

**BIC EDI Standards
and
Implementation Guidelines**

Library Supply

OVERVIEW

EDI standards in UK Library Supply

January 2008

Overview: EDI Standards in UK Library Supply

1	Overview of current EDI standards.....	2
2	General principles of EDI.....	2
3	Business cycle	3
4	Transaction cycles.....	3
5	Message formats.....	4
5.1	Title notification.....	4
5.1.1	Available formats	4
5.1.2	Use of "Title notification" within transaction cycles.....	4
5.1.2.1	Notification of new titles.....	4
5.1.2.2	Selection from a supplier's CD-ROM or online database.....	4
5.1.2.3	Showroom visit	4
5.1.2.4	Titles matching a customer profile.....	4
5.1.2.5	Titles supplied under a continuation order	5
5.1.2.6	Supplier selection	5
5.2	Order.....	5
5.2.1	Available formats.....	5
5.2.2	Use of "Order" within transaction cycles	5
5.2.2.1	New order	5
5.2.2.2	Confirmation order.....	5
5.2.2.3	Order for retained approval items.....	6
5.3	Order response	6
5.3.1	Available formats	6
5.3.2	Use of "Order response" within transaction cycles	6
5.4	Order status enquiry	7
5.4.1	Available formats	7
5.4.2	Use of "Order status enquiry" within transaction cycles.....	7
5.5	Order status report	7
5.5.1	Available formats	7
5.5.2	Use of "Order status report" within transaction cycles	7
5.6	Order fulfilment.....	8
5.6.1	Available formats.....	8
5.6.2	Use of "Order fulfilment" within transaction cycles.....	8
5.7	Invoice.....	8
5.7.1	Available formats.....	8
5.7.2	Use of "Invoice" within transaction cycles	8
5.8	Order cancellation	9
5.8.1	Available formats.....	9
5.8.2	Use of "Order cancellation" within transaction cycles	9
6	Trading partner agreements	10
7	Identification of trading partners	10
8	Multiple suppliers or customers within a transmission	11
9	Identification of transactions and products.....	11
	Appendix 1 – Business Cycle Diagram.....	12

1 Overview of current EDI standards

There are two main standards used in the UK:

- TRADACOMS – UK National standard
- EDIFACT – International standard

TRADACOMS was developed by the Book Trade EDI Standards (BEDIS) group and is now maintained by that group's successor: Book Industry Communication (BIC). BIC has decided that any new developments will be carried out in EDIFACT.

EDIFACT (Electronic Data Interchange for Administration, Commerce and Transport) was developed during the 1990s with a subset, EANCOM, which is the most widely-used 'dialect' of EDIFACT in the international retail and distribution sector.

The Pan-European Book Sector EDI Group (EDItEUR) was set up to develop and promote EDI in the European book sector and decided to work within the EANCOM subset wherever possible. EDItEUR mainly interprets, and occasionally extends, these standards for use in the book trade.

Documentation available:

- TRADACOMS – *BIC: EDI Standards and Implementation Guidelines: TRADACOMS*
- EDIFACT - *EDItEUR: EDI Implementation Guidelines for Library Book Supply*

Documentation may be downloaded from the following websites:

- TRADACOMS – www.bic.org.uk (note: area is members only)
- EDIFACT – www.editeur.org

2 General principles of EDI

In all EDI trading, a key aim is to use coded data to ensure that message processing can be fully automated and that the messages themselves are as concise and efficient as possible. Text which merely supports and duplicates coded data should not be carried in an EDI message. General text fields should be avoided, since they will normally cause messages to be sidelined for human intervention, which may delay the processing of the transaction.

Throughout these guidelines, it will be apparent that there are many options for which agreed defaults need to be set. Typically, some of these options may be standardised across a particular application while others will be specific to a trading relationship and will need to be held as a customer or supplier "profile" within the respective application system. See section 6 for more details.

3 Business cycle

The library book supply business cycle covers the sequence:

Title notification – New or Confirmed Order – Order response – Order status enquiry – Order status report – Order cancellation – Order fulfilment – Invoice.

“Title notification” is used here to mean a message sent by a supplier to a customer that lists titles that the supplier is offering, or that the customer has indicated outside of EDI that it wishes to order.

“Book” is interpreted here as including any non-serial or monographic publication in any medium. Continuation orders for monographic series may be handled as part of book or journal supply.

A library book supply transaction cycle may begin with either a ‘Title notification’ message or an ‘Order’ message.

