

## **BaanERP (Grieg)**

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**The BEMIS V Cookbook (Structure, master data, and configuration of BEMIS V)**

**A publication of:**

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# About this document

This documentation provides an overview over the BAAN Electronic Message Interchange System (BEMIS V) for BAAN ERP. It describes the positioning, structure and working method, as well as the requirements for the correct operation. Furthermore, the necessary data settings, which support the correct configuration of BEMIS V are described in detail.

This document is intended for everyone who wants to use the advantages of the EDI functionality in connection with a BAAN ERP environment, as well as for every consultant who implements such a solution.

This documentation does not contain a detailed or complete description of the whole EDI functionality in BAAN, but is limited to the aspects concerning BEMIS V. For further details about EDI, see the EDI Users' Guide (U7100C US). Users' Guides are also available for each of the specific file types supported by BEMIS V (for example, orders, orderrsp).

After the Introduction, this Users' Guide is divided into seven chapters:

- Chapter 1 describes the structure of BEMIS V and its functioning as interface between the EDI subsystem and the BAAN ERP-System. It contains definitions of the individual BEMIS V components and their functions.
- Chapter 2 describes the master data settings which are necessary for the correct functioning of BEMIS V.
- Chapter 3 describes the conversion settings which are necessary for the correct functioning of BEMIS V.
- Chapter 4 describes the code and conversion tables which are necessary for the correct functioning of BEMIS V.
- Chapter 5 contains information about the used evaluation expressions.
- Chapter 6 describes the import and export of the defaults.edi file
- Chapter 7 describes the interface between the EDI subsystem and BAAN ERP.

A glossary of terms and abbreviations is provided at the end of the book.



# 1 Introduction: concept and structure of BEMIS V

In common BEMIS represents the standardized interface to import or to export Non Automotive and Automotive related messages. In the trading business we normally have to deal with EDIFACT messages. Looking at the automotive industrie in germany currently the VDA standard is used. In contrast to that, the standard ODETTE is used in other European countries and ANSI X.12 is used in the United States. Each standard is distinguished from the others by different transmission formats and data interpretation. More and more companies are migrating to EDIFACT message standard.

Moreover the BEMIS V message standard is not only designed for external EDI. Another focus in developement was to make this standard more suitable for Intercompany EDI in a BAAN ERP Multi Site environment.

The BAAN Electronic Message Interchange System (BEMIS V) has been developed as fixed, standardized interface to the 'outside world of EDI' to ensure a consistent processing of the different standards from the side of the BAAN ERP-System. BEMIS V make use of BAAN ERP standard, i.e. the BAAN ERP standard is used to standardize an interface. BEMIS V consists of the following components:



Therefore, BEMIS V provides the following advantages for BAAN ERP

- Independence from which EDI standard is used
- Process security when using another EDI standard
- Reduction of necessity for development by concentrating on one internal standard and for suppliers of EDI subsystems
- Possibility to estimate the necessary efforts for the acquisition to BAAN ERP.
- Reduction of development scope through defined interface

The diagram on the following page shows the areas, in which BEMIS V can be used in the EDI communication chain. Between the EDI subsystems, messages are transmitted with a certain standard (for example, VDA, ODETTE) using remote data transmission. The communication between the EDI subsystem and BAAN ERP is carried out via BEMIS V.

BEMIS V consists of several components to carry out its task in a flexible and correct way, as is shown in Figure 1.

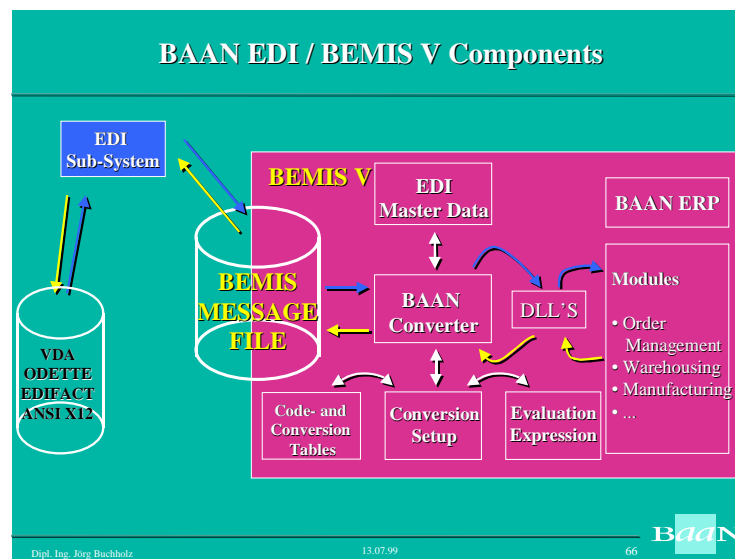


Figure 1, BEMIS V components

The BEMIS V Cookbook (Structure, master data, and configuration of BEMIS V)



The individual components have the following functions:

- **BAAN EDI in-house format interface file**  
The BAAN EDI in-house **format interface** file serves as interface to the EDI subsystem. A defined format is available for incoming and outgoing messages for every message type supported. For incoming messages, the EDI subsystem creates from the received file an interface file with the agreed format. For outgoing messages, BAAN ERP creates from BAAN data an interface file with this format, which the EDI subsystem will process, convert into a transmission file, and transmit.
- **BAAN ERP EDI Converter**
  - **Outgoing:** The EDI Converter creates from BAAN data (for example, schedules, purchase contracts) an interface file with the appropriate format for the message type required.
  - **Incoming:** The EDI Converter creates from the interface file the appropriate data (for example, schedules, invoices), in the appropriate format, which will then be processed in the BAAN ERP modules.
- **EDI Master Data**  
The EDI Master Data provide fundamental information about the functionality and operational capacity of the system concerning the network used, messages supported and communication partners involved.
- **Converter Settings**  
The converter settings contain the instructions for the BAAN ERP EDI Converter, including the format of the interface file by message type and transmission direction. These settings define for incoming messages how and where the information of the interface file will be stored in BAAN ERP. For outgoing messages, they define how and which BAAN ERP data will be written to the interface file.
- **Code Tables and Converter Tables**  
The code and conversion tables define which data have to be converted by the EDI Converter for processing. That way, customer or supplier data (for example, item numbers, item codes, quantity units) can be converted to BAAN ERP internal data and the other way round. The converter settings determine when these settings are valid.
- **Evaluation expressions**  
The evaluation expressions define the conditions under which the EDI Converter carries out certain actions. The converter settings determine when these settings are valid.

- **Dynamic Link Libraries (DLLs)**  
Dynamic Link Libraries, which the EDI Converter uses at lead time to carry out certain actions, are available for every supported message type, by transmission direction. They can be adapted to the application as required.

## 2 Master data in BEMIS V

The following parameters and master data have to be defined, entered and possibly maintained to be able to use the BAAN Electronic Message Interchange System V and to ensure its functioning:

- Organizations
- Networks
- Messages
- EDI Business Partner
- Code Tables and Conversion Tables

The following sections detail the steps necessary, and illustrates them with examples. The data of the examples refer to the BAAN ERP internal EDI subsystem BEMIS V. This system has been developed to become independent of the various EDI organizations/standards, which are currently used in the automobile industry or in trading business. When you set up your system, you should use the values given in the examples, or only make changes if you are certain what the effect will be.

### Fundamental EDI parameters

This session defines the fundamental parameters for the BAAN ERP EDI module. Some of them can be redefined in other sessions.

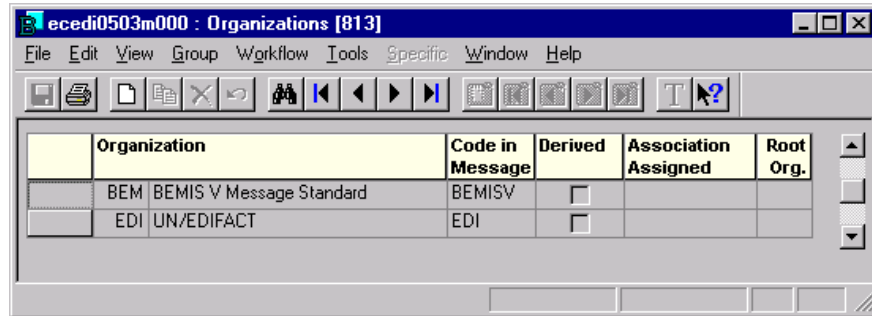
EDI Implemented	This field has to be set to 'Yes' and the BAAN ERP EDI module has to be installed.
Standard Path	This Unix / NT directory, where the messages and control files will be stored, is used for the communication between BEMIS V and the EDI-subsystem. The standard directory is also used as the source for the default.edi.
Make use of Tracefile	When processing messages, all actions will be recorded in a sub-directory ('Tracefile') of the 'Standard Path'.
Our Identification	This field contains the network identification of the transmitter, which is enclosed in outgoing messages. (The encoded number of the company from which the messages were generated is usually enclosed as well).
Reference Number	The message reference for outgoing messages will be generated on the basis of the subsequent 4 fields. The message reference consists of at <b>maximum 14 characters</b> and contains the fixed part/date/serial number.
Fixed Part	This is the fixed part of the message reference.
Date Format	Different date formats (for example, with or without century) can be selected in this field. The selected format can then be used for the date in the reference number. Use without century here because of the fact that the reference number is limited to 14 characters.
First free number	The serial number will be increased from this number.
Action on First Message on New Date	For every new date the serial number will be set back to 1.

## Organization

In BEMIS V, the organizations are used as common standard for the data transmission. These standards are for example VDA in Germany (automobile industry) or ODETTE in Europe.

BEMIS V itself does not use these standards but a BAAN internal organization/standard BEM, which is able to support VDA and ODETTE messages. These also means that BEMIS V is the BAAN internal message standard comparable to external standard like the mentioned above.

