Sterling Standards Library

Using CII

Version 7.0

Sterling Commerce
An IBM Company

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CII Overview

CII is the data format of the Center for the Informatization of Industry. The CII implementation in the application is based on the CII Syntax Rule, which is available in both Japanese and English. The CII standard provides a set of syntax rules, specifies details such as looping structures and data types. However, it does not include standard message types, which are provided by industry groups. Sterling Commerce provides a number of these standard message types, which you can download.

This table describes how the application supports CII:

Functionality	Details	Action You Need to Take to Implement CII
Services	◆ CII Envelope service relies on the EDI Encoder service to locate the document envelope to be used to envelope the messages. It takes as input one or more messages. Envelopes the messages with a message group header and trailer. Values are defined in the CII document envelope associated with the messages are used to build the message group header. Similar to the X12 and EDIFACT envelope services. ◆ CII Deenvelope service parses the message group. Using values found in the message group header, the service attempts to find a matching envelope. If a matching envelope is found, the envelope defines how the message group should be further processed. If a matching envelope is not found, the service fails and the compliance report indicates that the envelope could not be found. **Note:** Both CII Envelope and CII Deenvelope services are internal services that should not be used externally for steps in creating business processes because it is subject to change without notice, and use may cause unpredictable results and loss of data.	Both CII Envelope service and CII Deenvelope service are pre configured. It runs as part of a predefined EDI business process. **Note:** As a way to help reduce the number of envelopes you need to create and use, the CII Envelope and CII Deenvelope services support use of an asterisk (*) as a wildcard character in mandatory envelope fields for CII. By using wildcards, you can set up one set of envelopes that can be used for multiple trading partners. If certain trading partners have specific requirements, you can still have envelopes that pertain just to them, and the CII Envelope service chooses the envelope that is the best match. In other words, the envelope that has the most matches to specific fields in the data is the one selected.
Envelopes	◆ Inbound CII envelope wizard to implement inbound CII. ◆ Outbound CII envelope wizard to implement outbound CII.	Create the appropriate CII envelopes for the CII messages you are sending and receiving.

Functionality	Details	Action You Need to Take to Implement CII
Predefined business processes	◆ CIIDeenvelope extracts EDI documents from a CII interchange and locates an associated contract, according to the content of the envelopes. CIIDeenvelope then starts the appropriate business process. ◆ CIIEnvelope applies a CII envelope to one or more CII messages and then uses the envelope data to translate and process them.	Configure the predefined business processes and create new ones as necessary.
Map Editor	◆ Map Editor wizard enables you to generate a file layout for you using the CII message that you select. Included in the CII map are the map components that are defined by CII. ◆ Properties dialog boxes enable you to define and modify map components for CII. ◆ Autolink function automatically creates links between input and output fields that have the same name or business name. This function can be used with any data format. ◆ Additional mapping operations as needed.	◆ Download Map Editor. ◆ Create a map or maps to translate your CII messages.
Correlation Search	Search by CII information.	Use the EDI Correlation search functionality to search for CII and EDI correlation information.
Reports	Report by CII standard.	Use the EDI Translation Detail report to search for details of inbound and outbound CII messages and easily create useful reports on your inbound and outbound CII messaging.

Prerequisite Knowledge

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

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

Using CII with the Application

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

1. Create inbound and outbound CII envelopes.
2. Configure the CIIEnvelope and CII Deenvelope services appropriately.
3. Use the predefined CII business processes and create your own business processes as necessary.
4. Create any necessary code lists and maintain them as needed.

5. Create your CII map or maps, linking your proprietary file format to the appropriate CII message format.

6. To track CII messages, use the EDI Correlation Search functionality.

7. To report on inbound and outbound CII message flow, use the EDI Translation Detail report features.

CII Standard Versions

The following are the versions of the Japanese Center for the Informatization of Industry (CII) standard that are included in the application standards database. Descriptions are available in the standards database, in Japanese.

- ✦ CINT0110
- ✦ CINT0111
- ✦ CINT0112
- ✦ EIAJ011A
- ✦ EIAJ011B
- ✦ EIAJ011C
- ✦ EIAJ011D
- ✦ EIAJ012E
- ✦ EIAJ012F
- ✦ EIAJ012G
- ✦ EIAJ012H
- ✦ EIAJ012J
- ✦ EIAJ012K
- ✦ EIAJ022D
- ✦ EIAJ022T
- ✦ FEPCE12A
- ✦ FEPCO12A
- ✦ FEPCS11A
- ✦ FEPCS12B
- ✦ FEPCU12A
- ✦ HIIS0110
- ✦ HWSW001A
- ✦ HWSW001B
- ✦ JGAS0001
- ✦ JISI0105
- ✦ JISI0110
- ✦ JPCA0101

- ✦ JPCA0102
- ✦ JTRNEI00
- ✦ JTRNEI2E
- ✦ JTRNFF00
- ✦ JTRNFF1A
- ✦ JTRNFF2A
- ✦ JTRNFF2C
- ✦ JTRNFF2D
- ✦ JTRNJI00
- ✦ JTRNTR00
- ✦ NEWS0011
- ✦ TIRAAS03
- ✦ TIRARA01
- ✦ TIRARA02
- ✦ TIRARA03
- ✦ TIRATA01
- ✦ TIRATA02
- ✦ TIRATA03
- ✦ TRPT011A

CII Business Processes

Overview

To help you accomplish your business goals, the application provides business processes to implement CII processing:

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

Business Process	Business Goals
CIIDeenvelope	Extracts the content of the envelopes. CIIDeenvelope then starts the appropriate business process.
CIIEnvelope	Applies a CII envelope to one or more CII messages and then uses the envelope data to translate and process them.

