Softshare DELTA®

The open architecture of Softshare Delta lets you create integration solutions that fit the requirements of your business. Whether you want to integrate EDI purchase orders with an internal accounting database, convert accounts receivable files into XML invoices, load your inventory into an online Web catalog, or handle Web service requests, Delta has all the tools you need to seamlessly integrate your business operations.

Delta is a *universal* data translator. Delta not only supports EDI standards, but a variety of other data formats as well, including data (flat) files, databases (via OLE DB), and XML. Delta also supports mapping to free-form text document formats, such as HTML, to aid in Web integration. When modeling and mapping, Delta considers each data type individually, leveraging the unique power of each format.

No application should be an island—with Delta, you can integrate your disparate data sources into one powerful electronic commerce system.

Download the **Softshare Delta Demo** from Softshare's Web site **www.softshare.com**

Softshare Delta. Integrate your enterprise.

Six Easy Steps

Softshare Delta divides the translation process into six easy steps:

1	Designing a source business object model
2	Designing a target business object model
3	Creating a data translation map
4	Validating a data translation map
5	Testing a data translation map
6	Installing a map for execution via Softshare ECS or Softshare Vista

Steps 1 and 2: Designing Business Object Models

What is a Business Object Model?

Before you can map between two data formats, you must first model those formats. Your source model represents the data before it is mapped. Your target model represents the data after it is mapped. For example, if you want to integrate incoming EDI purchase orders into an accounting database, the EDI purchase order would be your source business object model and the accounting database would be your target business object model.

Delta Standard vs. Delta Enterprise

Softshare offers two versions of Softshare Delta: Delta Standard and Delta Enterprise. Delta Standard supports two common business data formats: EDI and data file.

Delta Enterprise provides another layer of sophistication by supporting three additional data formats: database, XML, and text. Delta Enterprise fully supports the Microsoft OLE DB standard for database access, letting you avoid intermediary data files and integrate directly with your internal database applications.

Data Format	Delta Standard	Delta Enterprise
EDI	\checkmark	✓
Data File	✓	✓
Database		\checkmark
XML		✓
Text Document		\checkmark

Modeling with Ease

As highlighted in the following three pages, you can design business object models from scratch or you can import sample files and let Softshare Delta design them for you. Either way, Delta's helpful Merlin screens efficiently guide you through the process, prompting you for important information about your model.

EDI Models

Softshare Delta ships with the final release of the ANSI X12 and UN/EDIFACT standards and offers full support for all X12 dictionaries and all recent EDIFACT directories. There are four easy ways to model your EDI documents:

- Importing sample EDI documents
- Importing Standard Exchange Format (SEF) files
- Importing Guideline XML (gXML) files
- Using Delta's built-in EDI standards

When you import a sample EDI document, Delta creates a baseline model reflecting all the segments and elements found in the sample. This baseline model can then be enhanced with additional segments, elements, and code values as needed. If your trading partner makes their ICs (implementation conventions) available in an electronic SEF or gXML file format, Delta can use this information to create a complete EDI model in a matter of seconds, no adjustments needed.

When you use Delta, you never need to create an EDI model from scratch. At a minimum, Delta provides you with a baseline EDI model that contains the mandatory segments and elements required by the document or message type you are modeling.

If your ICs or those of your trading partners are updated to reflect a new EDI version, Delta can automatically convert your models to the new version. Called Map Migration, this feature saves you the time and trouble of recreating your EDI models and the maps associated with them.

Data File Models

Data file models can also be created by importing sample files. Softshare Delta recognizes both fixedwidth and character-delimited file formats, including comma-separated values (CSV) and tab-delimited files. Delta Enterprise users running SAP®, a popular ERP application, can take advantage of Delta's SAP IDocs Modeler utility to instantly create a data file model based on an SAP IDoc parser file.

EDI Model Merlin ×
What will your EDI model be based upon?
Sample - An actual EDI document sent by my trading partner. EDI File: C:\SampleEDI\850.edi
C SEE - A Standard Exchange Format (SEF) file. SEF File:
gXML - A Guideline XML (gXML) file. gXML File:
C Generic - A generic transaction as specified by an EDI standard.
< <u>B</u> ack Finish Cancel Help

Softshare Delta's Merlin screens walk you through the model creation process. These "smart" screens ask all the right questions, ensuring that your model meets your business needs perfectly.

Data File Linkage You have placed a data file model within another one. Most typically the second file contains records which are detail records of the first. Softshare Delta needs to know how the data of these two files are linked.	×		
Record Inclusion O No linkage. (Recommended for target models only.)			
Include records where the PONumber			
field matches the FlatPO.Header.PONumber			
field in the primary file.			
C Include records for which the following conditional is true:			
OK Cancel			

To help you represent the header-detail relationship often found between data files or data file records, one data file model can consist of multiple, linked data files or multiple record types.

