RosettaNet and Its Implementation in Sterling B2B Integrator

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Agenda

- **RosettaNet Overview**
  - What is RosettaNet and who uses it?
  - Where to download RosettaNet files
- **Terminology**
  - PIP, RNIF, Action Message, Signal Message
- **How does SI implement RosettaNet?**
  - Trading Partners
  - Business Process
- **Frequently Asked Questions**
- **We won't discuss RosettaNet Attachments (a topic unto itself.)**

Part 1 – Things We Need to Know to Understand RosettaNet

RosettaNet Overview and Terminology

What is RosettaNet?

A standard for sending XML messages using HTTP(S) with MIME headers

- RosettaNet uses DUNS (Dun and Bradstreet) numbers as Identifiers
- RosettaNet messages have a Preamble, Delivery Header (RNIF 2.0), Service Header, and Service Content.

Used by 3 main industries

- Electronic Components
- Information Technology
- Semiconductor Manufacturing

Other industries have their own RosettaNet implementations

- CIDX – Chemical Industry Data Exchange
- PIDX – Petroleum Industry Data Exchange

RosettaNet Terminology - PIP

- PIP – Partner Interface Process
  - The term refers to a <u>process</u>. However…
  - It is often used colloquially to refer to the RosettaNet document itself.
    - "I just sent a PIP to my trading partner."
- PIPs can be Asynchronous or Synchronous.
  - SBI only supports Asynchronous PIPs
  - SBI <u>does not</u> support Synchronous PIPs (for example, PIP2A9)
    - However, we have seen little or no customer demand for Synchronous PIPs.

Sources for RosettaNet Materials

RosettaNet Site
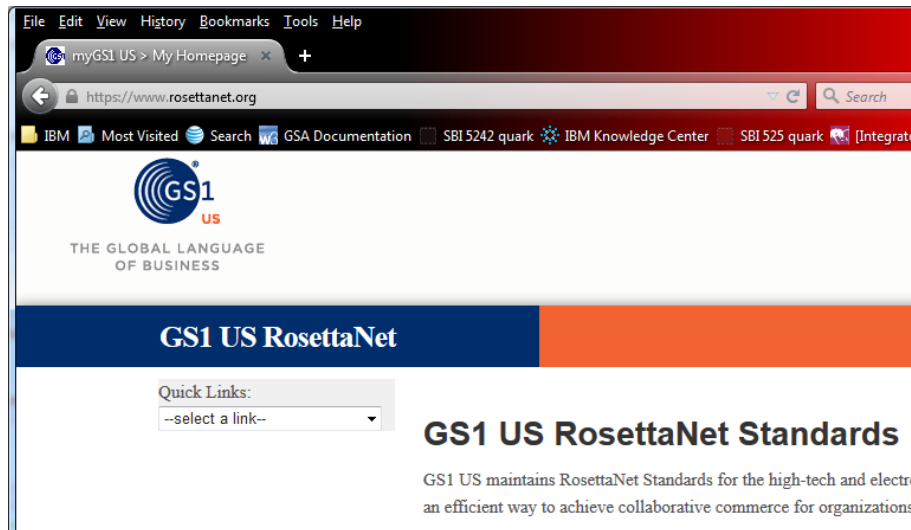
http://www.rosettanet.org is RosettaNet's site for downloading zip files containing DTDs (or schemas) and documents describing the PIP choreography and PIP content. The materials are free, but it's necessary to create a login.

RosettaNet Resources – a word about schemas

- If the PIP uses schemas, there may be **many** of these.
- SBI **does not** have a method for checking in schemas en masse.
- Schemas **must** be checked in individually!

Check In Schemas

Select Schema

Schema filename: [Browse_] RN_TPIRFileType_01_01.xsd
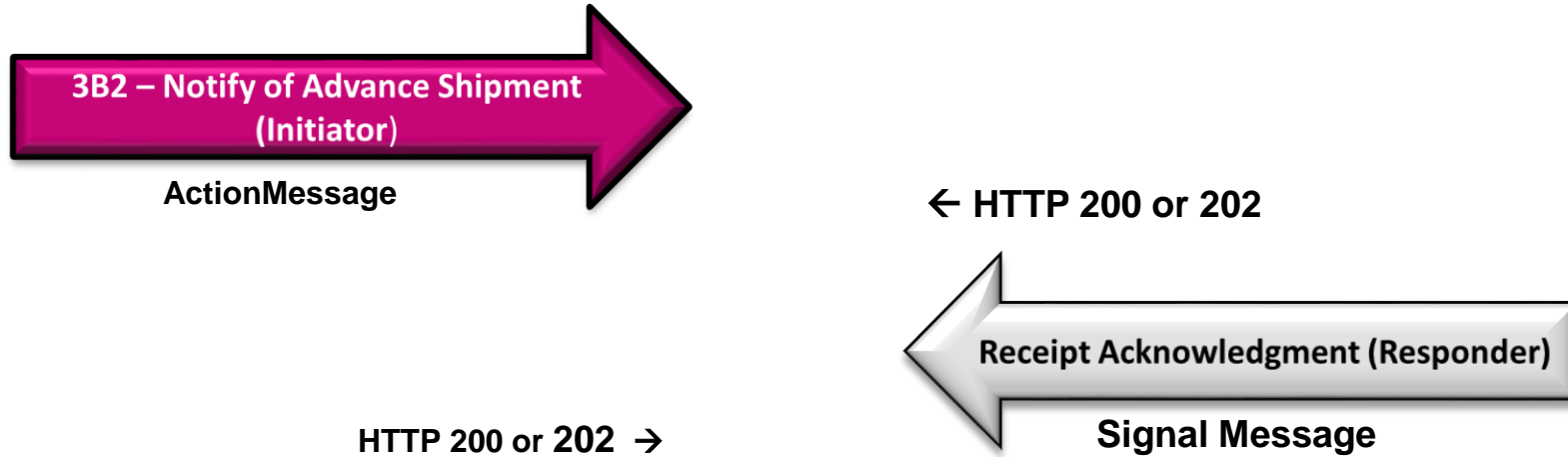
Check-In Comments: rosettanet

