

Sterling Standards Library

Using VDA

Version 5.7

Sterling Commerce
An IBM Company

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VDA Overview

The application supports the use of Verband der Automobilindustrie (VDA), the standard for the German Association of the Automotive Industry (which consists of automobile manufacturers and their development partners, the suppliers, and the manufacturers of trailers, body superstructures, and containers). VDA has several features that distinguish it from most other EDI standards:

- ◆ It does not use a common set of interchange envelopes for all messages.
- ◆ It does not use functional groups.
- ◆ It uses a positional, non-delimited format.
- ◆ It uses looping but not composite elements.
- ◆ It uses a new control number (for the current transmission) and an old control number (for the previous one). As a result, control numbers do not need to be sequential.
- ◆ In some messages, it processes date formats differently than other standards.
- ◆ It uses a separate message to identify the communications protocol. A message is defined by a four-digit number, which does not appear in the data.
- ◆ The header record has eight fields: tag, version, customer, supplier, old transmission number, new transmission number, transmission date, and date reset input.
- ◆ Each record begins with a three-byte record ID and a two-byte version number.

The VDA standards are not installed with the other EDI standards; instead, sixteen new *Integrator File Definition* (IFD) files—corresponding to the inbound and outbound formats for the eight VDA message types/transaction sets that the application supports—are bundled with the Map Editor and placed by the Map Editor install in the **Sterling Commerce/Map Editor/Samples/IFDs** folder. Additionally, the application automatically installs the appropriate VDA build and break (system) maps, which determine the message type and then match it with the appropriate envelope. You can then create VDA maps to translate your data by loading the appropriate IFD file and creating a map with your specific requirements. See *VDA Mapping* on page 21.

In addition, support for VDA requires you to create inbound and outbound VDA envelopes. See *VDA Envelopes* on page 7. You must also create a business process or processes to order the flow of the application activities so you can accomplish your business objectives with VDA.

For more information on the VDA standard, access this web site:

<http://www.vda.de>

For more information on ordering VDA recommendations, access this web site:

http://www.vda.de/de/service/sonstige_veroeffentlichungen/index.html and select the **VDA-Empfehlungen** option.

This table describes how the application was enhanced to support VDA:

Functionality	Enhancements	Action You Need to Take to Implement VDA
Services	<ul style="list-style-type: none"> ◆ EDI Deenvolving service enhanced to recognize the VDA standard. ◆ EDI Enveloping service enhanced to recognize the VDA standard. ◆ Generic Deenvelope service enhanced to recognize the VDA standard. ◆ Generic Envelope service enhanced to recognize the VDA standard. 	None.
Envelopes	<ul style="list-style-type: none"> ◆ Inbound VDA envelope wizard added to implement inbound VDA. ◆ Outbound VDA envelope wizard added to implement outbound VDA. <p>See <i>VDA Envelopes</i> on page 7.</p>	<p>Create the appropriate VDA envelopes for each message type you are sending and receiving.</p> <p>See <i>VDA Envelopes</i> on page 7.</p>
Predefined business processes	<ul style="list-style-type: none"> ◆ Predefined VDA Deenvelope business process added. ◆ Predefined VDA Envelope business process added. <p>See <i>VDA Business Processes</i> on page 14.</p>	<p>Create a business process or processes and configure the appropriate service parameters.</p> <p>See <i>VDA Business Processes</i> on page 14.</p>
Map Editor	<ul style="list-style-type: none"> ◆ VDA build and break maps are automatically installed with the application. ◆ Sixteen new IFDs—corresponding to the inbound and outbound formats for the eight VDA message types/transaction sets that are supported—are bundled with the Map Editor and placed by the Map Editor install in a new Sterling Commerce/Map Editor/Samples/IFDs folder. <p>See <i>VDA Mapping</i> on page 21.</p>	<p>Create a map or maps to translate your VDA messages.</p> <p>Note: VDA maps can be created by loading the data formats from the installed IFDs.</p> <p>See <i>VDA Mapping</i> on page 21.</p>

Prerequisite Knowledge

The audience using this software should be familiar with the application and the VDA standard.

Note: This documentation is not intended to explain the VDA standard.

Using VDA with the Application

To use VDA with the application, you must complete the following tasks:

1. Create inbound and outbound VDA envelopes. See *VDA Envelopes* on page 7.

2. Create a business process or processes and configure the appropriate service parameters. See *VDA Business Processes* on page 14.
3. Create the appropriate VDA maps. See *VDA Mapping* on page 21.

