Chapter Five Implementation

In this research, a prototype system of the business process model is implemented. This prototype demonstrates that the business process model of this research is feasible. In this chapter, the prototype system architecture and prototype system design is described in the following sections.

5.1 Prototype System Architecture

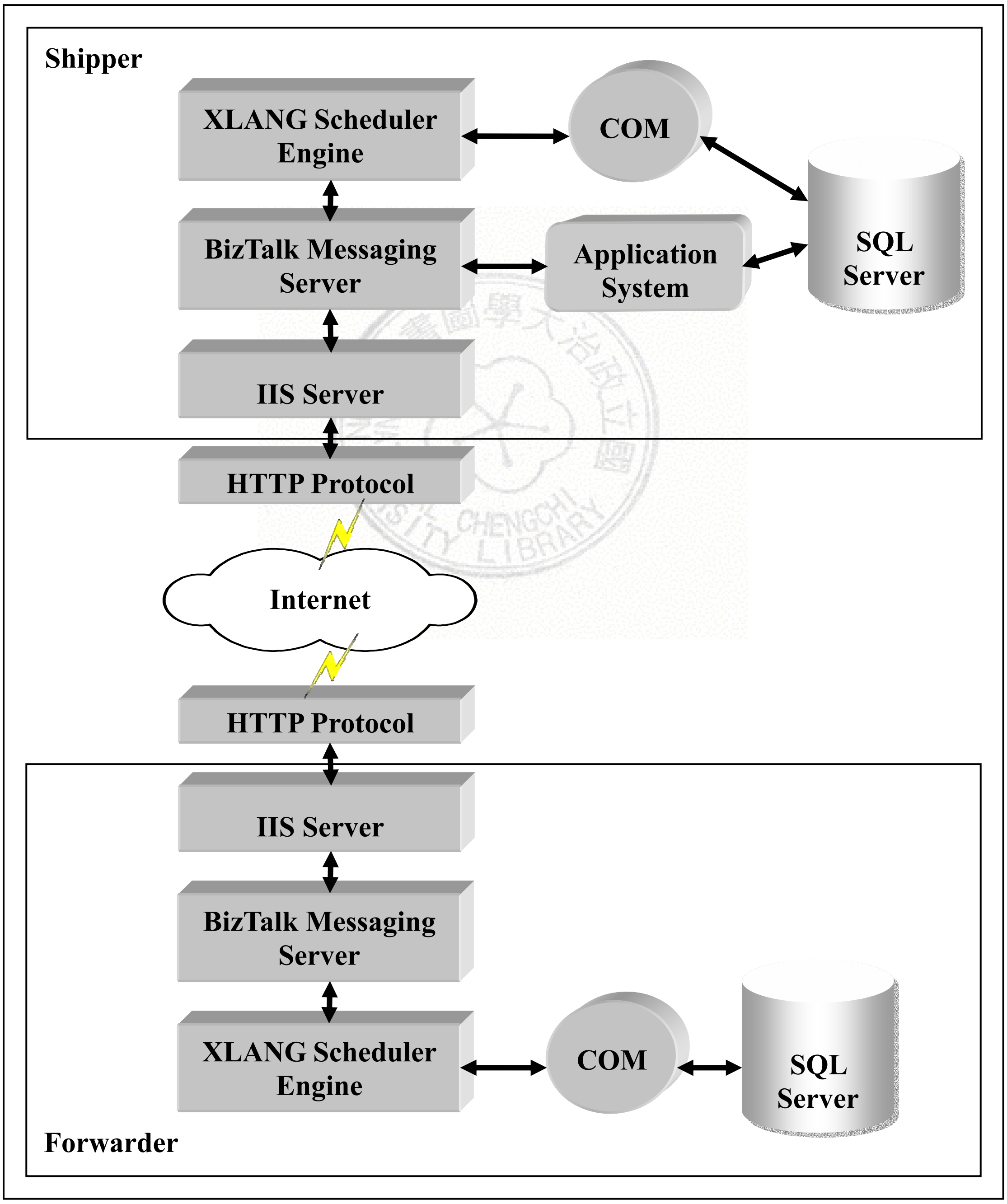


Figure 5. 1 Prototype System Architecture

In our implementation, Microsoft Internet Information Server (IIS Server) is used as the web server and Microsoft SQL Server as the database server. BizTalk Messaging Server is used to deliver and manage interchange of business document. XLANG Scheduler Engine is a business process engine used to execute the modeled business processes. COM object and application system are used as internal application systems of organizations, and they can retrieve data from database and insert data into database.

In this architecture, Microsoft BizTalk Server provides an application infrastructure that enables businesses to implement remote data interchange and orchestrates business processes both within and between businesses. BizTalk Server addresses the two key aspects of any document exchange.

1. BizTalk Messaging Services provides the ability to send business documents in a secure and reliable manner. It is used to send and receive messages between two trading partners, and between business applications and XLANG schedules within business.

2. BizTalk Orchestration Services represents the top layer of BizTalk Server. It is used to design business processes and create an XLANG schedule that manages the overall business logic.

Since BizTalk Messaging Services manages the delivery and receipt of messages with trading partners, and BizTalk Orchestration Services manages the XLANG schedule instances that manage the business process, there is need to closely integrate the two services. The relationship between BizTalk Messaging Services and XLANG schedule is shown as below.

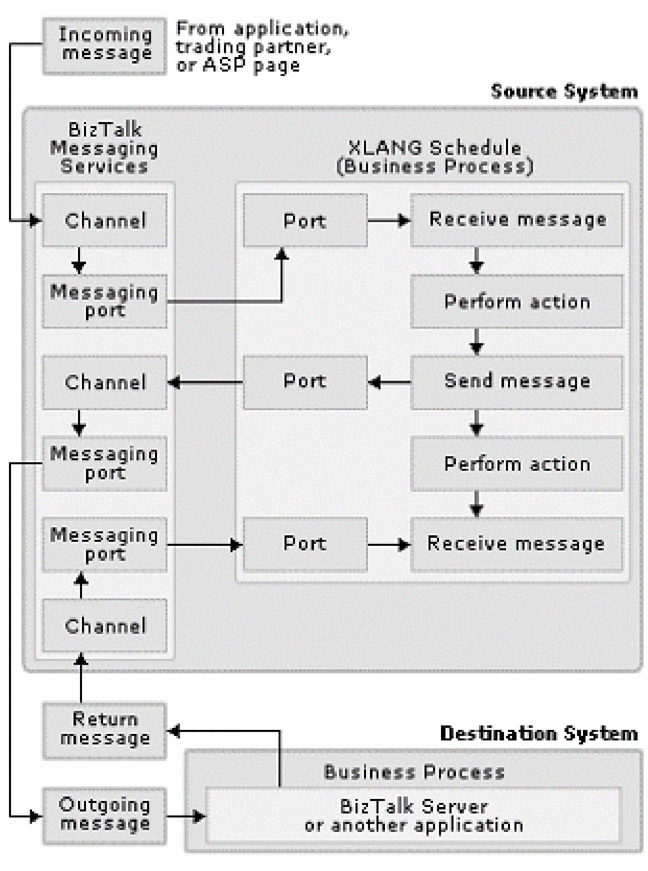


Figure 5. 2 Relationship between BizTalk Messaging Services and XLANG Schedule

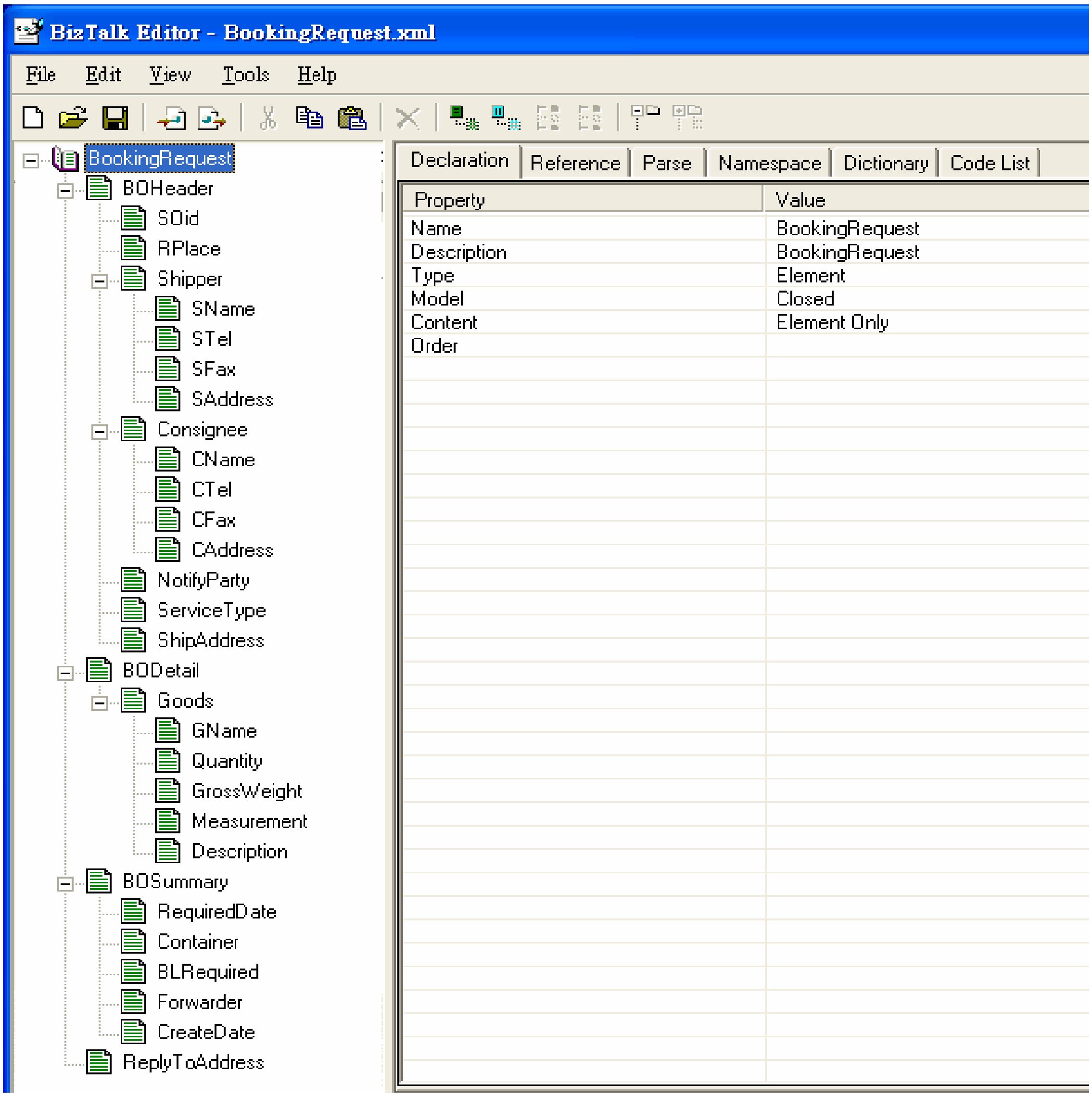
Data source: Microsoft Corporation, 2001

A messaging port in BizTalk Messaging Services defines only the destination of the messages and must be associated with a channel, which defines the source of the messages. In XLANG schedule, a port that implements the BizTalk Messaging technology can be configured either to send messages to or receive messages from BizTalk Messaging Services.