RosettaNet Terminology - PIP

- **PIP Naming Conventions**
  - PIPs are divided into 8 **clusters** using the numerals 0 to 7
  - In addition, each PIP has a **segment** designation consisting of an alphabet letter
  - The PIP name also uses a another number.
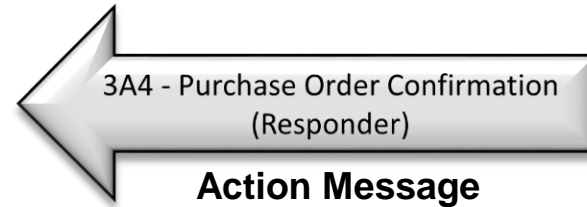 - Examples: PIP3A4 (Purchase Order Request) PIP3B2 (Notify of Advance Shipment)

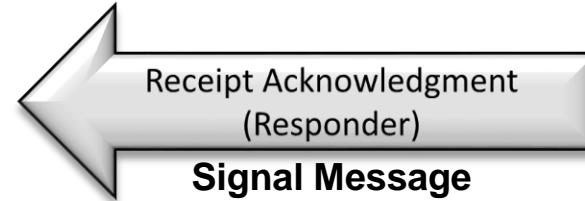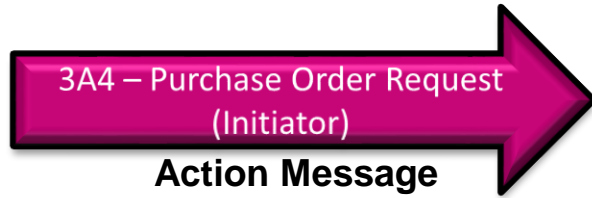| Cluster	Usage		
0	RosettaNet Support	4	Inventory Management
1	Partner Product and Service Review	5	Marketing Information Management
2	Product Information	6	Service and Support
3	Order Management	7	Manufacturing

RosettaNet Terminology – One Action PIPs

3B2 – Notify of Advance Shipment (Initiator)

ActionMessage

← HTTP 200 or 202

Receipt Acknowledgment (Responder)

HTTP 200 or 202 →

Signal Message

Note: If the received PIP document contains errors, the Signal message will be a Receipt Acknowledgment Exception.

RosettaNet Terminology – Two Action PIPs

3A4 – Purchase Order Request
(Initiator)
Action Message

Receipt Acknowledgment
(Responder)
Signal Message

3A4 - Purchase Order Confirmation
(Responder)
Action Message

Receipt Acknowledgment
(Initiator)
Signal Message

IBM Commerce

IBM.

RosettaNet Terminology - RNIF

- RNIF – RosettaNet Implementation Framework Specification
  - Defines how to build, parse, secure, and send RosettaNet messages
- RNIF 1.1
  - Supports Digital Signatures
- RNIF 2.0
  - Supports Digital Signatures
  - Encryption
  - Compression
  - Uses a Delivery Header (this one is an addition to the structure - i.e, not protocol)

PIP Version and RNIF version

- PIP Versions and RNIF Versions are <u>two different things!</u>
- Any PIP Version can be sent using either RNIF Version (with one exception):
  - The only RNIF version-specific PIP is the 0A1 (Notification of Failure)
  - PIP Version refers to the **content** of the PIP Document - the content may vary from version to version (similar to EDI documents)
  - RNIF Version refers to **how** the message is sent.

What does a PIP document look like?

- A PIP in its entirety consists of:
  - Preamble
  - Delivery Header (if using RNIF 2.0)
  - Service Header
  - Service Content *

  *(the actual data – the Purchase Order, Advance Ship Notice, etc.)

