



The Bans Consulting Group Inc.

www.TheBans.com

IT Meeting

Toronto, 22 March 2001



The Bans IT Seminar 2001



Seminar B2B XML/JAVA Integration

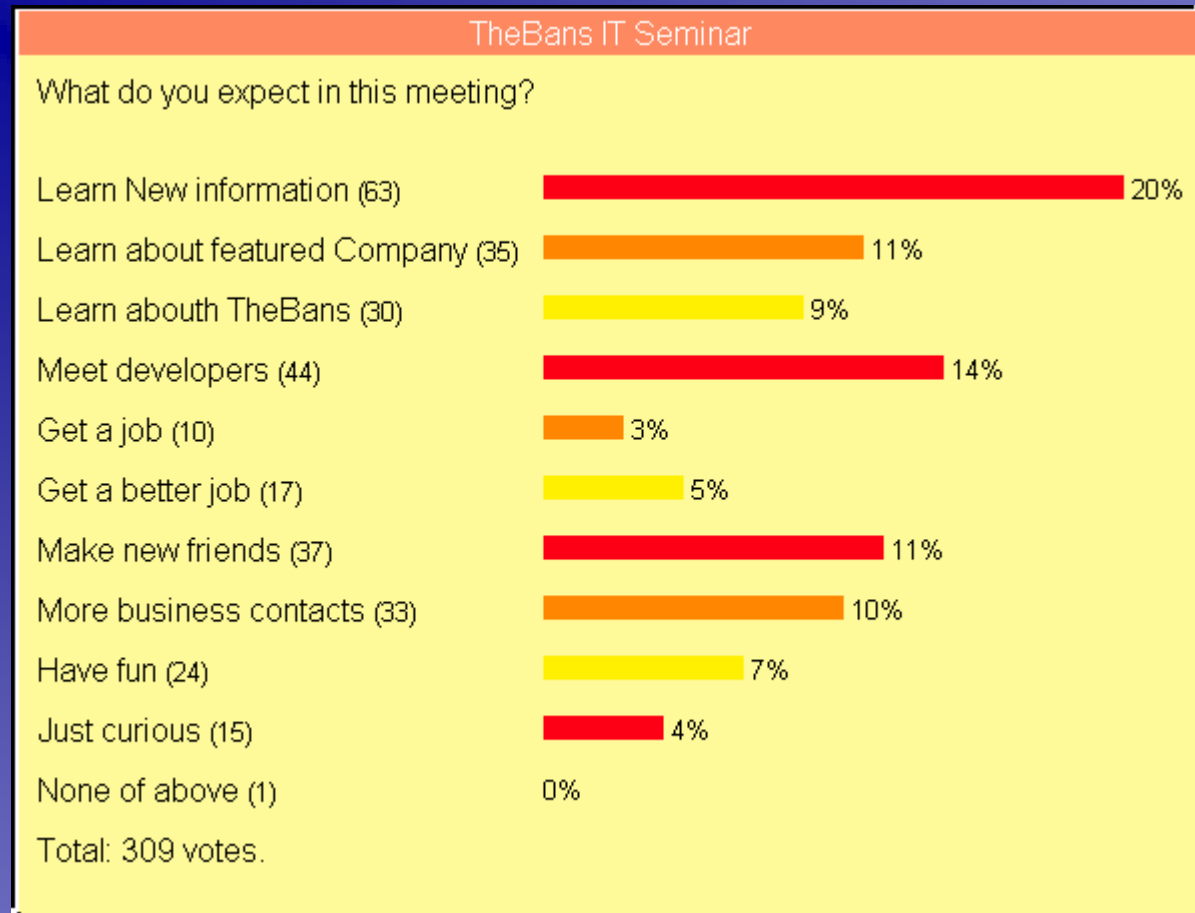
How to Integrate IT Infrastructures Across
Enterprise and Among Trading Partners?

by **TheBans Consulting Group Inc.**
webMethods
RBC Dominion Securities



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IT Seminar Pool





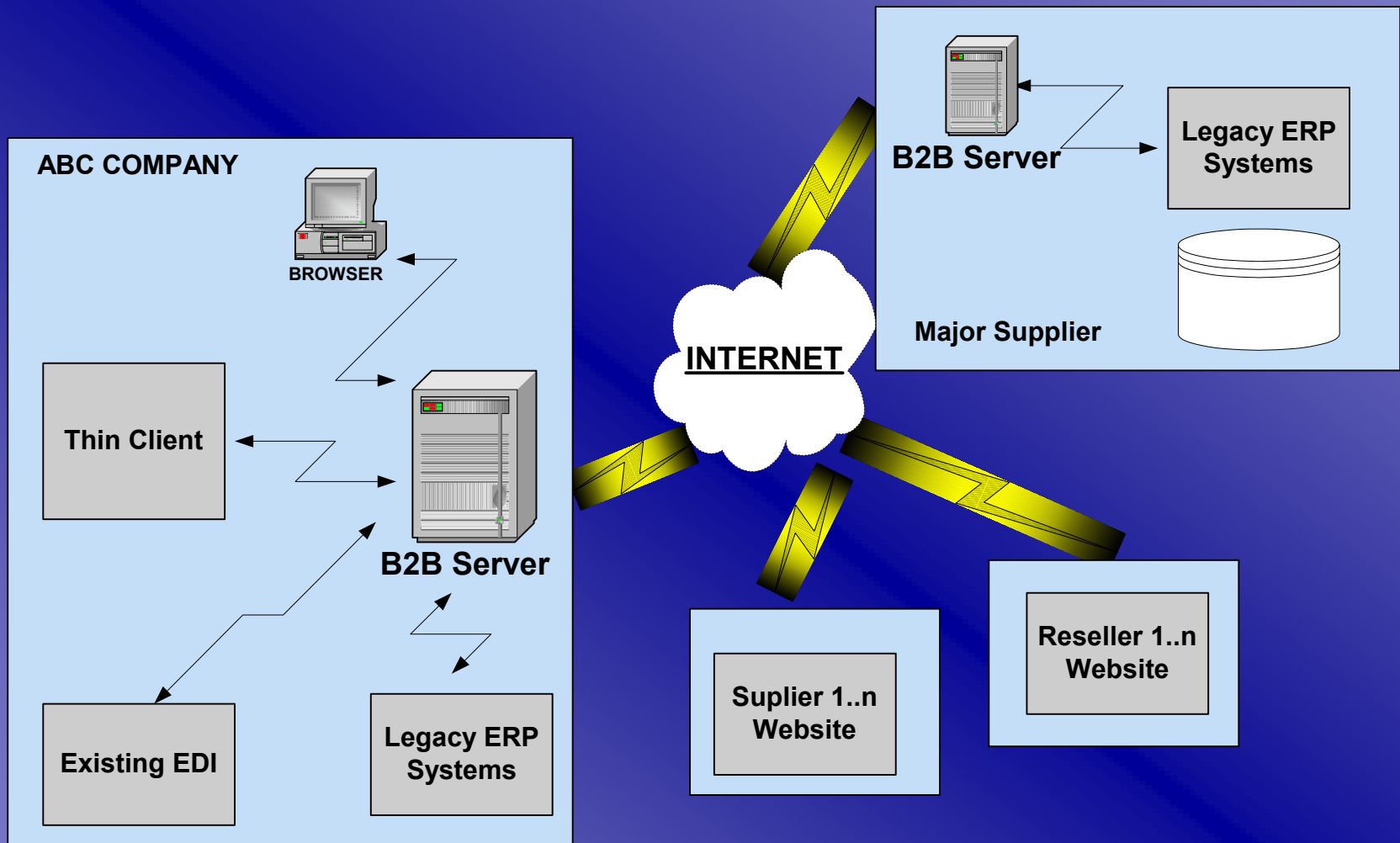
B2B integration (B2Bi)

To support new Internet business models, companies must integrate their IT infrastructures so they can process a seamless flow of information across the enterprise and among trading partners.

