time zone). All payments scheduled after this time for immediate processing are handled on the next available processing day.

StorMos

This is the number of months that payment information is stored for the FI. For example, a value of 18 indicates that a maximum of 18 months 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 FI. 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 processing model for the Institution. Canonical values are:

- **SubDrft (Subscriber or Consumer draft)**
- **BillPayPrvdDrft (aka iPay check)**
- **InstDrft (Institution draft)**

This value specifies where the check payment 'originates' and which account funds are drawn from to satisfy the payment. 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 FI must stop the check. The iPay Solutions check is drawn from the iPay Solutions account after subscriber funds are placed in the iPay settlement account, so iPay Solutions must be contacted to stop these checks.

Bill Pay Provider/iPay check

This processing 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 an iPay Solutions settlement account, who then forwards the payment electronically to the Payee, or drops the transaction to a check funded from an iPay Solutions settlement account.

Subscriber Draft Model

This draft model generates transactions funded directly from the subscriber's account. All electronic payments are debited from the subscriber's financial account. 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 rather on a central FI account. iPay Solutions 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 FI 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 within the *BillPayChanInfo* 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, weekends, 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.

BillPayProdTypeInfoArray

This array includes the *BillPayProdTypeInfo* 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:

BillPayProdType

This represents the Product Type associated with the product 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. 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. 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 P2P payment.

MaxEmailDlyAmt

This is the maximum daily amount that can be requested for all P2P payments in a single day for a given subscriber.

MaxIndvPmtAmt

This is the maximum payment amount that can be requested for a single electronic payment to an Individual Payee. (A separate single payment cap exists for those individual Payees set up through the 'Email/P2P' process—via email or text. See <MaxEmailPmtAmt> above.)

MaxIndvDlyAmt

This is the maximum daily amount that can be requested for all electronic payments to Individual Payees in a single day for a given subscriber. (A separate daily payment cap exists for those individual Payees set up through the 'Email/P2P' process—via email or text. See <MaxEmailDlyAmt> above.)

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 funding accounts ('pay from accounts'), in addition to the default funding accounts, 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 drafts/checks.

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 drafts/checks.

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 if an FI allows the subscriber to specify the starting check number for a given funding account. Canonical values are:

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

CanPayFromSavAcct

This indicates the subscriber can add a savings account as a funding account. Canonical values are:

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

DualSignOnReq

This indicates whether Dual Sign-On is required when accessing an iPay Solutions-hosted online Bill Pay interface, if it 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, to add/enroll the new subscriber. Canonical values are:

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

CanAddPayFromOwnInfo

This indicates if the FI allows specification of funding account ('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. It is applicable only if the *sub user* feature is available for the FI's product. A value of *False* indicates that the institution/service consumer will utilize the sub user permission structure provided by the Service Provider (iPay Solutions). Canonical values are:

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

HidSubAssocUsrConsmCustId

This indicates if 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 Solutions.

HidSubAssocUsrSubComId

This indicates if the FI allows an authorized user to view or modify the *SubAssocUsrComId*, the sub user'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 sub user specified in the request. Canonical values are:

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

AlwSubType

This indicates the subscriber type(s) 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 Solutions.

ElecMerAutoPmtAlw

This indicates whether set up 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: Prohibiting or enabling Automatic Payment Schedules is controlled at the individual eBiller level, so a value of *True* does not guarantee 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 determine whether an Automatic Payment Schedule can be established for a subscriber's Payee.

Complex element(s):

SubLoginIDRstr

This complex element contains the FI's LoginID parameter information for the specified product, which provides an explicit definition of 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 the credential type should contain.

MaxLenCharVal

This specifies the maximum number of characters 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. If the FI'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. If the FI'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] ! @ # \$ % ^ & * () _ - + = { } [] | \ : ; " ' < > ? /) the credential type should contain.

MinLowerCaseVal

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

MinUpperCaseVal

This specifies the minimum number of upper-case characters (ASCII chars: A-Z) 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 *BillPayProdTypeInfo* complex are listed below.

BillPayFeturInfoArray

This array contains a list of Bill Pay Service features (business service operations) 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 product. Canonical values are:

- **AddSub** - Add/Enroll new subscriber (includes ability to add funding)

- accounts)
- **ViewSubInfo** - View subscriber information
- **MgmtSubInfo** - Manage subscriber information
- **ViewPayFromAcct** - View funding accounts ('pay from accounts')
- **MgmtPayFromAcct** - Manage (Add, Edit, Delete) funding accounts
- **Sub users** - Manage (Add, Edit, Delete) sub users 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** - P2P 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
- **XferToSubFinInst** - Outbound Transfers
- **PaybyCard** - Pay by Card/Card-funded Payments

These features are mapped to specific Business Service Operations, allowing the Service Provider (iPay Solutions) to ensure the requested business service operation is available for the FI and, if applicable, the subscriber. Details can be found in [Appendix A](#), below.

FeturAct

This indicates if the specified feature is activated for this product for this FI. 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.

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 a subscriber's associated users (i.e., sub users), and includes the following element(s):

Simple element(s):

AlwSubAssocUsrMgmtOpt

This specifies the options that are available for managing a subscriber's associated users for the specified Bill Pay product. If all sub-user 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 Solutions) 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 Solutions for future use in requesting subscriber-specific Bill Pay services. However, if the consumer chooses *not* to store the subscriber identifier, this look-up service operation allows the Service Consumer to retrieve the required identifier as needed.

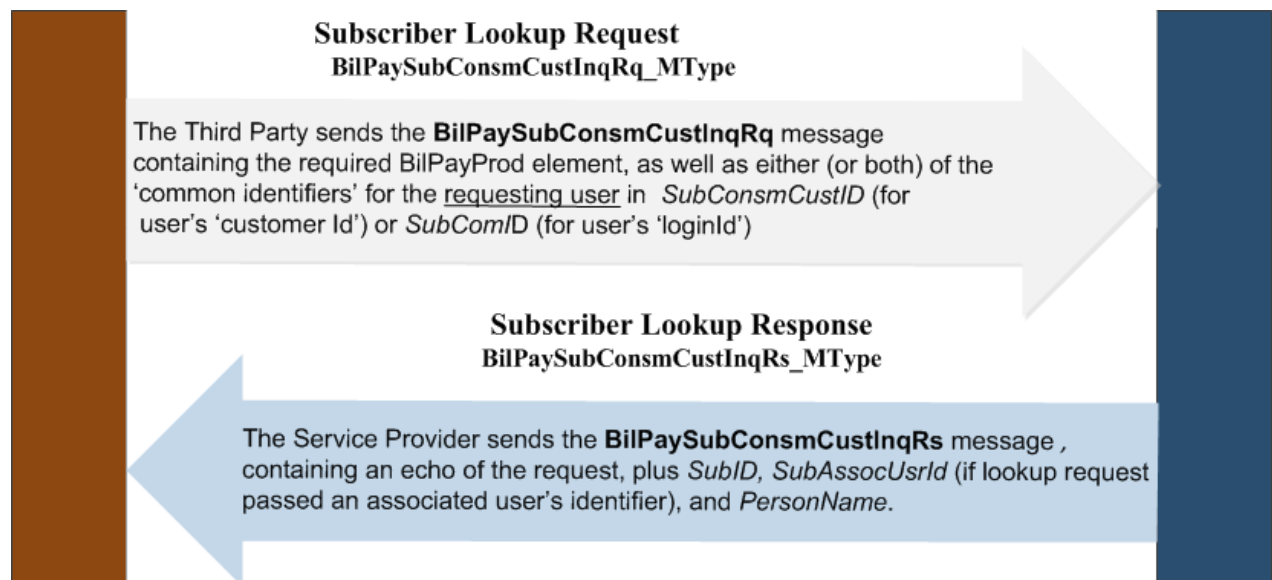
NOTE: Prior to using this lookup service, a common means of uniquely identifying each authorized user of a subscriber's account (e.g., subscriber or subscriber's associated user) between the two systems must be established.

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



Request

The third-party consumer forwards the *BilPaySubConsmCustInqRq* **request** message to the Service Provider. The following elements within the *BilPaySubConsmCustInqRq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay Solutions 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 is typically the user's LoginID used with a corresponding iPay Solutions-hosted online Bill Pay application.

NOTE: Either user identifier value can be used on the look-up request, regardless of whether Bill Pay Services are Stand-Alone or non-Stand-Alone, if the submitted identifier has previously been supplied to the Service Provider (iPay Solutions) and has been associated with the user.

Response

The service provider (iPay Solutions) 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 within the *BilPaySubConsmCustInqRs* response applicable for the Bill Pay Services API:

SubId

This is the Service Provider's (iPay Solutions) identifier for the subscriber. This is required for all subsequent subscriber-specific service requests.

SubAssocUsrId

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

SubStat

This represents the subscriber's status. Canonical values are:

- **Act** – Active
- **Pend** – Pending
- **Cls** – Deleted or rejected (Closed; not eligible for reactivation.)
- **InAct** – Inactive (Subscriber has been deactivated and is eligible for reactivation)

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 (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

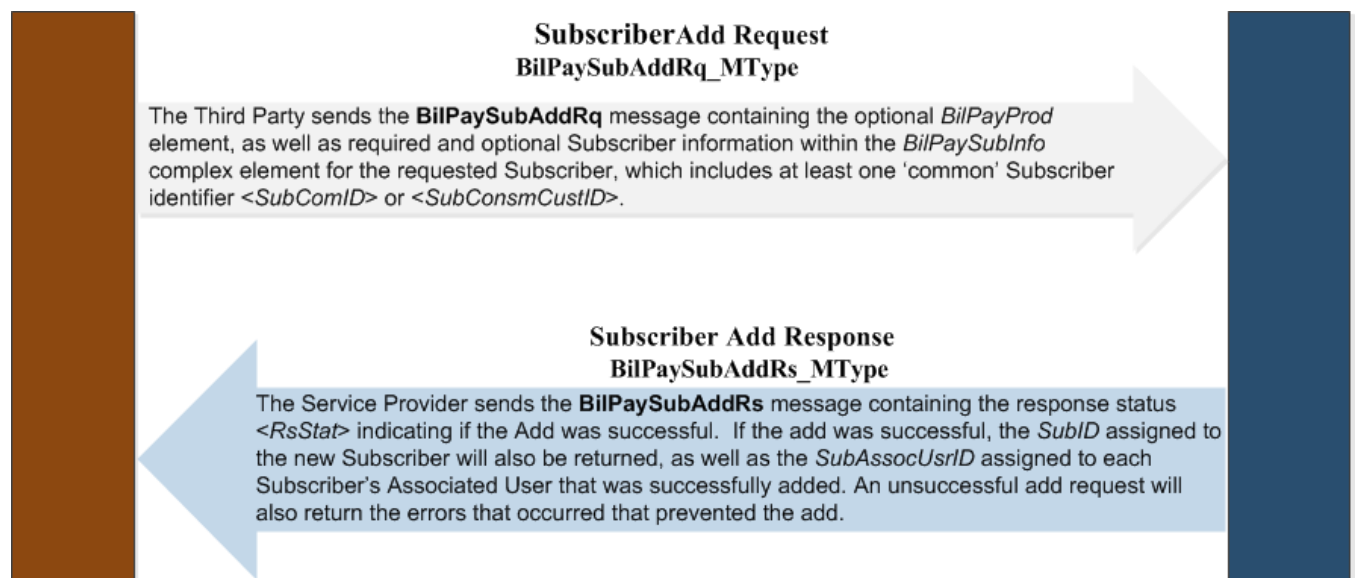
The Bill Pay Subscriber Add <BilPaySubAdd> will allow the service consumer to add (enroll) a new subscriber for a specific FI and product. At least one common user identifier element is required on the Add request (for individual subscribers: the <SubComId> or <SubConsmCustId>; for company subscribers: the primary account holder <SubAssocUsrComId> or <SubAssocUsrConsmCustId>).

When adding a company (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.



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 Solutions 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 Solutions) identifier for the subscriber. This element should be left blank for the *add* request, as this information will not be available to the Service Consumer until the Subscriber Add request has been completed.

BillPaySubInfo

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 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 Service Provider (iPay Solutions) and Service Consumer associated with an individual subscriber. This will typically be the subscriber's login ID used with a corresponding iPay Solutions-hosted online Bill Pay application.

This element should be left blank for a Company subscriber *add* 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.

NOTE: The above subscriber identifier value(s) provided to the Service Provider (iPay Solutions) can later be used in Subscriber Lookup requests to obtain the Service Provider's (iPay Solutions) 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 needed only if the subscriber's product requires it. A Channel Inquiry can 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 Solutions' online Bill Pay interface, if it is available for use by the FI's individual subscribers. The value entered must be between 2-20 [alphanumeric] characters, and can contain special characters.

This element should be left blank for a Company subscriber *add* request, as password 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.

NOTES:

- 1) A Temp Password is required only if the subscriber's product requires it. A Channel Inquiry can determine if this information is required when adding a subscriber.
- 2) The sub user 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 sub user permissions. A Channel Inquiry can determine if the Servicer Consumer or the Service Provider manages sub user 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.

SubStat

This represents the subscriber's status. Canonical values are:

- **Act** – Active
- **Pend** – Pending
- **Cls** – Deleted or rejected ('Closed')
- **InAct** – Inactive (Subscriber has been deactivated)

This element should be left blank for the *add* request, as this information will *not* be available to the Service Consumer until the Subscriber Add request has been completed. A value entered here will be ignored.

SubInActRsnType

This identifies the reason a subscriber was moved to Inactive. Canonical values are:

- **AdminAcctCls** – Subscriber's account at FI has been closed.
- **AdminPoorAcct** – Subscriber's account at FI is in poor standing.
- **AdminFraudAct** – Fraudulent activity in Subscriber's account at FI.
- **SubRq** – Subscriber request to close account due to customer service or other issue.

This element should be left blank for the *add* request. A value entered here will be ignored.

BirthDt *Reserved for future use; not supported by iPay Solutions at this time.*

This is the subscriber's date of birth.

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 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 used 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 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 if the subscriber would like a test text sent to their mobile device to validate an update to device information.

EmailArray

This array contains 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 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 funding account(s) ('pay from account') and includes the following simple and complex elements:

PayFromId

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

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

PayFromAcctId

This is the account number of the subscriber's funding account ('pay from account') at the subscriber's FI (e.g., checking or savings account number).

PayFromAcctType

The character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking (default value)
- **S** – Savings

PayFromAcctName

This is the account name (given by the subscriber) for the subscriber's funding account.

PayFromAcctDft

This indicates whether the funding account ('pay from account') is the default account, to be used if a funding account is not specified when scheduling a payment. There can be only one default funding account. Canonical values are:

- **True**
- **False** (default value)

NOTE: The subscriber's default funding account is also the account used 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 funding account.

NOTE: The subscriber's product must allow the inclusion of a Starting Check Number on the subscriber's funding account(s) to accept this value. A Channel Inquiry can determine if this feature is available.

PayFromIntsRtId

This is the routing transit number or ABA number of the FI where the subscriber's funding account resides. Entry is not required unless the funding account resides with an external institution.

PayFromAcctStat

This is the status of the funding 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 *not* be available to the Service Consumer until the Subscriber Add request has been completed.

PayFromAcctOwnName

This optional complex element contains information for the funding account ('pay from account') owner's name (if the owner of the account is not the subscriber), and includes the following simple elements, as well as an optional *x_PersonName* complex element (not currently used by iPay Solutions):

ComName

This represents the funding account owner's name, if the actual owner of the account is a company.

FirstName

This represents the funding account owner's first name, if the actual owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the actual owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the actual owner of the account is a person.

NOTE: Inclusion of funding account owner information on the *Subscriber Add* request is allowed only if the subscriber's product permits it on the subscriber's funding account(s), and only if the subscriber is authorized to include funding account owner information. A Channel Inquiry can determine if the subscriber's product allows funding account owner information.

PayFromAcctOwnAddr

This complex element is optional and contains information for the funding account ('pay from account') owner's address (if the 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 two-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 funding account owner information on the *Subscriber Add* request is allowed only if the subscriber's product permits it, and only if the subscriber is authorized to include this information. A Channel Inquiry can determine if the subscriber's product allows funding account owner information.

SecdPersonArray

This optional array contains 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:

AddNameStat

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

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

AddName

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 one. A Channel Inquiry can determine if this feature is available.
- 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 *MktgOptInfo* 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 users of a Company bill pay account) is 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. sub user) 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 Solutions') identifier for the subscriber's associated user (or end user). This element should be left blank for the *add* request, as this information will *not* be available to the Service Consumer until the Subscriber Add request has been completed.

SubAssocUsrRole

This optional element indicates the role of the subscriber's associated user. Canonical values are:

- **Prim** – Primary Account Holder

NOTE: Only one 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 interna' 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 Solutions-hosted online Bill Pay application.

SubAssocUsrTempPswd

This is the password specified by the subscriber' associated user, which will be used when accessing iPay Solutions' online Bill Pay interface, if it is available for use by the FI's subscribers and associated users). The value entered is limited to a maximum of 20 [alphanumeric] characters.

NOTE: A Temp Password is needed only if the subscriber's product requires it. A Channel Inquiry can determine if one is required when adding a 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 available mobile providers and associated codes.

MobBB

This indicates if 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 *MktgOptInfo* 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, ScheduledBillPaymentExcludedPayeeld, 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, '<Payeeld>', 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.

CapAssocPayeeld

This specifies the Payeeld 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 get a list of available payment cap codes and corresponding details, if pre-defined values exist.

Subscriber Add Behaviors

- At least one common subscriber/primary account holder identifier is required to add a subscriber account:
 - For *Individual* subscribers:
 - using a StandAlone version of Bill Pay Services API, the *SubConsmCustld* is minimally required.
 - using a non-StandAlone version of Bill Pay Services API, the *SubComld* is minimally required.
 - Since this element will typically be used as the subscriber's LoginID for the corresponding online iPay Solutions Bill Pay application, the value entered must adhere to the FI's LoginID parameters, which can be obtained via a Channel Inquiry.
 - For *Company* subscribers:
 - using a StandAlone version of Bill Pay Services API, the primary account holder's *SubAssocUsrConsmCustld* is minimally required.
 - using a non-StandAlone version of Bill Pay Services API, the primary account holder's *SubAssocUsrComld* is minimally required.
 - Since this element will typically be used as the primary account holder's LoginID for the corresponding online iPay Solutions Bill Pay application, the value entered must adhere to the institution's LoginID parameters, which can be obtained via a Channel Inquiry.
 - 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 API.
 - Any *MktgOptInfoArray* information received on a *Subscriber Add* request for a subscriber using StandAlone Bill Pay Services API will be ignored.

- Funding Accounts ('pay from accounts'):
 - At least one funding account is required to complete a *Subscriber Add* request.
 - Designation of a default funding account is required to complete the *Subscriber Add* request.
 - If only one funding account is included in the *Subscriber Add* request, this account will be automatically designated as the default funding account.
 - If more than one funding account is included in the *Subscriber Add* request, selection of a default funding account is required.
 - The ability to add multiple funding accounts for a single subscriber is available only for those FIs that have included this feature for the specified product. A Channel Inquiry can determine if this feature is available.
 - The subscriber's product must allow the inclusion of savings accounts in order to add a one as a funding account. A Channel Inquiry can determine if this feature is available.
 - If funding account account owner information is entered and the subscriber's product does not allow it, 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. Only Company subscribers are enabled for multiple users.
 - At least one set of subscriber's associated user information must be included in a *Subscriber Add* request – that of the primary account holder.
 - Just one primary account holder role must be specified to complete the *Subscriber Add* request. If no primary account holder is specified, or more than one is entered, 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 sub user permissions, or if the associated user is the primary account holder. (In this instance, Superuser permissions are always assigned.)
 - A Channel Inquiry can determine whether the Service Consumer or the Service Provider manages sub user 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 used to limit otherwise-permissible activity by prohibiting that activity for specific Payees or funding 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 funding account where a restriction is desired.
- **Payment caps** must be 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 Solutions) returns the *BillPaySubAddRs* response message to the service consumer.

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

Simple elements:

SubId

This is the Service Provider's (iPay Solutions) 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 IDs (i.e. sub users) that were added with the *add* request. This complex element contains the following simple element(s):

SubAssocUsrId

This is the Service Provider's (iPay Solutions) 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 IDs for all additional users (subscriber's associated users) that were 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:

- **Subscriber Name** <PersonName >
- **Phone number** <PhoneNum>
- **Address** <SrchAddr>
- **City** <SrchCity>
- **Subscriber Type** <SubType>
- **Subscriber Status** <SubStat>
- **Subscriber ID** <SubId>
- **Funding Account ID** <PayFromAcctId>
- **Subscriber SSN/Tax Id** <TaxId>
- **Subscriber or Secondary Acct Holder Email Address** <EmailAddr>
- **Subscriber Zip Code** <PostalCode>

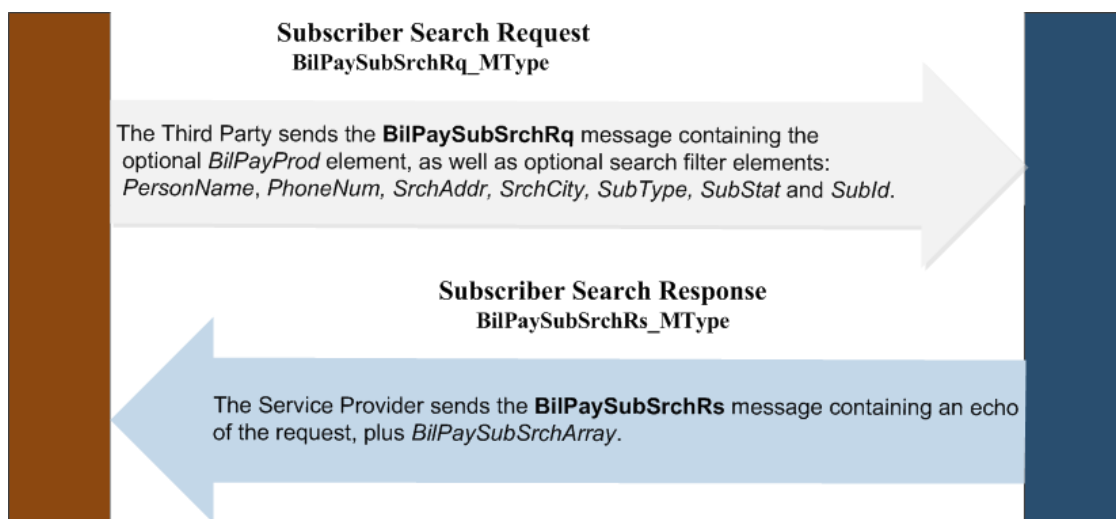
When more than one filter exists on the request, the resulting selection is based on the combined effect of the filters. Each added filter will further restrict the results; however, inclusion of all available search filter criteria, with the exception of Subscriber ID, does not guarantee the return of a single subscriber record. The Service Consumer is responsible for determining the correct subscriber if multiple subscriber records are returned.

The search process supports multiple SrchType attributes, such as Exact Match, Starts With, Ends With. However, the specific SrchType options applicable to a given filter criteria vary. Details for each filter criteria can be found below.

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.



Request

The third-party consumer forwards the *BilPaySubSrchRq* request message to the Service Provider. These elements within the *BilPaySubSrchRq* message request are necessary for the Bill Pay Services API.

BilPayProd

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

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

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

PhoneNum (*optional*)

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 (*optional*)

This is the subscriber's street address.

SrchCity (*optional*)

This is the subscriber's city.

SubType (*optional*)

This specifies the subscriber type(s) that can access the specified feature. Canonical values are:

- **Comp** – Company
- **Indv** – Individual

SubStat (*optional*)

This represents the subscriber's status. Canonical values are:

- **Act** – If selected, will return all actives subscribers.
- **Pend** – If selected, will return all pending subscribers (those awaiting approval).
- **Cls** – If selected, will return all rejected and/or deleted subscribers (not eligible for reactivation).
- **InAct** – If selected, will return inactive (i.e., deactivated) subscribers who are eligible for reactivation.

Subld (*optional*)

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

NOTE: Inclusion of the *Subld* 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 *Subld* are entered, the system will return only those users (subscriber, secondary account holders and subscriber's associated users) that match the name entered *within* the subscriber account specified on the request.