What does a PIP document look like? (cont'd)

```
X-RN-Version: RosettaNet/V02.00
X-RN-Response-Type: async
Date: Tue, 13 Dec 2016 13:52:21 -0500
Message-ID: <MOKOsi922522158f97e91dcnode1555123456@foo.ibm.com>
Subject: RNIF20 Message
Content-Type: multipart/related;type="multipart/signed";boundary="_=677470298702423Sterling677470298702423MOKO"

--_=677470298702423Sterling677470298702423MOKO
Content-Type: multipart/signed;protocol="application/pkcs7-signature";micalg=sha256;boundary="_=44158947148603866Sterling44158947148603866MOKO"

--_=44158947148603866Sterling44158947148603866MOKO
Content-Type: multipart/related;type="application/xml";boundary="_=793907957938066Sterling793907957938066MOKO"

--_=793907957938066Sterling793907957938066MOKO
Content-Type: application/xml
Content-ID: <si842523158f97e91dcnode1>
Content-location: RN-Preamble

<?xml version="1.0" encoding="UTF-8"?> <!DOCTYPE Preamble SYSTEM "Preamble_MS_V02_00.dtd" >
<Preamble>
  <standardName>
    <GlobalAdministeringAuthorityCode>RosettaNet</GlobalAdministeringAuthorityCode>
  </standardName>
  <standardVersion>
    <VersionIdentifier>V02.00</VersionIdentifier>
  </standardVersion>
</Preamble>
--_=793907957938066Sterling793907957938066MOKO
Content-Type: application/xml
Content-ID: <si122524158f97e91dcnode1>
Content-location: RN-Delivery-Header
```

Part 2 – Sterling B2B Integrator's RosettaNet Implementation

Creating RosettaNet Trading Partners

RosettaNet Trading Partner Creation uses AS2 Menus

We create RosettaNet Trading Partners using the same menus that we use for AS2.

The difference is that there is **no wizard** – RosettaNet Trading Partners must be set up manually!

Identities

Transports

Contracts

Document Exchanges

Profiles

Packaging Records

Delivery Channels

We set these up for both 'our' company, and for the trading partner.

RosettaNet Trading Partner Setup - Identities

Identities define the DUNS number and the contact information for the RosettaNet partner.

Required entries:

- Name – Usually the company name, the DUNS, or both
- Identifier – MUST be the DUNS number
- DUNS – the Dun and Bradstreet Number
- Address, City, Postal Code, Time Zone, E-mail Address, Phone Number

RosettaNet Trading Partner Setup - Identities

Example:

Identities

Gargantua_Electronics: Information

Name:	Gargantua_Electronics
Reference URL:	
DUNS:	555123456
Identifier:	555123456
Address Line 1:	7046 South Appoline
Address Line 2:	
City:	New York
State or Province:	NY
Zip or Postal Code:	10019
Email Address:	sue_smith@gargantua.com
Telephone Number:	734-555-1817

RosettaNet Trading Partner Setup - Transports

- Transports define how to send a RosettaNet message via HTTP to the identity tied to the transport.
- Required entries:
  - Name: Use company name or DUNS # as part of this name
  - Identity: Identity of RosettaNet trading partner
  - Receiving Protocol: HTTP
  - Sending Protocol: HTTP
  - End Point IP and End Point Port: Leave blank
  - End point: Destination URL for this trading partner. Note: If SSL is being used, the following URL format may be required: http://<host>:<port>/<restofurl>
  - End point type: allPurpose

RosettaNet Trading Partner Setup - Transports

Transports

Gargantua_Electronics_Transport: Information

Name: Gargantua_Electronics_Transport

Identity: Gargantua_Electronics

Gargantua_Electronics_Transport: Communications

Receiving Protocol: HTTP

Sending Protocol: HTTP

End Point IP:

End Point Port:

RosettaNet Trading Partner Setup – Transports (continued)

▪ Note that the default RosettaNet port is <base port + 35>

Transports

Gargantua_Electronics_Transport: Communications: End Point Settings

End Point: http:// _____ :28735/rosett

End Point Type: All Purpose ▾

RosettaNet Trading Partner Setup – Transports (continued)

Transports

Gargantua_Electronics_Transport: Communications: Protocol Settings

Response Timeout (sec): 600

Firewall Proxy:

Firewall Connect Count: 0

Socket Timeout (sec): 600

RosettaNet Trading Partner Setup – Transports (continued)

Transports

Gargantua_Electronics_Transport: Communications: Security

SMIME Encryption User Certificate:
> Configure Certificates
> None Selected

SMIME Decryption Certificate (System Store):
> Configure Certificates
> None Selected

SSL:

SSL: `Must ▾`

Key Certificate Passphrase: `••••••`

Cipher Strength: `STRONG ▾`

Key Certificate (System Store):
> Configure Certificates
> Gargantua_Electronics_28700

CA Certificates (Certificate Groups):
> Configure Certificates
> None Selected

Note that the SMIME Encryption User Certificate is used to encrypt messages sent to this Transport, so if this transport is for 'our' company, this field is left blank.