Comprehensive B2B integration (B2Bi) integrates packaged, custom, legacy and mainframe systems within the enterprise and links them over the Internet with business systems operated by customers, suppliers, partners and marketplaces. Such a comprehensive solution links individual enterprises together into seamless platforms for extended process efficiency across the supply chain. The result is a virtual enterprise with more resources and strengths than any individual company.



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B2B Integration and the Internet

- Hundreds of heterogeneous trading partners.
- Different industries with different needs.
- Incompatible IT systems.
- Existing investment in legacy software

TODAY - Resolving complex/costly integration issues is more critical than ever before.

The drive to:

- Reduce costs
- Improve efficiencies
- Sharpen competitiveness

is leading organizations to adopt Internet-based business-to-business (B2B) integration.

The Internet is a cost-effective and great vehicle for connecting businesses together.



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Today industries are forming online trading communities—leveraging the power of the Internet to share data and collaborative applications with business partners.

Usage:

- automated procurement
- inventory management
- distribution management
- order processing
- integrated customer support
- collaborative planning.

Sharing of information over the Internet does more than reduce the geographical, temporal and information barriers to doing business together.

It compresses business cycles and creates new markets and opportunities—exactly what businesses need to gain and maintain competitive advantage.



What is B2B Integration?

At its simplest, ***B2B integration is the automated exchange of information between different organizations.***

Occurring independent of or alongside manual processes, it is most accurately described as ***application-to-application integration that crosses corporate boundaries (e.g. firewalls).***

B2B integration is being done over the Internet, rather than over proprietary Value Added Networks (VANs), and the dominant trend is towards the use of open standards such as XML and HTTP, rather than proprietary protocols that are not well suited to the Internet.



What does B2Bi for companies?

- B2B integration improves external processes such as supply chain integration or shipping/logistics tracking by enabling rapid, cost-effective real-time links between business partners.
- Enables new business paradigms such as e-commerce initiatives.
- Reduces costs.
- Reduces inefficiencies by facilitating initiatives such as multi-vendor catalogs and electronic procurement promoting comparison shopping and dramatically reducing the costs associated with traditional procurement.
- Strengthens customer relationships by enabling capabilities such as real-time order management and customer service.
- Significant business advantages through improved customer satisfaction.



Advantages enabled through B2B integration

are achieved in a number of ways:

- Improved customer satisfaction and support
- Improved inventory management
- Reduced time to market
- Improved manufacturer/distributor coordination
- Better outsourcing coordination
- Improved order management
- Tighter links with logistics providers
- Better delivery of information required for planning and forecasting



Key Requirements for B2B Integration via the Internet

For organizations to integrate effectively using the Internet, a software infrastructure must be deployed that meets the following requirements:

- Scalability
- Performance
- Manageability
- Extensibility
- Security
- Guaranteed message delivery across corporate firewalls
- Standards compliance
- Ability to leverage existing corporate infrastructure



The Role of eXtensible Mark-up Language (XML)

XML is a metadata language that defines a universal standard for structuring data. It is a simplified dialect of the Standard Generalized Markup Language (SGML), the International Organization for Standards (ISO) standard for defining the structure and content of electronic documents.

XML was designed to enable business data to be served, received and processed on the Web as easily as HTML. Though the initial focus was the exchange of structured documents over the Web, XML supports a wide variety of applications.



XML

Endorsed by major technology vendors, technology analysts, business consortia and standards

bodies, XML is emerging as the up-and-coming “foundation” technology for B2B integration. Use of

XML for e-commerce is accelerating as vertical industry groups define specific XML vocabularies, including:

Open Application Group Interface Specifications (OAGIS)

•RosettaNet’s Partner Interchange Processes (PIPs) Framework

•Microsoft’s BizTalk

•Ariba’s Commerce XML (cXML).

The World Wide Web Consortium (W3C) adopted XML as a formal recommendation in February of 1998.



Why XML?

XML is a key enabler of both B2B electronic commerce and the open integration of applications and systems across enterprises in general. It meets the challenges of B2B integration because:

- XML is a uniform method for describing and exchanging data that is flexible, extensible and easy to implement
- XML has an exceptionally dynamic and self-describing nature that supports greater interactivity than other technologies, and makes data and information interoperable over the Internet using the standard HTTP protocol
- XML is an agreed-upon standard that is independent of technology, platform, application and system



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Today's guests:



webMethods is the software company currently offering the most comprehensive B2Bi solution. With over 425 customers, webMethods has helped companies such as Dell, FMC, GEON, Juniper Networks, Citibank and others achieve significant returns on their investments. As the market leader in customers, partners, revenue, growth and technology, webMethods is the ideal partner to help a company rapidly deploy a comprehensive B2Bi solution that enables new business models and creates a sustainable competitive advantage.



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Stocks markets around the world are crumbling! Where do we go from here?



Many IT people we speak with today, tell us they are uncomfortable watching the value of their investments drop almost daily. There are a number of so called "blue chip" stocks that have lost more than half their value in a relatively short period of time. What should investors do to protect themselves from today's volatile markets?

Start by attending **Jason Greenlees'** special presentation. **Learn Four Time Tested Methods Of How To Protect Your Investments in Turbulent Markets**



"Exactly what is B2Bi? It's a competitive advantage that's achieved when all business partners can easily exchange information and integrate business processes—in real time, over the Internet—without significant modifications to existing technology or security infrastructure." - webMethods



WHO is TheBans.com ?

Started Internet business 1996 with a GUIDE TO TORONTO.

<http://www.thebans.com>

<http://toronto.thebans.com>

<http://itjobs.thebans.com>

<http://romania.thebans.com>

Future IT portal:

<http://it.thebans.com> or

<http://thebans.com/it>



What we do @ TheBans.com

- Online Strategies/Infrastructure/Integration
- Improved Business Intelligence
- E-commerce Focused / Relationship Building

We have four types of solutions:

- Recommend technologies
- Design documents, UML modelling, DB architecture
- Build your entire system (turn key solutions)
- Build Java/XML/Servlet/EJB infrastructures
- **Integrate online businesses with customers (XML, JAVA, webMethods)**
- Recruit for you based on your needs



