



1  
2  
3  
4  
5  
6  
7  
8  
9

# Standard Business Document Header (SBDH) Version 1.3

## Technical Implementation Guide

Issue 3, July 2012



## 10 Document Summary

Document Item	Current Value
Document Title	Standard Business Document Header (SBDH) Version 1.3 Technical Implementation Guide
Date Last Modified	July 2012
Current Document Issue	Issue 3
Status	For publication
Document Description	This document contains guidelines for implementation of SBDH with GS1 XML eCom.

## 11 Contributors

Name	Organization
Dipan Anarkat	GS1
Ewa Iwicka	GS1
Justin Childs	GS1
John Duker	P&G
Steff Span	GS1 Netherlands
GSMP eTG Working Group members	GS1

## 12 Log of Changes in 2

Issue No.	Date of Change	Changed By	Summary of Change
1	July-2007	Dipan Anarkat	1st Issue
2	February-2012	Dipan Anarkat Ewa Iwicka	2nd Issue eCom Major Release 3.0 BRAD requirements – SBDH requirement ‘SBD1’ - May have the ability to include a guideline name and version for the implementation guideline that is followed to develop the instance file. Limit the scope of the Guideline to eCom only, remove GDSN and EPC
3	June-2012	Ewa Iwicka	3rd Issue Modified the use of Business Scope element and its content. Added the support for the ‘Test’ message flag.

## 13 Disclaimer

14 Whilst every effort has been made to ensure that the guidelines to use the GS1 standards contained in the  
 15 document are correct, GS1 and any other party involved in the creation of the document HEREBY STATE that  
 16 the document is provided without warranty, either expressed or implied, of accuracy or fitness for purpose, AND  
 17 HEREBY DISCLAIM any liability, direct or indirect, for damages or loss relating to the use of the document. The  
 18 document may be modified, subject to developments in technology, changes to the standards, or new legal  
 19 requirements. Several products and company names mentioned herein may be trademarks and/or registered  
 20 trademarks of their respective companies.



# Table of Contents

21

22 **1. Introduction..... 4**

23 1.1. Purpose ..... 4

24 1.2. Audience ..... 4

25 1.3. Process ..... 4

26 1.4. Document Conventions..... 5

27 **2. Overview ..... 6**

28 **3. General Guidelines..... 6**

29 3.1. GS1 XML Message Construction using SBDH ..... 6

30 3.2. SBDH Tags ..... 8

31 **4. Additional Information..... 15**

32 4.1. International telephone number format ..... 15

33 4.2. Serialization..... 15

34 4.3. Multiple Trading Partner Identification ..... 16

35 4.4. Message Grouping..... 16

36 4.5. Transport Protocol Options ..... 16

37 **5. References..... 16**

38 **Appendix A Example: GS1 XML eCom Document with SBDH ..... 18**

39 **Appendix B Main differences between the use of SBDH in GS1 XML 2.0 and GS1 eCom XML 3.0 ..... 20**

40

41

42

43

44

# 45 1. Introduction

## 46 1.1. Purpose

47 This Standard Business Document Header (SBDH) Technical Implementation Guide clarifies the  
48 function, design and implementation considerations of the [\[SBDH\]](#). The document can be used by  
49 technical implementers that need knowledge to implement the SBDH in their environment. It can also  
50 be used to educate others in the organisation of the advantages of adopting the [\[SBDH\]](#).

51 The Standard Business Document Header Technical Implementation Guide is to supplement [\[SBDH\]](#)  
52 so that the implementer understands not only the technical details but also practical ways to use the  
53 SBDH and guidelines on its appropriate use.

54 This guide also demonstrates the benefits of one common document header that enables integration  
55 of documents between internal applications, enterprise applications, and business-to-business  
56 infrastructure by providing a consistent interface between applications. This consistent interface also  
57 enables any application to determine the logical routing requirements and/or the logical processing  
58 requirements of a document based on the information contained in the SBDH.

59 Other benefits include the ability to:

- 60 ■ Provide one common SBDH across all vendors, providing vendors with a common standard  
61 for integration development
- 62 ■ Provide one common SBDH for any standard or file structure, such as EDI, XML or proprietary  
63 file structures
- 64 ■ Easily identify business documents without searching the business document for identifying  
65 information
- 66 ■ Route data through multiple applications using the information in the SBDH
- 67 ■ Identify the automated process required for a specific business document
- 68 ■ Save parsing time and effort
- 69 ■ Maintain the association of the document and its originator for business and legal reasons
- 70 ■ Eliminate the different proprietary approaches that have been developed to route and process  
71 data

## 72 1.2. Audience

73 This document is intended to serve as an implementation guide for business and technical people who  
74 will implement eCom XML standards using SBDH. Pre-requisite

75 [\[SBDH\]](#) contains information about the usage of all elements of SBDH. This guide only covers those  
76 parts of the UN/CEFACT [\[SBDH\]](#) that are relevant to its implementation in the GS1 world.