VDA Envelopes

A *document envelope* consists of control information that enables organizations to effectively exchange messages. This information is added in headers and trailers to messages. Document envelopes are specific to the EDI protocol used. Creating document envelopes is necessary to use VDA with your trading partners.

VDA has only one level of envelope, which you must modify appropriately to reflect your information and your trading partner's information. Envelopes specify whether the message is inbound or outbound:

- ◆ The **VDA Inbound** envelope identifies messages that are received by Gentran Integration Suite so they can be properly routed. Inbound envelopes also give you the option to translate messages when you choose to check messages for compliance. By choosing to translate messages from within the envelope, you can reduce message processing time because you do not need to specify a separate Translation service step in the business process. You need to create a VDA Inbound envelope to configure deenvolving information. See *Inbound VDA Envelope* on page 8.
- ◆ The **VDA Outbound** envelope identifies messages so that they can be sent to and received by trading partners. You need to configure a VDA Outbound envelope to configure enveloping information. See *Outbound VDA Envelope* on page 10.

When you envelope an outbound VDA message, the VDA header and trailer are created. For an inbound message, the envelope contains the header information (the trailer information is a summary appended to the VDA data).

Creating Envelopes

Inbound envelopes define expected header and trailer information for inbound messages. This information helps Gentran Integration Suite route and process the messages. Outbound envelopes specify information about messages that enables them to be sent to and received by trading partners, and they gather and provide the appropriate data used to create the header.

To create an envelope:

1. From the Admin Console, select **Trading Partner > Document Envelopes > Envelopes**.
2. Under Create, next to New Envelope, click **Go!**
3. On the Envelope Standards page, select **VDA** and click **Next**.
4. Select the level of envelope you want to create, inbound or outbound, and click **Next**.
5. On the Base Envelope page, do you want this envelope to inherit properties from a base envelope (if available)?
 - ◆ If Yes, select a base envelope and click **Next**.
 - ◆ If No (you want to create a new envelope), select **Not Applicable** and click **Next**.
6. On the Name page, type a unique name for the envelope, and a description or comments, then click **Next**.
7. Complete the properties for the envelope as necessary and click **Next** after each page until you reach the confirm page. Required fields are highlighted in blue. See *Inbound VDA Envelope* on page 8 or *Outbound VDA Envelope* on page 10.

8. Click **Finish** to add the envelope.

Using Base Envelopes

A *base envelope* is a regular envelope that you use as a starting point to create a new envelope. The base envelope maintains a link to the envelope that inherited its properties. If you modify the base envelope, all related envelopes (those that inherited the base envelope properties) are also changed.

When you create an envelope using a base envelope, everything in the new envelope is the same as in the base envelope, except the envelope name, description, and parameters such as unique identification numbers. If you plan to create many envelopes using base envelopes, do not use the base envelopes in production. You should also be sure to note the envelopes that are related to the base envelopes.

To use a base envelope:

1. Create the base envelope, using *Creating Envelopes* on page 7.
2. Specify the name and description of a new envelope.
3. Identify the base envelope that the new envelope uses.

Inbound VDA Envelope

You only need to create an Inbound VDA envelope if you are receiving inbound VDA messages. However, if you are receiving inbound VDA messages, you need to create a separate Inbound VDA envelope for *each* VDA message type you will be receiving. The following table describes inbound VDA envelope properties:

Field or Check Box	Description
Sender ID	Coded identifier of the supplier number or data sender. Valid value is nine standard characters. Required. Note: As you type, the combo-box returns all IDs saved in the system that match the string or values you are typing.
Receiver ID	Coded identifier of the customer number or data source number. Valid value is nine standard characters. Required. Note: As you type, the combo-box returns all IDs saved in the system that match the string or values you are typing.

Field or Check Box	Description
Message Type	Transaction message type as determined by the information type in the header of the message group, which includes the message, or determined by the information type in the transaction message. Required. Valid values are as follows: <ul style="list-style-type: none"> ◆ 4905 ◆ 4906 ◆ 4907 ◆ 4908 ◆ 4913 ◆ 4915 ◆ 4927
Agency	EDI standard to be used in this envelope. Required. Valid value is V.
Version	Standard version to be used in this envelope. Required.
Release	Release number to be used in this envelope. Required.
Test Flag	Whether you want the system to treat the messages that you receive from this trading partner as test (T) or production (P).
Determine the Business Process by	Displayed only if select BP invocation is set to 'Specify custom business process.' Valid values: <ul style="list-style-type: none"> ◆ Specifying a contract ◆ Specifying a business process (default)
Contract List	Select a previously created contract to associate with this envelope. Displayed only if Determine Business Process by is set to 'Specifying a contract.'
Business Process List	Select a previously created business process to associate with this envelope. Displayed only if Determine Business Process by is set to 'Specifying the business process.'
Perform Duplicate Control Number Checking	Determine control number duplications. Valid values: <ul style="list-style-type: none"> ◆ Yes ◆ No (default)
Maximum age of Control Number History Records in days	Maximum days that Gentran Integration Suite should retain a history of control numbers to use for duplication determinations. Valid value is nine standard characters. Optional.
Compliance Check Document	Check the transaction set body for compliance. Valid values are Yes (default) and No.

