



Creating A Single Global Electronic Market

# Core Component and Business Process Document Overview Version 1.0

## ebXML Business Process & Core Components

16 February 2001

### **1 Status of this Document**

This document is an ebXML White Paper for the eBusiness community.

Distribution of this document is unlimited.

The document formatting is based on the Internet Society's Standard RFC format.

*This version can be found on:*

[http://www.ebxml.org/working/project\\_teams/Core\\_Components/latest.htm](http://www.ebxml.org/working/project_teams/Core_Components/latest.htm)

### **2 ebXML participants**

We would like to recognize the following for their significant participation to the development of this document.

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## 4 Introduction

### 4.1 Summary of This Document

This document informs the reader of the scope of the work of the ebXML Business Process and Core Components Joint Delivery team. It also provides an overview explaining the relationship between the following documents.

The terminology within these documents is defined in the ebXML Glossary of Terms.

#### 4.1.1 The specification documents are;

- ebXML Business Process specification schema
- ebXML Methodology for the Discovery and Analysis of Core Components
- ebXML Naming conventions for Core Components and Business Processes
- ebXML The role of context in the re-usability of Core Components and Business Processes
- ebXML Specification for the application of XML based assembly and context rules

#### 4.1.2 The white paper documents for discussion are;

- ebXML Business Process methodology guidelines
- Initial catalogue of common Business Processes
- Business Process work-sheet
- Initial catalogue of Core Components
- Example implementation of ebXML context rules in an XML environment

### 4.2 Audience

The target audience is all participants of ebXML and other interested third parties. However specific papers will be of more interest to individual readers than others. The following table of potential readers indicates which documents may be of primary interest to them.

Software developers	<ul style="list-style-type: none"> <li>▪ ebXML Business Process specification schema</li> <li>▪ ebXML Methodology for the Discovery and Analysis of Core Components</li> <li>▪ ebXML Naming conventions for Core Components and Business Processes</li> <li>▪ ebXML The role of context in the re-usability of Core Components and Business Processes</li> <li>▪ ebXML Specification for the application of XML based assembly and context rules</li> </ul>
Business domain experts	<ul style="list-style-type: none"> <li>▪ ebXML Business Process specification schema</li> </ul>

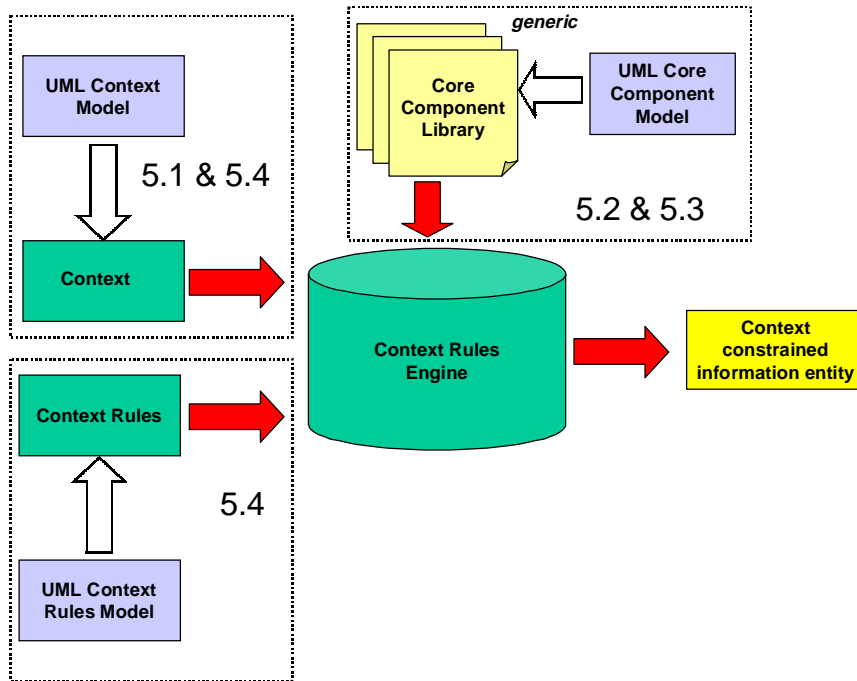
	<ul style="list-style-type: none"> <li>▪ ebXML Methodology for the Discovery and Analysis of Core Components</li> <li>▪ ebXML The role of context in the re-usability of Core Components and Business Processes</li> <li>▪ ebXML Specification for the application of XML based assembly and context rules</li> </ul>
Business IT developers	<ul style="list-style-type: none"> <li>▪ ebXML Business Process specification schema</li> <li>▪ ebXML Methodology for the Discovery and Analysis of Core Components</li> <li>▪ ebXML Naming conventions for Core Components and Business Processes</li> <li>▪ ebXML The role of context in the re-usability of Core Components and Business Processes</li> <li>▪ ebXML Specification for the application of XML based assembly and context rules</li> </ul>
Standards experts	<ul style="list-style-type: none"> <li>▪ ebXML Business Process specification schema</li> <li>▪ ebXML Methodology for the Discovery and Analysis of Core Components</li> <li>▪ ebXML Naming conventions for Core Components and Business Processes</li> <li>▪ ebXML The role of context in the re-usability of Core Components and Business Processes</li> <li>▪ ebXML Specification for the application of XML based assembly and context rules</li> </ul>