The organization BEM has to be entered in the BAAN session ecedi0503m000:

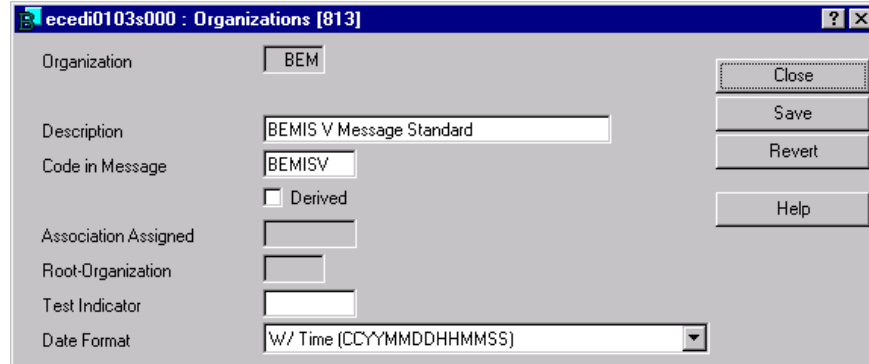


Organization	Code in Message	Derived	Association Assigned	Root Org.
BEM BEMIS V Message Standard	BEMISV	<input type="checkbox"/>		
EDI UN/EDIFACT	EDI	<input type="checkbox"/>		

## New Date / Time Format

For the BAAN Versions b and c2/3 we have defined a date format using up to 6 numerical digits. Coming with BAAN IVc3scc1 the date format has been changed to 8 digits at maximum.

Now with BEMIS V we have defined a new date / time format.



The screenshot shows a dialog box titled "ecedi0103s000 : Organizations [813]". It contains the following fields and controls:

- Organization: BEM
- Description: BEMIS V Message Standard
- Code in Message: BEMISV
- Derived
- Association Assigned: [Empty]
- Root-Organization: [Empty]
- Test Indicator: [Empty]
- Date Format: w/ Time (CCYYMMDDHHMMSS)

Buttons on the right side include Close, Save, Revert, and Help.

The new format is now: CCYYMMDDHHMMSS. The date / time information is put as an numerical field to the position within the message.

## Networks

The fundamental communication parameters (for example, stacker directories, structure of the message files, date formats, separators, and special characters within the message files) are defined in the network settings.

The network used for the communication has to be entered in the BAAN session ecedi0520s000. **Please define a network for every message type.**

The screenshot shows a dialog box titled "ecedi0120s000 : Networks [813]". It has two tabs: "References" and "File Definition". The "File Definition" tab is selected. The dialog contains the following fields and controls:

- Network:** A dropdown menu showing "BEMISV".
- Description:** A text field containing "BEMIS V Standard Network".
- Path:** A text field containing "\$BSE/BEMISV".
- Our Identification:** A text field containing "BEM".
- Reference Number:** A section containing:
  - General Reference
  - Fixed Part:** A text field containing "F813".
  - Date Format:** A dropdown menu showing "Without Century (YYMMDD)".
  - First Free Number:** A text field containing "5".
  - Action on New Date:** A dropdown menu showing "Start with 0".
- Multicompany:** A section containing:
  - Multicompany
  - Automatically Read in Generated Messages

On the right side of the dialog, there are four buttons: "Close", "Save", "Revert", and "Help".

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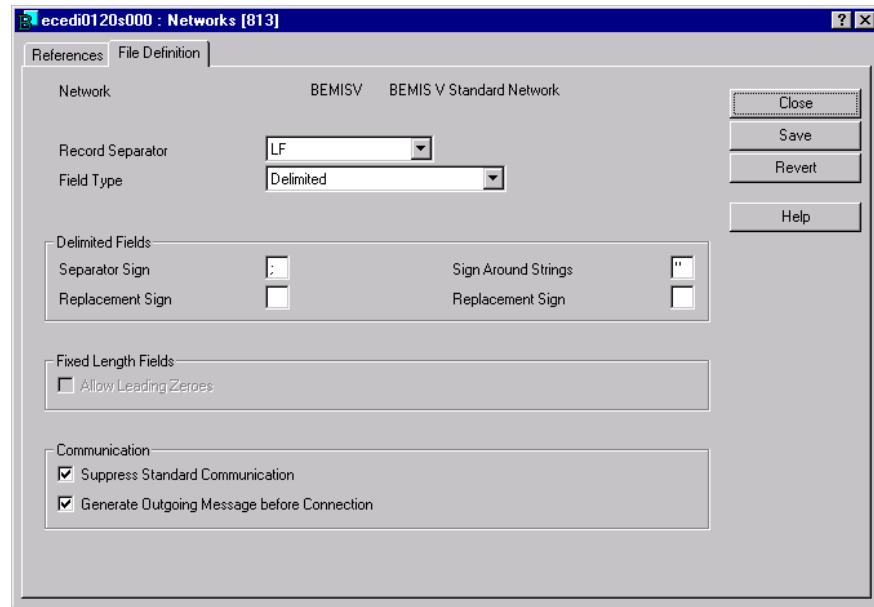
Path	This Unix / NT directory, where the messages and control files will be stored, is used for the communication between BEMIS V and the EDI-subsystem.
Our Identification	This field contains the network identification of the transmitter, which is enclosed in outgoing messages. (The encoded number of the company from which the messages were generated is usually enclosed as well).
General Reference	The message reference for outgoing messages will be generated on the basis of the subsequent 4 fields. The message reference consists of 14 characters and contains the fixed part/date/serial number.
Fixed Part	The BAAN company number has to be entered into this field as fixed part of the general reference.
First Free Number	The serial number will be increased from this number.
Action on New Date	For every new date the serial number will be set back to 1

---

Example: On the basis of the above information, the message reference number for outgoing messages will be: F5009705200003. The first message reference number for the next day would be: F5009705210001.



The important information about the record format is entered in the second form:



Record Separator	LF (LineFeed) indicates the end of a record.
Field type	The individual fields in the records do not consist of a certain number of characters, but are separated by separators.
Separator Sign	The fields are separated by a semicolon (;)
Sign Around Strings	Strings have to be put in inverted commas (" ").
Leading Zeroes	Fields are not to be filled up with leading zeroes, as the field type is delimited.
Suppress Standard Communication	The standard communication procedure between BEMIS V and the external EDI subsystem is activated.

**Tip:**

If you want define a new network please copy the default network BEMISV. Thus you will automatically get the correct setting for the delimiters.

Examples:		
....;"ABCDEFGG";.....		string ABCDEFG
....;"";.....		empty string
....;" ";.....		string with one blank
....;199;.....		number 199
....;"199";....		string 199
....;;.....		Field will not be read or filled.
		Date fields will be transmitted as strings.

## BEMIS V Messages - Conventions

The following general rules apply to a message record in a BEMIS message file:

- 1 Every message record starts with "SAX"
- 2 Every message record ends with "SAX\_END"
- 3 The length of a data record can vary.
- 4 The message record must consist of all fields, even if not every field contains a value.
- 5 The fields in the file must be separated by a ; .
- 6 A filled string field have to be put in "...".

As defined in BEMIS a position within a message file is pointed out using two semicolons.

To draw an example: "SAX";...;Position;...;"SAX\_END"

If an position in a BEMIS Message File is not taken by a value (this means the position is empty), the position is pointed out as shown above. Moreover the BAAN EDI Module distinguishes between numerical and alphanumerical data format. If a position defined as numerical is empty the position is pointed out using semicolons. On the other hand empty alphanumerical positions are exported in two way. The first way is to point out a position using the semicolons. The second way BAAN exports empty alphanumerical positions is to write two inverted commands within the position. This depends whether the alphanumerical field exists in BAAN's database or not. Finally we take a look at the following example:

empty numerical Position:

```
"SAX";...;;...;"SAX_END"
```

empty alphanumerical Position:

```
"SAX";...;;...;"SAX_END"
```

or

```
"SAX";...;"";...;"SAX_END"
```

## Messages

You must define the messages processed by BEMIS V in the BAAN ERP session ecedi0105s000.

In that session you can also define message-specific sessions (DLLs), which have to be executed to process such a message. The general message ORD001 must have been defined when processing schedules in the BAAN EDI standard in-house format.

The screenshot shows a dialog box titled "ecedi0105s000 : EDI Messages [600]". It contains the following fields and controls:

- EDI Message: ORD001
- Description: BEMIS Orders Version 1
- Library Incoming: otdstdll4280 (Receive Sales Orders)
- Library Outgoing: otpurdll4280 (Generate Purchase Orders)
- Release Type: (dropdown menu)
- Processing Type: Automatic (dropdown menu)
- File Layout: Single (dropdown menu)
- Level Identification Position: 1
- Level Identification Length: 3

Buttons on the right side include Close, Save, Revert, and Help.

Library for incoming/outgoing messages	The sessions used for the processing of messages will be recorded in this field. They are adapted to BEMIS V and every message type.
Processing type (in)	The system checks incoming EDI messages and processes the messages without error.
File Layout	All record types of one message are transmitted in one file (single).
Level Identification Position	The first part of the record is the identification of the record type.
Level Identification Length	The identification of the record type consists of three characters  In BEMIS V the identification of the record type is by default "SAX", with x = 1,2,3,... representing the level of the record type (1 = highest level).

## Maintenance of BEMIS V Message Versions

Coming with BEMIS V, we introduce a new message naming and versioning:

- a) Each message type is named by abbreviation and its version number.

