sciQuest®

Supplier Integration Specification – cXML Integrations

SciQuest, Inc.

SUPPLIER INTEGRATION SPECIFICATION – CXML INTEGRATIONS

GPS/SUPPLIER ENABLEMENT

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1 Introduction

The purpose of this document is to provide reference information to suppliers in the SciQuest Network (or those interested in joining the Supplier Network) on the SciQuest applications as well as SciQuest's supplier enablement capabilities and technologies.

This document applies to cXML integrations and specifically: Price and Availability Call for hosted catalogs, PunchOuts, Purchase Orders, Purchase Order Acknowledgements, and Invoices. If you are interested in providing SciQuest access to your catalog content via a hosted catalog, please see the information in the Hosted Catalog Supplier Integration Specification that can be obtained by e-mailing supplierenablement@sciquest.com.

The details in this document apply specifically to version 5.x of the SciQuest products, which was released July 2005.

2 SciQuest Application Suite

SciQuest offers a complete suite of modular applications to help automate the source-to-settle process for buying organizations. These applications in conjunction with the SciQuest Supplier Network reduce redundant tasks and maintain data integrity throughout the cycle of finding, acquiring and managing goods. This allows buying organizations to increase efficiencies, reduce cost and provide spend visibility.

2.1 SciQuest SelectSite

SelectSite's on-demand productivity modules can be deployed together or separately to meet specific procurement automation needs. Organizations can access the SciQuest Supplier Network to connect to hundreds of suppliers from a variety of commodity groups, or use SciQuest supplier enablement tools to activate other key suppliers. All SelectSite solutions can integrate with installed enterprise systems to leverage existing technology investments.

The following diagram outlines the SelectSite Productivity Modules. For more information please visit http://www.sciquest.com/enterprisesolutions/.

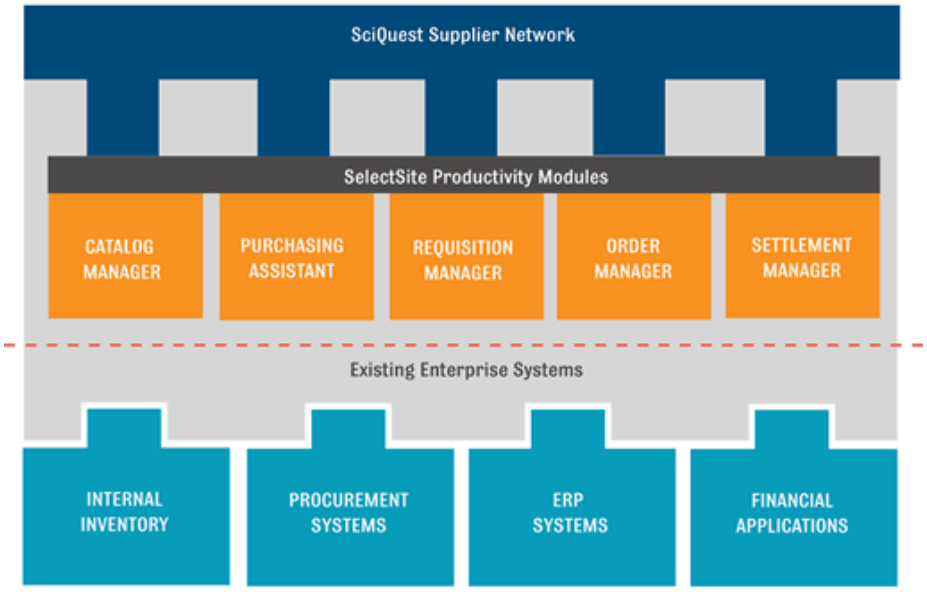

Figure 1: SciQuest SelectSite Productivity Modules

2.2 SciQuest HigherMarkets

The SciQuest HigherMarkets solution is built on the on-demand SelectSite technology platform and was specifically designed for higher education institutions. The HigherMarkets' e-procurement solution is currently utilized at many of the top education institutions across America. Our on-demand solution is designed to complement an organization's existing investments in technology, freeing an institution from purchasing and installing additional hardware and costly software.

2.3 SciQuest Spend Director

Spend Director is built on the on-demand SelectSite technology platform, which integrates directly with an organization's existing purchasing system. SpendDirector corresponds to the Catalog Manager and Purchasing Assistant modules in the diagram above. SpendDirector is used in conjunction with content from the SciQuest Supplier Network, which is configured by a buying organization to highlight and promote preferred suppliers. End users use advanced shopping tools to select products and create paperless requisitions.

2.4 SciQuest Supplier Network

Enabling a critical mass of supplier catalog content is crucial to maximizing user adoption, purchasing efficiency and spend visibility. Buying organizations use the Supplier Network to access product data from over 600 suppliers across several commodities. The data for these suppliers is accessed through on-demand hosted or PunchOut interfaces.

3 Supplier Enablement Process

3.1 Methodology

SciQuest has performed hundreds of successful integrations and attained years of experience enabling suppliers. From these experiences, SciQuest has adopted the following methodology for integrating suppliers and organizations via the SciQuest Supplier Network.

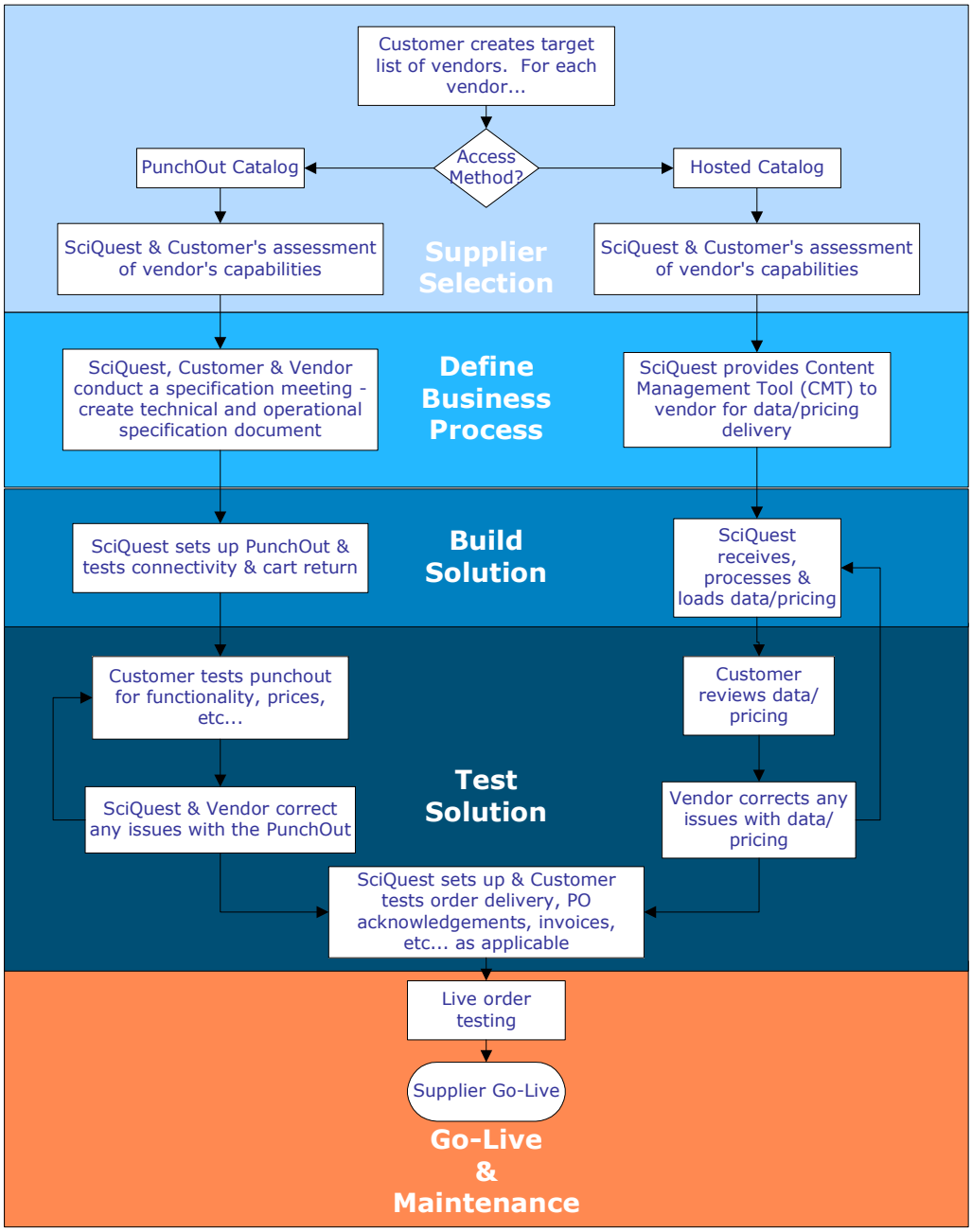

Figure 2: SciQuest Supplier Enablement Methodology

3.2 Integration

The following diagram depicts the e-procurement process and the potential integration points between suppliers and the SciQuest modules.