5.2 Prototype System Design

5.2.1 Business Document Specifications

To conduct data and document interchange over collaborative commerce, businesses need to choose a lingua franca in which to read and write these documents. This common language is exactly XML. We use BizTalk Editor to create elements and attributes of business document, to define data types for individual element and attribute, and to visualize a document's format. In this research, we define four XML Schemas of business documents. They are BookingRequest, BookingResponse, CancellationRequest, and CancellationResponse. The BookingRequest specification is shown as figure 5.3. All the XML document specifications are in the Appendix A. Once created, the specification needs to be added to the BizTalk Server WebDAV repository so that the BizTalk server can retrieve it.



- BookingRequest
  - BOHeader
    - SOid
    - RPlace
    - Shipper
      - SName
      - STel
      - SFax
      - SAddress
    - Consignee
      - CName
      - CTel
      - CFax
      - CAddress
    - NotifyParty
    - ServiceType
    - ShipAddress
  - BODetail
    - Goods
      - GName
      - Quantity
      - GrossWeight
      - Measurement
      - Description
  - BOSummary
    - RequiredDate
    - Container
    - BLRequired
    - Forwarder
    - CreateDate
  - ReplyToAddress

Property	Value
Name	BookingRequest
Description	BookingRequest
Type	Element
Model	Closed
Content	Element Only
Order	

Figure 5. 3 BookingRequest Specification

5.2.2 BizTalk Orchestration Configuration

Based on the Booking-shipper-to-forwarder transaction in the Ocean Freight Forwarder Export and Import Model, we use BizTalk Orchestration designer to design the detail flow chart for system implementation shown as follows. There are two functions in the B2B application system, Booking and Cancellation.

At the shipper side of the exchange, the scenario of shipping XLANG schedule is explained below:

1. Receiving a booking request from internal shipping system. The booking request is sent to BizTalk Messaging, and is transferred to the new XLANG Schedule instance.
2. Sending the message from XLANG Schedule instance through BizTalk Messaging to the forwarder and then waiting to receive booking response.
3. Receiving a booking response from the forwarder through BizTalk Messaging to the original instance of the schedule.
4. Sending the message from XLANG Schedule to WrtieResponse COM object.
5. In the WrtieResponse COM object, if shipping order number of this booking response is 0, it means forwarder rejects the booking request and the status of booking request in database is written as rejected. If booking response includes shipping order number, vessel, voyage number, port of loading, estimated time of departure, port of discharge, and estimated time of arrival, it means the forwarder accepts this booking request and the information will be written into database.

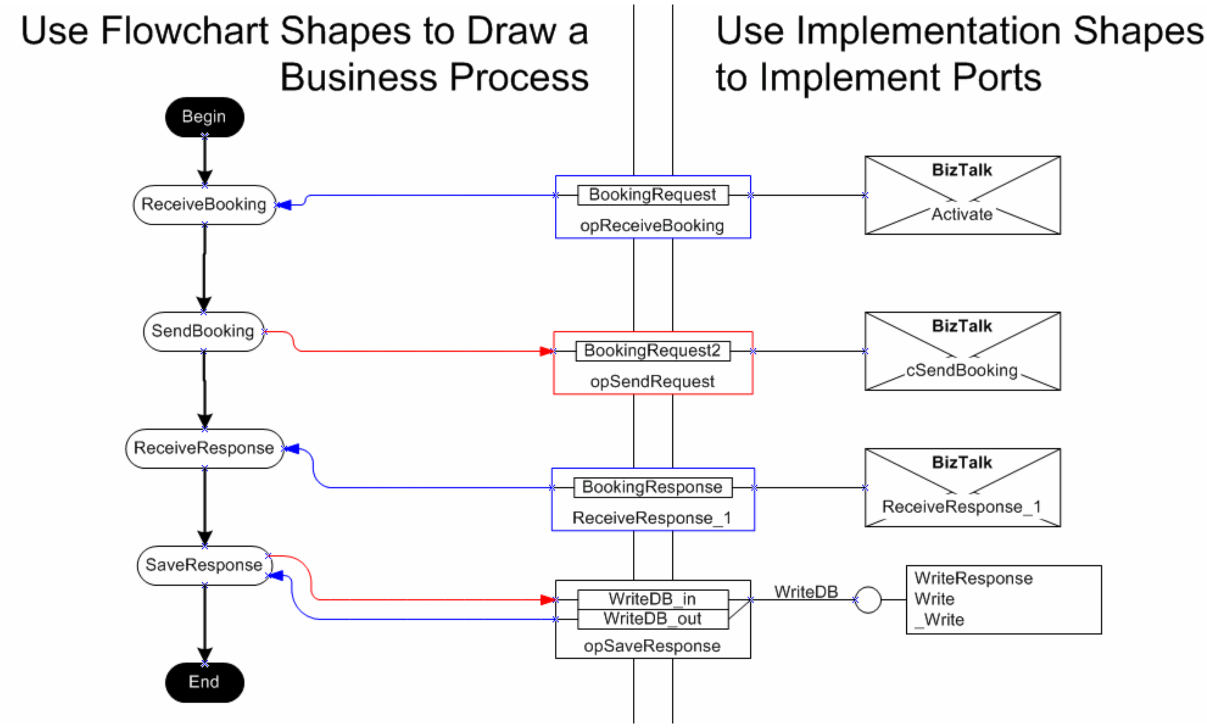
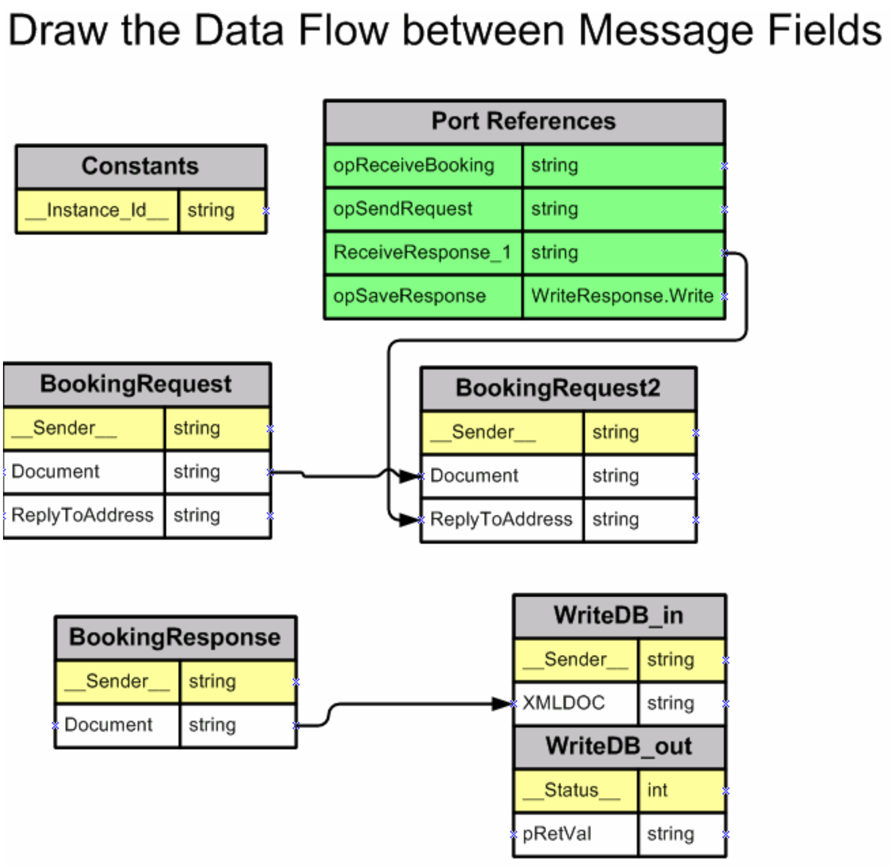


Figure 5. 4 Shipping XLANG Schedule

A schedule also consists of a data view in which the flow of data through a schedule is specified in terms of links between two messages. Therefore, we connect the document field of BookingRequest to the document field of BookingRequest2, and the document field of BookingResponse to the XMLDOC field of WriteDB_in.

To have a message returned to a running business process (XLANG schedule instance) in response to a message that is sent, we must store information in the outgoing message. This information is used to deliver a return message to the same XLANG schedule instance. In the outgoing message specification, BookingRequest2.xml, we have created a field called ReplyToAddress. In data page of BizTalk Orchestration designer, we send the ReceiveResponse_1 port string to the ReplyToAddress field of the BookingRequest2 message.



Draw the Data Flow between Message Fields

Constants	
__Instance_Id__	string

Port References	
opReceiveBooking	string
opSendRequest	string
ReceiveResponse_1	string
opSaveResponse	WriteResponse.Write

BookingRequest	
__Sender__	string
Document	string
ReplyToAddress	string

BookingRequest2	
__Sender__	string
Document	string
ReplyToAddress	string

BookingResponse	
__Sender__	string
Document	string

WriteDB_in	
__Sender__	string
XMLDOC	string

WriteDB_out	
__Status__	int
pRetVal	string

Figure 5. 5 Data View of Shipping XLANG Schedule

The scenario of Cancellation_shipper XLANG schedule is explained below:

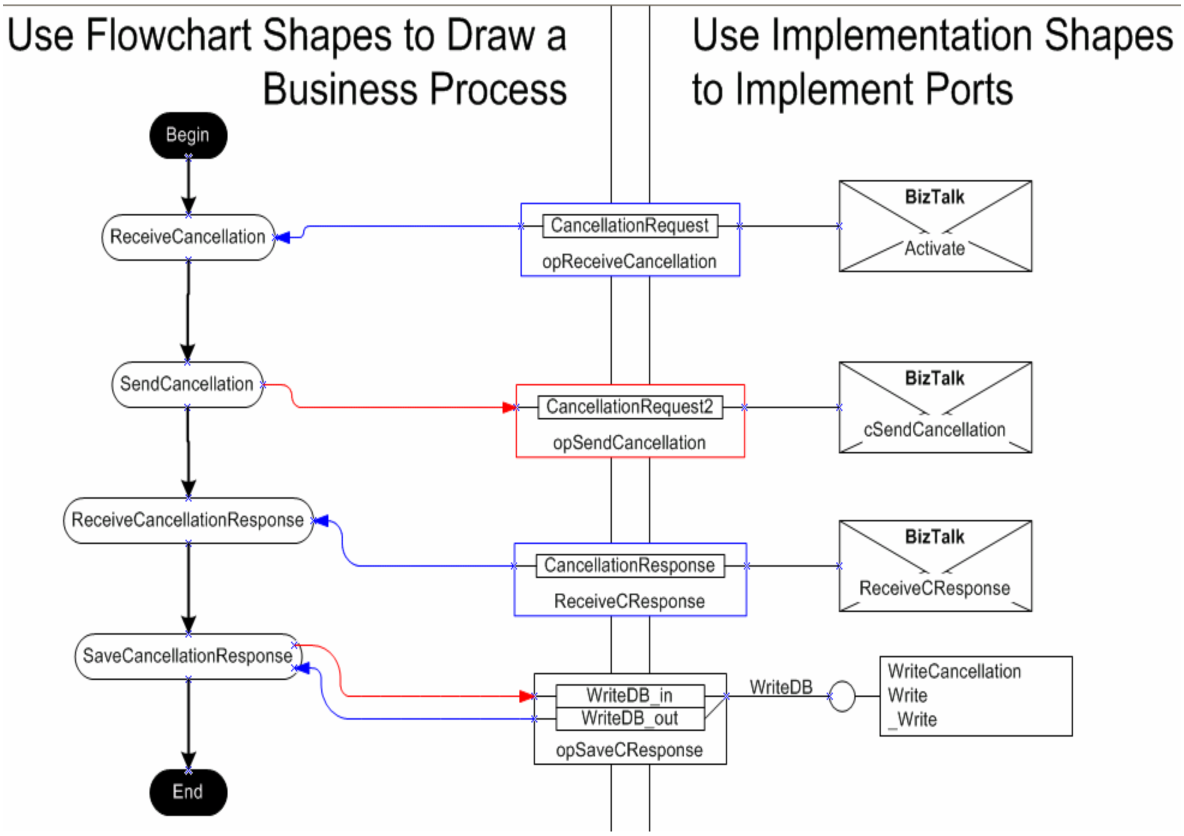
1. Receiving a cancellation request from internal shipping system. The cancellation request is sent to BizTalk Messaging, and is transferred this message to the new XLANG Schedule instance.

2. Sending the message from XLANG Schedule instance through BizTalk Messaging to the forwarder and then waiting to receive cancellation response.

3. Receiving a cancellation response from the forwarder through BizTalk Messaging to the original instance of the schedule.

4. Sending the message from XLANG Schedule to WrtieCancellation COM object.

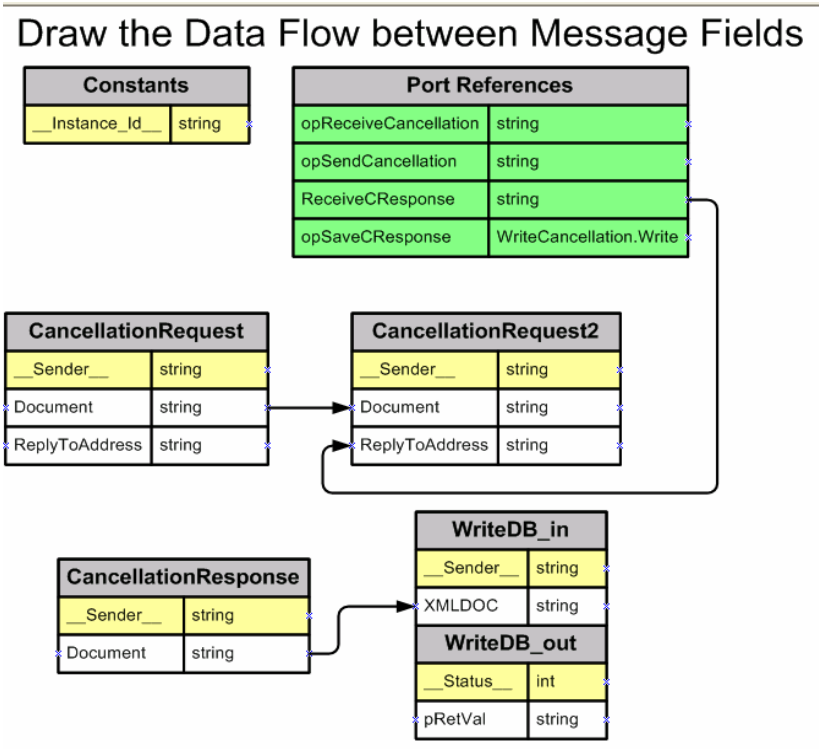
5. In the WrtieCancellation COM object, if the status of this cancellation response is “Canceled”, it means the forwarder accepts this cancellation request and the original booking record will be deleted in the shipper’s database.



Use Flowchart Shapes to Draw a Business Process

Use Implementation Shapes to Implement Ports

Figure 5. 6 Cancellation_Shipper XLANG Schedule



Draw the Data Flow between Message Fields

Constants	
__Instance_Id__	string

Port References	
opReceiveCancellation	string
opSendCancellation	string
ReceiveCResponse	string
opSaveCResponse	WriteCancellation.Write

CancellationRequest	
__Sender__	string
Document	string
ReplyToAddress	string

CancellationRequest2	
__Sender__	string
Document	string
ReplyToAddress	string

CancellationResponse	
__Sender__	string
Document	string

WriteDB_in	
__Sender__	string
XMLDOC	string
WriteDB_out	
__Status__	int
pRetVal	string

Figure 5. 7 Data View of Cancellation_Shipper XLANG Schedule

At the forwarder side of the exchange, the scenario of forwarding XLANG schedule is explained below:

1. Receiving a booking request through BizTalk Messaging from the shipper, and transferring this message to the new XLANG Schedule instance.
2. Sending the message from XLANG Schedule instance to WriteDB COM object. In the COM object, a suitable sailing date and related port information will be picked out according to the shipper's booking request and sailing schedule. Then, creating a booking response and returning it to the schedule.
3. Sending the booking response from XLANG Schedule through BizTalk Messaging back to the shipper.

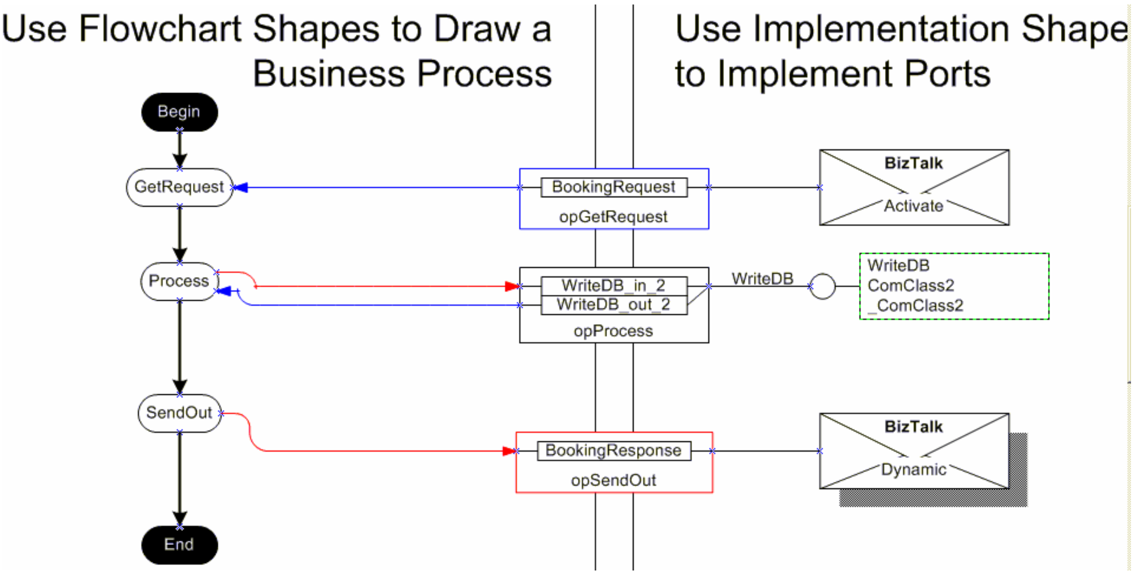
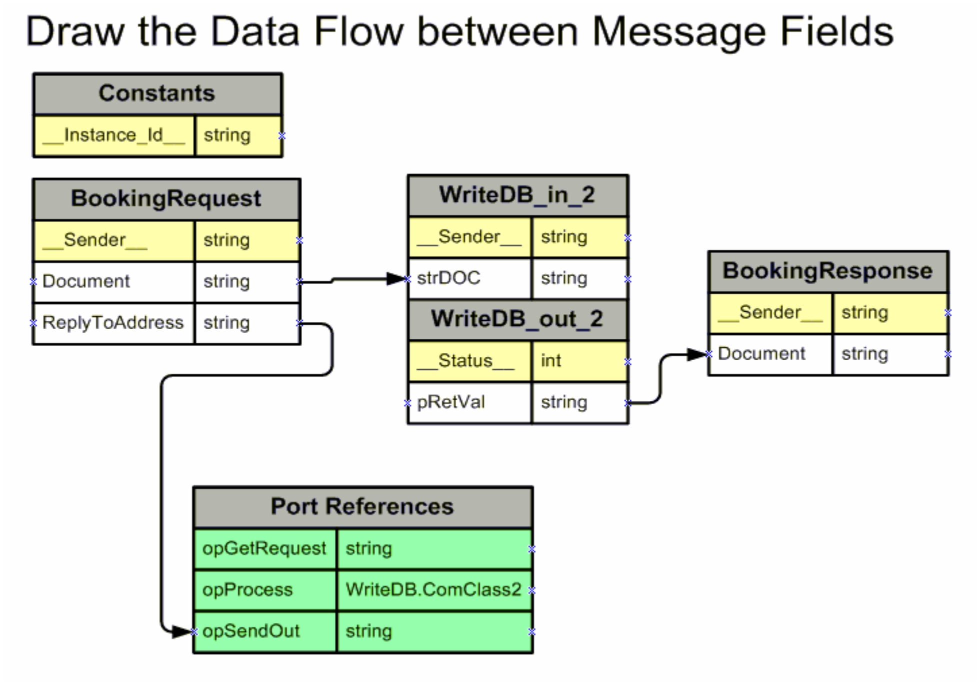


Figure 5. 8 Forwarding XLANG Schedule

Turn to the data view and connect the document field of BookingRequest to the strDOC field of WriteDB_in_2, and the pRetval field of WrtieDB_out_2 to the Document field of BookingResponse.

To deliver a return message to the same XLANG schedule instance of shipper, the most important data flow is from the ReplyToAddress of the incoming message to the dynamic port opSendOut. It transfers the HTTP URL stored in the BookingRequest message to the dynamic port so that BizTalk knows which particular instance of the shipping business process to return the message.