77 As a pre-requisite it is expected that the user has read and understood [\[SBDH\]](#).

## 78 1.3. Process

79 The [\[SBDH\]](#) standard provides a document header which identifies key data about a specific business  
80 document. Since [\[SBDH\]](#) standardizes the data presentation, the data elements within the SBDH can  
81 be easily located and leveraged by multiple applications. Software vendors can develop functionality in  
82 their applications that rely on the existence and location of the essential data used to manage the

83 routing of business documents and also systematically determine the documents processing  
84 requirements.

85 The SBDH is a business document header and should not be confused with a transport header. The  
86 SBDH is created before the transport routing header is applied to the document and is retained after  
87 the transport header is removed. Although the SBDH is not the transport header, data in the SBDH  
88 can be used by transport applications to determine the routing header since it does contain the  
89 sender, receiver and document details. It can also be used by the business applications to determine  
90 the appropriate process to perform on the business document.

91 [\[SBDH\]](#) has built in flexibility by the use of both mandatory data elements and additional optional  
92 elements. The mandatory elements are essential in identifying any business document for routing or  
93 processing, such as the Sender, Receiver, Document Type, Standard and Version, and Date/Time of  
94 the documents creation. Optional elements provide additional functionality that can be used if  
95 required. This additional functionality can be used to:

- 96 ■ Send EDI, XML or other file types as attachments
- 97 ■ Secure business documents with encryption while leaving the SBDH unencrypted and  
98 available to perform its routing functions
- 99 ■ Describe attachments in a Manifest
- 100 ■ Sent the business document within the SBDH or sent it as a separate MIME part
- 101 ■ Distribute a document to a specific receiver or to multiple receivers

## 102 1.4. Document Conventions

103 The keywords MUST, MUST NOT, REQUIRED, SHALL, SHALL NOT, SHOULD, SHOULD NOT,  
104 RECOMMENDED, MAY and OPTIONAL, when they appear in this document, are to be interpreted as  
105 described in [\[RFC2119\]](#) as quoted here:

- 106 ■ **MUST:** This word, or the terms "REQUIRED" or "SHALL", means that the definition is an  
107 absolute requirement of the specification.
- 108 ■ **MUST NOT:** This phrase, or the phrase "SHALL NOT", means that the definition is an  
109 absolute prohibition of the specification.
- 110 ■ **SHOULD:** This word, or the adjective "RECOMMENDED", means that there may exist valid  
111 reasons in particular circumstances to ignore a particular item, but the full implications must  
112 be understood and carefully weighed before choosing a different course.
- 113 ■ **SHOULD NOT:** This phrase, or the phrase "NOT RECOMMENDED", means that there may  
114 be valid reasons in particular circumstances when the particular behaviour is acceptable or  
115 even useful, but the full implications should be understood and the case carefully weighed  
116 before implementing any behaviour described with this label.
- 117 ■ **MAY:** This word, or the adjective "OPTIONAL", means that an item is truly optional. One  
118 vendor may choose to include the item because a particular marketplace requires it or  
119 because the vendor feels that it enhances the product while another vendor may omit the  
120 same item. An implementation which does not include a particular option **MUST** be prepared  
121 to interoperate with another implementation which does include the option, though perhaps  
122 with reduced functionality. In the same vein an implementation which does include a particular  
123 option **MUST** be prepared to interoperate with another implementation which does not include  
124 the option (except, of course, for the feature the option provides.)

125 When used in this way, these terms will always be shown in ALL CAPS; when these words appear  
126 in ordinary typeface they are intended to have their ordinary English meaning.

## 127 2. Overview

128 Information in the SBDH can be categorized into the following 4 categories

- 129 ■ Document Routing
- 130 ■ Document Identification
- 131 ■ Document Processing Context

132 **Document Routing** information is captured in the 'Sender' and 'Receiver' data structures of SBDH. It  
133 is used to identify the message sender and message receiver using unique identifiers for the trading  
134 partners and optionally with additional contact information details.

135 **Document Identification** information is captured in the 'DocumentIdentification' data structure of  
136 SBDH. It is used to identify the actual business document payload content enclosed inside SBDH.  
137 This information will be used by the middleware to identify and route the message to the appropriate  
138 business application without having to open or parse the business document payload.

139 **Document Processing Context** is captured in the 'BusinessScope' data structure of SBDH. It is used  
140 to provide parameters for processing the business document in the context of a business  
141 choreography exchange.

## 142 3. General Guidelines

143 The following section provides general guidelines on the usage of the [\[SBDH\]](#) data elements with GS1  
144 XML standards and the XML standards of its sub-entities and affiliates. These guidelines are not  
145 supposed to be an exhaustive description of [\[SBDH\]](#) elements. For full details of the element see the  
146 [\[SBDH\]](#) for details.