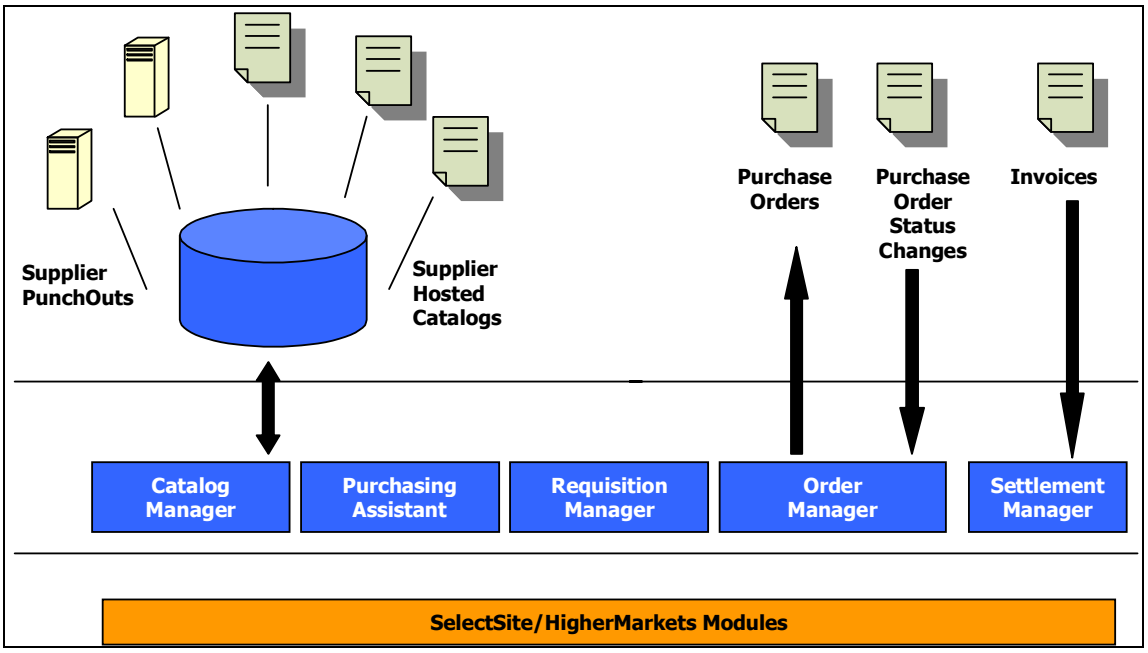

Figure 3: Integration Points

The SciQuest supplier enablement process is made up of one or more of the following integration points:

- Supplier Data: SciQuest offers two options for Supplier Data. The first is hosting products and pricing in the SciQuest database, which consists of over five million SKUs. The second is providing cXML PunchOut access to a catalog maintained on the supplier's Website.

- Purchase Order delivery: SciQuest offers three options for Purchase Order delivery. These options are cXML, e-mail (html or plain text) and fax. SciQuest does not support Purchase Order delivery via EDI.

- Purchase Order status changes: SciQuest is able to accept cXML ConfirmationRequest messages which contain information such as order statuses (e.g. backordered), shipping dates, shipping charges and tax charges. If you cannot provide Order Acceptance via cXML, e-mails can be sent directly to the buyer.

- Invoices: SciQuest is able to accept cXML InvoiceDetailRequest messages that contain information on the invoice regarding the transacting parties, the payment terms, products, amounts, taxes and shipping information.

4 Supplier Contact Data

SciQuest enables suppliers within the SelectSite application based on requests from buying organizations that would like to either have data hosted in the application or have access to the supplier catalog via PunchOut technology. In order to set you up as a supplier in the SciQuest Supplier Network, SciQuest requires some basic information:

Contact Information
SciQuest needs complete company contact information including:

- Supplier's Company Name as it should be presented to users
- Company promotional text
- Address, city, state/province, zip code/postal code
- E-mail
- Web Site URL
- Phone and fax

Supplier Category
As a supplier on the SciQuest Supplier Network, you must choose what category your company information will be displayed in. Current supplier categories include:

- Scientific,
- Office / Computer,
- Maintenance, Repair and Operations ("MRO")
- Furniture
- Services

Fax Number
If you will be receiving orders via fax, SciQuest needs all valid numbers for receiving orders. This may be a central customer service department or, depending on your relationship with the customer, the ordering fax number may be that of a buying organization's account manager. SciQuest has the ability to configure the system to send orders to specific fax numbers (such as the account manager) based on the customer (one fax number per organization).

DUNS Number
Your supplier DUNS number is used by customers to route orders properly. If the customer is using the Ariba Supplier Network (ASN), a DUNS number is required for routing and delivery of orders. Information on DUNS numbers is available at: http://www.dnb.com.

5 Supplier Data: Hosted versus PunchOut

SciQuest can either host supplier data at our headquarters on the SciQuest data server or, we can provide a 'PunchOut' (or 'tunnel out') connection to the supplier-hosted catalog from a specific customer site. SciQuest is unbiased when it comes to hosting the data or punching out to the data. The customer **always** makes the decision about how they would prefer to access the data. If you feel the customer would get increased benefits accessing your data in a different way then what they've requested, please contact them directly to discuss those benefits.

Here are some of the Pros and Cons that the customer reviewed when deciding on PunchOut versus SciQuest Hosted data:

PunchOut Pros	Hosted Pros
Products may be more up to date as the vendor has control over when products and prices are updated. SciQuest typically takes hosted catalog updates on a quarterly basis.	Customer has the maximum amount of strategic sourcing management. They can assign "preferred" flags to their hosted vendors. They can manage the hosted content and turn on/off certain categories of products (e.g. Radioactives).
End users have access to Product configurators (e.g. computers; oligos).	End user's ability to compare products and prices across different hosted vendors.
End users have access to any special website features that the vendor offers (e.g. order history, favorites lists).	End user's experience is the same for all suppliers.
End users are able to view things such as online product availability (including backorder information) and shipping/handling charges on the punchout. These features may vary by supplier.	Process for approving price files before they are loaded to the SciQuest application.
PunchOut Cons	**Hosted Cons**
Customer does not have the same catalog management abilities. Additionally, they cannot assign "preferred" flags to punchout suppliers.	Content and pricing are static until the supplier provides an update to the catalog (typically accepted by SciQuest on a quarterly basis).
End users lose the ability to perform side-by-side product comparisons between suppliers.	End users do not have access to special website features such as configurators, order history and online product availability.
There is a different user experience for each punchout site and some punchout sites may not be easily navigated.	

6 Price and Availability Call

In conjunction with the 5.0 release on July 31, 2005, SciQuest implemented a revised Price and Availability call from a hosted catalog; this call is now available for use by suppliers.

SciQuest previously supported an availability call from a hosted catalog. This call was limited to letting a requisitioner know whether or not a particular item was in stock at the time of the live query. The revised call allows the supplier to provide information on availability, price, estimated ship date, substitute part number as well as a myriad of miscellaneous information that may be specific to a certain supplier or commodity (e.g. CAS #). Additionally, the revised call can be executed by both a requisitioner as well as an approver.

This is a real-time call to a URL provided by the supplier. The information returned by the supplier is for informational purposes only and is not stored with the product in Purchase Requisition or Purchase Order history.

This call is an opportunity to differentiate your catalog offering in the SciQuest application. For example, suppliers who support this functionality will have a special icon assigned to them in search results. The call allows you to provide the catalog in the hosted format that customers require, yet still communicate the expanse of dynamic information available via your internal systems.

If you are interested in enabling this Price and Availability call from your hosted catalog, please contact a member of the SciQuest Supplier Enablement team at supplierenablement@sciquest.com.

6.1 Request Message

The PriceAvailabilityRequest is the message that is sent from the buyer to the supplier, to check the price and/or availability of one or more products at the supplier.

6.1.1 Sample Message

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE PriceAvailabilityRequest SYSTEM "PriceAvailabilityMessage.dtd">
<PriceAvailabilityRequest>
    <Header>
        <MessageId>[MessageID]</MessageId>
        <Timestamp> YYYY-MM-DD'T'HH:mm:ssZ</Timestamp>
        <Authentication>
            <Identity>[Authentication Identity]</Identity>
            <SharedSecret>[Shared Secret]</SharedSecret>
        </Authentication>
    </Header>
        <RequesterInfo>
            <Customer code="[Customer Code]"/>
            <Location code="[Location Code]"/>
            <PreferredLanguage>en</PreferredLanguage>
            <PreferredCountry>US</PreferredCountry>
```

