ISO 9735-3

Release 2
1996-07-05

Electronic data interchange for administration, commerce and transport (EDIFACT) - Application level syntax rules

Part 3:

Syntax rules specific to interactive EDI

Contents

Foreword

(To be amended as necessary, according to ISO procedures)

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75% approval by the member bodies voting.

International Standard ISO 9735 Release 2 was prepared by the UN/ECE Trade Division (as UN/EDIFACT) and was adopted, under the "fast-track procedure" as an existing standard, by Technical Committee ISO TC 154, *Documents and data elements in administration; commerce and industry.*

ISO/IEC 9735 consists (currently) of the following parts, under the general title *Electronic data interchange for administration, commerce and transport (EDIFACT) - Application level syntax rules:*

ISO 9735-1 - Syntax rules common to all parts, together with syntax service directories for each of the parts

ISO 9735-2 - Syntax rules specific to batch EDI

ISO 9735-3 - Syntax rules specific to interactive EDI

ISO 9735-4 - Syntax and service report message for batch EDI (message type - CONTRL)

ISO 9735-5 - Security rules for batch EDI (authenticity, integrity and non-repudiation of origin)

ISO 9735-6 - Secure authentication and acknowledgement message (message type - AUTACK)

ISO 9735-7 - Security rules for batch EDI (confidentiality)

ISO 9735-8 - Associated data in EDI

ISO 9735-9 - Security key and certificate management message (message type - KEYMAN)

Further parts may be added in the future.

In this Part, annexes A and B are for information only.

Introduction

This International Standard includes the rules at the application level for the structuring of data in the interchange of electronic messages in an open environment, based on the requirements of either batch or interactive processing. These rules have been agreed by the United Nations Economic Commission for Europe (UN/ECE) as syntax rules for Electronic Data Interchange for Administration, Commerce and Transport (EDIFACT) and are part of the United Nations Trade Data Interchange Directory (UNTDID) which also includes both batch and interactive Message Design Guidelines.

These syntax rules may be used in any application, but messages using these rules may only be referred to as EDIFACT messages if they comply with other guidelines, rules and directories in the UNTDID. For UN/EDIFACT, messages shall comply with the message design rules for interactive usage. These rules are maintained in the UNTDID.

Communications specifications and protocols are outside the scope of this standard.

This is a new part, which has been added to ISO 9735. It provides for the exchange of EDIFACT messages in an interactive (conversational) EDI environment.

Interactive EDI (I-EDI) is characterised by the following:

- a formalised association between the two parties using a dialogue,
- the ability, dynamically, to direct the course of the I-EDI transaction, depending upon the result of earlier exchanges within the dialogue,
- short response times,
- all the messages exchanged within one dialogue relate to the same business transaction,
- a transaction is a controlled set of dialogues which can take place between two or more parties.

These characteristics differentiate I-EDI from batch EDI which is specified in Part 2 (syntax rules specific to batch EDI).

For consistency and in order to simplify the implementation of the standard for those users who wish to utilise both batch and interactive processing, this Part 3 has been aligned as far as possible with Part 2.

Electronic data interchange for administration, commerce and transport (EDIFACT) - Application level syntax rules

Part 3:
Syntax rules specific to interactive EDI

1 Scope

This part of ISO 9735 specifies syntax rules specifically for the transfer of interactive messages to be interchanged between computer application systems.

2 Conformance

Conformance to a standard means that all of its requirements, including all options, are supported. If all options are not supported, any claim of conformance shall include a statement which identifies those options to which conformance is claimed.

Data that is interchanged is in conformance if the structure and representation of the data conforms to the syntax rules specified in this International Standard.

Devices supporting this International Standard are in conformance when they are capable of creating and/or interpreting the data structured and represented in conformance with the standard.

Conformance to this part shall include conformance to Part 1 of this International Standard.

When identified in this International Standard, provisions defined in related standards shall form part of the conformance criteria.

3 Normative references

There are no other standards which, through reference in this text, constitute provisions of this part of this International Standard.

4 Definitions

For the purpose of this part of this International Standard, the definitions in Part 1 annex A apply.