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## 5 Definition and Scope

The diagram below presents an overview of the scope, showing the area to which each document relates.



### 5.1 ebXML Business Process specification schema

The ebXML Specification Schema provides a standard framework by which business systems may be configured to support execution of business transactions. The ebXML Specification Schema provides for the nominal set of specification elements necessary to configure a runtime system in order to execute collaboration consisting of a set of ebXML business transactions. This schema facilitates the infrastructure release of ebXML's TRP, TP, and RegRep specifications. Users of the Specification Schema will create business process specifications as either UML diagrams, or eXtended Markup Language (XML) documents. The Specification Schema supports the specification of Business Transactions and the choreography of Business Transactions into Business Collaborations. Each Business Transaction can be implemented using one of many available standard patterns. These patterns determine the actual exchange of messages and business signals between the partners to achieve the required electronic commerce transaction.

The current version of the specification schema addresses collaborations between two parties (Binary Collaborations). A subsequent version will address additional features such as the semantics of economic exchanges and contracts, multi-party choreography, and context based content.

## **5.2 ebXML Methodology for the Discovery and Analysis of Core Components**

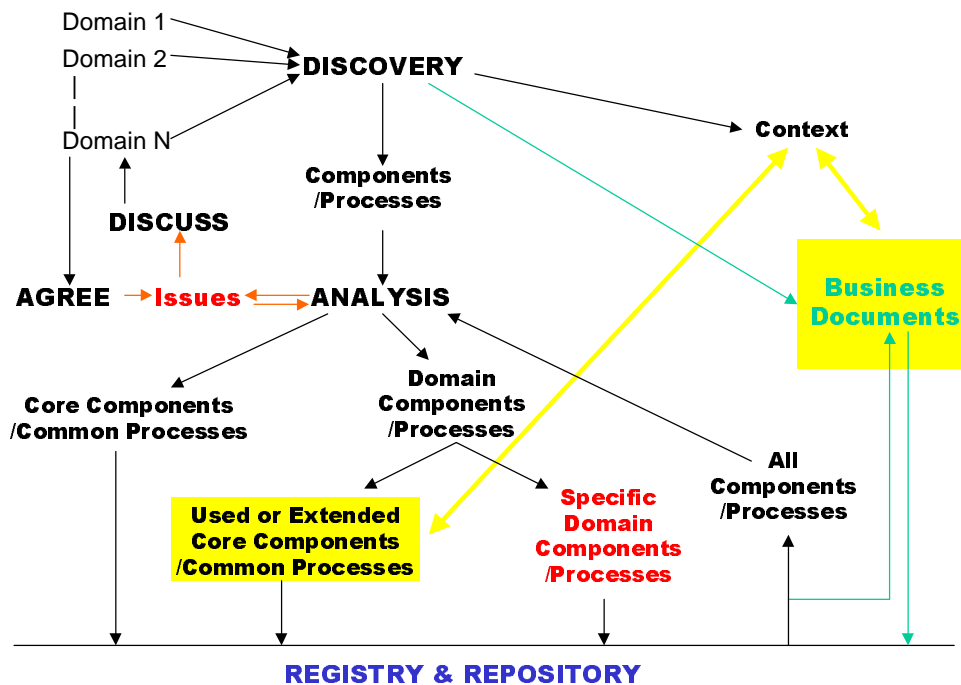
The discovery activity is conducted by Business Information Experts in each domain area, using appropriate means for extracting, gathering, and recording their “discovered” Core Components. For each Core Component a precise definition is established, together with any additional material pertinent to the specific domain.