PayFromAcctId (*optional*)

This is the account number of the subscriber's funding account ('pay from account') at the subscriber's FI (e.g., checking or savings account number).

Entry of the entire Account Id is required, as search results will be returned based on an Exact match only.

In addition, funding account information will be included in the matching subscribers result set only if this entry is included as a filter in the search request.

TaxId *(optional)*

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

Valid entry formats:

- Complete SSN or EIN (9 digits); or
- Last four only (last four digits of SSN/EIN)

If the complete SSN/EIN is entered, search results will be returned based on an Exact match only. If the last four digits only are entered, search results will be returned based on an *Ends with* SrchType option. For example, if four digits entered: 1234, search results will include all subscriber records where TaxId ends with 1234.

NOTE: If the entry includes a value greater than four digits, but less than nine, the search results will be based on a "last four only" search.

PostalCode *(optional)*

This is the subscriber's postal or ZIP Code.

Entry of 5-digit or 9-digit (ZIP+4) postal code is required.

If the complete 9-digit (ZIP+4) postal code is entered, search results will be returned based on an Exact match only.

If a 5-digit postal code is entered, search results will be returned based on a Starts with SrchType option. For example, if five digits entered: 12345, search results will include all subscriber records where postal code *starts with* 12345.

NOTE: If the entry includes a value greater than five digits, but less than nine, the search results will be based on a *5-digit, starts with* search.

EmailAddr *(optional)*

This element specifies the email address of the customer (either the primary or secondary email address).

If entered, the SrchType attribute entered for this element will be evaluated to determine the type of Email Address search (i.e., *wildcard* search) to execute. Valid canonical values are:

- **Exact** – (default)
- **StartsWith**

PersonName *(optional)*

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).

NOTE: Caution should be used when including filter criteria for subscriber-optional elements (i.e., those that are not required to create a subscriber record, and therefore may be null or blank; for example SSN, address, ZIP Code). If filter criteria for these elements is included in the search request, any subscriber records that do not contain values for the corresponding field will not match and will not be included in the search results.

Response

The Service Provider (iPay Solutions) returns the *BillPaySubSrchRs* response message to the Service Consumer, which returns a list of subscribers that meet the specified search criteria. The array(s) contained within the *BillPaySubSrchRs* response applicable for the Bill Pay Services API are:

BillPaySubSrchArray

This array returns responses for the subscriber search and includes the *BillPaySubSrchInfo* complex element for each subscriber or subscriber's associated user. The *BillPaySubSrchInfo* 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 Solutions) identifier for the subscriber. (This element is required for all subsequent subscriber-level service requests.)

SubAssocUsrId

This is the Service Provider's (iPay Solutions) 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)
- **InAct** – Inactive (Subscriber has been deactivated; eligible for reactivation)

PayFromAcctId

This is the account number of the subscriber's funding account ('pay from account') at the subscriber's FI (e.g., checking or savings account number).

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromIntsRtId

This is the routing transit number or ABA number of the FI where the subscriber's funding account resides.

TaxId

This is the subscriber's tax identifier (e.g., SSN or [Company] EIN). Value will be returned only if available for the subscriber.

Valid formats:

- Complete SSN or EIN (nine digits)
- Last four only (last four digits of SSN/EIN)

BirthDt

This is the subscriber's date of birth. Value will be returned only if available for the subscriber.

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 two-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 can be viewed only if the requesting user has 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 *Hide*, which indicates the Service Consumer should hide these elements from the requesting user.

PayFromAcctOwnName

This optional complex element contains information for the funding account ('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 Solutions):

ComName

This represents the funding account owner's name, if the owner of the account is a company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and if the specific subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permit it, and if the specific subscriber is authorized to include funding account owner information

Arrays:

SecdPersonArray

This optional array contains **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:

AddName

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 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 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 if the subscriber or associated user would like a test text sent to their mobile device to validate an update to device information.

NOTE: For Company subscribers, the above Phone Array information is considered Company profile information and can be viewed only if the requesting user has 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 the Service Consumer should *hide* these elements from the requesting user.

EmailArray

This array contains email information for the [Individual] subscriber, and includes these 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)

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 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.

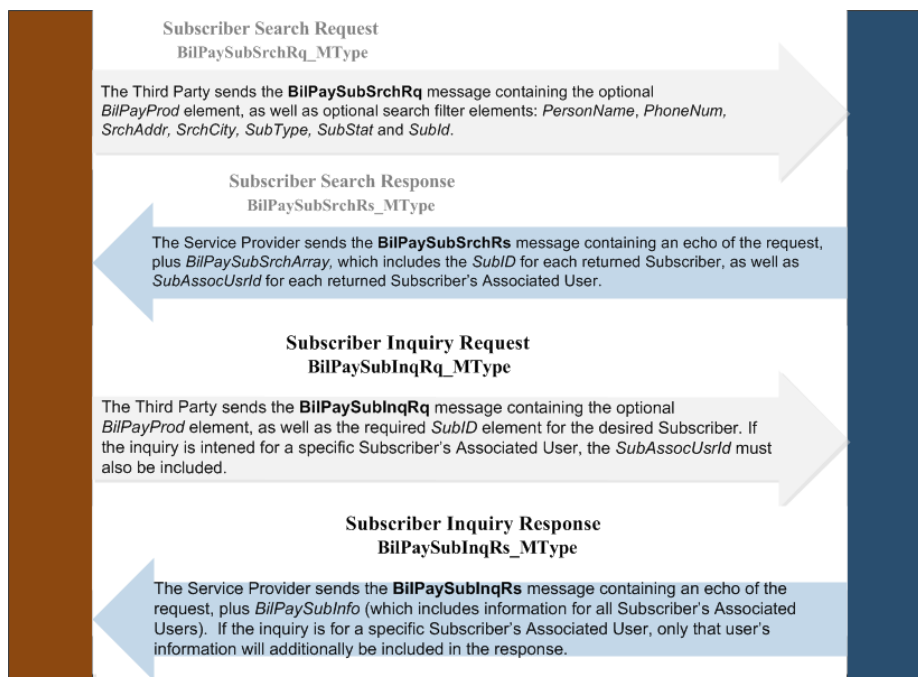
The elements at the root request message will be echoed back at the root response, regardless if those same elements exist in the repeating complex.

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.*

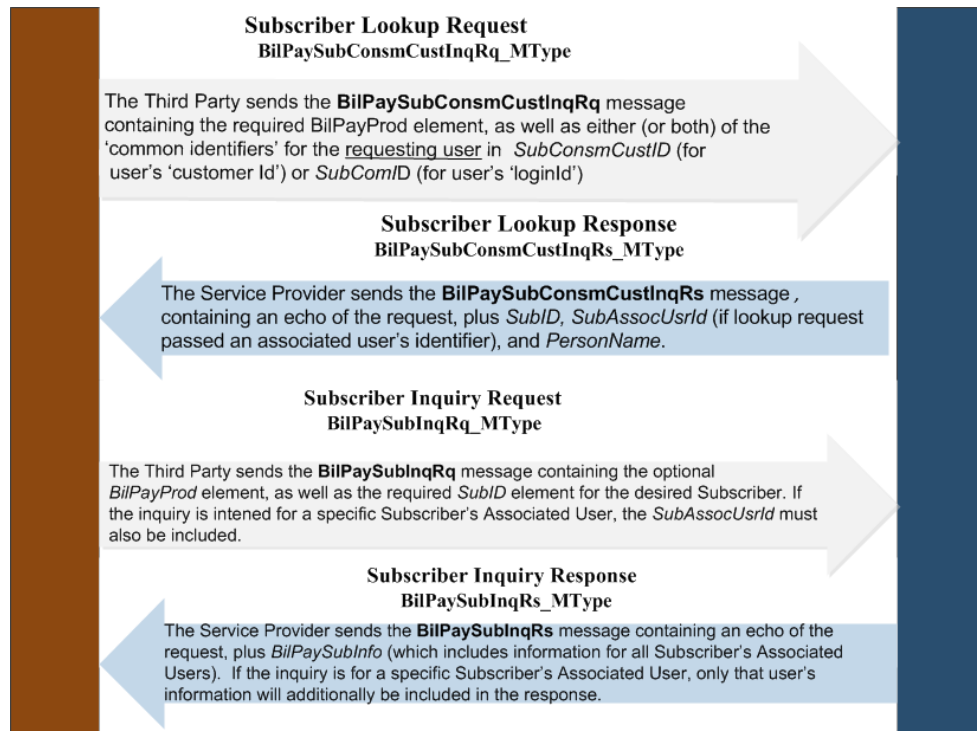
Message Flow

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:



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 Solutions 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 Solutions) identifier for the subscriber.

SubAssocUsrId

This is the Service Provider's (iPay Solutions) identifier for the subscriber's associated user or end 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 Solutions) returns the *BillPaySubInqRs* 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 *BillPaySubInqRs* 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)
- **InAct** – Inactive (Subscriber has been deactivated)

DEPRECATED 01-01-2018: This element has been moved to the Bill Pay Subscriber Information *<BillPaySubInfo_CType>* complex.

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.

BillPaySubInfo

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).

SubComId

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

NOTE: These two elements are not applicable for a Company subscriber, as identifier information for users 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, used to initially access an iPay Solutions-hosted online Bill Pay Interface, if available for use by the institution's subscribers. The subscriber is required to change their password upon accessing iPay Solutions 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 if 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 sub user 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

BirthDt

This is the subscriber's date of birth.

SubStat

This represents the subscriber's status. Canonical values are:

- **Act** – Active
- **Pend** – Pending
- **Cls** – Deleted or rejected (Closed)
- **InAct** – Inactive (Subscriber has been deactivated; eligible for reactivation)

SubInActRsnType

This identifies the reason a subscriber's status was moved to Inactive. Canonical values are:

- **AdminAcctCls** – Subscriber's account at FI has been closed.
- **AdminPoorAcct** – Subscriber's account at FI is in poor standing.
- **AdminFraudAct** – Fraudulent activity in Subscriber's account at FI.
- **SubRq** – Subscriber request to close account due to customer service or other issue.

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 two-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 can be viewed only if the requesting user has 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 the Service Consumer should *hide* these elements from the requesting user.

Arrays**PhoneArray**

This array contains phone information for the subscriber and includes 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 used for the Bill Pay Services API at this time, in favor of the ConStartTime and ConEndTime elements.

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 optional complex element 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 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 if the subscriber would like a test text sent to their mobile device to validate an update to device information.

NOTE: For Company subscribers, the above Phone Array is considered Company profile information and can be viewed only if the requesting user has 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 *Hide*, which indicates the Service Consumer should hide these elements from the requesting user.

EmailArray

This array contains 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 funding account and includes the following simple and complex elements:

PayFromId

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

PayFromAcctId

This is the account number of the subscriber's funding account at the subscriber's FI (e.g., checking or savings account number).

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name (given by the subscriber) for the subscriber's funding account.

PayFromAcctDft

This indicates if the funding account is the default account, to be used in the event a funding 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 funding 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 FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('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 funding account owner's name, if the actual owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the actual owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the actual owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the actual owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and only if the specific subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and only if the specific subscriber is authorized to include funding account owner information.

PayFromAcctInfo Array NOTES:

- 1) For Company subscribers, the above PayFromAcctInfoArray is eligible for viewing only if the requesting user has 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 *hide* these elements from the requesting user.
- 2) It is possible for an active subscriber to have *NO active* funding accounts. In that event, no funding account information will be returned in the array. (A brief grace period is provided to a subscriber whose funding accounts 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 Secondary Account Holder information, if a secondary account holder exists for the specified subscriber, and includes the following information:

AddNameStat

This indicates the status of the secondary account holder. Canonical values are:

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

AddName

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 *MktgOptInfo* 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 users 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. sub user) 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 for that associated user only. This complex element contains the following simple and complex elements and arrays:

Simple elements:

SubAssocUsrId

This is the Service Provider's (iPay Solutions) 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 one 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 Solutions) and Service Consumer associated with a Company subscriber's associated user. This will typically be the associated user's LoginID used with a corresponding iPay Solutions-hosted online Bill Pay application.

NOTE: This element can be viewed by requesting users only if the subscriber's product allows it. A Channel Inquiry can determine if the Service Consumer should *hide* this element from requesting users. Additionally, the <Rstr> attribute will be set to NoAccess, which indicates 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 Solutions-hosted online Bill Pay interface, if it 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 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. 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 used 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 list of available mobile providers and associated codes.

MobBB

This indicates if 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 if the associated user would like a test text sent to their mobile device to validate an update to device information.

NOTE: The above Phone Array is considered personal profile information for the associated user, and can be viewed 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 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 *MktgOptInfo* 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) 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*, *ScheduledBillPaymentExcludedPayeeld*, etc.)

PerValue

This specifies the permission value (e.g., *True*, *<Payeeld>*, etc.)

NOTE: There are two types of Payee permissions available for the subscriber's associated user: the ability to Manage Payees (where the user is allowed to add Payees and manage Payee details on behalf of the subscriber); and permissions to schedule payments to [all or specific] Payees. The Payees for which a subscriber's associated user does not have permissions to schedule payments will be returned in this array *<ScheduleBillPaymentExcludedPayeeld>*.

To determine the Payees for which the subscriber's associated user *does* have *schedule payments* permissions, execution of a Payee Search is recommended to obtain a complete list of Payees available for the subscriber. To ensure that all eligible Payees are returned, the request should specify the primary subscriber as the requesting user, since the primary subscriber has all available permissions.

A subsequent comparison of available Payees and the excluded Payees list for the subscriber's associated user will yield the list of permissible Payees.

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.)

CapAssocPayeeld

This specifies the Payeeld 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 SubAssocUsrInfoArray is eligible for viewing only if the requesting user has permission to manage sub users. If the requesting user does not have permission, the <Rstr> attribute for each of these elements will be set to *Hid*, which indicates 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.

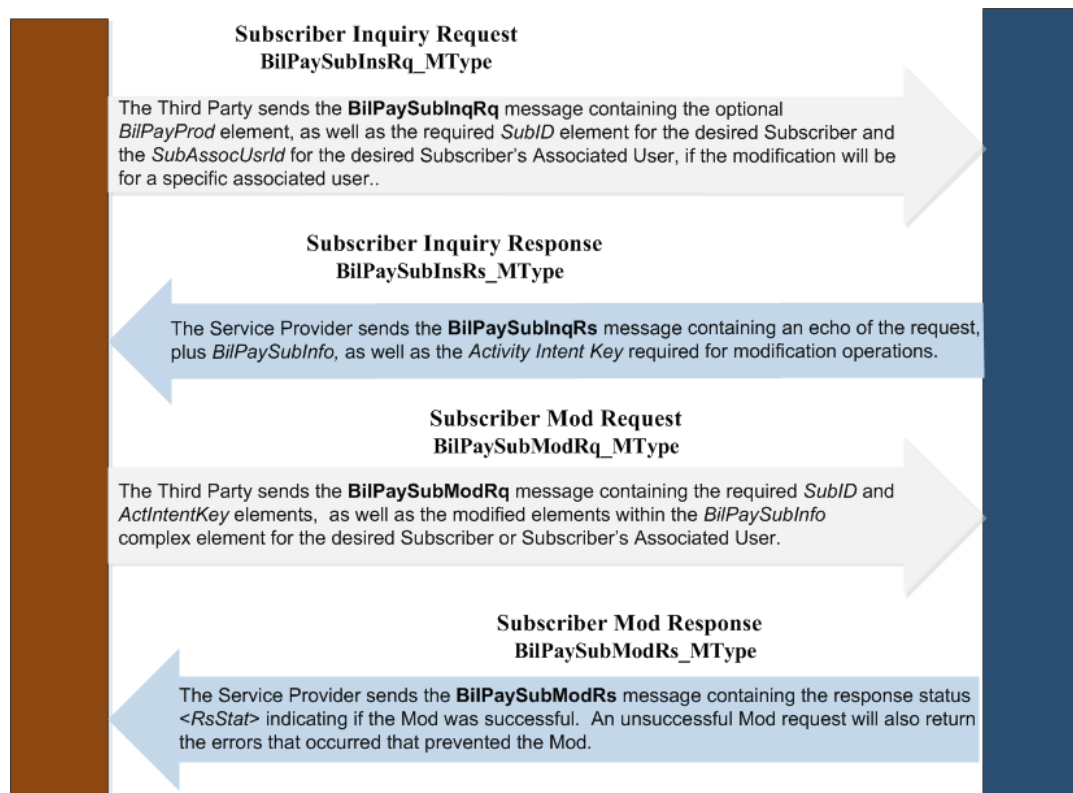
The ability to delete a subscriber is not available within the Bill Pay Services API service operations. However, a subscriber can be deactivated in order to prevent access to the Bill Pay application. Some deactivated subscribers may be eligible for subsequent reactivation. Deactivated subscribers who are eligible for reactivation can be identified via the Subscriber Search request (<SubStat> filter set to InAct) or via the Subscriber Lookup service.

A delete of a subscriber's associated user can 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.



Request

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

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

BilPayProd

This represents the type of iPay Solutions 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 Solutions) 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.

Dit

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 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 for subscribers utilizing StandAlon Bill Pay Services, and cannot be deleted (i.e., cannot be set to JHANull).

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 Solutions-hosted online Bill Pay application.

This element is required for subscribers using Bill Pay Services that are not considered Stand-Alone, and cannot be deleted (i.e., cannot be set to JHANull). 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 required for certain subscribers, and cannot be deleted (i.e., cannot be set to JHANull) for those subscribers. A Channel Inquiry can determine if this 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 sub user permissions. A Channel Inquiry can determine if the Servicer Consumer or the Service Provider manages sub user 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

SubStat

This represents the subscriber's status. Canonical values available for modification are:

- **Act** – Active
- **InAct** – Inactive (Subscriber deactivated)

This element must be set to InAct to deactivate a currently Active Subscriber, and must be set to Act to reactivate an [eligible] subscriber who is currently Inactive. Any inappropriate values entered will be ignored.

SubInActRsnType

This identifies why a subscriber was moved to Inactive (deactivated). Canonical values are:

- **AdminAcctCls** – Subscriber's account at FI has been closed.
- **AdminPoorAcct** – Subscriber's account at FI is in poor standing.
- **AdminFraudAct** – Fraudulent activity in Subscriber's account at FI.
- **SubRq** – Subscriber request to close account due to customer service or other issue.

Entry is required when deactivating a subscriber.

BirthDt *Reserved for future use; not supported by iPay Solutions at this time.*

This is the subscriber's date of birth.

Complex elements:***PersonName***

This complex element represents 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.
- 2) For Individual subscribers, only the First-, Middle- and LastName elements are editable in the *mod* request. Any inappropriate values entered will be ignored. This element is required for subscribers, and therefore cannot be deleted (i.e., cannot be set to JHANull).

Addr

This complex element represents 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 two-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 required for subscribers, and cannot be deleted (i.e., cannot be set to JHANull).

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 permission to update Company information.

Arrays

The below arrays contained within the *BillPaySubModRq* 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 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)
- **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 optional and 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 in an 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 available mobile providers and associated codes.

MobBB (optional)

This indicates if 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 if the subscriber would like a test text sent to their mobile device to validate an update to device information. Canonical values are:

- **True**
- **False** (default value)

NOTES:

- 1) A request to send a test text message is not persisted by the Service Provider (iPay Solutions). Therefore, there is no record that the message was sent. However, a new request can be sent at any time.

- 2) For Company subscribers, the above Phone array is considered Company Profile information and is eligible for update only if the requesting user has 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 funding accounts ('pay from accounts') and includes following simple and complex elements:

PayFromId

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

This element should be left blank for a request to *add* a funding account, as this information will *not* be available to the Service Consumer until the *add* request has been completed.

PayFromAcctId

This is the account number of the subscriber's funding account at the Subscriber's FI (e.g., checking or savings account number).

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the subscriber's funding account.

PayFromAcctDft

This indicates whether the funding account is the default account, to be used in the event a funding account is not specified when scheduling a payment. Canonical values are:

- **True**
- **False** (default value)

NOTE: The subscriber's default funding account is the account that is used to bill the subscriber.

StartChkNum

This is the check number that will be used to start check payments from the specified funding account . This will be available only if the subscriber's product allows specification of a starting check number.

PayFromIntsRtld

This is the routing transit number or ABA number of the FI where the subscriber's funding account resides.

PayFromAcctOwnName

This optional complex element contains information for the funding account ('pay from account') owner's name (if the 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 Solutions):

ComName

This represents the funding account owner's name, if the owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

NOTE: Inclusion of new or update of existing funding account owner information on the *Subscriber Mod* request is allowed only if the subscriber's product permits it, and only if the specific subscriber is authorized to include funding account owner information. A Channel Inquiry can determine if the subscriber's product allows funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

NOTES:

Inclusion of new or update of existing funding account owner information on the *Subscriber Mod* request is allowed only if the subscriber's product permits it, and if the specific subscriber is authorized to include funding account owner information. A Channel Inquiry can determine if the subscriber's product allows funding account owner information.

For Company subscribers, the above *PayFromAcctInfoArray* is eligible for update only if the requesting user has been granted permission to Manage Pay From Account information for the specified funding account.

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:

AddName

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 one on the subscriber's account.
- 2) Adding or updating a secondary account holder requires approval by the subscriber's FI. This has the effect of setting the secondary account holder's status to Not Active, or pending. Upon approval by the FI, 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 *MktgOptInfo* complex element, which specifies a package of available marketing communication options available to the [Individual] subscriber, and includes the following simple elements:

MktgOptType

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

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

MktgOptVal

This indicates if 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 (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. sub user) 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 Solutions) identifier for the Subscriber's Associated User (or end user). It 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 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 for an associated user utilizing Bill Pay Services that are not considered Stand-Alone, and therefore cannot be deleted (i.e., cannot be set to JHANull) on a *mod* request.

SubAssocUsrComId

This optional element represents the identification that is common between the Service Provider (iPay Solutions) 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 Solutions-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 JHANull) 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 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 Solutions' online Bill Pay interface, if it 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 requires it. A Channel Inquiry can 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 JHANull).

Arrays**SubAssocUsrPhoneArray**

This array contains 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 used 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 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 if the associated user would like a test text sent to their mobile device 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 subscriber's associated user who owns the information.

SubAssocUsrEmailArray

This array contains 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 JHANull).

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, ScheduledBillPaymentExcludedPayeeld, etc.) A Service Dictionary Search request is necessary to obtain the list of available permission codes and corresponding values, if pre-defined values exist.

PerValue

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

CapAssocPayeeld

This specifies the Payeeld 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 sub users.

Subscriber Mod Behaviors

- The Service Provider (iPay Solutions) 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 Solutions) also posts an alert on the FI'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)
- Funding Accounts ('pay from accounts'):
 - Adding or deleting an additional funding accounts:
 - At least one funding account must be available for a subscriber's account at all times.
 - The ability to add additional funding accounts for a subscriber is available via the SubMod request, but only for those FIs that have included this feature for the specified product. A Channel Inquiry can determine if this feature is available.
 - Required entries for adding an additional funding account are specified in the Subscriber Add request above.
 - Deletes of funding accounts are allowed via the SubMod request, as long as at least one funding account remains available for a subscriber's account.
 - Deletion of the subscriber's *default* funding account is prohibited.
 - If there are pending payments associated with the funding account being deleted, a fault override is required to complete the delete request.
 - Deleting a funding account also causes any automatic eBill payment schedule(s) that use the specified funding account to be permanently stopped.
 - Modifying an existing funding account:
 - Only the following elements can be edited when modifying an existing funding account:
 - Account Name
 - Starting Check Number

- Funding account default
 - Funding account owner information (if applicable)
- If funding account owner information is entered when adding a new or modifying an existing funding 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.
- For Company subscribers, funding 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 API.
 - Any *MktgOptInfoArray* information received on a SubMod request for a subscriber using StandAlone Bill Pay Services API will be ignored.
 - Company profile information: The TaxId, PmtApprvRedq and PswdChgFreq elements, as well as PersonName and Addr complex elements, are considered Company profile information and can be updated via the *SubMod* request if the requesting user has permission to update Company information.
 - Funding Account information: The entire funding account complex element can be updated via the *SubMod* request if the requesting user has permission to 'Manage Pay From Account' information.
 - 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. Only Company subscribers are enabled for multiple users.
 - Subscriber's Associated User:
 - Associated user information can be added or modified via a *SubMod* request if the requesting user has permission to manage sub user information.
 - Only one Primary Account Holder (role) is allowed for a Company subscriber. The primary account holder cannot be changed.
 - Additional associated users can be added via the *SubMod* request 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.
 - Associated users can be deleted via the *SubMod* request if that function is available for the subscriber's product). A Channel Inquiry can determine if the ability to delete associated users is available for this subscriber.
 - Deleting the subscriber's Primary Account Holder is prohibited.
 - When modifying associated user information via a Subscriber Mod request, the SubAssocUsrInfo array should contain only the subscriber's associated user entry for the associated user being modified.
 - If more than one associated user is included in the *mod* request, it will be rejected.
 - Permissions for subscribers/primary sub user cannot be modified (Superuser role is permanent).