5 I-EDI message within a transaction

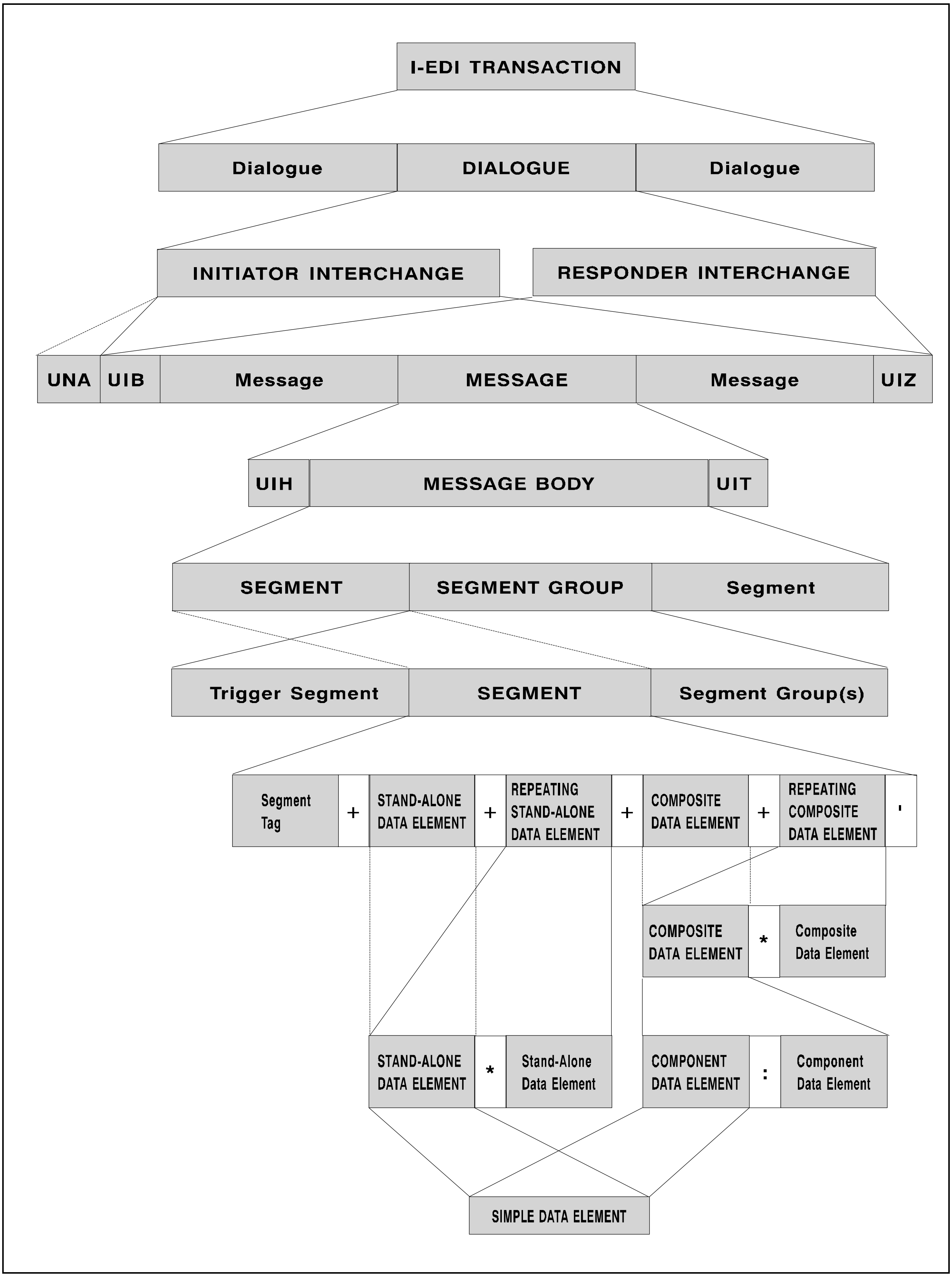


Figure 1a - I-EDI message within a transaction (Schematic)

An **I-EDI TRANSACTION** contains:

- Dialogue(s)

A **DIALOGUE** contains:

- an Initiator Interchange
- a corresponding Responder Interchange

An **INITIATOR INTERCHANGE** contains:

- UNA, Service String Advice, if used.
- UIB, Interactive Interchange Header
- message(s)
- UIZ, Interactive Interchange Trailer

A **RESPONDER INTERCHANGE** contains:

- UIB, Interactive Interchange Header
- message(s)
- UIZ, Interactive Interchange Trailer

A **MESSAGE** contains:

- UIH, Interactive Message Header
- a message body
- UIT, Interactive Message Trailer

A **MESSAGE BODY** contains:

- segment(s) and/or segment group(s)

A **SEGMENT GROUP** contains:

- a trigger segment
- segments(s) and possibly segment group(s)

A **SEGMENT** contains:

- a segment tag
- stand-alone data element(s) and/or composite data element(s) and/or repeating stand-alone data elements and/or repeating composite data elements

A **REPEATING STAND-ALONE DATA ELEMENT** is:

- one or more occurrences of the same stand-alone data element

A **REPEATING COMPOSITE DATA ELEMENT** is:

- one or more occurrences of the same composite data element

A **COMPOSITE DATA ELEMENT** contains:

- two or more component data elements

A **COMPONENT DATA ELEMENT** is:

- a simple data element

A **STAND-ALONE DATA ELEMENT** is:

- a simple data element

A **SIMPLE DATA ELEMENT** contains:

- a single data element value

Figure 1b - I-EDI message within a transaction (Legend)

6 Dialogue control

An I-EDI transaction, which is an instance of a particular scenario, consists of one or more dialogues, occurring either concurrently or sequentially between two or more parties.

A dialogue consists of an interleaved pair of EDIFACT interchanges; an initiator interchange and a responder interchange.

The following transfers shall take place:

- An initiator begins a dialogue by sending an interchange header segment to a responder, optionally preceded by a UNA, and optionally followed by a message.
- The responder replies to the initiator with an interchange header segment, optionally followed by a message (note that the values of the UNA sent by the initiator also apply to the responder).
- The initiator sends a query message to the responder.
- The responder replies to the initiator with a response message.
- The initiator and responder exchange additional messages, as necessary.
- The initiator ends the dialogue by sending an interchange trailer segment to the responder, optionally preceded by a message.
- The responder replies to the initiator with an interchange trailer segment, optionally preceded by a message.

The following variations are possible:

For each message from the initiator to the responder there may be zero, one, or more than one message from the responder to the initiator, and vice-versa.