Draw the Data Flow between Message Fields

Constants	
__Instance_Id__	string

BookingRequest	
__Sender__	string
Document	string
ReplyToAddress	string

WriteDB_in_2	
__Sender__	string
strDOC	string

WriteDB_out_2	
__Status__	int
pRetVal	string

BookingResponse	
__Sender__	string
Document	string

Port References	
opGetRequest	string
opProcess	WriteDB.ComClass2
opSendOut	string

Figure 5. 9 Data View of Forwarding XLANG Schedule

The scenario of Cancellation_forwarder XLANG schedule is explained below:

1. Receiving a cancellation request through BizTalk Messaging from shipper, and transferring this message to the new XLANG Schedule instance.
2. Sending the message from XLANG Schedule instance to WriteDB COM object. In the COM object, this record will be deleted. Then, creating a cancellation response and returning it to the schedule.
3. Sending the cancellation response from XLANG Schedule through BizTalk Messaging back to the shipper.

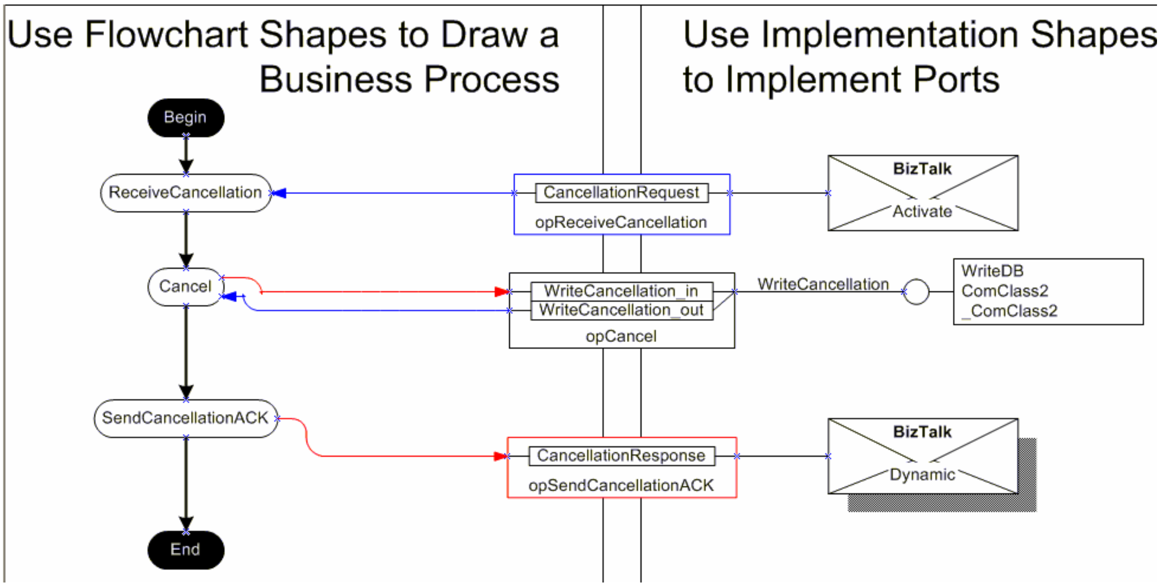
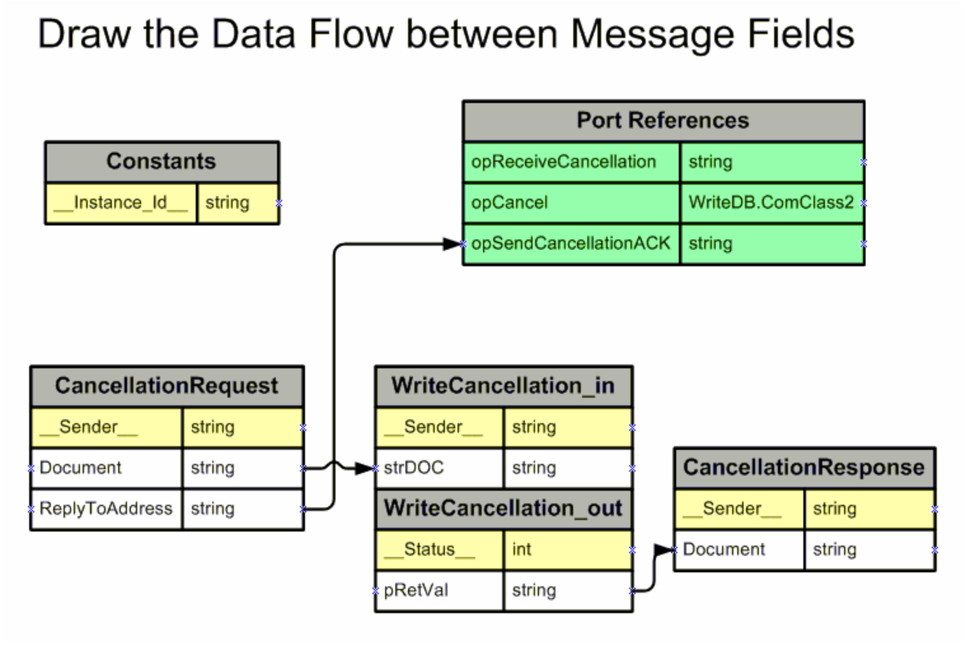


Figure 5. 10 Cancellation_Shipper XLANG Schedule


Draw the Data Flow between Message Fields

Constants	
__Instance_Id__	string

Port References	
opReceiveCancellation	string
opCancel	WriteDB.ComClass2
opSendCancellationACK	string

CancellationRequest	
__Sender__	string
Document	string
ReplyToAddress	string

WriteCancellation_in	
__Sender__	string
strDOC	string

WriteCancellation_out	
__Status__	int
pRetVal	string

CancellationResponse	
__Sender__	string
Document	string

Figure 5. 11 Data View of Cancellation_Shipper XLANG Schedule

5.2.3 BizTalk Messaging Service Configuration

To deliver the document to a destination, we define the messaging port in BizTalk Messaging Services. To identify the source organization or application that has sent out the document, we also define channel through which this document is delivered. Due to the space limitation, the following configuration information is all about booking scenario; cancellation configuration information is similar to the booking scenario.

1. Shipper Side

a. Configuring a message port to shipping schedule

Table 5. 1 Configuration of Message Port to Shipping Schedule

Message Port Wizard Item	Setting value
Port To	Application
Name	pReceiveBooking
Schedule moniker: [Sked://]	C:\Documents and Settings\hrwu\MyDocuments\Visual Studio Projects\ShippingSystem2\XMLFiles\Shipping.skx
Port Name (Orchestration)	opReceiveBooking

b. Configuring a channel from shipping system to shipping schedule messaging port

Table 5. 2 Configuration of Channel from Shipping System to Messaging Port

Cannel Wizard Item	Setting value
Name	cReceiveBooking
Source Application Name	ShippingSystem2
Inbound document definition name	BookingRequest
Outbound document definition name	BookingRequest

c. Configuring a message port to HTTP

Table 5. 3 Configuration of Message Port to HTTP

Message Port Wizard Item	Setting value
Port To	Organization
Name	pSendBooking
Organization Name	Forwarder
Primary Transport	http://140.119.75.32/OrderRecv.asp

d. Configuring a channel to HTTP port

Table 5. 4 Configuration of Channel to HTTP Port

Cannel Wizard Item	Setting value
Name	cSendBooking
Source	XLANG Schedule

Inbound document definition name	BookingRequest
Outbound document definition name	BookingRequest

e. Configuring a message port to correlate back to shipping schedule

Table 5. 5 Configuration of Message Port to Correlate Back to Shipping Schedule

Message Port Wizard Item	Setting value
Port To	Application
Name	pReceiveResponse_1
Running XLANG Schedule	Running XLANG Schedule

f. Configuring a channel from the ASP page to shipping schedule

Table 5. 6 Configuration of Channel from ASP Page to Shipping Schedule

Cannel Wizard Item	Setting value
Name	ReceiveResponse_1
Source	Forwarder
Inbound document definition name	BookingResponse
Outbound document definition name	BookingResponse

2. Forwarder Side

a. Configuring a message port to forwarding schedule

Table 5. 7 Configuration of Message Port to Forwarding Schedule

Message Port Wizard Item	Setting value
Port To	Application
Name	pReceiveRequest
Schedule moniker: [Sked://]	C:\will\ForwardingSystem\Forwarding.skx
Port Name (Orchestration)	opGetRequest

b. Configuring a channel from ASP page to forwarding schedule messaging port

Table 5. 8 Configuration of Channel from ASP Page to Forwarding Schedule Messaging Port

Cannel Wizard Item	Setting value
Name	cReceiveRequest
Source Application Name	OrderRecv
Inbound document definition name	BookingRequest
Outbound document definition name	BookingRequest

c. Configuring an open destination message port

Table 5. 9 Configuration of Open Destination Message Port

Message Port Wizard Item	Setting value
Port To	Organization
Name	pSendOut_1
Destination Organization	Open Destination

d. Configuring a channel to the open destination message port

Table 5. 10 Configuration of Channel to Open Destination Message Port

Cannel Wizard Item	Setting value
Name	cSendOut_1
Source	XLANG Schedule
Inbound document definition name	BookingResponse
Outbound document definition name	BookingResponse

5.2.4 Application System and COM Object

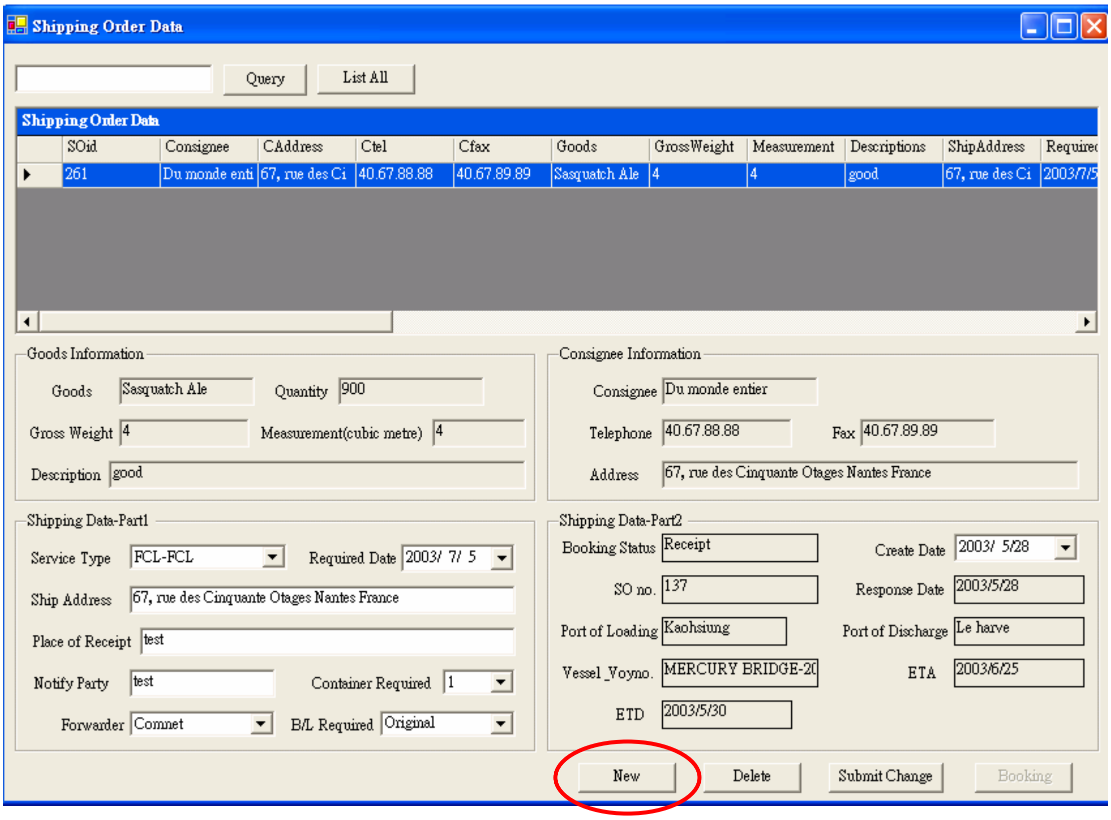
At the shipper side, we develop a shipping system to send in the booking requests and cancellation requests. The ASP page receiveresponse.asp receives the booking responses and cancellation responses, parses the incoming document, queue path, and channel, and delivers it via BizTalk Messaging back to the running schedule instance. We also develop WrtieResponse and WrtieCancellation COM objects to write booking responses and cancellation responses to the shipper’s database.