- Associated users' Phone and Email Arrays are considered personal profile information, and can be edited 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 sub user permissions, or if the associated user is the primary account holder. (In this instance, *Superuser* permissions are always assigned.)
 - A Channel Inquiry can determine if the Servicer Consumer or the Service Provider manages sub user 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 certain bill payment activities 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 used to prohibit an activity for specific Payees or funding accounts, etc., 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 funding 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 Solutions) returns the *BillPaySubModRs* **response** message to the Service Consumer. The element(s) contained within the *BillPaySubModRs* 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

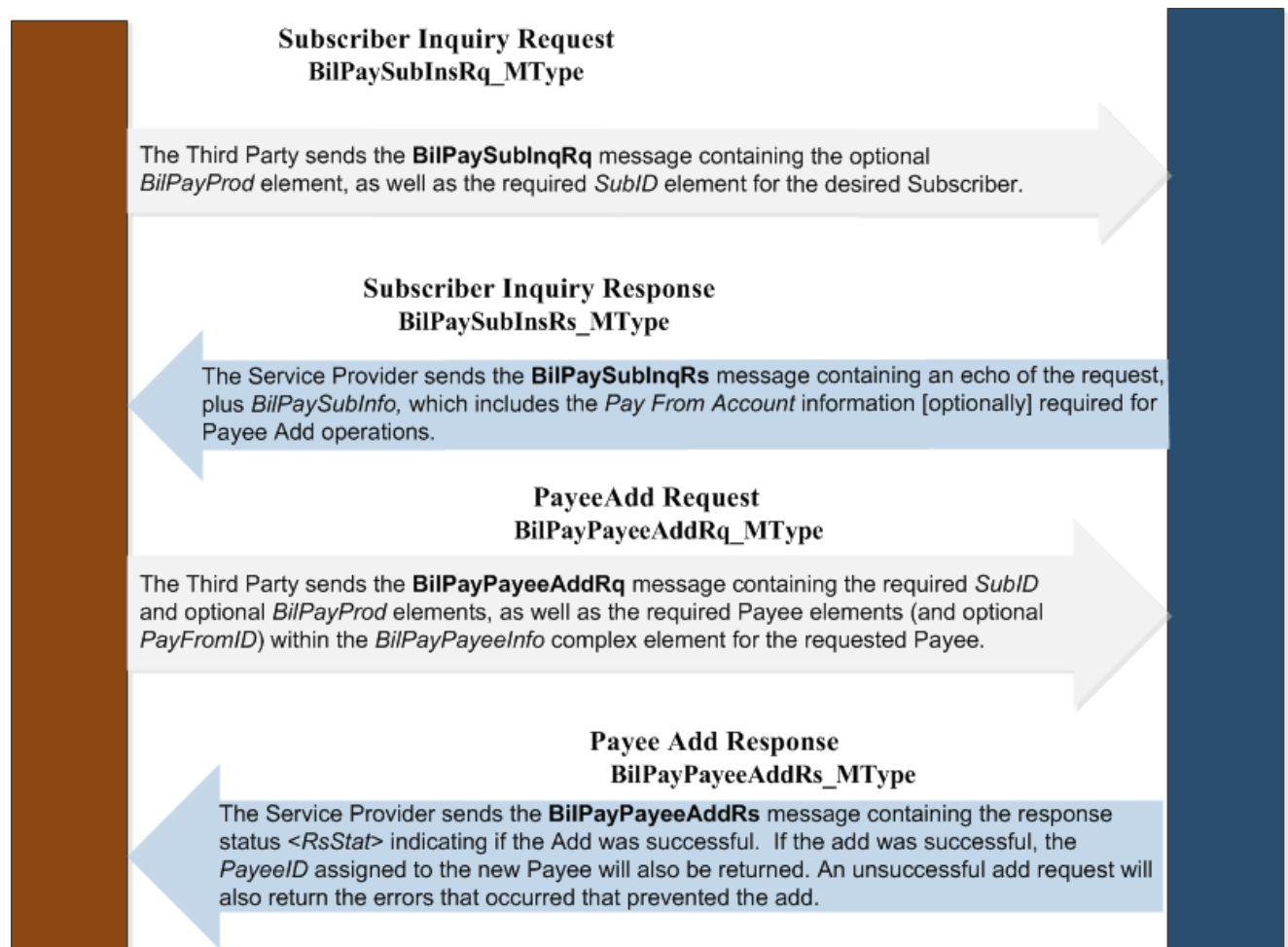
Container: TPG_BillPayMaster.xsd
Message: BilPayPayeeAdd

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.



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 Solutions 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 Solutions) 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 or not applicable to the Payee Add process (those that are not applicable are not itemized below).

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 (for Company or Individual Payees), this will default to the PayeeName . A value is required for Transfer accounts.

PayeeClsf

This specifies the classification of a Payee. Canonical values are:

- **Comp** (Company)
- **Indv** (Individual/Person)
- **FinInst** (FI) – to be used for Transfer accounts

[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 FI (Outbound)
- **XferFromSubFinInst** – *not supported by iPay Solutions at this time*
- **XferTo** – *not supported by iPay Solutions at this time*
- **XferFrom** – *not supported by iPay Solutions at this time*

The Payee's *PmtIntentType* must be appropriate for the specified Payee Classification (e.g., for FI Payees – 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 person-to-person (P2P) Payee, used to confirm the P2P Payee's identity when providing their financial deposit information. This is a required element when adding a P2P Payee.

PayeeP2PType

This optional element specifies the type of communication method to be used for person-to-person Payee contact. Applicable only for an Individual Payee (PayeeClsf = Indv). Canonical values are:

- **SMS** – Text
- **Email**

NOTE: A Mobile (SMS) phone number is required for the P2P Payee to set up the P2P Payee using the SMS PayeeP2PType. Likewise, an email address is required for the P2P Payee to set up the P2P Payee using the Email PayeeP2PType.

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 FI.

FIAcctId

Individual Payee's bank account number or, for Transfer accounts, subscriber's (checking or savings) account number at their FI.

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. The information is required 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 funding account ('pay from account') to be used to make payments to the specified Payee or Transfer account.

PayFromId

The identifier for the funding account. This is the only element necessary to identify the desired default Bill Pay funding account for the specified Payee.

If the Payee's funding account is not specified, the funding account designated as the *default* funding account will be used.

NOTE: For Company subscribers, funding 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 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 P2P Payees, and for Individual Electronic Payees (where PayeeClsf = Indv and PayeeFIAcctInfo is provided). Entry of payee's address 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.

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 two-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 to leverage check processing efficiencies gained from iPay Solutions' Merchant Management process for Company Payees, the Payee Address provided may not always be the address used for a check.

PayeePhoneArray

This array contains phone information for the specified Payee. A 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 is a numeric field that will not accept hyphens.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Current canonical values available for Payees for the Bill Pay Services API are:

- **Work** (required for Company Payees)
- **SMS** – Text

NOTES:

- 1) SMS PhoneType is required for an Individual Payee when PayeeP2PType = SMS.
- 2) Work Phone Type is required for Company Payees.
- 3) It should be noted that to leverage payment processing efficiencies gained from iPay Solutions' 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 if the Payee's PayeePmtMthd = Email.

EmailType

This element specifies to whom the email address applies. Applicable canonical values required for adding a Payee for the Bill Pay Services API are:

- **Prim** – Primary (default)

NOTES:

- 1) If the above email information is included in the Add Payee request for an Individual Payee, the Individual Payee will be considered a **P2P Email Payee**. All information in the *PayeeEmailArray* is required in order to set up a P2P Email Payee.
- 2) The above Email Address information is optional for a Company Payee. If entered, it should be noted that to leverage payment processing efficiencies gained from iPay Solutions' 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 permission to Manage Payees.
 - Transfer accounts can be added only if the requesting user (subscriber's associated user) has permission to Manage Transfer Accounts.
 - Funding account ('pay from account') information (other than the subscriber's default account) can be specified only if the requesting user has permission to 'Designate Pay From Accounts'.
- For Individual Payees (*PayeeClsf* = Individual)
 - If Payee deposit information is included in the request, the Payee will be set up to receive payments electronically.
 - If Payee email or SMS phone number information is included in the request, the Payee will be considered a P2P payee (Payee deposit information will be obtained directly from the Payee). *PayeePmtMthd* will be set to Email for all P2P Payees. (See P2P Payees section below for further details.)
 - If no Payee deposit information or Payee P2P 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 Solutions will fault an Add Payee request if both Payee deposit account information and Payee P2P information (e.g., email shared secret, *PayeeP2PType*, email address) 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 set-up 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 a P2P Payee
 - the subscriber wants to add an Individual as a P2P payee, and wants iPay Solutions to initiate the email or SMS/text 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
 - P2P Payees (individual Payees set up via email or SMS/text):
 - The ability to add a P2P Payee is available for those FIs with the Email Payments feature within the Bill Pay Services API. A Channel Inquiry can determine if this feature is available.
 - Entry of *PayeeP2PType* is not required to complete a P2P Payee setup; however, entry is recommended to ensure the desired P2P Payee communication method is clearly documented:
 - If communications to the P2P Payee are desired via SMS (text), *PayeeP2PType* should be set to SMS.

- Phone Number entry (with *PhoneType* = SMS) is required for an individual Payee when *PayeeP2PType* = SMS.
- If communications to the P2P Payee are desired via email, *PayeeP2PType* should be set to Email.
 - Payee's *EmailAddr* is required when *PayeeP2PType* = Email.
- If *PayeeP2PType* is not specified for an individual Payee, but information is provided that would imply P2P Payee setup is desired, the service provider (iPay Solutions) will derive the desired P2P Payee setup as follows:
 - If Payee's Mobile Number (*PhoneType* = SMS) is provided, and no email address is provided, communication with the P2P Payee will be via SMS (text).
 - If Payee's Email Address is provided (with or without a SMS Phone Number), communication with the P2P Payee will be via email.
- *PayeeEmailSharedSecret* is required to complete Payee set up for all P2P Payees.
 - The *PayeeEmailSharedSecret* element works only in conjunction with a request to add a P2P Payee. iPay Solutions will ignore this element when delivered by the Service Consumer without supporting P2P Payee information (e.g., *PayeeP2PType*, *PayeeEmailArray*, [SMS] *PhoneNum*).

Notes:

- 1) The Payee's *EmailAddr* or [SMS] *PhoneNum* is required for P2P Payees in order to send communications in the desired method (email or text) to the Payee directing them to an iPay Solutions-hosted Bill Pay website to provide their financial deposit information. To confirm the identity of the P2P Payee on this site, the P2P Payee must enter the *PayeeEmailSharedSecret*, which has been communicated to them by the subscriber, before account information will be accepted.
- 2) Financial deposit account information provided by a P2P Payee is never shared with the subscriber.

Response

The service provider (iPay Solutions) returns the *BillPayPayeeAddRs* **response** message to the service consumer. The simple elements contained within the *BillPayPayeeAddRs* response applicable for the Bill Pay Services API is/are:

Payeeld

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 <Payeeld> 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 product and subscriber.

The request provides the following optional filters:

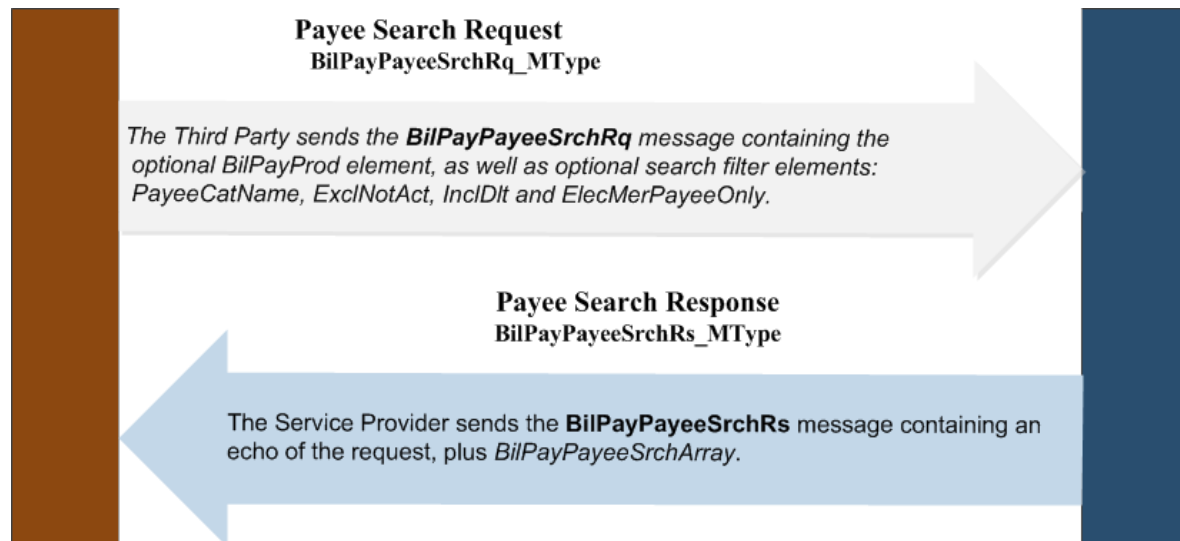
- **Payee Category Name <PayeeCatName> (Reserved for future use)**
- **Exclude non-activated <ExclNonAct> - Default = false**
- **Include deleted <InclDlt> - Default = false**
- **'eBill' Payees Only <ElecMerPayeeOnly> - Default = false**
- **Last Modified Start Date <LastMainStartDt>**
- **Last Modified End Date <LastMainEndDt>**
- **CardPay <CardPayFilter>>**

When there is 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.



Request

The third-party consumer forwards the **BilPayPayeeSrchRq** request message to the Service Provider. The elements within the **BilPayPayeeSrchRq** message request are necessary for the Bill Pay Services API.

BilPayProd

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

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

SubId

This is the Service Provider's (iPay Solutions) 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 currently a valid search filter option. 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 used 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 be deleted and re-added as a new payee to modify certain payee information.) For example, if a payee (e.g., AT&T) is deleted and re-added three times for a given subscriber, the Payee Search request with InclDlt set to *True* will return three AT&T payee records (each with a different Payeeld; 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**

LastMainStartDt

The date that designates the starting point for payees' *Last Modified* date selections. If no Start Date is specified, the Bill Pay Services API will return all available payees with a LastMainDt equal to or less than the specified End Date.

LastMainEndDt

The date that designates the ending point for payees' *Last Modified* date selections. If no End Date is specified, the Bill Pay Services API will return all available payees that have a LastMainDt that is equal to or greater than the specified Start Date.

NOTE: If no LastMainDt date range is specified, the Bill Pay Services API will return all available payees that satisfy all other filter requirements.

CardPayFilter

This is used to filter payees that are available for pay by card in the search results. Canonical values are:

- **Incl** – Include payees eligible for Pay by Card (default)
- **OnlyCardPay** – Only return payees that are eligible for Pay by Card
- **Excl** – Exclude payees eligible for Pay by Card

Response

The service provider (iPay Solutions) returns the *BillPayPayeeSrchrRs* 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.
- 2) For Company Subscribers: Payee information can be viewed only if the requesting user (subscriber's associated user) has permission to Manage Payees or, for transfer accounts, the requesting user has permission to manage Transfer Accounts.
 - a. When the purpose of the Payee Search is to obtain a complete list of the subscriber's eligible payees to allow a subscriber's associated user to schedule a payment, or for comparison with the excluded payees list for a subscriber's associated user (in order to determine the list of payees for which the subscriber's associated user has payment scheduling permissions), it is recommended that the Search request specify the primary subscriber as the requesting user to ensure that all eligible payees are returned.
- 3) Payee Search results will be returned in alphabetical order (A-Z) by Payee Name.

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

BillPayPayeeSrchrArray

This array returns an array of responses for the Payee search and includes the *BillPayPayeeSrchrInfo* complex element for each payee and transfer account returned. The *BillPayPayeeSrchrInfo* complex contains a package of data related to a subscriber's payee and includes the following simple and complex elements and arrays:

These elements within the *BillPayPayeeSrchrInfo* complex are included for the Bill Pay Services API:

Simple elements:

PayeId

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.

NOTE: Bill Pay subscribers have an option to *hide* certain payees in iPay Solutions' online Bill Pay application to prevent that payee from being displayed on their Payments page. To ensure that the list of payees available for payment is aligned between iPay Solutions' online application and Bill Pay Services API, an indicator is provided on the PayeeSrchr response (only) to alert the Service Consumer of a *hidden* payee. If the specified payee is identified as *hidden*, the <Rstr> attribute for the

PayeeName element will be set to *Hid*, which indicates to the Service Consumer that this payee should be *hidden* from the requesting user.

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)
- **FinInst** (FI) – indicates a Transfer account

[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 FI (Outbound)
- **XferFromSubFinInst** – *not supported by iPay Solutions at this time*
- **XferTo** – *not supported by iPay Solutions at this time*
- **XferFrom** – *not supported by iPay Solutions at this time*

PayeePmtMthd

This is the payment method for the payee. Transfer accounts will always be Electronic. Canonical values are:

- **Chk** – Check
- **Email** – P2P (electronic, but initial set up is via an email or SMS 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).

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)
- **Del** – Deleted (Payee is not available scheduling payments)

ElecBilPayeeType

This indicates whether the payee is eligible for eBills and, if so, if enrolled. Not applicable for Transfer accounts. Canonical values are:

- **NotAlw** – (default) Payee is not eligible for eBills.
- **Alw** – Payee 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).
- **EnrollPend** – Payee eBill account registration has been requested, but is not yet complete.
- **EnrollAlw** – Payee is actively registered for eBill summary information, but is also eligible to re-enroll to receive eBill details.

NOTE: If payee's eBill account registration is pending for additional information needed from the subscriber, the *ElecBilAcctErrExist* element for this payee will be set to *True*.

ElecBilPayeeCatType

This indicates the level of ebill detail available for the eBill payee. Canonical values are:

- **Sum** – Summary level eBill information is available.
- **Det** – Detailed eBill information is available.

The following payee eBill Account eligibility options are available, based on the specified combinations of *<ElecBilPayeeType>* and *<ElecBilPayeeCatType>*:

Table 3 – eBill Account Eligibility Options – Payee Search

ElecBil PayeeType	ElecBil PayeeCatType	eBill Account Status Option
NotAlw	blank	Payee is not eligible for eBills
Alw	Sum	Payee is eligible for eBills, summary level of eBill information only
Alw	Det	<p>Payee is eligible for eBills, detailed information available (including full electronic billing statements)</p> <p>NOTE: It is possible for a payee that is already registered to receive eBills at a <i>summary</i> level (eligibility status of Enroll/Sum) to become eligible for an upgrade to receive <i>detailed</i> eBill information. A new registration/set-up process is required to receive the upgrade, which will be reflected with a new eligibility status of Alw/Det.</p> <p>Summary-level eBill information will continue to be available if the subscriber does not immediately choose to upgrade.</p> <p><i>Design tip:</i> The service consumer may want to guide the subscriber through the eBill set up/upgrade</p>

		<p>experience by providing explicit indicators for initial set up vs. an upgrade, such as:</p> <ul style="list-style-type: none"> ▪ Set up eBill <ul style="list-style-type: none"> • For initial set up of an eBill account for the given Payee (where Payee eBill account eligibility = Alw/Sum or Alw/Det and Payee is not already enrolled for eBills). ▪ Request eBill PDF or Upgrade to full billing statements <ul style="list-style-type: none"> • Where Payee is already registered for summary eBill information (eBill account eligibility previously = Enroll/Sum; and Payee Inquiry now returns Alw/Det, indicating this Payee is eligible for an upgrade to begin receiving full electronic billing statements).
Enroll	Sum	Payee is registered for eBills, summary level of eBill information only available
Enroll	Det	Payee is registered for eBills, detailed information available (including full electronic billing statements)
EnrollAlw	Det	Payee is registered for eBills (summary level of eBill information), but is eligible for detailed information (including full electronic billing statements) if a new registration is completed
EnrollPend	Det	Payee's eBill registration is pending, detailed information will be available once registration complete

ElecBillAcctErrExist

This indicator is used to show if 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. A *PayeeInquiry* request is necessary to get eBill account error details. 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 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 uses 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.

LastMainDt

This is the date of the most recent (i.e., last) modification to the given payee's information.

PayFromAcctInfo

This optional complex element contains information on the funding account ('pay from account') designated for the specified payee or transfer account.

NOTE: For Company subscribers: *PayFromAcctInfo* can be viewed only if the requesting user has permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for these elements will be set to *Hid*, which indicates the Service Consumer should *hide* these elements from the requesting user.

PayFromId

This is the Bill Pay Services API identifier for the payee's designated funding account.

PayFromAcctId

The bank account number of the funding account designated for this payee.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the subscriber's funding account.

PayFromAcctDft

This indicates whether the funding account is the default account, to be used in the event a funding 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 funding account. This will be available only if the subscriber's product allows specification of a starting check number. A Channel Inquiry can determine if this feature is available.

PayFromIntsRtId

This is the routing transit number or ABA number of the FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('pay from account') owner's name (if the 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 funding account owner's name, if the owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and if the specific subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is optional and contains information for the funding account ('pay from account') owner's address, if the 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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

The PayFromAcctInfo complex element may be empty if no default funding account has been specified for the payee or transfer account.

Array(s)**RushOptArray**

This array contains possible Rush options that are available for the specified payee and includes the following simple elements within the **RushOptInfo** complex, and will be returned only if the value of the CanRush element (above) = True:

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 Business 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 applicable for Rush payments sent to Puerto Rico. This surcharge will be automatically applied to any Rush payment request to Puerto Rico.

NOTE: Rush options not applicable for Transfer accounts.