Field or Check Box	Description
Compliance Check Map Name	Which map to use to perform a compliance check (if Compliance Check Document set to Yes). The map must already be checked in to the application.
Translate transactions	Generate transactions according to the standard format from data groups in an EDI system and carry out reverse processing. By choosing to translate messages from within the envelope, you can reduce message processing time because you do not need to specify a separate Translation service step in the business process. Valid values are Yes and No (default).
Extraction Options	Business process data extraction. Valid values: <ul style="list-style-type: none"> ◆ Determined by business process (default) ◆ Extract to a file system directory ◆ Extract to a mailbox
Data Extraction Directory	Directory for data extraction. Displayed only if Extraction Options set to 'Extract to a file system directory'.
Data Extraction Filename	Filename for data extraction. Displayed only if Extraction Options set to 'Extract to a file system directory'
Data Extraction Mailbox	Mailbox for data extraction. Displayed only if Extraction Options set to 'Extract to a mailbox'.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Displayed only if Extraction Options set to 'Extract to a mailbox'.

Outbound VDA Envelope

You only need to create an Outbound VDA envelope if you are sending outbound VDA messages. However, if you are sending outbound VDA messages, you need to create a separate Outbound VDA envelope for *each* VDA message type you will be sending. The following table describes outbound VDA envelope properties:

Field or Check Box	Description
Sender ID (or Supplier Number/Data Sender)	Coded identifier of the supplier number or data sender. Valid value is nine standard characters. Required. Note: As you type, the combo-box returns all IDs saved in the system that match the string or values you are typing.
Receiver ID (or Customer Number/Data Source Number)	Coded identifier of the customer number or data source number. Valid value is nine standard characters. Required. Note: As you type, the combo-box returns all IDs saved in the system that match the string or values you are typing.
Acceptor Lookup Alias	Identifying string used with the sender ID and the receiver ID to look up this envelope with the EDI Encoder service. This alias associates a message with the service it requires. Valid value must be at least one limited standard character. Required.

Field or Check Box	Description
Message Type	Transaction message type as determined by the information type in the header of the message group, which includes the message, or determined by the information type in the transaction message. Required. Valid values are as follows: <ul style="list-style-type: none"> ◆ 4905 ◆ 4906 ◆ 4907 ◆ 4908 ◆ 4913 ◆ 4915 ◆ 4927
Sub Suppliers	Identification number that is assigned to sub-suppliers.
Sales Tax ID Number (Receiver)	Identification number of the national tax office for the recipient. This field is mandatory for delivery of goods within the European Union. Data entries are left-justified.
Sales Tax ID Number (Sender)	Identification number of the national tax office for the sender. This field is mandatory for delivery of goods within the European Union. Data entries are left-justified.
Comp. Reg. Number	Identification of the National Register of Business Names (Commercial Register) for the supplier. This field is mandatory for some European countries.
Carrier Number	Carrier data number of VDA message. If relevant, the contents of this field are identical to the contents of the field in record type 712, position 13.
Warehouse Keeper Code	Code that identifies the person who created the message. Valid value is one standard character.
Transmission Purpose Code	Code identifying the purpose of the transmission. Valid value is two standard characters.
Payment Date (YYMMDD)	Date of payment. Format is YYMMDD.
Payment Indication Number	Number indicating payment was made.
Map Name	Map used (if any) to translate documents.
Validate Translation Input	Enables input-side validation to be turned off.
Validate Translation Output	Enables output-side validation to be turned off.
Use global control number for SNRF Sender Reference	Whether a global control number is used for the SNRF sender reference. Valid values are Yes (default) and No.
SNRF Sender Reference	Identifier for the SNRF sender selected from list. Used only if Use global control number for SNRF Sender Reference is set to 'Yes.'

