UN/CEFACT

DRAFT

United Nations Centre for Trade Facilitation and Electronic Business

1 # UN/CEFACT – Core Components User's Guide

2

3 13 March 2004

Table of Contents

99   1.0 Status of this Document

100   This User Guide is being developed in accordance with the UN/CEFACT TMG
101   procedures for User Guides. This user guide is approved after completion of the TMG
102   review process that ended 1 April 2004.

103   This document contains information to guide in the interpretation or implementation of
104   the Core Components Technical Specification.

105   This version: Core Components User's Guide, Version 1.1 of 13 March 2004.

106 # 2.0 Overview

107 ## 2.1 Introduction

108 This User Guide illustrates the discovery and implementation of Core Components by
109 elaborating two real life examples in detail: the Boeing Part Ordering System and the
110 EAN.UCC Delivery Process for Fast Moving Consumer Goods (FMCG).

111 It should be used as a supplemental document to the ebXML Core Components Technical
112 Specification. This User Guide intends to explain the use of Core Components principles
113 through actual examples.

114 This User Guide shows how the employment of the Core Components methodology may
115 be used for analysing the needed information flows in cross-organisational processes and
116 how it can lead to information models and communication systems that are usable
117 internationally and cross-industry.

118 This User Guide should be read by management, responsible for the implementation of
119 information systems. End users, information managers and IT personnel may also find
120 the document helpful.

121 This document must be used in conjunction with the set of UN/CEFACT ebXML
122 specifications (see Appendix A for a list of references).

123 ## 2.2 Core Components in the Big Picture

124 In the early days of electronic business, systems were tailored to process proprietary data
125 between business partners; a lot of time was spent in getting the right data in and out of
126 systems.   The same data was redefined in different systems as the developer wished.
127 This created a nightmare for system integration and maintenance to match the ever
128 changing and growing requirements in the eBusiness environment.

129 Today, we have technology like XML and the Internet, which enables the exchange of
130 business data much easier, the same data can be processed across different systems on
131 different platforms. System interoperability is key for eBusiness success. The overhead
132 cost of data inconsistency needs to be improved.

133 ebXML Core Components enable standardising data across industries. Using
134 standardised data enables consistent data exchange from system to system and industry to
135 industry. The time requirements for interface development are reduced. Industry can
136 focus their time on improving business rather than worry about data flow.

137 By using Core Components, information is being aligned internationally and cross-
138 industry. Meaning, names, structures and definitions of information entities are set up in
139 a way that allows the use of it beyond the scope of the individual project defining them.
140 Investments in such projects are lasting and secure.

141 Results are being stored in internationally maintained registries. No project needs to start
142 from scratch, but instead should use the results of earlier projects in similar
143 environments. The Core Components methods allow, support and manage functional
144 deviations between those environments. This not only secures but also lowers the
145 investment needed when setting up an information system across organisational borders.

146   2.3 Where and When May Core Components Be Used

147   Core Components and Business Information Entities are used whenever business
148   processes cross-organisational borders. They define the information that is exchanged
149   between organisations semantically and structurally. Core Components are independent
150   of the syntax the information is cast in, they present an opportunity for information to be
151   transmitted in a variety of formats over any type of communication network.

152   Many technologies exist for exchanging information between automated systems.
153   Technologies may be embedded in integrated business information systems (like
154   Enterprise Resource Planning packages), they may be used in specific middleware or
155   workflow management systems or they may merely be employed to present information
156   through human interfaces to company employees. Core Components are technology
157   neutral. All mentioned technologies, and all usage of these technologies, may (and
158   should) use the Core Component methodology and definitions. This way investments in
159   information systems and in (internal) working procedures are secured, even when the
160   technology is upgraded.

161   Traditionally, structured information between companies is exchanged using Electronic
162   Data Interchange (EDI). Information that needs to be exchanged in the framework of a
163   business process is cast in a syntax (like EDIFACT or ANSI ASC.X12), packaged in
164   messages and transmitted using a communication network (like Internet). The
165   information to be exchanged can and in the future should be defined using the Core
166   Component methodology, and registered for re-use using an ebXML registry.

167   Using the standard eXtensible Markup Language (XML) of the World Wide Web
168   Consortium (W3C) more advanced systems can use the same Core Component
169   definitions. XML is more widely adopted by soft- and middleware vendors. XML can
170   even be interpreted by browsers that are used to present information to end-users. So
171   communication based on Core Components is not limited to application-to-application
172   systems, but can also be used in application-to-human communication that crosses
173   organisational borders. The illustrations in Section 4 show how the syntax neutral core
174   components can be used in a syntax specific format, such as XML or EDIFACT.