### 147 3.1. GS1 XML Message Construction using SBDH

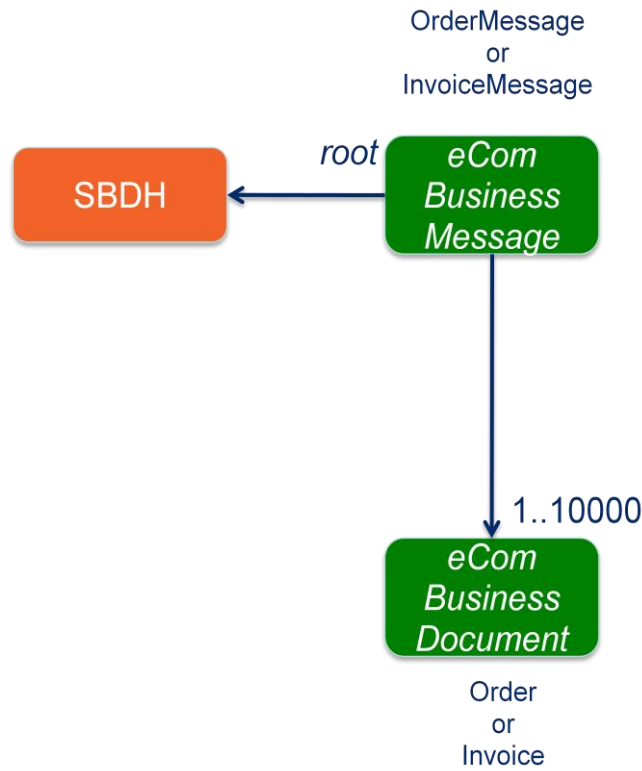
148 SBDH is an integral part of the XML instance. In the GS1 XML the  
149 'StandardBusinessDocumentHeader' element **MUST** be included inside the root element of the  
150 message together with the GS1 eCom Business Document.

151  
152  
153

Figure 3-1 demonstrates the concept.

154  
155  
156

**Figure 3-1** Use of SBDH in GS1 XML



157

158

✓ **Note 1:** See [Appendix A](#) for an example of a GS1 XML document using SBDH.

159

160

161

✓ **Note 2:** Since the GS1 XML 3.x message architecture changed compared to release 2.x<sup>1</sup>, the use of SBDH in the GS1 XML message changed accordingly see [Appendix B](#) for the list of changes

<sup>1</sup> For comparison of the GS1 message architecture 3.x and 2.x please refer to the “GS1 XML MR3 eCom Technical User Guide”



162 **3.2. SBDH Tags**

 163 The table below contains rules that are applicable for all GS1 XML standards messaged using SBDH.
   
164

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines
<b>StandardBusinessDocumentHeader</b>	StandardBusinessDocu ment Header	1..1	The UN/CEFACT standard, containing information about the routing and processing of the business document. It also identifies the message set that is sent together with on SBDH and the version number of the document(s) contained. <b>[R1]</b> Header information <b>MUST</b> be provided using the 'StandardBusinessDocumentHeader' element even though the use of this element is optional.
--  <b>HeaderVersion</b>	string	1..1	Version number of the SBDH standard used <b>[R2]</b> The value of the 'HeaderVersion' element <b>MUST</b> be set to '1.0'. This is the version number of the standard.
--  <b>Sender</b>	Partner	1..*	Sender of the message, party representing the organization which created the standard business document. <b>[R3]</b> The 'Sender' tag <b>MUST</b> be used exactly only once with GS1 XML messages, even though it can occur multiple times. If there is a requirement to use the 'Sender' block more than once with GS1 XML standards, such a requirement should be addressed through the use of the GSMP Change Request system.
----  <b>Identifier</b>	PartnerIdentification	1..1	A unique identification key for the Sender party <b>[R4]</b> The value of the 'Identifier' element of 'PartnerIdentification' type <b>MUST</b> be a GLN. The use of GLN as the identifier is mandatory with GS1 standards. Example: 8764321000003
----  <b>Authority</b>	string	0..1	Authority agency of the identification key <b>[R5]</b> The 'Authority' attribute, although optional, <b>MUST</b> be used and its value <b>MUST</b> be set to GS1 '.
----  <b>ContactInformation</b>	ContactInformation	0..*	Name of the contact person or department for the sending Party <b>[R6]</b> The element 'ContactInformation', although optional, <b>SHOULD</b> be used, if possible.
-----  <b>Contact</b>	string	0..1	Name of contact person or department <b>[R7]</b> The element 'Contact', although optional, <b>SHOULD</b> be used, if possible. Example: Delysha Burnet