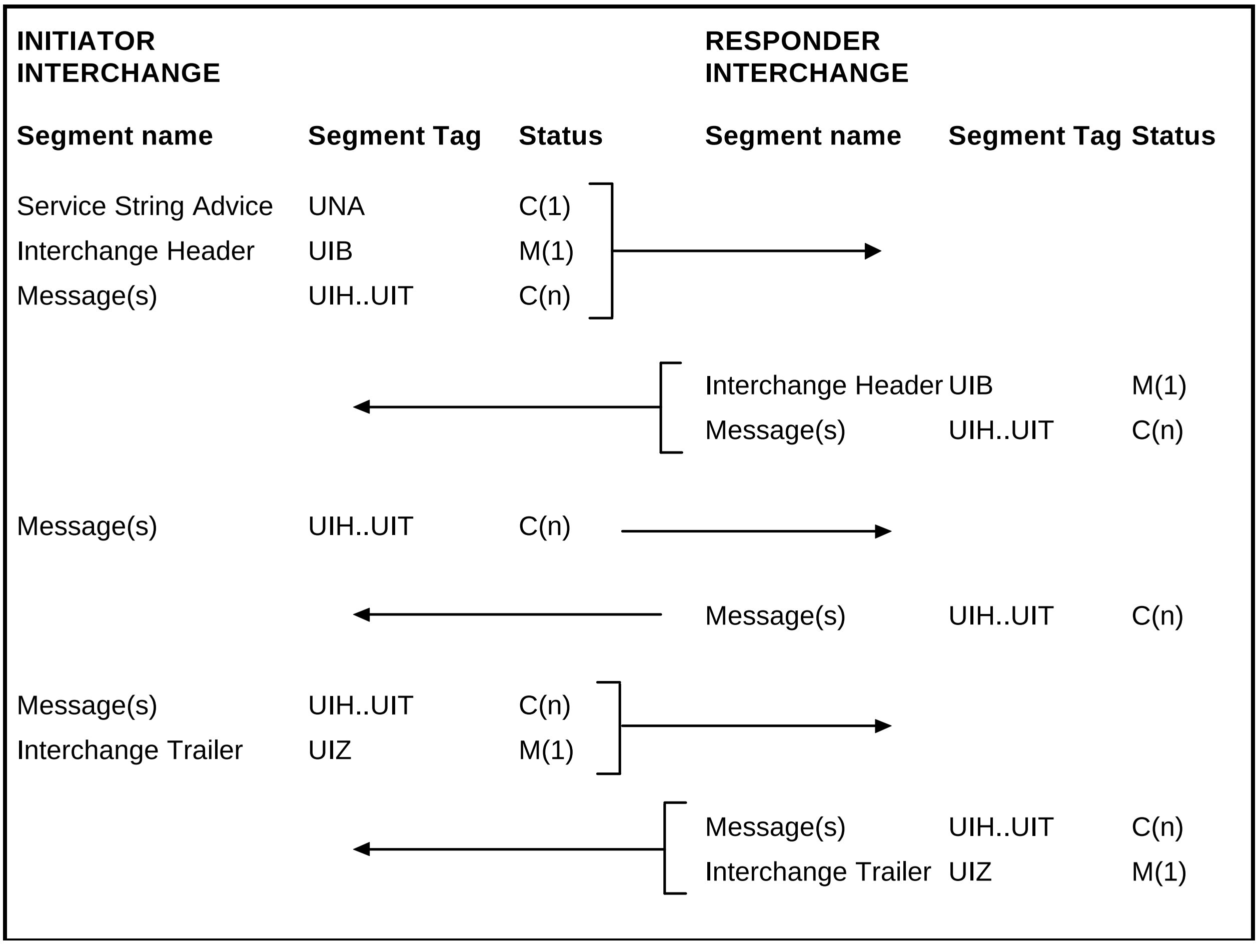
A dialogue can be prematurely terminated at any time by either party, by using a UIR control segment.

A message or messages may be combined with:

- the interchange header or,
- the interchange trailer or,
- both the interchange header and the interchange trailer.

See annex A for examples.

The following is a flow diagram of two interchanges which together form a dialogue.



INITIATOR INTERCHANGE				**RESPONDER INTERCHANGE**		
Segment name	**Segment Tag**	**Status**		**Segment name**	**Segment Tag**	**Status**
Service String Advice	UNA	C(1)	→			
Interchange Header	UIB	M(1)				
Message(s)	UIH..UIT	C(n)				
			←	Interchange Header	UIB	M(1)
				Message(s)	UIH..UIT	C(n)
Message(s)	UIH..UIT	C(n)	→			
			←	Message(s)	UIH..UIT	C(n)
Message(s)	UIH..UIT	C(n)	→			
Interchange Trailer	UIZ	M(1)				
			←	Message(s)	UIH..UIT	C(n)
				Interchange Trailer	UIZ	M(1)

Figure 2 - Flow diagram of two I-EDI interchanges

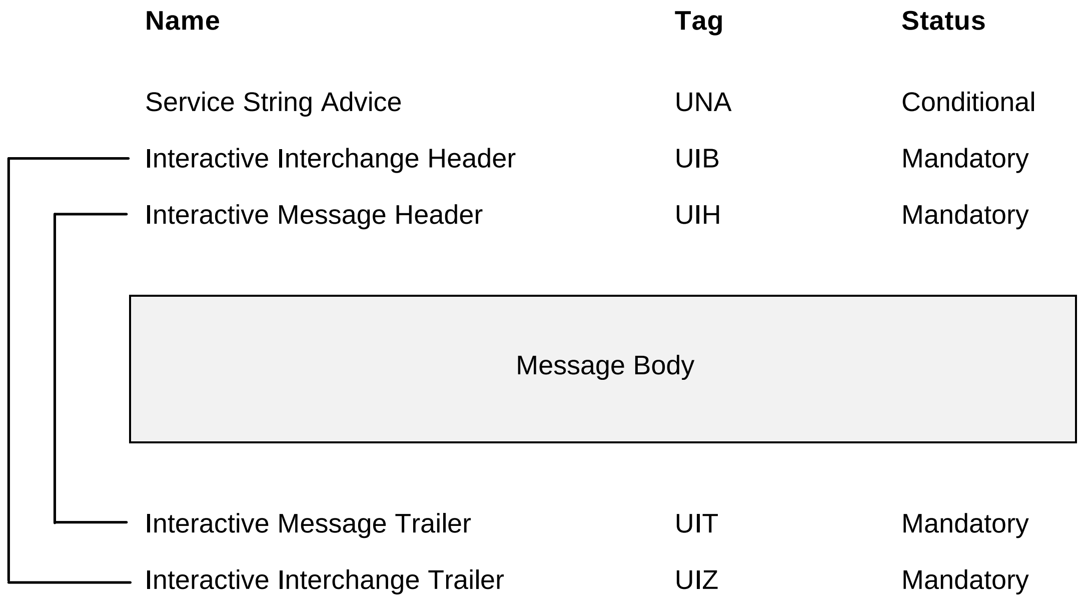
The arrows in figure 2 indicate the direction of data flow. Note that UNA is only sent by initiator.