Softshare Delta Makes Modeling Easy

Database Access Models

Softshare Delta lets you integrate with your internal applications using Microsoft's OLE DB standard for universal data access. Since OLE DB is backward compatible with the ODBC standard, Delta can access hundreds of relational database systems, including SQL Server, Oracle, IBM's DB2, and Informix, as well as file-based databases such as Microsoft Access, dBASE, and FoxPro.

Modeling databases is easy. You simply select a database and table and Delta instantly produces a complete database model. In addition, you can model tables that do not reside in the same database, or even on the same machine. Affording more power, Delta lets you write your own structured query language (SQL) statements for running complicated queries or calling stored procedures.

> To connect to a database, you create a data link in Delta's Data Link Manager utility. Data links identify database location, user name and password, and other important database information.

🖺 Data Link Properties 🛛 🛛 🗙
Provider Connection Advanced All
Specify the following to connect to Access data: 1. Select or enter a <u>d</u> atabase name: C:\Databases\SmartShip\bellshipto.mdb
2. Enter information to log on to the database: User <u>n</u> ame: Admin Password: ■ Blank password Allow <u>s</u> aving password
<u>I</u> est Connection
OK Cancel Help

XML Models

XML has become a popular data format. It's commonly used as an end format for data entered in storefront applications and as the language behind Web services. When creating XML models, you can base them on sample XML documents, XML schemas, or DTDs. Or, you can create XML models from scratch.

Softshare Delta, when used in conjunction with Softshare ECS, provides a complete solution for the exchange, creation, and translation of XML-based business frameworks such as SOAP, BizTalk, ebXML, and so on. One feature that is integral to Delta's support of XML-based business frameworks is the XML Schema Manager.

The XML Schema Manager locally stores the schemas you are working with, letting Delta dynamically validate source or target data against its associated schema during mapping. Local schema management also allows for an XML model to incorporate elements from multiple XML schemas.

XML Schema Manager					
		<ba <!--'</th--><th>tch><p Title> Header</p </th><th>ackSl <head Compa</head </th></ba 	tch> <p Title> Header</p 	ackSl <head Compa</head 	
Currently managed schemas:					
Namespace	Location	Prefix	Validate	Display	
http://schemas.xmlsoap.org/soap	Soap11.xsd	soap	Yes	SOAP	
http://www.ACORD.org/Standard.	AcordMsgSvc_v-1-0-1.xsd	ac	Yes	ACORD	
http://www.ACORD.org/standard	Jv-Ins-Reinsurance-2003-1.xsd	iv	Yes	JV	
http://tempuri.org/po.xsd	PurchaseOrder.xsd	pu	Yes	PO	
http://www.w3.org/1999/xlink	xlink.xsd	xlink	Yes	XLINK	
•				>	
<u>A</u> dd <u>E</u> dit <u>R</u> emove <u>V</u> iew					
Schemas that are modeled are automatically managed. Managed XML schemas allow for validation, as well as complex models that reference multiple schemas to be created. To manage an XML schema, select a file or URL location from the Add screen.					

The XML Schema Manager stores the locations, namespaces, and namespace prefixes for the schemas associated with your XML models.

Text Document Models

For use as a target model only, the text document model type lets you translate any of the previously mentioned model formats into a text file. You can use this model type to create faxes, e-mails, letters, or even HTML-formatted Web pages.

Appealing Model Interface

Delta represents your models in a user-friendly interface. All objects and elements are given descriptive titles and parent-child relationships are graphically shown via nesting.

Softshare Delta - [850_EDLbom] Image: Softshare Delta - [850_EDLbbom] Image: Softshare Delta - [850_EDLbbom] Image: Softshare Delta - [850_EDLbbom] Image: Softshare Delta - [850_EDLbback] Image: Softshare Delta - [850_EDLbback] Softshare Delta - [850_EDLbback] Image: Softshare Delta - [850_EDLback] Softshare Delta - [850_EDLback] Image: Softshare Delta - [850_EDLback] Softshare Delta - [850_EDLback] Image: Softshare Delta - [850_EDLback] Softshare Delta - [850_EDLback] Image: Softsha	Each element has its own set of properties that let you control mandatory status, width, range, acceptable values, and so on. DBEG.BEG01 - 353 - Transaction Set Purpose Code Kieneral Values Values Notes This is an element. Description: 353 - Transaction Set Purpose Code Validation Width: Min: Quidation Width: Min: Max: Quidation
Ready	Mandatory

