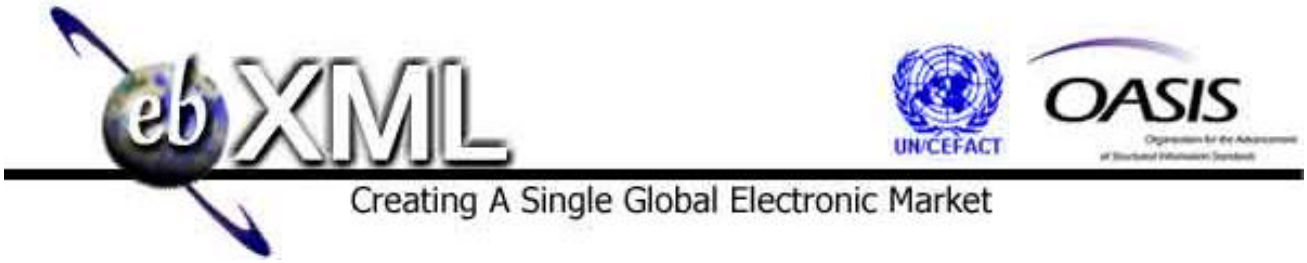

ebXML Documentation Roadmap v0.93

Quality Review Team

April 23, 2001

1 Status of this Document

This document specifies an ebXML DRAFT of guidance material for the eBusiness community. This document has not been accepted or approved by the ebXML Plenary, so is non-normative.

Distribution of this document is unlimited.

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

2 ebXML participants

We would like to recognize the following for their significant participation to the development of this document: the ebXML Quality Review Team.

3 Table of Contents

4 Introduction

ebXML is a set of specifications that together enable a modular electronic business framework. The vision of ebXML is to enable a global electronic marketplace where enterprises of any size and in any geographical location can meet and conduct business with each other through the exchange of XML based messages. ebXML is a joint initiative of the United Nations (UN/CEFACT) and OASIS, developed with global participation for global usage.

The set of ebXML technical specifications describe the technology architecture and functionality of ebXML.

This document describes the various ebXML specifications and their applicability to various types of business scenarios.

4.1 Summary of Contents of Document

This document was produced near the completion of the 18 month ebXML project, and is intended as introductory guidance for the ebXML documentation.

This document introduces the ebXML set of documentation, describes potential audiences and presents example scenarios of how these specifications may be applied.

4.2 Audience

This document is the starting point for medium to large organizations, electronic commerce associations, software vendors or service providers considering deploying or developing an ebXML application. Another potential audience may be companies and professionals that seek to provide tools and development aides to the primary audience.

Whilst this document is not a technical specification, the majority of ebXML specifications and references are technical in nature. Much of the referenced material pertains to specialized areas of expertise such as information technology architectures, data modelling, business process modelling and messaging protocols.

The targeted audience for this document is primarily business analysts, electronic commerce managers and software providers interested in the ebXML specifications in order to:

- evaluate the benefits of implementing ebXML solutions in the relationships with their partners,
- manage the deployment of ebXML solutions in their IT infrastructure,

- build and/or configure the ebXML infrastructure inside their current business activities, or
- provide tools and building blocks to the organisations using ebXML components.

4.3 Related Documents

There are a range of documents used to define the components of ebXML and their inter-relationships. These documents may be classified according to their area of application.

> NOTE:
> For convenience, an identifier has been allocated to each of these documents. A pre-fix of "eb" indicates an ebXML specification. Other pre-fixes indicate a document produced by a specific Project Team responsible, these are:
> bp Business Process Modelling
> cc Core Components
> sec Security Architecture
> qr Quality Review

1. Documents dealing with Business Process modelling, understanding the UML profile for Process modelling and understanding the Core Business Processes:
   - **Business Process Analysis Worksheet and Guidelines [bpWS]**
     A set of business process design aids, to sufficiently reflect all necessary parts of a business process; and thus be able to activate an ebXML business process relationship.
   - **ebXML Catalog of Common Business Processes [bpPROC]**
     Provides an initial list of common business process names, generic in nature that can be used across various industries.
   - **Business Process and Business Information Analysis Overview [bpOVER]**
     Deals with aspects of commercial interoperability, specifically the process by which enterprises can analyse, identify, and define those business processes and business documents necessary for the conduct of electronic business with other enterprises, within the ebXML framework.