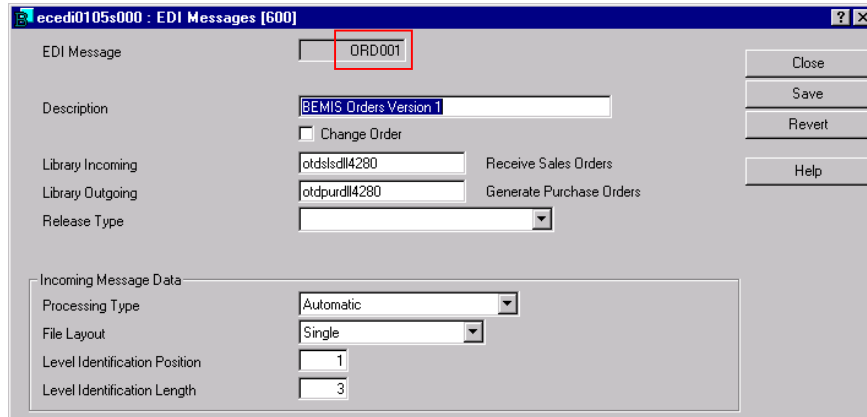
To draw an example:

ORD 001

Message Type:

ORD for ORDERS

Version: 1



- b) It is possible to define different releases to one message, e.g. Release A, B,... a.s.o.

Example: To draw an example:

ORD001 A



Release

Organization: BEM BEMIS V Message Standard  
 EDI Message: ORD001 BEMIS Orders Version 1  
 Direction: Out BEMIS Orders Version 1.0.a  
 Field Type: Delimited

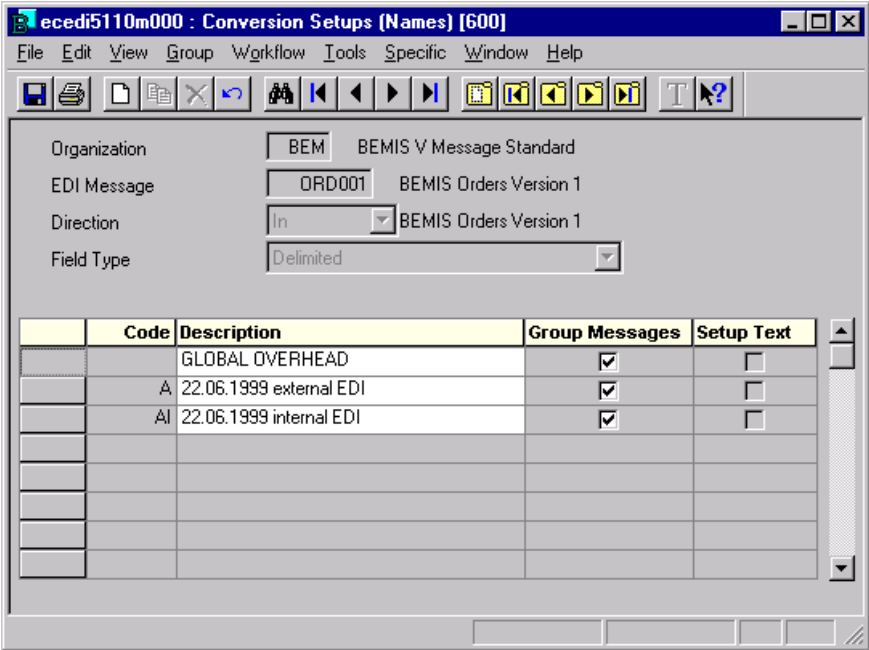
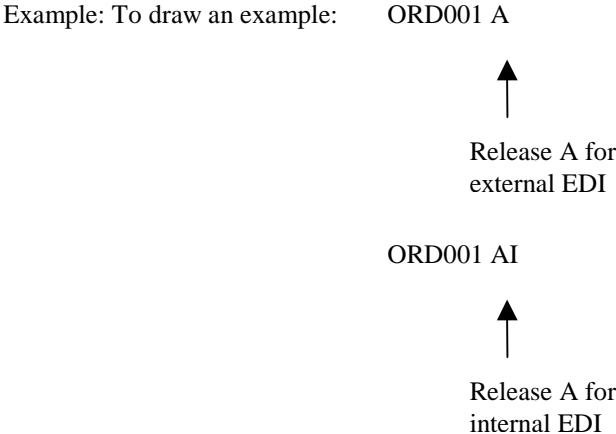
Code	Description	Group Messages	Setup Text
	GLOBAL OVERHEAD	<input type="checkbox"/>	<input type="checkbox"/>
A	10.05.1999	<input type="checkbox"/>	<input type="checkbox"/>
B	05.11.1999	<input type="checkbox"/>	<input type="checkbox"/>

In case of adding new positions to message type a new version will be released.

Therefore if you copy a conversion setup entry do not use as a coding A, B, C, ...

We have the aim that the BEMIS V Message standard fits to needs of external and internal EDI. Hence we decided to deliver two different conversion setups for one release. One for external EDI and one for internal EDI. The conversion setup für internal EDI gets additionally the extension "I". The structure is the same. For the internal EDI a conversion is only for the business partner codes necessary. Therefore the setup for the internal EDI has a minimum of conversions. It is also possible to use the internal setup for external EDI and the other way around if additionally conversion is needed or not.

To draw an example:



## Naming of the Message File

In order to make it more easier to use the BEMIS message standard for Multi Site Environments, incoming and outgoing messages have now the same file name. Moreover the name of the message file is now depended from the message version.

To draw an example:

file name for Orders Version 1: ord001.txt

## Messages by organization

Following the definition of the organization (that is, system) and the messages, you define which messages are supported, in which direction they are supported, and which organization they are supported for.

You can also use this session to determine the code for the message in the message file (field code in message).

EDI Message	Direction	Active	Code in Message	Description
ORD001	In	<input checked="" type="checkbox"/>	ORD001	BEMIS Orders Version 1
ORD001	Out	<input checked="" type="checkbox"/>	ORD001	BEMIS Orders Version 1

Active	The corresponding message is activated in this organization. The processing/generation will be carried out when this field is set to 'Yes'.
Code in Message	This code identifies the message type in the message file.

## Business Partner EDI Data by network

Following the definition of the business partner, you need to assign him to a network in the BAAN session ecedi0128s000 for the communication.

In this session you need to enter the network address of the business partner, which will be used in the message file.

The screenshot shows a dialog box titled "ecedi0128s000 : Business Partner EDI Data by Network [813]". It contains the following fields and controls:

- Business Partner: 020
- Supplier: (empty)
- Network: BEMISV (selected), BEMIS V Standard Network (available)
- Network Address: Network.Address1
- New Batch Number: By Message (selected in dropdown)
- Incrementing Reference Numbers:
- Buttons: Close, Save, Revert, Help

Network Address	Incoming messages contain this network address, which is used to determine the relationship with the corresponding customer number in BAAN. For outgoing messages (for example, schedules) use the number of the relationship here.
New Batch Number	A new message reference number is applied to for every new message. This number is used to identify the records of one message. Use here always: By Message

### NOTE

#### Network Address

- BAAN creates by business partner (customer or supplier) and message type one network address, which is identified by identification and path. This network address has to be unique.
- The EDI subsystem has to store an incoming message file from the business partner with the agreed file name under the corresponding path of the business partner and message type. The identification of the network address has to be written to the record type SA1 in position 3.
- For the identification of contracts, you can determine in BAAN additional business partners, for example the ship-to business partner, on the basis of the message contents (plant/final delivery location).

The data of the networks and business partner identifications have to be settled amongst the EDI subsystem and BAAN on the basis of the business partner relationship.



## EDI Messages Supported by Business Partner

In the session `ecedi0111s000` you define which business partner and which kind of message is linked to a particular.

You also have to enter the conversion settings to be used for the creation or processing of the message with the BAAN internal EDI converter.

These conversion settings inform BEMIS V about the format of the message files as well as about possibly necessary conversions of individual field contents of these files. The definition and functioning of the conversion settings will be explained in the following chapter.

**NOTE**

The below defined settings for incoming schedules have to be entered by message.

The screenshot shows a software dialog box titled "ecedi0111s000: EDI Messages Supported by Business Partner [813]". It has two tabs: "Message/Business Partner" and "Series/Conversion".

**Message/Business Partner Tab:**

- Business Partner: 010
- Organization: BEM
- EDI Message: ORD001
- Direction: In
- Order Type: ORD001
- Network: BEMISV
- Conversion Setup: A
- Person Responsible: bsp
- Number Group: SO

**Series/Conversion Tab:**

- Customer
- BEMIS V Message Standard
- BEMIS Orders Version 1
- Normal Order
- BEMIS V Standard Network
- 22.06.1999
- General\_User\_UNIX
- Sales Orders
- Print

**Incoming Message Processing:**

- Processing Type: Automatic
- Block
- Check Duplicate Order Numbers
- Automatically Prepare Error Notification

Buttons on the right: Close, Save, Revert, Help.

Type of Number	For incoming messages, the number will be determined on the basis of the indicated type of number and the series on form 2-2 (next page).
Print	Outgoing EDI messages will usually be created by a print session. If No is entered in this field, the messages are created but not printed.
Incoming Message Processing Type	The system automatically checks and processes incoming messages while reading the message file.

The screenshot shows a SAP dialog box titled "ecedi0111s000 : EDI Messages Supported by Business Partner [813]". It has two tabs: "Message/Business Partner" (selected) and "Series/Conversion".

Under the "Message/Business Partner" tab, the following fields are visible:

- Business Partner: 010 Customer
- Organization: BEM BEMIS V Message Standard
- EDI Message: ORD001 BEMIS Orders Version 1
- Direction: In
- Order Type: ORD001 Normal Order

On the right side of the dialog, there are four buttons: Close, Save, Revert, and Help.

Below the main fields, there are two sections:

- Incoming Messages:** Contains two input fields. The first is "Sales Order Type" with a dropdown menu showing "01" and "test". The second is "Series" with a dropdown menu showing "100" and "Sales Order".
- Outgoing Messages:** Contains two empty input fields: "Item Code System" and "Character Conversion".