Field or Check Box	Description
Maximum number of documents per interchange	<p>Specify the Maximum number of documents per interchange. If you do not specify a value or if you specify zero, the system will not check for maximum documents per interchange. If you specify a value greater than zero, only that number of documents (or less) will be included in an interchange.</p> <p>This parameter can work in conjunction with the Limit Interchange Size parameter to limit the number of documents per interchange and also limit the size of the interchange. This may result in less than the maximum number of documents depending upon the size limit you impose.</p> <p>Note: You can also specify the maximum number of documents per interchange globally without having to change all existing envelope definitions by modifying the <code>enveloping.VDA.MaxDocsPerInterchange</code> property in the <code>enveloping.properties</code> file by uncommenting this line (by removing the #) and then specifying a value greater than zero. See the <i>Property Files</i> documentation for more information on changing properties. Note that anything specified in the envelope definition will override the global value specified in the <code>enveloping.properties</code> file. Additionally, any correlation overrides will override the value specified in the envelope definition and the <code>enveloping.properties</code> file.</p> <p>Optional.</p>
Limit Interchange Size	<p>Maximum size allowed for an interchange before a single interchange is split into multiple interchanges that are each under the maximum size limitation.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> ◆ No ◆ Specify size limit ◆ Use global default in <code>enveloping.properties</code> (default) <p>Required.</p> <p>Note: If you select Use transaction set default in <code>enveloping.properties</code>, you need to specify the size limit directly (in the Maximum Interchange Size parameter) or by setting properties in the <code>enveloping.properties</code> property file, which contains a property for each supported standard and more specific properties for each message type that can override the standard property.</p>
Invoke Business Process for Each Interchange	<p>Whether a business process is invoked for each interchange generated. Valid values are Yes and No (default). Required.</p> <p>Note: If Invoke Business Process for Each Interchange is set to No, the service places the name of the business process specified in the envelope into process data using the key <code>WFD_NAME</code>. This business process is then invoked by the Invoke Business Process Service. If Invoke Business Process For Each Interchange is set to Yes, the service directly bootstraps an instance of the business process specified in the envelope, and does not set <code>WFD_NAME</code> in process data.</p>

Field or Check Box	Description
Maximum Interchange Size	Specify the maximum size of each individual interchange. Required. Note: Only displayed if you selected Specify size limit for the Limit Interchange Size parameter. If you choose to specify a maximum value, the value you specify is checked to make sure it is at least 456 bytes based on the header and trailer size for VDA standard.
Encode Document	Whether the message must be character encoded. Valid values are Yes and No (default).
Encoding	Type of character encoding for the message group that includes this header. Optional; used only if Encode Document is set to 'Yes.'
Stream Segments	Insert an end-of-line character after each segment record. Valid values are Yes and No (default).
Determine the Business Process by	Displayed only if select BP invocation set to 'Specify custom business process.' Valid values: <ul style="list-style-type: none"> ◆ Specifying a contract ◆ Specifying a business process (default)
Contract List	Select a previously created contract to associate with this envelope. Displayed only if Determine Business Process by set to 'Specifying a contract.'
Business Process List	Select a previously created business process to associate with this envelope. Displayed only if Determine Business Process by set to 'Specifying the business process.'
Extraction Options	Business process data extraction. Valid values: <ul style="list-style-type: none"> ◆ Determined by business process (default) ◆ Extract to a file system directory ◆ Extract to a mailbox
Data Extraction Directory	Directory for data extraction. Displayed only if Extraction Options set to 'Extract to a file system directory'.
Data Extraction Filename	Filename for data extraction. Displayed only if Extraction Options set to 'Extract to a file system directory'
Data Extraction Mailbox	Mailbox for data extraction. Displayed only if Extraction Options set to 'Extract to a mailbox'.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Displayed only if Extraction Options set to 'Extract to a mailbox'.

VDA Business Processes

To use VDA with the application, you need to create a business process or processes and configure the following parameters, which should match what you configured in the VDA envelope:

- ◆ Sender ID
- ◆ Receiver ID
- ◆ Lookup Alias

To help you accomplish your business goals, the application provides two predefined business processes, which are used by the application to implement VDA processing: *VDAEnvelope* and *VDADevelope*. These predefined business processes are initiated by other processes/services during VDA processing and do not require you to modify them.