2. Documents describing the initial set of Core Components.
   - **The Initial Core Components Catalogue [ccCTLG]**
     A framework for the results of the analysis of core components.

3. Documents describing how to apply/derive Core Components in the context of a given Business Process

- **ebXML Concept – Context and Re-Usability of Core Components [ebCNTXT]**
  Describes the contextual categories that have been identified as most critical in describing the use of generic Core Components for business information purposes.
- **Initial Catalogue of Context Drivers [ccDRIV]**
  A catalogue of context drivers which have been discovered to-date by the Core Components working group.
- **ebXML Specification – Document Assembly & Context Rules [ebCCDOC]**
  Describes the mechanism for assembling documents from the library of Core Components.

4. Documents describing how to define a new Core Component, how to build it and how to properly make it useful in the ebXML modelling activities.
   - **E-Commerce and Simple Negotiation Patterns [bpPATT]**
     A supporting document to the ebXML Business Process Specification Schema [ebBPSS], to address common pattern implementation issues.
   - **Core Component and Business Process Document Overview [ccOVER]**
     Provides an overview explaining the relationship between the following documents.
   - **ebXML Convention – Naming Convention for Core Components [ebCCNAM]**
     Specifies the rules for naming ebXML Core Components and Business Processes.
   - **ebXML Methodology: Core Components Discovery and Analysis [ebCCD&A]**
     Provides guidance for the discovery the discovery and analysis of common components and processes involved in the interchange of business information.

5. Documents describing the XML form of a Business Process Model
   - **ebXML Business Process Specification Schema [ebBPSS]**
     Provides a standard framework by which business systems may be configured to support execution of business collaborations consisting of business transactions

6. Documents describing the Collaboration Protocol Profile and Collaboration Protocol Agreement
   - **ebXML Collaboration-Protocol Profile and Agreement Specification [ebCPP]**
     Contains the detailed definitions of the Collaboration Protocol Profile (CPP) and the Collaboration Protocol Agreement (CPA).

7. Documents describing how to access an ebXML Registry
   - **ebXML Registry Services Specification [ebRS]**
     Defines the interface to the ebXML Registry Services as well as interaction protocols, message definitions and XML schema.

8. Documents describing the functionalities of the ebXML Messaging Layer.
   - **ebXML Message Service Specification [ebMS]**
     Defines the ebXML Message Service protocol that enables the secure and reliable exchange of messages between two parties.

9. Documents describing the security architecture that can be enforced by an ebXML compliant solution
   - **ebXML Technical Architecture Risk Assessment [secRISK]**
     Provides a high level overview of the security issues in the relationships, interactions, and basic functionality of the ebXML architectural components.

10. ebXML Overal Architecture documents
    - **ebXML Technical Architecture Specification [ebTA]**
      Describes the underlying architecture for ebXML.
    - **ebXML Glossary [ebGLOSS]**
      Defines the terminology chosen for ebXML.

11. Documents describing the internal model of an ebXML Registry
    - **ebXML Registry Information Model [ebRIM]**
      Specifies the information model for the ebXML Registry.

12. Other Reference documents.
    - **ebXML Requirements Specification [ebREQ]**
      Defines the requirements from representatives of international business and accredited standards organizations to assist the ebXML project team members in developing their deliverables in a consistent manner.
    - **ebXML Documentation Roadmap [qrROAD]**
      This document.

5 Document Objectives

5.1 Goal

The purpose of this document is to provide a guide to the different documents that form the overall ebXML Specifications.

This document identifies components of ebXML relevant to specific business scenarios and assists the reader to locate their definition in the ebXML deliverable material.

5.2 Caveats and Assumptions

This document assumes the reader is familiar with the overall concept of ebXML as described in the white paper "Enabling Electronic Business with ebXML" dated December 2000. This can be found at http://www.ebxml.org/white_papers/whitepaper.htm.

