



Book Industry Communication

BIC Realtime

Standards for Instant Business Message Exchange

ONIX Product Information Request and Response

Version 1.1, 5 February 2016

This document: <http://www.bic.org.uk/files/pdfs/BICWSONIXProductInformation-V1.1.pdf>
XML schema: <http://www.bic.org.uk/files/xml/BICWSONIXProductInformation-V1.1.xsd>
WSDL file: <http://www.bic.org.uk/files/xml/BICWSONIXProductInformationSOAP-V1.1.wsdl>
XML namespace: <http://www.bic.org.uk/webservices>
Next review date: 1 February 2018

This document specifies the *BIC Realtime* web service ONIX Product Information Request format and the “payload” for the corresponding ONIX Product Information Response format. Separate formats are specified for Requests made either as HTTP queries using the HTTP GET method or as XML attachments using the HTTP POST method. A single XML response “payload” format will apply to all Responses. Web services using either basic HTTP or SOAP protocols¹ are supported.

The complete specification of these two closely-related *BIC Realtime* web services includes two machine-readable resources that are to be used by implementers in conjunction with this document:

- a WSDL Definition for the SOAP protocol versions of the *BIC Realtime* web services
- an XML Schema for Request and Response payloads in XML format.

It is strongly recommended that SOAP client implementations of these *BIC Realtime* web services be constructed using the BIC WSDL Definitions as a starting point, as this will promote interoperability between SOAP client and server implementations. In some development environments it may be easier to implement a SOAP server without using the BIC WSDL Definitions, but in this case care must be taken to ensure that the WSDL Definitions that describe the actual implementation is functionally equivalent to the BIC WSDL Definitions.

Business requirements

The formats have been designed to support the implementation of *BIC Realtime* web services that accept product information requests and respond by supplying product information in ONIX format. Given the growing use of ONIX in the UK for the supply of book product information, a business case can be made for such a *BIC Realtime* web service at a number of points in the supply chain. Service providers are likely to include wholesalers, distributors and others supplying ONIX product information to the book trade.

Scope of the proposed formats

The requirements for sending and responding to a Product Information Request can be defined relatively simply. There are only a few options that a service provider would need to decide whether or not to offer.

¹ Throughout the term ‘HTTP protocol’ is to be interpreted as including secure internet protocols that are implemented either at the application layer (e.g. HTTPS) or are implemented at the transport layer (e.g. SSL/TLS).

For the Product Information Request application, the request format is fully specified in this document, in separate versions for HTTP GET and HTTP POST methods.

As well as including a header identifying the source and date-stamping the response, the response format allows error conditions to be reported, and provides an XML “wrapper” within which an ONIX product information record for each successful product request can be sent. Implementations may determine the extent of the information they supply about each product, but ONIX product information records returned must be valid and they should, if possible, meet BIC product data accreditation standards. In particular, ONIX product information records must be valid XML in accordance with the specified release of the ONIX DTD or schema.

A service provider is not obliged to implement the associated *BIC Realtime* ONIX Product Information Acknowledgement web service, but is highly likely to find it beneficial to do so.

Changes for version 1.0 made November 2009

- Page 4 Request line 10: code value ‘02’ (obsolete ISBN-10) now excluded.
- Page 5 Request Detail line 2: code value ‘02’ (obsolete ISBN-10) now excluded.
- Page 7 Response Header line 4: note added to code list, to use code value ‘02’ (proprietary) if the account ID type is invalid in the request.
- Page 8 Response Header line 8: description of element ResponseTypeDescription revised to indicate that, if the request is invalid, this element may contain the request string for reference / debugging purposes.
 Response Detail lines 1 and 2: description of elements EAN13 and ProductIdentifier revised to indicate that it is mandatory to include whichever of these was included in the request, regardless of whether the Response Detail contains Record or ResponseCoded.
 Response Detail line 2: code value ‘02’ (obsolete ISBN-10) now excluded.
 Response Detail line 2: note added after code list reference, to use code value ‘01’ (proprietary) if the product ID type is invalid in the request.
 Response Detail line 3: description of element ResponseTypeDescription revised to indicate that, if the request is invalid, this element may contain the request string for reference / debugging purposes.
 Response Detail line 4: description of element Record revised to indicate that this element should contain a single ONIX message or ONIX record.

Correction to Version 1.0 made July 2012

- Page 9 Response example: correction of XML errors.