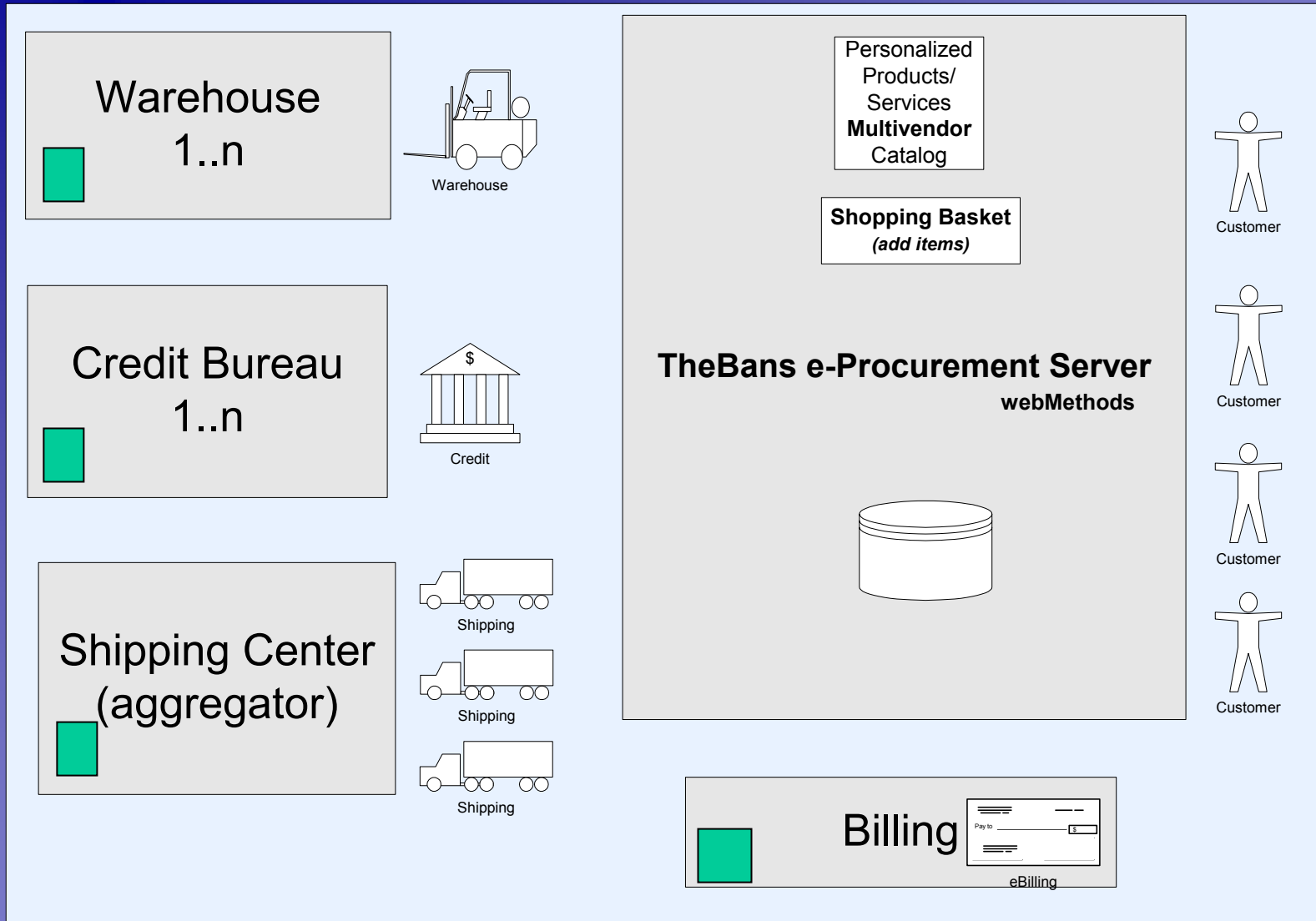
Sample webMethods Application eProcurement/eCommerce Application