At the forwarder side, the ASP page OrderRecv.asp receives the booking requests and delivers it via BizTalk Messaging to initiate a new schedule. The ASP page CancellationRecv.asp receives the cancellation requests and delivers it via BizTalk Messaging to initiate a new schedule. We also develop WrtieDB COM object including WriteDB and WriteCancellation methods to separately process the booking requests and cancellation requests.

5.3 Prototype System Presentation

1. Booking

(1) Figure 5.12 shows the main frame of the shipping system at the shipper side. The shipping order data is shown in the data grid and text boxes below are detailed information of each record. Click the "New" button, orders that have not been shipped will be shown in the data grid as figure 5.13 shows.



Shipping Order Data

Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
▶	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5

Goods Information

Goods: Sasquatch Ale
Quantity: 900
Gross Weight: 4
Measurement(cubic metre): 4
Description: good

Consignee Information

Consignee: Du monde entier
Telephone: 40.67.88.88
Fax: 40.67.89.89
Address: 67, rue des Cinquante Otages Nantes France

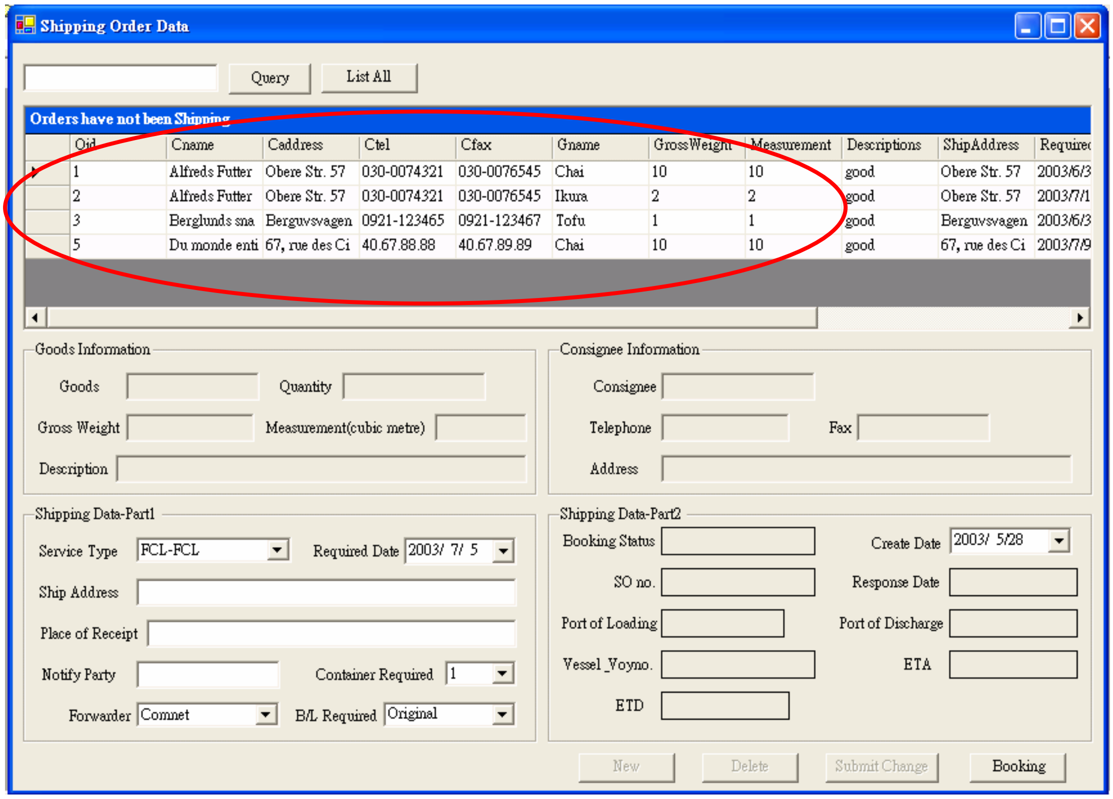
Shipping Data-Part1

Service Type: FCL-FCL
Required Date: 2003/ 7/ 5
Ship Address: 67, rue des Cinquante Otages Nantes France
Place of Receipt: test
Notify Party: test
Container Required: 1
Forwarder: Comnet
B/L Required: Original

Shipping Data-Part2

Booking Status: Receipt
Create Date: 2003/ 5/28
SO no.: 137
Response Date: 2003/5/28
Port of Loading: Kaohsiung
Port of Discharge: Le harve
Vessel_Voyno.: MERCURY BRIDGE-20
ETA: 2003/6/25
ETD: 2003/5/30

Figure 5. 12 Main Frame of the Shipping System



Shipping Order Data

Orders have not been Shipping

Oid	Cname	Caddress	Ctel	Cfax	Gname	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
1	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3
2	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Ikura	2	2	good	Obere Str. 57	2003/7/1
3	Berglunds sna	Berguvsvagen	0921-123465	0921-123467	Tofu	1	1	good	Berguvsvagen	2003/6/3
5	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Chai	10	10	good	67, rue des Ci	2003/7/9

Goods Information

Goods:

Quantity:

Gross Weight:

Measurement(cubic metre):

Description:

Consignee Information

Consignee:

Telephone:

Fax:

Address:

Shipping Data-Part1

Service Type: FCL-FCL

Required Date: 2003/ 7/ 5

Ship Address:

Place of Receipt:

Notify Party:

Container Required: 1

Forwarder: Comnet

B/L Required: Original

Shipping Data-Part2

Booking Status:

Create Date: 2003/ 5/28

SO no.:

Response Date:

Port of Loading:

Port of Discharge:

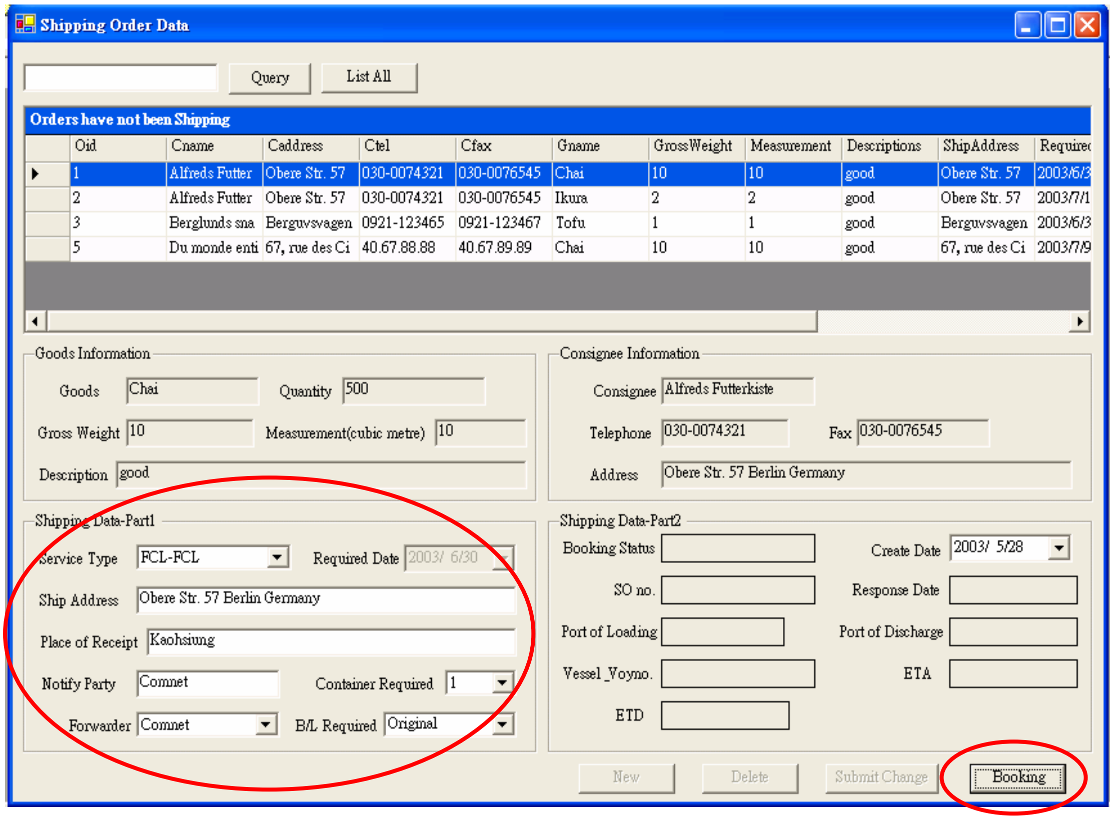
Vessel_Voyno.:

ETA:

ETD:

Figure 5. 13 Orders have not been Shipped

(2) We can choose one order record and fill in the blanks with related shipping information, click the "Booking" button, and then the booking request will be written into the database and sent to the forwarder as figure 5.14 and figure5.15 show.