Changes for Version 1.1 made February 2016

- General Version number updated from ‘1.0’ to ‘1.1’ in specification tables and examples.
- Page 4 HTTP Request line 3: Value ‘01’ added to code list and value ‘02’ marked as deprecated, for consistency with ONIX Code List 44 from which the code list is derived.
 HTTP Request line 7: New optional parameter ‘RecordType’ added, to allow the request to specify that a record update is preferred. Applies to ONIX 3.0 only.
- Page 5 Request header line 3: Value ‘01’ added to code list and value ‘02’ marked as deprecated, for consistency with ONIX Code List 44 from which the code list is derived.
 Request header line 6: New optional element <RecordType> added, to allow the request to specify that a record update is preferred. Applies to ONIX 3.0 only.
- Page 6 Example: Value in element ‘AccountIDType’ changed from ‘02’ to ‘01’, to reflect correction on page 5.

Example: Value in element 'SupplierIDType' changed from '02' to '01', for consistency with ONIX code list 92.

Page 7 Response header line 4: Value '01' added to code list and value '02' marked as deprecated, for consistency with ONIX Code List 44 from which the code list is derived.

Response header line 5: Description of value '01' changed to indicate that it should be used if the Request Header contained <IssueDateTime> but no <RequestNumber>.

Page 8 Response Header line 8: Text added to description of value '03' and to description of element <ResponseTypeDescription> to indicate that a response of this kind should normally be accompanied by a reason in free text.

Response header line 9: Values '04' and '05' added, to allow the response to contain block-level record updates.

Page 9 Example: Values in elements 'SenderIDType' and 'AccountIDType' changed from '02' to '01', for consistency with ONIX code list 92.

ONIX PRODUCT INFORMATION REQUEST

Requests using the basic HTTP protocol, HTTP GET method

Requests using the basic HTTP protocol and the HTTP GET method should include in the URL a query string containing parameters as specified below.

	Parameter description	M ²	Name	
1	A unique identifier for the sender of the Request. An alphanumeric string not containing spaces or punctuation.	M	ClientID	
2	A password to further authenticate the sender of the request	M	ClientPassword	
3	A code value from a BIC-controlled codelist for the scheme used for the account identifier (see ONIX codelist 44). Mandatory if including an account identifier. Permitted values are: 01 Proprietary 02 Proprietary (<i>DEPRECATED</i>) 06 EAN-UCC GLN 07 SAN 11 PubEasy PIN	D	AccountIDType	
4	Account identifier for this request, using the specified scheme	D	AccountIDValue	
5	Identification number of this request	D	RequestNumber	
6	A date/time reference for this request	D	IssueDateTime	
7	Preferred record type. Permitted values are: 00 Determined by prior agreement (default) 01 Complete ONIX record 02 Block-level update (ONIX 3.0 only)	D	RecordType	
8	Format in which the requestor would prefer product information records to be expressed in the response. Mandatory in every request. 01 ONIX Release 2.1 - reference tags 02 ONIX Release 2.1 - short tags 03 ONIX Release 3.0 - reference tags 04 ONIX Release 3.0 - short tags	M	ONIXRecordFormat	
9	EAN-13 product number (mandatory unless trading partners have agreed to use an alternative product identifier)	D	EAN13	
10	A code value from a BIC-controlled codelist for the type of an alternative identifier of the product (see ONIX codelist 5 - code value '02' excluded).	D	ProductIDType	
11	An alternative product identifier of the specified type. Only one alternative type of identifier may be carried in a Request using the HTTP protocol.	D	ProductIDValue	

Example of a Request using the HTTP protocol and HTTP GET method

<http://www.booksupplier.co.uk/ONIXProductInformationService?ClientID=12345&ClientPassword=x9a44Ysj&ONIXRecordFormat=01&ProductIDType=03&ProductIDValue=9781234567890>

² In the column headed "M", "M" means mandatory, and "D" means dependent.

Requests using the SOAP or basic HTTP protocol, HTTP POST method

Requests using the SOAP protocol should use the HTTP POST method and include a request document as the body of a SOAP request message.