Payee Inquiry

Container: TPG_BillPayMaster.xsd

Message: BilPayPayeeInq

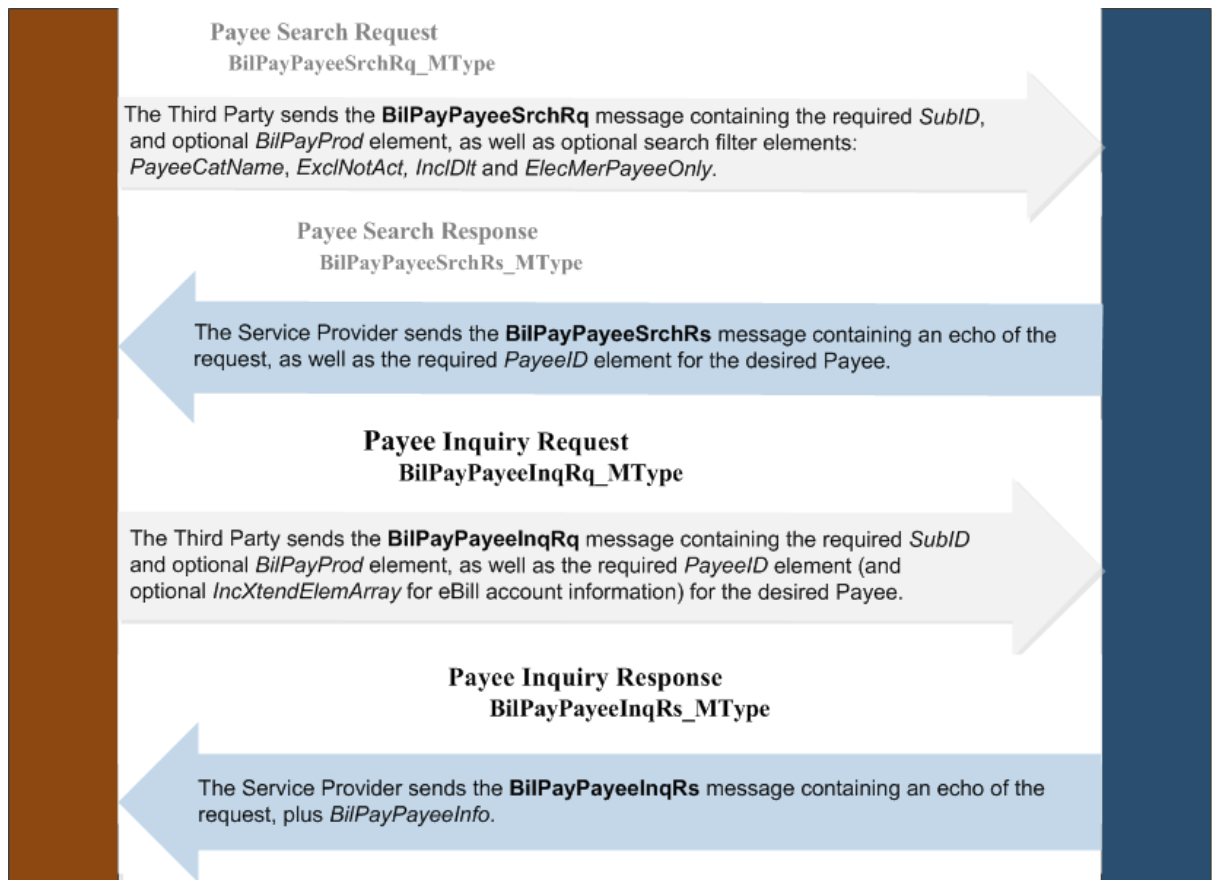
The Bill Pay Payee Inquiry <BilPayPayeeInq> will return element details for a specific Payee or Transfer account for a given subscriber. The subscriber identification element <SubId> is required on the request.

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 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.



Request

The third-party consumer forwards the *BilPayPayeeInqrq* request message to the Service Provider. The elements within the *BilPayPayeeInqrq* message request are necessary for the Bill Pay Services API.

BilPayProd

This represents the type of iPay Solutions 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 Solutions) identifier for the subscriber.

Payeeld

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* for the data set in the Inquiry response. This is the default.
- **Upd** – indicates the intention to perform an update (*Mod*) to the data set in the Inquiry response.
- **Dlt** – indicates the intention to perform a delete of the data set in the Inquiry response.

IncXtendElemArray

This optional array conveys the list of 'x_' elements by name which are to be included in the response. The inclusion of this array is necessary only if eBill and/or Card-funded 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 Extended Elements currently available for the *BilPayPayeeInqRq* are:

- **x_ElecMerPayeeInfo** – returns the Payee's eBill account information (not applicable for Transfer accounts)
- **x_CardFundedPayeeArray** – returns the *<CardFundedPayeeInfo>* complex, which includes the subscriber's custom 'Payee URL' to make a card-funded payment.

Response

The service provider (iPay Solutions) 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 if the requesting user has permission to manage Payees, or for Transfer accounts, the requesting user has permission to manage Transfer Accounts.

The simple and complex elements 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 electronic. Canonical values are:

- **Chk** – Check
- **Email** – P2P (electronic, but initial set up is via an email or SMS 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.

FirstAvIProcDt

This is the first available process date for a payment or Transfer to the Payee. This date is affected by the FI's Payment Cutoff Time and required Lag Days, as well as applicable Non-Processing days.

FirstAvIEstArvDt

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 is affected by the 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 uses 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 for 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 Solutions, 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 used for display on all subscriber transactions.

AlwCardFundedType

This indicates whether the Payee is available to receive card funded payments. Canonical values are:

- **True**
- **False** (default value)

NOTE: Card funded payments for a given Payee are allowed only for those FI products with the <PaybyCard> feature. A Channel Inquiry can determine if this feature is available.

Additionally, the Payee must be eligible for card funded payments, which is based on a partnership agreement between the Payee and the 'Pay by Card' vendor, and not that of the subscriber.

BillPayPayeeInfo

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.

NOTE: For certain Payees, the Payee Name may be eligible for modification. If the Payee Name is not able to be edited, the <Rstr> attribute for this element will be set to Read-Only, which indicates the Service Consumer should not make this element available for update from the requesting user.

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 person-to-person (P2P) Payee, used to confirm the P2P 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)
- **FinInst** (FI) – indicates a Transfer account

[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 FI (Outbound)
- **XferFromSubFinInst** – *not supported by iPay Solutions at this time*
- **XferTo** – *not supported by iPay Solutions at this time*
- **XferFrom** – *not supported by iPay Solutions 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.

ElecBillPayeeType

This indicates whether the Payee is eligible for eBills and, if so, if 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).
- **EnrollPend** – Payee eBill account registration has been requested, but is not yet complete.
- **EnrollAlw** – Payee is actively registered for eBill summary information, but is also eligible to re-enroll to receive eBill details.

NOTE: If Payee’s eBill account registration is pending for additional information from the subscriber, the *ElecBilAcctErrExist* element for this Payee will be set to *True*. Details for the needed information can be found in the *<ElecMerAcctErrInfoArray>* and *<AuthenQuesArray>*.

ElecBilPayeeCatType

This indicates the level of ebill detail that is available for the eBill Payee. Canonical values are:

- **Sum** – Summary level eBill information only is available for Payee.
- **Det** – Detailed eBill information is available for Payee.

The following Payee eBill Account eligibility options are available, based on the specified combinations of *<ElecBilPayeeType>* and *<ElecBilPayeeCatType>*:

Table 4 – eBill Account Eligibility Options – Payee Inquiry

ElecBil PayeeType	ElecBil PayeeCatType	eBill Account Status Option
NotAlw	blank	Payee is not eligible for eBills
Alw	Sum	Payee is eligible for eBills, summary level of eBill information only
Alw	Det	<p>Payee is eligible for eBills, detailed information available (including full electronic billing statements)</p> <p>NOTE: It is possible for a Payee that is already registered to receive eBills at a <i>summary</i> level (eligibility status of ‘Enroll/Sum’) to become eligible for an upgrade to receive <i>detailed</i> eBill information. A new registration/set-up process is required to receive the upgrade, which will be reflected with a new eligibility status of ‘Alw/Det’.</p> <p>Summary-level eBill information will continue to be available if the subscriber does not immediately choose to upgrade.</p> <p><i>Design tip:</i> The service consumer may want to guide the subscriber through the eBill setup/upgrade experience by providing explicit indicators for initial setup vs. an ‘upgrade’, such as:</p> <ul style="list-style-type: none"> ▪ ‘Set up eBill’ <ul style="list-style-type: none"> • For initial setup of an eBill account for the given Payee (where Payee eBill account eligibility = ‘Alw/Sum’ or ‘Alw/Det’ and Payee is not already enrolled for eBills). ▪ ‘Request eBill PDF’ or ‘Upgrade to full billing statements’

		<ul style="list-style-type: none"> Where Payee is already registered for summary eBill information (eBill account eligibility previously = 'Enroll/Sum'; and Payee Inquiry now returns 'Alw/Det', indicating this Payee is eligible for an upgrade to begin receiving full electronic billing statements.
Enroll	Sum	Payee is registered for eBills, summary level of eBill information only available
Enroll	Det	Payee is registered for eBills, detailed information available (including full electronic billing statements)
EnrollAlw	Det	Payee is registered for eBills (summary level of eBill information), but is eligible for detailed information (including full electronic billing statements) if a new registration is completed
EnrollPend	Det	Payee's eBill registration is pending, detailed information will be available once registration complete

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**

PayeeP2PType

This optional element specifies the type of communication method to be used for person-to-person Payee contact. Applicable only for an Individual Payee (*PayeeClsf* = 'Indv'). Canonical values are:

- **SMS** – Text
- **Email**

LastMainDt

This is the date of the most recent (i.e., last) modification to the given Payee's information.

Complex elements:

PayeeFIAcctInfo

This complex element contains a package of financial deposit account information. (Available for the Individual Payee with an Electronic Payment Method, and for Transfer accounts.)

FIRtd

The Bank Routing Number (ABA number) of the Payee's Bank (deposit) or Transfer account.

FIAcctId

Payee's Bank Account Number. For Transfer accounts, this value will be the subscriber's account number at the designated FI.

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 funding account ('pay from account' designated for the specified Payee or Transfer account).

NOTE: For Company subscribers: *PayFromAcctInfo* can be viewed if the requesting user has permission to designate funding 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 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 funding account.

PayFromAcctId

The bank account number of the funding account designated for this Payee or Transfer account.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the subscriber's Bill Pay funding account.

PayFromAcctDft

This indicates if the funding account is the default account to be used in the event a funding account is not specified when scheduling a payment or Transfer. Canonical values are:

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

This complex element may be empty if no default funding account has been specified for the Payee or Transfer account. If no funding account has been specified for the Payee, the funding account designated as the subscriber's *default* funding 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 funding 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 FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('pay from account') owner's name (if the 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 funding account owner's name, if the owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's Product allows this information on the subscriber's funding account(s), and then only if the specific subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding 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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's Product allows this information on the subscriber's funding account(s), and then only if the specific subscriber is authorized to include funding 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.

NOTE: For certain Payees, the Payee Phone Number may now be eligible for modification.

If the Payee Phone Number is NOT editable, the <Rstr> attribute for this element will be set to ‘Read-Only’, which indicates that the Service Consumer should **NOT** make this element available for update from the requesting user.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Current canonical values available for Payees for the Bill Pay Services API are:

- **Work**
- **SMS**

PayeeEmailArray

This optional array contains the *EmailInfo* complex element, which includes a package of email data for the Payee. An email address is available only 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)

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 P2P 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 for each eligible 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 (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) or where enrollment is pending (*ElecBillPayeeType* = *EnrollPend*), this array will contain a [single] package of data for the registered or pending eBill account associated with the Payee.

See [Appendix D](#) for additional detail on eBill Account Set up 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, *only* when the Payee's *ElecBillPayeeType* ('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 *ElecMerPayeeId* 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] *ElecBillPayeeAcctId* ('eBill Account ID') is necessary to identify the eBill account.

ElecBillPayeeAcctId

This is the identifier associated with the subscriber's registered eBill account with the Merchant/Payee.

This element is applicable when the Payee's *ElecBillPayeeType* ('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'.

ElecBillPayeeName

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 ('register') an eBill account.

For a Payee *currently* registered for eBills where a *new* Terms of Service acceptance is required by the eBiller, ongoing eBill activity will continue to be allowed. However, it is assumed that the new Terms of Service will be presented by the Servicer Consumer to the subscriber/end-user for review and acceptance (and new acceptance will then be conveyed to the Service Provider via a *PayeeMod* request.)

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 *ElecBillPayeeType* (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 5 - eBill Auto Payment Options - Payee Inquiry

ElecBil PmtAmtType	ElecBil PmtRuleAlgSymb	ElecBil PmtAmt	Payment Amount Option
StmntBal	EQ	N/A	Always pay [full] Statement Balance
StmntBal	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>

ElecBilPmtInstrType

This specifies the payment instruction for the automatically scheduled eBill payment. Canonical values are:

- **ElecMerStmnt** – 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 for registered eBill accounts ONLY 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 optionally specifies a 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}$`

NOTE: The required number of login credential attributes varies by eBiller (for example, while most biller websites require two (2): the user's username and password, some may require more than two, such as when a security PIN is required in addition to the username and password). Therefore, the Service Consumer must be able to support the display of (and user entry for) a variable number of credential attributes.

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, a request is first made to the eBiller prior to returning this array in order to obtain the 'latest' account error information available. No new eBill activity can occur until the error is resolved.

Resolution of eBill account errors regarding incorrect Login credentials, MFA (Multi-Factor Authentication) or OTA (One-Time Authentication) issues will require additional information from the subscriber (needed information for MFA/OTA authentication issues will be itemized in the *AuthenQuesArray*—see below) and *may* require a 'time-restricted' response. 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: eBiller MFA and OTA authentication processes are often 'time-restricted'; that is, the randomized 'security challenge question' or OTA requirement(s) presented for user response are valid only for a specified time period, often as little as 2-10 minutes. After expiration, a new security challenge question or one-time authentication is required from the eBiller.

Therefore, it is possible that an authentication process will 'time out' (i.e., become 'invalid') if too much time passes between the *PayeeInquiry* response from the Service Provider (iPay Solutions) that provided the initial MFA or OTA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the subscriber's 'answer' (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the *PayeeModRs* response will indicate that a 'time out' error has occurred, and a new *PayeeInquiry* request is required in order to 'trigger' receipt of a new MFA/OTA authentication requirement from the eBiller and restart the 'time-clock'.

Also note that some eBiller user authentication methods involve a multi-step response process, requiring an initial *PayeeModRq* with the subscriber's first response (*AuthenAnswDesc*), wherein the *PayeeModRs* response to that request returns another MFA failure error and an additional *AuthenQuesDesc*. The response to the additional authentication question(s) must be returned in a subsequent *PayeeModRq*, and must be received within the initially allocated time period in order to avoid a 'time out'. If a time out occurs at any step of this multi-step process, the process must be restarted in its entirety, starting with the request that returned the first MFA failure and *AuthenQuesArray* (e.g., *PayeeInquiryRq* if obtaining eBill account error resolution information, or *PayeeModRq* for initial eBill account setup).

See [Appendix D](#) for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

Arrays

The arrays contained within *BillPayPayeeInqRs* 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.

x_CardFundedPayeeArray

(As with all 'x_' objects, this CardFunded Payee x_ array will be included in the response only if explicitly requested in the *IncXtendElemArray* within the *BillPayPayeeInqRq* message.)

This optional array contained within the root *BillPayPayeeInqRs* contains an array of card funded Payee information.

Complex elements:

CardFundedPayeeInfo

This complex element contains a package of information related to card funded payments.

WebPgURL

This specifies the subscriber's 'custom' URL to be used to access the Payee's website to complete a card funded payment.

NOTES:

- This element includes several pieces of information returned as an embedded part of the URL string:
 - a) the URL for the Payee's website
 - b) A JSON web token ('JWT') that includes subscriber-specific information to enable the card funded payment
 - c) Company ID, which represents the Service Provider's ('iPay's') Payee card-funded identifier

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.

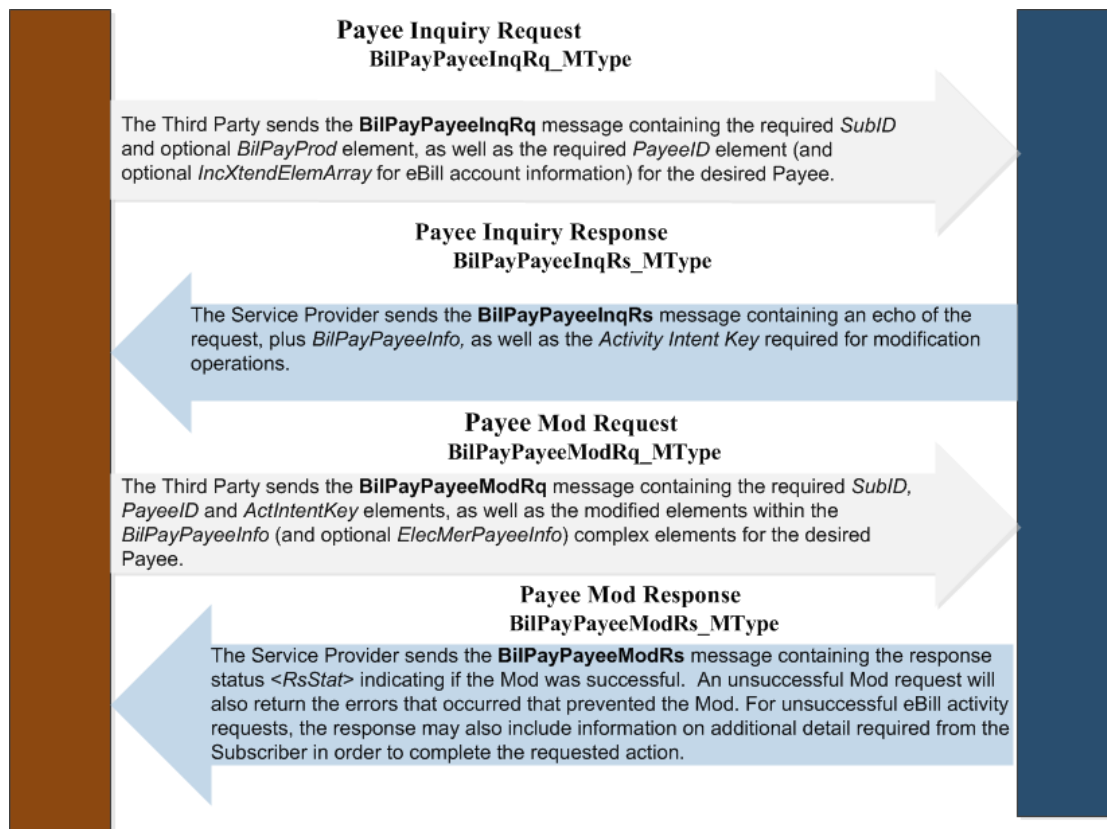
A request that provides the SubId, PayeeId and ActIntentKey along with the delete element (<Dlt>) that is set to 'True' will convey to the service provider to remove (delete) the Payee or Transfer account for the specified subscriber.

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.



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 Solutions 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 Solutions) identifier for the subscriber.

Payeeld

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 setup 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 existing 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.

BillPayPayeeInfo

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:

PayeeName

This is the name of the Payee or Transfer account. Modification of this value is not allowed for Transfer accounts. This is a required element, and therefore cannot be deleted (i.e., cannot be set to 'Null').

NOTE: For certain Payees, the Payee Name may now be eligible for modification. If the Payee Name is NOT editable, the <Rstr> attribute for this element will be set to 'ReadOnly' in the Payee Inquiry response, which indicates that the Service Consumer should **NOT** make this element available for update from the requesting user.

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 Solutions' 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 P2P 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 P2P Payees or Transfer accounts.

PayeeCatName *(reserved for future use)*

The name of the category assigned to the Payee or Transfer account

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions at this time*

The Payee's *PmtIntentType* must be appropriate for the specified Payee Classification (e.g., for FI Payees – Transfer Accounts), only Xfer-type values are appropriate).

PayeeP2PType

This element specifies the type of communication method to be used for person-to-person Payee contact.

Applicable only for P2P Payees (where *PayeePmtMthd* = 'Email'). This element is a required element for P2P Payees and therefore cannot be deleted (i.e., cannot be set to 'JHANull'). iPay Solutions will ignore entries for any other Payee type. Canonical values are:

- **SMS** ('Text')
- **Email**

NOTE: A Mobile ('SMS') Phone Number is required for the P2P Payee to set up the P2P Payee using the 'SMS' PayeeP2PType. Likewise, an Email address is required for the P2P Payee to set up the P2P Payee using the 'Email' PayeeP2PType.

PayFromAcctInfo

This optional complex element contains information on the 'default' funding account ('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 funding account.

This is the only element necessary to specify the desired 'default' funding account for the Payee or Transfer account.

If the Payee's funding account is not specified, the funding account designated as the Subscriber's *default* funding account will be used.

NOTE: Funding account ('pay from account') information (other than the subscriber's default funding 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).

FIRId

The Bank Routing Number (ABA number) of the Payee's Bank (deposit) account.

FIActId

Payee's Bank Account Number or, for Transfer accounts, subscriber's account number at FI.

FIActType

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 the ability to update an array of payee addresses. A primary address is required for Company Payees (i.e. can be updated, but not be deleted). The payee's address is an optional entry for 'P2P' Payees, and for 'Individual Electronic' Payees (where PayeeClsf = 'Indv' and PayeeFIAcctInfo is provided). Entry or update of payee's address is not allowed for Transfer accounts. 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 Solutions' Merchant Management process, the [primary] 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. Not applicable for Transfer accounts. This is a required element, and therefore cannot be deleted (i.e., cannot be set to 'JHANull').

PhoneNum

This represents a phone number, including area code, for the Payee. This is the Payee's Work (Business) number.

NOTE: For certain Payees, the PhoneNum may now be eligible for modification. If the Payee Phone Number is NOT editable, the <Rstr> attribute for this element will be set to 'ReadOnly' in the Payee Inquiry response, which indicates that the Service Consumer should NOT make this element available for update from the requesting user.

PhoneType

This specifies the type of phone number contained in the PhoneNum element (above). Current canonical values available for Payees for the Bill Pay Services API are:

- **Work** (required for Company Payees)
- **SMS**

NOTES:

- 1) 'SMS' PhoneType is required for an Individual Payee when *PayeeP2PType* = 'SMS'.
- 2) 'Work' Phone Type is required for Company Payees.

- 3) It should be noted that, in order to leverage payment processing efficiencies gained from iPay Solutions' 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. An email address is available only 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] *ElecBillPayeeAcctId* ('eBill Account ID') is necessary to identify the eBill account.

ElecBillPayeeAcctId

This is the identifier associated with the Subscriber's registered eBill account with the Merchant/Payee.

This element is applicable when the Payee's *ElecBillPayeeType* (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 ('register') an eBill account.

For a Payee *currently* registered for eBills where a new Terms of Service acceptance is required by the eBiller, ongoing eBill activity will continue to be allowed. However, it is expected that the Service Consumer will require new acceptance of the ToS by the Subscriber/end-user, which would then be conveyed to the Service Provider via a *PayeeMod* request.

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 ONLY 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 6 - eBill Auto Payment Options - Payee Mod

ElecBilPmtAmtType	ElecBilPmtRuleAlgSymb	ElecBilPmtAmt	Payment Amount Option	Valid for Acct Type(s)
StmntBal	EQ	N/A	Always pay Statement Balance	CCA
StmntBal	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:

- **ElecMerStmnt** – 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.

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:

- **UserName** – 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 multi-factor ('MFA') or one-time ('OTA') 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 authentication requirement by the eBiller. It includes the following simple element(s):

AuthenAnswDesc

This specifies the Subscriber-provided answer to the MFA/OTA requirement from the eBiller.

NOTE: eBiller MFA and OTA authentication processes are often ‘time-restricted’; that is, the randomized ‘security challenge question’ or OTA requirement(s) presented for user response are valid only for a specified time period, often as little as 2-10 minutes. After expiration, a new security challenge question or one-time authentication code is required from the eBiller.

Therefore, it is possible that an authentication process will ‘time out’ (i.e., become ‘invalid’) if too much time passes between the *PayeeInquiry* or *PayeeMod* response from the Service Provider (iPay Solutions) that provided the initial MFA or OTA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the Subscriber’s ‘answer’ (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the *PayeeModRs* response will indicate that a ‘time out’ error has occurred, and the original request that prompted the MFA/OTA authentication (e.g., *PayeeInquiryRq* for obtaining eBill account error resolution information, or *PayeeModRq* for initial eBill account setup) must be retried in order to ‘trigger’ receipt of a new MFA/OTA authentication requirement from the eBiller and a restart of the ‘time-clock’.

Also note that some eBiller user authentication methods involve a multi-step response process, requiring an initial *PayeeModRq* with the Subscriber’s first response (*AuthenAnswDesc*), wherein the *PayeeModRs* response to that request returns another MFA failure error and an additional *AuthenQuesDesc*. The response to the additional authentication question(s) must be returned in a subsequent *PayeeModRq*, and must be received within the initially allocated time period in order to avoid a ‘time out’. If a time out occurs at any step of this multi-step process, the process must be restarted in its entirety, starting with the request that returned the first MFA failure and *AuthenQuesArray* (e.g., *PayeeInquiryRq* if obtaining eBill account error resolution information, or *PayeeModRq* for initial eBill account setup).

See [Appendix D](#) for additional detail on eBill Account Setup and eBill Account Error Resolution flows.