Presented by **Sorin Tanasescu** – TheBans.com

Developed by **John Salau**

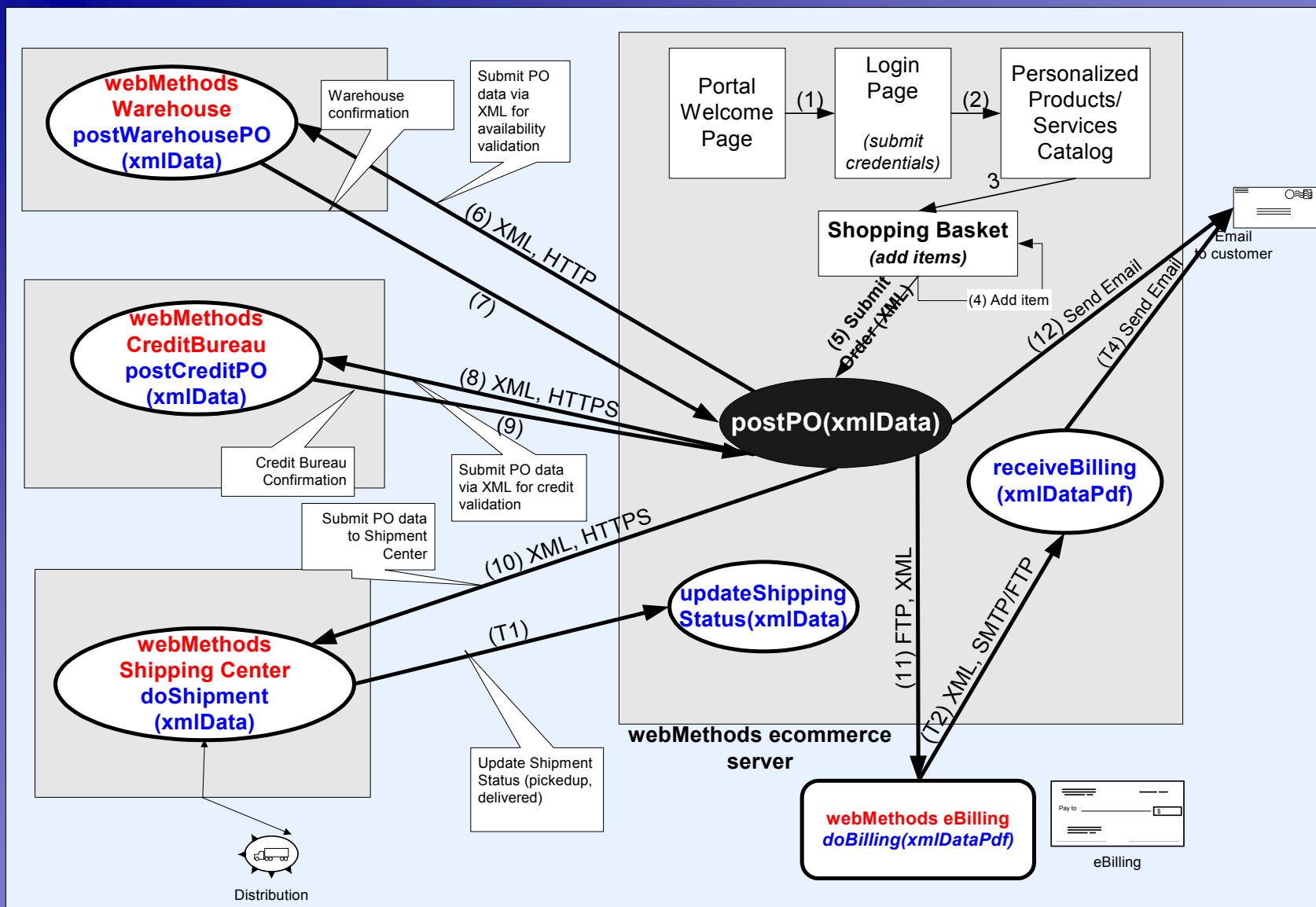


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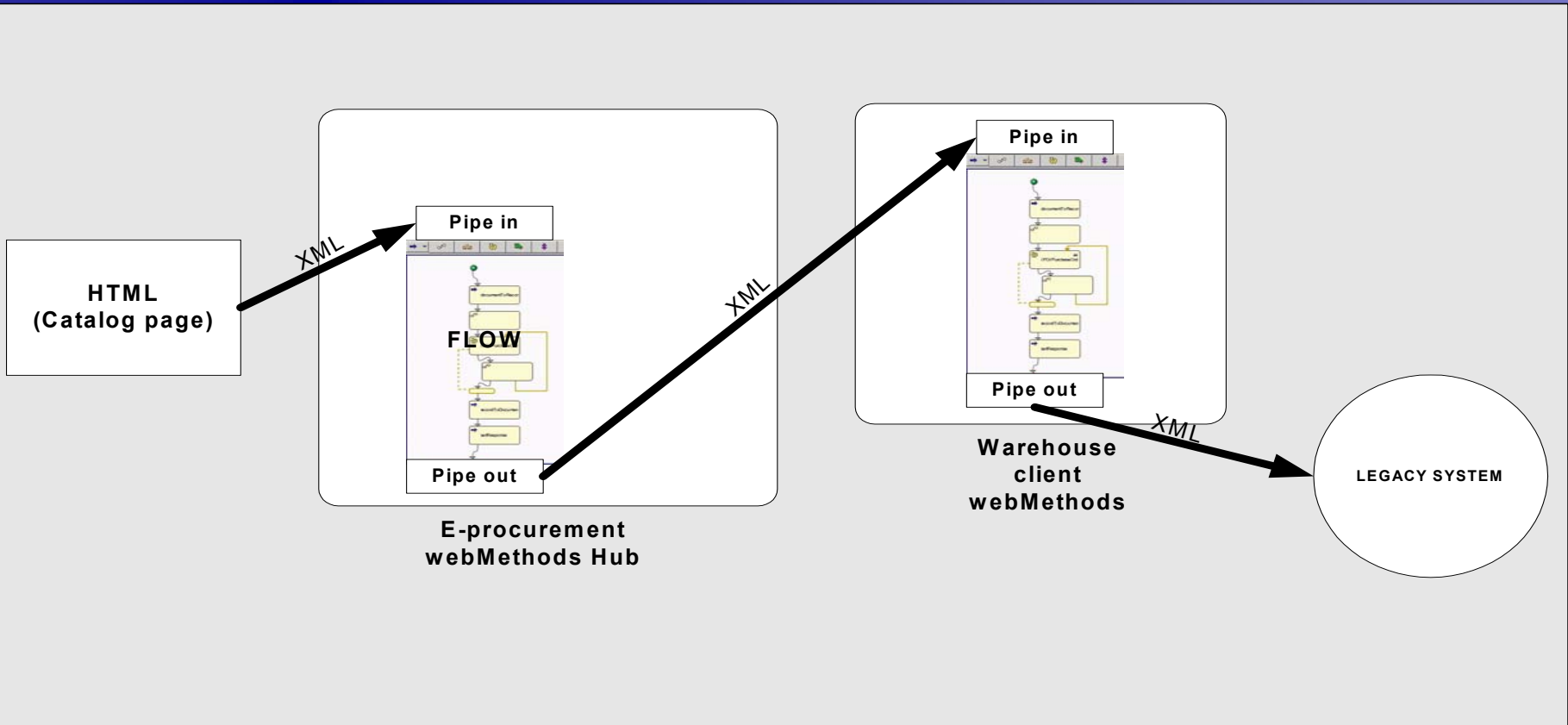
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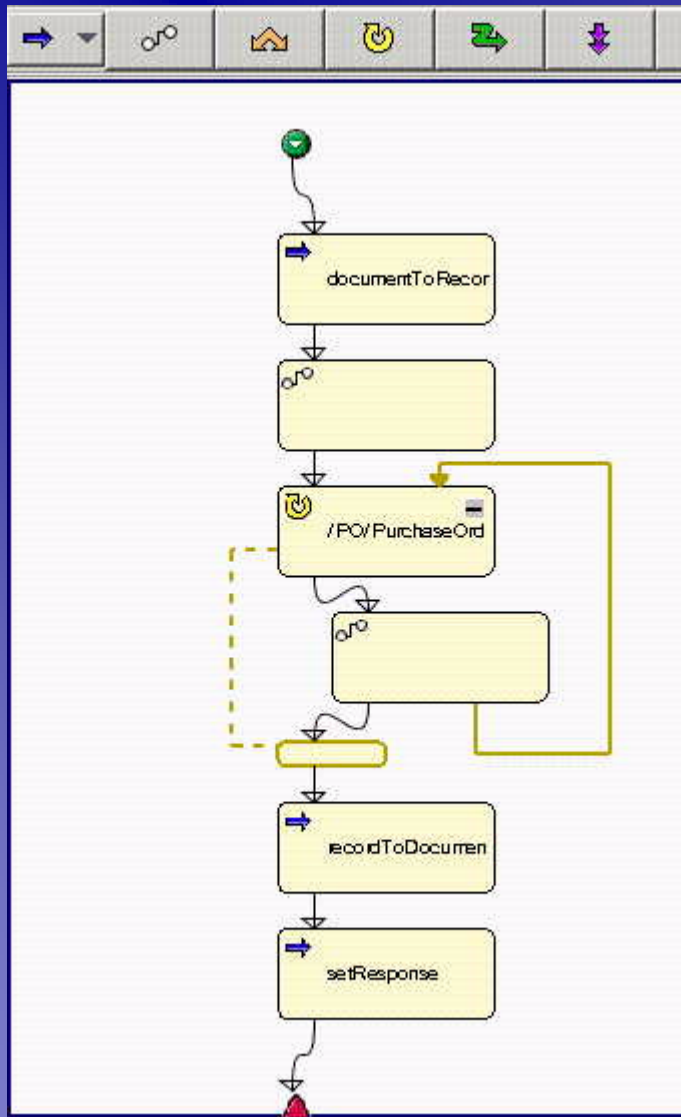
Detailed partners communication





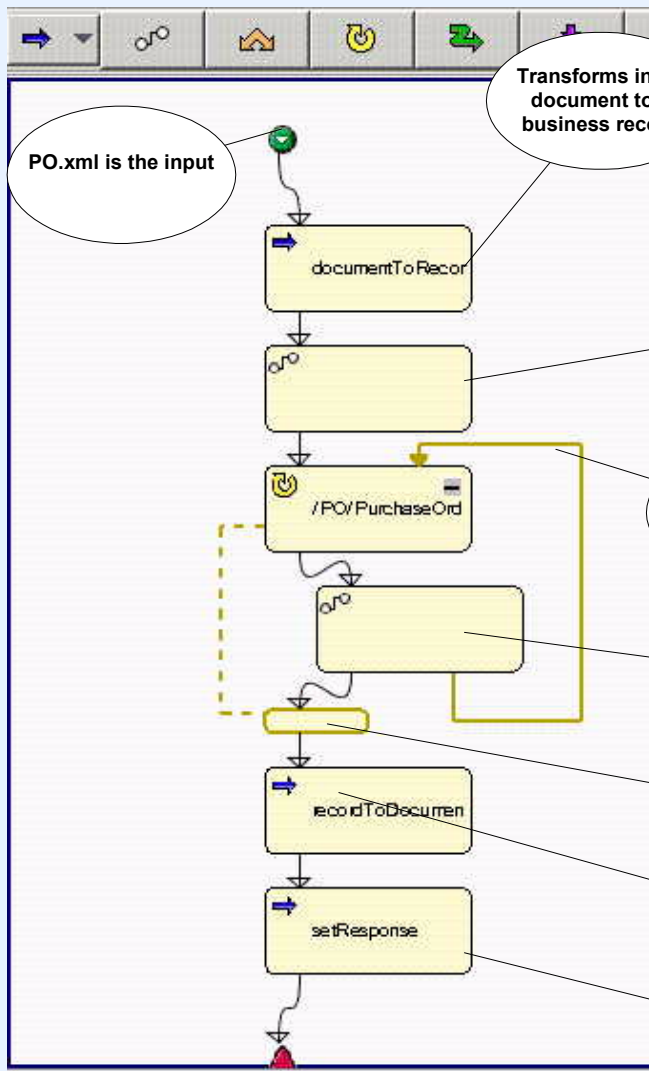
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Overview flow for
PurchaseOrder validation.