CIIDeenvelope Business Process

The CIIDeenvelope business process includes the EDI Deenveloping service to support non-printable characters as delimiters and starts the CII Enveloping or CII Deenveloping business processes, as appropriate.

If exceptions occur when running an CII Deenvelope business process, the application generates a compliance report.

This table lists the configuration parameters for the CIIDeenvelope 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 application 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.
Set 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 selected for this business process model for processing.

Parameter	Default	Description
Use BP Queuing (recommended)	True	Enable business processes to execute in a sequence, so that one executes after one business process ends.
Enable Transaction	False	This option instructs the application to treat the entire process as a single transaction so that either all of the steps complete, or, in the event of an error, none of them complete. When an error occurs, no data is committed; data returns to its pre-process state. By default, this transaction mode is not enabled.
Commit All steps when there is error	False	This option enables you to have the business process commit all work to the database, at the time an error is generated. With this option you can either rollback or commit all work prior to the error before the onfault block is called.
Category	N/A	A category name to which this business process belongs.
Set the Persistence Level to	Full	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.
Set the Event Reporting Level to	None	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 services running as a result of this business process, and any resulting errors and exceptions.
Set the Recovery Level to	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.
Set the Document Storage to	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.
Deadline Settings	Do not set deadline **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. ◆ 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.
Life Span	System default	The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method. If you select **Process Specific**, then you can select the number of days and hours for the life span. Also, you can select if you want the application to archive or purge a business process after its life span is over.

The following BPML code makes up the CIIDeenvelope business process:

```
<process name="CIIDeenvelope">

  <rule name="ack_generated">
    <condition>CII_ACK_GENERATED = "YES"</condition>
  </rule>

  <sequence>
    <sequence>
      <operation>
        <participant name="DeenvelopeCII" />
        <output message="Xout" >
          <assign to="produce_verbose_report">0</assign>
            <assign to="." from="*"></assign>
        </output>
        <input message="Xin" >
          <assign to="." from="*"></assign>
        </input>
      </operation>

      <onFault code="Message-Group-Non-Compliant">
        <assign to="BREAK">YES</assign>
      </onFault>

    </sequence>
    <sequence>
      <choice>
        <select>
          <case ref="ack_generated" activity="EDI_ENCODE_GENERATED_ACK" />
        </select>

        <sequence name="EDI_ENCODE_GENERATED_ACK">
          <operation>
            <participant name="EDIEncoder"/>
            <output message="Xout">
              <assign to="." from="*"></assign>
            </output>
            <input message="Xin" >
              <assign to="." from="*"></assign>
            </input>
          </operation>
        </sequence>
      </choice>
    </sequence>

  </sequence>
</process>
```

The following scenario shows how the CIIDeenvelope business process can deenvelope CII documents:

1. The File System adapter collects a file from a CII collection folder and invokes the CIIDeenvelope business process.

2. The CII Deenveloping service determines that the file contains a CII document and starts the CIIDeenvelope business process.

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3. The CIIDeenvelope business process removes the envelopes to make available the transaction set envelope for the CII document and determines the next action to perform.

4. For documents with CII Syntax Rule requirements, the CIIDeenvelope business process parses the message group and uses the values indicated in the message group header to locate a matching envelope. The envelope then determines the next action to perform. If a matching envelope is not found, the service fails and the compliance report indicates that the envelope could not be found.

Note: If the CIIDeenvelope business process does not locate a matching envelope, the business process stops. The application generates an EDI Compliance Report that describes the reason that the CIIDeenvelope business process could not locate the envelope.

Before Using CIIDeenvelope

Before you use the CIIDeenvelope business process, you must complete the following tasks:

1. Create the trading profile, including a contract.

2. Create necessary envelopes.

3. Create a business process that initiates the CIIDeenvelope business processes.

CIIEnvelope Business Process

The CIIEnvelope business process is initiated when it is run as part of a predefined business process.

The CIIEnvelope business processes performs the following primary activities:

1. Starting with one or more CII documents, the CII Enveloping service relies on the EDI Encoder service to be used to envelope the messages.

2. The CIIEnvelope service takes one or more transaction sets and applies an envelope.

3. Using the envelope data, the service either looks up a contract or runs a business process.

This table lists the configuration parameters for the CIIEnvelope 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.

Parameter	Default	Description
Set 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 selected for this business process model for processing.
Use BP Queuing (recommended)	True	Enable business processes to execute in a sequence. It is possible to queue business processes such that one executes after one business process ends.
Enable Transaction	False	This option instructs the application to treat the entire process as a single transaction so that either all of the steps complete, or, in the event of an error, none of them complete. When an error occurs, no data is committed; data returns to its pre-process state. By default, this transaction mode is not enabled.
Commit All steps when there is error	False	This option enables you to have the business process commit all work to the database, at the time an error is generated. With this option you can either rollback or commit all work prior to the error before the onfault block is called.
Category	N/A	A category name to which this business process belongs.
Set the Persistence Level to	Full	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.
Set the Event Reporting Level to	None	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 services running as a result of this business process, and any resulting errors and exceptions.
Set the Recovery Level to	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.
Set the Document Storage to	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.
Deadline Settings	Do not set deadline **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. ◆ 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
Life Span	System Default	The length of time, in days and hours, to retain the data in the application, along with the life span type and removal method. If you select **Process Specific**, then you can select the number of days and hours for the life span. Also, you can select if you want the application to archive or purge a business process after its life span is over.