The status above indicates Mandatory (M) or Conditional (C), together with an indication of allowed repetition. At least one message shall be sent in each interchange. See also annex A.

UIR service segments can be interleaved with messages. See annex A for examples.

6.1 I-EDI interchange structure

The service string advice (if used) and the header and trailer service segments shall appear in an I-EDI interchange in the order shown below:



Name	Tag	Status
Service String Advice	UNA	Conditional
Interactive Interchange Header	UIB	Mandatory
Interactive Message Header	UIH	Mandatory
Message Body		
Interactive Message Trailer	UIT	Mandatory
Interactive Interchange Trailer	UIZ	Mandatory

In the diagram above, the lines to the left show the pairing of header and trailer segments. For simplicity, an interchange containing only one message is shown.

For the specification of the service string advice see Part 1 annex B.

For the specification of the interactive header and trailer segments see Part 1 annex C.

NOTE - Segments for use in UN/EDIFACT messages are defined in the United Nations Trade Data Interchange Directory (UNTDID).

6.2 I-EDI functions

In the following sections, the word ‘application’ can mean either the main application program, or that part of the I-EDI handler which manages the I-EDI dialogue, depending upon the implementation. The word ‘association’ here refers to a logical relationship between two applications, not to any other meaning which may be used in other standards. Note that the following function points do not necessarily map to a single service segment or message.

Start dialogue request
Allows an application to pass sufficient information to a remote application to enable an association between the two applications to be initiated.

Start dialogue confirm
Allows the remote application to pass sufficient information to an initiating application to inform it that the association has been accepted.

Start dialogue reject
Allows the remote application to pass sufficient information to an initiating application to inform it that the association cannot be initiated.

Transfer data
Allows an application to pass business information to another application.

Request status
Allows an application to request status or control information from the other application, in the association.

Report status (reply)
Allows an application to send status or control information to the other application in the association. This can be sent as a reply to a request status, or as an unsolicited incident report.

Abort dialogue
Allows an application unconditionally to end an association when it is unable to continue with that association.

End dialogue request
Allows an application to request the other application in the association to close the association, typically at the normal end of a business transaction.

End dialogue confirm
Allows a responding application to confirm to the requesting application that the association is terminated.

Complete dialogue request
Allows an application to pass sufficient information to a remote application to enable an association between the two applications to be initiated, data to be sent, and the association termination requested in a single transfer.

Complete dialogue confirm
Allows the remote application to pass sufficient information to an initiating application to inform it that the association has been accepted, data has been returned, and the association has been terminated in a single transfer.

6.3 Data requirements

The following table indicates how the abstract I-EDI functions can be mapped to I-EDI service segments and messages. The M/C field indicates whether a segment is mandatory or conditional within an I-EDI function.

Table 1 - Functions mapped to service segments

Functions	Segments	M/C	Rept.
Start Dialogue Request	UNA UIB (UIH <data> UIT)	C M C	1 1 n
Start Dialogue Confirm	UIB (UIH <data> UIT)	M C	1 n
Start Dialogue Reject	UIR	M	1
Transfer Data	UIH <data> UIT	M	n
Request Status	UIR	M	1
Report Status	UIR	M	1
Abort	UIR	M	1
End Dialogue Request	(UIH <data> UIT) UIZ	C M	n 1
End Dialogue Confirm	(UIH <data> UIT) UIZ	C M	n 1
Complete Dialogue Request	UNA UIB (UIH <data> UIT) UIZ	C M M M	1 1 n 1
Complete Dialogue Confirm	UIB (UIH <data> UIT) UIZ	M M M	1 n 1

6.4 Sequencing of I-EDI functions

The I-EDI protocol is described in the following diagram and tables in terms of the states the protocol can be in, and the events which cause a transition from one state to another. As each event occurs the protocol "machine" moves automatically from state to state. The number of valid states the I-EDI protocol can be in is finite.

The dialogue state diagram (figure 3) shows the states of the I-EDI protocol, the events affecting the I-EDI protocol, and the transitions from state to state. This is further formalised as a state-event matrix (table 4) which is a two dimensional representation of the I-EDI protocol machine. The two dimensions are states and events, and the intersection of state and event gives the transition to the next state for that particular event; all other events are error conditions.

6.4.1 State

At any instant, the I-EDI protocol can be said to be in one of a finite number of states. The table below lists the valid states for the I-EDI protocol and describes the purpose of the state.