Payee Mod Behaviors

- For *Company Subscribers*:
 - Payees can be added or modified only if the requesting user (subscriber’s associated user) has been granted permission to Manage Payees. Further, Payee information can be modified only if the requesting user has been granted permission to ‘manage’ the specified Payee.
 - Transfer accounts can be modified only if the requesting user (subscriber’s associated user) has been granted permission to Manage Transfer Accounts.
 - Funding account (‘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 funding account for a Payee, the third-party consumer must first perform a *Subscriber Inquiry* to get a list of funding accounts from which to choose.
- iPay Solutions 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 P2P Payees, a new P2P 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 states: “Pending payments are associated with this Payee. Deleting Payee will stop all associated pending payments.”
 - The third-party consumer can override this fault by providing an error override. If provided, iPay Solutions 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 only be utilized in the following scenarios:
 - For future scheduled payments that must be sent by check to 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.
 - For check payments to Payees that are exclusive to the subscriber (i.e., exist only for the given subscriber, such as payments to individuals, etc.)

It is advisable for the Service Consumer to display a message to the end-user when the Address update will NOT impact the address where the check payment will ultimately be sent.

- **eBill Accounts:**

- **Setting up (‘registering’) an eBill account:**
 - **Initial Request** - The following elements are required when initially requesting to set up an eBill account:
 - ElecMerPayeeld (‘eBiller ID’)
 - ElecMerPayeeToSStat
 - Must be set to ‘Actp’ in order to complete eBill account registration
 - 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)
 - **Additional Information Needed to Complete Setup** - The following elements are required when a *subsequent* modification request (*PayeeModRq*) is required, supplying additional information needed to complete the setup of an eBill account (based on the preceding *Payee Mod* response):
 - ElecMerPayeeld (‘eBiller ID’)
 - ElecMerAcctErrCode (returned in preceding *Payee Mod* response)
 - Additional information:
 - 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
 - ElecMerPayeeCredInfoArray (required for 'Login Failure' error E6513)
 - All applicable ElecMerCredVal elements must be returned in the response.
 - AuthenQuesArray (required for 'MFA Failure' error E6518 or E6519)
 - 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 FIs that have included this feature for the specified product.
- **Resolving registered eBill account error conditions:**
- The following elements are required when a Payee 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)
 - All applicable ElecMerCredVal elements must be returned in the response.
 - AuthenQuesArray (required for 'MFA Failure' 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 *PayeeInquiryRs* or *PayeeModRs* 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

- **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 Solutions) returns the *BillPayPayeeModRs* **response** message to the service consumer.

The **simple element(s)** contained within the *BillPayPayeeModRs* 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 *BillPayPayeeModRs* 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 or OTA 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: eBiller MFA and OTA authentication processes are often 'time-restricted'; that is, the randomized 'security challenge question' or OTA requirement(s) presented for user response are valid only for a specified time period, often as little as 2-10 minutes. After expiration, a new security

challenge question or one-time authentication code is required from the eBiller.

Therefore, it is possible that an authentication process will 'time out' (i.e., become 'invalid') if too much time passes between the *PayeeInquiry* or *PayeeMod* response from the Service Provider (iPay Solutions) that provided the initial MFA or OTA authentication requirement (the *AuthenQuesDesc*) and subsequent submission of the Subscriber's 'answer' (the *AuthenAnswDesc*) via the *PayeeModRq*.

In that event, the *PayeeModRs* response will indicate that a 'time out' error has occurred, and the original request that prompted the MFA/OTA authentication (e.g., *PayeeInquiryRq* for obtaining eBill account error resolution information, or *PayeeModRq* for initial eBill account setup) must be retried in order to 'trigger' receipt of a new MFA/OTA authentication requirement from the eBiller and a restart of the 'time-clock'.

Also note that some eBiller user authentication methods involve a multi-step response process, requiring an initial *PayeeModRq* with the Subscriber's first response (*AuthenAnswDesc*), wherein the *PayeeModRs* response to that request returns another MFA failure error and an additional *AuthenQuesDesc*. The response to the additional authentication question(s) must be returned in a subsequent *PayeeModRq*, and must be received within the initially allocated time period in order to avoid a 'time out'. If a time out occurs at any step of this multi-step process, the process must be restarted in its entirety, starting with the request that returned the first MFA failure and *AuthenQuesArray* (e.g., *PayeeInquiryRq* if obtaining eBill account error resolution information, or *PayeeModRq* for initial eBill account setup).

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 Subscriber 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 *ElecBillPayeeAcctId* 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.

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.



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 Solutions 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 Solutions) 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 payment series dates, see the *RecurPmtInfo* complex below.)

This date is required for all *single* payments or Transfers for FIs that utilize the 'Process Date' payment date model, and should NOT be completed when adding a recurring payment or transfer series. iPay Solutions will ignore a value submitted for this element for FIs 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 payment series dates, see the *RecurPmtInfo* complex below.)

This date is required for all *single* payments or Transfers for FIs that utilize the 'Due Date' payment date model, and should NOT be completed when adding a recurring payment or transfer series. iPay Solutions will ignore a value submitted for this element for FIs 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 Solutions will ignore a value submitted for this element for any non-check payments (including

SubCmntToPayee

This is the personalized message that will be added to the email 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).

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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 Solutions 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).

Payeeld

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 funding account ('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 funding account.

This is the only element necessary to specify the desired funding account for the Payment or Transfer.

If the funding account for the payment or Transfer is not specified, the funding account designated as the Payee's *default* funding account will be used.

NOTE: Funding account ('pay from account') information (other than the default funding 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 scheduling 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.

StartPmtProcDt

This is the starting date for processing a new 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 FIs that utilize the 'Process Date' payment date model. iPay Solutions will ignore a value submitted for this element for FIs that utilize the Due Date payment date model.

StartPmtEstArvDt

This is the starting estimated arrival date (i.e., due date) for a new 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 FIs that utilize the 'Due Date' payment date model. iPay Solutions will ignore a value submitted for this element for FIs 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:

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.

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 for each line item needed for the Invoice, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay Solutions) identifier for the Invoice. This element should be left blank for the *add* request, as this information will not be available to the Service Consumer until the Payment Add request has been 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:
 - o a **Subscriber Inquiry** - in order to obtain the available list of funding accounts from which to choose
 - o a **Payee Inquiry** - in order to obtain the most accurate, up-to-date Payee information required to schedule the payment.

NOTE: Payeeld values are subject to change without notice, so inquiry for current Payee IDs should always be completed before actual use

- For Company Subscribers:
 - o '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.
 - o P2P Payments can be added only if the requesting user has been granted permission to 'schedule email payments', and for the specified P2P Payee.
 - o 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 Funding 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 pended (Payment Status = PmtApprvReq). The Service Provider (iPay Solutions) will notify the subscriber whenever payment approval is required.
 - A separate *Scheduled Payment Approval* request must be submitted 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' Solutions) 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 FI'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.
 - 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.
 - 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:
 - The Rush payment option is available only for those FIs 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.
 - iPay Solutions 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.
 - iPay Solutions 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.
 - 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 Business Day rush options:
 - The payment method for the payment is set to Check regardless of the Payee's designated payment method.
 - The selected funding account must be a checking account (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 P2P Payments:

- o The P2P payment option is available only for those FIs 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 a P2P Payment.
- o If a P2P payment requires a Service Fee (or surcharge), it is assumed that the service fee applicable to the P2P payment has been presented by the Service Consumer to the Subscriber/end-user, and that submission of the P2P payment implies fee acceptance.
 - A Payee Inquiry can be performed to determine if a P2P (Email) Service Fee is applicable and the Fee amount.
- For Recurring Payments:
 - o The 'Standard' RushOpt is the only valid Payment Rush Option for Recurring payments or Transfers.
 - o 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.
 - o The Starting Payment Date (StartPmtProcDt or StartPmtEstArvDt) must be valid for the specified Frequency and Payment Day of Week or Payment Day specified. For example, if a new 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.
 - o The Processing Date and Estimated Arrival Date (i.e., 'Due Date') will be set automatically by the Service Provider (iPay Solutions) for the first scheduled payment or Transfer in a recurring series, based on the entered Starting Payment Date for the series.
 - A *Pay Before* PayDtInstr is required for FIs using the Due Date Payment Model. The Service Provider (iPay Solutions) will automatically reset this value if any value other than *Pay Before* is received for a Due Date Payment Model.
- For eBill Payments:
 - o When a scheduled payment associated with an eBill is processed, the corresponding eBill will be marked Paid.

Response

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

The elements contained within the *BillPaySchedPmtAddRs* 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 Solutions) 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:

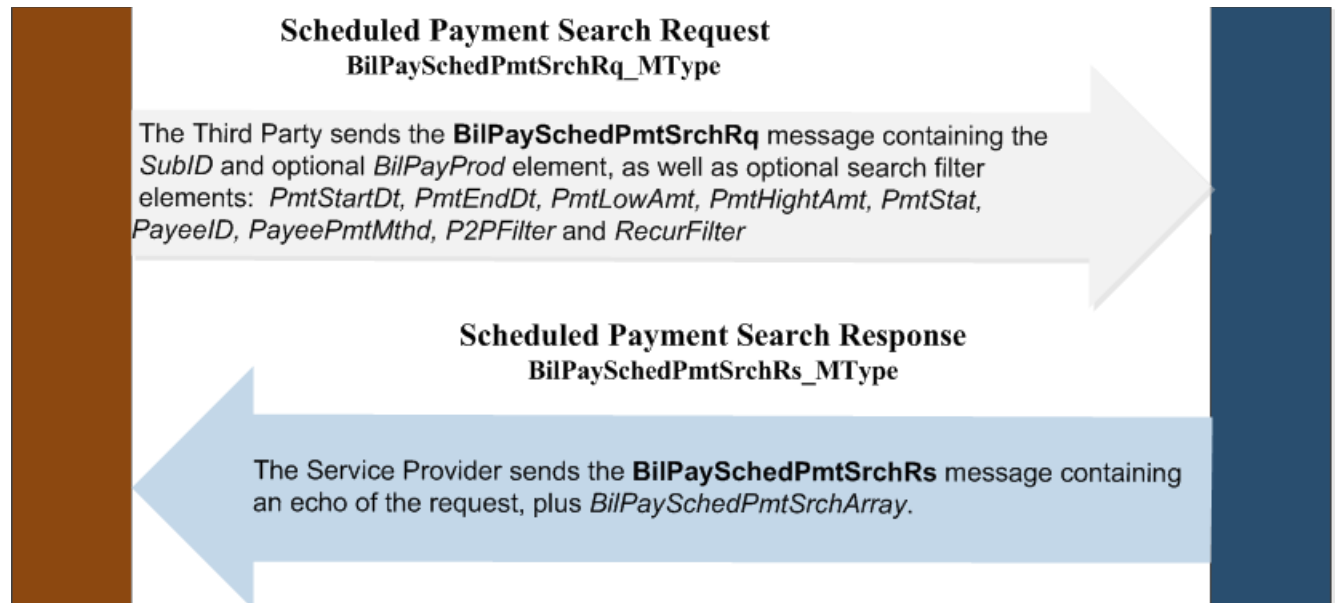
- **Payment Start Date <PmtStartDt>**
- **Payment End Date <PmtEndDt>**
- **Payment Low Amount <PmtLowAmt>**
- **Payment High Amount <PmtHightAmt>**
- **Payment Status <PmtStat>** - default = All
- **Payment Intention Type <PmtIntentType>** - default = All
- **Payee ID <Payeeld>**
- **Payee Payment Method <PayeePmtMthd>**
- **P2P Payees <P2PFilter>**
- **Recurring Payments <RecurFilter>**
- **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.



Request

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

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

BillPayProd

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

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

The *BillPayProd* default value is **BillPay**.

SubId

This is the Service Provider's (iPay Solutions) 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.

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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** – P2P (electronic, but initial set up is via an email or SMS process)
- **Elec** - Electronic

P2PFilter

This is used to filter payments associated with P2P 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

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 Solutions) 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. P2P Payments can be viewed only if the requesting user has been granted permission to Schedule Email Payments.
 - c. 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.
- 3) Scheduled Payment search results will be returned in descending Process Date order (newest to oldest).

The array(s) 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.

PayeId

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** – P2P (electronic, but initial set up is via an email or SMS 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 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 Payee type). Canonical values are:

- **True**
- **False** (default)

ElecMerBillPmt

This indicates whether the payment is an eBill payment (i.e., has an associated eBill). Canonical values are:

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

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions at this time*

PayFromAcctInfo

This optional complex element contains information on the funding account ('pay from account') designated for the specified Payment or Transfer.

NOTE: For Company Subscribers: Funding account information can be viewed if the requesting user has permission to 'Designate Pay From Account' information. If the requesting user does not have permission, the <Rstr> attribute for these elements will be set to *Hide*, 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 funding account specified for the Payment or Transfer.

PayFromAcctId

The bank account number of the funding account designated for this Payment or Transfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the subscriber's funding account.

PayFromAcctDft

This indicates if the funding account is the default funding account, to be used in the event a funding 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 funding 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 FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('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 funding account owner's Name, if the owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed if the subscriber's product permits it, and if the subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('pay from account') owner's address, if the 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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

Scheduled Payment Inquiry

Container: TPG_BillPayMaster.xsd

Message: BilPaySchedPmtInq

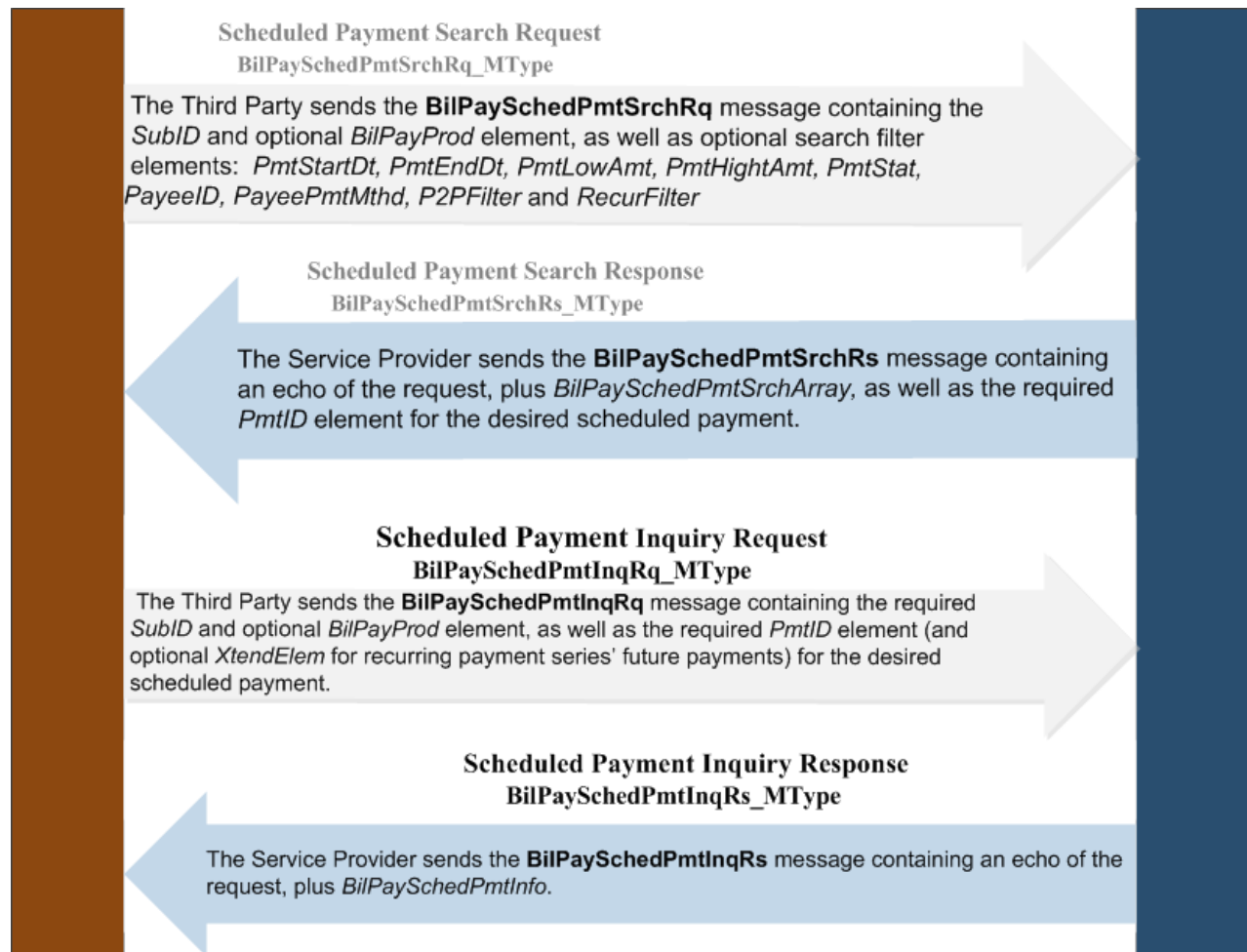
The Bill Pay Scheduled Payment Inquiry <BilPaySchedPmtInq> will return element details for a specific scheduled (Pending) single or recurring payment or Transfer for a given Subscriber. The subscriber identification element <SubId> and Payment ID <PmtId> are required on the request.

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.



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 Solutions 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 Solutions) 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* for the data set in the Inquiry response. This is the default.
- **Upd** – indicates the intention to perform an update (*Mod*) to the data set in the Inquiry response.
- **Del** – indicates the intention to perform a delete of the data set in the Inquiry response.

IncXtendElemArray

This array conveys the list of 'x_' elements by name which are to be included in the response. 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 Solutions) 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:

- Scheduled Payment information can be viewed only if the requesting user (subscriber's associated user) has permission to schedule bill payments.
- P2P Payments can be viewed only if the requesting user has permission to schedule email payments.
- Scheduled Transfer information can be viewed only if the requesting user has 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** – P2P (electronic, but initial set up is via an email or SMS 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.

BillPaySchedPmtInfo

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 pending payment or Transfer is scheduled to be processed. For a recurring payment or recurring transfer series, this will be the date associated with the currently scheduled payment or Transfer in the series.

PmtEstArvDt

This is the date the pending 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 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).

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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:

Payeeld

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)
- **FinInst** (FI) – indicates a Transfer account

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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** – P2P (electronic, but initial set up via an email or SMS 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.

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 used 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 two-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 Solutions Merchant Management process, the [primary] Payee Address listed may not always be the address used for a check payment.

BillPaySvcFeeInfoRec

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.

PayeePhoneArray

This array contains 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). Current canonical values for Payees for the Bill Pay Services API are:

- **Work**
- **SMS**

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 valid element only if the Payee's PayeePmtMthd = 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; specifies a non-expedited payment)
- **Ovrngt** – Overnight
- **2ndDay** – Second Business 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 funding account ('pay from account') used to make the payment or Transfer to specified the Payee for this scheduled payment or Transfer.

NOTE: For Company subscribers: Funding account information can be viewed 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 *Hide*, 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 funding account specified for the scheduled payment or Transfer.

PayFromAcctId

The bank account number of the funding account designated for this Payment or Transfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the specified funding account.

PayFromAcctDft

This indicates whether the funding account is the subscriber's designated default funding account, which is the funding account used in the event a funding 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 funding 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 FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('pay from account') owner's name (if the 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 funding account owner's name, if the owner of the account is a Company.

FirstName

This represents the funding account owner's first name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's middle name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's last name, if the owner of the account is a person.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and if the subscriber is authorized to include funding account owner information.

RecurPmtInfo

This optional complex element contains a package of scheduling 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 [original] process date for the first payment that started the recurring payment or recurring Transfer series.

StartPmtEstArvDt

This is the [original] estimated arrival date (i.e., due date) for first payment that 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 payment or Transfer. 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 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 remaining 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 *not* finite, recurring payments or Transfers will continue to be made until the series is terminated by the Subscriber. Canonical values are:

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

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 Solutions) 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 Solutions) 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.

StmntDt

This is the statement date for the associated eBill.

PmtDueDt

This is the date the payment is due for the associated eBill.

StmntBal

This is the statement balance for the associated eBill. A statement balance amount is available only for credit card account (CCA) 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 account (CCA) 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).

MinPmtAmt

This is the minimum amount due for the associated eBill. A minimum amount due is available only for credit card account (CCA) 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 for each line item entered for the Invoice, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay Solutions) 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. To optimize system performance, the number of future payments or Transfers returned in the 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 *BillPaySchedPmtInqRq* message (above), if future payment or future Transfer detail is desired in the response.

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.

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 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 funding account ('pay from account') to be used to make the specified future payment or Transfer in the recurring payment or recurring Transfer series.

PayFromId

This is the Bill Pay Services API identifier for the funding account specified for the specified future payment or Transfer.

PayFromAcctId

The bank account number of the funding account designated for the specified future Payment or Transfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the specified funding account.

PayFromAcctDft

This indicates if the funding account is the Subscriber's designated default funding account, which is the funding account used in the event a funding 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 funding 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 FI where the subscriber's funding account resides.

PayFromAcctStat

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

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

Scheduled Payment Mod

Container: TPG_BillPayMaster.xsd

Message: BilPaySchedPmtMod

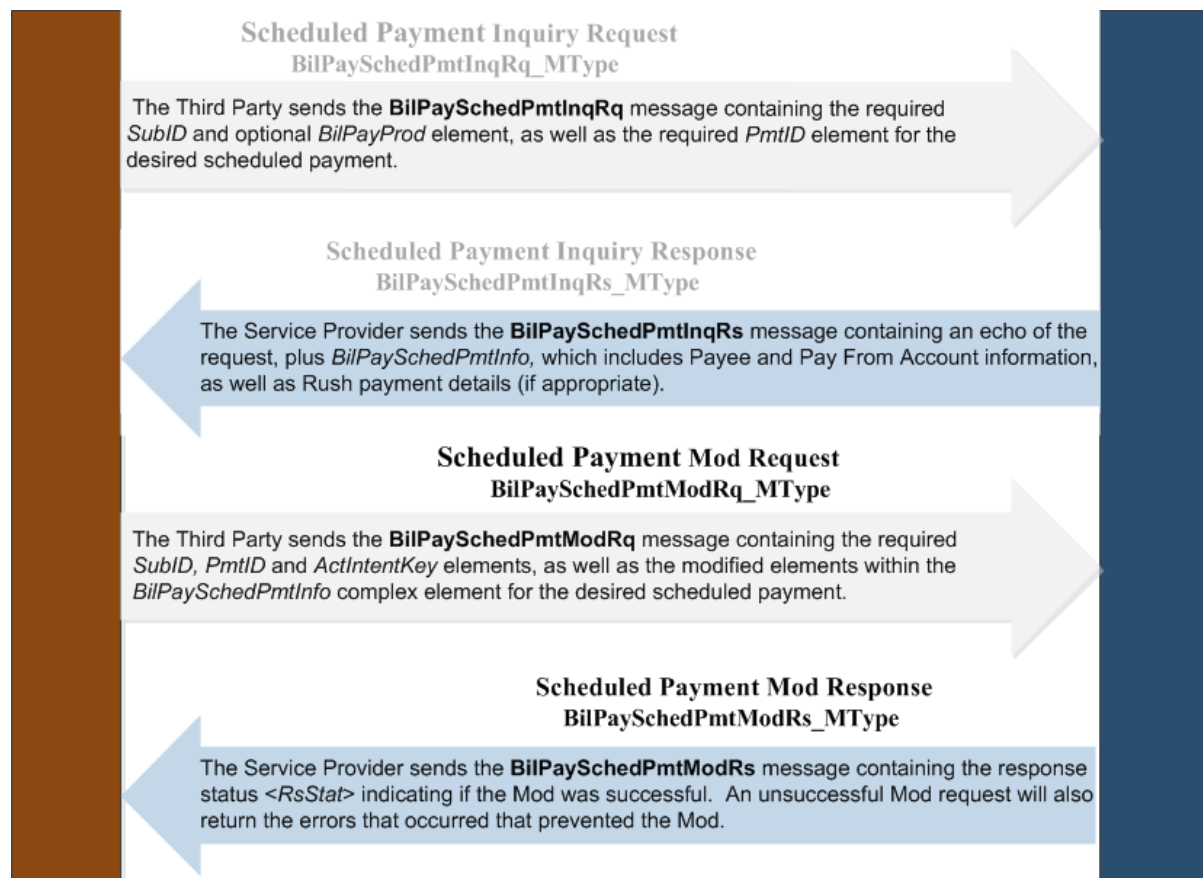
The Bill Pay Scheduled Payment Modification <BilPaySchedPmtMod> will allow the service consumer to update (modify) certain elements for a Subscriber's scheduled/pending single or recurring payment or Transfer, or delete (stop) the payment or Transfer entirely. For a recurring payment or recurring Transfer series, an option to delete (i.e., 'skip') a specific payment or Transfer, or delete the entire series, is available. The <Subld>, <Pmtld> and Activity Intent Key <ActlntenKey> are required on the Mod request.