The following BPML code makes up the CIIEnvelope business process:

```
<process name="CIIEnvelope">
  <sequence>
    <operation>
      <participant name="EnvelopeCII" />
      <output message="Xout" >
        <assign to="produce_verbose_report">0</assign>
        <assign to="." from="*"></assign>
      </output>
      <input message="Xin" >
        <assign to="." from="*"></assign>
      </input>
    </operation>
  </sequence>
</process>
```

Before Using the CIIEnvelope Business Process

Before you use the CIIEnvelope business process, complete the following task:

1. Create inbound envelopes for your CII messages.

2. Create outbound envelopes for your CII messages.

CII Enveloping

CII Enveloping Overview

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 message protocol used. Creating document envelopes is necessary to use CII with your trading partners.

During the envelope creation process, you need to assign the envelope name, description, and parameters, such as unique identification numbers (control numbers).

Note: Each time a user adds, modifies, or deletes an envelope, the action is logged to create an audit trail based on the user who performed the event.

Each envelope type has a specific properties page for the envelope and other pages that enable you to specify additional requirements for the envelope. Properties for the following envelopes can be found in this documentation:

✦ CII Inbound Envelope Properties

✦ CII Outbound Envelope Properties

Envelope Structure

The CII envelope structure has only one level of envelope that is the message group header.

Base Envelopes

The application uses a concept of a *base envelope* as a starting point to create a new envelope. The base envelope maintains a link to the new envelope that inherited its properties. If you modify the base envelope, all related envelopes (that is, ones that inherited the base envelope properties) change, as well.

Note: If you plan to create many envelopes using base envelopes, it is recommended that you do not use the base envelopes in production. You may want to document how your base envelopes are linked to other envelopes.

The default envelope is the version of the document envelope that the application uses. You can specify a default envelope only if there are two or more versions of the same envelope. One version must be selected as the default.

Types of Envelopes

There are many types of envelopes provided in the application. Each envelope is defined by its envelope properties. These predefined enveloping and deenveloping business processes are available for you to incorporate into your own business processes. Envelope parameters specify whether the document is inbound or outbound:

✦ *Inbound envelopes* identify documents that come into the application so they can be properly routed. Inbound envelopes also give you the option to translate documents when you choose to check documents for compliance. By choosing to translate documents from within the envelope, you can reduce document processing time because you do not need to specify a separate Translation service step in the business process.

✦ *Outbound envelopes* identify documents so that they can be sent to and received by trading partners.

Creating a CII Envelope

To create a CII envelope using the application:

1. From the **Administration** menu, select **Trading Partner > Document Envelopes > Envelopes**.

2. Under Create, next to New Envelope, click **Go!**

3. On the Envelope Standards page, select **CII** and click **Next**:

4. Select the envelope you want to create, including inbound or outbound, and click **Next**.

5. Do one of the following:

   ◆ To create this envelope from a base envelope, select the Base envelope from the Select Envelope list, and click **Next**.

   Note: All the properties are pre-filled but you can update them as needed.

   ◆ To create a new envelope, select the Not Applicable from the Select Envelope list, 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.

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

9. Click **Return** to continue.

Updating a CII Envelope

The application enables you to modify any information in your envelopes, except the name of the envelope. To update envelope properties:

1. From the **Administration** menu, select **Trading Partner** > **Document Envelopes** > **Envelopes**.

2. Find the envelope using the Search or List function.

3. From the list of envelopes, click **source manager** next to the envelope you want to update.

4. Click **edit** next to the envelope you want to update.

5. Update envelope properties and settings as necessary, clicking **Next** to continue.

6. Click **Finish** to update the envelope.

7. Click **Return** to continue.

Importing and Exporting Envelopes

The Import/Export feature enables you to save time and increase the accuracy of duplicating resources on different systems. This feature enables you to move resources and data between application environments of the same version. The Import/Export feature enables you to:

◆   Move from a test application environment to a production application environment.

◆   Move resources from one application system to another.

The ability to import and export envelopes means that you can configure resources on one system and then move or copy them to a different system, thereby avoiding having to recreate the resources on each system. Even if you have resources that are going to be slightly different from one system to another, you can export the resources from one system and import them to a different system, and then make the necessary changes to the resource on the second system.

The Import/Export feature supports several different resource types, including envelopes.

Note: Importing an export file of envelopes always requires a passphrase, even if a passphrase was not required during the export. The passphrase is now required because of the addition of encrypted passwords that apply to some envelopes. When you are prompted for a passphrase for envelopes during the import of envelopes (when you did not use a passphrase when the envelopes were exported), you can supply any value for the passphrase.

Deleting a CII Envelope

Caution: Before deleting a base envelope, consider the impact on all related envelopes (envelopes that inherited the base envelope properties).

To delete an individual envelope or all versions of an envelope:

1. From the **Administration** menu, select **Trading Partner** > **Document Envelopes** > **Envelopes**.

2. Find the envelope using the Search or List function.

3. Next to the envelope you want to delete, click **source manager**.

4. In Envelope Source Manager page, do one of the following:

   To delete an individual envelope:

   ◆   Next to the version, under Delete, select the check box.

   ◆   Next to Delete Selected Versions, click **Go!**.

   To delete all versions of this envelope, next to Delete All Versions, click **Go!**.