Table 2 - States

State	Description
IDLE	No association exists and no responses are outstanding
START_I	Waiting for ‘Start Dialogue Confirm’ from responder to initiator
DATA_I	Waiting for ‘Transfer Data’ from responder to initiator
DATA_R	Waiting for ‘Transfer Data’ from initiator to responder
REPORT_I	Waiting for ‘Report Status’ from responder to initiator
REPORT_R	Waiting for ‘Report Status’ from initiator to responder
STOP_I	Waiting for ‘End Dialogue Confirm’ from responder to initiator
CMPL_I	Waiting for ‘Complete Dialogue Confirm’ from responder to initiator

6.4.2 Event

The following table lists the valid events for the I-EDI protocol and describes the conditions attached to those events. These events are usually caused by data objects or control objects being transferred through the protocol handler.

Table 3 - Events

Event	Function	Direction
SD_REQ_I	Start Dialogue Request	From Initiator to Responder
SD_CNF_R	Start Dialogue Confirm	From Responder to Initiator
SD_REJ_R	Start Dialogue Reject	From Responder to Initiator
TR_DATA_I	Transfer Data	From Initiator to Responder
TR_DATA_R	Transfer Data	From Responder to Initiator
ED_REQ_I	End Dialogue Request	From Initiator to Responder
ED_CNF_R	End Dialogue Confirm	From Responder to Initiator
ABORT_I	Abort Dialogue	From Initiator to Responder
ABORT_R	Abort Dialogue	From Responder to Initiator
REQUEST_I	Request Status	From Initiator to Responder
REQUEST_R	Request Status	From Responder to Initiator
REP_ST_I	Report Status	From Initiator to Responder
REP_ST_R	Report Status	From Responder to Initiator
CD_REQ_I	Complete Dialogue Request	From Initiator to Responder
CD_CNF_R	Complete Dialogue Confirm	From Responder to Initiator

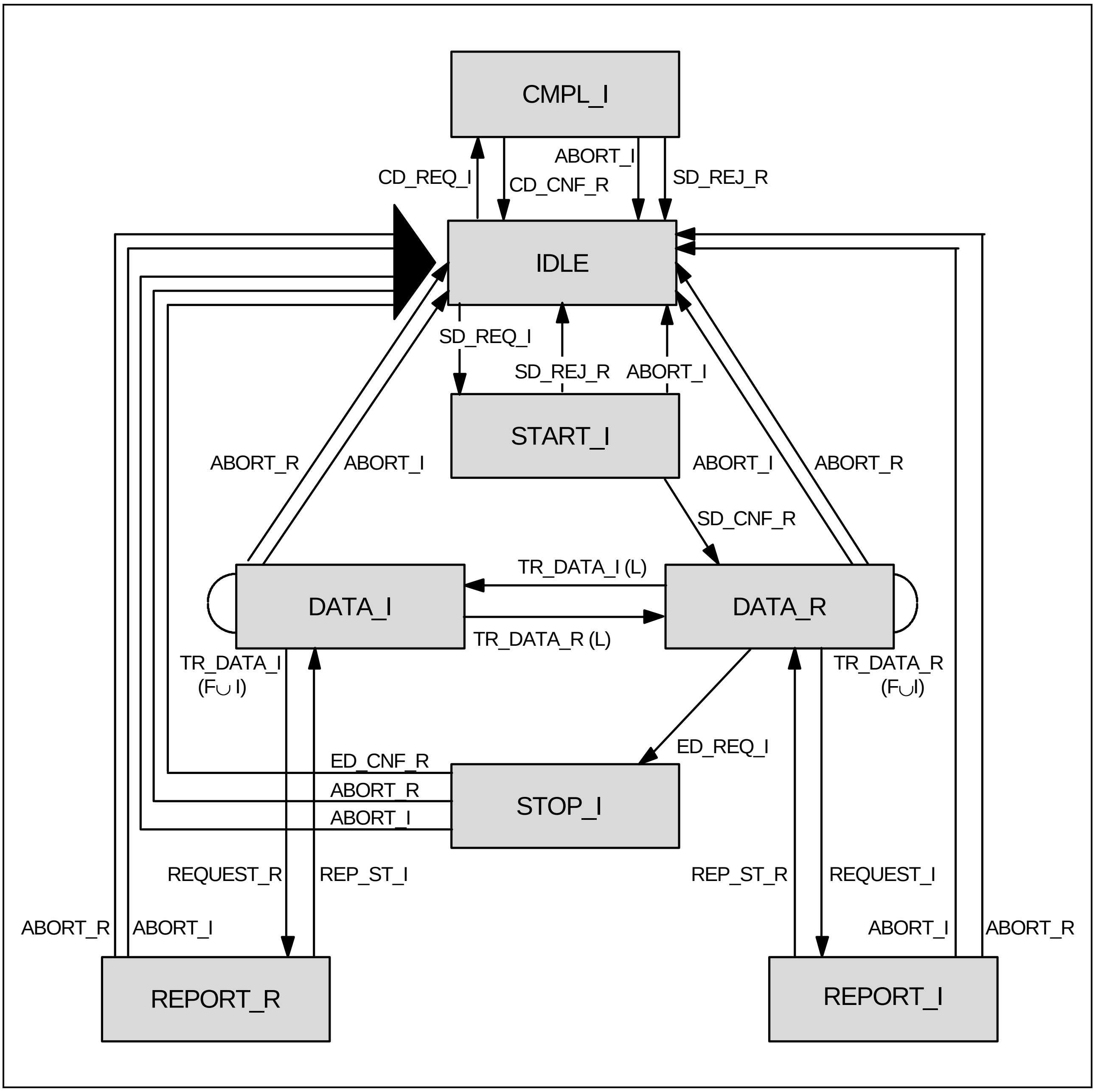


Figure 3 - Dialogue state diagram

Legend:	**Means**
(F ∪ I)	**F**irst or **I**ntermediate message
(L)	**L**ast message
_**I** suffix	**I**nitiator
_R suffix	Responder