Orders have not been Shipping

	Oid	Cname	Caddress	Ctel	Cfax	Gname	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
▶	1	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3
	2	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Ikura	2	2	good	Obere Str. 57	2003/7/1
	3	Berglunds sna	Berguvsvagen	0921-123465	0921-123467	Tofu	1	1	good	Berguvsvagen	2003/6/3
	5	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Chai	10	10	good	67, rue des Ci	2003/7/9

Goods Information

Goods Chai Quantity 500
Gross Weight 10 Measurement(cubic metre) 10
Description good

Consignee Information

Consignee Alfreds Futterkiste
Telephone 030-0074321 Fax 030-0076545
Address Obere Str. 57 Berlin Germany

Shipping Data-Part1

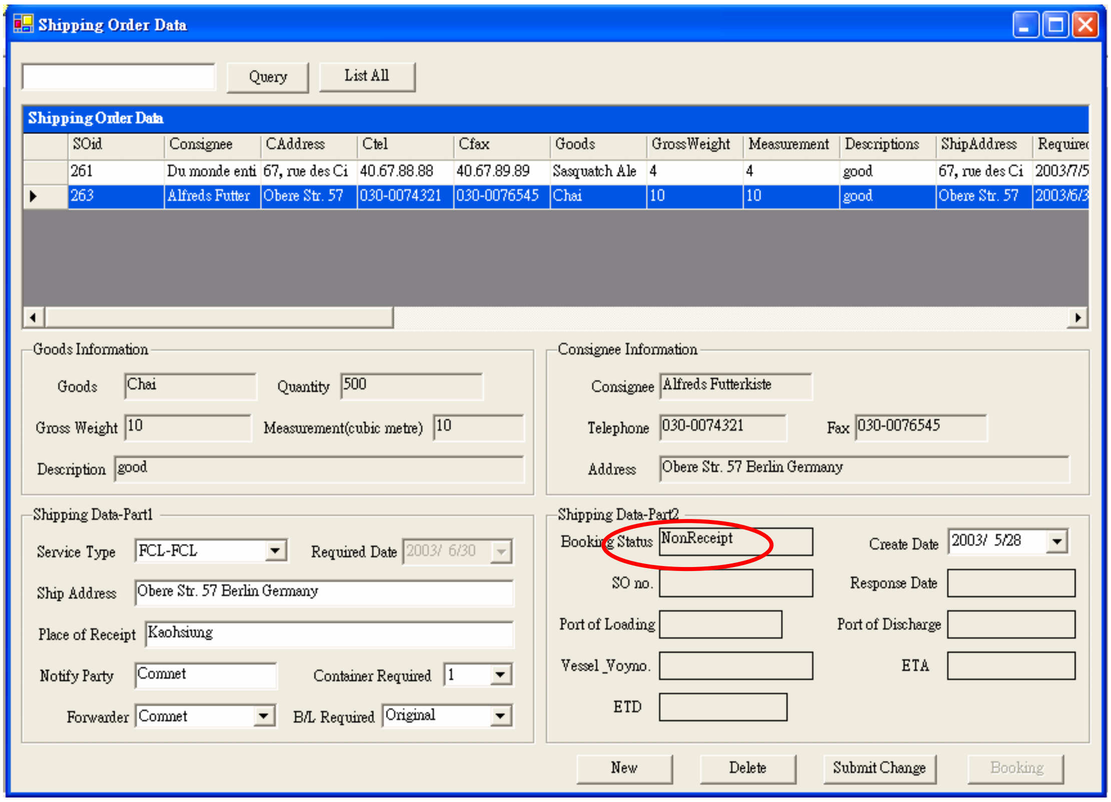
Service Type FCL-FCL Required Date 2003/ 6/30
Ship Address Obere Str. 57 Berlin Germany
Place of Receipt Kaohsiung
Notify Party Comnet Container Required 1
Forwarder Comnet B/L Required Original

Shipping Data-Part2

Booking Status Create Date 2003/ 5/28
SO no. Response Date
Port of Loading Port of Discharge
Vessel_Voyno. ETA
ETD

Figure 5. 14 Input Related Shipping Information of Order

(3) The booking request we added before is shown in the data grid and the status is "nonReceipt".



Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5
▶	263	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3

Goods Information

Goods: Chai
Quantity: 500
Gross Weight: 10
Measurement(cubic metre): 10
Description: good

Consignee Information

Consignee: Alfreds Futterkiste
Telephone: 030-0074321
Fax: 030-0076545
Address: Obere Str. 57 Berlin Germany

Shipping Data-Part1

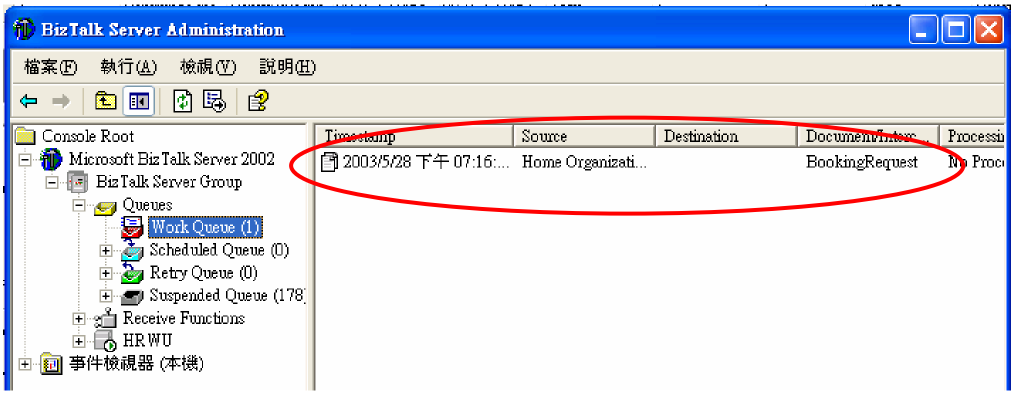
Service Type: FCL-FCL
Required Date: 2003/ 6/30
Ship Address: Obere Str. 57 Berlin Germany
Place of Receipt: Kaohsiung
Notify Party: Comnet
Container Required: 1
Forwarder: Comnet
B/L Required: Original

Shipping Data-Part2

Booking Status: NonReceipt
Create Date: 2003/ 5/28
SO no.:
Response Date:
Port of Loading:
Port of Discharge:
Vessel_Voyno.:
ETA:
ETD:

Figure 5. 15 Booking Request We Added

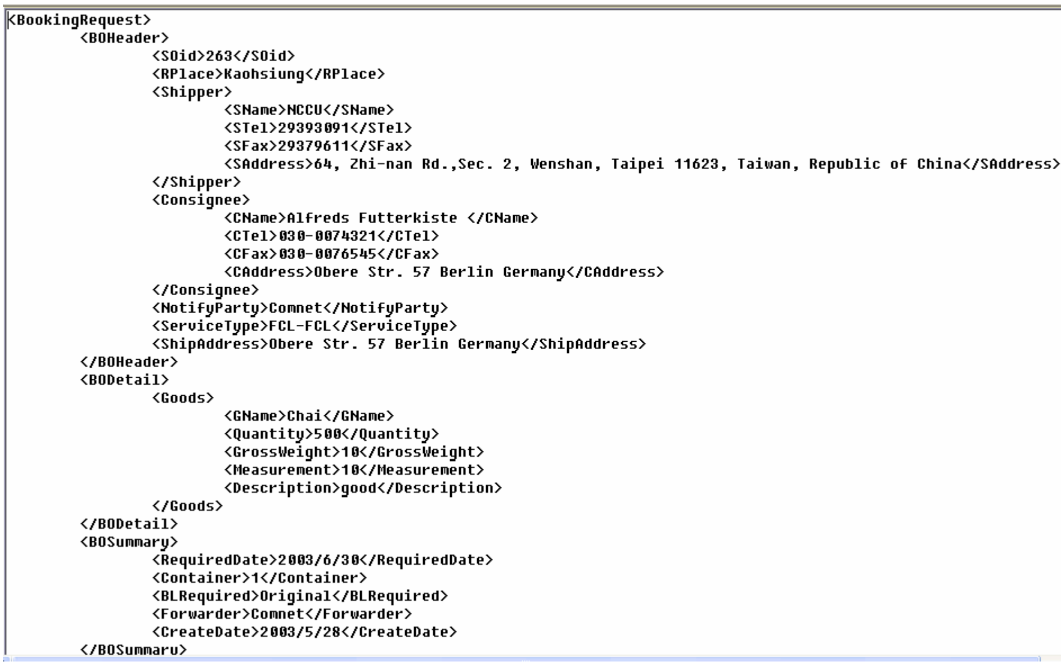
(4) The booking request is sent into new shipping XLANG schedule instance through BizTalk Message Server according to the setting value of the messaging port pReceiveBooking and channel cReceiveBooking. Flowing to the second process, booking request is transferred from XLANG schedule to the forwarder through BizTalk Message Server. Figure 5.16 shows the work queue contains one interchange which is currently in process.



Timestamp	Source	Destination	Document/Interc...	Processi
2003/5/28 下午 07:16:...	Home Organizati...		BookingRequest	No Proc

Figure 5. 16 An Interchange in the Work Queue

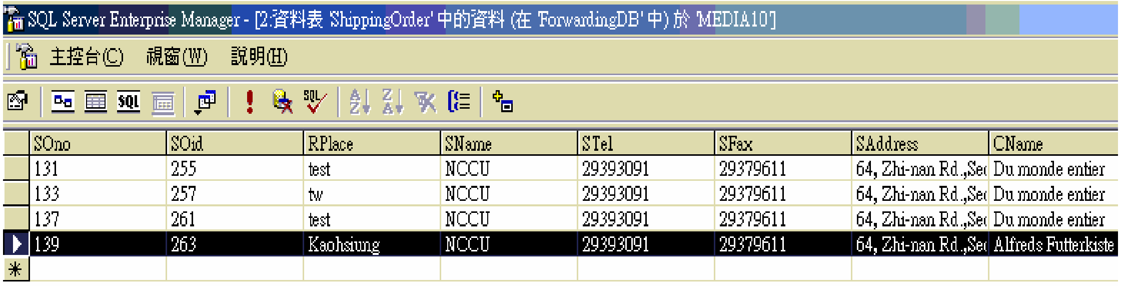
(5) At the forwarder side, a booking request is received by the ASP page, OrderRecv.asp and transferred to new XLANG Schedule through BizTalk Messaging. Figure 5.17 is the content of this booking request.



```
<BookingRequest>
        <BOHeader>
                <SOid>263</SOid>
                <RPlace>Kaohsiung</RPlace>
                <Shipper>
                        <SName>NCCU</SName>
                        <STel>29393091</STel>
                        <SFax>29379611</SFax>
                        <SAddress>64, Zhi-nan Rd.,Sec. 2, Wenshan, Taipei 11623, Taiwan, Republic of China</SAddress>
                </Shipper>
                <Consignee>
                        <CName>Alfreds Futterkiste </CName>
                        <CTel>030-0074321</CTel>
                        <CFax>030-0076545</CFax>
                        <CAddress>Obere Str. 57 Berlin Germany</CAddress>
                </Consignee>
                <NotifyParty>Comnet</NotifyParty>
                <ServiceType>FCL-FCL</ServiceType>
                <ShipAddress>Obere Str. 57 Berlin Germany</ShipAddress>
        </BOHeader>
        <BODetail>
                <Goods>
                        <GName>Chai</GName>
                        <Quantity>500</Quantity>
                        <GrossWeight>10</GrossWeight>
                        <Measurement>10</Measurement>
                        <Description>good</Description>
                </Goods>
        </BODetail>
        <BOSummary>
                <RequiredDate>2003/6/30</RequiredDate>
                <Container>1</Container>
                <BLRequired>Original</BLRequired>
                <Forwarder>Comnet</Forwarder>
                <CreateDate>2003/5/28</CreateDate>
        </BOSummary>
```

Figure 5. 17 Contents of Booking Request

(6) After the booking request is sent from XLANG Schedule instance to WriteDB COM object, a suitable sailing date and related port information will be picked out according to the shipper's booking request and sailing schedule. Then, the result will be written into the forwarder's database shown as figure 5.18 and the booking response will be returned to the schedule.