A request that provides the Subld, Pmtld and ActlntenKey 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.



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 Solutions 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 Solutions) 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 a single specified **current or future** payment or Transfer in a recurring series. If entered, all eligible recurring payment or recurring Transfer updates will be applied to *that specified current or future 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 here.

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 pending 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:

PmtProcDt

This is the date the currently scheduled payment or Transfer is scheduled to be processed. (For changes to the overall schedule for a recurring series, see the RecurPmtInfo complex below.)

PmtEstArvDt

This is the date the currently scheduled payment or Transfer is estimated to be delivered to the Payee. (For changes to the overall schedule for a recurring series, 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.

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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 Solutions will ignore a value submitted for this element.

SubCmntToPayee

This is the personalized message that will be added to the email 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:

PayeId

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:

- **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 (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 funding account ('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 funding account specified for the scheduled single or recurring payment or Transfer.

If a FutPmtId is specified for this 'mod' request, only the funding account associated with the specified future payment or Transfer in the recurring payment or recurring Transfer series will be updated. The funding account specified for all other payments in the recurring series will remain unchanged.

NOTE: Funding 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 existing recurring payment or recurring Transfer series. This date cannot be less than the First Available Process Date for the Payee that would be available based on Frequency and Payment Day selections.

StartPmtEstArvDt

If updated, this will be the new starting estimated arrival date (i.e., due date) for the existing recurring payment or recurring Transfer series. This date cannot be less than the First Available Estimated Arrival Date for the specified Payee that would now be available based on Frequency and Payment Day selections.

PmtFreqUnits

This is the payment frequency for a recurring payment or recurring Transfer series. A specified frequency of 'Once' indicates a single 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** (default)

RetroToOrigPmtDt

This optional element is available for recurring payments or recurring Transfers that may be pending 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 for each line item needed for the Invoice, and contains the following simple elements:

InvoiceId

This is the Service Provider's (iPay Solutions) identifier for the Invoice. This element should be left blank when adding a new invoice line item to an existing scheduled payment, as this value will not be available to the Service Consumer until the Payment Mod request to add the new invoice item has been 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 SolutionsMod request.
- In order to change any Scheduled Payment or Transfer elements *other* 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.
- 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.
 - 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.
 - 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:
 - 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.
 - P2P Payments can be modified only if the requesting user has been granted permission to 'Schedule Email Payments', and for the specified P2P Payee.
 - 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.
 - Funding account ('pay from account') information (other than the Subscriber's default funding account designated for the Payee) can be modified only if the requesting user has been granted permission to 'Designate Pay From Accounts'.
 - Modification of the amount or funding 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.
 - 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:
 - 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 Solutions will fault a request to change the scheduled payment to a Rush payment if the payment's specified Process Date has already passed.
- iPay Solutions will fault a 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.
- iPay Solutions 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.
- The Process Date and/or Estimated Arrival Date will be adjusted by the service provider to accommodate the newly specified Rush Option.
- 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 Second 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:
 - 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 series.
 - Any updates to recurring series information included in the *RecurPmtInfo* complex will be applied to the entire recurring series.
 - 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.
 - 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.

Response

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

The element(s) contained within the *BillPaySchedPmtModRs* 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

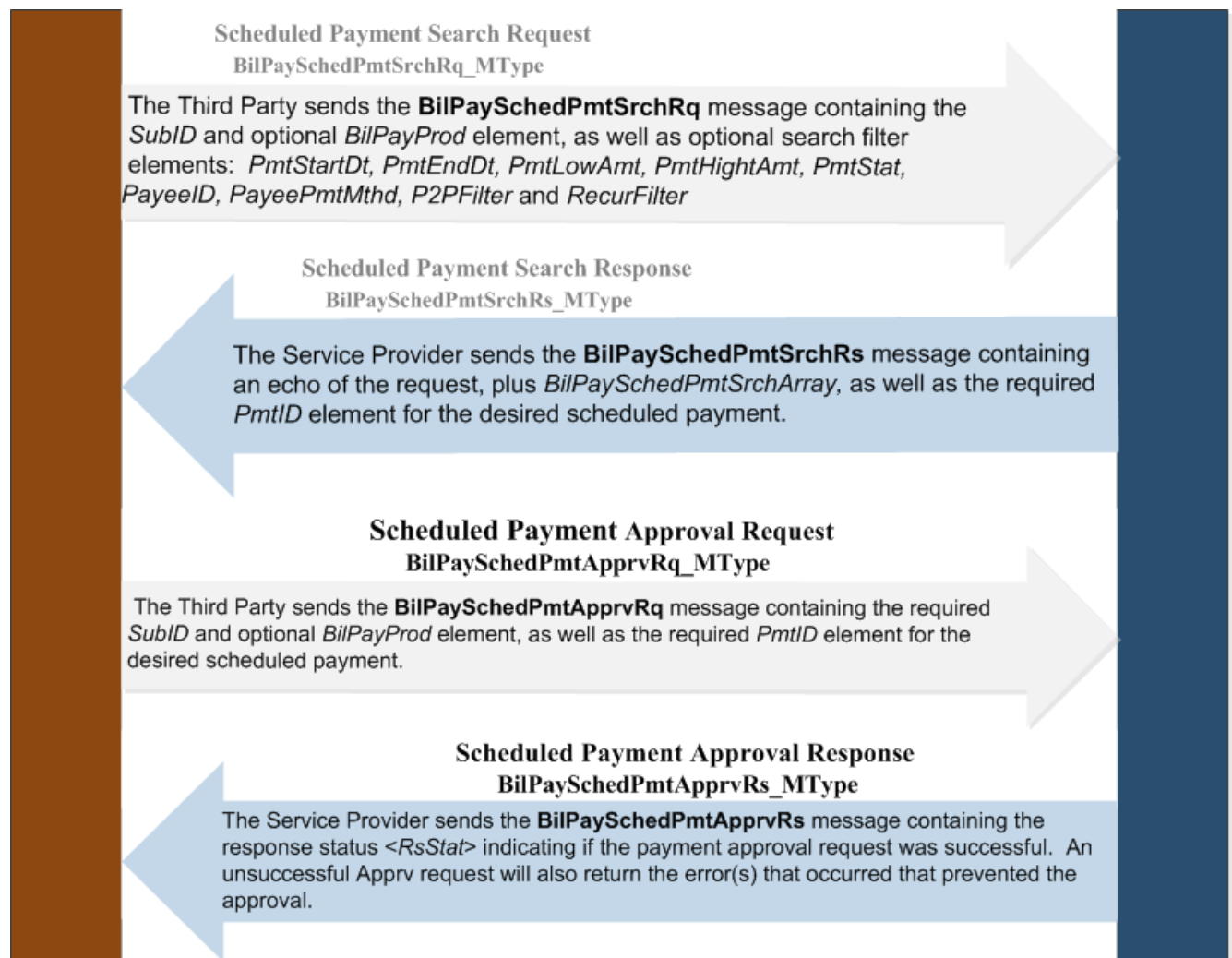
Message: BilPaySchedPmtApprv

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.



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 Solutions 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 Solutions) 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., sub user 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 execute a payment approval request, the requesting user must have 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 Solutions) 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**

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:

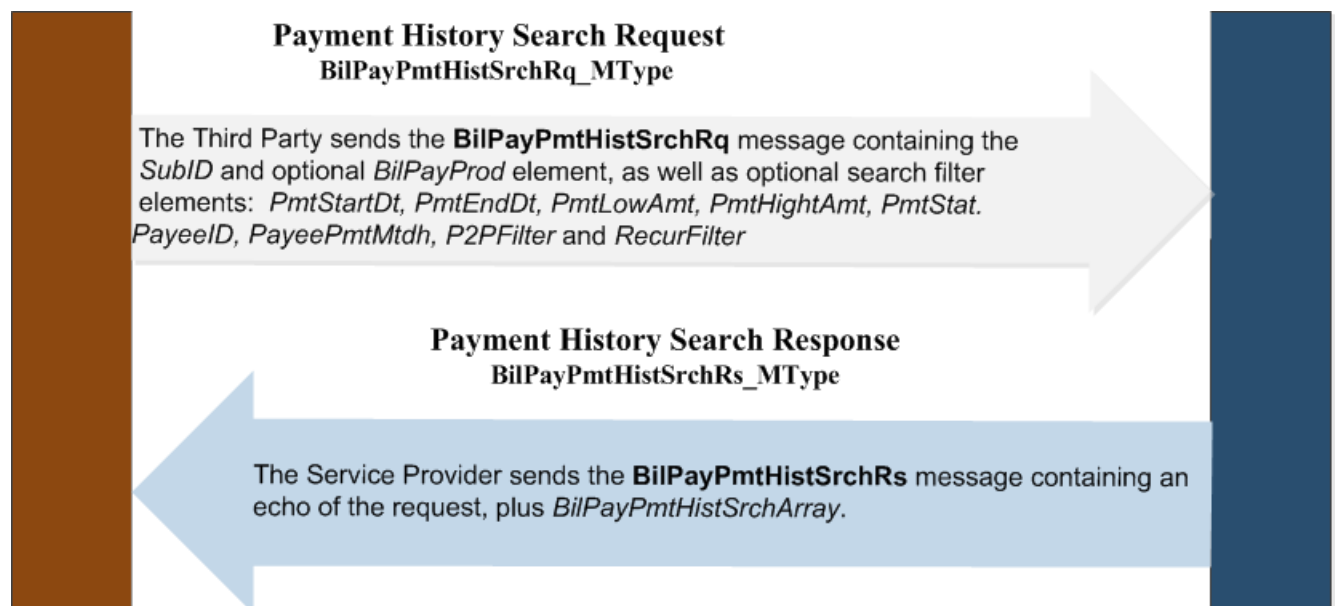
- **Payment Start Date** <PmtStartDt>
- **Payment End Date** <PmtEndDt>
- **Payment Low Amount** <PmtLowAmt>
- **Payment High Amount** <PmtHightAmt>
- **Payment Status** <PmtStat> - default = All
- **Payment Intention Type** <PmtIntentType> - default = All
- **Payee ID** <Payeeld>
- **Payee Payment Method** <PayeePmtMthd>
- **P2P Payees** <P2PFilter>
- **Recurring Payments** <RecurFilter>
- **Transfers** <XferFilter>
- **[NEW!] CardPay** <CardPayFilter>

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.



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 Solutions 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 Solutions) 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 an ending point for payment and/or Transfer amount selections.

This value is the highest amount to search for 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
- **ReSbm** - Resubmitted
- **Rfd** - Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that received payment approval)

NOTE: See [Appendix C](#) for Payment Status definitions.

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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

Payeeld

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** – P2P (electronic, but initial set up is via an email or SMS process)
- **Elec** - Electronic

P2PFilter

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

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

XferFilter

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

[NEW!] CardPayFilter

Used to filter CardPay payments into (or from) the search results. Canonical values are:

- **Incl** – Include CardPay payments (default)
- **OnlyCardPay** – Only return CardPay payments
- **Excl** - Exclude CardPay 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 Solutions) 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.

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 FI'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.
- 3) Payment Historysearch results will be returned in descending Process Date order (newest to oldest).

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.

Payeeld

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

- **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
- **Elec** – Electronic

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 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 Payee type'). Canonical values are:

- **True**
- **False** (default)

ElecMerBillPmt

This indicates whether the payment is an 'eBill payment' (i.e., has an associated eBill). Canonical values are:

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

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions at this time*

PayFromAcctInfo

This complex element contains information on the funding account ('pay from account') designated for the specified Payment or Transfer.

NOTE: For Company Subscribers, Pay From Account Info ('funding account') 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 funding account specified for the Payment or Transfer.

PayFromAcctId

The bank account number of the funding account designated for this Payment or Transfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the subscriber's funding account.

PayFromAcctDft

This indicates whether the funding 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 funding 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 FI where the subscriber's funding 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 funding account ('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 funding account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName

This represents the funding account owner's First Name, if the owner of the account is a person.

MiddleName

This optional element represents the funding account owner's Middle Name, if the owner of the account is a person.

LastName

This optional element represents the funding account owner's Last Name, if the owner of the account is a person.

NOTE: Funding account ('pay from account') owner information is allowed only if the subscriber's product permits it, and if the specific subscriber is authorized to include funding account owner information.

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('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 two-character alpha code approved by the USPS which represents a state.

PostalCode

This is the postal or ZIP Code (ZIP+4 is supported).

Payment History Inquiry

Container: TPG_BillPayMaster.xsd

Message: BilPayPmtHistInq

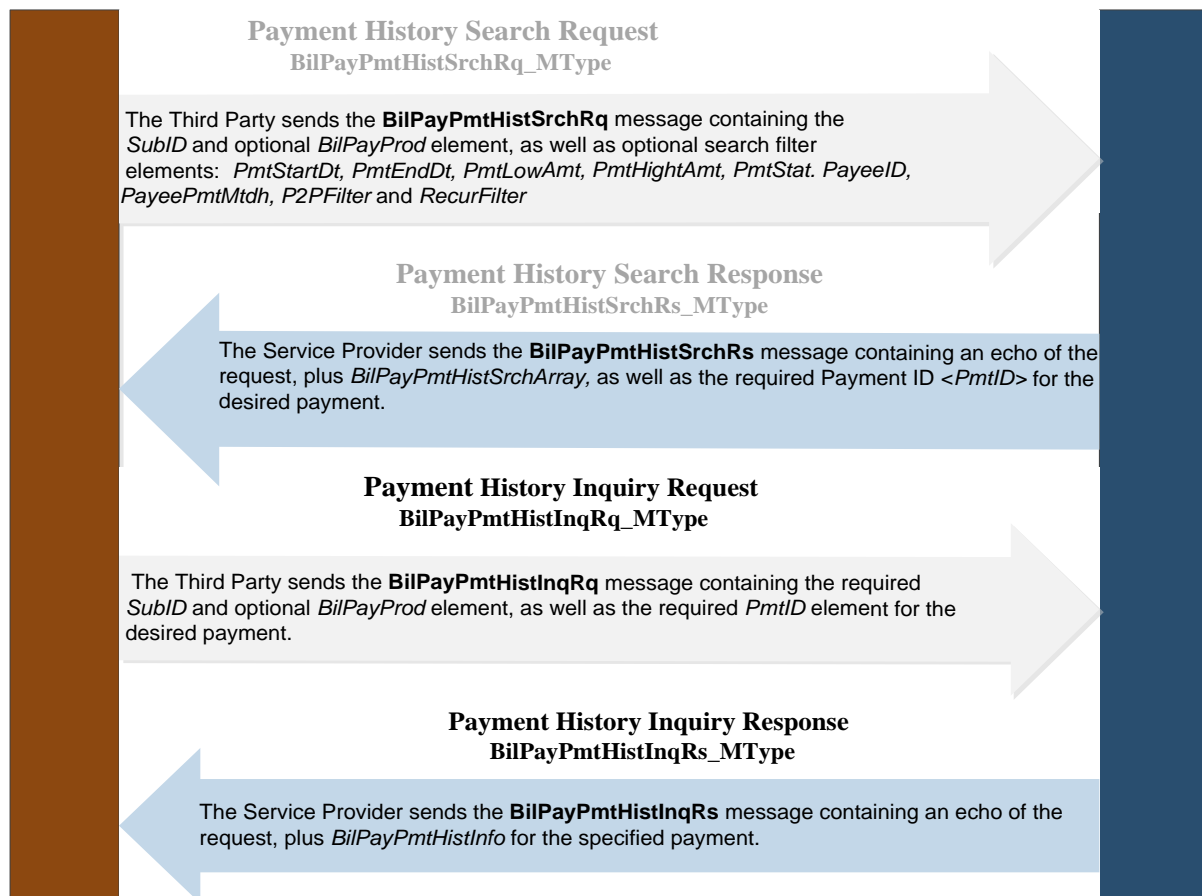
The bill pay Payment History Inquiry <BilPayPmtHistInq> will return element details for a specific single or recurring payment or Transfer made for a given Subscriber. The subscriber identification element <SubId> and Payment ID <PmtId> are required on the request.

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.



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 Solutions 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 Solutions) 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 Solutions) 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
- **ReSbm** - Resubmitted
- **Rfd** – Refunded
- **Skip** – Skipped
- **PmtApprv** - Payment Approved (for processed payment that required payment approval)

NOTE: See [Appendix C](#) for Payment Status definitions.

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 sent to a P2P payment recipient notifying them that a payment was made.

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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:

Payeeld

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)
- **FinInst** (FI) – 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** – P2P (electronic, but initial set up via an email or SMS process)
- **Elec** – Electronic

[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 FI (Outbound)
- **XferFromSubFinInst** - *not supported by iPay Solutions at this time*
- **XferTo** - *not supported by iPay Solutions at this time*
- **XferFrom** - *not supported by iPay Solutions 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:

- **Prim** – Primary (default)
- **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). Current canonical values for Payees for the Bill Pay Services API are:

- **Work**
- **SMS**

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 PayeePmtMthd = '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 funding account (‘pay from account’) that was used to make the payment or Transfer to the specified Payee or Transfer account.

NOTE: For Company Subscribers: Funding account information can be viewed if the requesting user has permission to designate funding 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 the Service Consumer should *hide* these elements from the requesting user.

PayFromId

This is the Bill Pay Services API identifier for the funding account specified for the payment or Transfer.

PayFromAcctId

The bank account number of the funding account designated for this Payment or Transfer.

PayFromAcctType

The number(s) or character(s) that categorize the type of funding account. Canonical values are:

- **D** – Checking
- **S** – Savings

PayFromAcctName

This is the account name for the specified funding account.

PayFromAcctDft

This indicates whether the funding account is the subscriber’s designated ‘default’ funding account, which is the funding account used if a funding 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 funding account. This will be available only if the Subscriber’s Product allows specification of a starting check number.

PayFromIntsRtld

This is the routing transit number or ABA number of the FI where the subscriber's funding account resides.

PayFromAcctStat

This is the status of the funding 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 funding account ('pay from account') 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 funding account Owner's Name, if the 'actual' owner of the account is a Company.

FirstName

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

MiddleName

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

LastName

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

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

PayFromAcctOwnAddr

This complex element is an optional element which contains information for the funding account ('pay from account') Owner's Address (if the actual owner of the funding 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: Funding account ('pay from account') Owner information is allowed only if the Subscriber's Product allows this information on the Subscriber's funding account(s), and then only if the specific Subscriber is authorized to include funding 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 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**
- **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.

Array(s):**InvoiceInfoArray**

This array can include a list of invoices, if applicable for the processed payment, and includes the *InvoiceInfo* complex element for each line item entered for the Invoice, and contains the following simple elements:

InvoiceID

This is the Service Provider's (iPay Solutions) 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

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 FI 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 FI; and
- 4) the Check Funding Model utilized by the FI (e.g., check images are available for the iPay Solutions Draft/Good Funds model, but not for Institutions utilizing the Subscriber Draft/Risk model).

x_ElecBilPmtInfo

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 *BillPayPmtHistInqRq* 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
- **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 *BillPayPmtHistInqRq* 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 used by the FI (e.g., check status timelines are available for both the iPay Solutions Draft/Good Funds and Subscriber Draft/Risk models, but not for FIs using 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 *BillPayPmtHistInqRq* 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.

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:

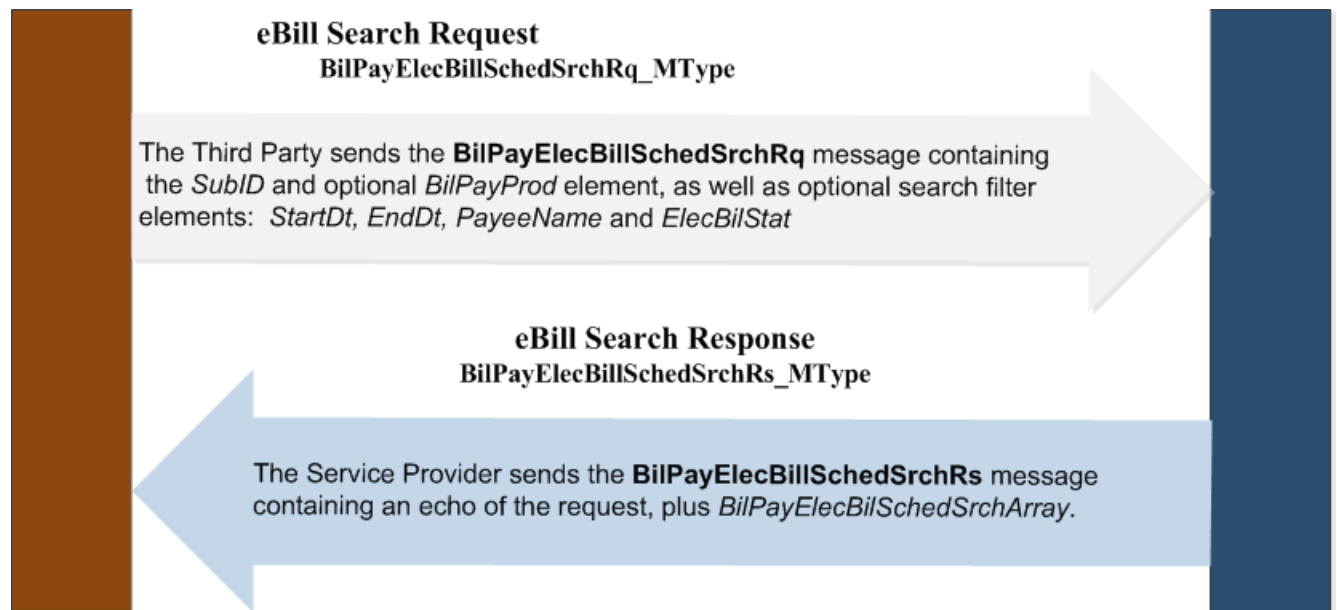
- **eBill Start Date** <StartDt>
- **eBill End Date** <EndDt>
- **Payee Name** <PayeeName>
- **eBill Status** <ElecBilStat>

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.



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 Solutions 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 Solutions) 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.

Response

The service provider (iPay Solutions) returns the *BillPayElecBilSchedSrchrRs* **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 FI'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 *BillPayElecBilSchedSrchrRs* response applicable for the Bill Pay Services API are:

BillPayElecBilSchedSrchrArray

This array returns an array of responses for the eBill search and includes the *BillPayElecBilSchedSrchrInfo* complex element for each eBill returned, which includes the following simple elements:

ElecBillId

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.

StmntDt

This is the statement date for the specified eBill.