175   XML messages may also be used in information presentation (webforms-like) systems,
176   and in webservices that are offered commercially to either application systems or human
177   users. The information exchanged in the request for a webservice, and in the response
178   given by the service may and should be defined according to the Core Component
179   methodology. That ensures consistency of information semantics and structure among
180   and between webservices and the client applications.

181   Summarising, Core Components are being deployed whenever information is exchanged
182   between information systems of different organisations, regardless of the technology
183   used.

184

185   3.0 Core Component Identification

186   3.1 How is Information Being Modelled in a Class Diagram?

187   There exist many ways to model or structure information that is being stored or
188   exchanged. Core Components are based on Class Diagrams of the Unified Modeling
189   Language (UML) to model information required in a business collaboration. A Class
190   diagram shows object classes, their properties and their relationships. Object classes are
191   the categories of the "things" that are accessed, inspected, manipulated, produced, and
192   worked on in business operations, like products, agreements, parties and events. Object
193   Classes can be tangible or intangible. A Person is a tangible object: "it is of flesh and
194   blood". An Address is an intangible object: one cannot touch an address, it only exists as
195   a piece of information related to a location.

196   Class diagrams show object classes as boxes with (among other things) their names and
197   their properties (i.e., attributes).

198

Person	Work Address	Address
Person ID: Identifier First Name: Text Last Name: Text	Home Address	Street: Text City: Text State/Province: Code
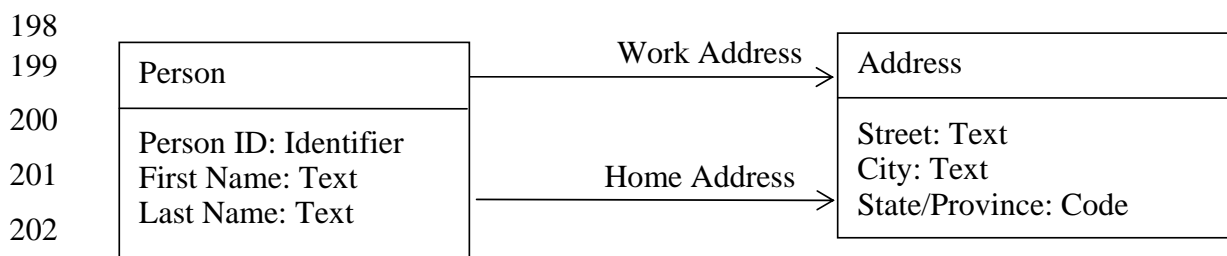
203   **Figure 3-1 Class diagram example**

204

205   In the example in Figure 3-1 both Person and Address are object classes. Person has five
206   properties: Person ID, First Name, Last Name, Work Address and Home Address.
207   Address has three properties: Street, City and State/Province.

208   An Object Class can be represented as a box in which the top compartment contains the
209   Object Class name and the bottom compartment contains the properties that are
210   attributes. The Data Type (kind of information) associated with each attribute is indicated
211   next to each property separated from it by a colon.

212   Associations between Object Classes are indicated by drawing a line between the object
213   classes. If the association means that one object class is the property of another object
214   class (an address is a property of a person) an arrow point is drawn at the side of the
215   object class that represents the property (Address).

216   3.2 Introduction to Core Components

217   Core Components (CC) are the (standardised) data elements that are used for constructing
218   (electronic) business documents. Data is the core of any business communication. The
219   ability to define data well is crucial to the success of electronic business.
220   The Core Component Technical Specification provides guidelines in identifying,
221   defining, and naming of data elements. Core Components are in fact the generic
222   representations of information on UML object classes. Because UML class diagrams
223   have four categories of elements, there are four categories of core components:

224 • Aggregate Core Components (ACC), that represent Object Classes;

225 • Basic Core Components (BCC), that represent simple properties of Object Classes;

226 • Association Core Components (ASCC), that represent relations between Object
227 Classes, where one Object Class is the (complex) property of another Object Class;

228 • Core Component Types (CCT), that define the type of information that a Basic Core
229 Component may contain, like text, a number or a date.

230 Taking as an example the class diagram in Figure 3-1, both *Person* and *Address* are
231 representations of Aggregate Core Components. *Person ID*, *First Name*, *Last Name*,
232 *Street*, *City* and *State/Province* are Basic Core Components. *Work Address* and *Home*
233 *Address* are Association Core Components (see Figure 3-2).