The following table lists business goals for the predefined VDA business processes:

Business Process	Business Goals	For more information, see
VDADevelope	Extracts VDA message types from an EDI message and locates an associated contract, according to the content of the envelopes.	<i>VDADevelope Business Process</i> on page 14
VDAEnvelope	Applies a VDA envelope to one or more VDA message types and then uses the envelope data to locate the associated contract and start the appropriate business process.	<i>VDAEnvelope Business Process</i> on page 17

VDADevelope Business Process

The *VDADevelope* business process is used to develope VDA data. A typical scenario is one in which VDA data must be received from a trading partner. The data must be develope to extract identifying batch and interchange data, and the *VDADevelope* business process helps to provide the develope services.

The *VDADevelope* business process is initiated as part of the following inbound process flow:

1. You create a business process that calls the EDI Develope service.
2. The EDI Develope service parses the whole message and compliance checks it so it can be further processed by the application.
3. Passes the VDA messages to the *VDADevelope* business process. The *Generic Develope* service runs as a subprocess.
4. The *VDADevelope* business process looks up the envelope, based on the data found in the header.
5. The envelope specifies what to do with the develope messages.
6. Starts the *Invoke Business Process* service or a subprocess service to initiate the appropriate business process to handle each develope message.

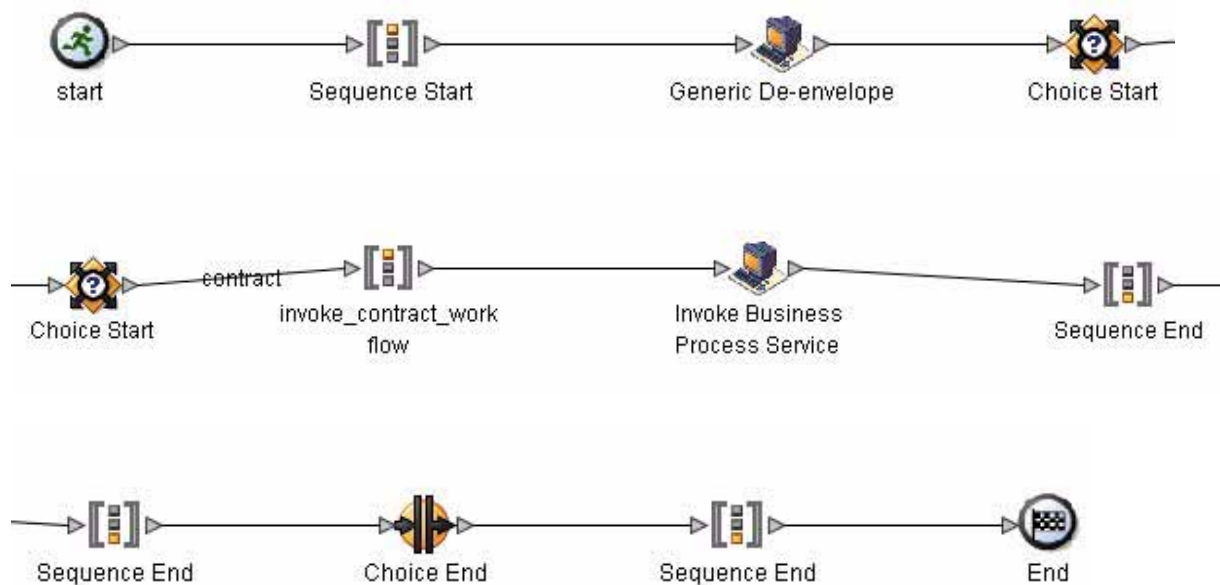
If exceptions occur when running an EDI Deenveloping business process, the application generates an EDI Compliance Report.

This table lists the configuration parameters for the VDADevelope business process:

Parameter	Default	Description
Document Tracking	False	When document tracking is enabled for a business process, tracking information is carried with the message throughout the process, and the tracking information is persisted about the message regardless of the persistence level you configured globally for the application.
Set onfault processing	False	Onfault processing allows the process to immediately execute the on-fault activity specified in the process, even if the process has not yet reached that step in the process. For example, if a process fails at step 3, but the on-fault activity is specified in step 7, if onfault processing is enabled, the process proceeds to the step 7 on-fault rather than halting at step 3.
Queue	4	The application enables you to set performance optimizations by queue, defining queue levels to allocate resources. This number indicates the previously allocated queue level that you want for this business process model for processing.
Persistence Level	System Default	The level of data to retain for generating a status report that describes each step that the business process completes. System default indicates that, for the data, configuration is already defined in the application to retain data.
Recovery Level	Manual	The level of recovery for this business process if the business process should halt during execution. Manual requires you to resume or restart the business process manually.
Document Storage Type	System Default	The level of document storage for messages that process when the business process runs. System Default specifies to store messages in the file system or database, according to how you configured archiving and purging in the application.
Life Span	Life Span Days — 2 Life Span Hours — 0 Life Span Type — System Level Removal Method — Archive	The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method.
Complete by Deadline	None Available Note: To set a deadline you must change it in the business process.	Complete by – The deadline time, in hours and minutes, by which the business process must complete process once it starts. <ul style="list-style-type: none"> ◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline. ◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.