CII Inbound Envelope Properties

The following table describes CII inbound envelope properties for the Message Group Header:

Field	Description
Sender Code	Coded name of the company or division sending the message group. Valid value is 12 standard characters. Required.
Receiver Code	Coded name of the company or division receiving the message group. Valid value is 12 standard characters. Required.
Organization Code	Coded name of the organization within a company or division receiving the message group. Valid value is four standard characters. Required.
Sub Organization Code	Coded name of the suborganization within a company or division receiving the message group. Valid value is two standard characters. Required.
Edition	Edition equates to the version number of the standard message number of the standard message. Valid value is two standard characters. Required.
Information ID Code	Type of the standard message. Valid value is four standard characters. Required.
Operation mode setting	Mode of operation as test mode or production (normal) mode. Required. Valid values are: ◆ Test ◆ Production (default)
Eight Bit Character Encoding	Information interchange referred to in this CII syntax rule; encoding type of the 1-byte character set. Optional. Valid values are: ◆ Default Encoding of Platform ◆ JIS0201 (JIS X 0201, Japanese) - default ◆ SJIS (Shift-JIS, Japanese) ◆ Other
Sixteen Bit Character Encoding	Information interchange referred to in this CII syntax rule; encoding type of the 2-byte character set. Optional. Valid values are: ◆ Default Encoding of Platform ◆ JIS0208 (JIS X 0208, Japanese) - default ◆ JIS0212 (JIS X 0212, Japanese) ◆ SJIS (Shift-JIS, Japanese) ◆ Other
Generate a Receiving Acknowledgement Message	Generate an acknowledgement that notifies the sender that the receiver has received an interpretable transaction message. Valid values are Yes (default) and No. Required.

Field	Description
Compliance Check Document	Check the transaction set body for compliance. Valid values are Yes (default) and No. Required.
Compliance Check Map Name	Which map to use to perform a compliance check. Select the map from the list of maps already checked in. Required if **Compliance Check Document** is set to Yes.
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 documents from within the envelope, you can reduce document processing time because you do not need to specify a separate Translation service step in the business process. Required. Valid values are Yes and No (default).
Handling of Non-Compliant Message Groups	Process to follow when non-compliant message groups are encountered. Required. Valid values are: ◆ Accept ◆ Reject (default) ◆ Accept compliant transactions, reject non-compliant transactions
Business Process for Non-Compliant Documents	Business process that should run when non-compliant documents are encountered. Optional.
Batch messages received within a message group into one output document.	Send received batch messages into one output document. If you select No, instructs the application to output each message to a separate document. Valid values are Yes (default) and No. The default is to output each message to a separate document. Required.
Determine the Business Process by	Select a business process that should run with extracted CII messages as the primary document. Required. Valid values are: ◆ Looking up contract dynamically ◆ Specifying a contract ◆ Specifying a business process
For each document	As specified in the Determine the Business Process. Required. Valid values are: ◆ Invoke the business process ◆ Set the business process name in the process data
Business Process List	Select a business process to run when this envelope is processed. Optional.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Extraction Options	Required. Valid values are: ◆ Determined by a business process ◆ Extract to a file system directory ◆ Extract to a mailbox
Data Extraction Directory	Directory for data extraction. Optional.
Data Extraction Filename	Filename for data extraction. Optional.

Field	Description
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Optional.

CII Outbound Envelope Properties

The following table describes CII outbound (message group header) envelope properties for the Message Group Header:

Field	Description
Sender Stationed VAN Code	Coded name for the value-added network (VAN) of the company or division sending the message group. Valid value is 12 standard characters. Optional.
Sending Center Code	Computer center sending the message group. Valid value is an alphanumeric code with 12 standard characters. Optional.
Sender Code	Coded name of the company or division sending the message group. Valid value is 12 standard characters. Required.
Receiver Stationed VAN Code	Coded name for the VAN of the company or division receiving the message group. Valid value is 12 standard characters. Optional.
Receiving Center Code	Agency controlling the computer center receiving the message group. Valid value is an alphanumeric code with 12 standard characters. Optional.
Receiver Code	Coded name of the company or division receiving the message group. Valid value is 12 standard characters. Required.
Organization Code	Coded name of the organization within a company or division receiving the message group. Valid value is four standard characters. Required.
Sub Organization Code	Coded name of the suborganization within a company or division receiving the message group. Valid value is two standard characters. Required.
Edition	Edition number of the standard message. Valid value is two standard characters. Required.
Information ID Code	Type of the standard message. Valid value is four standard characters. Required.
Syntax ID and Version Number	Coded identifier of syntax rules and the version number. Valid value is six standard characters. Required.
Extended mode setting	Mode to indicate whether the length of a variable length data element in the TFD (transfer form data element) should be compressed or extended if the condition determined according to the data type is satisfied. Required. Valid values are: ◆ Compressed mode (default) ◆ Extended mode
Operation mode setting	Mode to indicate this operation as test mode or production (normal) mode. Required. Valid values are: ◆ Test ◆ Production (default)

Field	Description
Dividing mode setting	Mode to indicate message groups are stored in a variable length record file. Required. Valid values are: ◆ Dividing mode ◆ Non-dividing mode (default)
Eight Bit Character Encoding	Information interchange referred to in this CII syntax rule; encoding type of the 1-byte character set. Optional. Valid values are: ◆ Default Encoding of Platform ◆ JIS0201 (JIS X 0201, Japanese) - default ◆ SJIS (Shift-JIS, Japanese) ◆ Other
Sixteen Bit Character Encoding	Information interchange referred to in this CII syntax rule; encoding type of the 2-byte character set. Optional. Valid values are: ◆ Default Encoding of Platform ◆ JIS0208 (JIS X 0208, Japanese) - default ◆ JIS0212 (JIS X 0212, Japanese) ◆ SJIS (Shift-JIS, Japanese) ◆ Other
Accepter 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 document with the service it requires. Valid value must be at least one limited standard character. Required.
Map Name	Select the map to be used to perform a compliance check. The map must already be checked in. Required.
Validate translation input	Enables input-side validation to be turned off. Valid values are Yes (default) and No. Required.
Validate translation output	Enables output-side validation to be turned off. Valid values are Yes (default) and No. Required.
Generate checksums	Check and generate sums of specified TFDs (that is, TFD containing a user data tag and control data tag), consecutively. Required. Valid values are Yes and No (default).
Checksum TFD 1	Transfer form data (TFD) tag of first checksum. Valid value must be at least one numeric character. Optional. **Note:** Only displayed if you select **Yes** for **Generate Checksums**.
Checksum TFD 2	TFD tag of second checksum. Valid value must be at least one numeric character. Optional. **Note:** Only displayed if you select **Yes** for **Generate Checksums**.