```
        </RequesterInfo>
          <!-- ProductRequest.  Each element contains identifying information about a single product
          whose price and/or availability is to be checked.  At least one is required.-->
        <ProductRequest itemNumber="1”>
            <SupplierPartNumber>[Part Number (SKU)]</SupplierPartNumber>
            <UnitOfMeasure quantity="[UOM Qty]" unit="[UOM]"/>
            <Quantity>[Qty]</Quantity>
        </ProductRequest>
</PriceAvailabilityRequest>
```

Variable	Description
MessageId	Identifier for the message. This value from the request message should be included in the response message in the RelatedMessageId element. This is the equivalent of a payloadID.
Timestamp	This value should be in the recommended ISO-8601 notation.
Authentication Identity	Default = SciQuest
Authentication Shared Secret	Specified by the supplier.
Customer Code	Identifies the customer – typically the name of the organization or the DUNS.
Location Code	Identifies the customer’s location. Please specify if you would like to receive the ShipTo code or Zip Code.

6.2 Response Message

The PriceAvailabilityResponse is the response message from a supplier back to the buyer. It contains information about the price and availability of one or more products.

6.2.1 Sample Message

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE PriceAvailabilityResponse SYSTEM "PriceAvailabilityMessage.dtd">
<PriceAvailabilityResponse>
    <Header>
        <MessageId>[MessageID]</MessageId>
          <RelatedMessageId>[MessageID from PriceAvailabilityRequest Message]</RelatedMessageId >
        <Timestamp> YYYY-MM-DD’T’HH:mm:ssZ</Timestamp>
    </Header>
     <!--ProductResponse.  Each element contains the results of the availability check for a single product.
     The number of ProductResponse elements should be exactly the same as the number of
     ProductRequest elements in the request message.-->
     <ProductResponse itemNumber="1" status="OK">
        <SupplierPartNumber>[Part Number (SKU)]</SupplierPartNumber>
            <UnitPrice currency="USD">10.00</UnitPrice>
            <QuantityAvailable>[Quantity Available]</QuantityAvailable>
            <IsAvailable>[true, false, or unknown]</IsAvailable>
            <QuantityBackordered>10</QuantityBackordered>
            <ShipDate>YYYY-MM-DD</ShipDate>
            <BackorderShipDate>YYYY-MM-DD</BackorderShipDate>
            <SubstitutePartNumber>13890A-024</SubstitutePartNumber>
            <SubstituteUnitOfMeasure quantity="12" unit="CS"/>
```

```
            <OtherInfo name="MSDS" type="url">http://www.sciquest.com</OtherInfo>
            <OtherInfo name="Description" type="text"><![CDATA[This is a cutting-edge
            product.]]></OtherInfo>
            <OtherInfo name="Legal Disclaimer" type="text"><![CDATA[ This price and availability
            message is for informational purposes only.  It does not constitute a legal contract or offer to
            sell, and does not guarantee that a product will be available for purchase ...]]></OtherInfo>
        </ProductResponse>
</PriceAvailabilityResponse>
```

Variable	Description	Required or Optional
MessageId	Identifier for the message. This value from the request message should be included in the response message in the RelatedMessageId element. Similar to the payloadID.	Required
RelatedMessageId	The MessageID from the original request message.	Required
Timestamp	This value should be in the recommended ISO-8601 notation.	Required
ProductResponse – itemNumber	This value should match the original itemNumber from the request message.	Required
Product Response – status	"OK" for a successful product match or "Error" for an unsuccessful product match.	Required
SupplierPartNumber	The supplier's part number for the product. It should match what was sent in the original request.	Required
UnitPrice	The current unit price for the requested quantity of the product. This must always be a US-formatted price even if the currency is not USD.	Required
QuantityAvailable	The quantity of the product that is currently available. Either this element of the IsAvailable element is required. If both are present, the QuantityAvailable value takes precedence.	Either QuantityAvailable or IsAvailable is required.
IsAvailable	An indicator that some quantity of the requested product is available. Values are "true", "false" and "unknown". This should only be used by suppliers who do not support a numeric quantity response. Either this element or the QuantityAvailable element is required. If both are present, the QuantityAvailable value takes precedence.	IsAvailable or QuantityAvailable is required.
QuantityBackordered	The quantity of the product that would be on backorder (e.g. is not available)	Optional
ShipDate	The date the available quantity could be ready to ship. If present, this should be in the form	Optional

	YYYY-MM-DD.	
BackorderShipDate	The date that the backordered quantity could be ready to ship. If present, this should be in the form YYYY-MM-DD.	Optional
SubstitutePartNumber	This is the supplier's part number for a potential substitute product if the requested product is on backorder.	Optional
SubstituteUnitOfMeasure	This is the supplier's unit of measure for a potential substitute product if the requested product is on backorder. The quantity attribute is optional; the unit attribute is required if a value is provided.	Optional
OtherInfo	This section contains additional information about the product that may be useful to the buyer. Zero or more items may be present. Providing any of these elements is entirely at the discretion of the supplier. If provided, the name attribute is required. It will be a display name for the data value. It should be specific to the requested language, if possible. The type attribute is optional; it has valid values of "text" and "url". If this attribute is left blank, a value of "text" is assumed. The value may be enclosed within CDATA tags if needed. HTML tags in the name and text are not supported.	Optional

6.3 Price and Availability DTD

This is the DTD that will be used for the XML request/response over HTTP.

```
<?xml version="1.0" encoding="UTF-8"?>
<!--
    $Revision: 1.1 $
    PriceAvailabilityMessage.dtd
-->
<!--============= PRE-DEFINED DATA TYPES ======================-->

<!ENTITY % response.status     "(OK|Error)" >

<!--============= PRE-DEFINED ATTRIBUTES ======================-->

<!ENTITY % measure.attributes "
    quantity CDATA #IMPLIED
    unit     CDATA #REQUIRED
">

<!ENTITY % response.attributes "
    itemNumber CDATA          #REQUIRED
    status     %response.status; #REQUIRED
">

<!ENTITY % otherinfo.attributes "
```

```
    name CDATA #REQUIRED
    type CDATA #IMPLIED
">

<!--============ ELEMENT AND ATTRIBUTE DECLARATIONS ==============-->
<!--============ COMMON ELEMENTS=============================-->

<!ELEMENT MessageId (#PCDATA) >
<!ELEMENT Timestamp (#PCDATA) >
<!ELEMENT SupplierPartNumber (#PCDATA) >
<!ELEMENT Header (MessageId, RelatedMessageId?, Timestamp, Authentication?) >

<!--============== REQUEST ELEMENTS==========================-->

<!ELEMENT PriceAvailabilityRequest (Header, RequesterInfo, ProductRequest+) >
<!ELEMENT Authentication (Identity, SharedSecret) >
<!ELEMENT Identity (#PCDATA) >
<!ELEMENT SharedSecret (#PCDATA) >
<!ELEMENT RequesterInfo (Customer, Location?, PreferredLanguage?, PreferredCountry?) >
<!ELEMENT Customer EMPTY >
<!ATTLIST Customer
    code CDATA #REQUIRED
>
<!ELEMENT Location EMPTY >
<!ATTLIST Location
    code CDATA #REQUIRED
>
<!ELEMENT PreferredLanguage (#PCDATA) >
<!ELEMENT PreferredCountry (#PCDATA) >
<!ELEMENT ProductRequest (SupplierPartNumber, UnitOfMeasure, Quantity) >
<!ATTLIST ProductRequest
    itemNumber CDATA #REQUIRED
>
<!ELEMENT UnitOfMeasure EMPTY >
<!ATTLIST UnitOfMeasure
          %measure.attributes; >
<!ELEMENT Quantity (#PCDATA) >

<!--============== RESPONSE ELEMENTS=========================-->

<!ELEMENT PriceAvailabilityResponse (Header, ProductResponse+) >
<!ELEMENT RelatedMessageId (#PCDATA) >
<!ELEMENT ProductResponse (SupplierPartNumber, UnitPrice, QuantityAvailable?,
    IsAvailable?, QuantityBackordered?, ShipDate?, BackorderShipDate?,
          SubstitutePartNumber?, SubstituteUnitOfMeasure, OtherInfo*) >
<!ATTLIST ProductResponse
          %response.attributes; >
<!ELEMENT UnitPrice (#PCDATA) >
<!ATTLIST UnitPrice
    currency CDATA #REQUIRED
>
<!ELEMENT QuantityAvailable (#PCDATA) >
<!ELEMENT IsAvailable (#PCDATA) >
<!ELEMENT QuantityBackordered (#PCDATA) >
<!ELEMENT ShipDate (#PCDATA) >
<!ELEMENT BackorderShipDate (#PCDATA) >
<!ELEMENT SubstitutePartNumber (#PCDATA) >
<!ELEMENT SubstituteUnitOfMeasure (#PCDATA) >
<!ATTLIST SubstituteUnitOfMeasure
    %measure.attributes; >
<!ELEMENT OtherInfo (#PCDATA) >
<!ATTLIST OtherInfo
          %otherinfo.attributes; >
```

7 PunchOut

SciQuest conforms to the cXML 1.2 punchout standard. SciQuest should be able to integrate with any supplier using this form of cXML. If you are using another version of the standard, SciQuest can work with you to further investigate the possibility of integration. For more information on the cXML standard, please visit: http://www.cxml.org.

SciQuest utilizes the three Punchout session documents detailed in the cXML specification. These are:

PunchOutSetupRequest – This session is from SciQuest to the supplier and is used to initiate the punchout. Currently SciQuest supports create sessions, but not edit or inspect.

PunchOutSetupResponse – This session is used to confirm the punchout request and to provide a redirect URL to the vendor's start page.

PunchOutOrderMessage – This session sends the contents of the shopping cart back to the SciQuest application.

The sections below discuss these 3 session documents in more detail.