850 Purchase Order Dictionary: 4010

i ivaavi				
Usage	Pos. No.	Seg. ID	Name	Max. Use
Mandatory	10	BEG	Beginning Segment for Purchase Order	1
Optional	30	REF	Reference Identification	>1
Optional	40	PER	Administrative Communications Contact	>1
Optional	160	DTM	Date/Time Reference	>1
Detail				
<u>Usage</u>	Pos. No.	<u>Seg. ID</u>	<u>Name</u>	Max. Use
LOOP ID -	P01			
Optional	760	PO1	Baseline Item Data	
Summa	ry			
Summa <u>Usage</u> LOOP ID -	ry <u>Pos. No.</u> CTT	<u>Seg. ID</u>	Name	Max. Use
Summa <u>Usage</u> LOOP ID - Optional	ry Pos. No. CTT 1930	Seg. ID	Name Transaction Totals	Max. Use >1
Summa Usage Optional SEGMENT: Loop: Usage:	Pos. No. CTT 1930 BEG - Begin 850.BEG Mandatory	Seg. ID	Name Transaction Totals ent for Purchase Order	<u>Max. Use</u> >1
Summa Usage LOOP ID - Optional SEGMENT: Loop: Usage:	Pos. No. CTT 1930 BEG - Begin 850.BEG Mandatory	Seg. ID	Name Transaction Totals ent for Purchase Order Data Element Summary	Max. Use >1
Summa Usage LOOP ID - Optional SEGMENT: Loop: Usage: Mandatory	Pos. No. 1930 BEG - Begin 850.BEG Mandatory Ref. Des. BEG01	Seg. ID CTT ning Segm 353 - Transad 00 0 0	Name Transaction Totals ent for Purchase Order Data Element Summary ction Set Purpose Code >riginal >ropellation	Max. Use >1 Attribute D 2/2

Printing Models in HTML Format

Designed with Internet commerce in mind, Softshare Delta exports your models (and maps) in HTML format. This capability aids in documentation and publication of ICs (implementation conventions).

Delta's HTML-formatted models are ideal for producing EDI ICs.

Follow the Six Steps to Business Integration

Step 3: Creating a Data Translation Map

What is a Data Translation Map?

Once your business object models are defined, the next step is to identify how the target model will use the information from the source model. This is done by writing rules that link the source model's data elements to their proper positions in the target model. The process of writing these rules is called mapping and the set of rules that results is called a data translation map.

Softshare Delta is a true universal data mapper, supporting any-to-any maps. The advantages of any-to-any mapping are twofold: not only are you able to integrate all incoming and outgoing electronic documents with your internal applications, but you are also able to integrate *between* your internal applications (regardless of data format), allowing for total enterprise integration.



To map an element from your source model to your target model, simply drag it to the target model. The resulting rule appears in the rule pane.

Source and Target-Driven Mapping

Softshare Delta supports both source and target-driven mapping. Delta's ability to perform rules based upon the order of your source or target data is invaluable when you are dealing with disparate source and target data formats whose layouts cannot otherwise be reconciled.

xpression Builder	?
Expression:	
Round(850.AMT.AMT02, 2)	<u>^</u>
+ · / * & = > < <> And C	Dr Not () Check Syntax
Functions Constants Source Elements Variables Random Round RoundUp Sign Round(NUMBER, NUMBER	⟨All> ▲dd Math Text Date/Time Conversion Conversion Create Reservat Create Expression Builder Help × Return type: NUMBER NUMBER Description: Returns the value of the NUMBER rounded to the number of decimal places specified. Sample: round(15.69871, 2) Returns 15.70
	Select All Copy OK

The Expression Builder is loaded with over 200 functions for you to use in your map rules. If the function you're looking for isn't here, you can create your own!

Built-in Intelligence

Mapping is rarely as straightforward as linking one data element to another. Usually, your target data format will require data that is not present in your source data. Or, you may need to manipulate your source data before it meets the requirements of your target data format. For example, your accounting package may require a product's catalog number in order to generate an invoice, while the purchase orders you receive from your trading partner only identify your products by name.

For this scenario and countless others like it, Softshare Delta offers built-in intelligence. You can use Delta's Expression Builder to incorporate functions, conditions, variables, and constants into your mapping rules. Or, you can perform a dynamic lookup that retrieves the needed information from an alternate data source.

Trading Partner Manager

Using Trading Partner Manager (TPM), an application shipped with Softshare Delta, you can store a wide variety of trading partner information including a trading partner's mailing address, vendor or accounting ID, and production status. If your trading partner is an EDI trading partner, TPM offers even more functionality by maintaining EDI-related information such as qualifiers; ISA and GS identifiers; element, subelement, and segment delimiters; and control number sequences.

When executing maps, Delta uses the trading partner information stored in TPM to automatically format and address your outgoing EDI, XML, and text document data. Delta also queries TPM to determine which maps to run against arriving EDI or XML data.