234 Each Aggregate Core Component, Basic Core Component and Association Core
235 Component is given a unique name, under which the Core Component can be found in a
236 registry or dictionary. This name is therefore called a "Dictionary Entry Name". The
237 Dictionary Entry Name consists in principle of three parts or "terms": the object class
238 term (the name of the object class), the property term (the property the core component is
239 representing) and the representation term (the name of the data type that is derived from
240 the core component type). The conventions for constructing the dictionary entry name are
241 described in detail in Section 3.7.

242

Person.	Person. Work.	Address.
Person. Person. First Name. Person. Last Name.	Person. Home.	Address. Street. Address. City. Address. State Province.
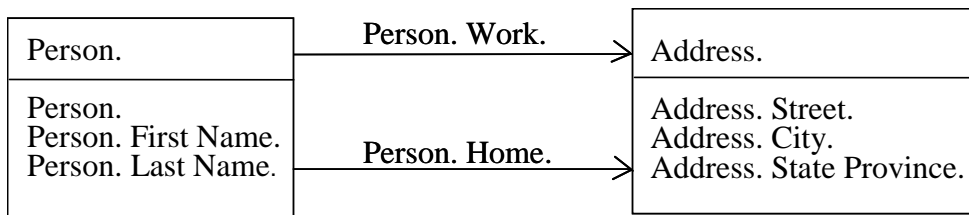
243
244
245 **Figure 3-2 Dictionary Entry Names**

246 Each core component is also given a definition, which describes the semantics (the
247 meaning) of the Core Component. Other attributes of core components are a unique
248 identifier (a unique meaningless number or string) and a number of "business terms" or
249 synonyms. Business terms are names under which the Core Component is known in some
250 business communities. Business terms do not need to be unique.

251 To understand how data is standardized to form Core Components, it is best to walk
252 through an example. Let us consider the business term name 'Charge Card Expiration
253 Date'. First we analyze the data and give it a definition, then, based on the definition, we
254 identify the data's object class, property term, and representation term as follows:

255   Definition: The expiration date of a payment card that is
256   associated with an account.

257   Object Class: Payment Card

258	Property Term:	Expiration Date
259	Representation Term:	Date

260 The description represents the semantically unique business meaning of the core
261 component in a complete and unambiguous way. The sentences in the description must
262 be clear and concise.

263 Furthermore, the description should:

264   a) be unique (within any data dictionary in which it appears)

265   b) be stated in the singular

266   c) state what the concept is, not only what it is not

267   d) be stated as a descriptive phrase or sentence(s)

268   e) contain only commonly understood abbreviations

269   f) be expressed without embedding definitions of other data elements or underlying
270   concepts

271 These rules were taken from ISO 11179-4 (Rules and guidelines for the formulation of
272 data definitions).

273 The dictionary entry name is derived from the description. This means that the
274 expressions of a dictionary entry name must be included in the description. Any
275 abbreviations or acronyms used in the dictionary entry name must be described in the
276 description.

277 After the data is analysed and classified, concatenating the Object Class, Property Term,
278 and Representation Term can generate the Dictionary Entry Name. In the "Charge Card
279 Expiration Date" example, the Core Component name is "Payment Card. Expiration.
280 Date" (see Section 3.7 for naming and truncation rules).

281

282

283

Payment Card
Expiration Date: Date

284

285
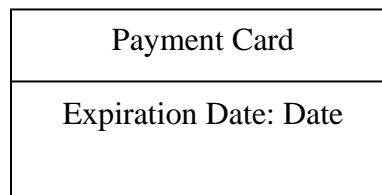
286 **Figure 3-3 Class diagram**

287

288 **3.3 Introduction to Core Component Types and Data Types**

289 An important element in the core component construct is the Core Component Type
290 (CCT). Each Basic Core Component is of a Core Component Type.

291 Defined are ten Core Components Types. They are listed in table 3-1.

292 The Core Component Types come with some extra features, called supplementary
293 components, e.g. amounts have a supplementary component that is used to define the

294   currency identifier. So the currency is implied by the Core Component Type, and does
295   not need to be a separate property in the Class Diagram. The table below shows the
296   supplementary components belonging to the ten Core Component Types.