Specific terminology used throughout ebXML is defined in the ebXML Glossary [ebGLOSS].

6 ebXML Documentation

6.1 What ebXML Does

The ebXML initiative is targeted at every sector of the business community, from international conglomerate to small and medium sized enterprises engaged in business-to-business and business-to-consumer trade. With that audience in mind, the ebXML initiative is committed to developing and delivering specifications that will be used by all trading partners interested in maximizing XML interoperability within and across trading partner communities.

The ebXML Requirements Specification [ebREQ] provides a detailed set of business and technology requirements for ebXML. This specification is also intended to convey to interested parties the purpose, scope, and vision of ebXML.

6.2 How ebXML Works

The ebXML Technical Architecture [ebTA] describes the underlying architecture for ebXML. It provides a high level overview of ebXML and describes the relationships, interactions, and basic functionality of ebXML. It should be used as a roadmap to learn:

- what ebXML is,
- what problems ebXML solves, and
- core ebXML functionality and architecture.

6.3 Where ebXML May Be Implemented

The ebXML specifications address the different components that can be used to create an ebXML solution. However, an ebXML solution does not necessarily need to use all the components. For example, it is reasonable to use ebXML Messaging Services with existing e-commerce content such as UN/EDIFACT messages.

For this reason, the ebXML specifications have been created in a modular way, allowing features to be used independently. The possibility of selectively using ebXML features to engage in electronic commerce with trading partners offers companies a flexible and attractive model.

The fact that ebXML participants may implement only part of the overall ebXML specifications is accounted in this document by presenting scenarios for various implementations.

The following are some examples where portions of the ebXML architecture could be a part of an electronic commerce business solution:

- Large Enterprise to Large Enterprise using ebXML Technology and Services
- Large Enterprise to Large Enterprise using ebXML Content and Processes
- Large Enterprise to SME exchanges
- Integrating commercial packages and in-house applications
- Building ebXML registries
- Developing an ebXML CASE tool
- Documenting Business Processes

Whilst ebXML does not require a radical change in electronic commerce activities; the evolving sophistication of ebXML, the availability of tools, solutions and building blocks implementing the required ebXML components and the adoption of ebXML models within vertical industries will, we hope, encourage the adoption of more complete solutions.

6.4 Scope

In order to facilitate classification, the ebXML documentation can be split into the four categories:

- Business Processes,
- Content,
- Services, and
- Reference

6.4.1 Business Processes Documents

The documents to assist in modelling electronic commerce processes are:

- [bpOVER] Business Process and Business Information Analysis Overview
- [ebBPSS] ebXML Business Process Specification Schema
- [bpPATT] E-Commerce and Simple Negotiation Patterns
- [bpWS] Business Process Analysis Worksheet and Guidelines
- [bpPROC] ebXML Catalog of Common Business Processes

These documents would be used by analysts or by domain experts.

6.4.2 Content Documents

The documents to assist in identifying reusable components to compose the relevant exchanges are:

- [ccOVER] Core Component and Business Process Document Overview
- [ebCCD&A] ebXML Methodology: Core Components Discovery and Analysis

- [ebCCDOC] ebXML Specification – Document Assembly & Context Rules
- [ebCCNAM] ebXML Convention – Naming Convention for Core Components
- [ebCNTXT] ebXML Concept – Context and Re-Usability of Core Components
- [ccCTLG] The Initial Core Components Catalogue
- [ccDRIV] Initial Catalogue of Context Drivers

These documents would be used by analysts or by domain experts.

6.4.3 Services Documents

The documents to assist in creating, assembling and deploying the software services that actually execute the business processes are:

- [ebMS] ebXML Message Service Specification
- [ebCPP] ebXML Collaboration-Protocol Profile and Agreement Specification
- [ebRS] ebXML Registry Services Specification
- [ebRIM] ebXML Registry Information Model

These documents would be mainly useful to software designers, developers and service providers.

6.4.4 Reference Documents

This material presents the overall concepts of ebXML. As well as providing reference material for other ebXML specifications, these documents would also be useful to managers and decision makers in an evaluation of an ebXML strategy.