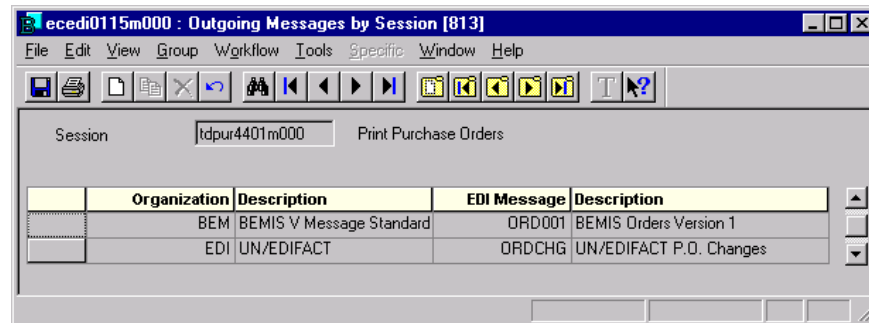
## Generation of outgoing messages

The generation of outgoing messages in BAAN ERP is usually prepared with print sessions. After having started the print job, a message is prepared for the EDI module. The reference number indicating the outgoing message which has to be created will be stored in the table ecedi700. Based upon this reference, BEMIS V automatically or interactively creates the actual message. These sessions are already programmed in the appropriate way. For example for:

- Message                      Session
- ORD001                      tdpur4401m000 Print Purchase Order

The BAAN session ecedi0115m000 Outgoing messages by Session defines which message has to be prepared for which organization in the appropriate print session.

The corresponding organization and message have to be entered to prepare the generation of schedule messages via the session tdpur4401m000 'Print Purchase Order'. These entries are necessary for the generation of outgoing orders.





## 3 Conversion settings

### General information

Receiving a message file from the business partner, the EDI subsystem creates on the basis of the incoming standard format (for example, VDA, ODETTE) a message file in accordance with the BAAN EDI Message in-house File Format. This file will be processed in BEMIS V and the for this necessary actions will be executed in BAAN.

Sending an EDI message to a business partner, BEMIS V creates from the BAAN data a message file in the BAAN EDI Message in-house Format, corresponding to the message type. This file will be processed in the EDI subsystem, converted to a file with a standard format (for example, VDA, ODETTE) and sent.

All these information, which BEMIS V requires for the processing (incoming ) or generation (outgoing) of the BEMIS V message file, are defined in the conversion settings of the BAAN EDI module by message type and message direction.

The name and general information about various record types as well as the identification, number and position of their key fields are recorded in the BAAN session ecedi5112m000.

The detailed structure of the file in connection with the links between a message file field and the corresponding BAAN table field is stored in the BAAN sessions ecedi5110m000 and ecedi5110s000. Furthermore, you will find in these sessions information about linked code and conversion tables or evaluation expressions (outgoing), which will be used for the generation or processing of the BEMIS V message file.

**WARNING**

Changes of the default settings given in the following chapter will lead to malfunctioning of BEMIS V.



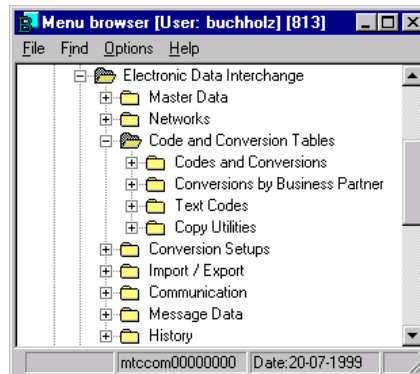
## 4 Code tables and conversion tables

### General information

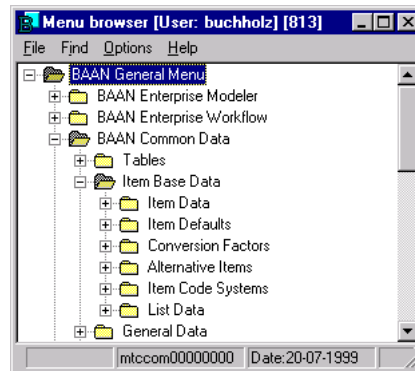
In BEMIS V the code tables and conversion tables increase the flexibility of the data interchange between BAAN and the business partners.

There are three kinds of Code and Conversion tables which are really important for BEMIS:

- a) Codes and Conversions
- b) Conversions by Business Partner



- c) Item Code Conversion



# Code and Conversions

## Country Codes

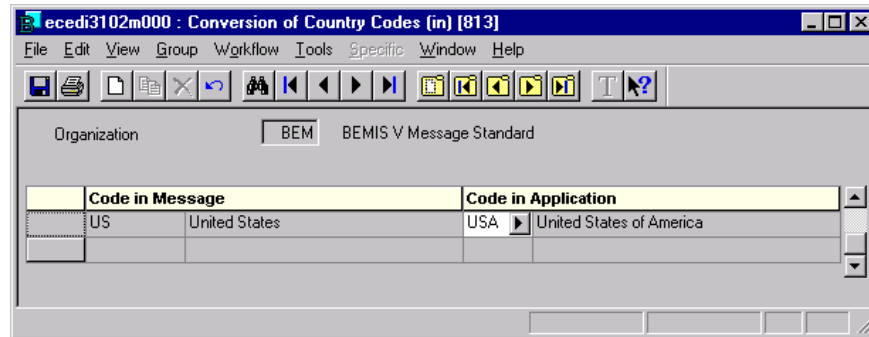
Code in Message	Description
AR	Argentina
AT	Austria
AU	Australia
BE	Belgium
BR	Brasil
CH	Switzerland
CZ	Czech Republic
DE	Germany
DK	Denmark
ES	Spain
FI	Finland
GB	United Kingdom
GR	Greece
HK	Hong Kong
HU	Hungary
IE	Ireland
IL	Israel
IN	India
IQ	Iraq
IR	Iran (Islamic Republic of)
IS	Iceland
IT	Italy

- The code table **Countries**, which contains the allowed values for the country codes, will be maintained by organization. The codes in this table refer to ISO4217. A conversion table, which defines the country code to be converted, is available for both message directions (incoming/outgoing). The codes are agreed to by the EDI subsystem supplier. This code table will be imported using a standard BEMIS defaults.edi's.

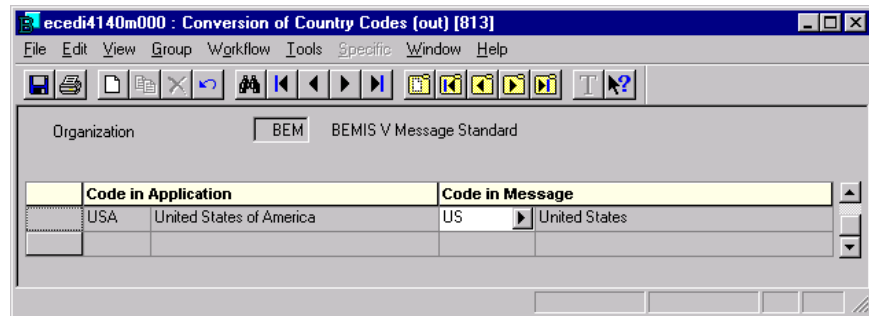


To draw an example here are the two session to maintain for incoming and outgoing messages.

Incoming:



Outgoing:



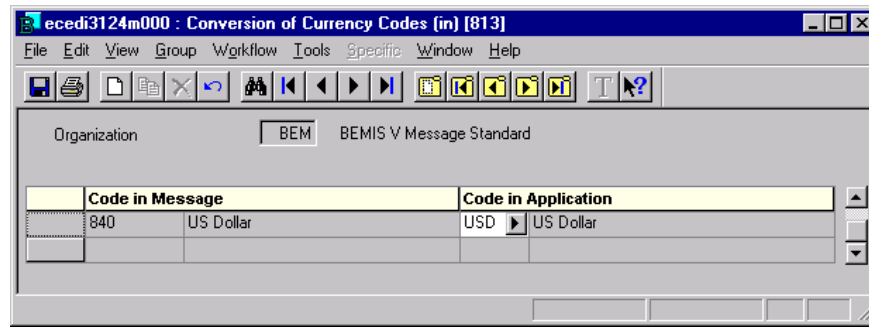
## Currency Codes

Code in Message	Description
356	Indian Rupee
372	Irish Pound
380	Lira, Italy
392	Yen, Japan
424	Kuwait Dinar
458	Malaysian Ringgit
470	Maltese Pound, Malta
528	Netherlands Guilder
554	New Zealand Dollar
578	Norwegian Krone
620	Portugese Escudo
702	Singapore Dollar
710	Rand, South Africa
724	Spanish Peseta
752	Swedish Krona
756	Swiss Franc
764	Baht, Thailand
788	Tunisian Dinar
826	Pound Sterling, UK
840	US Dollar
958	Euro
993	Belgian Franc

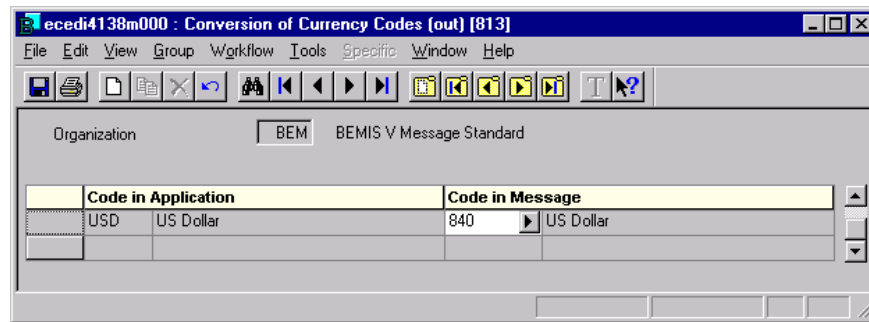
- The code table **Currencies**, which contains the allowed values for the currency codes, will be maintained by organization. The codes in this table refer to ISO 4217. A conversion table, which defines the currency code to be converted, is available for both message directions (incoming/outgoing). The codes are agreed to by the EDI subsystem supplier. This code table will be imported using a standard BEMIS defaults.edi's.

