



Book Industry Communication

BIC Realtime

Standards for Instant Business Message Exchange

MARC Product Information Request and Response

Version 1.0, 8 February 2016

This document: <http://www.bic.org.uk/files/pdfs/BICWSMARCPProductInformation-V1.0.pdf>

XML schema: <http://www.bic.org.uk/files/xml/BICWSMARCPProductInformation-V1.0.xsd>

WSDL file: <http://www.bic.org.uk/files/xml/BICWSMARCPProductInformationSOAP-V1.0.wsdl>

XML namespace: <http://www.bic.org.uk/webservices/marcProductInformation>

Next review date: To be reviewed by the BIC Library Committee

This document specifies in human-readable form the *BIC Realtime* web services MARC Product Information Request format and the “payload” for the corresponding MARC 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 the *BIC Realtime* MARC Product Information Request and Response web service 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 this *BIC Realtime* web service 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 MARC format. Given the widespread use of MARC in the UK for the supply of book product information to libraries, 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 involved in library supply.

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).

Scope of the proposed formats

The requirements for sending and responding to a MARC 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.

For the MARC 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 a MARC 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 MARC product information records returned must be valid according to either the MARC 21 or the UK MARC specification and they should, if possible, meet BIC product data accreditation standards. UK MARC is no longer supported and BIC recommends that MARC 21 be used where possible.

MARC 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 06 EAN-UCC GLN 07 SAN 09 ISIL 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	Format in which the requester would prefer product information records to be expressed in the response. Mandatory in every request. 05 MARC 21 (only link included in response) 06 UK MARC (only link included in response) 07 MARCXML (MARC 21 in XML) 08 MARC 21, Base64-encoded 09 UK MARC, Base64-encoded 10 UNIMARC	M	MARCRecordFormat	
8	Character encoding which the requester would prefer the MARC record to be encoded. If omitted, the requester has no preference. Permitted values: 01 Proprietary / other – description mandatory 02 ISO 646 / ASCII 03 ISO 8859-2 04 Unicode / UTF-8 05 MARC-8 06 ISO 5426	D	MARCRecordCharEncoding	
9	MARC record character encoding description. Mandatory if the requested character encoding is proprietary or not otherwise listed in line 8.	D	MARCRecordCharEncodingDescription	
10	EAN-13 product number (mandatory unless trading partners have agreed to use an alternative product identifier)	D	EAN13	
11	A code value from a BIC-controlled codelist for the type of an alternative identifier of the product (see ONIX codelist 5).	D	ProductIDType	
12	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/MARCProductInformationService?ClientID=12345
&ClientPassword=x9a44Ysj&MARCRecordFormat=01&MARCRecordCharEncoding=04
&ProductIDType=03&ProductIDValue=9781234567890](http://www.booksupplier.co.uk/MARCProductInformationService?ClientID=12345&ClientPassword=x9a44Ysj&MARCRecordFormat=01&MARCRecordCharEncoding=04&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

MARC Product information request Version 1.0	<MARCProductInformationRequest version="1.0">
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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 06 EAN-UCC GLN 07 SAN 09 ISIL 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	Format in which the requestor would prefer product information records to be expressed in the response. Mandatory in every request. 05 MARC 21 (only link included in response) 06 UKMARC (only link included in response) 07 MARCXML (MARC 21 in XML) 08 MARC 21, Base64-encoded 09 UKMARC, Base64-encoded 10 UNIMARC	M	MARCRecordFormat	
7	Character encoding which the requester would prefer the MARC record to be encoded. If omitted, the requester has no preference. Permitted values: 01 Proprietary / other – description mandatory 02 ISO 646 / ASCII 03 ISO 8859-2 04 Unicode / UTF-8 05 MARC-8 06 ISO 5426	D	MARCRecordCharEncoding	
8	MARC record character encoding description. Mandatory if the requested character encoding is proprietary or not otherwise listed in line 8.	D	MARCRecordCharEncodingDescription	

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

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 ID type name, only if ID type = proprietary Product number	D M D M	ProductIdentifier. ProductIDType IDTypeName Identifier	R