These documents are:

- [qrROAD] ebXML Documentation Roadmap (this document)
- [ebREQ] ebXML Requirements Specification
- [ebGLOSS] ebXML Glossary
- [ebTA] ebXML Technical Architecture Specification
- [bpOVER] Business Process and Business Information Analysis Overview
- [ccOVER] Core Component and Business Process Document Overview
- [secRISK] ebXML Technical Architecture Risk Assessment

6.5 ebXML Target Audiences

The modularity of the ebXML Specifications is also reflected in the different categories of users they address.

Some categorization is provided below. This categorization should not be considered exhaustive. Nevertheless, it could be useful in providing concrete examples of how the ebXML specification can benefit different areas of business.

6.5.1 Vertical Industries

Associations of companies forming vertical consortia may find ebXML attractive for the possibility of defining Common Business Processes modelling the choreography of exchanges that Trading Partners within the specific industry are familiar with.
The consolidation of these models and the possibility of enforcing them electronically will contribute to streamline the business activities.
It is envisaged that Vertical Industry consortia will see in ebXML the possibility of standardizing on electronic exchange standards without being forced to standardize on proprietary technology or products.

The professional roles involved are the ones of Industry Business Analysts in charge of defining, modelling and standardizing the electronic exchange practices across a Vertical.

The main areas of interest for Vertical Industries would be in…

- defining new Core Components
- refining the context of existing Core Components
- defining and modelling Business Processes
- defining CPP and CPA templates
- creating adapters for the IT packages that are most commonly used within the vertical.

6.5.2 Medium to Large Organisations

Companies driving electronic exchanges with their partners may find ebXML attractive for the possibility of enforcing agreements on electronic exchange models with all of their partners (especially small and medium enterprises) without imposing big infrastructure costs on the partners themselves.

A possible obstacle in extending the penetration of electronic exchanges is the high cost and the lack of interoperability of available solutions. The ebXML specifications and the modularity of ebXML components can create a new infrastructure that can accommodate exchanges happening at different levels, e.g. with large as well as small suppliers. For a

supplier, the possibility to use cheap and standard software will be seen as a chance to improve the exchange with the big partners.

It is envisaged that large organisations may ease the adoption of ebXML for a wider community by providing the software that would allow their partners to quickly engage in ebXML compliant processes. In this context, a big company may well produce the software that small suppliers may use to interact with it, thus allowing better choice and control of suppliers.

In the context of larger organisations, more then one role may be involved.

- **External Relationships.**
  Marketing trading partner capabilities.
  Through automating the procurement processes.

- **Analysts, Business experts.**
  Large organisations may require the modelling of specific Business Processes and the use of specific metadata artefacts.

- **IT Professionals.**
  The IT department will certainly be involved in order to prepare and manage the technical infrastructure hosting the electronic exchanges.

The application of ebXML technology within large organisations will mainly be in:

- defining new Core Components
- refining the context of existing Core Components
- defining and modelling Business Processes or in refining Core Processes
- defining Trading Partner (CPP and CPA) templates
- integrating the existing IT infrastructure with the ebXML software
- configuring and creating the ebXML runtime software required to implement the electronic exchanges
- preparing the required software for trading partners if required.

6.5.3 Small to Medium Enterprises

Small to Medium enterprises (SMEs) are often excluded from the advantages of electronic commerce because of the high cost and incompatibility of proprietary solutions.

ebXML offers these organisations the possibility to engage in electronic commerce relationships without having to incur in this investment in experience and software products.

The widespread adoption of ebXML may allow SMEs to use the same procedures and software infrastructure for managing multiple relationships with different partners.

Most SMEs will rely on ebXML infrastructure components provided by other entities (Technology and Service Providers).

6.5.4 Technology and Service Providers

EbXML offers an opportunity to Technology and Service Providers to specialize in the delivery of components implementing the ebXML Specifications.

- The modularity of the ebXML Specifications allows these companies to specialize in the delivery of ebXML components according to their specific competences.

- The openness of the ebXML Specifications will encourage a fierce competition on the delivery of ebXML components.