StmntBal

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

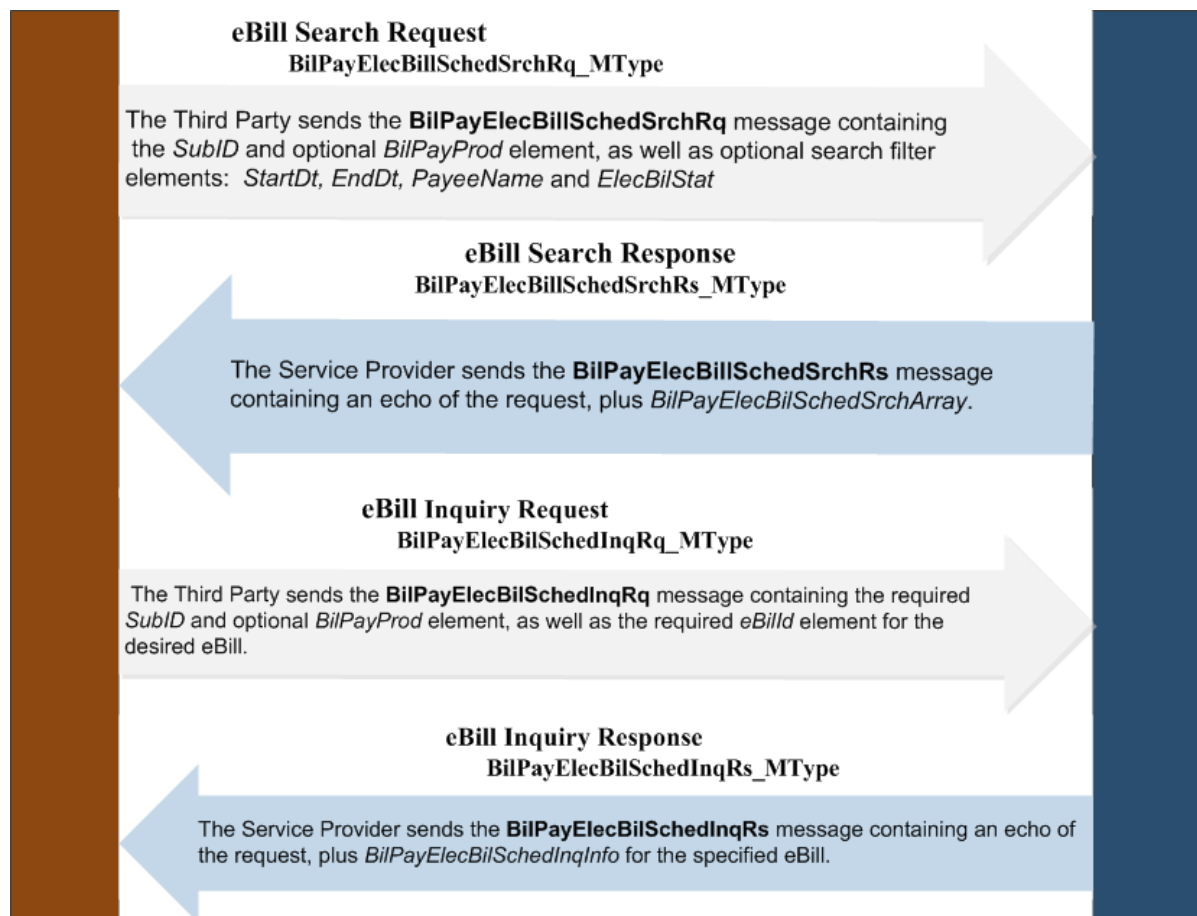
The bill pay eBill Inquiry <BilPayElecBilSchedInq> will return element details for a specific eBill for a given Subscriber. The subscriber identification element <SubId> and eBill ID <ElecBillId> are required on the request.

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.



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 Solutions 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 Solutions) identifier for the subscriber.

ElecBillId

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.*

The following three (3) elements are required entries ONLY if detailed eBill information (i.e., full electronic billing statements) is available for the specified eBiller (where Payee's <ElecBilPayeeType> = 'Enroll' and <ElecBilPayeeCatType> = 'Det') and then ONLY if the full eBill statement will be viewed on a mobile device.

MobDevType

This indicates whether the [end-user's] device being used to view eBill detail information is a mobile device. This is necessary so correct sizing of eBill detail media can be delivered to the mobile device. Canonical values are:

- **True**
- **False** (default value)

MobDevResoType

This specifies the size of the resolution for the mobile device, and is needed to deliver correct sizing of eBill detail media to the device. Entry is required if the request indicates a mobile device is being used. If no value is specified, the default value will be used. Valid canonical values are:

- **1** - small resolution (under 1280 pixels)
- **2** - medium resolution (1280x768 to 1440x900 pixels) (default value)
- **3** - large resolution (1600x900 to 2732x2048 pixels)
- **4** - extra large resolution (3000x2000 to 5120x2880 pixels)

NOTE: The largest current resolutions per device are:

- 2560x1440 – largest current phone resolution
- 2732x2048 – largest current tablet resolution
- 5120x2880 – largest current desktop resolution

Orientation

This specifies the desired orientation of the eBill detail media when displayed on the mobile device. Entry is required if the request indicates a mobile device is being used. If no value is specified, the default value will be used. Valid canonical values are:

- **Landscape**
- **Portrait** (default value)
 - **RvrLandscape** (*not supported by iPay Solutions at this time*)
 - **RvrPortrait** (*not supported by iPay Solutions at this time*)

Response

The service provider (iPay Solutions) 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:

ElecBillId

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

NOTE: Only the current (i.e., 'Coming 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.

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.

WebPgURL (Ver 2)

This specifies the URL to be used to access/view the full electronic billing statement for the selected eBill. This information is available ONLY for those eBillers that are enabled for full eBill detail (where Payee’s <ElecBilPayeeType> = ‘Enroll’ and <ElecBilPayeeCatType> = ‘Det’).

NOTES:

- 1) For this version of the WebPgURL element, a JSON web token (‘JWT’) is returned as an embedded part of the URL string in order to provide added security around the transmission of the URL. The JWT is valid only for a specified period of time (currently 10 minutes), and will ‘time out’ after this time span expires. The JWT timer begins at the instant the JWT is created (essentially, when the *BillPayElecBilSchedInq* response is generated by the Service Provider).

Therefore, it is possible that a request to view eBill detail via this URL will time out if too much time passes between the initial *BillPayElecBilSchedInq* response from the Service Provider (iPay Solutions) and the end-user's use of the URL to view the full eBill statement.

It is suggested that, in order to maximize the available time period for the JWT, the initial *BillPayElecBilSchedInq* request to obtain eBill detail information be sent only after the end-user has explicitly requested to view the full eBill statement.

The receipt of the *BillPayElecBilSchedInq* response can then be used to determine approximately when the JWT will expire, after which a new *BillPayElecBilSchedInq* request would be required in order to trigger the creation of a new JWT and restart the 'time-clock'.

- 2) Limitations on some web browsers may result in an inability to read the entire URL string (thereby truncating the JWT/token value). To ensure the entire JWT is transmitted correctly in the URL request, iPay recommends that the Service Consumer parse the token (JWT) within the query string from the URL and place it in the URL's HTTP request header in a name/value pair with the header field name of 'Token'.

WebPgURLNoToken (Ver 3)

This version of the WebPgURL element specifies the URL to be used to access/view the full electronic billing statement for the selected eBill, and does NOT include an embedded JSON web token. This version can be used as an alternate option to the <WebPgURL> element above, and does not require the Service Consumer to parse the token (JWT) from the URL string (token is sent separately, in the <WebPgToken> element, below).

WebPgToken (Ver 3)

This specifies the JSON web token ('JWT'), which is used to provide added security around the transmission of the WebPgURL. This token is valid only for a specified period of time, and will 'time out' after this time span expires.

TokenExpTimeDt (Ver 3)

This specifies the expiration time (and date) for the WebPgToken.

NOTES:

- 1) The above (Ver 3) information is available ONLY for those eBillers that are enabled for full eBill detail (where Payee's <ElecBilPayeeType> = 'Enroll' and <ElecBilPayeeCatType> = 'Det').
- 2) The JWT timer begins at the instant the JWT is created (essentially, when the *BillPayElecBilSchedInq* response is generated by the Service Provider).

Therefore, it is suggested that, in order to maximize the available time period for the JWT, the initial *BillPayElecBilSchedInq* request to obtain eBill detail information be sent only after the end-user has explicitly requested to view the full eBill statement.

If the JWT expires, a new *BillPayElecBilSchedInq* request is required in order to trigger the creation of a new JWT and reset the TokenExpTimeDt.

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>, <eBillId> and Activity Intent Key <ActIntenKey> are required on the Mod request.

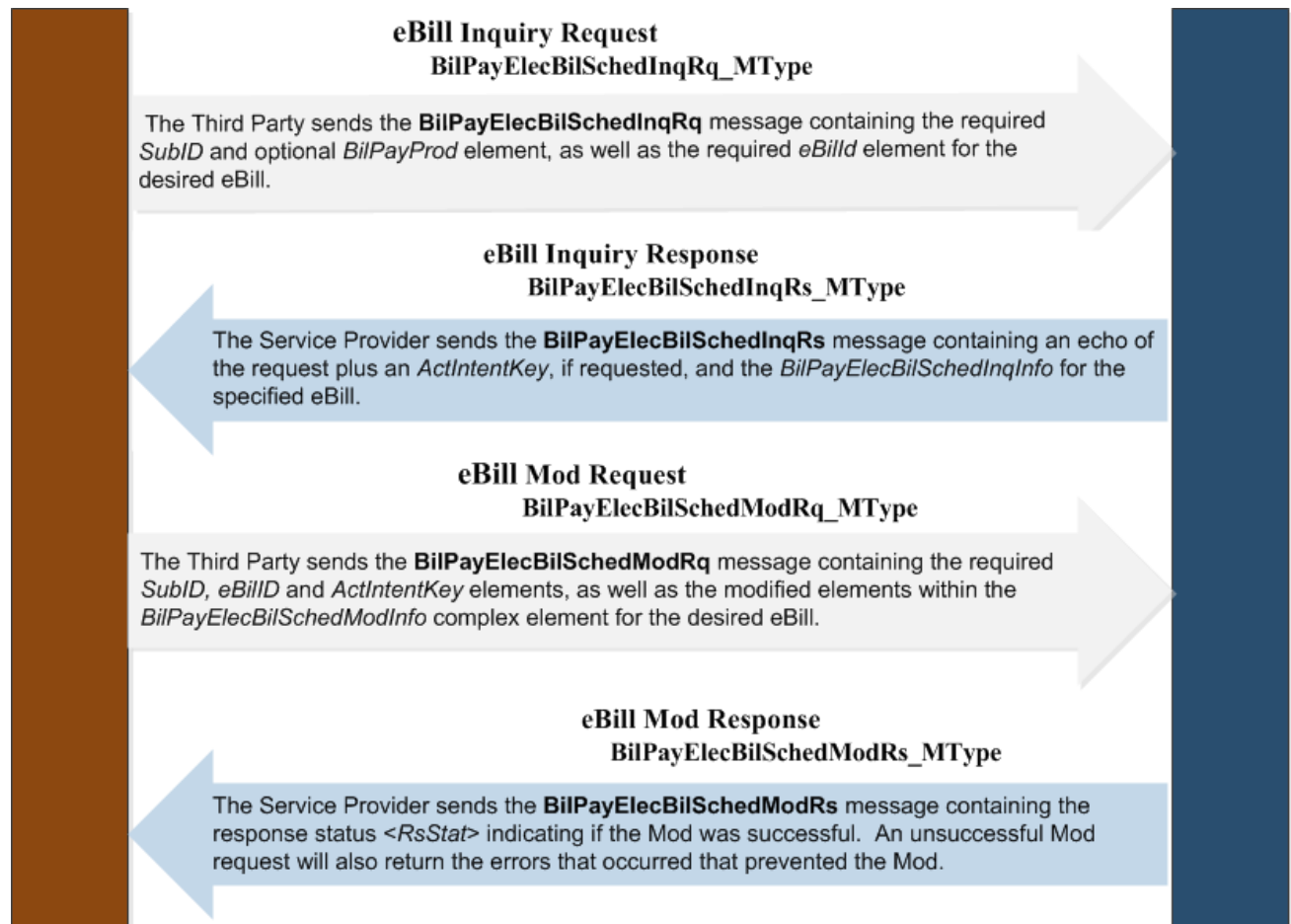
The ability to 'file' an eBill is currently the only update (modify) process available for an eBill within the Bill Pay Services API.

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.



Request

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

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

BilPayProd

This represents the type of iPay Solutions 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 Solutions) identifier for the Subscriber.

ElecBillId

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

ElecBilSchedPmtCmnt

This optional element represents a comment entered by the Subscriber that will be stored with a filed eBill.

eBill Mod Behaviors

- iPaySolutions 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 *BillPayElecBilSchedPmtModRs* **response** message to the service consumer.

The element(s) contained within the *BillPayElecBilSchedPmtModRs* 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
	Pay by Card	PaybyCard	
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
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 Sub users	AddSub	Sub users
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
	Subscriber Mod with edit Sub user (profile/contact info)	MgmtSubInfo	Sub users (requesting user must be actual Sub user)
	Subscriber Mod with Add/Edit/Delete Sub user	MgmtSubInfo	Sub users (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	

Appendix B: Subscriber's Associated User – Permission/Caps specifications example

Subscriber's Associated User Information Array

```
<SubAssocUserName>
:
<PermissionsArray>
  <Permission>
    <PermissionCode>CanManagePayees
    <PermissionValue>>true
  <Permission>
    <PermissionCode>CanManageTransferAccounts
    <PermissionValue>>true
  <Permission>
    <PermissionCode>CanManagePayFromAccounts
    <PermissionValue>>true
  <Permission>
    <PermissionCode>CanScheduleBillPayments
    <PermissionValue>>true
  <Permission>
    <PermissionCode>ScheduleBillPaymentExcludedPayeeld
    <PermissionValue>123
  <Permission>
    <PermissionCode>ScheduleBillPaymentExcludedPayeeld
    <PermissionValue>456
  <Permission>
    <PermissionCode>CanScheduleP2PPayment
    <PermissionValue>true
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    <PermissionCode>ScheduleP2PPaymentExcludedPayeeld
    <PermissionValue>123
  <Permission>
    <PermissionCode>ScheduleP2PPaymentExcludedPayeeld
    <PermissionValue>456
  <Permission>
    <PermissionCode>ScheduleP2PPaymentExcludedPayeeld
    <PermissionValue>789
  <Permission>
    <PermissionCode>CanDesignatePayFromAccounts
    <PermissionValue>true
  <Permission>
    <PermissionCode>ExcludedPayFromAccountldThatTheSubUserCannotDesignate
    <PermissionValue>111
  <Permission>
    <PermissionCode>ExcludedPayFromAccountldThatTheSubUserCannotDesignate
    <PermissionValue>222
  <Permission>
    <PermissionCode>CanEstablishPaymentCaps
    <PremissionValue>true

  <Permission>
    <PermissionCode>CanViewPaymentHistory
    <PermissionValue> false
```

```

<Permission>
  <PermissionCode>CanTransfer
  <PermissionValue>>true
<Permission>
  <PermissionCode>TransferExcludedPayeeld
  <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
    <Payeeld><Null>
    <CapAmount>$5,000
  <Cap>
    <CapFor>PayeeSpecificPaymentCap
    <Payeeld>321
    <CapAmount>$1,000
  <Cap>
    <CapFor>PayeeSpecificPaymentCap
    <Payeeld>654
    <CapAmount>$2,000
  <Cap>
    <CapFor>PayeeSpecificPaymentCap
    <Payeeld>987
    <CapAmount>$3,000
  <Cap>
    <CapFor>DefaultTransferCap
    <Payeeld><Null>
    <CapAmount>$4,000

```

```
<Cap>  
  <CapFor>PayeeSpecificTransferCap  
  <Payeeld>3375  
  <CapAmount>$1,500  
</CapsArray>
```

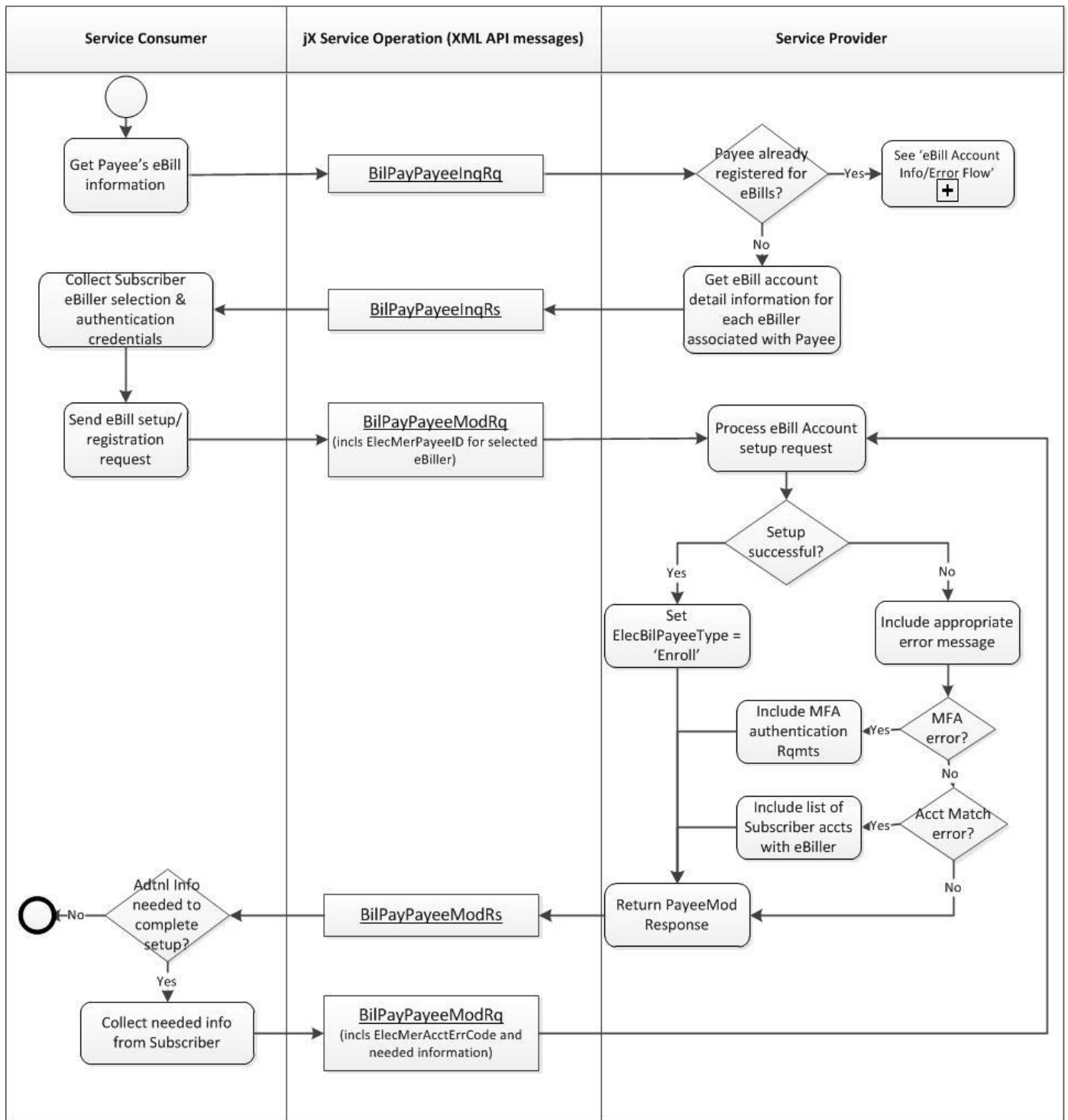
Appendix C: Payment Statuses and Definitions

The following table includes the bill payment status ('PmtStat') values used in iPay Solutions' Bill Pay Services, as well as the canonical value and a definition for each status.

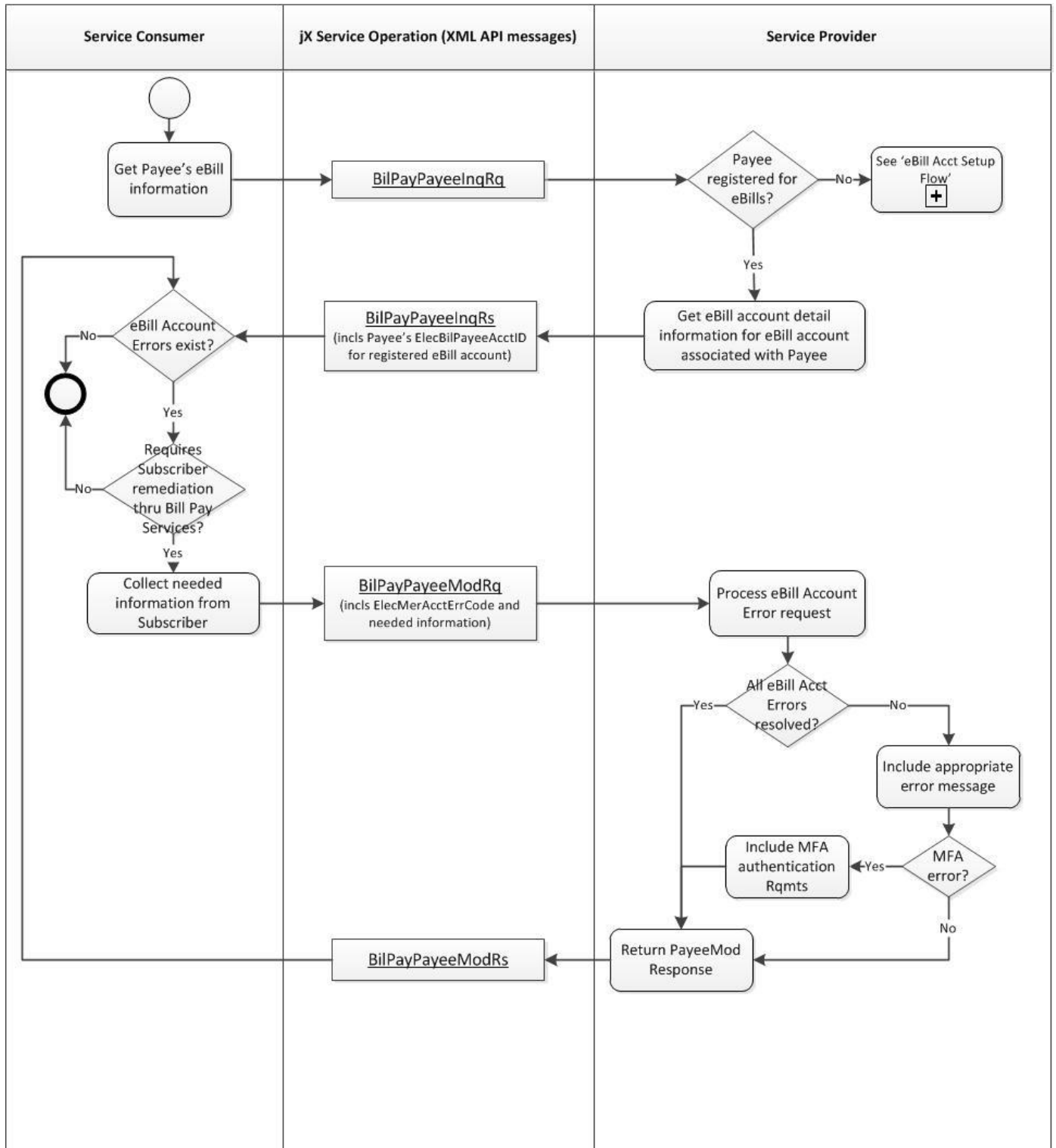
Payment Status	Canonical Value	Definition
Scheduled	Sched	A payment or Transfer that has been submitted by the subscriber, but has not yet been processed.
Pending	Pend	A payment or Transfer that has been submitted by the subscriber, but will not process until requirements are met to move the transaction into scheduled status. <i>Example:</i> 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. <i>This payment/Transfer will be reflected in Pending Payments until it is skipped.</i>
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 Solutions but was cancelled by the FI before the subscriber's funding account was debited. <i>Example:</i> the FI cancels a payment because the subscriber does not have sufficient funds for the payment.
Refunded	Rfd	A returned payment that has been refunded to the subscriber.
Resubmitted	ReSbm	A returned payment that has been 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. <i>This status will be reflected as Skipped in Transaction History after the processing date for the instance has passed.</i>
Payment Approval Required	PmtApprvReq	A payment or Transfer that has been scheduled but requires a user's approval before being submitted for processing. <i>This status only applies to payments/transfers made by Business subscribers or sub users.</i>
Payment Approved	PmtApprv	A payment or transfer that has received the required user approval to be processed. <i>This status only applies to payments/transfers made by Business subscribers or sub users.</i>

Appendix D: eBill Account Setup and Error Resolution Flows

eBill Account Setup Flow



eBill Account Info/Error Resolution Flow



Appendix E: eBill Account Errors – Subscriber remediation required

The following table includes 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.
E6570	OTA Failure – Additional eBill account authentication information required. Request must be resubmitted with valid security authentication response.
E6571	eBill Account is currently in 'Pending' status and updates can not be applied. Refer to Payee Inquiry response for additional information.
E6572	eBill Account is currently in 'Issue' status. eBill Account Error(s) must be resolved before updates can be applied. Refer to Payee Inquiry response for additional information about 'Issue' detail(s).