297

CCT	Explanation	SupplementaryComponents
Amount. Type	Monetary amounts	Amount Currency. Identifier Amount Currency. Code List Version. Identifier
Binary Object. Type	Binary objects like pictures or sounds	Binary. Format. Text Binary Object. Mime. Code Binary Object. Encoding. Code Binary Object Character set. Code Binary Object. Uniform Resource. Identifier Binary Object Filename. Text
Code. Type	Codes	Code List. Identifier Code List. Agency. Identifier Code List. Agency Name. Text Code List. Name. Text Code List. Version. Identifier Code. Name. Text Language. Identifier Code List. Uniform Resource. Identifier Code List Scheme. Uniform Resource. Identifier
Date Time. Type	Dates, times or combinations of date and time.	Date Time. Format. Text
Identifier. Type	Identifiers	Identification Scheme. Identifier Identification Scheme. Name. Text Identification Scheme Agency. Identifier Identification Scheme. Agency Name. Text Identification Scheme. Version. Identifier Identification Scheme Data. Uniform Resource. Identifier Identification Scheme. Uniform Resource. Identifier
Indicator. Type	Yes/no, on/off, present/not present kind of indication	Indicator. Format. Text
Measure. Type	All kinds of measurements	Measure Unit. Code Measure Unit. Code List Version. Identifier
Numeric. Type	Numeric values.	Numeric. Format. Text

CCT	Explanation	SupplementaryComponents
Quantity. Type	Countable quantities	Quantity. Unit. Code
		Quantity Unit. Code List. Identifier
		Quantity Unit. Code List Agency. Identifier
		Quantity Unit. Code List Agency Name. Text
Text. Type	Text	Language. Identifier
		Language. Locale. Identifier

298 **Table 3-1 Core Component Types**

299

300 The values of the content and/or of the supplementary components can be restricted by
301 defining Data Types. For example the data type Country_ Code. Type is based on the
302 Core Component Type Code. Type, but restricts the code values to country codes only. A
303 Data Type can be used for multiple Core Components.

304 A Data Type defines the set of valid values that can be used for a particular Property of a
305 BBIE or BCC. It is defined by specifying restrictions on the CCT from which the Data
306 Type is derived. Where necessary, a Data Type restricts the set of valid values allowed
307 by the CCT on which it is based, by imposing restrictions on the Content Component
308 and/or Supplementary Component.

309 Each Data Type shall be given a Dictionary Entry Name and a Definition using the rules
310 specified in 3.7.2.1.
311

312 **3.4 Introduction to Business Information Entities**

313 The actual information exchanged in business collaborations is not defined as Core
314 Components, but as Business Information Entities (BIE) that reflect the business context.
315 For each Core Component category, there is a corresponding BIE category. So there is
316 the Aggregate Business Information Entity (ABIE) corresponding to the Aggregate Core
317 Component (ACC), the Association Business Information Entity (ASBIE) corresponding
318 to the Association Core Component (ASCC), and the Basic Business Information Entity
319 (BBIE) corresponding to the Basic Core Component (BCC). Each individual Business
320 Information Entity must be based on a corresponding Core Component.

321 Business Information Entities are derived from their corresponding Core Component by
322 applying context (see Section 3.5 for contexts) to the generic (or "context free") Core
323 Component. The context refines the Core Component. The definition is narrowed, the
324 number of properties may be less and the allowed values of the properties may be
325 restricted (e.g., by means of data typing).

326 Business Information Entities can be identified during Business Process Modeling. If,
327 when analyzing the business information, a Business Information Entity is found that has
328 no corresponding Core Component, a generic Core Component must be defined.
329

330 A Business Information Entity may be distinguished from its corresponding Core
331 Component by adding "qualifiers" to the Core Component name. Qualifiers can be added

332 to the Object Class names and to the property terms. For the example about personal
333 information, Business Information Entities may be specified for applications exchanging
334 personal information of a person living in the US, using the Core Components in Figure
335 3-2. The Agregate Core Component Person. Details, used in the context of the United
336 States, gets the qualifier US. Therefore the Aggregate Business Information Entity is
337 called US_ Person. Details. Figure 3-4 illustrates this example.

US_ Person. Details		US_ Address. Details
	US_ Person. Work. ─── US_ Address ──→	
US_ Person. Identification. US SSN_ Identifier US_ Person. First Name. Text US_ Person. Last Name. Text	US_ Person. Home. ─── US_ Address ──→	US_ Address. Street. Text US_ Address. City. Text US_ Address. State Province. US State_ Code
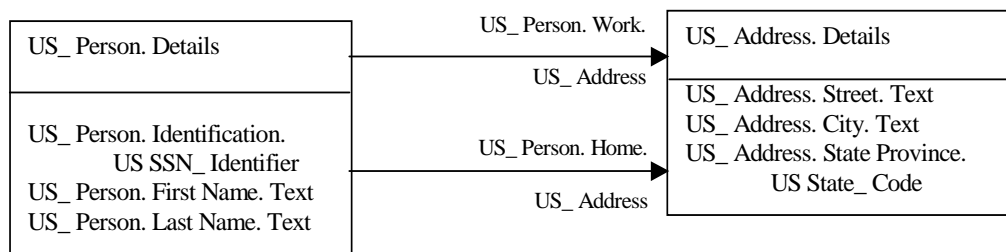
338
339 **Figure 3-4 Examples of Business Information Entities**

340

341 **3.5 What is 'Context'?**

342 The concept of Core Components is based on the assumption that there exist many
343 commonalities in the business information exchanged in different environments. Still
344 differences exist. To manage commonalities and differences in definition and structure of
345 business information the concept of Context was introduced.