For example, Software Editors have already established significant presence in the market with solutions specialising in different areas of eCommerce. It is envisaged that support for the ebXML specifications will be natively included in the existing solutions, thus granting better interoperability among them.

In addition, value added solutions would allow a more transparent use of the ebXML specifications. New tools and libraries will be required to speed up and simplify the adoption of new standards.

The success of the ebXML initiative will depend on the availability of technology infrastucture and consulting services.

The following is a list of possible deliverables in this area:

- Implementation of specific components, such as ebXML compliant Registries or Messaging Services.
- Integration solutions with existing and popular packages
- Customised libraries of Business Processes and Information models
- Configuration tools and Code Generators to quickly build the runtime layer
- CASE Tools oriented to the creation and management of metadata
- Consulting services from Business Modelling to integration with legacy systems
- Methodology Training and Consulting

7 Scenarios for ebXML Use

7.1 Introduction

This chapter presents different "Usage Scenarios" for the ebXML Specification documents. The accent will be given on the definition of tasks that will likely be very important in setting up a consistent and effective ebXML solution.

These scenarios are only examples, they do not pretend to cover all the possible flavours of use of the ebXML documents. Specifically, they will describe how someone with a very specific goal should use the ebXML Specification documents; sometimes these scenarios take the role to the extreme in order to better highlight the importance of the information that needs to be retrieved Nevertheless, they are intended to be representative of the major tasks that may be encountered during normal activities.

NOTE:
In the scenarios described in this chapter, the following conventions are used:

- "Large Enterprise" is an organisation that has significant IT infrastructure and significant electronic business opportunities to be considered a driver in the e-commerce exchange.
- "Small-Medium Enterprise" is an organisation that does not have access to significant IT infrastructure.
- "Consulting Firm" is a Company specialized in consulting
- "Software Developer" is a Company specialized in building software tools and/or products.

7.2 Large Enterprise to Large Enterprise using the full ebXML framework

Two Large Enterprises, already used to do business together in a traditional way, decide to manage their commercial exchanges using the complete ebXML framework.

They decided to embrace ebXML:

- in order to have the possibility of re-using parts of the modelling activities that have already been developed by other companies they know
- to use the same infrastructure (in terms of software and in terms of competences) they already use in managing the electronic exchanges with their suppliers
- to grant that the different tools they have properly and seamlessly interoperate.

The Business Analysts form both organisations may research, in an ebXML Registry, the models for commercial exchanges that are similar to the one the two companies actually perform. These models include:

- The Business Process Definition, modelling the commercial exchange as the choreography of transactions, expressed in UML form. The UML form conforms to the content of the specification [ebBPSS].
- The Business Process model references the messages exchanged during the transactions. These messages are a collection of Core Components, which may be stored in the same ebXML Registry.
- The Core Component catalog is described in [ccCTLG] and the composition rules to instantiate such Core Components in the context of the given Business Process are described in [ebCCDOC].

After having examined the details of existing commercial patterns and components, the Analysts may decide to make some modifications in order to account for the specificities of their commercial exchange to be modelled. In order to do this, the Analysts:

- Modify the Business Process model, in accordance with the UML profile described in [ebBPSS].
- Refine the Core Components (the building blocks) of the data exchanged within the commercial transactions using the rules described in [ebCNTXT]. This refinement is necessary to adapt the components to the new Business Process context.
- Define new Core Component candidates following the process described in [ebCCD&A]. These candidates, once accepted, will become part of the Core Components catalog described in [ccCTLG]
- Create the XML version of the new Business Process model, following the production rules described in [ebCCDOC]. The result is an XML Document that will be used as a reference for the population of the CPP/CPAs.

The customised version of the Business Process and Information Model that have been identified may now be stored in the ebXML Registry, using the Registry interface described in [ebRS]. In this way, the ebXML Registry can function as a shared repository of information.

At this point, each Large Enterprise builds its own Collaboration Protocol Profile (CPP), following the specification in [ebCPP]. Each CPP defines:

- which role in the previously defined Business Process each company supports, and
- details of the technical infrastructure for supporting the different actions such a role is intending to perform.