Transports (continued) – Protocol Mode

Transports

Gargantua_Electronics_Transport: Communications: Protocol Mode

Protocol Mode: PUT ▾

Document:

Back   Next   Cancel   Save

The Protocol Mode screen can be left as is.

Transports (continued) – Transport Account

Transports

Gargantua_Electronics_Transport: Transport Account

User ID: [   ]

Password [   ]

Confirm Password [   ]

Back   Next   Cancel   Save

The Transport Account
screen can also be left
as is.

Transports (continued)

Review the settings and click Finish.

RosettaNet Trading Partner Setup – Document Exchanges

- Define whether digital signatures will be used with the identity tied to the document exchange. Required entries:

- Name: Use the company name or DUNS # as part of this name

- Identity: Identity of the RosettaNet trading partner

- Number of Retries: 3

- Retry Interval: 3000

- Persist Duration: 10000

- Protocol: If a digital signature will be used to exchange RosettaNet messages, then set to SMIME. Otherwise, set to NONE.

RosettaNet Trading Partner Setup – Document Exchanges

Document Exchanges (continued)

- If using digital signatures AND this document exchange is for 'our' company:

  - Signing algorithm: This is the algorithm used to sign outgoing RosettaNet messages.

  - **Signing key certificate: This is the certificate used to sign the outgoing RosettaNet message. It is a System cert created for the company running SBI and it contains a private key. Choose the appropriate certificate from the drop down list.**

  - Signing user certificate: Not used - this Document Exchange is being used to sign outbound RosettaNet messages. It is not being used to verify incoming digital signatures.

Document Exchanges (continued)

- Example:

Document Exchange

Gargantual_Doc_Exchange_for_Signed_Documents: Enveloping Properties: Security

Encryption Algorithm:	Triple DES 168 CBC with PKCS5 padding ▾
Signing Algorithm:	SHA1 ▾
Signing Key Certificate:	Configure Certificates Gargantua_Electronics_pseudo_CA_Cert_28700
Signing User Certificate:	Configure Certificates None Selected

*Note: Signing Algorithm SHA384 and SHA512 only apply to AS2 and AS3

Document Exchanges (continued)

- If using digital signatures AND this document exchange is for the trading partner:

  - Encryption Algorithm: Not used.

  - Signing Algorithm: Not used.

  - Signing key certificate: Not used. This certificate is used to generate digital signatures, but this Document Exchange is being used to verify digital signatures.

  - **Signing user certificate: The Trusted certificate imported from the trading partner. This certificate contains the public key used to verify incoming digital signatures**.

Document Exchanges (continued)

- Example:

Document Exchange

Sterling_Doc_Exchange: Enveloping Properties: Security

Encryption Algorithm:	Triple DES 168 CBC with PKCS5 padding ▾
Signing Algorithm:	SHA256 ▾
Signing Key Certificate:	Configure Certificates None Selected
Signing User Certificate:	Configure Certificates Sterling_pseudo_CA_Cert

*Note: Signing Algorithm SHA384 and SHA512 only apply to AS2 and AS3

RosettaNet Trading Partner Setup – Delivery Channels

- Ties a **Document Exchange**, a **Transport**, and an **Identity** together.
- Name: Varies – use company name or DUNS # as part of the name
- Identity: Identity for RosettaNet trading partner
- Transport: the Transport the chosen Identity
- Document Exchange: the Document Exchange for the chosen Identity
- Receipt timeout: 86400
- Delivery mode: Asynchronous HTTP

Delivery Channels

Garantua_Electronics_Del_Channel: Information

Name: Garantua_Electronics_Del_Channel
Identity: Gargantua_Electronics

Transport: Gargantua_Electronics_Transport
Document Exchange: Gargantual_Doc_Exchange_for_Signed_Documents

Delivery Channels (continued)

- Example:

RosettaNet Trading Partner Setup – Packaging Records

- Define how to build/package an outbound RosettaNet message
- Only one is required – both parties may share the same record
- Required entries:
  - Name: Will vary, but perhaps use 'RosettaNet' in the name.
  - Message parsable: No

Packaging

RN_Signed_Detached_Encrypted: Information

Name: RN_Signed_Detached_Encrypted

Message Parsable: ○ Yes ● No

Payload Type:	Signed Detached Encrypted ▼
MIME Type:	Application ▼
MIME Sub Type:	XML ▼
Compress Data:	none ▼

Packaging Records (continued)

- Example:

RosettaNet Trading Partner Setup - Profiles

- Tie a Delivery Channel to a Packaging Record. Also define top level RosettaNet settings.