Field	Description
Expect an Acknowledgement for this Message Group	Whether you expect an acknowledgement that the receiver has received an interpretable message group. Valid values are Yes and No (default). Required.
Acknowledgement overdue after (hours)	Amount of time, in hours, within which you must receive an acknowledgement. Valid value is four numeric characters. Optional.
Acknowledgement overdue after (minutes)	Amount of time, in minutes, within which you must receive an acknowledgement. Valid value is four numeric characters. Required.
Determine the Business Process by	Select a business process that should run with extracted CII messages as the primary document. Required. Valid values are: ◆ Looking up contract dynamically ◆ Specifying a contract ◆ Specifying a business process
Business Process List	Select a business process to run when this envelope is processed.
Contract List	Select a previously created contract to associate with this envelope. Optional.
Extraction Options	Required. Valid values are: ◆ Determined by a business process ◆ Extract to a file system directory ◆ Extract to a mailbox
Data Extraction Directory	Directory for data extraction. Optional.
Data Extraction Filename	Filename for data extraction. Optional.
Data Extraction Mailbox	Mailbox for data extraction. Required.
Data Extraction Mailbox Message Name	Mailbox message name for data extraction. Optional.

Mapping CII Documents

Overview

The Map Editor enables you to map CII documents, and generates a file layout for you using the components and message types that you select. The Map Editor-generated CII map consists of groups, composites, and fields that are comparable to parameters that are defined by CII.

Note: The CII standards database contains Japanese data. To use it, you must first install the Japanese code page into Windows first.

A CII map that contains an FA, FD, or F9 data tag in extended mode on the output side of the map must have a Use Constant standard rule defined, so that a detail number is generated. A detail number is mandatory for these tags in extended mode.

For CII inbound and outbound processes, you must specify either 8-bit or 16-bit character set in the envelope. For 8-bit character set, you can choose JIS0201, SJIS, or Default, where Default is JIS0201. For 16-bit character set, you can choose JIS0208, JIS0212, SJIS, or Default, where Default is SJIS. If you do not set these two values, the default value will be used in translation.

Note: You need to download the Map Editor component to use it.

Map Editor allows you to modify the map components by using the Deactivate, Promote, Split, Copy, Cut, and Paste functions.

You can create a map for all CII Standards Release messages loaded into the standards database through the Map Editor.

CII Components in the Map Editor

The following table lists the components that make up the CII layout in the Map Editor, the icons that represent the components, and descriptions of the components. For information about adding a map component to a layout, see *Map Editor Basics*. For information about the properties of these map components, see Appendix C, *Map Editor Properties* in the *Map Editor guide*.

Component	Icon	Description
CII root element	日本	The CII File root element represents the CII document that Map Editor is mapping.

Component	Icon	Description
Group		A *group* is a looping structure that contains a sequence or an implicit group of repeating field tags (in Map Editor, a group is related segments and groups that repeat in sequence until either the group data ends, or the maximum number of times that the loop is permitted to repeat is exhausted).
		A group that is subordinate to another group is a subgroup (and corresponds to a nested looping structure, a loop within a loop).
		When a group contains an extended rule or a standard rule, an asterisk appears to the right of the group icon.
TFD		Transfer form data (TFD) is a block of data that consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary.
		When a TFD has a link performed against it, a red check mark appears over the TFD icon.
		When a TFD contains an extended rule or a standard rule, an asterisk appears to the right of the TFD icon.

About the CII Message

CII headers and trailers are in text, but messages are binary. To read a raw CII message outside of this product, you need a hex editor. Using a hex editor, you can see the basic structure of a CII message, which consists of:

✦ Control tags
✦ Transfer form data (TFDs)
✦ Length indicators
✦ Data bytes

A typical TFD consists of a tag, a length indicator, and data. The length of the element is always indicated, so delimiters are unnecessary.

The Translation service handles hexadecimal data in the range of 0x01 through 0xFF. The Translation service does not handle 0x00, and thus it cannot translate pure binary data such as bitmaps.

Example

In the following sample is from a dividing-mode CII message, **bold** indicates the tag and *italics* indicates the length. The data is displayed in hex and spaces are added here for readability.

… **01** *04* 34 32 39 30 **02** *04* 30 35 30 34 **03** *06* 39 38 30 35 32 39 …

Dividing Mode

Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor.

Note: Dividing mode does not affect message group headers or trailers because they are always 251 bytes.

Non-transparent Mode

According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems.

Using Extended-mode Tags

According to the CII specification, tags are in either compressed or extended mode. The following table illustrates the differences.

Mode	Size	Range (Decimal)
Compressed	1 byte	1 - 239
Extended	2 bytes	1 - 61439

A TFD is in compressed mode unless an extended-mode indicator (0xF0) was previously encountered in the TFD stream.