7.1 PunchOutSetupRequest

7.1.1 Sample Message

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/cXML.dtd">
<cXML payloadID="[payload ID]" timestamp="YYYY-MM-DD'T'HH:mm:ssZ" xml:lang="en-US">
    <Header>
        <From>
            <Credential domain="[From Domain]">
                <Identity>[From Identity]</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="[To Domain]">
                <Identity>[To Identity]</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="[Sender Domain]">
                <Identity>[Sender Identity]</Identity>
                <SharedSecret>[Shared Secret]</SharedSecret>
            </Credential>
            <UserAgent>[User Agent]</UserAgent>
        </Sender>
    </Header>
    <Request>
        <PunchOutSetupRequest operation="create">
            <BuyerCookie>[Buyer Cookie]</BuyerCookie>
            <Extrinsic name="FirstName">[Punchout User's First Name]</Extrinsic>
            <Extrinsic name="LastName">[Punchout User's Last Name]</Extrinsic>
            <Extrinsic name="UniqueName">[Punchout User's Login Name]</Extrinsic>
            <Extrinsic name="UserPrintableName">[Punchout User's First Name & Last Name]</Extrinsic>
            <Extrinsic name="UserOrgName">[Punchout User's Organization Name]</Extrinsic>
            <Extrinsic name="UserOrgId">[Punchout User's Organization Identifier]</Extrinsic>
```

```
            <Extrinsic name="UserOrgDept">[Punchout User's Organization Dept]</Extrinsic>
            <Extrinsic name="UserDept">[Punchout User's Department]</Extrinsic>
            <Extrinsic name="UniqueUsername">[Punchout User's Login Name]</Extrinsic>
            <Extrinsic name="ReturnFrame">_parent</Extrinsic>
            <Extrinsic name="UserEmail">[Punchout User's Email Address]</Extrinsic>
            <Extrinsic name="User">[Punchout User's Login Name]</Extrinsic>
            <BrowserFormPost>
               <URL>[SciQuest URL Initiating Punchout Session]</URL>
            </BrowserFormPost>
            <Contact>
               <Name xml:lang="en-US">[Punchout User's Login Name]</Name>
               <Email>[Punchout User's Email Address]</Email>
            </Contact>
            <SupplierSetup>
               <URL>[Supplier's Punchout URL]</URL>
            </SupplierSetup>
            <ShipTo>
               <Address addressID="[AddressID]">
               <Name xml:lang="en-US">[Organization Name]</Name>
                  <PostalAddress>
                     <DeliverTo>[Organization Name]</DeliverTo>
                     <Street>[Primary Street Address]</Street>
                     <City>[City]</City>
                     <State>[State Abbreviation]</State>
                     <PostalCode>[Postal Code]</PostalCode>
                     <Country isoCountryCode="[Code]">[Country]</Country>
                  </PostalAddress>
                  <Phone>
                     <TelephoneNumber>
                        <CountryCode isoCountryCode="[Code]">[Country Code]</CountryCode>
                        <AreaOrCityCode>[Area Code]</AreaOrCityCode>
                        <Number>[Phone Number]</Number>
                     </TelephoneNumber>
                  </Phone>
               </Address>
            </ShipTo>
         </PunchOutSetupRequest>
      </Request>
</cXML>
```

7.1.2 Variables

The supplier can specify the variables listed below. If a variable is not provided, the default value will be used. For those variables highlighted in red, the supplier must provide a value to be used by SciQuest for the integration.

Variable	Description
FromDomain	Default = NetworkID
FromIdentity	Typically the Institution Name (e.g. GSK) or DUNS #
ToDomain	Typically "NetworkID" or "DUNS"
ToIdentity	Typically the Supplier DUNS number
SenderDomain	Default = NetworkID
SenderIdentity	Default = SciQuest
SharedSecret	Specified by the Supplier
UserAgent	Default = SciQuest
BuyerCookie	Default = SciQuest
Extrinsic 1-12	By default these values will map to their logical extrinsic name (e.g. "FirstName" maps to the User's First Name). Although the Extrinsic names themselves are not configurable, the values are. Therefore, if you needed to receive the User's E-mail Address in the Extrinsic called "User", this could be accommodated. If none of these Extrinsic names are valid in your system, SciQuest can add custom Extrinsics. However, this requires custom code and adds time to the punchout setup schedule. Therefore, adding custom Extrinsic names is not a preferred solution for SciQuest.
Contact Name & Contact Email	By default these values are not populated in the punchout. However, if you need to receive these values, they can be populated with the User's Name and E-mail Address respectively.
ShipTo AddressID, Name, DeliverTo, Street, City, State, Postal Code, Country & Telephone Number	By default these values are not populated in the punchout. However, if you need to receive these values, they can be populated with generic ShipTo information for the client organization. SciQuest does not send dynamic ShipTo information on the punchout based on user.
HTTP Header	When posting the PunchoutSetupRequest, the HTTP header contains a Content Type of "text/xml".

7.2 PunchOutSetupResponse

7.2.1 Sample Message

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/cXML.dtd">
<cXML payloadID="[payloadID]" timestamp=""YYYY-MM-DD'T'HH:mm:ssZ" version="1.2.009"
xml:lang="en-US">
    <Response>
        <Status code="200" text="[Successful Punchout Text]" xml:lang="en-US"/>
        <PunchOutSetupResponse>
            <StartPage>
                <URL>[URL for Supplier Punchout]</URL>
            </StartPage>
        </PunchOutSetupResponse>
    </Response>
</cXML>
```

If the PunchOut connection is initiated, SciQuest expects to receive a Status Code of 200 indicating a success.

7.3 PunchOutOrderMessage

7.3.1 Sample Message

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/cXML.dtd">
<cXML version="1.2.009" payloadID="[payloadID]" timestamp=" "YYYY-MM-DD'T'HH:mm:ssZ">
    <Header>
        <From>
            <Credential domain="[From Domain]">
                <Identity>[From Identity]</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="[To Domain]">
                <Identity>[To Identity]</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="[Sender Domain]">
                <Identity>[Sender Identity]</Identity>
                <SharedSecret>[Shared Secret]</SharedSecret>
            </Credential>
            <UserAgent>[User Agent]</UserAgent>
        </Sender>
    </Header>
    <Message deploymentMode="production">
        <PunchOutOrderMessage>
        <BuyerCookie>[Buyer Cookie]</BuyerCookie>
        <PunchOutOrderMessageHeader operationAllowed="edit">
            <Total>
                <Money currency="USD">[Total Price]</Money>
            </Total>
        </PunchOutOrderMessageHeader>
            <ItemIn quantity="[Quantity]">
                <ItemID>
                    <SupplierPartID>[Part ID]</SupplierPartID>
                    <SupplierPartAuxiliaryID>[Auxiliary Part ID]</SupplierPartAuxiliaryID>
                </ItemID>
                <ItemDetail>
                    <UnitPrice>
                        <Money currency="USD">[Unit Price]</Money>
                    </UnitPrice>
                    <Description xml:lang="en">[Product Description]</Description>
                    <UnitOfMeasure>[UOM]</UnitOfMeasure>
                    <Classification domain="UNSPSC">[UNSPSC Code]</Classification>
                </ItemDetail>
            </ItemIn>
        </PunchOutOrderMessage>
    </Message>
</cXML>
```

The PunchOutOrderMessage should be posted to the URL specified in the BrowserFormPost element of the PunchOutSetupRequest:

```
    <BrowserFormPost>
        <URL>[SciQuest URL Initiating Punchout Session]</URL>
    </BrowserFormPost>
```

SciQuest processes the following elements from the PunchOutOrderMessage

Mandatory Elements	Optional Elements
ItemIn -> Quantity	ItemDetail -> Description -> ShortName
ItemID -> SupplierPartID	ItemDetail -> ManufacturerPartID
ItemID -> SupplierPartAuxiliaryID (if applicable)	ItemDetail -> ManufacturerName
ItemDetail -> UnitPrice -> Money	ItemDetail -> CAS Number
ItemDetail -> Description	ItemDetail -> Classification domain (UNSPSC, Radioactive, Hazardous, Controlled Substance, Toxin, Select Agent, Green, Radioactive Minor)
ItemDetail -> UnitOfMeasure	
ItemDetail -> Classification	

8 Purchase Order Delivery

SciQuest has three options for Purchase Order delivery. These are:

cXML, SciQuest's preferred method of purchase order delivery. SciQuest conforms to the cXML 1.2 purchase order standard. SciQuest should be able to integrate with any supplier using this form of cXML. If you are using another version of the standard, SciQuest can work with you to further investigate the possibility of integration. For more information on the cXML standard, please visit: http://www.cxml.org.

E-mail purchase orders can be sent to the supplier if cXML purchase orders are not accepted. SciQuest has the ability to send e-mails in any of the following three formats: plain text, HTML embedded, or HTML attachment.

Fax purchase orders have a format identical to the HTML version of the e-mail purchase order. Fax is the default purchase order delivery method unless cXML or e-mail is preferred and specified by the supplier.

SciQuest does not support delivery of purchase orders via EDI.

8.1 cXML Purchase Order

SciQuest utilizes the two Purchase Order messages, "Order Request" and "Response to an Order Request".

8.1.1 Order Request

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/cXML.dtd">
<cXML timestamp=" "YYYY-MM-DD'T'HH:mm:ssZ" payloadID="[payloadID]" version="1.2.009" >
    <Header>
        <From>
            <Credential domain="[From Domain]">
                <Identity>[From Identity]</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="[To Domain]">
                <Identity>[To Identity]</Identity>
            </Credential>
```

```
    </To>
    <Sender>
        <Credential domain="[Sender Domain]">
            <Identity>[Sender Identity]</Identity>
            <SharedSecret>[Shared Secret]</SharedSecret>
        </Credential>
        <UserAgent>[User Agent]</UserAgent>
    </Sender>
</Header>
<Request deploymentMode="”production">
    <OrderRequest>
        <OrderRequestHeader orderDate=" YYYY-MM-DDTHH:MM:SS-hh:mm" orderID="[PO Number]"
        type="new">
            <Total>
                <Money currency="USD">[PO Total]</Money>
            </Total>
            <ShipTo>
                <Address addressID="[Ship To Code]">
                    <Name xml:lang="en-US">[Organization Name]</Name>
                    <PostalAddress name="default">
                        <DeliverTo>[Package Recipient]</DeliverTo>
                        <Street>[Street Address]</Street>
                        <City>[City]</City>
                        <State>[State Abbreviation]</State>
                        <PostalCode>[Postal Code]</PostalCode>
                        <Country isoCountryCode="[Code]">[Country]</Country>
                    </PostalAddress>
                    <Email name="default">[Email Address]</Email>
                    <Phone name="work">
                        <TelephoneNumber>
                            <CountryCode isoCountryCode="[Code]">[Country Code]</CountryCode>
                            <AreaOrCityCode>[Area Code]</AreaOrCityCode>
                            <Number>[Phone Number]</Number>
                        </TelephoneNumber>
                    </Phone>
                </Address>
            </ShipTo>
            <BillTo>
                <Address addressID="[Bill To Code]">
                <Name xml:lang="en-US">[Organization Name]</Name>
                    <PostalAddress name="default">
                        <DeliverTo>[AP Recipient]</DeliverTo>
                        <Street>[Street Address]</Street>
                        <City>[City]</City>
                        <State>[State Abbreviation]</State>
                        <PostalCode>[Postal Code]</PostalCode>
                        <Country isoCountryCode="[Code]">[Country]</Country>
                    </PostalAddress>
                    <Email name="default">[Email Address]</Email>
                    <Phone name="work">
                        <TelephoneNumber>
                            <CountryCode isoCountryCode="[Code]">[Country Code]</CountryCode>
                            <AreaOrCityCode>[Area Code]</AreaOrCityCode>
                            <Number>[Phone Number]</Number>
                        </TelephoneNumber>
                    </Phone>
                </Address>
            </BillTo>
            <Payment>
                <PCard number="[Number]" expiration="YYYY-MM-DDTHH:MM:SS"/>
            </Payment>
            <Comments>[Header Level Comment]</Comments>
            <Extrinsic name="[Name]">[Value for Header Level Extrinsic]</Extrinsic>
        </OrderRequestHeader>
        <ItemOut quantity="[Qty]" lineNumber="[Line Number]">
            <ItemID>
                <SupplierPartID>[Part ID]</SupplierPartID>
```

```
                <SupplierPartAuxiliaryID>[Auxiliary Part ID]</SupplierPartAuxiliaryID>
            </ItemID>
            <ItemDetail>
                <UnitPrice>
                    <Money currency="USD">[Unit Price]</Money>
                </UnitPrice>
                <Description xml:lang="en-US">[Product Description]</Description>
                <UnitOfMeasure>[UOM]</UnitOfMeasure>
                <Classification domain ="UNSPSC">[UNSPSC Code]</Classification>
                <Extrinsic name="[Name]">[Misc Customer Code]</Extrinsic>
            </ItemDetail>
            <Comments>[Line Level Comment]</Comments>
        </ItemOut>
    </OrderRequest>
  </Request>
</cXML>
```

The supplier can specify the variables listed below. If a variable is not provided, the default value will be used. For those variables highlighted in red, the supplier must provide a value to be used by SciQuest for the integration.

Variable	Description
FromDomain	Default = NetworkID
FromIdentity	Typically the Institution Name (e.g. GSK) or DUNS #
ToDomain	Typically "NetworkID" or "DUNS"
ToIdentity	Typically the Supplier DUNS number
SenderDomain	Default = NetworkID
SenderIdentity	Default = SciQuest
SharedSecret	Specified by the Supplier
UserAgent	Default = SciQuest
Deployment Mode	By default SciQuest will pass "production" if the order is generated in the production environment, and "test" if the order is generated from the test environment.
ShipTo and BillTo	SciQuest is flexible in the format of both the ShipTo and BillTo address format. We can send an three <DeliverTo> tags, and three <Street> tags, as well as one each of <City>, <State>, <PostalCode>, and <Country>. You should let SciQuest know during implementation how many tags you can receive and the maximum length of each. SciQuest can then custom map the customer's address to your Address field requirements.
Payment	This section is optional depending on whether the customer uses PCards or strictly Purchase Orders for purchases. If they do use PCards, the number and expiration date will be provided in the manner above.
Contact	This section is optional and typically contains the name of the product requisitioner.
Comments	This section is optional depending on the configuration of the customer's SciQuest application. However, if customers choose to enter header level comments, they will be passed in this tag.
Extrinsics (header level) – unlimited number	This section is optional depending on the configuration of the customer's SciQuest application. If the customer has special information to pass to the vendor at the header level, it will be provided in these fields. SciQuest has the flexibility to modify the Extrinsic Name, if necessary, so that the vendor can more easily map that value into their current system.
Line Number	By default SciQuest passes line numbers for each ItemOut record.
Extrinsics (line level) – unlimited number	This section is optional depending on the configuration of the customer's SciQuest application. If the customer has special information to pass to the vendor at the line level, it will be provided in these fields. SciQuest has the flexibility to modify the Extrinsic Name, if necessary, so that the vendor can more easily map that value into their current system.
Comments	This section is optional depending on the configuration of the customer's SciQuest application. Most customers choose not to enable this feature, as most vendors do not read comments at the line level. However, if customers choose to enter line level comments, they will be passed in this tag.
HTTP Header	When posting the Order Request, the HTTP header contains a Content Type of "text/xml".
Order Request URL	The vendor will need to provide a URL for receipt of the Purchase Orders. SciQuest expects to receive a message in the 200 range for all successful Purchase Orders. Messages in the 300 range are not handled.

8.1.2 Response to an Order Request

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/cXML.dtd">
<cXML payloadID="[payloadID]" timestamp=""YYYY-MM-DD'T'HH:mm:ssZ " xml:lang="en-US">
    <Response>
        <Status code="200" text="[Successful Punchout Text]"/>
    </Response>
</cXML>
```

SciQuest expects to receive a status code in the 200 range if the vendor receives the order successfully. Anything not in the 200 range (including 300s) will prevent successful Purchase Order transmission.

8.2 E-mail Purchase Order

SciQuest has the ability to deliver purchase orders via e-mail as either plain text, embedded html, or attached html.

8.2.1 Plain Text E-mail Format

Following is a sample plain text e-mail that would be sent to a supplier.

```
========================= Purchase Order ==================
_____________________________ Order Header _____________________________
PO No.: 39680
PO Date: 9/1/2004

Buyer Info:
Acme Buyer
+1 (919) 555-2133
buyer@acme.com

Supplier Info:
ABC Supplier International
1010 Main Street
Raleigh, NC  27606
US

+1 (919) 555-2728
+1 (919) 555-1761
Note to all Suppliers:
This is a priority order.  Please rush delivery.