Like shown above Currency Codes have to be maintain for incoming and outgoing messages.

Incoming:



Outgoing:



## Unit Codes

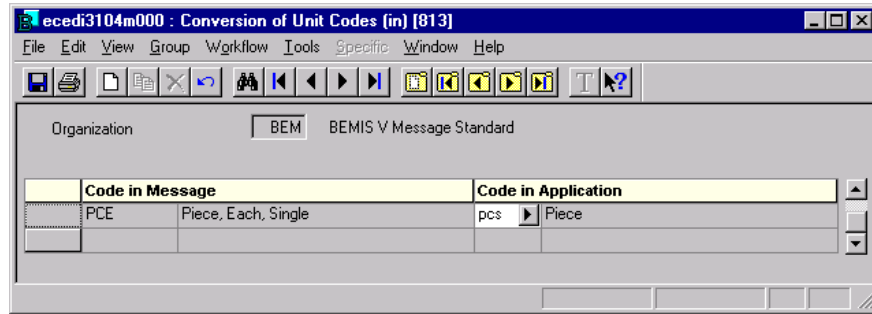
The screenshot shows a software window titled "ecedi2130m000 : Units [813]". The window has a menu bar with "File", "Edit", "View", "Group", "Workflow", "Tools", "Specific", "Window", and "Help". Below the menu bar is a toolbar with various icons. The main area of the window displays a table with two columns: "Code in Message" and "Description". The table lists various units and their corresponding descriptions. The organization is set to "BEM" and the message standard is "BEMIS V Message Standard".

Code in Message	Description
IN	Per Invoice
INH	Inch
INK	Square inch
KGM	Kilogram
KMT	Kilometre
LBR	Pound
LTN	Long ton
MIL	Thousand
MMK	Square millimetre
MMQ	Cubic millimetre
MMT	Millimetre
MON	Calendar month
MTK	Square meter
MTQ	Cubic metre
MTR	Meter
NPR	Pair
ONZ	Ounce
OR	per order
PCE	Piece, Each, Single
PII	Pint
QTI	Quart (UK)

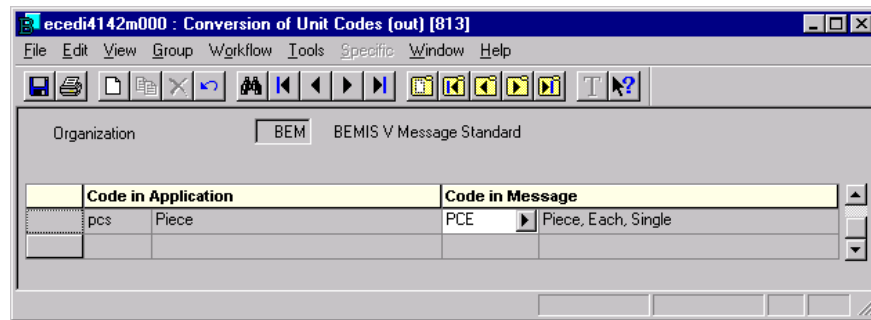
- The code table **Units**, which contains the allowed values for the unit codes, will be maintained by organization. The codes in this table refer to Odette ODDC 25. A conversion table, which defines the unit code to be converted, is available for both message directions (incoming/outgoing). The codes are agreed to by the EDI subsystem supplier. This code table will be imported using a standard BEMIS defaults.edi's.

This is also one of the code tables which has to be maintained for the incoming and outgoing direction.

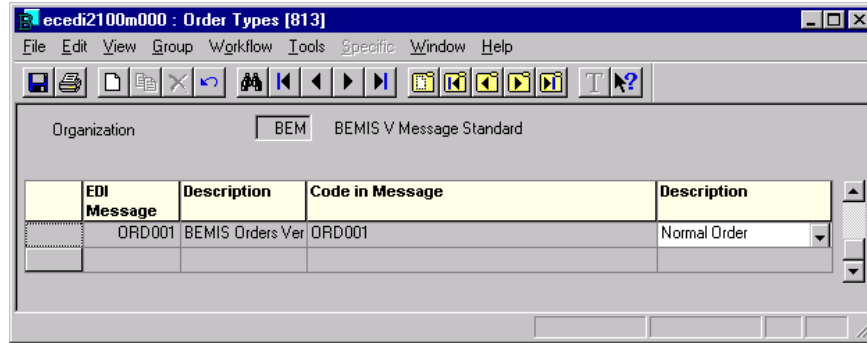
Incoming:



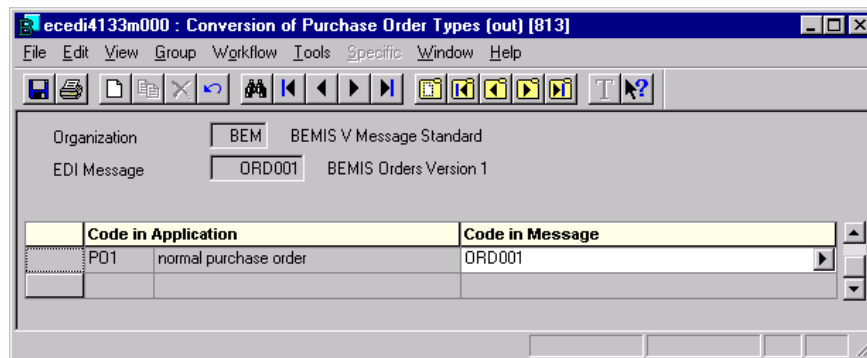
Outgoing:



## Order Types



To link an Order Type to an outgoing message the following session has to be maintained. Thus the related print session for outgoing orders will prepare edi messages.



Please notice that the defined order type for this kind of message must be the same as defined in the following session:

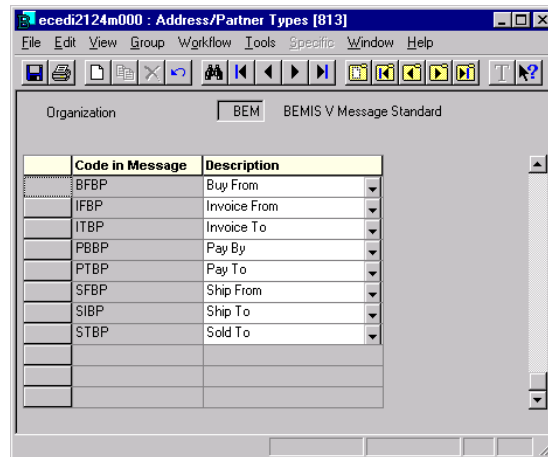
## Address / Partner Codes ID's

After the import of the BEMIS V defaults.edi one new entry has been added to table Tectedi218:

Code in Message	Description
ZZ	Mutually Defined

This qualifier will be needed as described in the following section.

## Address / Partner Types



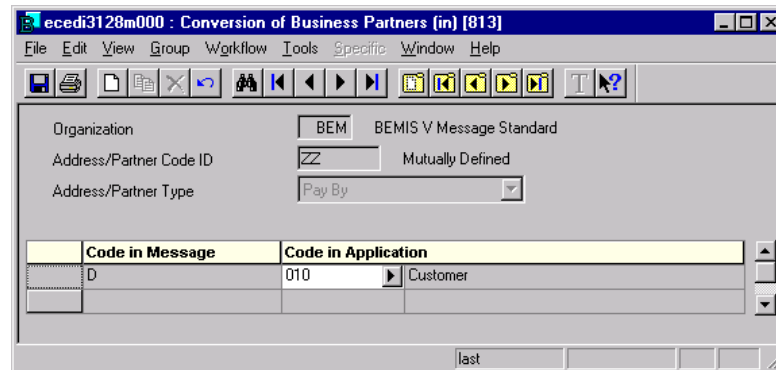
The screenshot shows the SAP configuration window for Address/Partner Types. The organization is set to BEM (BEMIS V Message Standard). The table below lists the codes and their descriptions:

Code in Message	Description
BFBP	Buy From
IFBP	Invoice From
ITBP	Invoice To
PBBP	Pay By
PTBP	Pay To
SFBP	Ship From
SIBP	Ship To
STBP	Sold To

The Address / Partner Types above will be imported. These qualifiers and the Address / Partner Code Id “ZZ” are used to determine the Business Partner.

To determine the business partner please refer to these examples:

Incoming:

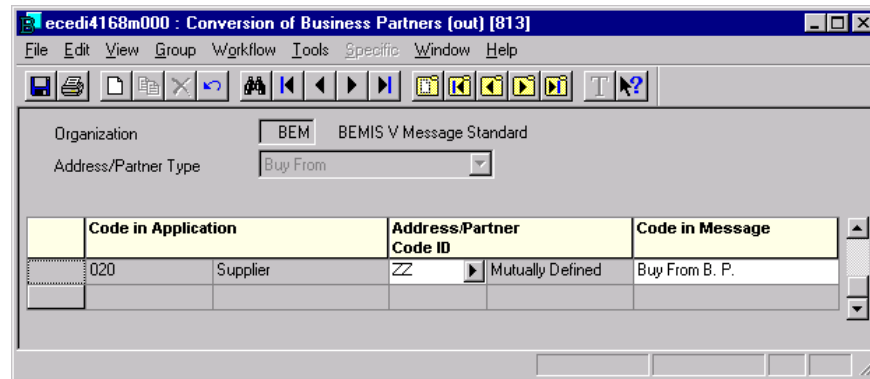


The screenshot shows the SAP configuration window for Conversion of Business Partners. The organization is BEM (BEMIS V Message Standard). The Address/Partner Code ID is set to ZZ (Mutually Defined) and the Address/Partner Type is Pay By. The table below shows the conversion mapping:

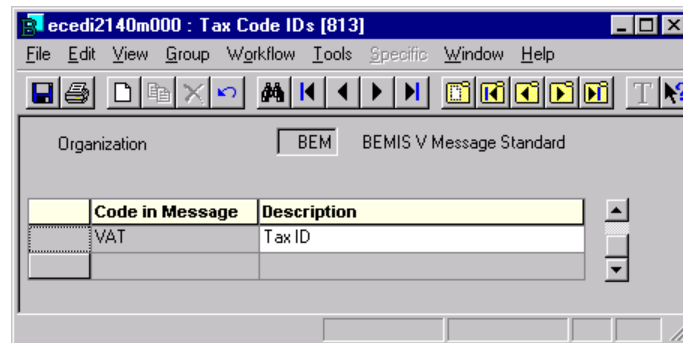
Code in Message	Code in Application
D	010 Customer



Outgoing:

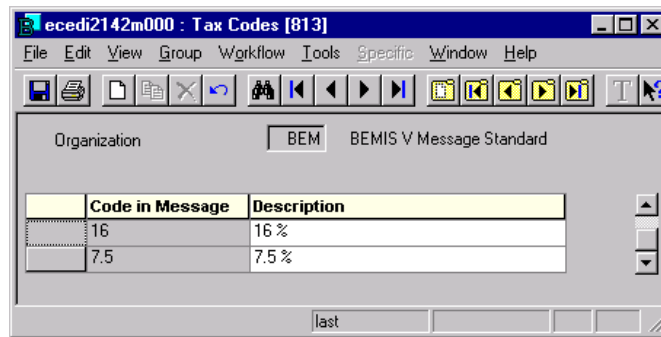


## Tax Codes ID



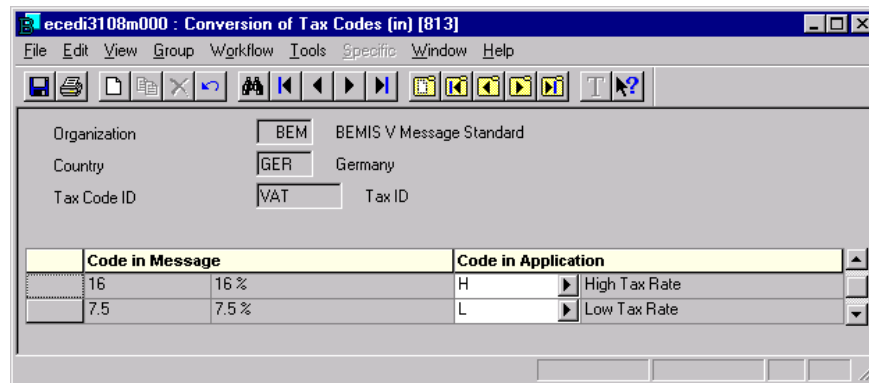
This qualifier is used to convert the Tax Codes. It is a part of the distributed default.edi data.

## Tax Codes



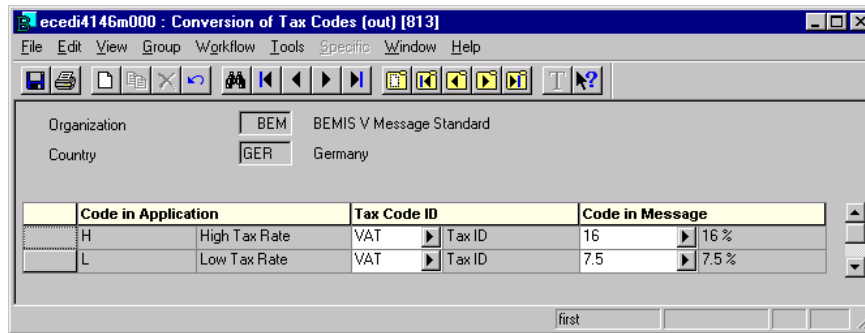
These are some sample codes which have to be agreed to the EDI partner system. Moreover this session is used to maintain the base table. The conversion tables for incoming and outgoing messages refer to Tecedi212.

Incoming:



Please note, that the conversion is also dependent on the country code.

Outgoing:



## Conversions by Business Partner

The following Business Partner related Code – and Conversion Tables have to be maintained if you need the codes in an incoming or outgoing message. If you are not sure about that please refer to the BEMIS V Message Definitions:

- Conversion of Purchase Contract Codes by BP
- Conversion of Forwarding Agent Codes by BP
- Conversion of Discount Codes by Business Partner
- Conversion of Discount Method by Business Partner
- Conversion of Lot Selection Codes by Business Partner
- Conversion of Lot Code Id by Business Partner

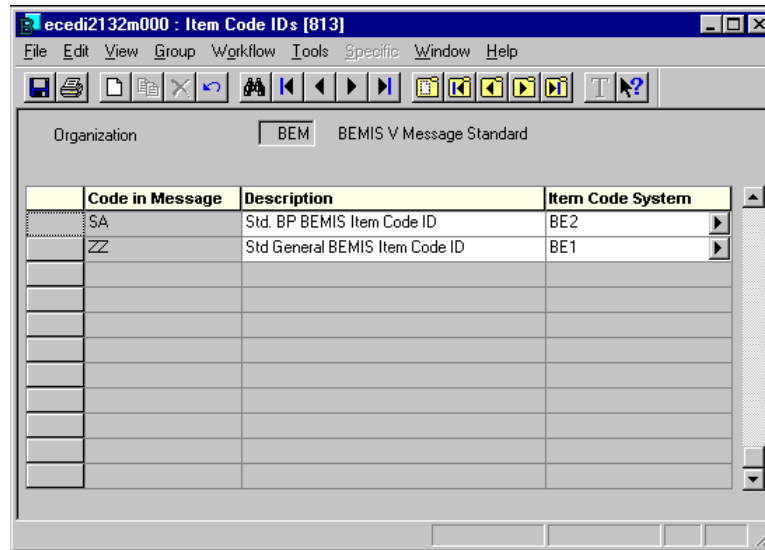
## Item Code Conversions

### Item Codes

In comparison to BAAN IV the conversion of the **Item Codes (customer's item code)** has been changed.

BEMIS comes with two predefined qualifiers in order to determine the internal item code. The Item Code Id's are used in order to distinguish between a general item conversion and a conversion which is business partner related.

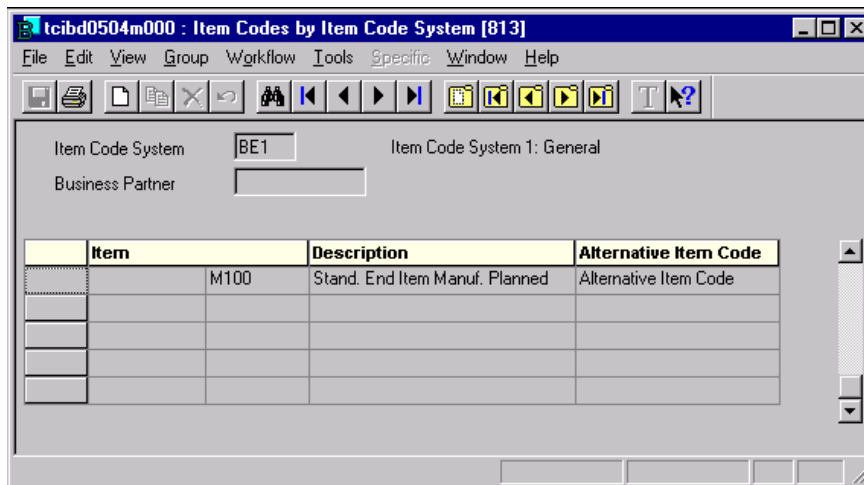
Therefore two Codes for the Item System are defined.



Code in Message	Description	Item Code System
SA	Std. BP BEMIS Item Code ID	BE2
ZZ	Std. General BEMIS Item Code ID	BE1

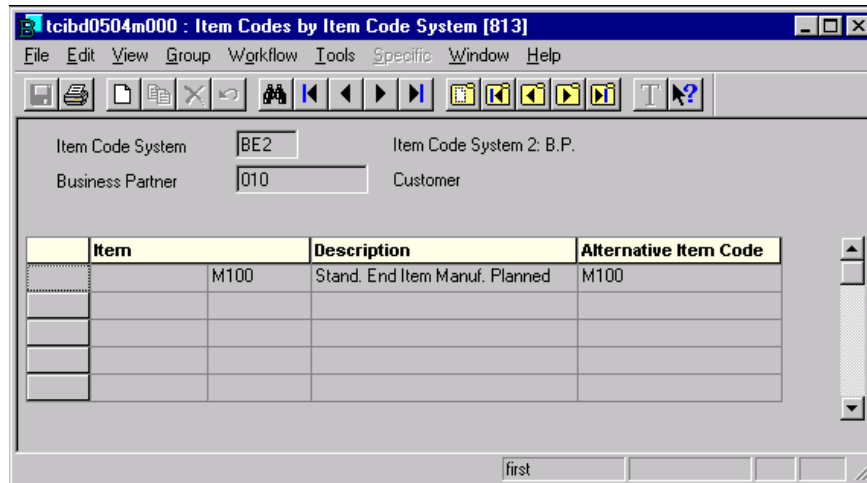
Looking at BAAN ERP Common data we will find the used table to translate the item codes:

a) General Code System:



Item	Description	Alternative Item Code
M100	Stand. End Item Manuf. Planned	Alternative Item Code

b) Business Partner specific Code System:



The exported BAAN ERP Item Code is a string with at maximum 47 digits. At minimum the item code contains 10 digits. To draw an example: “.....1” (nine leading blanks and at minimum one sign).

The BEMIS V converter settings define, if these tables will be used for the generation or processing of the message, by setting the conversion option to Yes when mapping the corresponding BAAN field. The following chapter provides a detailed description of the converter settings.

The settings of the code and conversion tables of course depend on the requisitions of the business partners and the capacity of the used EDI subsystem. Therefore, on the next pages only the default settings for the correct processing of the BEMIS V in-house data formats will be described.