4 Transaction cycles

The following are examples of possible transaction cycles to cover different business cases:

- Title notification – Invoice (no order required)
- Title notification – Confirmation order – Order response – Invoice
- Title notification – Confirmation order – Order response – Order fulfilment – Invoice
- Title notification – Confirmation order – Order response – Order cancellation
- New order – Order response – Invoice
- New order – Order response – Order fulfilment – Invoice
- New order – Order response – Order cancellation

Details of the EDI message formats required for these transaction cycles are given in section 5.

Two other messages – Order status enquiry and Order status report – are outside the normal transaction cycles and may be used when orders have not been fulfilled within an agreed timescale. They are also described in section 5.

The diagram of a standard transaction cycle – from title notification to invoice – appears in Appendix A.

5 Message formats

Documentation for the message formats listed in this section can be found on the websites given in section 1.

5.1 Title notification

5.1.1 Available formats

- EDIFACT QUOTES

5.1.2 Use of “Title notification” within transaction cycles

5.1.2.1 Notification of new titles

The supplier sends the customer a notification of a title which the customer may be interested in acquiring, and if the customer requires the item they respond with an Order message.

5.1.2.2 Selection from a supplier’s CD-ROM or online database

The customer selects a title from a supplier’s CD-ROM or online database and the supplier sends the information back to the customer. The customer responds with a “confirmation order” – see section 5.2.2.2.

5.1.2.3 Showroom visit

The customer visits the supplier’s showroom and selects items from the shelves. The supplier sends the information to the customer and the customer responds as in section 5.1.2.2.

5.1.2.4 Titles matching a customer profile

The supplier sets up a customer profile containing details of the customer’s requirements for certain types of material (an approval plan or “blanket order” agreement). The supplier notifies the customer of any item which matches the profile.

The choice of message depends on the exact nature of the agreement between customer and supplier and the transaction cycle will continue in one of two ways:

1. If the customer requires the right to confirm the supplier’s selection the customer responds as outlined in 5.1.2.2.
2. If the customer does not require the right to confirm the supplier’s selection there is no message returned by the customer.

5.1.2.5 Titles supplied under a continuation order

The supplier sets up a “continuation order” when a customer requires a complete set or series, the items of which are published at different times. As each item is published, the supplier notifies the customer. The choice of transaction cycle is as for 4.4.

5.1.2.6 Supplier selection

The supplier sets up a customer profile containing details of the customer’s requirements, enabling the supplier to select items for the customer (a “supplier selection” agreement). The supplier notifies the customer of any item which matches the profile. The choice of transaction cycle is as for 4.4.

5.2 Order

5.2.1 Available formats

- TRADACOMS BTOERS
- EDIFACT ORDERS

5.2.2 Use of “Order” within transaction cycles

5.2.2.1 New order

The customer sends the supplier an order for an item which has not been the subject of a notification.

A special case is where the required item is known to be not currently available (eg: a secondhand or antiquarian title). In this case a customer may send an order which is, in effect, a request to the supplier to trace a copy. This can be expressed as an Order message with an upper limit on price.

5.2.2.2 Confirmation order

A “confirmation order” is sent as a response to a “title notification” message sent by a supplier. The content of the message depends on the exact nature of the agreement between customer and supplier. One of the following will apply:

- (a) The supplier may send a “title notification” message representing a *provisional* order. The customer is then allowed to make certain changes to the order (deleting lines or reducing copy quantities) as well as adding extra copy details, and will then send a message back to the supplier to *confirm* the order.
- (b) The supplier may send a “title notification” message representing a *firm* order. The customer *confirms* the order and may add extra copy details. However the customer may NOT delete lines or reduce copy quantities.

5.2.2.3 Order for retained approval items

The supplier sends items 'on approval' to the customer. The customer either returns the items or sends an order confirming retention of the items.

5.3 Order response

5.3.1 Available formats

- TRADACOMS ACKMNT
- EDIFACT ORDRSP

5.3.2 Use of "Order response" within transaction cycles

Whenever the customer sends an Order message, the supplier should reply immediately with an EDI order response, detailing order lines which cannot be supplied from stock, in full and in accordance with the terms stated in the order. The order response lists all such items, even when the variation from the terms stated in the order falls within tolerances agreed between the trading partners to allow the order to proceed without further authorisation from the customer. It shows the reason for non-fulfilment and, where applicable, the terms on which the item can be supplied; and it shows what action the supplier is taking.

Note: some trading partners may agree to exchange comprehensive order responses – including items that can be supplied in full.