Table 4 - State-event matrix

State Event	IDLE	START_I	DATA_I	DATA_R	STOP_I	CMPL_I	REPORT_I	REPORT_R
SD_REQ_I	START_I							
SD_CNF_R		DATA_R						
SD_REJ_R		IDLE				IDLE		
TR_DATA_I(F∪I)				DATA_R				
TR_DATA_I(L)				DATA_I				
TR_DATA_R(F∪I)			DATA_I					
TR_DATA_R(L)			DATA_R					
ED_REQ_I				STOP_I				
ED_CNF_R					IDLE			
ABORT_I		IDLE	IDLE*	IDLE	IDLE*	IDLE	IDLE*	IDLE
ABORT_R			IDLE	IDLE*	IDLE		IDLE	IDLE*
REQUEST_I				REPORT_I				
REQUEST_R			REPORT_R					
REP_ST_I				DATA_R				DATA_I
REP_ST_R			DATA_I				DATA_R	
CD_REQ_I	CMPL_I							
CD_CNF_R						IDLE		

Notes:

* Might not be possible if communication medium is half-duplex.

Annex A
(informative)

Examples illustrating segment sequences

Example a) Message pairs with first and final message combined with interchange header and trailer:

```
Initiator  UIB...UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIB...UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
etc.
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
```

Example b) Message pairs with separate interchange header and trailer, and with UNA: Note that UNA is only sent by initiator, and therefore also applies to responder.

```
Initiator  UNA...UIB
Responder  UIB
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment (s) and/or Segment Group(s)...UIT
etc.
Initiator  UIZ
Responder  UIZ
```

Example c) A single message combined with interchange header and trailer:

```
Initiator  UIB... UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
Responder  UIB... UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
```

Example d) Multi-message sequences with final message combined with interchange trailer:

```
Initiator  UIB
Responder  UIB
Initiator  UIH....Segment(s) and/or Segment Group(s)...UIT
Responder  UIH(F).Segment(s) and/or Segment Group(s)  ...UIT
           UIH(L).Segment(s) and/or Segment Group(s)...UIT

Initiator  UIH....Segment(s) and/or Segment Group(s)...UIT...UIZ
Responder  UIH....Segment(s) and/or Segment Group(s)...UIT...UIZ
```

Example e) Message pairs with separate interchange header and trailer, and embedded UIR pairs.

```
Initiator  UNA...UIB
Responder  UIB
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
etc.
Initiator  UIR...Function code = 'n' (Query status) *
```

```
Responder  UIR...Function Code = 'n' (Status report) *
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
etc.
Initiator  UIZ
Responder  UIZ
```

Example f) Message pairs with separate interchange header and trailer, and with UNA. UIR used to report severe error detected by Responder:

```
Initiator  UNA...UIB
Responder  UIB
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/o r Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIR...Function code = 'n' (Fatal error) *
                 Reason code indicates problem area *
No further exchanges in this dialogue.
```

Example g) Dialogue unable to start. UIR used by Responder to report Start Dialogue Reject:

```
Initiator  UNA...UIB
Responder  UIR...Function code = 'n' (Dialogue Reject) *
                 Reason code indicates problem area *
No further exchanges in this dialogue.
```

Example h) Message pairs with first and final message combined with interchange header and trailer, and using pause and continue:

```
Initiator  UIB...UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIB...UIH...Segment(s) and/or Segment Group(s)...UIT
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIR...Function code = 'n' (Paused) *
                  Reason code indicates reason for pause; e.g. low    resources *
No more data flows in dialogue until:-
Some time later...
Responder  UIR...Function code = 'n' (Continue) *
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT
etc.
Initiator  UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
Responder  UIH...Segment(s) and/or Segment Group(s)...UIT...UIZ
```

* see Part 1 annex D for the applicable code values.

Annex B
(informative)

A model of the I-EDI process

B.1 Summary of I-EDI.

Interactive EDI is a series of exchanges of information between the applications of independent parties in order to accomplish a joint task, where subsequent exchanges may depend upon the results of previous exchanges. Strict timing constraints frequently apply. Applications which are inherently interactive include airline reservation systems; healthcare pharmacy, claims submission and eligibility verification; and remote automated teller machines for banks.

Initially, Interactive EDI is aimed at those applications where the initiating party, sends data to the responder, and the responder sends data back in reply. This alternate exchange of data controlled by the initiator is by far the most common way of working among existing interactive applications, but the I-EDI syntax does not exclude other modes of working.

The definition of interactive EDI depends upon the definition of EDI in general. The approach taken towards EDI in this document has been based on the “Report on the Open-edi Conceptual Model” prepared by the EDI Special Working Group of ISO/IEC JTC 1. Characteristics of the “Open-edi Conceptual Model” include:

- Generalising EDI beyond trade.
- Defining EDI as “open” (available to all parties, according to standards and without requiring special bipartite agreements).
- Co-ordinating EDI with other international standards in communications, modelling and open environments.

Two major elements of the business context of EDI have made the development of interactive EDI necessary. The first is pressure from the market on many organisations (not just in the private sector) for more competitive, more responsive performance. Many fundamental processes must, in fact, be “re-modelled” to respond to these pressures. The second element is the desire for standard solutions, in contrast to the current proprietary (and therefore “non-Open-edi”) situations.

The following guiding principles were adopted in defining I-EDI requirements:

- Ease of user implementation is paramount and standards should define their elements accordingly.

- Interactive EDI mechanisms should be fully compatible with and where possible identical to those for other forms of EDI.