Parameter	Default	Description
Event Reporting Level	Full	The level of event reporting that is retrieved for this business process when it runs. Full specifies to generate events for the business process, including the business process start and end time, start and end times for all services or adapters running as a result of this business processes, and any resulting errors and exceptions.

The following figure shows the business process model in the GPM, which makes up the VDA Deenvelope business process:



The following BPML code makes up the VDADevelope business process:

```

<<process name="VDADevelope">

  <rule name="contract">
    <condition>CONTRACT_FOUND = "YES"</condition>
  </rule>

  <sequence>
    <operation>
      <participant name="DeenvelopeGeneric" />
      <output message="Xout" >
        <assign to="map_name">BrkIvda</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </input>
    </operation>
  </sequence>
</process>

```



```

</operation>

<choice>
  <select>
    <case ref="contract" activity="invoke_contract_workflow" />
  </select>
  <sequence name="invoke_contract_workflow">
    <operation>
      <participant name="InvokeBusinessProcessService" />
      <output message="Xout">
        <assign to="INVOKE_MODE">ASYNC</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </input>
    </operation>
  </sequence>
</choice>

</sequence>
</process>

```

Before Using the VDAEnvelope Business Process

Before you use the VDAEnvelope business process, you must complete the following task:

1. Create a VDA inbound envelope for each VDA message type that you are receiving. See *Outbound VDA Envelope* on page 10.

VDAEnvelope Business Process

The VDAEnvelope business process is initiated when it is called by another business process. The VDAEnvelope business process envelopes the VDA messages contained in the business process context with outbound VDA envelopes that you have preconfigured. You must have created one outbound VDA envelope for each VDA message type that you are sending.

A typical scenario is one in which VDA data must be sent to a trading partner. To prepare for this, the data must be enveloped to provide identifying batch and interchange data. The VDAEnvelope business process helps to provide these enveloping services.

The VDAEnvelope business process is initiated as part of the following outbound process flow:

1. You create a business process that calls the EDI Encoder service.
2. The EDI Encoder service calls the EDI Enveloping service, either in immediate or deferred mode, depending on what you specify.
3. The EDI Enveloping service starts the VDAEnvelope business process (which runs the Generic Envelope service as a subprocess to extract the name of the business process).
4. The VDAEnvelope business process searches the envelope definition to retrieve information to envelope each message.

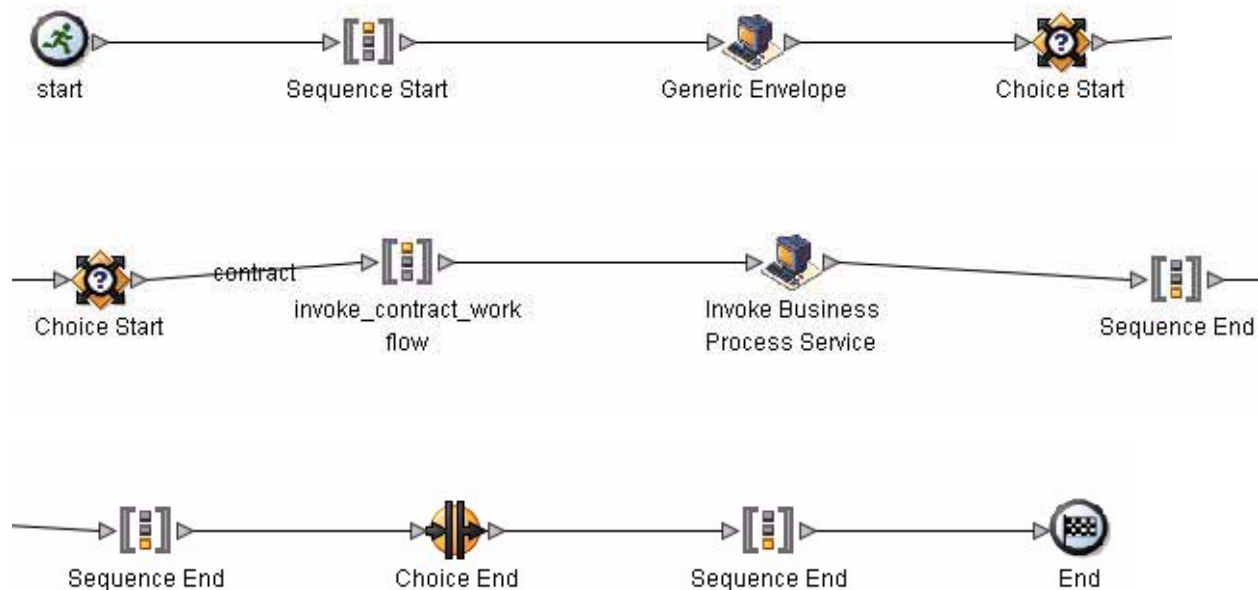
Note: The Sender ID, Receiver ID, and Lookup Alias in your Outbound Envelope definition must match the parameters that you define for this outbound business process.