If an item cannot be supplied immediately, but will be available in due course on terms which fall within tolerances on price and expected delivery time agreed with the customer, the order line will be shown as recorded as a backorder or "due". If the item can be supplied, but only outside of such tolerances, there are two possible forms of response, depending on the agreement between trading partners. The supplier can either:

- (a) Show the order line as cancelled, in which case the customer must issue a new order if the item is still required, or
- (b) Show the order line as having been placed on hold, awaiting further instructions from the customer. NB: the trading agreement may include a time limit after which the order will be deemed to have been cancelled. Note: "further instructions" cannot be supplied using an EDI message.

When a backorder or "due" is eventually supplied, it will of course be listed in an accompanying EDI Invoice message.

5.4 Order status enquiry

5.4.1 Available formats

- TRADACOMS BTOERS
- EDIFACT OSTENQ

5.4.2 Use of “Order status enquiry” within transaction cycles

The customer may send an “order status enquiry” message to request the latest status information on an outstanding order or orders (in other words, as an order chaser or claim). The supplier is expected to respond to an order status enquiry message by sending an “order status report” message detailing the status of the outstanding item(s).

The recommended practice is that suppliers should send updated status reports on outstanding orders, either on a regular periodic basis agreed with the customer or, preferably, whenever changes occur which affect the date or terms of supply. In these circumstances, book order chasers may be regarded as unnecessary.

EDI order chasers or claims may also be sent in connection with continuation orders.

5.5 Order status report

5.5.1 Available formats

- TRADACOMS ACKMNT
- EDIFACT ORDRSP

5.5.2 Use of “Order status report” within transaction cycles

The Order response message can be used not only to reply to an order but also to send reports on the status of outstanding orders. Suppliers are encouraged to use it in this way, thus minimising - or avoiding altogether - the necessity for order chasing.

Depending on the agreement between trading partners, two approaches are possible:

- (a) Periodic reports on all outstanding orders, sent at agreed intervals, or
- (b) Reports on changes of status only, either as they occur or at agreed intervals.

Further reports on an outstanding item may lead to the order being cancelled by the supplier (if it cannot now be supplied) or by the customer (if unwilling to accept a price change or further delay in supply).

5.6 Order fulfilment

5.6.1 Available formats

- EDIFACT ORDRSP

5.6.2 Use of “Order fulfilment” within transaction cycles

An “Order fulfilment” message can be used, and is used in UK library practice, to enable the supplier to communicate – shortly before delivery – “copy-related data”, such as accession or barcode numbers, shelfmarks, etc which have been added to individual copies during the supplier’s processing of the books. Sending this information electronically means that copy-level detail can be loaded into the library’s computer system before the books arrive, thus simplifying the process of checking them in and making them available on the shelves.

5.7 Invoice

5.7.1 Available formats

- TRADACOMS INVOICE
- EDIFACT INVOIC

5.7.2 Use of “Invoice” within transaction cycles

The final message in a normal transaction cycle is an “invoice”. (It should be noted that in library supply it is not usual to send a despatch advice using EDI.) Libraries receive invoices in one of two ways (dependent on their working practices):

- (a) Invoicing per delivery. Each consignment will be invoiced separately and the invoice message should normally reach the customer in advance of the actual shipment, effectively doubling as a despatch advice as well as an invoice.
- (b) Invoicing per period. Some libraries prefer to receive invoices at pre-determined intervals (eg: weekly, monthly) and each invoice should cover every shipment received during the invoicing period.

Note: the invoice message must be used in accordance with the current requirements of HMR&C. Detailed guidance on these aspects is given in the specifications for the invoice message being used.

5.8 Order cancellation

5.8.1 Available formats

a) when cancelled by supplier:

- TRADACOMS ACKMNT
- EDIFACT ORDRSP

b) when cancelled by customer:

- TRADACOMS BTOERS
- EDIFACT ORDCHG

5.8.2 Use of “Order cancellation” within transaction cycles

A **supplier** may cancel an order by sending an “Order response” message giving details of the reason for the cancellation. This may be due to problems with customer accounts or with supplying the requested items. Where the supplier cannot meet the order as stated, but can offer to meet it at a later date or on different terms, one of two situations may arise:

- (a) The revised terms are within tolerances agreed between the parties as mutually acceptable. In this event, the supplier sends an “order response” which gives the buyer full details of the change, and indicates that supply will proceed in the normal way.
- (b) The revised terms are outside any agreed tolerances. In this event, the supplier sends an order response which shows whether the ordered item can be supplied on other terms, and cancels the order. The buyer must send a new order – NOT an order change – if the item is still wanted.