The following conversions will be described:

- Countries (outgoing)
- Units (incoming/outgoing)
- Release date (incoming/outgoing)

**WARNING**

Changes of the following default settings will lead to malfunctioning of BEMIS V.



## **5 Evaluation expressions**

### **Application of evaluation expressions**

For the generation of outgoing messages it is possible to use evaluation expressions in the conversion settings. In this way a condition is linked to a field which decides whether the field will be written or not. In addition the evaluation expressions can control under which conditions whole record types will be written.

### **Maintenance of evaluation expressions**

The evaluation expressions are recorded in the BAAN default text components. Importing the defaults.edi, the evaluation expressions will be entered in the current BAAN language version. For example, if the current language of the importing user is 'German' then the evaluation expressions will be imported into the German text components.

This needs to be taken into account when setting up the BAAN EDI module because otherwise the in-house format files will not be written complete.





## 6 Import and export of the defaults.edi file

### Starting position

Updates of the BAAN EDI functionality can concern the following areas:

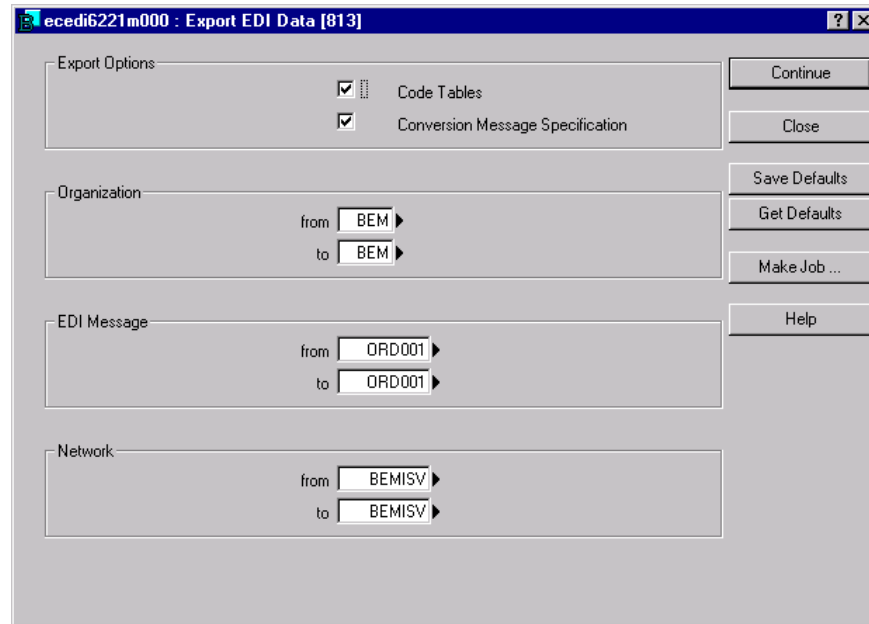
- Sessions
- Data

Updates of the sessions will be executed with the BAAN default update procedure. On the next pages will be described how to carry out updates of EDI relevant data (for example, implementation of new messages or transmission standards, format changes of messages files). The following cases can be executed with the available export and import functionality:

- Backup of EDI basic data by export
- Recovery of EDI basic data by import
- Transmission of EDI relevant data from old into new company by export/import
- Entry of all for EDI necessary data for the empty company by import
- Entry of data updates from BAAN by import

## Export of EDI data

To backup the EDI basic data, the easiest way is to export these data as an ASCII file using the BAAN session ecedi6221m000 “Export EDI Data“.



Code Tables	Code tables will be exported as well.
Conversion Message Specification	Note: The corresponding conversion tables for incoming and outgoing messages will not be exported. The converter settings will be exported.
Organization	Selection of the organizations to be exported.
EDI Message	Selection of the messages to be exported.
Network	Selection of the messages to be exported.

The export includes the following EDI tables:

<b>BAAN table</b>	<b>Description</b>	<b>Selection condition</b>
ecedi003	Organization	according to selection
ecedi005	EDI Messages	according to selection
ecedi001	Supported EDI Messages	according to selected organization
ecedi015	Outgoing Messages by session	according to selected messages
ecedi020	Networks	according to selection
ecedi500	Conversion Setups (Name)	according to selected organization if field set to Yes
ecedi501	Conversion Setups (Definitions)	according to selected organization if field set to Yes
ecedi502	Conversion Setups (Relationships)	according to selected organization if field set to Yes
ecedi 505	Evaluation Expressions	all, if field converter settings set to Yes
ecedi200	Order Types	According to selected organization if field set to Yes
ecedi218	Address Code IDs	According to selected organization if field set to Yes
ecedi224	Address / Partner Types	According to selected organization if field set to Yes
ecedi226	Countries	According to selected organization if field set to Yes
ecedi228	Terms of Delivery	According to selected organization if field set to Yes
ecedi230	Units	According to selected organization if field set to Yes
ecedi232	Item Code IDs	According to selected organization if field set to Yes
ecedi240	Tax Code Id's	according to selected organization if field set to Yes
ecedi292	Currencies	according to selected organization if field set to Yes
ecedi294	Terms of Payment	according to selected organization if field set to Yes

**NOTE**

In general, all EDI data (for example, customers, suppliers, items), which contain references to BAAN internal data, but which do not belong to the EDI module, will not be exported. These data include the conversion tables which belong to the code tables, the additional SCH conversion tables (requirement types, requirement frequencies, release date) and the business partner identification by network.

## Import of EDI data

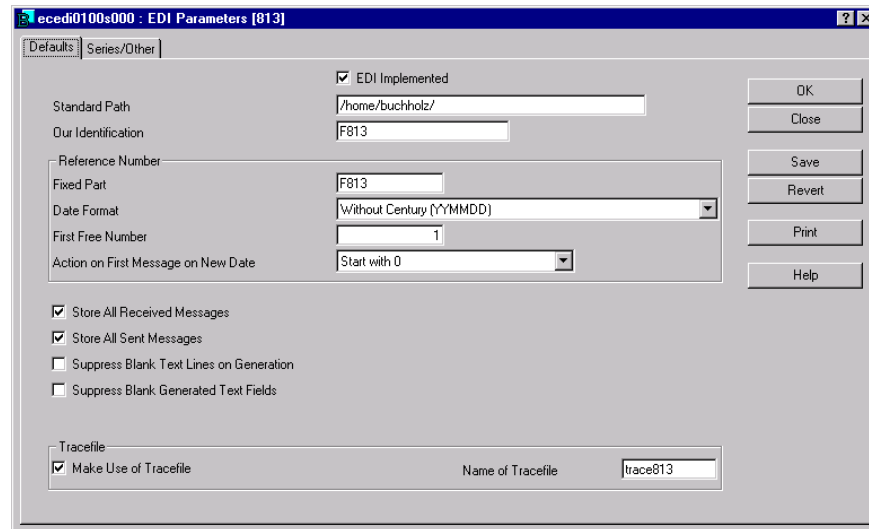
The following procedures are possible to establish a new company with all EDI relevant data:

- Manual entry of the required data
- Import of a file with EDI basic data and manual completion of the missing data

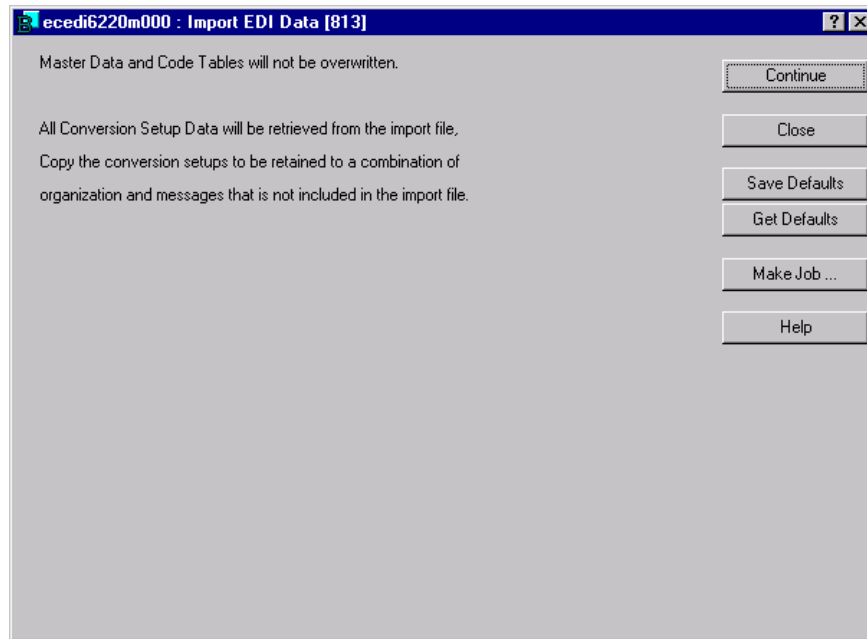
You will find a detailed description of the previous sections.

The second method will be described in the following section. For this method there has to be an export file of an EDI basic setting, which has been created as described above.

Another condition is the definition of the EDI parameter ecedi000.



The file to be imported has to be stored under the name **defaults.edi** in the file path, which is defined in the field **Standard Path**.



This file will be imported into the new (empty) company in the BAAN session ecedi6220m000 Import EDI Data.

When you importing data you must note the following points:

- The error message “Error opening file 'filename' press <return>“ appears: In this case the import file is stored in the wrong directory or has got the wrong name.
- The error messages “Default text group by user not available“ appears: In this case you need to create the corresponding text group for the importing user under BAAN Tools / Text Management / Text Parameters.
  - 1. Maintain Text Windows → create
  - 2. Maintain Text Groups → create
  - 3. Maintain Default Text Groups by User → create
- When you import, existing EDI basic data will not be overwritten. Data with already existing key fields will not be taken over, new data will be added.
- When you import, already-existing data in code tables will not be overwritten. Data records with already existing key fields will not be altered, new data will be added.