Advanced delivery bindings Notes Counters Part Numbers Binding Criteria General EDI Delivery Identification Documents Contacts Address EDI delimiters Element Sub-element Segment Add Edit Be Add Edit Be Use advanced delivery bindings to delive Acknowledgement level For gecepted data: Interchange, Group and Message For geleted data: Interchange, Group and Message Preferences Accept data with gross (Not recommended) V Always send back an acknowledgement (Trading Partner Agreement) Send UN§/UNE segments with EDIFACT data Stored in TPM, Delta Always stat a gew interchange for each message	roperties of 'Zoomingdale's' Notes General EDI Delivery Ide Default delivery binding Send yia: Softshare Vista to: Zoomingdales@zooming Uverwrite existing	iounters Part Numbers intification Documents Contacts Address integrates with Softshare's communication applications—Softshare Vista or Softshare ECS.
Add Edit Be Use advanced delivery bindings to delive For gocepted data: Interchange, Group and Message For gocepted data: Interchange, Group and Message For gocepted data: Interchange, Group and Message Preferences Acknowledgement level Send UNG/UNE segments with EDIFACT data Always start a new interchange for each message Qustom Dictionaries	Advanced delivery bindings	Notes Counters Part Numbers General EDI Delivery Identification Documents Contacts Address EDI delimiters Element Sub-element Segment ANSI ½12: * ✓ Øx0a (LF) ✓ UN/EDIFACT: + ✓ ✓ ✓
Using the EDI- specific information stored in TPM, Delta	Add <u>E</u> dit <u>R</u> e Use advanced delivery bindings to delive	Acknowledgement level For accepted data: Interchange, Group and Message For rejected data: Interchange, Group and Message Preferences Accept data with errors (Not recommended)
knows how to format	Using the EDI- specific information stored in TPM, Delta knows how to format	Always send back an acknowledgement (Trading Partner Agreement) Send UNG/UNE segments with EDIFACT data Always start a new interchange for each message <u>Custom Dictionaries</u>

Delta's tight integration with TPM makes trading partner lookups possible. Trading partner lookups let Delta dynamically determine, upon map execution, where a map's EDI, XML, or text document output should be delivered—based on information found in the map's source data. By taking advantage of trading partner lookups, you can automatically turn around translated output to the original sender or deliver different portions of a map's output to different trading partners.

During map creation, Delta gives you full access to the data in TPM so that you can populate outgoing documents with the proper names, addresses, and contact information for your trading partners. And, based on the status of each trading partner, Delta will automatically switch between the test and production identifiers used for sender and receiver addressing.

Steps 4 and 5: Validating and Testing a Map

Softshare Delta's advanced map validation and testing features help ensure that your map is accurate *before* you place it into production. The Map Validator checks the syntax of your map rules, looking for invalid expressions and unmapped mandatory elements. The Map Tester performs a test run of your map, giving you a preview of its output and alerting you to any mapping errors.

Diagnostic Window 🛛		
Severity	Details	
(1) Information	Executing Map: Inbound850 to RecordPO	
🔕 Error	The variable '850.beg.beg03' is undefined or has gone out of scope.	
🔘 Error	Rule #3: Rule execution failed (expression: Purchase_Order_Number=850.BEG.BEG03)	
🔘 Error	Map Execution Failed (Map: 'EDI_850ToDataFile_PO_Out.dtm')	
(1) Information	Map test elapsed time 1 sec	

Map validating and testing are exact sciences with Delta. Descriptive error messages point you directly to the offending rule.

www.softshare.com

Step 6: Installing a Map

When your map is ready for production, the final step is installation. Once installed, your map is available for scheduling via Softshare Vista Professional or Softshare's electronic commerce server application, Softshare ECS. Vista Professional and ECS integrate closely with Delta, passing data to and from Delta. In addition, both Vista Professional and ECS support secure communications between you and your trading partners using today's prevalent Internet security standards.

Softshare Delta System Requirements

Softshare Delta is shipped on CD-ROM and periodic updates are available from the Softshare eService Web site at www.softshare.com/eservice.

If you have Microsoft Visual SourceSafe installed on the development workstation, you can incorporate it into Delta's operations. Delta takes advantage of SourceSafe's sophisticated version management features, letting you track and store the various revisions made to a map or model.

Component	Minimum Requirement
Computer	Pentium PC, 500 MHz or higher processor (1 GHz recommended)
Memory	512 MB of RAM (1 GB recommended)
Hard Disk Space	100 MB available disk space
Monitor	VGA monitor with a 256-color display
Operating System	Microsoft Windows® 98, 2000, 2003, Me, XP or NT® 4.0



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