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines
-----  <b>EmailAddress</b>	string	0..1	<b>[R8]</b> The element 'EmailAddress, although optional, SHOULD be used, if possible. Example: Delysha.Burnet@CompanyXYZ987.com
-----  <b>FaxNumber</b>	string	0..1	<b>[R9]</b> A number format agreed upon between the 'Sender' and 'Receiver' SHOULD be used. Number format expressed using [RFC3966] 'The tel URI for Telephone Numbers' MAY be used. See section 5.1 'International telephone number format' for recommended options on formatting telephone/fax numbers. Example: tel:+31.235.3311.87
-----  <b>TelephoneNumber</b>	string	0..1	<b>[R9]</b> A number format agreed upon between the 'Sender' and 'Receiver' SHOULD be used. Number format expressed using [RFC3966] 'The tel URI for Telephone Numbers' MAY be used. See section 5.1 'International telephone number format' for recommended options on formatting telephone/fax numbers. Example: tel:+31.235.3311.69
-----  <b>ContactTypeIdentifier</b>	string	0..1	Role of the identifier. Example: EDI co-ordinator
--  <b>Receiver</b>	Partner	1..*	Receiver of the message, party representing the organization which receives the standard business document. <b>[R10]</b> The 'Receiver' tag MUST be used exactly only once with GS1 XML messages, even though it can occur multiple times
----  <b>Identifier</b>	PartnerIdentification	1..1	A unique identification key for the receiving party <b>[R4]</b> The value of the 'Identifier' element of 'PartnerIdentification' type MUST be a GLN. The use of GLN as the identifier is mandatory with GS1 standards. Example: 8712345000004
----  <b>Authority</b>	string	0..1	Authority agency of the identification key <b>[R5]</b> The 'Authority' attribute, although optional, MUST be used and its value <i>must</i> be set to 'GS1'
----  <b>ContactInformation</b>	ContactInformation	0..*	Name of the contact person or department for the Sender Party <b>[R6]</b> The element 'ContactInformation', although optional, SHOULD be used, if possible.
-----  <b>Contact</b>	string	0..1	Name of contact person or department <b>[R7]</b> The element 'Contact', although optional, SHOULD be used, if possible. Example: John Brown
-----  <b>EmailAddress</b>	string	0..1	<b>[R8]</b> The element 'EmailAddress, although optional, SHOULD be used, if possible. Example: john.brown@thecompany.com

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines
-----  <b>FaxNumber</b>	string	0..1	<p><b>[R9]</b> A number format agreed upon between the 'Sender' and 'Receiver' SHOULD be used. Number format expressed using [RFC3966] 'The tel URI for Telephone Numbers' MAY be used. See section 'International telephone number format' for recommended options on formatting telephone/fax numbers. Example: fax:+ +3227887800</p>
-----  <b>TelephoneNumber</b>	string	0..1	<p><b>[R9]</b> A number format agreed upon between the 'Sender' and 'Receiver' SHOULD be used. Number format expressed using [RFC3966] 'The tel URI for Telephone Numbers' MAY be used. See section 'International telephone number format' for recommended options on formatting telephone/fax numbers. Example: tel: +3227887846</p>
-----  <b>ContactTypeIdentifier</b>	string	0..1	<p>Role of the identifier Example: EDI Helpdesk</p>
--  <b>DocumentIdentification</b>	DocumentIdentification	1..1	Identification information for the document
----  <b>Standard</b>	String	1..1	<p>The name of the document standard contained in the payload <b>[R11]</b> The value of the element 'Standard' MUST be set to the value 'GS1'</p>
----  <b>TypeVersion</b>	String	1..1	<p>Version information of the document included in the payload of SBDH. This is the 'complete' version of the document itself and is different than the 'HeaderVersion'.</p> <p><b>[R12]</b> The value of the element 'TypeVersion' MUST be set the version number of the root schema of the XML business document contained in the payload of the message. Every GS1 standard schema has version information in the 'xsd:version' attribute of the 'xsd:schema' tag of the schema and also in the schema annotation tag.</p> <p>The SBDH specification requires that all documents sent with one header have the same version number. To comply with this requirement;</p> <p><b>[R13]</b> Only business documents belonging to the same BMS publication release and having the same version number MUST be included in the payload if sending more than one document type.</p> <p>Example: 3.0</p>
----  <b>InstancelIdentifier</b>	String	1..1	<p>Description which contains reference information which uniquely identifies this instance of the Standard Business Document (SBD) between the 'Sender' and the 'Receiver'. This identifier identifies this document as being distinct from others. Example: MSG-1645000099</p>

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines
----  <b>Type</b>	String	1..1	<p>This element identifies the type of the document</p> <p><b>[R14]</b> The value of the 'Type' element of 'DocumentIdentification' element MUST be set to the name of the XML element that defines the root of the business document. This is the name of the global XML element declared in the root schema for the business document in consideration.</p> <p>Example; order, invoice, debitCreditAdvice,</p>
----  <b>MultiType</b>	boolean	0..1	<p>Flag to indicate that there is more than one type of business document in the payload of the SBDH</p> <p><b>[R15]</b> The value of the 'MultiType' element of 'DocumentIdentification' element MUST be set 'false' as the GS1 XML design allows only one type of business documents to be sent within one message.</p>
----  <b>CreationDateAndTime</b>	String	1..1	<p>Date and time of the SBDH document creation.</p> <p><b>[R16]</b> The value of the 'CreationDateAndTime' element MUST be set to the date and time when the 'document originating application' or the parser created the document. This value will typically be populated by the trading partner and will typically differ from the time stamping of the message by the communications software.</p> <p>Example: 2006-03-23T01:00:78.000+02:00</p>
--  <b>Manifest</b>	Manifest	0..1	
----  <b>NumberOfItems</b>	integer	1..1	
----  <b>ManifestItem</b>	ManifestItem	1..*	
-----  <b>MimeTypeQualifierCode</b>	MimeTypeQualifier (string)	1..1	
-----  <b>UniformResourceIdentifier</b>	anyURI	1..1	
-----  <b>Description</b>	string	0..1	
-----  <b>LanguageCode</b>	Language (string)	0..1	
--  <b>BusinessScope</b>	BusinessScope	0..1	<p>Description of the complete business environment in which the SBDH and Business document will be processed. The business scope provides a basis to determine which rules are applicable to the transaction involving the enclosed business documents.</p>