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

```
<MARCProductInformationRequest version="1.0"
  xmlns="http://www.bic.org.uk/webservices/marcProductInformation">
  <Header>
    <ClientID>12345</ClientID>
    <ClientPassword>x9a44Ysj</ClientPassword>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <RequestNumber>001</RequestNumber>
    <IssueDateTime>20150418T1525</IssueDateTime>
    <MARCRecordFormat>07</MARCRecordFormat>
  </Header>
  <Product>
    <ProductIdentifier>
      <ProductIDType>03</ProductIDType>
      <IDValue>9781234567890</IDValue>
    </ProductIdentifier>
  </Product>
</MARCProductInformationRequest>
```

MARC 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

MARC Product information response Version 1.0	<MARCProductInformationResponse version="1.0">
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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 06 EAN-UCC GLN 07 SAN 09 ISIL 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 02 Number or date/time of associated product information request or search Reference number / string Reference date or date and time	D M M 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	
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 MARC record format or character encoding not as requested Free text description / reason for response	D M D	ResponseCoded. ResponseType ResponseTypeDescription	R

Response Header (continued)

	Payload header	M	Header.	
9	Record type Record type code 00 See description for details 03 Full MARC record Record type description	D M D	RecordType RecordTypeCode RecordTypeDescription	
10	Format in which product information records are expressed in the response detail. Mandatory in every request that contains response detail elements. 05 MARC 21 (only link included in response) 06 UK MARC (only link included in response) 07 MARCXML (MARC 21 in XML) 08 MARC 21, Base64-encoded 09 UK MARC, Base64-encoded 10 UNIMARC	D	MARCRecordFormat	
11	Character encoding of the original MARC record prior to Base64 encoding 01 Proprietary / other – description mandatory 02 ISO 646 / ASCII 03 ISO 8859-2 04 Unicode / UTF-8 05 MARC-8 06 ISO 5426	D	MARCRecordCharEncoding	
12	Name of other character set of the original MARC record prior to Base64 encoding	D	MARCRecordCharEncodingDescription	

Response detail

	MARC Product information record: mandatory unless the header reports an exception condition that prevents any response	D	MARCProductInformationRecord.	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 and a response code is included in this response detail.	D	EAN13	
2	Alternative product identifier as specified in the request detail. Mandatory if included in the request detail and a response code is included in this response detail. Product ID type - see ONIX codelist 5 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 08 Product record format not as requested Free text description	D M D	ResponseCoded. ResponseType ResponseTypeDescription	
4	URI for MARC record. May only be included for a record that is requested in un-encoded MARC 21 or UK MARC format.	D	RecordURI	
5	The content of a record must comprise the content of a MARC product information record that conforms to the record format specified in the header. Each record must also be consistent with the specified record type. May only be included for a record that is requested in MARCXML format or Base64-encoded MARC 21 or UK MARC format.	D	Record	

Example of a Response XML payload:

```
<MARCProductInformationResponse version="1.0"
  xmlns="http://www.bic.org.uk/webservices/marcProductInformation">
  <Header>
    <IssueDateTime>20150418T1527</IssueDateTime>
    <SenderIdentifier>
      <SenderIDType>01</SenderIDType>
      <IDValue>XYZ</IDValue>
    </SenderIdentifier>
    <AccountIdentifier>
      <AccountIDType>01</AccountIDType>
      <IDValue>12345</IDValue>
    </AccountIdentifier>
    <ReferenceCoded>
      <ReferenceCodeType>01</ReferenceCodeType>
      <ReferenceNumber>001</ReferenceNumber>
      <ReferenceDateTime>20150418T152500</ReferenceDateTime>
    </ReferenceCoded>
    <RecordType>
      <RecordTypeCode>01</RecordTypeCode>
    </RecordType>
    <MARCRecordFormat>07</MARCRecordFormat>
  </Header>
  <MARCProductInformationRecord>
    <ProductIdentifier>
      <ProductIDType>03</ProductIDType>
      <IDValue>9781234567890</IDValue>
    </ProductIdentifier>
    <Record>
      -- MARCXML RECORD HERE --
    </Record>
  </MARCProductInformationRecord>
</MARCProductInformationResponse>
```