- The required functions should be available no matter what communications methods are used.

- Wherever equivalent functions are available in the underlying communications protocols (e.g. X.25, OSI Transaction Processing) they may be used.

- EDI standards should be fully harmonised with all other relevant international standards.

The business and functional models, and the contents of the information required in interactive EDI service segments, have been described below, to present the characteristics and requirements of interactive EDI independently of an underlying architecture. It is recommended though, but not mandatory, that the relevant ISO protocols be used to carry I-EDI data.

B.2 Business requirements of Interactive EDI

- Enable consistent completion of a single business transaction between two or more business partners.

- Interactive conversational activities must be supported.

- Provide for the handling of high volumes of business information, in a timely manner .

- Provide the means for business information to be passed securely between business partners.

B.3 Functional requirements to support business requirements

Within a business transaction:

- Enable co-operation between applications.

- Enable multiple bilateral conversations.

- Enable the co-ordination of bilateral conversations.

- Enable cascading of bilateral conversations.

- Enable the two way exchange of I-EDI messages within a bilateral conversation.

- Provide efficient mechanisms to allow for sub-second response times.

- Support high transaction volumes through reduced overhead.

- Security shall be provided by common UN/EDIFACT security, or other standards.

B.4 Business model

The I-EDI dialogue is separate from and independent of, dialogue as a term used in other ISO documents.

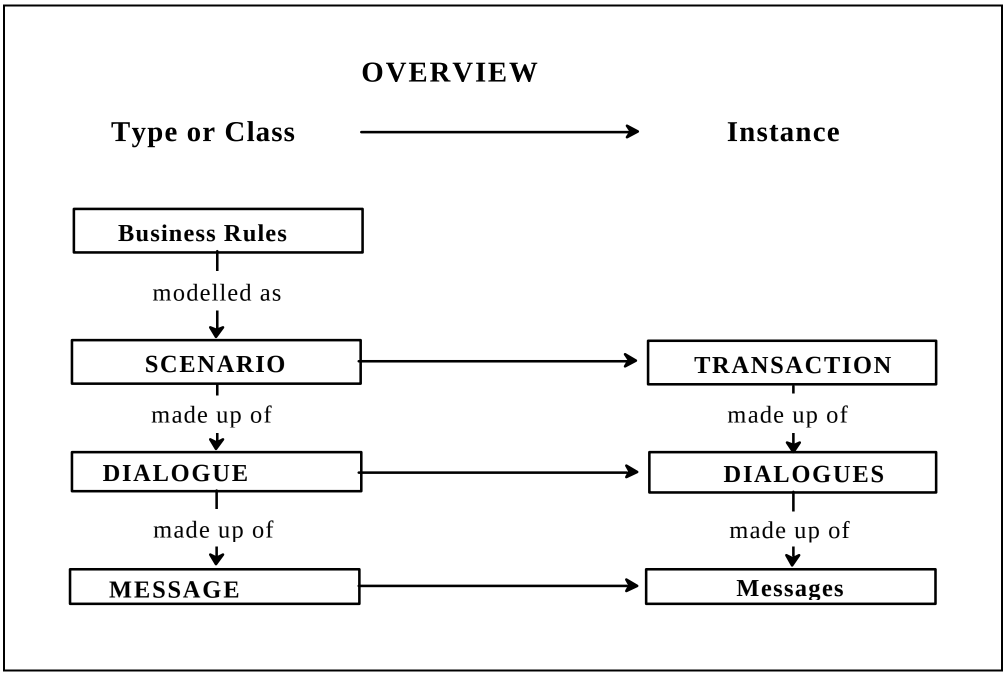


Figure B.1 - Overview of types and instances

A scenario is a formal specification of a group of business activities that take place between parties to achieve a particular business objective. A scenario models the relationships and interactions among the parties.

A *transaction* is an instance of a *scenario*. When roles are played in a *scenario* to execute an actual business transaction, a *transaction* is created. *Transactions* are outlined here simply to clarify the context of the *dialogue*.

In order to carry out a *transaction* the various parties involved in the business transaction communicate bilaterally using *dialogues* for the I-EDI part of the *transaction*. *Transactions* have the potential of grouping a number of *dialogues*. But many *scenarios* can be modelled which contain only a single *dialogue type* between two parties, an instance of which is a *transaction* containing only a single *dialogue* between two parties.