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines																			
----  <b>Scope</b>	Scope	0..*	<b>[R17]</b> The 'Scope' element MAY be used to provide information about the set of processing rules that are applicable to this instance of the business document. For each individual set of processing rules a different 'Scope' element MUST be used.																			
-----  <b>Type</b>	string	1..1	<b>[R18]</b> The value of 'Type' element MUST be set to one of the entries from the BusinessDocumentProcessingTypeCode code list:																			
<table border="1" style="margin-left: 40px;"> <thead> <tr> <th>GS1 Code List</th> <th>BusinessDocumentProcessingTypeCode</th> </tr> </thead> <tbody> <tr> <td>GS1 Code List Version</td> <td>R1</td> </tr> <tr> <td>Managing Agency</td> <td>GS1</td> </tr> <tr> <td>Based on Code List</td> <td>n/a</td> </tr> <tr> <td>Type Of Management</td> <td>n/a</td> </tr> </tbody> </table> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Code Value</th> <th>Code Name</th> <th>Code Definition</th> </tr> </thead> <tbody> <tr> <td>MESSAGE_STATUS</td> <td>Message status</td> <td>Specifies whether the message is a test and should not be passed to business application.</td> </tr> <tr> <td>SCHEMA_GUIDE</td> <td>Schema Guide</td> <td>Indicates that the business document should be validated against the schema guide that is a subset of the 'generic' GS1 schema, adapted to specific geography or user group.</td> </tr> </tbody> </table>				GS1 Code List	BusinessDocumentProcessingTypeCode	GS1 Code List Version	R1	Managing Agency	GS1	Based on Code List	n/a	Type Of Management	n/a	Code Value	Code Name	Code Definition	MESSAGE_STATUS	Message status	Specifies whether the message is a test and should not be passed to business application.	SCHEMA_GUIDE	Schema Guide	Indicates that the business document should be validated against the schema guide that is a subset of the 'generic' GS1 schema, adapted to specific geography or user group.
GS1 Code List	BusinessDocumentProcessingTypeCode																					
GS1 Code List Version	R1																					
Managing Agency	GS1																					
Based on Code List	n/a																					
Type Of Management	n/a																					
Code Value	Code Name	Code Definition																				
MESSAGE_STATUS	Message status	Specifies whether the message is a test and should not be passed to business application.																				
SCHEMA_GUIDE	Schema Guide	Indicates that the business document should be validated against the schema guide that is a subset of the 'generic' GS1 schema, adapted to specific geography or user group.																				

XSD Element / Attribute	XSD Type	Occ	GS1 Usage Guidelines
-----  <b>InstanceIdentifier</b>	string	1..1	<p>The value of 'InstanceIdentifier' element depends on the value used in the 'Type' element:</p> <p><b>[R19]</b> If 'Type' element contains value MESSAGE_STATUS, the 'InstanceIdentifier' MUST contain value "Test"</p> <p><b>[R20]</b> If 'Type' element contains value SCHEMA_GUIDE, the value of 'InstanceIdentifier' MUST be set to the name and version of the guideline / set of processing rules that are applicable to this particular instance of the business document. The format of the name and version of the guideline / set of processing rules must be previously agreed upon between the sender and recipient of the message.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>■ Dutch Fruit &amp; Vegetable Industry Reference Model 1.1</li> <li>■ Brazilian Footwear Industry Guidelines</li> <li>■ UIM Implementation Guide Despatch Receipt Consumption 3.0</li> </ul>
-----  <b>Identifier</b>	string	0..1	<p><b>[R21]</b> The 'Identifier' element MAY be used to provide a unique value for the guideline / set of processing rules referenced in the 'Type' element. Some examples of identifiers that may be provided are – URL, Globally Unique ID (GUID), Contract / Agreement number, Document Reference Number etc ...</p>
----  <b>ScopeInformation</b>	Scope	0..*	<p>This is an abstract element with a substitution group. The element will be substituted by any one of the other elements that have the same substitution group. From the perspective of this implementation guide, these are the elements shown below</p>
-----  <b>BusinessService</b>	BusinessService		<p>This element substitutes the element 'ScopeInformation' when used</p>
-----  <b>BusinessServiceName</b>	string	0..1	
-----  <b>ServiceTransaction</b>	string	0..1	
-----  <b>TypeOfServiceTransaction</b>	string	0..1	
-----  <b>IsNonRepudiationRequired</b>	string	0..1	
-----  <b>IsAuthenticationRequired</b>	string	0..1	
-----  <b>IsNonRepudiationOfReceiptRequired</b>	string	0..1	
-----  <b>IsIntegrityCheckRequired</b>	string	0..1	
-----  <b>IsApplicationErrorResponseRequested</b>	string	0..1	
-----  <b>TimeToAcknowledgeReceipt</b>	string	0..1	