About CII Control Tags

The following hexadecimal control tags are used in CII:

Control Tag	Function
0xF0	Starts extended mode
0xF2	Length extender
0xF7	Length indicator
0xF8	Escape indicator
0xF9	Internal segment separator
0xFA/0xFD	Multi-detail header (loop start)
0xFB	Multi-detail return
0xFC	Multi-detail trailer (loop end)
0xFE	Message Trailer

Creating a CII Map

When you create a new map, you can either manually create an EDI layout or you can use a wizard that creates a layout for you based on an EDI standard. The wizard saves you time and effort and minimizes the risk of having an invalid standard format.

Note: If the map you are creating contains greater than 20,000 objects, you will receive a message noting that this map contains a very large number of objects. For best performance, it is recommended that

you consider whether any unnecessary objects in the map can be removed, do not expand the entire object tree—expand only the section of the tree you are currently mapping, consider using the **Show links to or from the currently selected element** option instead of the **Show links to or from all visible elements** option, and save the map using the .MAP file format (using the Save As function).

To create a CII map:

1. From the Map Editor **File** menu, select **New**.

2. In the **New Map Wizard**, complete the questions in the first window and click **Next**.

Note: Be sure that **Sterling Integrator** is selected in the **What kind of map are you creating** list.

3. If you are translating from CII, in the Input Format window select the **Create a New Data Format Using this Syntax** option.

4. Then, select **CII**. If you are translating from another format, select that format and continue to the next page of the wizard.

5. Select the ODBC data source that contains the standards database (the default is **Sterling Integrator Standards**) and click **Next**.

Note: If you want to use Japanese descriptions, select the **Use Japanese descriptions, if available** check box and click **Next**. Otherwise, just click **Next**.

6. Click **Finish** to load the transaction set.

7. Click **Next** to select the Output Format.

8. If you are translating to CII, in the Output Format window (select the **Create a New Data Format Using this Syntax** option.

9. Then, select **CII** and click **Customize**. If you are translating from another format, select that format and continue to the next page of the wizard.

10. Select the ODBC data source that contains the standards database (the default is **Sterling Integrator Standards**) and click **Next**.

Note: If you want to use Japanese descriptions, select the **Use Japanese descriptions, if available** check box and click **Next**. Otherwise, just click **Next**.

11. Click **Finish** to load the transaction set. The Map Editor displays the new map in the Map Editor window.

12. In the Map Editor, select **File > Save** to save the map. Do not use spaces or apostrophes in the map name.

Note: To compile the map, select **File > Compile**. A progress dialog box displays and updates during the compilation process. If the map contains a large number of objects, you may be prompted that you should save the map in .MAP format.

13. To save a map as a .map file, select File > Save As and then select Source Maps (*.map) from the Save as type list.

Note: Prior to opening an .mxl (XML-formatted) file, the Map Editor verifies that you have the Microsoft XML Core Services (MSXML) 4.0 installed on the same computer as Map Editor. If you do not have the Microsoft XML Core Services (MSXML) 4.0 installed, the Map Editor cannot save or load .mxl source files.

CII File Properties Dialog Box

This table contains the parts and functions for the CII FIle Properties dialog box:

Part	Functions
Name Tab	
Name	Map Component name. **Note:** Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non- XML map components, contains any user-defined comments.
Mode Tab	
Dividing Mode	Most CII files are sent in dividing mode (also translated as division mode). This mode requires the messages to be sent in chunks of 251 bytes to facilitate communications. To set dividing mode, use the Partner Editor. Default.
Non-Transparent Mode	According to the CII Syntax Rule, non-transparent mode is an option that helps you avoid interfering with communication control characters in some communications systems. Transparent mode is the default setting in the application.
Character Sets tab	
Select 8 Bit Character Set	Valid values are Default, JIS-X0201, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.
Select 16 Bit Character Set	Valid values are Default, JIS-X0208, and Other. Default instructs the translator to use the default character setting of the computer on which the translator is running. Use Other if you must specify any other type of character encoding.
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Map Editor processes On End rules at the end of each loop occurrence, not at the end of all loops.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Extended rule	Defines the extended rule.

Part	Functions
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

CII Group Properties Dialog Box

This table contains the parts and functions for the CII Group Properties dialog box:

Part	Functions
Name Tab	
Name	Map Component name.
	Note: Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non- XML map components, contains any user-defined comments.
Looping Tab	
Minimum usage	Minimum number of times the loop must be repeated.
	For a conditional loop, the minimum usage is zero.
Maximum usage	Maximum number of times the loop must be repeated.
Promote records to parent	Select this check box to specify that when the group is compiled, the subordinate records and groups are extracted from the loop and located in the parent group. This function is valid for single iteration subgroups only.
	Note: Select this check box if you are mapping the fields in this group to data that is not grouped in the output.
Get usage from related field	This is supported on the input side of the map only. If this option is selected, you can associate the usage of a group or segment with the value stored in another field.
	Note: This options is disabled for SWIFT.
	The field associated with the usage must meet the following requirements:
	✦ It must be in a segment that's contained in the same group as the segment whose usage is being determined.
	✦ It must be in a non-repeating segment.
	✦ It must be in a segment that precedes the segment whose usage is being determined.
	✦ It must be an integer field.
Ordering tab	

Part	Functions
◆ Normal ◆ Start random order ◆ Inside random order ◆ End random order	Used for the *input* side of the map only. The order in which the group, segment, or record can occur. **Note:** If you are using a non-EDI syntax like CII and wish to use this feature, you must manually set the ordering start/inside/end group and segment points and also set the associated Ordering Tag.
Ordering Tag	Used to perform validation on the ordering types to ensure there is a start and end for every defined ordering sequence. The following caveats apply to this parameter: ◆ The Ordering Tag must be the same for a related sequence of groups or segments. ◆ The Ordering Tag is not valid for the XML syntax. ◆ This parameter is only enabled (and is mandatory) when you select Start random order, Inside random order, or End random order.
Loop Extended Rules tab	
On Begin	Extended rule to be run before the translator processes the map object.
On End	Extended rule to be run after the translator concludes processing the map object. Map Editor processes On End rules at the end of each loop occurrence, not at the end of all loops.
Full Screen	Maximizes the dialog box.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Extended rule	Defines the extended rule.
Errors	Displays any errors generated when you clicked the Compile button to compile the extended rule. Double-click an error to make the cursor go to the line containing the error.