- Required entries:

  - Name: Use the company name or DUNS # as part of this name

  - Identity: Identity of the RosettaNet trading partner

  - Profile Type: RN

  - Delivery Channel: Delivery channel for the RosettaNet trading partner Identity chosen above

  - Packaging: The RosettaNet Packaging Record set up above

  - Provider: rosettanet

Profiles (continued)

- Example:

Profiles

Gargantua_Electronics_RN_Profile: Information

Name: Gargantua_Electronics_RN_Profile
Identity: Gargantua_Electronics
Profile Id: -2f8dcb42:1451980e0b4:-7af3

Profile Type: RN
GLN:
Delivery Channel: Garantua_Electronics_Del_Channel
Packaging: RN_Signed_Detached_Encrypted
Provider: rosettanet

Profiles (continued)

- Example:

Profiles

Gargantua_Electronics_RN_Profile: Profile Definition: RNData

Role:	Initiator ▼
RNIF Version:	ALL ▼
Location Code:	New York
Partner Location Code:	
Classification Code:	End User
Supply Chain Code:	Electronic Components
Contact:	Sue Smith

Note: The Role field is mostly for informational purposes – there is no need to set up a separate Profile if the company is in the Initiator role for some PIPs and in the Responder role for others.

In addition, if setting up the Profile for 'our' company, we can leave the Partner Location Code blank, avoiding the need to configure a Profile for 'our' company for each trading partner with whom we do business.

Profiles (continued)

- The remaining Profile Fields can be left blank:

Profiles

Gargantua_Electronics_RN_Profile: Business Processes

Send:	[Not Applicable]
Respond:	[Not Applicable]
Request-Response:	[Not Applicable]

RosettaNet Trading Partner Setups - Contracts

Gargantua_to_Sterling_PIP3A4_Initiator

Contract Settings

Start Date	12/18/2015
End Date	12/25/2056
Status	SIGNED
Contract Id	3394c72e:151a7462607:-313c
> Contract Definition	
Production Profile	[Gargantua_Electronics]-[Gargantua_Electronics_RN_Profile]
Consumption Profile	[Sterling]-[Sterling_RN_Profile]
Business Process	
> Extensions	
Extensions Type Identifier	ROSETTANET 555123456
Partner Identifier	123456789
PIP Code	3A4
PIP Version	V02.00
RNIF Version	V02.00
PIP Role	Buyer
Global Usage Code	Test

Content Transfer Encoding	None
Encode binary message parts only	No
Include MIME version header	No
Description	Request Purchase Order
From Role	Buyer
To Role	Seller
From Service	Buyer Service
To Service	Seller Service
Sender Business Process	PIP3A4_Buyer_Private
Responder Business Process	None provided
Response Mode	Asynch
Non-Repudiation Required	Yes
Time to Acknowledge	120
Time to Acknowledge Acceptance	N/A
Time to Perform	1440
Retry Count	3
Is Authorization Required	No
Non-Repudiation of Origin and Content	Yes

Content Transfer Encoding: None

- ☐ Encode binary message
- ☐ Include MIME version hea

None
Base64
Quoted-Printable

RosettaNet Trading Partner Setups – Contracts (continued)

Sterling_to_Gargantua_PIP3A4_Responder

Contract Settings	
Start Date	12/24/2015
End Date	12/31/2051
Status	SIGNED
Contract Id	3394c72e:151a7462607:6887
▶ Contract Definition	
Production Profile	[Sterling]-[Sterling_RN_Profile]
Consumption Profile	[Gargantua_Electronics]-[Gargantua_Electronics_RN_Profile]
Business Process	
▶ Extensions	
Extensions Type Identifier	ROSETTANET 123456789
Partner Identifier	555123456
PIP Code	3A4
PIP Version	V02.00
RNIF Version	V02.00
PIP Role	Seller
Global Usage Code	Test

Content Transfer Encoding	None
Encode binary message parts only	No
Include MIME version header	No
Description	Request Purchase Order
From Role	Buyer
To Role	Seller
From Service	Buyer Service
To Service	Seller Service
Sender Business Process	PIP3A4_Buyer_Private
Responder Business Process	None provided
Response Mode	Asynch
Non-Repudiation Required	Yes
Time to Acknowledge	120
Time to Acknowledge Acceptance	N/A
Time to Perform	1440
Retry Count	3
Is Authorization Required	No
Non-Repudiation of Origin and Content	Yes

Part 3 – Sterling B2B Integrator's RosettaNet Implementation

RosettaNet Business Processes

RosettaNet Business Processes

- <SI Root>/install/data/rosettanet/templates contains templates for business processes:

  - Launch_PIP_Private_Template.bpml

  - OneActionPIP_Initiator_Private_Template.bpml

  - OneActionPIP_Responder_Private_Template.bpml

  - TwoActionPIP_Initiator_Private_Template.bpml

  - TwoActionPIP_Responder_Private_Template.bpml

- All require customization to be used with a specific PIP and PIP version.