Once the two CPPs are ready, the two companies may publish them in the ebXML Registry using the Registry interface described in [ebRS]. These CPPs are now persistent and searchable, making it possible for them to be referenced in any subsequent Collaboration Protocol Agreement (CPA).

The actual Collaboration Protocol Agreement used in a business exchange needs to be negotiated between the two organisation's Collaboration Protocol Profiles. The CPA is fully described in [ebCPP].

Each Large Enterprise now reviews the potential partner's CPP, in order to verify if it is actually possible to arrive at an agreement on how to conduct the technical exchange described by the Business Process model. This may involve verifying that the security enforcements on both sides are compatible, that the low-level protocols are the same and that the understanding of the respective role is clear.

Once the agreement is reached and an agreed upon version of the CPA is produced, the CPA can be used to configure the necessary "runtime" software that implements the electronic exchange. Each company configures its own copy of such software, in a way that is completely independent of the other. The CPA is the only agreement that is required for configuring the software and, by itself, ensures the interoperability of software developed independently.

The "runtime" software that each organisation configures may include the capabilities for the ebXML Message Services described in [ebMS]. Typically, this software may be shared by many different configurations at any one time.

At this point, the two companies are ready to exchange their first ebXML messages.

7.3 Large Enterprise to SME exchanges

A Large Enterprise, in the effort of rationalizing the procurement processes, plans to migrate towards ebXML for all their current commercial exchanges. This includes the exchanges with Small to Medium (SME) suppliers. Currently, these may depend on manual processes that vary between each supplier.

ebXML is chosen because:

- For the Large Enterprise it is consistent with the technology infrastructure used to manage the exchanges with other Large Enterprises
- For the SME supplier it is seen as an affordable way to engage in e-commerce and satisfy their larger customers without requiring large investments in technology infrastructure.

The definition of the commercial exchange and the modelling of the relevant ebXML Business Processes is contracted to a Consulting firm specialized in Business Process modelling.

The Consulting firm, after having analysed the practices within the Large Enterprise, defines the model for the commercial exchange governing the interactions with the SME suppliers. They then verify if similar models have already been defined in the ebXML

Registry. After having examined the details of existing commercial patterns and components, the Consulting firm may decide to make some modifications in order to account for the specificities of their commercial exchange to be modelled. This is identical to the processes followed by the Large Enterprises described in section 7.2 (above).

If required, the customised version of the Business Process and Information Model that have been identified may now be stored in the ebXML Registry, using the Registry interface described in [ebRS]. In this way, the ebXML Registry can function as a shared repository of information.

At this point, the activity of the Consulting firm terminates and the responsibility returns inside the Large Enterprise. Since it is anticipated that:

- The same Business Process model will govern the interaction with many suppliers
- The suppliers may not be interested in negotiating directly with the Large Enterprise (and vice versa)

The Large Enterprise then decides to:

- Prepare the CPP describing its own role in the commercial exchange. This CPP may reference the Business Process model defined by the Consulting firm. The Message Services part of the CPP may reference multiple delivery channels to offer the possibility of doing business with suppliers across a range of different technologies. For instance, some suppliers may prefer to use SMTP e-mail, others may prefer FTP or HTTP.
  The CPP is prepared following the specifications in [ebCPP].
- Register the CPP inside the ebXML Registry using the Registry interface described in [ebRS].
- Prepare one or more template CPPs describing the opposite role in the commercial exchange, i.e. the one played by the suppliers. These CPPs also reference the same Business Process model defined by the Consulting firm.
- These template CPPs have some “blanks” to be filled by the relevant suppliers with information that are unique to each supplier (name, endpoint address etc). These template CPPs are prepared following the specifications in [ebCPP].
- Prepare a Web Service on its own web site allowing a candidate partner to select one template and fill the required missing information. This could then automatically create a suitable CPA.

In situations like this, any Collaboration Protocol Agreement is virtually “imposed” by the Large Enterprise.

Since the small suppliers may not be able to build or configure their “runtime” software themselves, the Large Enterprise may prepare different copies of the runtime to be deployed at each supplier’s site.