This table lists the configuration parameters for the VDAEnvelope business process:

Parameter	Default	Description
Document Tracking	False	When document tracking is enabled for a business process, tracking information is carried with the message throughout the process, and the tracking information is persisted about the message regardless of the persistence level you configured globally for the application.
Set onfault processing	False	Onfault processing allows the process to immediately execute the on-fault activity specified in the process, even if the process has not yet reached that step in the process. For example, if a process fails at step 3, but the on-fault activity is specified in step 7, if onfault processing is enabled, the process proceeds to the step 7 on-fault rather than halting at step 3.
Queue	4	The application enables you to set performance optimizations by queue, defining queue levels to allocate resources. This number indicates that previously allocated queue level that you want for this business process model for processing.
Persistence Level	System Default	The level of data to retain for generating a status report that describes each step that the business process completes. System default indicates that, for the data, configuration is already defined in the application to retain data.
Recovery Level	Manual	The level of recovery for this business process if the business process should halt during execution. Manual requires you to resume or restart the business process manually.
Document Storage Type	System Default	The level of document storage for messages that process when the business process runs. System Default specifies to store messages in the file system or database, according to how you configured archiving and purging in the application.
Life Span	Life Span Days — 2 Life Span Hours — 0 Life Span Type — System Level Removal Method — Archive	The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method.
Complete by Deadline	None Available Note: To set a deadline you must change it in the business process.	Complete by – The deadline time, in hours and minutes, by which the business process must complete process once it starts. <ul style="list-style-type: none"> ◆ First Notification: Hours and Minutes – Whether to receive notification before a business process deadline. ◆ Second Notification: Hours and Minutes – Whether to receive another notification before a business process deadline.

Parameter	Default	Description
Event Reporting Level	Full	The level of event reporting that is retrieved for this business process when it runs. Full specifies to generate events for the business process, including the business process start and end time, start and end times for all services or adapters running as a result of this business processes, and any resulting errors and exceptions.

The following figure shows the business process model in the GPM, which makes up the VDA Envelope business process:



The following BPML code makes up the VDA Envelope business process:

```

<process name="VDAEnvelope">
  <rule name="contract">
    <condition>CONTRACT_FOUND = "YES"</condition>
  </rule>
  <sequence>
    <operation>
      <participant name="EnvelopeGeneric" />
      <output message="Xout" >
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </input>
    </operation>
  </sequence>
</process>

```

```

<choice>
  <select>
    <case ref="contract" activity="invoke_contract_workflow" />
  </select>
  <sequence name="invoke_contract_workflow">
    <operation>
      <participant name="InvokeBusinessProcessService" />
      <output message="Xout">
        <assign to="INVOKE_MODE">ASYNC</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </input>
    </operation>
  </sequence>
</choice>

</sequence>
</process>

```

Before Using the VDAEnvelope Business Process

Before you use the VDAEnvelope business process, you must complete the following task:

1. Create a VDA outbound envelope for each VDA message type that you are sending. See *Inbound VDA Envelope* on page 8.

VDA Mapping

This documentation assumes that you are familiar with mapping concepts and with the Map Editor.

The VDA standards are not installed with the other EDI standards; instead, sixteen new *Integrator File Definition* (IFD) files—corresponding to the inbound and outbound formats for the eight VDA message types/transaction sets that the application supports—are bundled with the Map Editor and placed by the Map Editor install in the **Sterling Commerce/Map Editor/Samples/IFDs** folder. Additionally, the application automatically installs the appropriate VDA build and break (system) maps, which determine the message type and then match it with the appropriate envelope.