RosettaNet Business Processes

- What do we mean by customization?

```
<process name = "PIP3A4_Seller_Private">
    <sequence>
        <consume name='GetInitiatingDocument'>
            <input message='InitiatingDocument'>
                <assign to='.' from='RequestMessage'/>
                <assign to='.' from='Caller'/>
            </input>
        </consume>
        <!-- Pick up response action message from file system -->
        <operation name="ReadResponseActionMessage">
            <participant name="RN_FS"/>
            <output message="FileSystemInputMessage">
                <assign to="filter">ResponseActionMessage.xml</assign>
                <assign to="Action">FS_COLLECT</assign>
                <assign to="fileModTimeThreshold">0</assign>
                <assign to="." from="*"></assign>
            </output>
            <input message="inmsg">
                <assign to="ResponseActionMessage" from="PrimaryDocument"></assign>
            </input>
        </operation>
        <!-- Send response action message -->
        <produce name="SendPrivateResponseMessage">
            <participant name="Caller"/>
            <output message="PrivateResponseMessage">
                <assign to="." from="ResponseActionMessage" />
            </output>
        </produce>
        <consume name="GetFinalPIPStatusMessage">
            <input message="FinalPIPStatusMessage">
                <assign to="FinalPIPStatus" from="FinalPIPStatus/text()"/>
            </input>
        </consume>
    </sequence>
</process>
```

The 'out of the box' PIP3A4_Seller_Private BP is a 'bare bones' process, consisting of a File System adapter to pick up the Purchase Order Confimation.

An actual implementation would require additional steps!

45

RosettaNet Business Processes – Private BPs

- Private BPs excute 'behind the scenes' – the trading partner does not directly 'see' these business processes

- An example of this would be a business process that initiates the Partner Interface Process. This bp might:

    1. Collect the Service Content for initiating the action message from a back end system

    2. Perform PIP contract lookup for both PIP roles

        o PIP execution inside SBI will stop if any contracts are missing

    3. Start RNPIPInitiator

RosettaNet Business Processes – Private BPs

- An example of a Private BP on the Responder's side would be:
  1. A business process that consumes the Initiator's action message data and delivers it to a back-end system

```
<process name = "PIP3A4_Seller_Private">
  <sequence>
    <consume name='GetInitiatingDocument'>
      <input message='InitiatingDocument'>
        <assign to='.' from='RequestMessage'/>
        <assign to='.' from='Caller'/>
      </input>
    </consume>
    <operation name="Translation">
    <participant name="Translation"/>
      <output message="outmsg">
      <assign to="map_name">PIP3A4_POR_to_POC</assign>
        <assign to="." from="*"/>
      </output>
      <input message="inmsg">
        <assign to="." from="*"/>
      </input>
    </operation>
```

Two Action PIP initiated by Sterling B2B Integrator

1. PIP private BP (Ex: PIP3A4_Buyer_Private)

    I.   Calls RNPIPInitiator

    II. Calls RNIF_Action

        1. Calls RNIF_Envelope to build the RNIF action message

        2. Calls RNPIPTracking to add PIP tracking information for the initiating action message

        3. Calls RNHTTPAsyncSend to deliver the message to the trading partner

2. RNIF_Bootstrap receives signal in response to the initiating action message

    I.   Started by the RN Http Server Adapter instance when the trading partner sends the signal message in response to the action message sent by RNIF_Action

Two Action PIP initiated by Sterling B2B Integrator (cont'd)

II. Calls RNIF_DeEnvelope to parse the signal message

III. Calls HTTP_Sync_Response to return the HTTP status code back to the trading partner

IV. Calls RNPIPTracking to add PIP tracking information for the received signal message

V. Calls RNIF_PIP_Dispatcher

3. RNIF_Bootstrap - Receives 2nd action message in PIP

i. Started by the RN HTTP Server Adapter when the trading partner sends the Purchase Order Confirmation for PIP 3A4 (for example)

ii. Calls RNIF_DeEnvelope to parse the action message.

iii. Calls HTTP_Sync_Response to return the HTTP status code back to the trading partner

Two Action PIP initiated by Sterling B2B Integrator (cont'd)

IV. Calls RNPIPTracking to add PIP tracking information for the received action message

V. Calls RNIF_SendAck or RNIF_SendException

1. If incoming action message is valid, RNIF_SendAck is called. If the Service Content portion of the incoming action message is not valid, RNIF_SendException is called.

2. Calls RNHTTPAsyncSend to delivery the signal message to the trading partner

3. Calls RNPIPTracking to add PIP tracking information for the signal message

VI. Calls RNIF_PIP_Dispatcher

This ends the process from the Initiator's point of view.