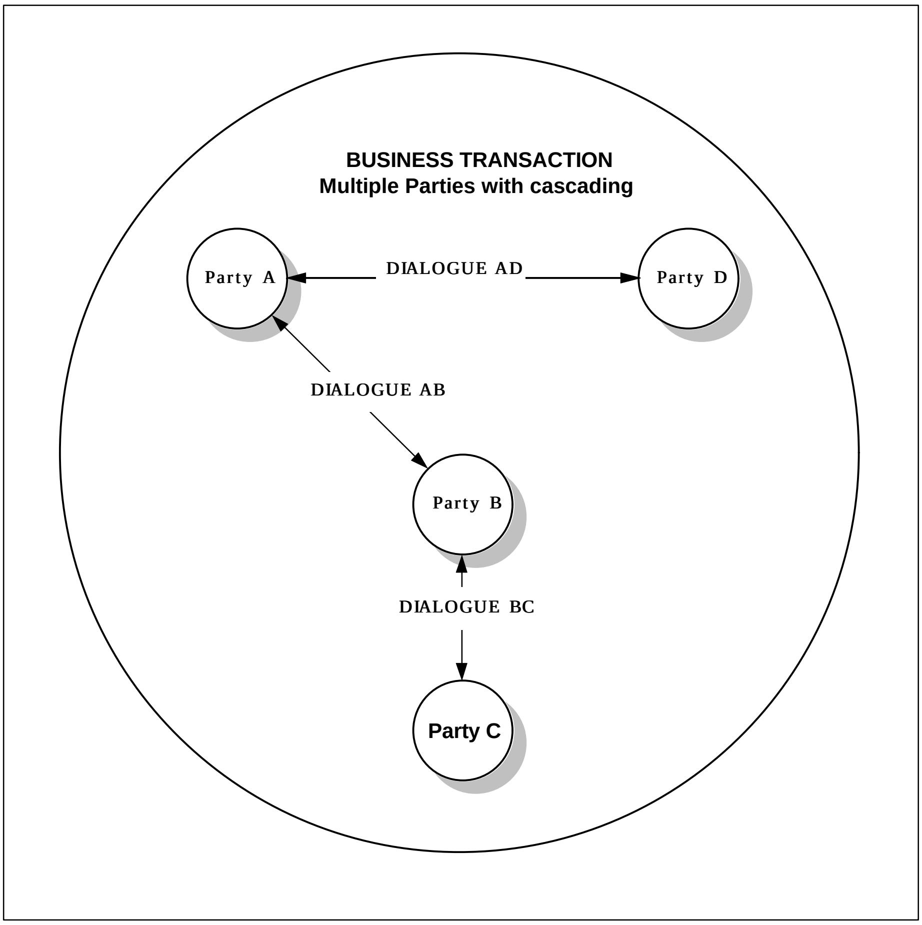


Figure B.2 - Illustration of a business transaction

Dialogues can be grouped together within the same transaction. Multiple dialogues can take place between the same or different pairs of parties.

B.5 Functional Model

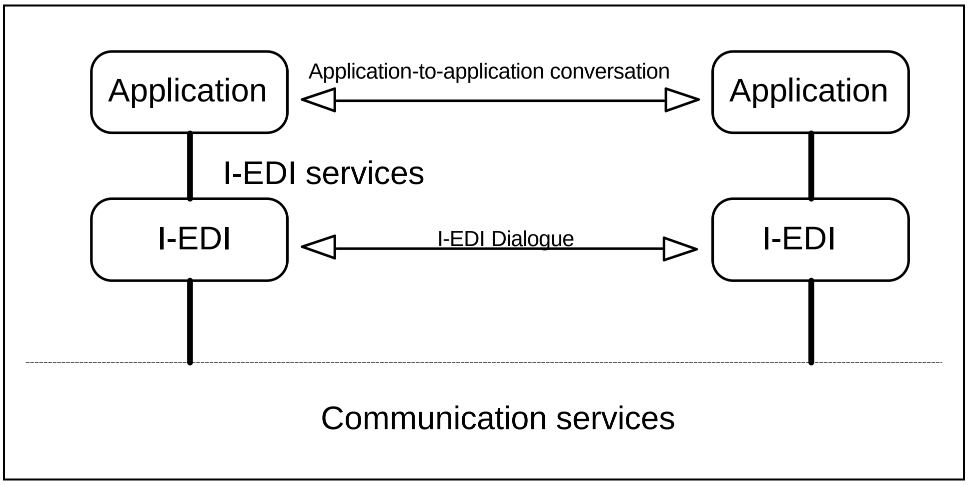


Figure B.3 - Dialogue

B.6 Minimum communication requirements.

The communications must:

- be error free.
- deliver data in the order in which it was transmitted.
- allow bi-directional data flows.
- provide detection and reporting of lost logical associations.
- provide a persistent logical association between applications (e.g. session, conversation, etc.). Each I-EDI dialogue would then have its own unique logical association. If this requirement cannot be met, implementors will have to deal with problems associated with separators and character set recognition.

B.7 Data requirements

The following list is an attempt to provide a list of the data which are needed to perform the named functions. The list was used for modelling the service segments but the presence of a function here does not necessarily guarantee the existence of a unique service segment, as some service segments perform multiple functions.

Start dialogue request; (UNA, UIB and optional message)

· Separator characters
· Character set
· Syntax identifier
· Dialogue reference
· Business transaction reference
· Scenario identifier
· Dialogue identifier
· Sender identifier
· Recipient identifier
· Date and time
· Duplicate indicator
· Test indicator
. Security information

Start dialogue confirm; (UIB and optional message)

· Syntax identifier
· Dialogue reference
· Business transaction reference
· Scenario identifier
· Dialogue identifier
· Sender identifier
· Recipient identifier
· Date and time
· Duplicate indicator
· Test indicator
· Response information
. Security information

Send data; (Message = UIH, query or command, UIT)

· Message identifier or type
· Message reference
· Dialogue reference
· Status of transfer
· Date and time
· Test Indicator

Receive data; (Message = UIH, response, UIT)
- Message identifier or type
- Message reference
- Dialogue reference
- Status of transfer
- Date and time
- Test Indicator

Request status; (UIR)
- Dialogue reference
- Function (= Query)
- Date and time

Report status; (UIR)
- Dialogue reference
- Function
- Reason code
- Other information from message in error
- Date and time

Pause Dialogue; (UIR)
- Dialogue reference
- Function (= Paused)
- Reason code
- Date and time

Continue Dialogue; (UIR)
- Dialogue reference
- Function (= Continue)
- Date and time

Abort; (UIR)
- Dialogue reference
- Function (= Fatal error)
- Reason code
- Other Information from message in error
- Date and time

End dialogue request; (optional message and UIZ)
- Dialogue reference
- Control count of messages sent
- Duplicate indicator

End dialogue confirm; (optional message and UIZ)
- Dialogue reference
- Control count of messages sent