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Transforms input document to a business record

PO.xml is the input

documentToRecord

MappingPO.xml to POV.xml

Loop to validate at item by item

Decision code to set validation field for current item

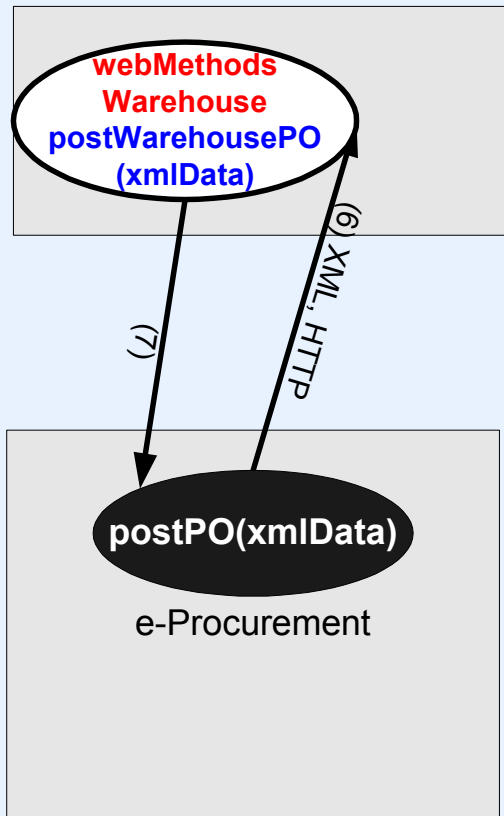
recordToDocument

setResponse

Next

Transforms Record back to Document

Set the response only to POV.xml



Detail validation

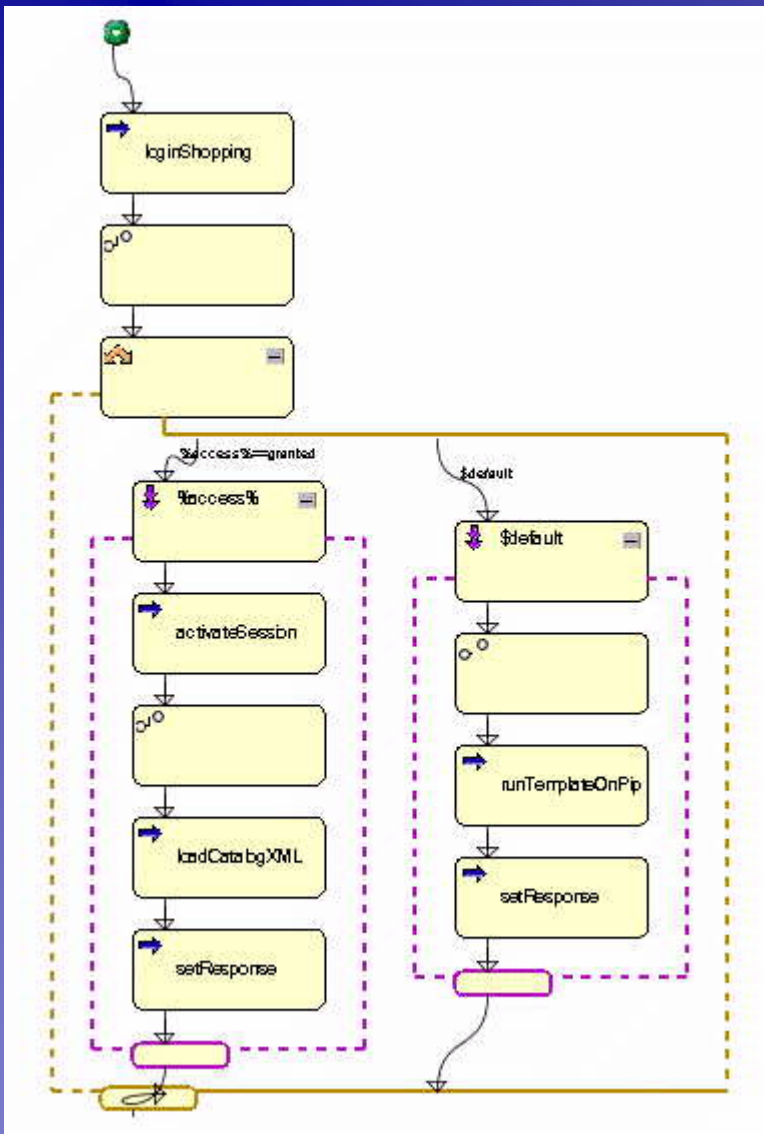


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Login Flow

(contains decision)

If credential Ok
loads catalog else
return to login page
with notification.





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The screenshot shows the B2B Developer interface for localhost:5555. The left pane displays a project tree with folders like Default, Test, Credit, LoadCatalog, OrderProduct, PurchaseOrder, Shipping, Util, Warehouse, eBilling, poSession, and WmDB. The 'PurchaseOrder' folder is expanded, showing sub-elements like PO DB, login, loginShopping, postPurchaseOrc, start, Password, PurchaseOrder, and PurchaseOrderV. The right pane shows the XML schema for 'PurchaseOrder', which includes elements like @version, @encoding, PurchaseOrder, Header, Credentials, ShoppingChart, and Item. The 'Item' element is expanded to show attributes: Name, Type, Qty, and Price.

XML schema
for
PurchaseOrder
which is posted
to Warehouse
for validate

(XML)



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The screenshot shows the B2B Developer application interface. The left pane displays a project tree with folders like Default, Test, Credit, LoadCatalog, OrderProduct, PurchaseOrder, Shipping, Util, Warehouse, eBilling, poSession, and WmDB. The 'PurchaseOrder' folder is expanded, showing sub-elements like POODB, login, loginShopping, postPurchaseOrc, start, Password, PurchaseOrder, and PurchaseOrderVa. The right pane shows the XML schema for 'PurchaseOrderValidate'. The schema is structured as follows:

```
<?xml version='1.0' encoding='UTF-8'>
  <PurchaseOrder>
    <Header>
      <ShopName type='string'></ShopName>
      <URLShop type='string'></URLShop>
    </Header>
    <Credentials>
      <User type='string'></User>
      <Password type='string'></Password>
      <HashCrypt type='string'></HashCrypt>
    </Credentials>
    <Credit>
      <Amount type='string'></Amount>
      <Approved type='boolean'></Approved>
    </Credit>
    <ShoppingChart>
      <Item>
        <Name type='string'></Name>
        <Type type='string'></Type>
        <Qty type='string'></Qty>
        <Price type='string'></Price>
        <Valid type='boolean'></Valid>
      </Item>
    </ShoppingChart>
  </PurchaseOrder>
</?xml>
```

XML schema for
PurchaseOrderValidate
which comes back
from the warehouse

(XML)



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Sample XML Purchase Order

py - [PurchaseOrderFull.xml *]

Edit Project XML DTD/Schema XSL Convert Table View Browser Window Help

XML

Comment PurchaseOrder B2B IT Seminar 22 March 2001

PurchaseOrder

Header

ShopName	eProcurement Online
URLShop	http://www.thebans.com/it

Credentials

User	john
Password	john
HashCrypt	*@w#""51429872302skjkkj+==[[[]p_]98213

Items

ShoppingChart

Item (3)

	Name	Type	Qty	Price
1	Beginning VB6 Application Development	6	1	26.55
2	Lucky Numbers DVD	7	3	52.98
3	Instant Dental Insurance	9	1	120.00