================ Delivery Info ============================
**************************************************************
For timely delivery, please print the following details on the shipping label.
**************************************************************
_____________________________ SHIP TO INFO _____________________________
ACME LABORATORY
John Doe
Room 123
RESEARCH BUILDING A
```

5151 MCCRIMMON PARKWAY
MORRISVILLE, NC 27560
United States
_____ BILL TO INFO _____
ACME LABORATORY
Accounts Payable Department
PO Box 2500
MORRISVILLE, NC 27560
United States
========== Line Item Details ==========
Line No.: 1 of 1

Product Name: BEAKER POLY PK-12 150ML
Catalog No.: 11111-222
Manufacturer Part No: 444444-3333
Quantity: 1
UOM: CS
Unit Price: 999.99 USD
Extended Price: 999.99 USD
Req Delivery: 9/1/2004
Commodity Code:
Ship Via: CG

External Note: This order is a priority. Please rush order.
Capital Expense: No
Account Code: 4321TEST
Pricing Code: 1234TEST
****
_____ Payment Info _____
Total lines: 1
TOTAL: 999.99 USD

Payment Method: Charge to PO Listed Above
Payment Terms:
****
Failure to include PO Number on invoice will delay payment.
****
========== End Purchase Order ==========

8.2.2 HTML E-mail Format

SciQuest can send purchase orders via e-mail as either attached html, or as html embedded in the body of the e-mail itself. Below is a sample of the html purchase order:

PO/Reference No.	PO Date	Supplier Name
39680	9/1/2004	ABC Supplier International

SUPPLIER INFO

Supplier Name	ABC Supplier International	Note To All Suppliers
Address	1010 Main Street Raleigh, NC 27606. US	This is a priority order. Please rush delivery.
Duns No.	123456789	
Phone	+1 (919) 555-2728	
Fax	+1 (919) 555-1761	
Payment Method	**Charge to PO Listed Above**	
Payment Terms		

Attachments

BUYER INFO
Acme Buyer
buyer@acme.com
+1 (919) 555-2133

BILL TO INFO
ACME LABORATORY
Accounts Payable Department
PO Box 2500
MORRISVILLE, NC 27560
United States

SHIP TO INFO
ACME LABORATORY
John Doe
Room 123
RESEARCH BUILDING A
235 ELM ROAD
5151 MCCRIMMON PARKWAY
United States
Shipto Code - CB01

Line Items:PO No. 39680, Total lines ordered: 1, sciquest ic / Pace

Line No.	Commodity Code	Product Name	Catalog No.	Unit Price	Qty/Uom	Extended Price	Capital Expense
1		BEAKER POLY PK-12 150ML	11111-222	999.99	1 / CS	999.99 USD	No

DELIVERY

Ship Via	CG
Expedite	No
Req Delivery	9/1/2004

SUPPLIER INFO

Pricing Code	1234TEST
Account Code	4321TEST
External Note	This order is a priority. Please rush order.

Attachments

ACCOUNTING INFO
PLEASE INCLUDE THE FOLLOWING ON THE INVOICE FOR THIS ITEM

Shipping, Handling, and Tax charges are calculated and charged by each supplier.

Subtotal	**999.99 USD**
***Tax**	**0.00 USD**
***Shipping**	**0.00 USD**
***Handling**	**0.00 USD**
TOTAL	**1,184.60 USD**

Line Items:PO No. 39680, Total lines ordered: 1, acme buyer/ Acme Laboratory

8.3 Fax Purchase Order

The format of a fax purchase order is identical to the html e-mail format. (Please see example in the previous section.)

Fax orders can either be sent to a single location for all customers (e.g. customer service center) or, the faxes can be sent to different numbers based on the ordering organization (e.g. account representative). However, for each ordering organization, only one fax number can be provided per vendor (e.g. orders cannot be sent to customer service with a CC to the account representative).

9 Purchase Order Status Changes

As a general rule, SciQuest customers like to receive Order Acknowledgements from suppliers when orders have been successfully received and queued for processing by that supplier. Often these acknowledgements come in the form of an e-mail back to the requisitioner at the customer site. However, SciQuest can receive order acknowledgements electronically through cXML.

9.1 cXML Confirmations

SciQuest has the ability to process cXML Order Acknowledgements for Purchase Orders that initiated as cXML transactions. This transaction is called a **ConfirmationRequest** and is sometimes referred to as a CR or POA. cXML also supports two other later status changes called StatusUpdateRequest and ShipNoticeRequest, which SciQuest does not currently support.

In order to setup cXML CRs with a supplier, SciQuest and the supplier need to coordinate on three items:

- SenderIdentity. Typically this is the vendor's DUNS number
- SenderSharedSecret
- URLs for posting the confirmations

The SenderIdentity and SharedSecret can be setup at the vendor's discretion. However, these credentials will be supplier specific and apply across all of the SciQuest organizations. The vendor when selecting credentials should consider this and therefore, these credentials should not be specific to a single client.

The URLs that should be used by suppliers for posting cXML CRs (once credentials have been exchanged) are below:

Test URL	https://uitweb.sciquest.com/apps/Router/CXMLReceive
Production URL	https://solutions.sciquest.com/apps/Router/CXMLReceive

These URLs have SSL certificates associated with them, which will need to be downloaded and installed by the suppliers.

9.1.1 ConfirmationRequest

SciQuest supports a header level of "detail" and at the line item level, SciQuest will accept statuses of "accept", "detail", "reject", "unknown" and "backordered". SciQuest does not currently accept "allDetail", nor do we accept substitutions, which are represented with a line level of "detail" along with an <ItemIn> tag. Following is a sample ConfirmationRequest message:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.009/Fulfill.dtd">
<cXML timestamp=""YYYY-MM-DD'T'HH:mm:ssZ" payloadID="[payloadID]">
    <Header>
        <From>
            <Credential domain="DUNS">
```

```
            <Identity>[Supplier Name or DUNS]</Identity>
        </Credential>
    </From>
    <To>
        <Credential domain="DUNS">
            <Identity>[Customer Name or DUNS]</Identity>
        </Credential>
    </To>
    <Sender>
        <Credential domain="DUNS">
            <Identity>[Supplier Name or DUNS]</Identity>
            <SharedSecret>[Shared Secret]</SharedSecret>
        </Credential>
        <UserAgent>[User Agent]</UserAgent>
    </Sender>
</Header>
<Request>
    <ConfirmationRequest>
        <ConfirmationHeader type="detail" operation="new" noticeDate="YYYY-MM-DD"
        confirmID="[PO ID in Supplier's System]"/>
        <OrderReference orderID="[POID]" orderDate="YYYY-MM-DD">
            <DocumentReference payloadID="[payloadID from Original PO]"/>
        </OrderReference>
        <ConfirmationItem lineNumber="[lineNumber from Original PO]" quantity="[Qty]">
            <UnitOfMeasure>[UOM]</UnitOfMeasure>
            <ConfirmationStatus type="[Status]" quantity="[Qty]" shipmentDate="YYYY-MM-DD">
                <UnitOfMeasure>[UOM]</UnitOfMeasure>
                <UnitPrice>
                    <Money currency="USD">[UnitPrice]</Money>
                </UnitPrice>
                <Tax>
                    <Money currency="USD">[Tax Charge]</Money>
                    <Description xml:lang="en">[Description of Tax Charges]</Description>
                </Tax>
                <Shipping>
                    <Money currency="USD">[Shipping Charge]</Money>
                    <Description xml:lang="en">[Description of Shipping Charges]</Description>
                </Shipping>
            </ConfirmationStatus>
        </ConfirmationItem>
    </ConfirmationRequest>
</Request>
</cXML>
```

10 Invoices

The SciQuest Settlement Manager Module has the ability to process cXML Invoices for Purchase Orders that initiated as cXML transactions.

In order to setup cXML Invoices with a supplier, SciQuest and the supplier need to coordinate on three items:

- SenderIdentity. Typically this is the supplier's DUNS number
- SenderSharedSecret
- URLs for posting the invoices

The SenderIdentity and SharedSecret can be setup at the supplier's discretion. However, these credentials will be supplier specific and apply across all of the SciQuest organizations utilizing electronic invoices. The supplier when selecting credentials should consider this and therefore, these credentials should not be specific to a single client.

The URLs that should be used by suppliers for posting cXML Invoices (once credentials have been exchanged) are below:

Test URL	https://usertest.sciquest.com/apps/Router/CXMLInvoiceImport
Production URL	https://solutions.sciquest.com/apps/Router/CXMLInvoiceImport

These URLs have SSL certificates associated with them, which will need to be downloaded and installed by the suppliers.

10.1 cXML Invoice Types

SciQuest supports standard invoices as well as credit memos. Credit memos must be order level invoices per the cXML specification. Standard invoices may be order level or line level. Line level invoices may contain a combination of line and summary level charges.

If a order level invoice or credit memo is provided to SciQuest, the values (price, tax, shipping, etc…) will be distributed equally across all lines of the original PO.

If a line level invoice is provided to SciQuest, the values (price, tax, shipping, etc…) will be applied accordingly to the original lines of the PO. The lines from the invoice will be matched to the lines from the original PO using the lineNumber attribute.

It is possible for a standard invoice to have a combination of summary and line level charges (e.g. unit price at the line level and shipping charges at the summary). The cXML specification requires that if this is the case, the appropriate InvoiceDetailLineIndicator exists (e.g. isShippingInLine = "yes"). When the SciQuest system comes across one of these InvoiceDetailLineIndicator tags, it will look at the line level for that piece of information. It will then look at the InvoiceDetailSummary section for the rest of the data (e.g. subtotal).

SciQuest is not able to accept an electronic invoice that references multiple original POs. When the invoice is received by SciQuest, SciQuest verifies the payloadID from the original purchase order. The supplier sends this payloadID back to SciQuest as the DocumentReferenceID in the InvoiceDetailOrder section of the document.

If the incoming payloadID does not match an existing purchase order in the system, the system will then validate upon a combination of the OrderID and the Date/Time stamp from the original PO. If no match is found on either the PayloadID or the OrderID/Date, an error is generated. Suppliers should setup their system to trap these errors and then contact SciQuest Customer Support if such an error occurs. SciQuest does not monitor errors to incoming invoices as we do with errors on outgoing POs.

10.2 Structure of the Invoice Document

There are two potential structures of the invoice document. They are:

Order Level Invoice Information	**Detailed Line Item Information**
<Request> <InvoiceDetailRequest> <InvoiceDetailRequestHeader> *header information* </InvoiceDetailRequestHeader> <InvoiceDetailHeaderOrder> *order-level invoice information* </InvoiceDetailHeaderOrder> <InvoiceDetailSummary> *invoice summary* </InvoiceDetailSummary> </InvoiceDetailRequest> </Request>	<Request> <InvoiceDetailRequest> <InvoiceDetailRequestHeader> *header information* </InvoiceDetailRequestHeader> <InvoiceDetailOrder> *detailed line-item information* </InvoiceDetailOrder> <InvoiceDetailSummary> *invoice summary* </InvoiceDetailSummary> </InvoiceDetailRequest> </Request>

10.3 Standard Invoices

Standard invoices can be either at the order level or at the line level. The chapters below note whether or not a section of the message is applicable to the order level invoices, line level invoices or both.