<i>XSD Element / Attribute</i>	<i>XSD Type</i>	<i>Occ</i>	<i>GS1 Usage Guidelines</i>
-----  <b>TimeToAcknowledgeAcceptance</b>	string	0..1	
-----  <b>TimeToPerform</b>	string	0..1	
-----  <b>Recurrence</b>	string	0..1	
-----  <b>CorrelationInformation</b>	string	0..1	Co-relates requesting document information with the responding document information This element substitutes the element 'ScopeInformation' when used
-----  <b>RequestingDocumentCreationDateTime</b>	dateTime	0..1	
-----  <b>RequestingDocumentInstanceIdentifier</b>	string	0..1	
-----  <b>ExpectedResponseDateTime</b>	dateTime	0..1	

## 165 4. Additional Information

### 166 4.1. International telephone number format

167 The [\[SBDH\]](#) elements 'FaxNumber' and 'TelephoneNumber', currently should be formatted in a way  
168 that is commonly agreed upon or understood between the 'Sender' and 'Receiver' party. It is a  
169 common practice to format the number using a local format. To further improve the interoperability and  
170 clarity of contact information data an international standard format for telephone number should be  
171 used. The International Telecommunications Union (ITU) and the Internet Engineering Task Force  
172 (IETF) 'de jure' standards bodies have a standard/recommendation on the format to be used for  
173 telephone numbers. Although, this implementation guide refrains from standardizing any rules for  
174 telephone number format, optionally it is recommended that the URI format for telephone numbers as  
175 specified in [\[RFC3966\]](#) should be used. [\[RFC3966\]](#) is based upon [\[ITU-T E.123\]](#) which is used as the  
176 starting point for standardization of telephone number formats. A URI notation adds more specificity  
177 and clarity and is more recognizable by software as it standardizes the telephone number string in a  
178 machine and human readable format.

#### 179 Examples:

- 180 ■ **tel:+1-201-555-0123**: This URI points to a phone number in the United States. The hyphens  
181 are included to make the number more human readable; they separate country, area code  
182 and subscriber number.
- 183 ■ **tel:7042;phone-context=example.com**: The URI describes a local phone number valid within  
184 the context "example.com".
- 185 ■ **tel:863-1234;phone-context=+1-914-555**: The URI describes a local phone number that is  
186 valid within a particular phone prefix.

### 187 4.2. Serialization

188 Serialization actually is the requirement for sequencing/choreography of messages in a particular  
189 business process to determine processing order of messages. There's a need for serialization of GS1  
190 XML messages in the upstream business processes being implemented by GUSI trading partners.  
191 The question asked is if [\[SBDH\]](#) provides any support for serialization of messages.

192 SBDH is a simple header and does not provide a mechanism for identifying sequencing information at  
193 the header level. An example of serialization is, a newer order in the sequence replaces the older in  
194 the message choreography between 2 trading partners. Sequencing requires business intelligence at  
195 payload level / backend application system and is a characteristic of the business process rather than  
196 transaction management at the middleware. In short Serialization is dependent on the business  
197 process and should be handled in the business document rather than the header/envelope. If  
198 requirement for serialization is to handle changes to documents exchanged earlier, it may be more  
199 appropriate to handle such changes using the document status attributes.

200 Not all business processes need sequencing; e.g.; CPFR (Collaborative Planning Forecast and  
201 Replenishment). Forecast messages may be received out of order without any kind of sequencing.  
202 Additionally, depending on the transport protocol and middleware used, it is difficult to ensure FIFO  
203 (First In First Out) sequencing of messages received.

204 [\[SBDH\]](#) provides a 'Correlation' block, the data attributes of which can be used in certain scenarios to  
205 mimic a sequencing kind of behaviour. Although, it does not really do sequencing, it can be used in a  
206 request / response messaging scenario to relate a logical sequencing with other messaging criteria  
207 like 'Time to Acknowledgement', 'Security', 'Non Repudiation', etc...



208 Sequencing of messages in a business process is driven by business requirements. As such any  
209 requirements for sequencing should be handled at the business document level. Only if there is a real  
210 business need to have sequencing at the envelope level, then the requirement needs to be explored  
211 further.

### 212 4.3. Multiple Trading Partner Identification

213 [\[SBDH\]](#) allows for the possibility of identifying multiple trading partners/ or applications via the use of  
214 the 'Sender/Receiver (1..\*)', (Identifier, Authority) element. Currently, the use of multiple trading  
215 partner identification schemes has been prohibited when [\[SBDH\]](#) is used with GS1 XML standards.  
216 There are 2 main reasons for this:

- 217 ■ GS1 has been mandated that GLN is the key to be used for party identification within all GS1  
218 XML standards
- 219 ■ Currently no GS1 business requirements have been expressed that require the use of multiple  
220 Sender/Receiver parties or multiple identification schemes

221 If there is an expressed business need to support multiple trading partner identification within SBDH,  
222 then the business requirements need to be submitted to GS1 via the GSMP WR (Work Request)  
223 System.