Request document name and version

ONIX Product information request Version 1.1	<ONIXProductInformationRequest version="1.1">
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Header

	Request header	M	Header.	3
1	A unique identifier for the sender of the request. An alphanumeric string not containing spaces or punctuation	M	ClientID	
2	A password to further authenticate the sender of the request	M	ClientPassword	
3	Account identifier for this request A code value from a BIC-controlled codelist for the scheme used for the account identifier (see ONIX codelist 44). Mandatory if including an account identifier. Permitted values are: 01 Proprietary 02 Proprietary (DEPRECATED) 06 EAN-UCC GLN 07 SAN 11 PubEasy PIN Account identifier for this request, using the specified scheme	D M M	AccountIdentifier. AccountIDType IDValue	
4	Identification number / string of this request	D	RequestNumber	
5	Document date/time: the date/time when the request was generated. Permitted formats are: YYYYMMDD YYYYMMDDTHHMM YYYYMMDDTHHMMZ (universal time) YYYYMMDDTHHMM±HHMM (time zone) where "T" represents itself, ie letter T	D	IssueDateTime	
6	Preferred record type. Permitted values are: 00 Determined by prior agreement (default) 01 Complete ONIX record 02 Block update	D	RecordType	
7	Format in which the requestor would prefer product information records to be expressed in the response. Mandatory in every request. 01 ONIX Release 2.1 - reference tags 02 ONIX Release 2.1 - short tags 03 ONIX Release 3.0 - reference tags 04 ONIX Release 3.0 - short tags	M	ONIXRecordFormat	

Request detail

	Product	M	Product.	R
1	EAN-13 product number (mandatory unless trading partners have agreed to use an alternative product identifier)	D	EAN13	
2	Alternative product identifier Product ID type - see ONIX codelist 5, code value '02' excluded ID type name, only if ID type = proprietary Product number	D M D M	ProductIdentifier. ProductIDType IDTypeName Identifier	R

³ An 'R' in the right-most column means that the element is repeatable.

Example of a Request XML payload using either the SOAP or the HTTP protocol and the HTTP POST method:

```
<ONIXProductInformationRequest version="1.1"
xmlns="http://www.bic.org.uk/webservices">
  <Header>
    <ClientID>12345</ClientID>
    <ClientPassword>x9a44Ysj</ClientPassword>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <RequestNumber>001</RequestNumber>
    <IssueDateTime>20150418T152500</IssueDateTime>
    <ONIXRecordFormat>01</ONIXRecordFormat>
  </Header>
  <Product>
    <ProductIdentifier>
      <ProductIDType>03</ProductIDType>
      <IDValue>9781234567890</IDValue>
    </ProductIdentifier>
  </Product>
</ONIXProductInformationRequest>
```

ONIX PRODUCT INFORMATION RESPONSE

The Response will use the protocol corresponding to the Request. If the Request uses the basic HTTP protocol, the Response will be an XML document as specified below attached to a normal HTTP header. If the Request uses the SOAP protocol, the Response will contain a SOAP response message whose body will contain the XML document specified below.

Response document name and version

ONIX Product information response Version 1.1	<ONIXProductInformationResponse version="1.1">
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Header

	Payload header	M	Header.	
1	Document date/time: the date/time when the response was generated. Permitted formats are: YYYYMMDD YYYYMMDDTHHMM YYYYMMDDTHHMMZ (universal time) YYYYMMDDTHHMM±HHMM (time zone) where "T" represents itself, ie letter T	M	IssueDateTime	
2	Sender (<i>BIC Realtime</i> web service host) Sender ID type - see ONIX codelist 92 ID type name, only if ID type = proprietary Identifier	M M D M	SenderIdentifier. SenderIDType IDTypeName IDValue	
3	Identification number / string of this response	D	ResponseNumber	
4	Account identifier, required if included in the request A code value from a BIC-controlled codelist for the scheme used for the account identifier (see ONIX codelist 44). Must be specified if an account identifier is specified. Permitted schemes are: 01 Proprietary 02 Proprietary (<i>DEPRECATED</i>) 06 EAN-UCC GLN 07 SAN 11 PubEasy PIN Account identifier for this request, using the specified scheme	D M M	AccountIdentifier. AccountIDType IDValue	
5	References: request number of request must be quoted if included in the request; request date or date and time must be quoted in this composite if both number and date/time are included in the request. Reference type 01 Number or date/time of associated ONIX product information request Reference number / string Reference date or date and time	D M D D	ReferenceCoded ReferenceTypeCode ReferenceNumber ReferenceDateTime	R
6	Reference date or date and time: must be quoted separately if and only if included in the request <i>without</i> a request number. See header line 5 for permitted formats.	D	ReferenceDateTime	
7	Default currency of prices given in the response	D	CurrencyCode	