7.4 Integrating commercial packages and in-house applications

TO BE COMPLETED

7.5 Adapting an eCommerce package to ebXML

ebXML is an important and innovative initiative which leverages and improves the experience gained through the years by technology and service providers that have specialized in developing e-commerce solutions.

Although, in many cases these solutions have adopted XML, they are generally based on proprietary frameworks.

It is envisaged that technology and service providers will make use of the ebXML specifications to make their products increasingly ebXML-compliant. These will not prevent customising and adding-value to these products and services. Rather it encourages building this added-value on open standards.

The degree of adoption will vary depending on the products. Probably adopting the ebXML Message Service [ebMS] would be a first step for many service providers, embracing the other components as demand drives them forward.

7.6 Building ebXML registries

TO BE COMPLETED

7.7 Developing ebXML CASE tools

In this scenario, a software developer wishes to provide CASE tools aimed at supporting the development methodology of an ebXML solution.

Since ebXML provides a comprehensive set of specifications covering the different phases of the modelling, definition and deployment of an e-commerce solution, CASE tools will be of great help in supporting the different phases of development.

It is envisaged that good CASE tools may further improve the adoption of ebXML by hiding the complexity of documenting specifications behind a graphical environment.

The modularity of the ebXML approach and of the ebXML specifications makes it possible for Software Developers to provide:

- specialized software tools that address a specific part of the specification. This is the case for Developers that are already present in specific domains (such as modelling, editors, code generators etc)
- integrated development environments (IDEs) that help a team in supporting the different phases of the modelling, development and deployment of an ebXML solution.

The following is a potential set of software tools that may be produced in the near future:

- **Messaging Services libraries**
  These libraries will need to implement the ebXML Message Service specifications described in [ebMS] and should account for the support of the ebXML Security architecture described in [secRISK].
  In addition, an understanding of the overall ebXML Architecture [ebTA] as well as the Collaboration Protocol Agreement [ebCPP] is important to correctly design the Message Service software layer.
  The libraries may be integrated in a coherent ebXML solution or may be used as a standalone message service layer.

  ebXML Business Process Editors
  The task of creating an ebXML Business Process may be complex. CASE tools allowing the definition and modification of a Business Process Specification Schema [ebBPSS] will be of great benefit.
  In this area, Software Developers should be familiar with the ebXML Business Process Methodology ([ebBPSS], [bpOVER], [bpWS] and [bpPROC]) as well as with the definitions and specifications of Core Components (used to define and build the actual format of messages exchanged within the business process).
  Some of these tools may also provide direct interfaces to ebXML Registry implementations [ebRS].

- **ebXML CPP/CPA Editors**
  The Collaboration Protocol Profile and Agreement [ebCPP] are a central component in the ebXML framework. They function as a glue between the technical infrastructure described by the Messaging Service [ebMS], the Security aspects [secRISK] and the business modelling provided by the Business Process Specification Schema [ebBPSS].
  The CPA contains the information that drives the configuration of a total ebXML solution.
  CASE tools allowing the creation and modification of CPPs and the composition of CPAs will be useful.
  In the area of composing a CPA, these tools may provide a significant aid to potential trading partners during the negotiation phase.
  Some of these tools may also provide direct interfaces to ebXML Registry implementations [ebRS].
- Core Components Editor and Browser.
  Core Components capture the essence of re-usable data definitions [ebCCD&A].

Core Components need to be instantiated in a context in order to be usable [ebCNTXT].
A tool that helps the analysts to browse existing Core Components, to compose them together in order to define the format of the XML messages that are exchanged between trading partners, and to properly define and apply the context rules would make the use of Core Components very easy and understandable to everybody.
Some of these tools may also provide direct interfaces to ebXML Registry implementations [ebRS].

8 References

[BL73] Bell, D.E. & LaPadula, L.J., "Secure Computer Systems: Mathematical Foundations and Model", Technical Report M74-244, The MITRE Corporation, Bedford, MA, May 1973.

[Bra97] Bradner, S., "Key words for use in RFCs to Indicate Requirement Level", BCP 14, RFC 2119, March 1997.

9 Disclaimer

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

Copyright Statement