To ensure cross-domain harmonisation a comprehensive and consistent analysis needs to be conducted for each “discovered” component by a domain-neutral technical assessment team.

During the analysis activity, each new Core Component is reviewed against the existing library in the following way;

- If there is already a Core Component that matches the name, definition and any supplementary notes, the existing Core Component is updated to show the context in which it is used.
- If there is an imperfect match, the analysis team needs to discuss the issue with the domain team in order to determine whether the new-found Core Component is genuinely new or whether its description is capable of being changed to match the already-found component.
- If there is no match, the new-found Core Component is added as a domain-specific component, recording the context in which it is used.

The discovery and analysis processes result in a maintained library of Core Components. The following diagram provides a picture of the overall discovery and analysis processes.



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### 138 **5.3 ebXML Naming conventions for Core Components and** 139 **Business Processes**

140 This document describes the rules for naming ebXML Core Components and Business  
141 Processes. These rules are based on the guidelines and principles described in document  
142 ISO 11179-5, clause 6 (Guidelines for Structured Naming Conventions).

In addition to the naming convention rules that lead to a Dictionary Entry Name, the document also provides rules for creating definitions. It also establishes the principle of synonyms to cover the instances where a commonly-used business term equates to a well-formed Dictionary Entry Name according to the rules.

## 148 5.4 ebXML The role of context in the re-usability of Core 149 Components and Business Processes

150 This document defines the way in which context is categorised. It describes the context  
151 drivers that have been identified as most critical for facilitating the maximum re-use of  
152 Core Components and Business Process.

The document contains the context definitions, the sources of classification value lists, and examples of how these contexts will be applied in business use. It describes how to build business documents drawing on the contents of the repository, and contains a pictorial model of Core Component and Context Descriptor Relationships.

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## 159 **5.5 ebXML Specification for the application of XML based** 160 **assembly and context rules**

161 The challenge of ebXML is to create a framework for automating trading partner  
162 interactions that is both:

- 163 ▪ sufficiently generic to permit implementation across the entire range of business  
164 processes (in various industries, geographical regions, legislative environments, etc.)
- 165 ▪ expressive enough to be more effective than ad hoc implementations between specific  
166 trading partners.

167

168 This specification document describes the way in which rules can be formed and/or  
169 derived, but is not a prescriptive specification. It is believed that rule mechanisms will be  
170 achieved in different ways within different implementations/solutions.

171

172 This document deals with two specific aspects of the task:

- 173 ▪ the assembly of core component schemas into full business document schemas,
- 174 ▪ the modeling of core components for business documents that provide useful building  
175 blocks for real-world trading scenarios and, at the same time, are open enough to take  
176 into account the wide variety of document formats required by organizations with  
177 differing business practices and requirements.

178

179 Complicating this situation is the need for interoperability: companies must be able to  
180 communicate business documents effectively with minimum human intervention, even  
181 though the formats used may have a significantly different syntax.

182

183 Central to achieving this goal is the notion of context. Context provides a framework for  
184 adapting generic core components to specific business needs, while keeping the  
185 transformation process transparent so that the processing engine can find a useful set of  
186 common information for use by different trading partners. An example of a contextual  
187 category that is useful for business is industry: different industries will have different  
188 requirements for the syntax of core components. By starting with a generic core  
189 component and using context to derive a context-specific core component, we ensure  
190 that, at the very least, the information in the generic component will be useful when  
191 interacting with a trading partner in a different context (i.e. industry, region, etc.). This  
192 should be contrasted with the alternative: context-specific business documents that are  
193 not built from generic core components and therefore provide no common basis for  
194 interaction outside of that context.

195

196 In order to assemble full business documents from core components, rules are drawn  
197 specifying what components are to be included in the document, and how.

198

199 In order to generate a context-specific core component, rules are associated with different  
200 values for each of the context categories. This document presents a proposed syntax for



201 these context rules, and a methodology for applying them, in order to achieve maximum  
202 reuse of existing XML software development tools and libraries.  
203

203

## 204 **6 Disclaimer**

205 The views and specification expressed in this document are those of the authors and are  
206 not necessarily those of their employers. The authors and their employers specifically  
207 disclaim responsibility for any problems arising from correct or incorrect implementation  
208 or use of this design.

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