IFD is a Sterling Commerce format that contains a binary description of the input or output side of a source map and has the file extension .ifd. IFD files include the hierarchical and looping structure of the data, the map objects (groups, records, fields) and their attributes (for example, names, descriptions, data types). An IFD file can be loaded (imported) or created (for export) from the Map Editor.

Note: IFD files do not contain standard or extended rules, links, or any other map information unrelated to the data format. The one exception is the Use Code code lists. If the map references a Use Code standard rule and instructs the application to raise a compliance error if the code is not found in the Use Code code list, the application saves the standard rule and the associated code list.

The application supports the following VDA message types:

Note: The CDA version of a specified message type is indicated by the name of the IFD file. For example, the name of the file **4905_ED4_0496_inbound.IFD** specifies that the file contains the inbound VDA structure of VDA message type 4905 of edition 4.

VDA Message Type	IFD File Names
4905	<ul style="list-style-type: none"> ◆ 4905_ED3_1088_inbound.IFD ◆ 4905_ED3_1088_outbound.IFD ◆ 4905_ED4_0496_inbound.IFD ◆ 4905_ED4_0496_outbound.IFD
4906	<ul style="list-style-type: none"> ◆ 4906_ED2_0593_inbound.IFD ◆ 4906_ED2_0593_outbound.IFD
4907	<ul style="list-style-type: none"> ◆ 4907_ED2_0893_inbound.IFD ◆ 4907_ED2_0893_outbound.IFD
4908	<ul style="list-style-type: none"> ◆ 4908_ED3_0596_inbound.IFD ◆ 4908_ED3_0596_outbound.IFD
4913	<ul style="list-style-type: none"> ◆ 4913_ED1_1094_inbound.IFD ◆ 4913_ED1_1094_outbound.IFD

VDA Message Type	IFD File Names
4915	<ul style="list-style-type: none"> ◆ 4915_ED1_1189_inbound.IFD ◆ 4915_ED1_1189_outbound.IFD
4927	<ul style="list-style-type: none"> ◆ 4927_ED1_0293_inbound.IFD ◆ 4927_ED1_0293_outbound.IFD

You can create VDA maps by loading the appropriate IFD file and creating a map to translate your VDA data. The IFD is a Sterling Commerce format that contains an XML-formatted description of the input or output side of a source map and has the file extension .IFD. An IFD file includes the hierarchical and looping structure of the data, the map objects (groups, records, fields) and their attributes (for example, names, descriptions, data types). An IFD file can be loaded (imported) or created (for export) from the Map Editor.

Note: An IFD file does not contain standard or extended rules, links, or any other map information unrelated to the data format. The one exception to this injunction is the Use Code code lists. If the map references a Use Code standard rule and instructs the application to raise a compliance error if the code is not found in the Use Code code list, the application saves the standard rule and the associated code list.

Opening an IFD File to Create a VDA Map

Map Editor enables you to open, or import, an IFD file in two ways—when you create a new map, and when you open an IFD file into one side of an existing map. Either way, using an IFD file provides you with a quick way to create either side of a map.

When you create a new map, the New Map wizard enables you to select an IFD file to use as the basis for the input or output side of the map.

When you open an IFD file, the application assigns acceptable defaults if attributes are not included. For example, if a value is not specified for Minimum Length, a value of zero is assigned.

To open an IFD file into an existing map:

Caution: Opening an IFD file into an existing map replaces the selected side of the map. After you open an IFD file into a map, you cannot undo the operation.

1. In the Map Editor, right-click the **data format** icon on the side of the map where you want to open the IFD file and select **Open File Definition** from the shortcut menu.

If you are creating a map for outbound VDA messages, you typically open the IFD file on the Output side of the map; for inbound VDA messages, you typically open the IFD file on the Input side of the map.

If you already used Map Editor to create that side of the map, you are prompted with a message that warns you that the existing file format will be replaced. Click **Yes** to continue.

2. Browse to locate the IFD file for the VDA message type you are using. Be sure you select the IFD corresponding to the appropriate direction for the message type (that is, inbound or outbound).

The IFD files are installed in the **Sterling Commerce/Map Editor/Samples/IFDs** folder.

3. Click **Open** to open the selected IFD file into the map.

4. In the Map Editor, select **File > Save** to save the map. Do not use spaces or apostrophes in the map name. The map is automatically saved as a .xml file; to save a map as a .map file, select **File > Save As** and then select **Source Maps (*.map)** from the **Save as type** list.
5. Create the other side of the map, create links, standard rules, and extended rules to map data between the two sides of the map, and complete and compile the map.

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