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```
SPY XML Spy - [PurchaseOrderFull.xml *]
File Edit Project XML DTD/Schema XSL Convert Table View Browser Window Help
[Icons]
This is the new provider of the XML Spy 3.0 previewer. Please use the "New" or "Of" Proc or to star wor with pro in XM
<?xml version="1.0" encoding="UTF-8"?>
<!--PurchaseOrder B2B IT Seminar 22 March 2001-->
<PurchaseOrder>
  <Header>
    <ShopName>eProcurement Online</ShopName>
    <URLShop>http://www.thebans.com/it</URLShop>
  </Header>
  <Credentials>
    <User>john</User>
    <Password>john</Password>
    <HashCrypt>*@w##`51429872302skjkkj+==[[[]p_]98213</HashCrypt>
  </Credentials>
  <Items>
    <ShoppingChart>
      <Item>
        <Name>Beginning VB6 Application Development </Name>
        <Type>6</Type>
        <Qty>1</Qty>
        <Price>26.55</Price>
      </Item>
      <Item>
        <Name>Lucky Numbers DVD</Name>
        <Type>7</Type>
        <Qty>3</Qty>
        <Price>52.98</Price>
      </Item>
      <Item>
        <Name>Instant Dental Insurance </Name>
        <Type>9</Type>
        <Qty>1</Qty>
        <Price>120.00</Price>
      </Item>
    </ShoppingChart>
  </Items>
</PurchaseOrder>
```

XML Sample

Text view of the XML file for purchase order

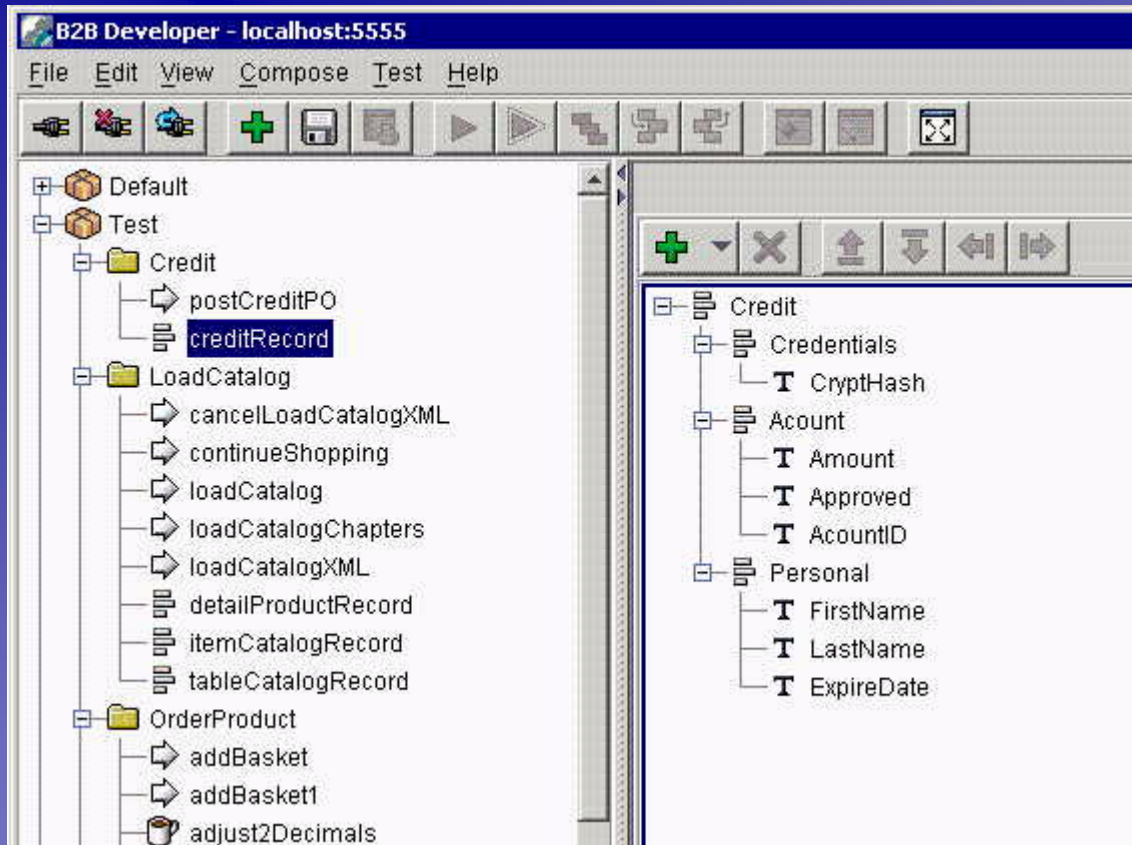