### 224 4.4. Message Grouping

225 Current design of GS1 XML for eCom does not allow for inclusion more than one business document  
226 type in the GS1 message, thus MultipleType should always be set to 'false'.

### 227 4.5. Transport Protocol Options

228 In certain business processes / messages business drivers may require the use of a specific transport  
229 protocol like HTTPS or email. SBDH is agnostic / independent of the message transport protocol used.

230 With GS1 XML, any transport protocol may be used for messaging and this decision should be based  
231 on the business drivers within the business process, like trading partner agreements, business rules,  
232 security, non-repudiation, etc... If there is a need within any particular GS1 user community to  
233 'officially' support a particular transport protocol, then it should be expressed to GS1 with the use of its  
234 WR System.

## 235 5. References

- 236 1. [\[RFC2119\]](#) Key words for use in RFCs to Indicate Requirement Levels

237 In many standards track documents several words are used to signify the requirements in the  
238 specification. These words are often capitalized. This document defines these words as they  
239 should be interpreted in IETF documents.

240 <http://www.ietf.org/rfc/rfc2119.txt>

241  
242 [\[SBDH\]](#) Standard Business Document Header specification  
243 [http://www.gs1.org/services/gsm/kc/ecom/xml/xml\\_sbdh.html](http://www.gs1.org/services/gsm/kc/ecom/xml/xml_sbdh.html)

- 244  
245 2. [\[ITU-T E.123\]](#) Notation for national and international telephone numbers, e-mail addresses and  
246 Web addresses

247 This Recommendation applies specifically to the printing of national and international telephone  
248 numbers, electronic mail addresses and Web addresses on letterheads, business cards, bills, etc.  
249 Regard has been given to the printing of existing telephone directories. The standard notation for  
250 printing telephone numbers, E-mail addresses and Web addresses helps to reduce difficulties and  
251 errors, since this address information must be entered exactly to be effective.

252 <http://www.itu.int/rec/T-REC-E.123-200102-l/en>

253

254 **3.** [RFC3966] The tel URI for Telephone Numbers

255 This document specifies the URI (Uniform Resource Identifier) scheme "tel". The "tel" URI  
256 describes resources identified by telephone numbers.

257 <http://www.rfc-editor.org/rfc/rfc3966.txt>

258

## 259 Appendix A Example: GS1 XML eCom Document with 260 SBDH

```

261 <?xml version="1.0" encoding="UTF-8"?>
262 <order:orderMessage xmlns:order="urn:gs1:ecom:order:xsd:3"
263 xmlns:sh="http://www.unece.org/cefact/namespaces/StandardBusinessDocumentHeader"
264 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:gs1:ecom:order:xsd:3
265 ../Schemas/gs1/ecom/Order.xsd">
266   <sh:StandardBusinessDocumentHeader>
267     <sh:HeaderVersion>1.0</sh:HeaderVersion>
268     <sh:Sender>
269       <sh:Identifier Authority="GS1">8764321000003</sh:Identifier>
270       <sh:ContactInformation>
271         <sh:Contact>John Doe</sh:Contact>
272         <sh:EmailAddress>John_Doe@purchasing.XYZretailer.com</sh:EmailAddress>
273         <sh:FaxNumber>+1-212-555-1213</sh:FaxNumber>
274         <sh:TelephoneNumber>+1-212-555-2122</sh:TelephoneNumber>
275         <sh:ContactTypeIdentifier>EDI co-ordinator</sh:ContactTypeIdentifier>
276       </sh:ContactInformation>
277     </sh:Sender>
278     <sh:Receiver>
279       <sh:Identifier Authority="GS1">8712345000004</sh:Identifier>
280       <sh:ContactInformation>
281         <sh:Contact>Mary Smith</sh:Contact>
282         <sh:EmailAddress>Mary_Smith@widgets.com</sh:EmailAddress>
283         <sh:FaxNumber>+1-312-555-1214</sh:FaxNumber>
284         <sh:TelephoneNumber>+1-312-555-2125</sh:TelephoneNumber>
285         <sh:ContactTypeIdentifier>EDI Helpdesk</sh:ContactTypeIdentifier>
286       </sh:ContactInformation>
287     </sh:Receiver>
288     <sh:DocumentIdentification>
289       <sh:Standard>GS1</sh:Standard>
290       <sh:TypeVersion>3.0</sh:TypeVersion>
291       <sh:InstanceIdentifier>100002</sh:InstanceIdentifier>
292       <sh:Type>Order</sh:Type>
293       <sh:MultipleType>>false</sh:MultipleType>
294       <sh:CreationDateAndTime>2006-01-10T12:00:01.000-05:00</sh:CreationDateAndTime>
295     </sh:DocumentIdentification>
296     <sh:BusinessScope>
297       <sh:Scope>
298         <sh:Type>MESSAGE_STATUS</sh:Type>
299         <sh:InstanceIdentifier>Test</sh:InstanceIdentifier>
300       </sh:Scope>
301       <sh:Scope>
302         <sh:Type>SCHEMA_GUIDE</sh:Type>
303         <sh:InstanceIdentifier> Dutch Fruit and Vegetable Industry Reference Model v.
304 1.1</sh:InstanceIdentifier>
305         <sh:Identifier>urn:FruglCom:AGF:1.1</sh:Identifier>
306       </sh:Scope>
307     </sh:BusinessScope>
308   </sh:StandardBusinessDocumentHeader>
309 </order>
310   <creationDateTime>2011-03-11T11:00:00.000-05:00</creationDateTime>
311   <documentStatusCode>ORIGINAL</documentStatusCode>
312   <orderIdentification>