If you paste together sections 10.3.1, 10.3.2, 10.3.3 and 10.3.5, you will have a sample order level standard invoice.

If you paste together sections 10.3.1, 10.3.2, 10.3.4 and 10.3.5, you will have a sample detail line level standard invoice.

10.3.1 Invoice Header – Standard Invoices (Order Level & Detailed Line) and Credit Memos

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE cXML SYSTEM "http://xml.cXML.org/schemas/cXML/1.2.0010/InvoiceDetail.dtd">
```

```
<cXML timestamp="YYYY-MM-DD'T'HH:mm:ssZ" payloadID="[payloadID]" version="1.2.011"
xml:lang="en-US">
    <Header>
        <From>
            <Credential domain="DUNS">
                <Identity>[Supplier Name or DUNS]</Identity>
            </Credential>
        </From>
        <To>
            <Credential domain="DUNS">
                <Identity>[Customer Name or DUNS]</Identity>
            </Credential>
        </To>
        <Sender>
            <Credential domain="DUNS">
                <Identity>[Supplier Name or DUNS]</Identity>
                <SharedSecret>[Shared Secret]</SharedSecret>
            </Credential>
            <UserAgent>[User Agent]</UserAgent>
        </Sender>
    </Header>
```

Variable	Description
DOCTYPE	The DTD for cXML invoices is "InvoiceDetail.dtd". This is different from the DTD used for cXML purchase orders.
Header From, To & Sender Domain, Identity & Shared Secret. Also User Agent.	Use the same values as used in the cXML Purchase Order except that the Supplier becomes the "From" and "Sender" and the Customer or SciQuest becomes the "To" for the invoice. In the Purchase Order the Supplier was the "To" and the "From" and "Sender" values were either the Customer or SciQuest.

10.3.2 Invoice Detail Request Header – Standard Invoices (Order Level & Detailed Line)

```
    <Request deploymentMode="production">
        <InvoiceDetailRequest>
            <InvoiceDetailRequestHeader invoiceDate ="YYYY-MM-DD'T'HH:mm:ssZ"  invoiceID = "[Invoice
        Number]" operation ="new" purpose ="standard">
            <InvoiceDetailHeaderIndicator />
            <InvoiceDetailLineIndicator isAccountingInLine ="yes" isShippingInLine ="yes"
        isSpecialHandlingInLine ="yes" isTaxInLine ="yes" isDiscountInLine ="yes"/>
            <InvoicePartner>
                <Contact role ="remitTo" >
                    <Name xml:lang ="en-US" >[RemitTo Name Saved to SciQuest]</Name>
                    <PostalAddress name = "[Ignored]" >
                        <Street>[Street Address Name Saved to SciQuest]</Street>
                        <City>[City Saved to SciQuest] </City>
                        <State>[State Abbreviation Saved to SciQuest] </State>
                        <PostalCode>[Postal Code Saved to SciQuest] </PostalCode>
                        <Country isoCountryCode="[Code]">[Country saved to SciQuest] </Country>
                    </PostalAddress>
                </Contact>
            </InvoicePartner>
            <!--The cXML Specification requires a 2nd mandatory element in addition to the SciQuest
            required "remitTo".  This second InvoicePartner can be "soldTo", "billTo" or "issuerOfInvoice".
            SciQuest ignores all InvoicePartner information except for "remitTo" -->
            <InvoicePartner>
                <Contact role="soldTo">
                    <Name xml:lang="en-US">[Ignored]</Name>
                    <PostalAddress>
                        <Street>[Ignored]</Street>
                        <City>[Ignored]</City>
                        <State>[Ignored]</State>
                        <PostalCode>[Ignored]</PostalCode>
```

```
                    <Country isoCountryCode="en-US">[Ignored]</Country>
                </PostalAddress>
            </Contact>
        </InvoicePartner>
        <!--SciQuest ignores the InvoiceDetailShipping section, but it is required by the cXML
        Standard-->
        <InvoiceDetailShipping>
            <Contact role="shipTo" addressID="[Ignored]">
                <Name xml:lang="en-US">[Ignored]</Name>
                <PostalAddress>
                    <Street>[Ignored]</Street>
                    <City>[Ignored]</City>
                    <State>[Ignored]</State>
                    <PostalCode>[Ignored]</PostalCode>
                    <Country isoCountryCode="US" />
                </PostalAddress>
            </Contact>
                <Contact role="shipFrom">
                <Name xml:lang="en-US">[Ignored]</Name>
            </Contact>
        </InvoiceDetailShipping>
        <InvoiceDetailPaymentTerm payInNumberOfDays ="[Days - e.g. 15]" percentageRate =
              "[Discount Percentage - e.g. 10]"/>
        <InvoiceDetailPaymentTerm payInNumberOfDays ="[Days - e.g. 30]" percentageRate =
              "[Discount Percentage - e.g. 0]"/>
        <InvoiceDetailPaymentTerm payInNumberOfDays ="[Days - e.g. 45]" percentageRate =
              "[Discount Percentage - e.g. -10]"/>
    </InvoiceDetailRequestHeader>
```

Variable	Description
Deployment Mode	"test" or "production" – SciQuest does not pay attention to this value for electronic invoices. The URL the invoice was sent to dictates whether it was a test or production invoice.
InvoiceDate & InvoiceID	Supplier generated date & ID for the invoice. This is stored in the SciQuest GUI for the customer's reference.
Operation	Values accepted are either "new" or <null>
Purpose	Values accepted are "standard" or "creditMemo". SciQuest does not accept "debit memo". The example above is for a standard invoice.
HeaderIndicator	If isHeaderInvoice = "yes", then isAccountingLine must = "no". SciQuest ignores the tag "isVATRecoverable" attribute
LineIndicator(s)	Values accepted are "yes" or <null> for false. Line indicators available are: isShippingLine, isTaxInLine, isSpecialHandlingInLine, isDiscountInLine, isAccountingInLine. If a LineIndicator is set to "yes", the SciQuest system will look at the line level for that particular piece of information. If one or more line indicators is left <null>/false, SciQuest will check the InvoiceDetailSummary for that piece of information.
InvoicePartner	The cXML Specification requires a 2nd mandatory element in addition to the SciQuest required "remitTo". This second InvoicePartner can be "soldTo", "billTo" or "issuerOfInvoice". SciQuest ignores all InvoicePartner information except for "remitTo" The remitTo information is stored with the invoice in the SciQuest system.
InvoiceDetailShipping	SciQuest ignores the InvoiceDetailShipping section, but it is required by the cXML Standard
InvoiceDetailPaymentTerm	The PaymentTerm with zero or an empty discount percentage will be chosen as the net days. The element with the smallest number of days will be chosen as the discount days and discount percentage/amount

10.3.3 Invoice Detail Header Order – Standard Invoices (Order Level)

```
<InvoiceDetailHeaderOrder>
    <InvoiceDetailOrderInfo>
        <OrderReference orderID = "[Original PO Number]" orderDate = "[Date/timestamp from Original
    PO]">
            <!--SciQuest matches the incoming invoice to the original PO by the payloadID-->
            <DocumentReference payloadID="[payloadID from Original PO]"/>
        </OrderReference>
    </InvoiceDetailOrderInfo>
    <InvoiceDetailOrderSummary invoiceLineNumber="1">
        <SubtotalAmount>
            <Money currency="USD">30.00</Money>
        </SubtotalAmount>
        <Tax>
            <Money currency="USD">5.00</Money>
            <Description xml:lang="en-US"></Description>
        </Tax>
        <InvoiceDetailLineSpecialHandling>
            <Money currency="USD">0.00</Money>
        </InvoiceDetailLineSpecialHandling>
        <InvoiceDetailLineShipping>
            <InvoiceDetailShipping>
                <Contact role="soldTo">
                    <Name xml:lang="en-US">[Ignored]</Name>
                    <PostalAddress>
                        <DeliverTo>[Ignored]</DeliverTo>
                        <Street>[Ignored]</Street>
                        <City>[Ignored]</City>
                        <State>[Ignored]</State>
                        <PostalCode>[Ignored]</PostalCode>
                        <Country isoCountryCode="US">[Ignored]</Country>
                    </PostalAddress>
                </Contact>
                <Contact role="shipFrom">
                    <Name xml:lang="en-US">[Ignored]</Name>
                    <PostalAddress name="default">
                        <DeliverTo>[Ignored]</DeliverTo>
                        <Street>[Ignored]</Street>
                        <City>[Ignored]</City>
                        <State>[Ignored]</State>
                        <PostalCode>[Ignored]</PostalCode>
                        <Country isoCountryCode="US">[Ignored]</Country>
                    </PostalAddress>
                </Contact>
            </InvoiceDetailShipping>
            <Money currency="USD">0.00</Money>
        </InvoiceDetailLineShipping>
            <Comments>test comments</Comments>
            <Extrinsic name="test name 1">test extrinsic value 1</Extrinsic>
            <Extrinsic name="test name 2">test extrinsic value 2</Extrinsic>
    </InvoiceDetailOrderSummary>
</InvoiceDetailHeaderOrder>
```

Variable	Description
OrderReference	The "DocumentReference payloadID" represents the payloadID from the original cXML purchase order. This is the value that SciQuest uses to match the incoming invoice to the originating purchase order.
OrderID	The original PO Number. If a PO match cannot be determined by payloadID, SciQuest will attempt to match on OrderID and OrderDate.
OrderDate	The date/timestamp from the original PO. If a PO match cannot

	be determined by payloadID, SciQuest will attempt to match on OrderID and OrderDate.
InvoiceDetailOrderSummary	The invoiceLineNumber is the vendor's line number for the invoice and is ignored by SciQuest.
Subtotal, Tax, Special Handling & Shipping	These values are all read from the InvoiceDetailSummary section of a Order level invoice. The values in this section are ignored.
Comments & Extrinsics	Comments and Extrinsics are passed through into a "notes" field in the SciQuest GUI.

10.3.4 Invoice Detail Order – Standard Invoices (Detailed Line)