CII TFD Properties Dialog Box

This table contains the parts and functions for the CII TFD Properties dialog box:

Part	Functions
Name Tab	
Name	Map Component name. **Note:** Do not use spaces or hyphens (-) in the name. You can use the underscore (_) to separate words.
Description	Description of the map component.

Part	Functions
Additional notes	When you import an XML schema, the annotation attached to each XML map component is saved in this box. For non- XML map components, contains any user-defined comments.
Tag Tab	
Tag	The element ID, which is defined by a CII standard.
Hex	Whether you view the tag in hexadecimal or decimal and applies only to what you see in the Map Editor.
Decimal	This setting does not affect translation.
Looping tab	
◆ Normal ◆ Loop Start ◆ Loop End ◆ Loop Repeat	Type of loop. Values are: ◆ Normal – In the loop, but is not the beginning or ending ◆ Loop Start – Marks the beginning of the loop ◆ Loop End – Marks the end of the loop ◆ Loop Repeat – Marks the end of one loop iteration and the beginning of the next iteration
Validation tab	
Mandatory field	Select this check box to indicate that the map component is required.
Minimum length	Minimum number of characters in the map component.
Maximum length	Maximum number of characters of the map component.
Data-type	Type of data for this map component. Valid values are: ◆ String - Alphanumeric ◆ Number - Numeric, real, overpunched, or packed (for Positional only) ◆ Date/time - Date or time
Data format	How the data in the map component will be formatted. Depending on the data type you selected, you can either: ◆ For the String data-type, select a syntax token to denote that this map component must be formatted as the syntax token dictates. ◆ Free Format indicates that any characters are acceptable in the field. The translator does not check the characters for compliance. ◆ For Number or Date/Time data-type, select the data format from a list.
Data is Read/written as Raw Bytes	Type of byte ordering: ◆ Little-endian byte ordering specifies that the least significant character is first. Intel and Windows use this order. ◆ Big-endian byte ordering specifies that the most significant character is first. UNIX and Java use this order.

Part	Functions
Positive Number Format Default	Specifies the value used at field-level configuration dialog boxes. The default is **Don't allow/generate '+' prefix**. Valid choices are: ◆ Use properties file setting (specifies that the rule or rules specified in the customer_overrides.properties file is followed) ◆ Don't allow/generate '+' prefix (specifies that regardless of whether the customer_overrides.properties file contains a rule or rules to allow the "+" prefix, the plus sign will not be used for the field) ◆ Allow/generate '+' prefix (specifies that even if the customer_overrides.properties file indicates that the "+" prefix is not allowed in maps, the rule or rules will be overridden and the plus sign will be used for the field)
Standard Rule Tab	
Please select the standard rule to use	The standard rules from which you can select are: ◆ Select ◆ Update ◆ Use System Variable ◆ Use Constant ◆ Use Accumulator ◆ Loop Count ◆ Use Code For more information on using standard rules, see the *Map Editor User's Guide*.
Extended Rule Tab	
Extended Rule	Area where you type the extended rule. For more information on using extended rules, see the *Map Editor User's Guide*.
Full Screen	Enlarges the extended rule area to the size of your entire display to give you more room to see what you type.
Compile	Compiles the extended rule. This function enables you to view compile errors for this rule prior to compiling the translation object. This function gives you immediate feedback about the accuracy of your rule. Double-click an error to immediately navigate to the line containing the error. The rule is also compiled when you compile the map.
Errors	If you compiled this extended rule, any warnings or errors are displayed in the Errors list. Double-click an error to make the cursor go to the line containing the error.
Character Set tab	
Character Set	Select 8 Bit (Default) if the TFD is single-byte, and 16 Bit if the TFD is double-byte.

Configuring a Loop

In CII terminology, a loop is expressed as a multi-detail. Multi-details are indicated through the use of specific TFDs. A multi-detail header (MDH) is used before the start of a loop, and at the end of each iteration

there is a multi-detail return (MDR). The multi-detail trailer (MDT) is located at the end of the loop. The following table shows how a multi-detail is typically configured:

TFD Type	Tag	Properties
Multi-detail header (MDH)	0xFA	One-byte string
MDH	0xFD	Two-byte binary numeric type N0
Multi-detail return (MDR)	0xFB	No data
Multi-detail trailer (MDT)	0xFC	No data

Configuring Key Fields for Multi-Detail Headers

In extended mode, you must identify multi-detail headers with key fields. You must also specify key fields if there is any possibility of ambiguity in the data (for example, if a multi-detail in the CII file layout has no corresponding data).

Note: Key fields are intended to be used with string fields only. If you use a key field on a numeric field, the result is not guaranteed.