Response Header (continued)

	Payload header	M	Header.	
8	Response code, if there are exception conditions that affect the response as a whole Response type code. Suggested code values: 01 Service unavailable 02 Invalid ClientID or ClientPassword 03 Server unable to process request– a reason should normally be given as a free text description – see below 08 Product record format not as requested Free text description / reason for response. If the request used the basic HTTP protocol, and there was an unprocessable error in the request (e.g. invalid account ID type code), the request string may be repeated here for reference and debugging purposes.	D M D	ResponseCoded. ResponseType ResponseTypeDescription	R
9	Record type Record type code 00 See description for details 01 ONIX record without supply P&A 02 ONIX record with supply P&A 04 ONIX 3.0 block-level update without supply P&A 05 ONIX 3.0 block-level update with supply P&A Record type description	D M D	RecordType RecordTypeCode RecordTypeDescription	
9	Format in which product information records are expressed in the response detail. Mandatory in every request that contains response detail elements. 01 ONIX Release 2.1 - reference tags 02 ONIX Release 2.1 - short tags 03 ONIX Release 3.0 - reference tags 04 ONIX Release 3.0 - short tags	D	ONIXRecordFormat	

Response detail

	ONIX Product information record: mandatory unless the header reports an exception condition that prevents any response	D	ONIXProductInformationRecord.	R
1	EAN-13 product number as specified in the request detail, if any (mandatory unless trading partners have agreed to use an alternative product identifier). Mandatory if included in the request detail to which this response relates.	D	EAN13	
2	Alternative product identifier as specified in the request detail. Mandatory if included in the request detail to which this response relates. Product ID type - see ONIX codelist 5, code value '02' excluded. Use code value '01' (proprietary) if invalid in the request. ID type name, only if ID type = proprietary Product number	D M D M	ProductIdentifier. ProductIDType IDTypeName Identifier	R
3	Response code, if no information can be sent for this product. If present, no further elements may be included in this product information record. Response type code. Suggested code values: 06 Invalid product ID 07 No information for this product Free text description If the request used the basic HTTP protocol, and there was an unprocessable error in the request (e.g. invalid product ID type code), the request string may be repeated here for reference and debugging purposes.	D M D	ResponseCoded. ResponseType ResponseTypeDescription	

Response detail (continued)

	ONIX Product information record	D	ONIXProductInformationRecord.	
4	The content of a record must comprise the content of an ONIX product information record that conforms to the record format specified in the header (i.e. it is valid according to the corresponding DTD or Schema). Each record must also be consistent with the specified record type. It is recommended that the content of this element should be a single ONIXMessage or Product element, to facilitate validation and processing.	D	Record	

Example of a Response XML payload:

```

<ONIXProductInformationResponse version="1.1"
  xmlns="http://www.bic.org.uk/webservices">
  <Header>
    <IssueDateTime>20150424T1145</IssueDateTime>
    <SenderIdentifier>
      <SenderIDType>01</SenderIDType>
      <IDValue>XYZ</IDValue>
    </SenderIdentifier>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <ReferenceCoded>
      <ReferenceTypeCode>01</ReferenceTypeCode>
      <ReferenceNumber>001</ReferenceNumber>
      <ReferenceDateTime>20150418T152500</ReferenceDateTime>
    </ReferenceCoded>
    <RecordType>
      <RecordTypeCode>01</RecordTypeCode>
    </RecordType>
    <ONIXRecordFormat>01</ONIXRecordFormat>
  </Header>
  <ONIXProductInformationRecord>
    <ProductIdentifier>
      <ProductIDType>03</ProductIDType>
      <IDValue>9781234567890</IDValue>
    </ProductIdentifier>
    <Record>
      <Product>
        <RecordReference>00101</RecordReference>
        <NotificationType>04</NotificationType>
        <ProductIdentifier>
          <ProductIDType>03</ProductIDType>
          <IDValue>9781234567890</IDValue>
        </ProductIdentifier>
        <ProductForm>BA</ProductForm>
        <Title>
          <TitleType>01</TitleType>
          <TitleText>Title of book</TitleText>
        </Title>
        <Contributor>
          <ContributorRole>A01</ContributorRole>
          <PersonNameInverted>Author, A.N.</PersonNameInverted>
        </Contributor>
        <ImprintName>Imprint</ImprintName>
      </Product>
    </Record>
  </ONIXProductInformationRecord>
</ONIXProductInformationResponse>

```