```

```

313     <entityIdentification>PO3352</entityIdentification>
314   </orderIdentification>
315   <orderTypeCode>220</orderTypeCode>
316   <isApplicationReceiptAcknowledgementRequired>true</isApplicationReceiptAcknowledgementRequired>
317   <additionalOrderInstruction languageCode="en">Pack all items individually </additionalOrderInstruction>
318   <totalMonetaryAmountExcludingTaxes
319 currencyCode="EUR">12675</totalMonetaryAmountExcludingTaxes>
320   <totalTaxAmount currencyCode="EUR">2661.75</totalTaxAmount>
321   <buyer>
322     <gln>5412345000013</gln>
323   </buyer>
324   <seller>
325     <gln>4098765000010</gln>
326   </seller>
327   <orderLogisticalInformation>
328     <shipFrom>
329       <gln>4098765000010</gln>
330     </shipFrom>
331     <shipTo>
332       <gln>5412345000037</gln>
333     </shipTo>
334   </orderLogisticalInformation>
335   <paymentTerms>
336     <paymentTermsEventCode>AFTER_DATE_OF_DELIVERY</paymentTermsEventCode>
337     <paymentTermsTypeCode>1</paymentTermsTypeCode>
338     <proximoCutOffDay>---31</proximoCutOffDay>
339   </paymentTerms>
340   <orderLineItem>
341     <lineItemNumber>1</lineItemNumber>
342     <requestedQuantity measurementUnitCode="EA">48</requestedQuantity>
343     <additionalOrderLineInstruction languageCode="en">FRAGILE</additionalOrderLineInstruction>
344     <netAmount currencyCode="EUR">8016</netAmount>
345     <netPrice currencyCode="EUR">167</netPrice>
346     <transactionalTradeItem>
347       <gtin>04098765000027</gtin>
348     </transactionalTradeItem>
349   </orderLineItem>
350 </order>
351 </order:orderMessage>
352

```

353

354

## Appendix B Main differences between the use of SBDH in GS1 XML 2.0 and GS1 eCom XML 3.0

355

356

The GS1 eCom XML message architecture 3.x is different than 2.x. This change required different way of implementing the SBDH. The table below lists the main differences.

Functionality	MR3	MR2
Scope	eCom only	eCom, GDSN and EPC
SBDH	Mandatory	Optional
Standard Business Document tag	Not used	Used as a start tag of the GS1 message
Business document nesting	Nested in the message tag, as a sibling of SBDH	Wrapped in SBDH, nested as a payload
'Authority' tag content	Fixed: 'GS1'	Fixed: 'EAN.UCC'
'Standard' tag content	Fixed: 'GS1'	Fixed: 'EAN.UCC'
'MultiType' tag content	Fixed: 'false' (multiple document type not allowed)	'true' if different types of business documents are sent 'false' if one type of business document is sent

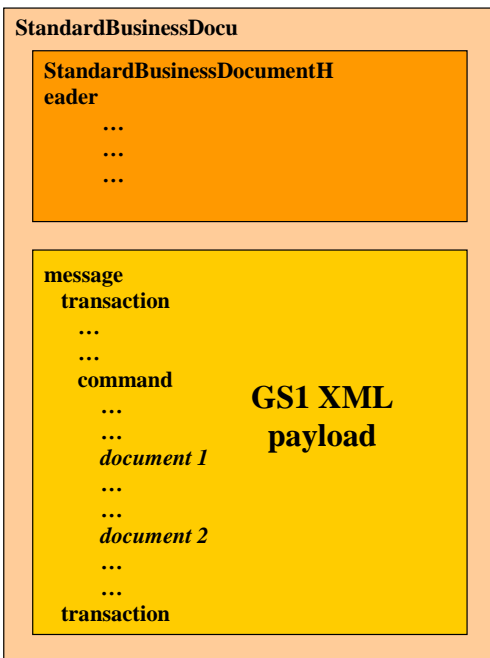
357

358

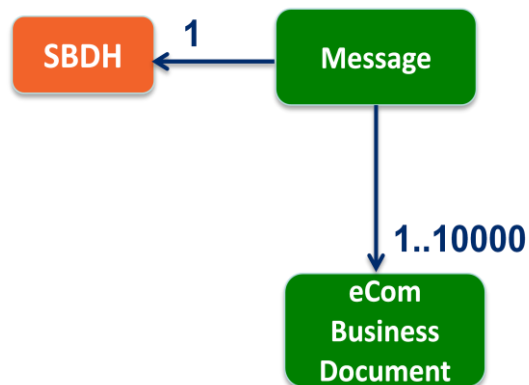
359

The message architecture in:

### Release 2.x



### Release 3.x



360