- When you import, already existing converter settings will be overwritten. To keep existing settings, copy them to another key field (organization, name) before you start the import.
- When you import, a selection is not possible. All data of a file will be imported under consideration of the above mentioned restrictions.
- If the corresponding Unix directories are not available during the import of the network data, an error messages appears on the screen. Nevertheless, the data will be imported and the directories have to be created afterwards.

The import includes the following EDI tables:

<b>BAAN table</b>	<b>Description</b>
ecedi003	Organization
ecedi005	EDI messages
ecedi001	Supported EDI messages
ecedi015	Outgoing message by session
ecedi020	Networks
ecedi500	Conversion setups (name)
ecedi501	Conversion setups (definitions)
ecedi502	Conversion setups (relationships)
ecedi505	Evaluation expression
ecedi200	Order types
ecedi218	Address code IDs
ecedi224	Address / Partner Types
ecedi226	Countries
ecedi228	Terms of delivery
ecedi230	Units
ecedi232	Item code IDs
ecedi240	Tax Code Id's
ecedi292	Currencies
ecedi294	Terms of Payment

---

The following data have to be maintained manually (this is not a complete list. please refer to the message definitions):

BAAN Table	Description	Link to BAAN Master Data
ecedi011	EDI Messages supported by Business Partner	Business Partner
ecedi028	Business Partner EDI by Network	Business Partner
ecedi432	Conversion of the Sales Order Types (out)	Order types
ecedi433	Conversion of the Purchase Order Types (out)	Order types
ecedi302/440/	Conversion of Country Codes (in/out)	Countries
ecedi300/430	Conversion of Delivery Condition Codes (in/out)	Terms of delivery
ecedi304/442	Conversion of unit codes (in/out)	Units
ecedi306/444	Conversion of Item Codes by Relation (in/out)	Item master data

**To import a new defaults.edi:**

When you import a current defaults.edi file, you are recommended to carry out the following procedure to update the conversion tables (especially the tables TBecedi500 and TBecedi501). Before starting the import you are recommended to store the current conversion settings under a different name and then to delete the old settings. You can then start the import of the new defaults.edi file.



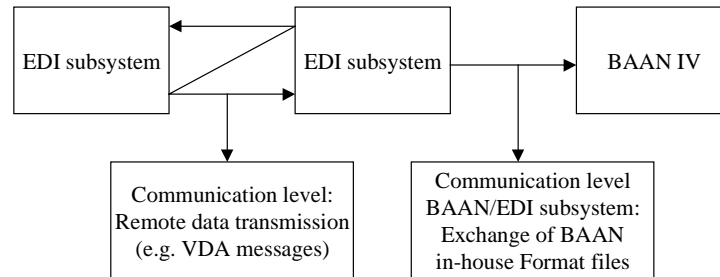


# 7 Interface

This chapter describes the technical link between the BAAN Electronic Message Interchange System BEMIS V and the corresponding EDI subsystem.

You must take into account the following two components when looking at the interface between the EDI subsystem and the default software of BAAN ERP:

- The BEMIS V in-house files to be exchanged
- The communication method necessary for the exchange



*Figure 2, Communication method*

Separate User Guides are provided which describe the BEMIS V in-house file formats. In this chapter, communication methods are described which give a well-ordered and error-free exchange of the BEMIS V message files. The general functioning of the BAAN EDI module is also described.

In BAAN ERP, data are generally exchanged on the basis of semaphores. With the help of a shell script this exchange can be carried out in a more flexible way. Furthermore, the BAAN EDI module can generate or record messages over its internal job management with the crontab file.

## Overview network directories

The so-called network directories form the basis of the communication between the EDI subsystem and BAAN ERP. These directories are established in BAAN. The network basis directories for each network will be defined in the BAAN session ecedi0120m000. For the network BEMIS V, the basis directories can be indicated in the following way:

- \$BSE/bemisv/ord001
- \$BSE/bemisv /tin001

BAAN will additionally create the following subdirectories:

- \$BSE/bemisv/ord001/appl\_from/
- \$BSE/bemisv/ord001/appl\_to/
- \$BSE/bemisv/ord001/command/
- \$BSE/bemisv/ord001/store\_recv/
- \$BSE/bemisv/ord001/store\_sent/
- \$BSE/bemisv/ord001/trace/

The above directories have the following function:

- 1 **.../appl\_from/:** In this directory, BAAN ERP records the outgoing messages which are the defined BEMIS V in-house format files. The EDI subsystem can collect them from here.
- 2 **.../appl\_to/:** The EDI subsystem writes the incoming message into this directory in the BAAN ERP in-house format.
- 3 **.../command/:** Directory of the semaphores.
- 4 **.../store\_recv/:** BAAN ERP stores in this directory processed incoming messages, if the configuration is accordingly. During this process an additional subdirectory by incoming message file will be created which is named with a date and time stamp indicating when the message was moved.
- 5 **.../store\_sent/:** BAAN ERP stores in this directory processed outgoing messages if the configuration is accordingly. During this process an additional subdirectory by outgoing message file will be created which is named with a date and time stamp indicating when the message was moved.
- 6 **.../trace/:** BAAN creates under this directory a log of the incoming and outgoing messages in the processing order, if the configuration is accordingly.

## Default communication over the semaphores

In general, the BAAN ERP EDI subsystem works in two phases: Firstly, the outgoing messages will be created and secondly, the incoming messages will be read. In the directory `.../command` will be defined, if BAAN ERP or the EDI subsystem writes or reads.

The following points describe the order for the exchange of the temporary format files:

- 1 The communication between BAAN ERP and the EDI subsystem is only possible, when the corresponding network has been activated. BAAN ERP checks the corresponding directory `.../command` for the semaphore `comm.yes`. If this semaphore is not set, then the network for BAAN ERP has not been activated and the EDI subsystem is not ready for communication.
- 2 After the EDI subsystem has set `comm.yes`, BAAN ERP generates a corresponding message file in the directory `.../appl_from/`. Before writing the outgoing message file, BAAN ERP generates a log file in the directory `.../trace/`.
- 3 After BAAN ERP has generated the message file, the semaphore `command.fil` is written into the directory `.../command`. BAAN ERP then waits until this semaphore is deleted by the EDI subsystem.
- 4 The EDI subsystem reads the messages which BAAN ERP generated in the directory `.../appl_from/` and writes the incoming messages into the directory `.../appl_to/`.
- 5 After having finished this procedure, the EDI subsystem deletes the semaphore `command.fil` in the directory `.../command`.
- 6 Then BAAN ERP starts to record the message files, which the EDI subsystem stored in the directory `.../appl_to/`. This procedure will also be logged in the directory `.../trace/`.
- 7 BAAN will copy the message generated by BAAN and the incoming message file from the EDI subsystem into the directory `.../store_sent/` or `.../store_recv/`.
- 8 BAAN ERP writes the semaphore `command.end` into the directory `.../command`. This step brings the communication between the EDI subsystem and BAAN ERP to an end.
- 9 Finally, the EDI subsystem deletes the semaphores `comm.yes` and `command.end` in the directory `.../command`.

The following table displays an overview over the used pattern of the semaphores:

Step	Semaphores in directory .../command	BAAN writes semaphore(s)	EDI subsystem writes semaphore(s)	EDI subsystem deletes semaphore(s)	Status communication
I.	empty				Network directory deactivated
II.			comm.yes		Network directory activated by EDI subsystem
III.	comm.yes	Command.fil			BAAN ERP has generated messages
IV.	comm.yes command.fil			command.fil	The EDI subsystem records outgoing messages or writes incoming messages
V.	comm.yes				BAAN ERP reads incoming messages and stores them
VI.	comm.yes	command.end			End of communication
VII.	comm.yes command.end			comm.yes command.end	Disconnecting network
VIII.					Network deactivated

---

## Turning off the default communication

BAAN ERP generates or reads messages, even if the communication based on semaphores in BAAN has been turned off. Please note the following points:

- When BAAN generates and stores messages in the directory **.../appl\_from/**, these messages will neither be deleted nor copied. The message file which has been generated by BAAN will be stored in the directory. When new messages are generated, they will be appended to the old message file in the directory **.../appl\_from/**.
- Message files, which have been stored in the directory **.../appl\_to/** by the EDI subsystem, will be deleted after BAAN has read them.

If this communication method is being selected, the EDI subsystem has to guarantee, that:

- Incoming and outgoing messages have to be stored in the BAAN in-house format
- Outgoing messages have to be deleted in the directory **.../appl\_from/** after being transmitted to the EDI subsystem.



## 8 Glossary of terms and abbreviations

appl	Application
ANSI	American National Standards Organisation
BEM	Baan Electronic Message - abbreviated form of BEMIS V used with the definition of the EDI organization
BEMIS V	Baan Electronic Message Interchange System for BAAN ERP
Business partner	Customer or supplier
C	Conditional, that is, optional message
defaults.edi	Export file detailing master EDI data
DELINS	Odette Delivery Instruction (Schedule)
EDI	Electronic Data Interchange; electronic exchange of documents in standard formats
EDIFACT	Electronic Data Exchange For Administration, Commerce and Transport. An ISO standard.
ELP	External Logistic partner
evaluation expression	If statement in the conversion setup for outgoing messages
ISO	International Standards Organization
ISO 4217	Code table
M	Mandatory (compulsory) message
MAIS	General Motor's interpretation of the subset of EDIFACT DELJIT Message
Messg	Message
network address	Folder (directory) path on network
ODDC	Odette Code Table
ODDC25	Odette Code Table 25
ODETTE	European standard for electronic data exchange
Org	Organization, that is, system
SCH	Supply Chain
Semaphore	Method to show a status using files with zero length
Translation	Conversion of one data format to another, for example Baan in-house data format to ODETTE

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VDA	Standard used for electronic data exchange in Germany
X12	Standard used for electronic data exchange in the United States

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