```
<?xml version="1.0" ?>
- <Credit>
  - <Credentials>
    <CryptHash>ert65fdg9789g879iowerfqwp56efoij32456ejifwef2477236</CryptHash>
  </Credentials>
  - <Account>
    <Amount>1031.90</Amount>
    <Approved>no</Approved>
    <AccountID>245345765567546</AccountID>
  </Account>
  - <Presonal>
    <FirstName>John</FirstName>
    <LastName>Salau</LastName>
    <Expire>032004</Expire>
  </Presonal>
</Credit>
```

XML Credit Card Response



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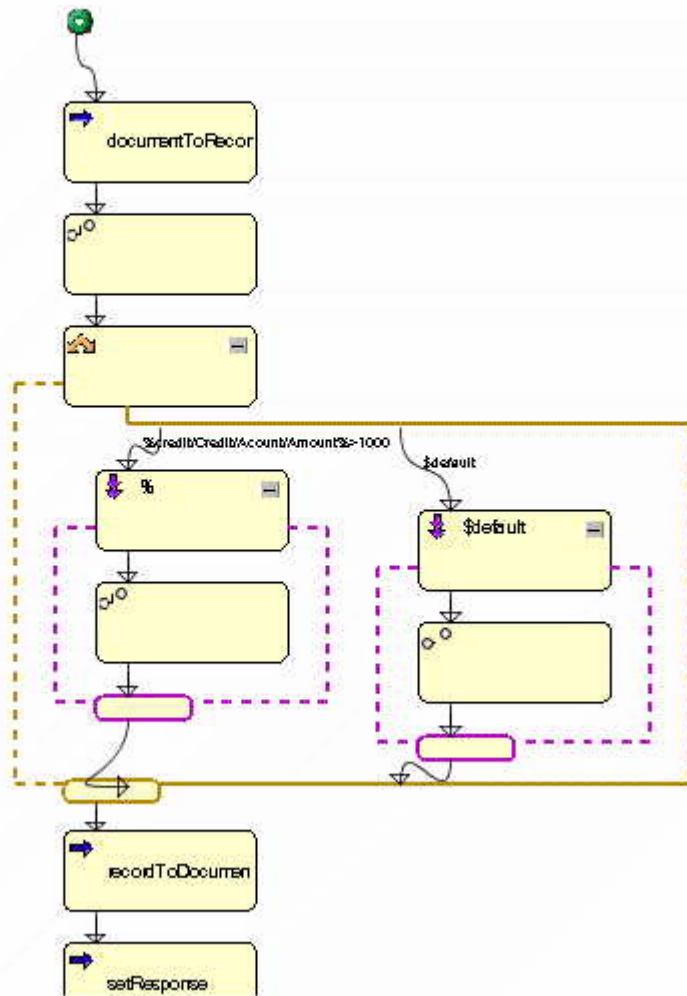


Credit record



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⇒ postCreditPO



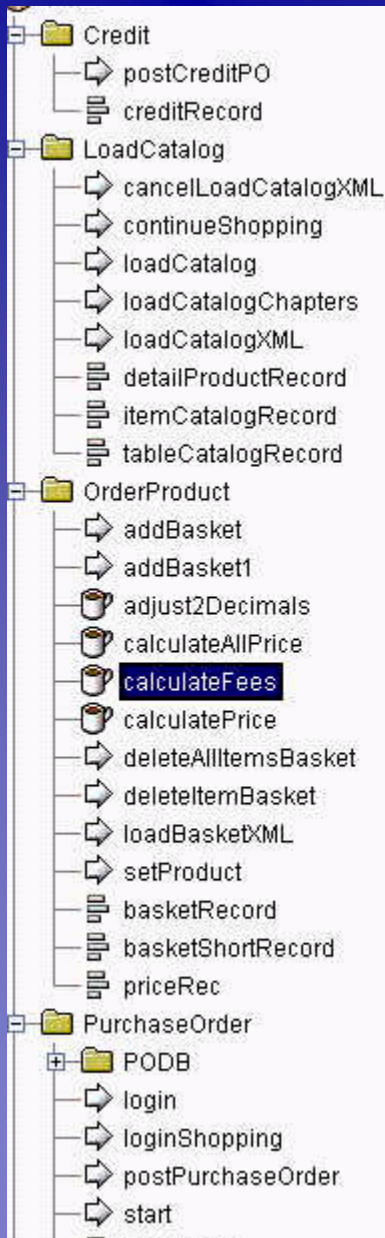
Credit validation flow

Flow includes
decision points

Flow picture was
generated *as HTML*
view



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```
public static final void calculateFees( IData pipeline ) throws ServiceException
{
    IDataHashCursor pipelineCursor = pipeline.getHashCursor();
    pipelineCursor.first("subtotal");
    Double subtotalD = Double.valueOf( (String) pipelineCursor.getValue() );
    double subtotal = subtotalD.doubleValue();

    double gst = subtotal*0.07;
    double pst = subtotal*0.08;
    double total = subtotal+gst+pst;

    String gstValue = (new Double(gst)).toString();
    gstValue = gstValue.substring(0, Math.min( gstValue.indexOf(".")+3, gstValue.length() ));

    pipelineCursor.last();
    pipelineCursor.insertAfter("GST", gstValue);

    String pstValue = (new Double(pst)).toString();
    pstValue = pstValue.substring(0, Math.min(pstValue.indexOf(".")+3, pstValue.length() ));

    pipelineCursor.insertAfter("PST", pstValue );

    String totalValue = (new Double(total)).toString();
    totalValue = totalValue.substring(0, Math.min(totalValue.indexOf(".")+3, totalValue.length() ));

    pipelineCursor.insertAfter("TOTAL", totalValue );

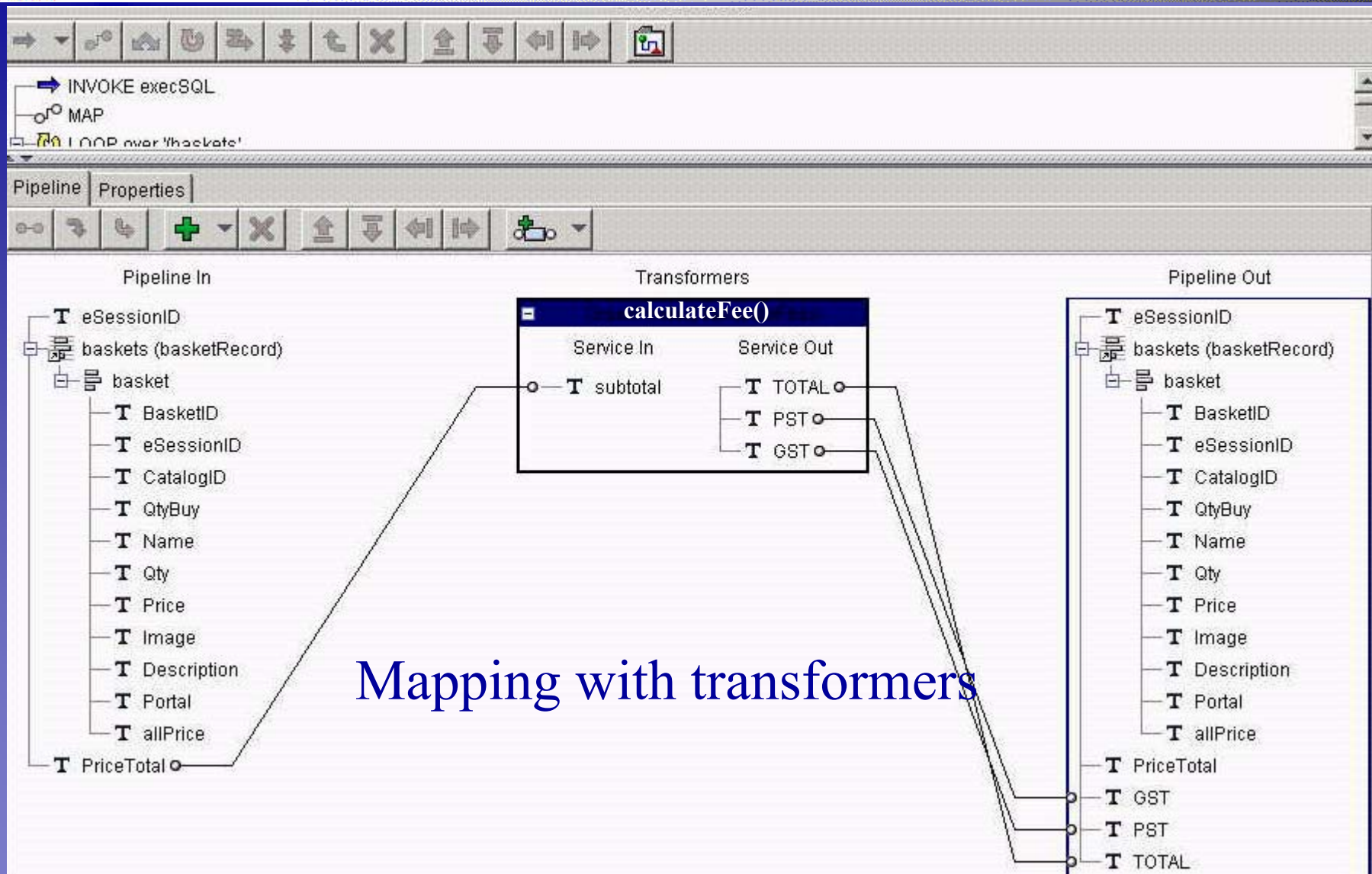
    pipelineCursor.destroy();

    return;
}
```