Where the buyer wishes to change an outstanding order, it must cancel the outstanding order and send a new order incorporating the change.

A **customer** may cancel an order by sending an “Order cancellation” message at any stage during the transaction cycle prior to receiving an “Order fulfilment” message or despatch of the items.

6 Trading partner agreements

Any EDI trading relationship must be based upon agreements between the trading partners which confirm the contractual status of EDI messages within the trading relationship, and specify the procedures, defaults and technical options which the partners will adopt.

Examples of procedures, defaults and technical options which will need to be specified include:

- (a) What level of change the customer will accept in an ordered item without requiring the supplier to notify him and await approval (eg: substitution of the ordered edition by another, percentage tolerance on price increase).
- (b) Whether the default is for dues to be recorded or not, and the longest estimated delivery time for which dues will be recorded.
- (c) Whether acknowledgements are required for ALL order lines or only for those which cannot be supplied in full within the normal despatch cycle.
- (d) Whether in the case of order lines specifying multiple copies the default when supplies are short is that the customer will or will not accept the supply of part of the order.

In the library supply sector, an additional and essential aspect of the agreements between partners is the specification of standard servicing to be applied to all orders, or to orders which are identified by an agreed order type or fund account code. Individual EDI orders need only specify any exceptions to the standard servicing. Such exceptions should be avoided if possible.

7 Identification of trading partners

It is essential that the parties to an EDI transaction are identified by recognised location codes. BIC has adopted the GLN (Global Location Number), a 13-digit numeric code including a check digit, as the book trade standard. Some networks will use this number also as a mailbox address; others may require the use of a different form of mailbox address at EDI transmission level.

At EDI file and message level, the use of GLNs is strongly recommended.

8 Multiple suppliers or customers within a transmission

In certain circumstances the sender or receiver of an EDI transmission may be acting as an agent on behalf of a number of suppliers or customers. The following principles should be applied:

- (a) The GLNs for 'sender' and 'recipient' contained in the "envelope" – STX segment (TRADACOMS) or UNB segment (EDIFACT) – identify the owner of the mailbox from which the EDI transmission is sent, and the owner of the destination mailbox, and it should not be assumed that these are the same as the supplier and customer for individual message files within the transmission envelope.
- (b) The GLNs contained in the file headers – SDT and CDT segments (TRADACOMS) or NAD (EDIFACT) – identify the supplier and customer.
- (c) Different message files (acknowledgement, title notification, invoice, etc) should not be mixed within one envelope.
- (d) Normal practice should be to send one file per envelope. Even so, the GLNs in the envelope should not be assumed to identify supplier and customer.
- (e) There are cases in which it is plainly more efficient to send multiple files of the same type in one envelope, eg when several organisational units trade through a shared EDI gateway. Such cases should be handled by agreement between the trading parties.

9 Identification of transactions and products

Complete and unambiguous identification of every transaction and every product which is the subject of a transaction is fundamental to successful electronic trading. This is particularly the case in the book trade where typically the items which form part of a single order will be subject to wide variations in delivery time, so that they must be processed as individual items rather than as a single combined order.

Key elements in this respect are:

- (a) Customers should give every line item in an Order message a unique transaction ID number – using RTEX code 082 (TRADACOMS) or code LI in element DE 1153 of the appropriate RFF segment (EDIFACT) – which both parties can cite in subsequent interchanges.
- (b) Either the ISBN-13 or an EAN-13 product number should be used as the unique identification of the title ordered.
- (c) Every effort should be made to use an ISBN-13 which correctly identifies the specific item, ordered, and to avoid (eg) ordering a paperback edition under a hardback ISBN. Where an ISBN notified by the supplier is available (eg from a CD-ROM download or from a showroom order list, it should always be used in preference to a different ISBN recorded in an existing library MARC file.

While it is common practice in many businesses to use the Order message number and a line sequence number within the order as the unique transaction identifying number, this practice is NOT recommended for the present application.

Either an approval collection or a delivery of ordered items may be accompanied by a file of bibliographic records. This is not currently treated as part of the EDI transaction cycle, though it may be sent by non-EDI file transfer over the same network as is used for EDI.

At the present time the processing of claims for missing, damaged or unordered items is outside the scope of EDI.

Appendix 1 – Business Cycle Diagram

