BIC Bites

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BIC Realtime – Standards for Instant Business Message Exchange

This BIC Bite is relevant to business leaders and sales, IT, finance and customer services departments in booksellers, distributors, publishers, wholesalers, library suppliers and data providers.

Introduction

BIC Realtime establishes a set of standard Application Programming Interfaces (APIs) for retailers, suppliers and data providers. This newly revised set of XML standards is designed to facilitate and improve business communication in the book supply chain. The book trade is very familiar with EDI (Electronic Data Interchange) and the advantages of exchanging business messages electronically. But EDI is usually a batch transaction rather than a real time transaction. Now using XML communication over the Internet, businesses can communicate much more quickly, obtaining real time replies to their requests.

This standard is recommended by BIC as the best way to implement these new messages between book businesses. BIC is not suggesting that longstanding and highly effective EDI implementations should be replaced by *BIC Realtime* but that existing capabilities can be significantly enhanced by implementing these additional messages. In addition new implementations should consider using the *BIC Realtime* API's as a modern, cost effective standards based alternative to EDI.

Background

EDI has benefited the book industry for many years with messages including purchase order, order response, invoice, credit note and returns, but trading partners have found that they need to exchange additional information in real time. Proprietary and bilateral XML Web Services were developed by some but these carried an increasing administrative overhead as they proliferated. The term 'Web Services' is also often confused with online services via web sites. BIC has assembled a working group of industry experts who have reviewed the existing suite of BIC web services, updated them, added many additional message pairs as requested by members and now BIC can offer the industry a single, free to use, suite of XML messages (APIs) covering all the main requirements. These messages are called *BIC Realtime*.

Why use *BIC Realtime*?

BIC Realtime is a suite of 18 standard business APIs, which are easily understood and very quick to develop, install and test. Businesses can deploy *BIC Realtime* solutions far more quickly and cheaply than is the case with traditional EDI. Trading partners can also start to use these solutions far more quickly without weeks of testing.

Here is an example of *BIC Realtime* in action:

This example describes a particular business model involving an online bookseller or website undertaking consumer direct fulfilment (CDF) with a book distributor or wholesaler using up to nine of the 18 *BIC Realtime* message pairs.

1. The online bookseller receives an order from a customer and sends it to the supplier via CDF Order Request.
2. Progress on the order can be tracked by the bookseller (and their customer) using Order Status Request.
3. If necessary the order can also be cancelled using Order Cancellation Request.
4. Any items not despatched can be reported (by the supplier) via ShortPick Notification.
5. The retailer can obtain details of the invoice or credit raised from the supplier using Request Financial Document List and Request Financial Document.
6. Additionally, Order Shipment Details Change can accommodate a last minute change in delivery address etc.
7. CDF Request Authorisation and CDF Grant Authorisation to Despatch Order can coordinate the despatch of the books to ensure that payment has been received and cleared before despatch is authorised.

BIC Realtime - List of currently-available APIs

Here is the full list of *BIC Realtime* APIs. Note that each API is always a pair of messages, a request message followed by a response message, which contains the requested information or a functional response to acknowledge the request.

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Product Metadata APIs

1. Retrieve ONIX Product Information
2. ONIX Product Information Acknowledgement *(acknowledges an ONIX feed and reports the result)*
3. Retrieve Price & Availability *(requests price and availability information)*

Ordering APIs

4. Trade Order Request *(places a trade purchase order)*
5. Retrieve Order List *(obtains a list of orders, e.g. dues)*
6. Order Status Request and report *(requests status of an order)*
7. Request Order Cancellation *(cancels an order, e.g. from backorders/dues)*
8. Request Backorder Release *(asks for backorders to be released for supply)*
9. Short Pick Notification *(notifies recipient of a shortage/zero pick)*

Financial documents APIs

10. Retrieve Financial Document List *(requests a list of financial documents, e.g. invoices)*
11. Retrieve Financial Document *(requests a copy of a specific financial document)*
12. Post Financial Document *(sends a financial document e.g. invoice)*

Returns APIs

13. Returns Authorisation and Despatch *(requests permission to return books)*
14. Returns Despatch Advice *(states what is actually being returned)*

Consumer Direct Fulfilment APIs

15. CDF order message *(an order for a direct delivery to a customer)*
16. Order Shipment Details Change *(enables changes to a CDF order, e.g. customer delivery address)*
17. CDF Request Authorisation to despatch order *(asks if order can be despatched)*
18. CDF Grant Authorisation to despatch order *(asks for order to be despatched)*

Database holders

The *BIC Realtime* standard details the API formats and their data fields and effectively provides a template for organisations wishing to share this data with their trading partners. This data is returned in response to a *BIC Realtime* request and this highlights an opportunity for database holders to enhance their customer service and reduce their administration costs, for example by reducing the number of calls and emails requesting a copy of financial documents or to release or cancel backorders – these functions are outsourced to the computer system to deliver to customers via a *BIC Realtime* API. Giving customers access to this data in real time eliminates issues caused by batch daily or weekly updates that are out of date as soon as they are produced, further eliminating cost.

BIC's role

BIC has been involved with establishing standards and promoting best practice in the book supply chain for over 20 years. BIC established the EDI standards which are in use in the book trade and *BIC Realtime* is the latest contribution to improved communication leading to an improved book supply chain. BIC's Technical Clinic will manage future requests for changes to *BIC Realtime*. BIC recommends that business leaders consider investing in the necessary systems to host the exchange of *BIC Realtime* messages.

More information on *BIC Realtime* use cases and message formats, XSD, WSDL, XML Schema, User Guide, etc. are hosted on the BIC website at https://www.bic.org.uk/152/BIC-Realtime/