A Two Action PIP – Initiator and Responder

Two Action PIP where SBI is the Responder

1. RNIF_Bootstrap - Receives action message that initiates the PIP Response

   I. Started by the RN Http Server Adapter instance

   II. Calls RNIF_DeEnvelope to parse the action message.

   III. Calls HTTP_Sync_Response to return the HTTP status code back to the partner

   IV. Calls RNPIPTracking to add PIP tracking information for the received action message

   V. Calls RNIF_SendAck or RNIF_SendException

      1. If incoming action message is valid, RNIF_SendAck is called. If not, we call RNIF_SendException.

      2. Calls RNHTTPAsyncSend to delivery the signal message to the trading partner

Two Action PIP where SBI is the Responder (cont'd)

3. Calls RNPIPTracking to add PIP tracking information for the signal message

VI. Calls RNIF_PIP_Dispatcher

1. Calls RNPIPResponder

   a. Calls <u>PIP private BP</u> (Ex: PIP3A4_Seller_Private)

      I. Responsible for delivering action message that initiated the PIP to back-end system and for collecting the service content for the response action message (Ex: Purchase Order Confirmation in PIP 3A4)

   b. Calls RNIF_TwoAction_Async_Responder

      I. Calls RNIF_Envelope to build RNIF message for the response action message

      II. Calls RNPIPTracking to add PIP tracking information for the response action message

      III. Calls RNHTTPAsyncSend to delivery the RNIF message to the trading partner

Two Action PIP where SBI is the Responder (cont'd)

2. RNIF_Bootstrap receives signal message in response to response action message

   I. It's started by the RN Http Server Adapter wen the partner sends the acknowledgment in response to the response action message

   II. Calls RNIF_DeEnvelope to parse the signal message

   III. Calls HTTP_Sync_Response to return the HTTP status code

   IV. Calls RNPIPTracking to add PIP tracking information for the received signal message

   V. Calls RNIF_PIP_Dispatcher

   This ends the process from the Responder's point of view.

Part 4 – Frequently Asked Questions

RosettaNet Frequently (and Not So Frequently)
Asked Questions

How do we add new PIP definitions to SBI?

- Answer: We use pipdefloader.sh/.cmd in
  <SBI Root>/install/data/rosettanet
- SBI comes with many, but not all, PIP definitions preloaded.
- Before running pipdefloader.sh/.cmd to load a PIP, execute it without parameters to familiarize yourself with its syntax:

```
> pipdefloader.sh
```

How do we add new PIP definitions to SBI? (continued)

>pipdefloader.sh

PipDefLoader - Load RosettaNet PIP definitionsSyntax: PipDefLoader <Pip Definitions XML file> [nodelete] [updatecontracts]

Notes: The first parameter MUST be the PIP definitions XML filename. The other
two parameters (nodelete and updatecontracts) can be in any order or
they can be omitted.
Existing PIP definitions by default are deleted first.
If nodelete is specified, the existing PIP definitions are not deleted
first before adding the new PIP definitions.
****
*** NOTE: If the nodelete parameter is NOT specified,   ***
*** ALL existing PIP definitions will be overwritten.   ***
*** The new PIP definitions will be the only entries in   ***
*** the PIP tables. Should this occur, invoking   ***
*** pipdefloader.sh/.cmd using the pipdefs.xml file in   ***
*** this directory will restore the tables to their   ***
*** post-installation state. It will then be possible to ***
*** add new PIPs using the nodelete option.   ***
****
Existing contracts by default are not updated.
If updatecontracts is specified, existing PIP contracts will have
their PIP information updated based on data loaded from the
PIP definitions XML file.

How do we add new PIP definitions to SBI? (continued)

- Where do we get the PIP Definitions XML file mentioned in the command line syntax?

  ▪ PipDefLoader - Load RosettaNet PIP definitionsSyntax: PipDefLoader <Pip Definitions XML file> [nodelete] [updatecontracts]

- Answer: We use the PIP definition template files in <SBI Root>/install/data/rosettanet

```
oneactionpipdeftemplate.xml
twoactionpipdeftemplate.xml
```

- Make a copy of the appropriate template file and edit the copy.

```
>cp oneactionpipdeftemplate.xml pip5C2deftemplate.xml
```

How do we add new PIP definitions to SBI? (continued)

- **Here is where downloading PIP information from http://www.rosettanet.org really comes in handy.**
- **The MS Word document included in the downloaded zip file will define the values required to populate the XML file.**

PIP5C2: Request Design Registration   Validated 01.01.00   PIP Specification

3.6   Partner Role Descriptions

Table 3-1 describes the partner roles in this PIP.

Table 3-1: Partner Role Descriptions		
Role Name	**Role Description**	**Role Type**
Demand Creator	The partner role that identifies the opportunity, submits design registration, provides engineering support to advance the opportunity towards design win, and generates revenue by satisfying customer demand for a product.	Organizational
Product Provider	The partner role that creates a differentiated product, owns the registration process, and creates a list of eligible products for use in design registration.	Organizational

```xml
<?xml version="1.0" encoding="utf-8"?>
<RosettaNetPIPDefinitions>
<PIP_DEF>
    <PIP_CODE>5C2</PIP_CODE>
    <TO_ROLE>Product Provider</TO_ROLE>
    <FROM_ROLE>Demand Creator</FROM_ROLE>
    <TO_SERVICE>Product Provider Service</TO_SERVICE>
    <FROM_SERVICE>Demand Creator Service</FROM_SERVICE>
    <PIP_VERSION>V01.01</PIP_VERSION>
    <RNIF_VERSION>All</RNIF_VERSION>
    <PIP_DESCRIPTION>Request Design Registration</PIP_DESCRIPTION>
    <STATUS>3</STATUS>
    <TYPE>2</TYPE>
    <RESPONSE_MODE>1</RESPONSE_MODE>
    <SENDER_WFD_NAME>5C2_I_STUB</SENDER_WFD_NAME>
    <RESPONDER_WFD_NAME>5C2_R_STUB</RESPONDER_WFD_NAME>
    <NONREPUD_REQ>1</NONREPUD_REQ>
```