To configure a key field for a multi-detail header:

1. In the Map Editor, double-click or right-click the multi-detail header and select **Properties**.

2. Click the Key Field tab.

3. Select **Use constant** and click **Edit**.

4. In the Map Constants dialog box, type the constant you need.

Tag	Data Type	Range of Values
0xFA	String	A to Z, 1 to 9
0xFD	String	0000 to 65535

About Character Encoding

An encoding system determines the hexadecimal values that represent display characters. The Map Editor uses the default character set of the computer you are working on. The default encoding for Japanese Windows is Shift-JIS although there are several other encoding systems for Japanese characters.

When you are specifying character sets for the CII side of a map, you must indicate one character set each for 8-bit and 16-bit characters in the CII File Properties dialog box. Then in the CII TFD Properties dialog box, you indicate whether the TFD uses an 8-bit or 16-bit character set.

Relating CII Data Attributes to Map Editor Data Types

The following table shows how CII data attributes correspond to the data types in the Map Editor:

Description of Data	CII Attribute	Map Editor Data Type
Numeric, implied decimal	9	N0 to N9
Numeric, explicit decimal	N	R0 to R9
8-bit characters	X	X, J, or other single-byte syntax token
16-bit characters	K	K, double-byte syntax token
8-digit date	Y	Date: YYYYMMDD

About Syntax Tokens

To process Japanese characters, you must use a syntax token that enables non-Latin characters in the data that the map will process. The Map Editor provides the syntax token K, which enables all double-byte Japanese characters.

You can create a syntax token to meet your specific needs. If you create a double-byte character set (DBCS) syntax token, you must configure the syntax tokens on a computer with a DBCS operating system (Japanese, Korean, Traditional Chinese, or Simplified Chinese) or a Windows 2000 system to which you have added font support for one of those languages. If you do not configure syntax tokens, the DBCS button is inactive and you are unable to use it. Syntax tokens cannot be imported.

Preserving Leading Spaces When Mapping to a Positional Data Format

In the EDIFACT and ANSI standards, leading spaces in fields are eliminated. However, in the CII format, according to the CII Syntax Rule, leading spaces are typically preserved (although they can be eliminated).

To preserve leading spaces in a map for translating CII to the positional format:

1. From the Map Editor **Edit** menu, select **Details**.

2. In the **Map Details** dialog box, select **Use Configurable Trimming** and click **OK** to close the dialog box.

3. In each field on the positional side of the map, open the Field Properties dialog box, and click the Position tab.

4. If the spaces are single-byte:

    a. In the characters used in empty portions of the map box, type SP.

    b. From the data alignment options, select beginning of the field.

5. If the spaces in the field are double-byte and the data is encoded in Shift-JIS (windows code page 932), for **Enter the character used in empty portions of the field**, type 0x8140 or the appropriate key code combination.

6.   Click **OK**.

CII Reporting

The EDI Translation Detail report enables you to access EDI data (for a particular standard like CII) for a specified time period. It further allows you to organize the report by selecting criteria such as direction of the transmission, sender and receiver identifier, envelope name, unique identifier for the envelope level, EDI standard used, and translation success or failure, among other parameters. This report allows you to quickly and easily access information about EDI translation through the system.

To run a report containing details on inbound/outbound CII messages:

1. From the **Operations** menu, select **Reports**.

2. Use the Report Configuration wizard to create a new **EDI Translation Detail** report. Click **Go!** to create a new report configuration.

3. In the Type page, select **EDI Translation Detail** from the from the drop down list and click **Next**.

4. In the Report Configuration Name page, give a unique Name for the report and a meaningful description in the Comments box and click **Next**.

5. Select the transaction level and click **Next**. The valid options are:

    ◆ Transaction

    ◆ Group

    ◆ Interchange

6. In the Report By page, select the Reports by Fields from the drop down list. The options are available based on the option selected for the transaction level:

    If you select the Transaction option for the transaction level, then you get the following options:

    ◆ Sender ID-Receiver ID

    ◆ Transaction Envelope

    If you select the Group option for the transaction level, then you get the following options:

    ◆ Group Sender ID-Group Receiver ID

    ◆ Group Envelope

    If you select the Interchange option for the transaction level, then you get the following options:

    ◆ Interchange Sender ID-Interchange Receiver ID

    ◆ Interchange Envelope

7. On the **Detail Filtering** page in the **Standard** parameter, clear the checkboxes for all standards *except* **CII**.

8. Filter by any other desired criteria like Date or Time.

9. Select the Display Order whether Ascending or Descending.

10. In the Confirm page, verify the settings that you have selected and click **Finish** at the end of the Report Configuration Settings Wizard to generate the report.

Note: You can view the report in any of the following formats:

- PDF
- HTML
- XLS

Searching for CII Correlations

Correlation data, often called correlations, is defined as specific pieces of data that you may need to review in the process of monitoring, tracking, and troubleshooting your activities. These data items are defined by type and value. These type-value pairs are known as name-value pairs, and are a powerful tool you can use to record and search for business process- and document-specific data. The application has some predefined correlations and enables you to define more so that you can easily and efficiently monitor and track your activities, such as CII message flow.

To search for CII correlations:

1. From the **Administration** menu, select **Business Process** > **Advanced Search** > **EDI Correlation**.

2. In the Search Option area, specify any combination of the following search criteria, as appropriate. To search for CII messages, in the **Interchange Level Options > Standard** box, type **CII**.

3. Click **Go!** to display the EDI correlation records that match your search criteria.

4. In the EDI Correlation Interchange Results page, click ⓘ **info** in the Detail column for the CII interchange for which you want to view details.

5. In the EDI Correlation Interchange/Group/Transaction Detail Results page, click ⓘ **info** to the right of Document Correlations for additional information about the CII messages.

6. Click ⓘ **info** to the right of Business Process for additional information about the CII business process.