```
<InvoiceDetailOrder>
    <InvoiceDetailOrderInfo>
    <!--SciQuest matches the incoming invoice to the original PO by the payloadID-->
        <OrderReference orderID = "[Original PO Number]" orderDate = "[Date/timestamp from
    Original PO]">
            <DocumentReference payloadID="[payloadID from Original PO]"/>
        </OrderReference>
    </InvoiceDetailOrderInfo>
    <InvoiceDetailItem invoiceLineNumber="1" quantity="1">
        <UnitOfMeasure>[UOM e.g. BX - Ignored]</UnitOfMeasure>
        <UnitPrice>
            <Money currency="USD">[Unit Price e.g. 25.00]</Money>
        </UnitPrice>
        <InvoiceDetailItemReference lineNumber="1">
            <ItemID>
                <SupplierPartID>[SKU e.g. ABC123]</SupplierPartID>
            </ItemID>
            <Description xml:lang="en-US">[Ignored]</Description>
        </InvoiceDetailItemReference>
    </InvoiceDetailItem>
    <InvoiceDetailItem invoiceLineNumber="2" quantity="1">
        <UnitOfMeasure>[UOM e.g. EA - Ignored]</UnitOfMeasure>
        <UnitPrice>
            <Money currency="USD">[Unit Price e.g. 5.00]</Money>
        </UnitPrice>
        <InvoiceDetailItemReference lineNumber="2">
            <ItemID>
                <SupplierPartID>[SKU e.g. ABC987]</SupplierPartID>
            </ItemID>
            <Description xml:lang="en-US">[Ignored]</Description>
        </InvoiceDetailItemReference>
    </InvoiceDetailItem>
</InvoiceDetailOrder>
```

Variable	Description
OrderReference	The "DocumentReference payloadID" represents the payloadID from the original cXML purchase order. This is the value that SciQuest uses to match the incoming invoice to the originating purchase order. If SciQuest is unable to match based on payloadID, SciQuest will attempt to match on OrderID and OrderDate.
InvoiceDetailItem	The invoiceLineNumber is the vendor's line number for the invoice and is ignored by SciQuest. If more than once PO matches the payloadID, orderID, and orderDate, SciQuest will match based on SupplierPartID if the invoice is at the detail line level. If the invoice is not a header level invoice, the UnitPrice values in this section will be used for invoicing.

10.3.5 Invoice Detail Summary – Standard Invoices (Order Level & Detailed Line)

```
<InvoiceDetailSummary>
    <SubtotalAmount>
        <Money currency="USD">30.00</Money>
    </SubtotalAmount>
    <Tax>
        <Money currency="USD">5.00</Money>
        <Description xml:lang="en-US"> </Description>
    </Tax>
    <SpecialHandlingAmount>
        <Money currency=" USD">0.00</Money>
    </SpecialHandlingAmount>
    <ShippingAmount>
        <Money currency=" USD">0.00</Money>
    </ShippingAmount>
    <GrossAmount>
        <Money currency="USD">35.00</Money>
    </GrossAmount>
    <InvoiceDetailDiscount>
        <Money currency="USD">0.00</Money>
    </InvoiceDetailDiscount >
    <NetAmount>
        <Money currency="USD">35.00</Money>
    </NetAmount>
    <DueAmount>
        <Money currency=" USD">35.00</Money>
    </DueAmount>
</InvoiceDetailSummary>
</InvoiceDetailRequest>
</Request>
</cXML>
```

Variable	Description
SubtotalAmount	If this invoice is at the Order Level, the subtotal amount is read. If this invoice is at the Detail Line level, SciQuest will ignore the subtotal and will calculate the subtotal by multiplying Quantity x Unit Price and adding the sum of the lines.
Tax, Special Handling, Shipping and Discount	If this invoice is at the Order Level, Tax, Shipping, Handling and Discounts will be distributed equally across all invoice lines. If this invoice is at the Detail Line level, based on the line level indicators, SciQuest will read the appropriate values from the InvoiceDetailItem section and ignore the values in the InvoiceDetailSummary.
GrossAmount, NetAmount & DueAmount	These values are ignored. SciQuest sums the lines above these values instead.

10.4 Credit Memos

Per the cXML specification, credit memos must be at the order level. If you paste together sections 10.3.1 (from above), 10.4.1, 10.4.2 and 10.4.3, you will have a sample credit memo.

10.4.1 Invoice Detail Request Header – Credit Memo

```
<Request deploymentMode="production">
    <InvoiceDetailRequest>
```

```
<InvoiceDetailRequestHeader invoiceDate ="MM/DD/YYYY HH:MM:SS" invoiceID = "[Invoice
    Number]" operation ="new" purpose ="creditMemo">
  <InvoiceDetailHeaderIndicator isHeaderInvoice="yes" />
  <InvoiceDetailLineIndicator />
</InvoiceDetailRequestHeader>
```

Variable	Description
Deployment Mode	"test" or "production" – SciQuest does not pay attention to this value for electronic invoices. The URL the invoice was sent to dictates whether it was a test or production invoice.
InvoiceDate & InvoiceID	Supplier generated date & ID for the invoice. This is stored in the SciQuest GUI for the customer's reference.
Operation	Values accepted are either "new" or <null>
Purpose	Values accepted are "standard" or "creditMemo". SciQuest does not accept "debit memo". The example above is for a credit memo.
HeaderIndicator	The cXML specification dictates that credit memos must be header invoices. Therefore, for credit memos, this value should be set to "yes".

10.4.2 Invoice Detail Header Order – Credit Memo

```
<InvoiceDetailHeaderOrder>
  <InvoiceDetailOrderInfo>
    <OrderReference orderID = "[Original PO Number - Ignored]" >
      <!--SciQuest matches the incoming invoice to the original PO by the payloadID-->
      <DocumentReference payloadID="[payloadID from Original PO]"/>
    </OrderReference>
  </InvoiceDetailOrderInfo>
  <InvoiceDetailOrderSummary invoiceLineNumber="1">
    <SubtotalAmount>
      <Money currency="USD">-25.00</Money>
    </SubtotalAmount>
  </InvoiceDetailOrderSummary>
</InvoiceDetailHeaderOrder>
```

Variable	Description
OrderReference	The "DocumentReference payloadID" represents the payloadID from the original cXML purchase order. This is the value that SciQuest uses to match the incoming invoice to the originating purchase order. If SciQuest is unable to match based on payloadID, SciQuest will attempt to match on OrderID and OrderDate.
InvoiceDetailOrderSummary	The invoiceLineNumber is the vendor's line number for the invoice and is ignored by SciQuest.

10.4.3 Invoice Detail Summary – Credit Memo

```
<InvoiceDetailSummary>
  <SubtotalAmount>
    <Money currency="USD">-25.00</Money>
  </SubtotalAmount>
  <Tax>
    <Money currency=" USD">-3.50</Money>
    <Description xml:lang="en">total tax</Description>
  </Tax>
  <ShippingAmount>
    <Money currency=" USD">-5.00</Money>
  </ShippingAmount>
  <GrossAmount>
    <Money currency=" USD">-33.50</Money>
  </GrossAmount>
```

```
    <NetAmount>
        <Money currency=" USD">-33.50</Money>
    </NetAmount>
    <DueAmount>
        <Money currency=" USD">-33.50</Money>
    </DueAmount>
</InvoiceDetailSummary>
</InvoiceDetailRequest>
</Request>
</cXML>
```

Variable	Description
SubtotalAmount	
Tax & ShippingAmount	Since this is a header invoice/credit memo, the tax is distributed equally across all invoice lines
GrossAmount, NetAmount & DueAmount	These values are ignored. SciQuest sums the lines above these values instead.

11 Additional Information

SciQuest has helped suppliers in a variety of vertical markets prepare their data for loading into an electronic catalog. Our team of technical experts is also skilled in setting up electronic connectivity for punchout, order transmissions, and electronic invoice transactions. For more information on enabling your catalog for a SelectSite solution, contact SciQuest Customer Support at 919-659-4200 and ask for a member of the Supplier Enablement Team or e-mail supplierenablement@sciquest.com.