How do we add new PIP definitions to SBI? (continued)

- Note that the PIP template file has 'helpful' comments, but they may not be in exactly the right places, so keep that in mind.

```xml
<?xml version="1.0" encoding="utf-8"?>
<RosettaNetPIPDefinitions>
    <PIP_DEF>
        <!-- TODO:  Insert PIP code here -->
        <PIP_CODE></PIP_CODE>
        <!-- TODO:  Insert PIP initiator's role here -->
        <TO_ROLE></TO_ROLE>
        <!-- TODO:  Insert PIP responder's role here -->
        <FROM_ROLE></FROM_ROLE>
        <!-- TODO:  Insert PIP initiator's service here -->
        <TO_SERVICE></TO_SERVICE>
        <!-- TODO:  Insert PIP responder's service here -->
        <FROM_SERVICE></FROM_SERVICE>
        <!-- TODO:  Insert PIP version here -->
        <PIP_VERSION></PIP_VERSION>
        <RNIF_VERSION>All</RNIF_VERSION>
        <!-- TODO:  Insert PIP description here -->
        <PIP_DESCRIPTION></PIP_DESCRIPTION>
        <STATUS>3</STATUS>
        <TYPE>1</TYPE>
```

How do we add new PIP definitions to SBI?

>pipdefloader.sh pip5C2def.xml nodelete updatecontracts
RosettaNet PIP definitions successfully loaded from pip5C2def.xml

- If you forget, this Technote discusses the process:
- http://www-01.ibm.com/support/docview.wss?uid=swg21973581

What about those Notifications of Failure (PIP 0A1)?

- After the sender of an Action or Signal message has transmitted the message, SBI will wait (usually 2 hours) for the response.
- If the response is not forthcoming, the Action or Signal message will be re-enveloped and sent again.
- SBI will again wait the predefined amount of time and re-send until either:
  - the response is received
  - all retries are exhausted
- The 0A1 will then be sent to indicate a total failure of the PIP process.

Does SI have a menu for viewing sent and received PIPs?

- Glad you asked! Yes, it's in Business Process > Monitor > Advanced Search > RosettaNet

Menu for viewing sent and received PIPs? (continued)

RosettaNet PIP Search

| Search Filter | | | | | | | | | | ▼ ? |

Search Results

Instance	Standard	RNIF Version	PIP Code	PIP Version	Identity	Partner	Status	Role	Initiated ▾
123456789:...	RN	V02.00	3A4	V02.00	555123456	123456789	🖥️	Initiator	12/29/2015 10:3...

⏮ ◀ | Page 1 of 1 | ▶ ⏭ | 🔄   Showing 1 - 1 of 1

Step Info for Instance: 123456789:74922

Step	Description	Date Time	Direction	Document	MIME Doc	Attachments	Bus.Proc. ID
1	PURCHASE ORDER REQUEST ACTION	12/29/2015 10:33:06 AM	➡️	📄	📄	None	74926
2	RECEIPT ACKNOWLEDGMENT	12/29/2015 10:33:09 AM	↙️	📄	📄	None	74931
3	PURCHASE ORDER CONFIRMATION ACTION	12/29/2015 10:33:15 AM	↙️	📄	📄	None	74935
4	RECEIPT ACKNOWLEDGMENT	12/29/2015 10:33:18 AM	➡️	📄	📄	None	74935

What about Produce and Consume?

- I've noticed that RN BPs make extensive use of Produce and Consume – what happens if some steps remain unconsumed?
- The BP Expirator Service runs on its schedule and it will cleanup unconsumed messages that are past the time they should have been consumed.

Can SBI customers create custom PIPs?

- They can and they do. Our policy is to support these as long as:
  1. The customizations do not involve modifying established RosettaNet functionality in Sterling B2B Integrator
  2. If the customizations require modification to established RosettaNet functionality, IBM Sterling B2B Intergrator Support cannot offer support for the customizations.

Actual Customer Inquiry

- I won't receive a Receipt Acknowledgment for over 24 hours – can I configure SI to wait that amount of time for the Receipt Acknowledgment?

- The answer is yes, this is possible, but…

  1. Keep in mind that RosettaNet business processes don't complete until the last PIP step is complete.

  2. If you don't mind business processes being in a waiting state for 24 hours, you can do this.

Questions & Answers