Sample Code for Java Service



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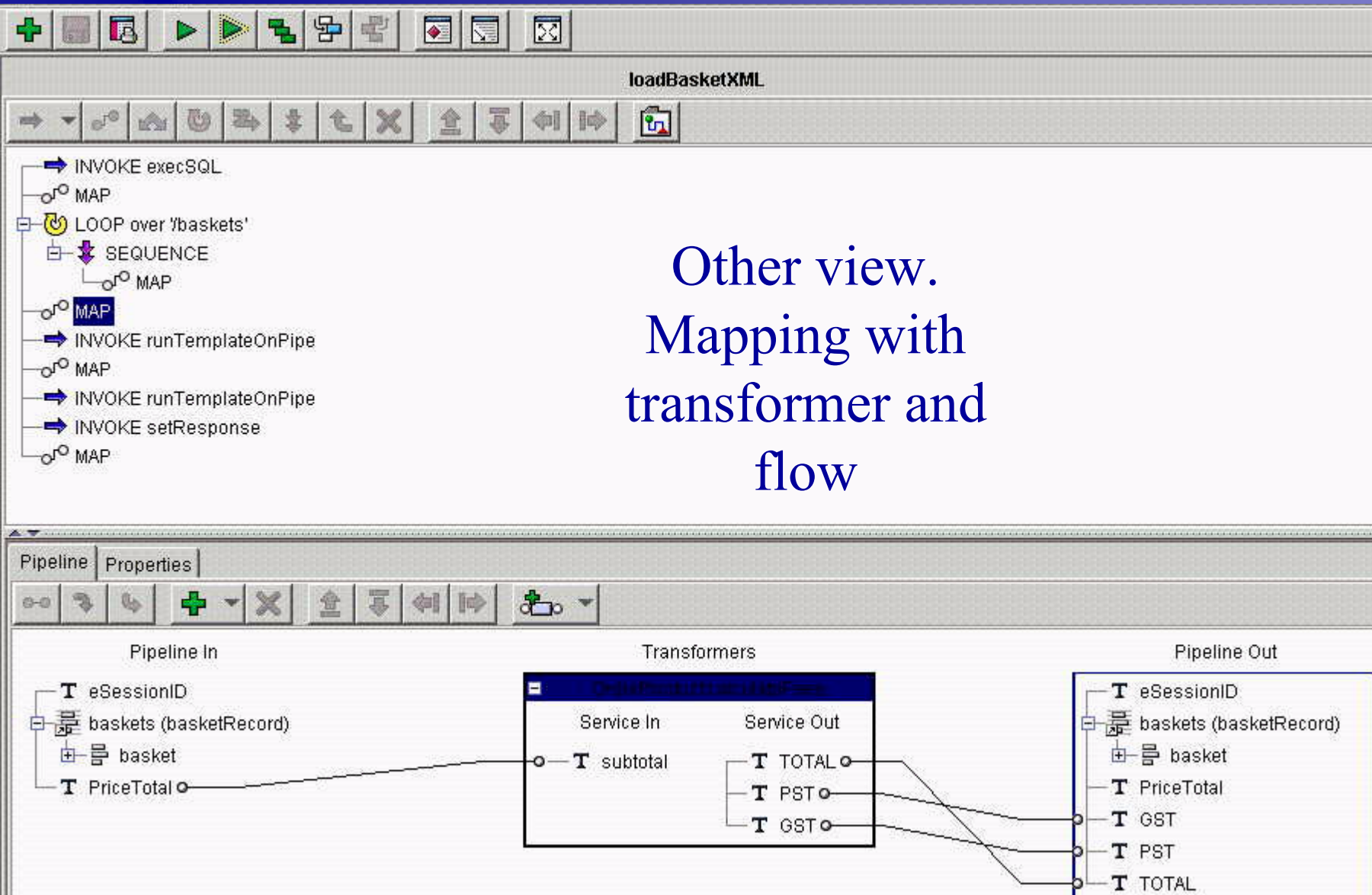


Mapping with transformers



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Other view.
Mapping with
transformer and
flow





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execSQL
sample
In order to
set values
for dbSQL

Input for '\$dbSQL'

\$dbSQL: `SELECT * FROM Basket, Catalog WHERE Basket.eSessionID=? AND Basket.CatalogID=Catalog.CatalogID`

Overwrite Pipeline Value

Perform Variable Substitution

OK Cancel Help

execSQL

Service In

- \$dbAlias
- \$dbURL
- \$dbUser
- \$dbPass
- \$dbDriver
- * \$dbConnection
- \$dbCatalog
- \$dbSchemaPattern
- \$dbSQL**
- \$dbProcessEsc
- \$dbProcessReporterTokens
- * \$dbParamValues
- \$dbParamNames
- \$dbParamTypes

Service Out

- sql
- paramsAsStrings
- \$rowCount
- results
 - \$updateCount
 - \$dbMessage
- \$updateCount
- \$dbMessage

Pipeline In

- eSessionID

Pipeline Out

- \$dbAlias
- eSessionID
- \$dbSQL
- \$dbParamNames
- \$dbParamTypes
- sql
- paramsAsStrings
- \$rowCount
- results
 - \$updateCount
 - \$dbMessage
- \$updateCount
- \$dbMessage



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Login Screen

The screenshot shows a web browser window with a menu bar (File, Edit, View, Favorites, Tools, Help). The page header includes the logo and navigation links: Job in Canada, IT Login, IT Register, and IT Event. A sidebar on the left contains the text "B2B IT Seminar 22 March 2001" and "eProcurement". The main content area features a "Login Form" with fields for "Username: john" and "Password: ****", and a "Login" button.

File Edit View Favorites Tools Help

 **IT@thebans.com**
E-procurement

[Job in Canada](#) [IT Login](#) [IT Register](#) [IT Event](#)

B2B IT Seminar
22 March 2001

eProcurement

Login Form

Username:

Password:



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IT@thebans.com

E-procurement Page

Job in Canada IT Login IT Register IT Event

B2B IT Seminar
22 March 2001

eProcurement

Catalog Products

[View Basket](#)

[Checkout](#)



Title: Compaq Presario 7947

Internet PC

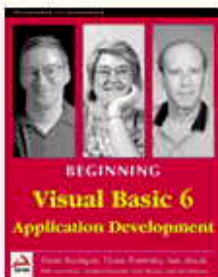
Description: 600 MHz AMD ATM Processor, 128MB SynchDRAM, 30.0GB Ultra DMA, 16MB DS III S540 Graphics, 56K Modem, DVD-ROM, CD-RW Drive

Price: \$ 560.0

Qty: 100

Section: Computers

[Buy](#)



Title: Beginning VB6 Application Development

Description: Created by Canadian senior analyst Pierre Boutquin, this manual is for aspiring and intermediate VB programmers

Price: \$ 26.55

Qty: 100

Section: Books

[Buy](#)


Multi Vendor Products/ Services Catalog





Synchronized with warehouses 1 time per day



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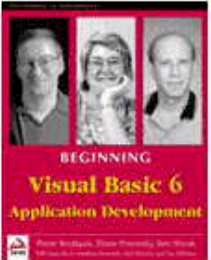
File Edit View Favorites Tools Help

 **IT@thebans.com**
E-procurement

 Job in Canada  IT Login  IT Register  IT Event

B2B IT Seminar
22 March 2001

eProcurement



Name: Beginning VB6 Application Development Price: \$ 26.55
Created by Canadian senior analyst Pierre
Qty: 100
Description: Boutquin, this manual is for aspiring and
intermediate VB programmers Section: 100

Order quantity
a
product or
a
service



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IT@thebans.com

E-procurement

Job in Canada IT Login IT Register IT Event

Basket
preview

B2B IT Seminar
22 March 2001

eProcurement

Basket Shopping

Delete All

Continue Shopping

ID	NAME	QTY	PRICE	Delete
6	Beginning VB6 Application Development	1	26.55	Delete
7	Lucky Numbers	3	52.98	Delete
9	Instant Dental Insurance	1	120.0	Delete

Subtotal: 199.53

GST 7% 15.96

PST 8% 13.96

TOTAL 229.45

Delete All

Continue Shopping



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IT@thebans.com

E-procurement

Job in Canada IT Login IT Register IT Event

eProcurement

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22 March 2001

Basket Shopping Approved

Delete All

Continue Shopping

ID	NAME	QTY	PRICE	WH VALID
5	Compaq Presario 7947 Internet PC	1	560.0	true
6	Beginning VB6 Application Development	3	79.65	true
7	Lucky Numbers	1	17.66	true
9	Instant Dental Insurance	2	240.0	true

Subtotal: 897.31
 GST 7% 62.81
 PST 8% 71.78
 TOTAL 1031.90

Delete All

Continue Shopping

Authorized Sales Agent for:
<http://www.thebans.com/eProcurement>
 903755-0000



ENTER SHIPMENT & CREDIT CARD INFORMATION

First Name:

Shopping basket approved by warehouses



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ENTER SHIPMENT & CREDIT CARD INFORMATION

First Name:

Last Name:

Address:

City:

State/Province:

ZIP/Postal code:

Phone Number:

Country:

E-mail address:

Description of Product:

Credit Card Number:

Expires:

Type of Credit Card:

Name on Card:

Thank you for using <http://www.thebans.com/eProcurement>!

Shipment and
Credit info



OTHER COMPETITORS:

www.extricity.com

www.netfish.com (IONA)

www.sterlingcommerce.com

www.seebeyond.com



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QUESTIONS AND ANSWERS...

Next Speaker: Jason Greenlees



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THANK YOU ALL!

www.TheBans.com