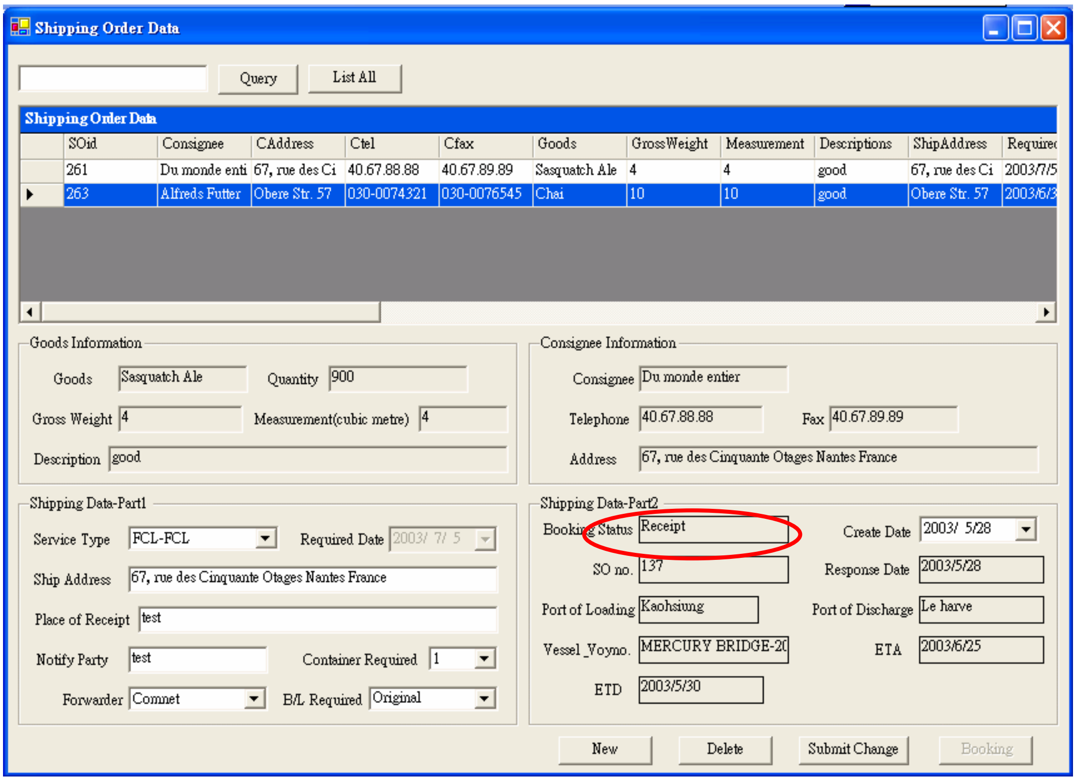
SQL Server Enterprise Manager - [2:資料表 ShippingOrder' 中的資料 (在 ForwardingDB' 中) 於 'MEDIA10]
主控台(C)
視窗(W)
說明(H)

	SOno	SOid	RPlace	SName	STel	SFax	SAddress	CName
	131	255	test	NCCU	29393091	29379611	64, Zhi-nan Rd.,Se	Du monde entier
	133	257	tw	NCCU	29393091	29379611	64, Zhi-nan Rd.,Se	Du monde entier
	137	261	test	NCCU	29393091	29379611	64, Zhi-nan Rd.,Se	Du monde entier
▶	139	263	Kaohsiung	NCCU	29393091	29379611	64, Zhi-nan Rd.,Se	Alfreds Futterkiste
✳								

Figure 5. 18 Result of the Booking Response in the Forwarder's Database

(7) After the shipper receives the booking response via the ASP page,

receiveresponse.asp, this message will be sent from XLANG Schedule to WrtieResponse COM object. Since the booking response includes shipping order number, vessel, voyage number, port of loading, estimated time of departure, port of discharge, and estimated time of arrival, all of which will be written into the shipper's database and the status will be changed into "Receipt.



Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5
▶	263	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3

Goods Information

Goods: Sasquatch Ale Quantity: 900
Gross Weight: 4 Measurement(cubic metre): 4
Description: good

Consignee Information

Consignee: Du monde entier
Telephone: 40.67.88.88 Fax: 40.67.89.89
Address: 67, rue des Cinquante Otages Nantes France

Shipping Data-Part1

Service Type: FCL-FCL Required Date: 2003/ 7/ 5
Ship Address: 67, rue des Cinquante Otages Nantes France
Place of Receipt: test
Notify Party: test Container Required: 1
Forwarder: Comnet B/L Required: Original

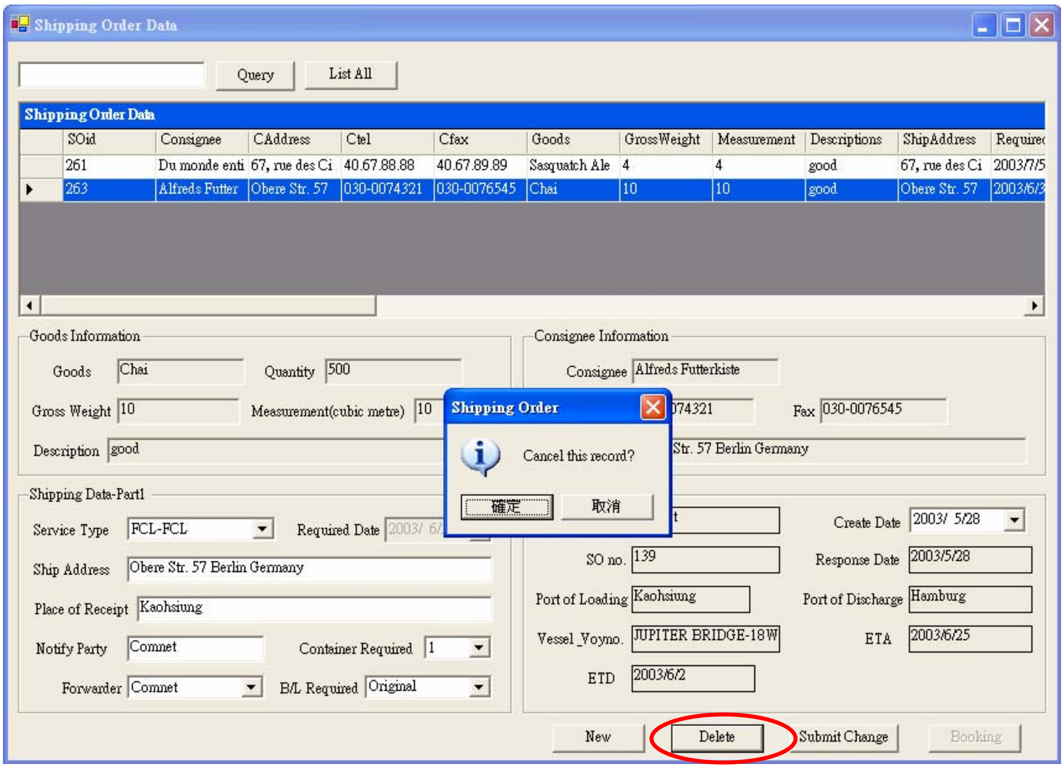
Shipping Data-Part2

Booking Status: Receipt Create Date: 2003/ 5/28
SO no.: 137 Response Date: 2003/5/28
Port of Loading: Kaohsiung Port of Discharge: Le harve
Vessel_Voyno.: MERCURY BRIDGE-20 ETA: 2003/6/25
ETD: 2003/5/30

Figure 5. 19 Result of the Booking Response in the Shipping System

2. Cancellation

(1) Choose one record which will be deleted and click the “Delete” button.



Shipping Order Data

Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5
▶	263	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3

Goods Information

Goods: Chai
Quantity: 500
Gross Weight: 10
Measurement(cubic metre): 10
Description: good

Consignee Information

Consignee: Alfreds Futterkiste
074321
Fax: 030-0076545
Str. 57 Berlin Germany

Shipping Order

Cancel this record?

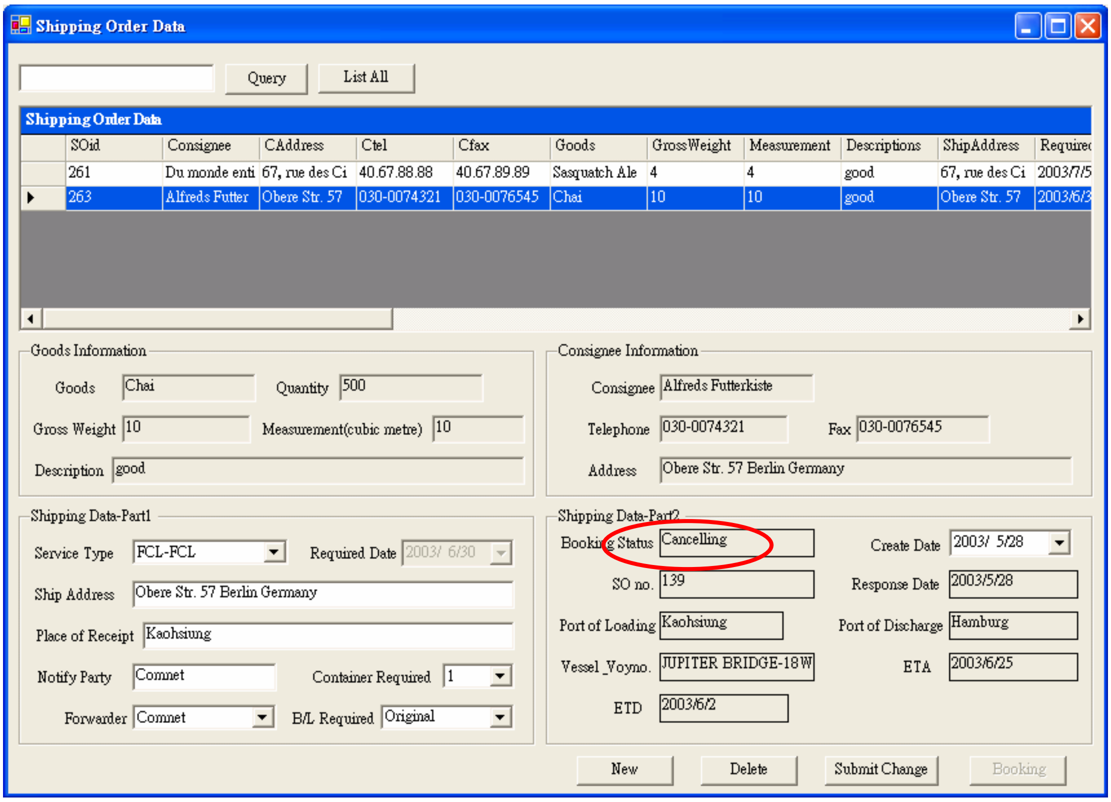
Shipping Data-Part1

Service Type: FCL-FCL
Required Date: 2003/ 6/
Ship Address: Obere Str. 57 Berlin Germany
Place of Receipt: Kaohsiung
Notify Party: Comnet
Container Required: 1
Forwarder: Comnet
B/L Required: Original

t
Create Date: 2003/ 5/28
SO no.: 139
Response Date: 2003/5/28
Port of Loading: Kaohsiung
Port of Discharge: Hamburg
Vessel_Voyno.: JUPITER BRIDGE-18W
ETA: 2003/6/25
ETD: 2003/6/2

Figure 5. 20 Cancellation of a Record

(2) After clicking the "Delete" button, a cancellation request will be produced and be sent to the new Cancellation_shipper XLANG schedule through BizTalk Messaging, and then be sent from XLANG schedule through BizTalk Messaging to the forwarder. The status of this record will be changed into "Cancelling".



Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5
▶	263	Alfreds Futter	Obere Str. 57	030-0074321	030-0076545	Chai	10	10	good	Obere Str. 57	2003/6/3

Goods Information

Goods: Chai　Quantity: 500
Gross Weight: 10　Measurement(cubic metre): 10
Description: good

Consignee Information

Consignee: Alfreds Futterkiste
Telephone: 030-0074321　Fax: 030-0076545
Address: Obere Str. 57 Berlin Germany

Shipping Data-Part1

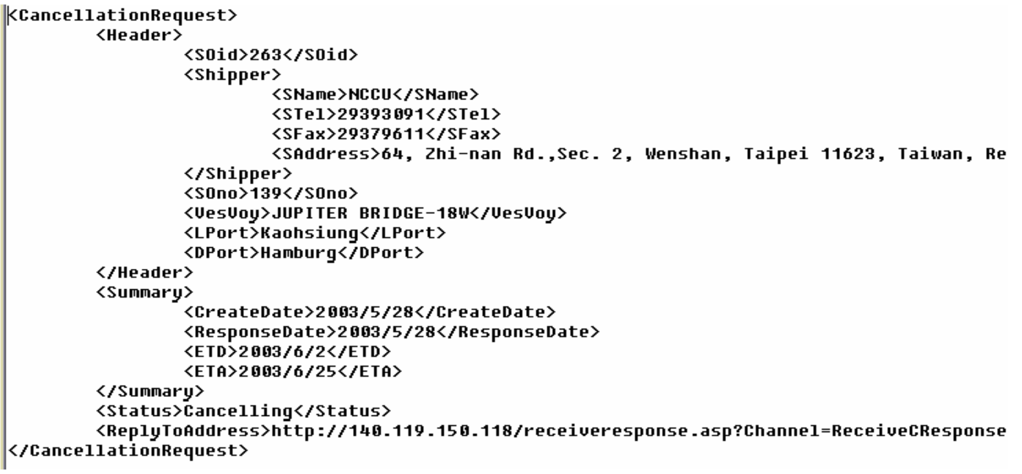
Service Type: FCL-FCL　Required Date: 2003/ 6/30
Ship Address: Obere Str. 57 Berlin Germany
Place of Receipt: Kaohsiung
Notify Party: Comnet　Container Required: 1
Forwarder: Comnet　B/L Required: Original

Shipping Data-Part2

Booking Status: Cancelling　Create Date: 2003/ 5/28
SO no.: 139　Response Date: 2003/5/28
Port of Loading: Kaohsiung　Port of Discharge: Hamburg
Vessel_Voyno.: JUPITER BRIDGE-18W　ETA: 2003/6/25
ETD: 2003/6/2

Figure 5. 21 Record Prepares to be Cancelled

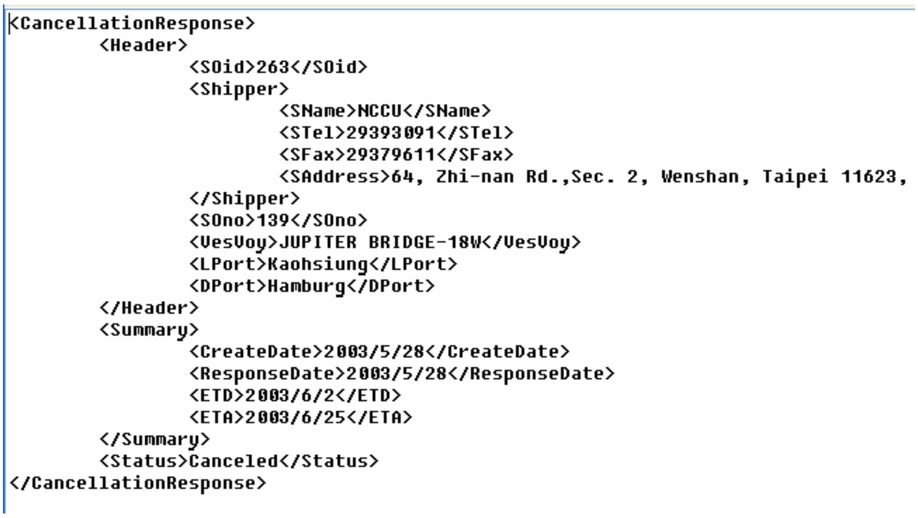
(3) At the forwarder side, a cancellation request is received by the ASP page, CancellationRecv.asp and transferred to the new XLANG Schedule through BizTalk Messaging. Figure 5.22 is the content of this cancellation request.



```
<CancellationRequest>
        <Header>
                <SOid>263</SOid>
                <Shipper>
                        <SName>NCCU</SName>
                        <STel>29393091</STel>
                        <SFax>29379611</SFax>
                        <SAddress>64, Zhi-nan Rd.,Sec. 2, Wenshan, Taipei 11623, Taiwan, Re
                </Shipper>
                <SOno>139</SOno>
                <VesVoy>JUPITER BRIDGE-18W</VesVoy>
                <LPort>Kaohsiung</LPort>
                <DPort>Hamburg</DPort>
        </Header>
        <Summary>
                <CreateDate>2003/5/28</CreateDate>
                <ResponseDate>2003/5/28</ResponseDate>
                <ETD>2003/6/2</ETD>
                <ETA>2003/6/25</ETA>
        </Summary>
        <Status>Cancelling</Status>
        <ReplyToAddress>http://140.119.150.118/receiveresponse.asp?Channel=ReceiveCResponse
</CancellationRequest>
```

Figure 5. 22 Contents of Cancellation Request

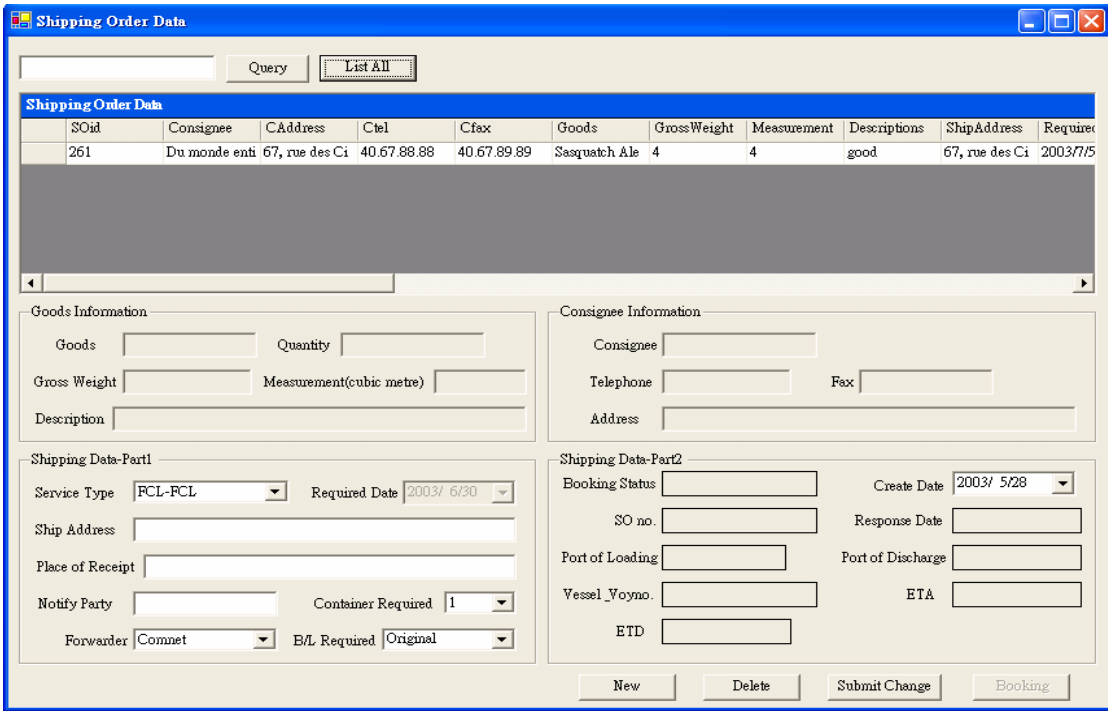
(4) After the cancellation request is sent from XLANG Schedule instance to WriteDB COM object, this record will be deleted. Then, a cancellation response will be created, be returned to the schedule and be sent from XLANG Schedule through BizTalk Messaging back to the shipper.



```
<CancellationResponse>
        <Header>
                <SOid>263</SOid>
                <Shipper>
                        <SName>NCCU</SName>
                        <STel>29393091</STel>
                        <SFax>29379611</SFax>
                        <SAddress>64, Zhi-nan Rd.,Sec. 2, Wenshan, Taipei 11623,
                </Shipper>
                <SOno>139</SOno>
                <VesVoy>JUPITER BRIDGE-18W</VesVoy>
                <LPort>Kaohsiung</LPort>
                <DPort>Hamburg</DPort>
        </Header>
        <Summary>
                <CreateDate>2003/5/28</CreateDate>
                <ResponseDate>2003/5/28</ResponseDate>
                <ETD>2003/6/2</ETD>
                <ETA>2003/6/25</ETA>
        </Summary>
        <Status>Canceled</Status>
</CancellationResponse>
```

Figure 5. 23 Contents of Cancellation Response

(5) After the shipper receives the cancellation response via the ASP page, receiveresponse.asp, this message will be sent from XLANG Schedule to WrtieCancellation COM object. Since the status of the cancellation response is "Canceled", this record will be deleted in the shipper's database and disappear in the data grid as figure 5.24 shows.



Shipping Order Data

	SOid	Consignee	CAddress	Ctel	Cfax	Goods	GrossWeight	Measurement	Descriptions	ShipAddress	Requirec
	261	Du monde enti	67, rue des Ci	40.67.88.88	40.67.89.89	Sasquatch Ale	4	4	good	67, rue des Ci	2003/7/5

Service Type FCL-FCL
Required Date 2003/ 6/30
Container Required 1
Forwarder Comnet
B/L Required Original
Create Date 2003/ 5/28

Figure 5. 24 Result of Cancellation