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 has its own Merchant Account Number. See also 'Payee'
Activation [Payee]	The process where a Subscriber enters an activation code (provided by iPay Solutions) 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 Solutions' 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

Term	Definition
	their financial exposure on electronic payments that settle on the same day as 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.
Funding Account	The Subscriber's checking or savings account(s) used to fund payments.
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 Solutions 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 Solutions' 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 FIs 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 FI within a holding company, the institution routing identification is the specific FI 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.
P2P Payee	A person-to-person ('P2P') Payee. At iPay Solutions, this is an 'Individual' payee who, as part of their initial setup process, receives an email or text with a link that allows them to securely and confidentially provide their financial deposit information for payment.
Pay From Account	See <i>Funding Account</i> .
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.

Term	Definition
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 Solutions' online or service-based bill payment solutions, such as Bill Pay Services, Consumer (includes Classic, Plus, etc.), Business, PayCenter, etc.
[iPay] Service	Any of a defined set of features that is available for a specific FI or for an iPay Solutions 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 Solutions).
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 a person-to-person ('P2P') Payee. A keyword is simply a single word, specified by Subscriber, known only to the subscriber and the designated P2P payee, and is required in order to authenticate the P2P recipient prior to requesting deposit account information. Prior to setting up a new P2P payee, subscriber must share the Keyword with the P2P Payee (i.e., recipient). This exchange of information occurs outside of the Bill Pay application.
'StandAlone' Bill Pay Services	Bill Pay Services API services that are not utilized in conjunction with a corresponding iPay Solutions-hosted online Bill Pay website. Bill Pay Services API services are considered 'StandAlone' if the FI is utilizing iPay Solutions' Bill Pay processes only via the API services, and has not also purchased Bill Pay access via any of iPay Solutions' 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 Deactivation	The process of inactivating an [approved], active Subscriber Bill Pay account so that it is unavailable for bill payment activities. The account remains in an 'approved' status, but has been inactivated so that future bill payment activities cannot be completed. A deactivated account <u>may</u> be eligible for reactivation. However, a subscriber account that has been deactivated and is <u>not</u> eligible for reactivation has the effect of permanent prohibition from bill payment activities (i.e., as if the account has been closed or deleted).

Term	Definition
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 <i>sub user</i> . Any authorized <i>user</i> of a bill pay account that allows multiple users, including the Primary Account Holder. The sub user can be authorized by the Primary Account Holder or by another sub user authorized to add sub users to the bill pay account.
Subscriber's Associated User Identifier	Any of the accepted identifiers that will be used to uniquely identify the subscriber's associated user for each Service request. (e.g., login ID, token/GUID, Partner ID, etc.)
Subscriber Reactivation	The process of reactivating an [approved], <u>inactive</u> Subscriber Bill Pay account so that it once again becomes available for bill payment activities. The reactivation process allows a Subscriber to 'restart' their account without having to re-enroll. Therefore, a re-activated account contains all original identifier values, such as original LoginID, SubscriberID, etc. Not all deactivated accounts are eligible for reactivation.
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 FI.
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 sub user on behalf of which bill payment services are being requested.

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There are no sources in the current document.

Index

ActIntent, 77, 78, 122, 123, 171, 172, 221, 222
ActIntentKey, 22, 79, 91, 124, 139, 140, 173, 184, 185, 223, 227
AddName, 5, 29, 61, 75, 85, 97
AddNameStat, 61, 85
Addr, 57, 73, 74, 81, 93, 103
AlwAddPayFromAcct, 46
AlwCardFundedType, 124
AlwSecdPerson, 46
AlwSubAssocUsrMgmtOpt, 50
AlwSubAssocUsrMgmtOptInfoArray, 49
AlwSubType, 29, 47
AuthenAnswDesc, 136, 147, 148, 152
AuthenQuesArray, 136, 147, 150, 151
AuthenQuesDesc, 136, 148, 151, 152
Authentication, 16
AuthenUsrCred, 17
Authorization, 16
Automatic eBill Payment Schedule Options, 133, 145
BakChkImg, 213
BakChkImgLength, 213
BilPayeeElecPmtInfo, 180
BilPayElecBilSchedInqInfo, 223
BilPayElecBilSchedModInfo, 227
BilPayElecBilSchedSrchArray, 219
BilPayFeturlInfoArray, 48
BilPayPayeeInfo, 29, 31, 107, 125, 141
BilPayPayeeSrchArray, 115
BilPayPmtHistSrchArray, 199
BilPayPmtInfo, 28, 205
BilPayProd, 43, 52, 54, 70, 78, 91, 107, 113, 123, 140, 154, 165, 172, 185, 195, 197, 204, 218, 222, 227
BilPayProdType, 43, 45
BilPayProdTypeInfoArray, 5, 6, 7, 45
BilPaySchedPmtInfo, 154, 173, 185
BilPaySchedPmtSrchArray, 167
BilPaySubInfo, 4, 5, 26, 54, 55, 79, 91
BilPaySubSrchArray, 72
BilPaySvcFeeArray, 131
BilPaySvcFeeInfoRec, 131, 175, 212
BirthDt, 9, 32, 56, 73, 80, 92
Business Service Operations, 24
Business Service Operations – General Behaviors, 37
Business Service Operations – Updates, 26
CanAddPayFromOwnInfo, 47
CanocValDetail, 41
CanocValInfo, 41
CanocValInfoArray, 41

CanocValText, 41
 Canonicals, 18
CanPayFromSavAcct, 46
CanRush, 116
CanSetStartChkNum, 46
CapAmt, 65, 89, 102
CapAssocPayeeld, 65, 89, 102
CapCode, 40, 42, 64, 89, 101
CardFundedPayeeInfo, 138
CardPayFilter, 113, 115, 198
 Channel Inquiry, 24, 43
ChkFundModel, 44
ChkImgFormat, 213
ChkImgStorMos, 44
City, 57, 60, 69, 73, 74, 81, 84, 93, 97, 109, 120, 129, 130, 143, 156, 170, 175, 178, 187, 202, 207, 209
ClosedEnums, 18
ComNam, 53, 81
ComName, 57, 60, 71, 73, 74, 80, 83, 93, 96, 120, 129, 169, 177, 201, 209
ConEndTime, 58, 63, 75, 81, 82, 87, 94, 100
ConsmOwnSubUsrPer, 47
ConStartTime, 58, 63, 75, 81, 82, 87, 94, 100
ConsumerName, 17
ConsumerProd, 17
CurBal, 181, 214
CurrBal, 220, 224
 Cursor, 10, 21
 Deprecation Policy, 23
DIt, 79, 91, 117, 123, 124, 139, 140, 172, 184, 185, 192, 222, 227
DItRecur, 185, 192
DlyElecRiskLmt, 46
DualSignOnReq, 46
 eBill Inquiry, 25, 221
 eBill Mod, 226
 eBill Mod Behaviors, 228
 eBill Modification, 25
 eBill Search, 25, 217
ElecBilAcctErrExist, 118, 127
ElecBilId, 219, 221, 222, 223, 227
ElecBilPayeeAcctId, 132, 144, 149, 150, 152, 218, 219, 223
ElecBilPayeeCatType, 117, 126
ElecBilPayeeName, 132, 219, 223
ElecBilPayeeType, 117, 125, 132, 133, 144
ElecBilPmtAmt, 117, 126, 134, 146, 150
ElecBilPmtAmtType, 117, 126, 133, 134, 145, 146, 150
ElecBilPmtAuto, 181, 214, 224
ElecBilPmtInstrType, 134, 146, 150
ElecBilPmtMthd, 224, 227
ElecBilPmtRuleAlgSymb, 133, 134, 145, 146, 150
ElecBilStat, 217, 218, 219, 223, 227

ElecMerAcctAliasName, 152
ElecMerAcctErrCode, 136, 140, 149, 150, 152
ElecMerAcctErrDesc, 136
ElecMerAcctErrInfoArray, 126, 136, 140
ElecMerAcctId, 152
ElecMerAcctIdArray, 151, 152
ElecMerAcctStat, 133
ElecMerAcctType, 5, 29, 30, 40, 42, 135, 147, 149
ElecMerAcctTypeDesc, 135
ElecMerAcctTypeInfoArray, 134, 147, 149
ElecMerAutoPmtAlw, 47, 133, 134, 146
ElecMerAutoSuspType, 145, 150
ElecMerBilPmt, 168, 200
ElecMerCredRegEx, 135, 147
ElecMerCredType, 135, 147
ElecMerCredTypeDesc, 135
ElecMerCredValue, 147
ElecMerPayeeCredInfoArray, 135, 147, 149, 150
ElecMerPayeeld, 132, 144, 149
ElecMerPayeeInfoRec, 131, 132, 139, 144
ElecMerPayeeOnly, 113, 114
ElecMerPayeeToS, 132
ElecMerPayeeToSStat, 132, 145, 149, 150
ElecMerPayeeURL, 132
ElecMerPendTerDt, 133
ElecMerSuspExpDt, 133
ElemCanocArray, 41
ElemCanocType, 41
ElemCanocVal, 41
ElemCanocValDesc, 41
ElemName, 38, 39, 41
EmailAddr, 58, 64, 69, 71, 76, 82, 88, 95, 101, 110, 131, 144, 176, 207
EmailArray, 58, 76, 82, 95
EmailType, 58, 64, 76, 82, 88, 95, 101, 110, 131, 144, 176, 207
EndDt, 217, 218
EnrollDt, 72, 79
EstArvDay, 118, 124
ExclNonAct, 113, 114
Fault Behaviors, 15
FeturAct, 49
FeturType, 48
FIAcctId, 108, 127, 142
FIAcctType, 108, 127, 142
FinInstName, 44
FirstAvlEstArvDt, 118, 124
FirstAvlProcDt, 118, 124
FirstName, 53, 57, 60, 61, 62, 71, 73, 74, 75, 80, 83, 85, 86, 93, 96, 97, 99, 120, 129, 169, 178, 201, 209
FIRtId, 108, 127, 142
FrontChklmg, 213

FrontChkImgLength, 213
Funding Accounts, 102
FundVerif, 45
FutPmtActualProcDt, 182
FutPmtAmt, 182
FutPmtChkMemo, 182
FutPmtCmnt, 182
FutPmtId, 182, 185, 186, 187, 192
FutPmtLastMainDt, 182
FutPmtModUsrID, 182
FutPmtOrigProcDt, 182
FutPmtPayFromAcctInfo, 183
FutPmtStat, 182
Handling Time Zones, 22
HidSubAssocUsrConsmCustId, 47
HidSubAssocUsrSubComId, 47
Identification, 17
IncChkImg, 204
InclDIt, 113, 114
IncXtendElemArray, 38, 40, 123, 131, 137, 172, 182, 204
Institution Draft Model, 44
InstRtId, 17
InvoiceAmtNeg, 160, 181, 190, 212
InvoiceAmtPos, 159, 181, 190, 212
InvoiceCat, 159, 181, 190, 212
InvoiceDesc, 159, 181, 190, 212
InvoiceId, 190
InvoiceID, 159, 181, 212
InvoiceInfoArray, 28, 159, 181, 190, 212
InvoiceNum, 159, 181, 190, 212
JHANull' Attribute, 19
jXchangeHdr, 17
LastMainDt, 119
LastMainEndDt, 113, 114
LastMainStartDt, 113, 114
LastName, 53, 57, 60, 61, 63, 72, 73, 74, 75, 81, 84, 85, 86, 93, 96, 97, 99, 120, 129, 170, 178, 202, 209
MaxEmailDlyAmt, 45
MaxEmailPmtAmt, 45
MaxIndvDlyAmt, 46
MaxIndvPmtAmt, 45
MaxLenCharVal, 48
MaxPmtAmt, 45
MaxRec, 10, 21
MiddleName, 53, 57, 60, 61, 62, 71, 73, 74, 75, 81, 84, 85, 86, 93, 96, 97, 99, 120, 129, 169, 178, 202, 209
MinAlphaCharVal, 48
MinLenCharVal, 48
MinLowerCaseVal, 48
MinNumCharVal, 48

MinPmtAmt, 181, 214, 220, 224
MinSpecCharVal, 48
MinUpCaseVal, 48
MktgOptInfoArray, 61, 64, 65, 85, 98, 101, 103
MktgOptType, 61, 64, 85, 88, 98, 101
MktgOptVal, 61, 64, 85, 88, 98, 101
MobBB, 58, 63, 76, 82, 87, 94, 100
MobDevResoType, 222
MobDevType, 222
MobPhoneInfo, 58, 63, 75, 82, 87, 94, 100
MobPrvdCode, 40, 42, 58, 63, 76, 82, 87, 94, 100
MobSendTestText, 58, 63, 76, 82, 87, 94, 100
Modification Behaviors, 22
MoreRec, 21
MthlyElecRiskLmt, 46
Nillable' Attribute, 20
NonProcDt, 45
NonProcDtInfoArray, 45
Nulls, 19
OpenEnums, 19
Orientation, 223
P2PFilter, 164, 166, 196, 198
P2PType, 168, 200
Parallel Error Message Handling, 16
PayDtInstr, 158, 162, 179, 189, 211
Payee Add, 25, 106
Payee Add Behaviors, 111
Payee Inquiry, 25, 122
Payee Mod Behaviors, 148
Payee Modification, 25
Payee Modify, 139
Payee Search, 25, 113
PayeeAddr, 109, 130, 143, 156, 175, 187, 192, 207
PayeeAddrId, 130, 155, 175, 187, 192, 206
PayeeAddrInfo, 155, 175, 187, 206
PayeeAddrInfoArray, 109, 129, 143
PayeeAddrType, 109, 130, 143, 155, 175, 187, 207
PayeeCatName, 108, 113, 114, 116, 125, 141, 175
PayeeClsf, 28, 107, 111, 116, 125, 174, 206
PayeeEmailArray, 110, 131, 144, 176, 207
PayeeEmailSharedSecret, 26, 108, 112, 125
PayeeFIACctInfo, 108, 127, 142
PayeeId, 64, 65, 66, 88, 89, 101, 102, 104, 112, 114, 115, 123, 139, 140, 155, 160, 164, 166, 167, 174, 186, 196, 198, 199, 205, 233
PayeeLastPdAmt, 116, 124
PayeeLastPdDt, 116, 124
PayeeName, 107, 115, 125, 141, 167, 174, 199, 205, 217, 218
PayeeNickname, 107, 116, 125, 141, 167, 174, 199, 205
PayeeP2PType, 108, 111, 112, 127, 142
PayeePhoneArray, 110, 130, 143, 176, 207

PayeePmtMthd, 4, 26, 28, 32, 36, 116, 123, 164, 166, 174, 196, 198, 206
PayeeStat, 117, 124
PayFromAcctDft, 59, 83, 96, 119, 128, 169, 177, 183, 201, 208
PayFromAcctId, 4, 59, 69, 70, 72, 83, 95, 119, 128, 169, 177, 183, 201, 208
PayFromAcctInfo, 59, 82, 95, 119, 120, 128, 142, 168, 200
PayFromAcctInfoArray, 59, 82, 95
PayFromAcctName, 59, 83, 96, 119, 128, 169, 177, 183, 201, 208
PayFromAcctOwnAddr, 60, 74, 84, 96, 120, 129, 170, 178, 202, 209
PayFromAcctOwnName, 60, 74, 83, 96, 120, 129, 169, 177, 201, 209
PayFromAcctStat, 60, 83, 119, 128, 169, 177, 183, 201, 209
PayFromAcctType, 59, 73, 83, 95, 119, 128, 169, 177, 183, 201, 208
PayFromId, 59, 66, 83, 95, 104, 109, 119, 128, 142, 156, 168, 177, 183, 187, 201, 208
PayFromIntsRtId, 59, 73, 83, 96, 119, 128, 169, 177, 183, 201, 209
 Payment Add, 25, 153
 Payment Add Behaviors, 160
 Payment Caps, 104
 Payment History Inquiry, 25, 203
 Payment History Search, 25, 196
PerCode, 40, 41, 42, 64, 88, 101
 Permissions, 104
PersonName, 5, 29, 52, 57, 60, 61, 62, 69, 70, 71, 73, 74, 80, 81, 83, 85, 86, 92, 93, 96, 99, 103,
 120, 129, 169, 177, 201, 209
PerValue, 64, 88, 101
Phone Type, 42
PhoneArray, 57, 75, 81, 93
PhoneExt, 58, 63, 75, 82, 87, 100
PhoneNum, 57, 58, 63, 69, 70, 75, 81, 87, 94, 100, 110, 130, 143, 176, 207
PhoneTime, 58, 63, 75, 81, 87, 100
PhoneType, 5, 29, 30, 40, 58, 63, 75, 81, 87, 94, 100, 110, 130, 143, 176, 207
PmtAmt, 134, 146, 154, 167, 173, 186, 199, 205
PmtAmtDue, 181, 214, 219, 224
PmtApprvReq, 5, 28, 29, 56, 80, 92, 160, 165, 167, 173, 235
PmtChklmgInfo, 213
PmtChkMemo, 155, 173, 186, 205
PmtChkNum, 212
PmtChkStat, 213, 215
PmtChkStatChngDt, 215
PmtChkTrakArray, 216
PmtChkTrakCarr, 215
PmtChkTrakCmnt, 216
PmtChkTrakDt, 216
PmtChkTrakId, 215
PmtChkTrakLoc, 216
PmtChkTrakReclInfo, 216
PmtChkTrakStat, 216
PmtChngBy, 215
PmtCmnt, 154, 173, 186, 205, 224, 228
PmtCrtDt, 173, 204
PmtCutoffTime, 44
PmtDayInfoArray, 158, 179, 189, 211

PmtDayOfMonth, 158, 179, 189, 211
PmtDayOfWeek, 158, 179, 189, 210
PmtDtModel, 45
PmtDueDt, 180, 214, 219, 224
PmtEndDt, 164, 165, 196, 197
PmtEstArvDt, 154, 162, 167, 173, 186, 199, 205
PmtExcDesc, 215
PmtFinalAmt, 159, 180
PmtFreqUnits, 157, 168, 178, 188, 200, 210
PmtHighAmt, 165, 197
PmtId, 167, 171, 172, 184, 185, 194, 195, 203, 204
PmtID, 162, 163, 194, 199
PmtIntentType, 107, 116, 125, 141, 155, 166, 168, 174, 186, 198, 200, 205, 206
PmtLowAmt, 164, 165, 196, 197
PmtMthd, 28, 168, 173, 200, 205
PmtOccur, 158, 179, 189, 211
PmtPayeeInfo, 155, 174, 186, 205
PmtPayFromAcctInfo, 156, 177, 187, 208
PmtProcDt, 154, 162, 167, 173, 186, 199, 205
PmtRushOptInfo, 156, 176, 188, 208
PmtSerExpDt, 158, 179, 189, 211
PmtSerFinite, 158, 180, 189, 211
PmtStartDt, 6, 30, 32, 164, 165, 196, 197
PmtStat, 28, 164, 165, 167, 173, 196, 197, 199, 204, 214, 235
PmtStatChngDt, 215
PmtUseLastBusDay, 158, 179, 189, 211
PostalCode, 57, 60, 69, 71, 74, 81, 84, 93, 97, 109, 120, 129, 130, 143, 156, 170, 175, 178, 187, 202, 207, 209
PswdChgFreq, 56, 80, 81, 92, 93, 103
RecurFilter, 164, 166, 196, 198
RecurPmtInfo, 29, 157, 178, 188, 210
RetroToOrigPmtDt, 28, 159, 180, 190, 211
RsStat, 67, 105, 112, 151, 163, 193, 195, 228
Rstr' Attribute, 20
RushOpt, 121, 137, 156, 162, 176, 188, 208
RushOptArray, 120, 137
RushOptFeeAmt, 121, 137, 176, 208
RushOptSurChg, 121, 137, 176, 208
Scheduled Payment Approval, 25, 194
Scheduled Payment Inquiry, 25, 171
Scheduled Payment Mod, 184
Scheduled Payment Mod Behaviors, 191
Scheduled Payment Modification, 25
Scheduled Payment Search, 25, 164
Search/Inquiry Behaviors, 20
Searches: Record Request/Response Behaviors:, 21
SecdPersonArray, 5, 29, 61, 75, 85, 97
SentRec, 21
Serial Error Message Handling, 16
Service Dictionary Search, 24, 38

SkipPmtOccur, 185, 192
SpecCharRstrArray, 48
SpecCharRstrType, 48
SrchAddr, 69, 70
SrchCity, 69, 70
StartChkNum, 59, 83, 96, 119, 128, 169, 177, 183, 201, 208
StartDt, 217, 218
StartPmtEstArvDt, 157, 178, 188, 210
StartPmtProcDt, 157, 178, 188, 210
StateCode, 57, 60, 73, 74, 81, 84, 93, 97, 109, 120, 129, 130, 143, 156, 170, 175, 178, 187, 202, 207, 209
StmntBal, 117, 126, 133, 134, 145, 146, 180, 214, 219, 224
StmntDt, 180, 214, 219, 224
StorMos, 44
StreetAddr1, 57, 60, 73, 74, 81, 84, 93, 96, 109, 120, 129, 130, 143, 156, 170, 175, 178, 187, 202, 207, 209
StreetAddr2, 57, 60, 73, 74, 81, 84, 93, 97, 109, 120, 129, 130, 143, 156, 170, 175, 178, 187, 202, 207, 209
SubAssocUsrCapInfoArray, 64, 89, 101
SubAssocUsrCmnt, 62, 86, 99
SubAssocUsrComId, 54, 62, 65, 86, 99
SubAssocUsrConsmCustId, 54, 62, 65, 86, 98
SubAssocUsrEmailArray, 64, 88, 100
SubAssocUsrId, 5, 17, 52, 62, 68, 72, 78, 85, 86, 90, 98, 195
SubAssocUsrIdInfoArray, 67
SubAssocUsrInfoArray, 54, 55, 59, 61, 62, 79, 82, 85, 89, 91, 95, 98
SubAssocUsrMktgOptInfoArray, 88
SubAssocUsrName, 62, 86, 99, 232
SubAssocUsrPerInfoArray, 64, 88, 101
SubAssocUsrPhoneArray, 63, 87, 99
SubAssocUsrRole, 62, 86, 98
SubAssocUsrTempPswd, 62, 86, 99
SubCmntToPayee, 155, 173, 182, 186, 205
SubComId, 26, 52, 54, 55, 65, 79, 91
SubConsmCustId, 26, 52, 54, 55, 65, 79, 91
SubId, 51, 52, 55, 67, 69, 70, 72, 77, 78, 90, 91, 106, 107, 114, 122, 123, 139, 140, 153, 154, 165, 171, 172, 184, 185, 194, 195, 197, 203, 204, 218, 221, 222, 226, 227
SubInActRsnType, 56, 80, 92
SubLogInIdRstr, 48
SubMerAcctId, 4, 5, 29, 31, 108, 116, 124, 125, 141, 152, 175, 206
SubMerPayerName, 108, 125, 141, 175, 206
SubModMerAcctId, 124
Subscriber Add, 24, 54
Subscriber Add Behaviors, 65
Subscriber Inquiry, 24, 77
Subscriber Lookup, 4, 17, 24, 26, 51, 55, 77, 78
Subscriber Mod Behaviors, 102
Subscriber Modification, 24
Subscriber Modify, 90
Subscriber Search, 24, 69

Subscriber's Associated User, 103
SubStat, 52, 56, 61, 69, 70, 72, 79, 80, 92
SubType, 49, 55, 69, 70, 72, 79
SubTypeAccessFeturlInfoArray, 49
SvcDictFilterArray, 38, 40
SvcDictInfoArray, 41
SvcDictName, 38, 39
SvcDictType, 38, 39
SvcFeeAmt, 131, 176, 212
SvcFeeDesc, 5, 29, 30, 40, 42, 131, 176, 212
TaxId, 55, 69, 71, 73, 80, 81, 92, 93, 103
TaxIdReq, 46
TempPswd, 29, 30, 31, 33, 55, 80
TokenExpTimeDt, 225
TotRec, 21
WebPgToken, 225
WebPgURL, 138, 224
WebPgURLNoToken, 225
x_CardFundedPayeeArray, 123, 137
x_ElecBilPmtInfo, 203, 204, 214
x_ElecMerPayeeInfo, 123, 131
x_FutPmtInfoArray, 172, 182
x_PmtChkStatHistArray, 203, 204, 215
x_PmtChkTrakInfo, 203, 204, 215
x_PmtStatHistArray, 203, 204, 214
x_SvcPrvdErrArray, 41
XferFilter, 166, 198
XtendElem, 123, 172