346 The Context of a business relationship defines the environment in such detail, that the
347 specific Business Information Entities can be derived from the more generic Core
348 Components. Core Components are said to be valid in all contexts (they are context free),
349 whereas Business Information Entities, being derived from Core Components, are context
350 specific.

351 Context is defined using eight categories:

Context category	Description	Example
Business Process	The type of business process	Ordering Delivery
Product Classification	The type of products that the collaboration is about	Parts Consumer Goods
Industry Classification	The type of industry in which the collaboration takes place	Aerospace Fast Moving Consumer Goods (FmCG)
Geopolitical	The location of the partners	International

		Europe
Official constraints	The legislation that applies	US law EU law
Business Process Role	The role the partners play in the process	Buyer Seller
Supporting Role	Roles of relevant parties outside the collaboration	Shipping Agent
System Capabilities	Specific system requirements	EAN.UCC System SAP Intuit

352 By specifying the business context of a collaboration, the exact structure of the
353 information that is exchanged by means of Business Information Entities in business
354 documents (or otherwise) can be derived. The context is the filter that changes Core
355 Components into the Business Information Entities.

356 3.5.1 Use of Context in Core Component Normalization

357 Qualifiers that are used in the naming of Business Information Entities associate a
358 context specific semantic with the Core Component.   These qualifiers make up a
359 controlled vocabulary that can have unique semantic within a specific context. For
360 instance, "reserved" used as a qualifier has an order process context semantic, as well as a
361 travel industry context semantic. Rigor in the construction of the controlled vocabularies
362 for qualifiers is as important as rigor in the construction of the controlled vocabulary for
363 core components. A qualifier should be used consistently across the library of core
364 components. The qualifier context category, semantic, and control vocabulary source
365 should be noted.

366 3.6 Modeling the Business Collaboration

367 The Business Information Entity and Core Component discovery process, which is
368 described in detail in Section 3.8, starts with the Class diagram that shows the Business
369 Entities that are the subject of the business collaboration process. This high level Class
370 diagram does contain Object Classes and only a few attributes. It defines the scope and
371 boundaries of the information relating to the collaboration. The purpose of the high level
372 Class Diagram is *not* to model the business documents. So the high level Class Diagram
373 is a picture of the Object Classes the communication will be about. It does not model the
374 communication itself.

375 At this time, the Object Classes and their associations should be taken as much as
376 possible from the standardised and harmonised repository (if available).

377 The REA model is an excellent starting point for structuring the High Level Class
378 Diagram that depicts the relevant business entities in a collaboration. REA stands for
379 Resource, Event, and Agent. According to the REA model, a business collaboration can
380 be described as an *Event* of transferring *Resources* **from** a Trading Partner *("Agent")* **to**
381 another Trading Partner, resulting in a *dual Economic Event* of transferring *Economic*

382 *Resources* in the reverse direction. For example, a Supplier (Agent) transfers ownership
383 of an Automobile (Resource) to a Customer (Agent) in return for which the Customer
384 will provide Money (Resource) to the Supplier.

385 This basic REA structure is shown in Figure 3-5. The structure models the basic
386 semantics of a business collaboration.

387
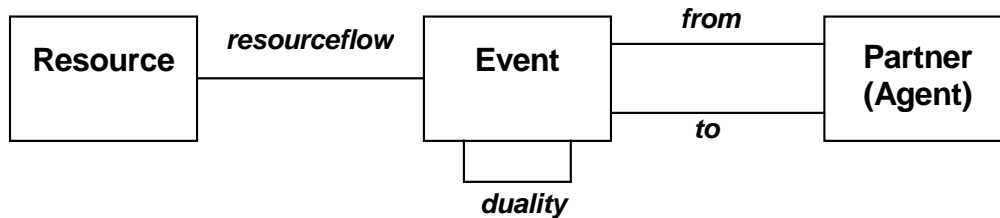
388

389 **Figure 3-5 Basic REA Ontology**

390
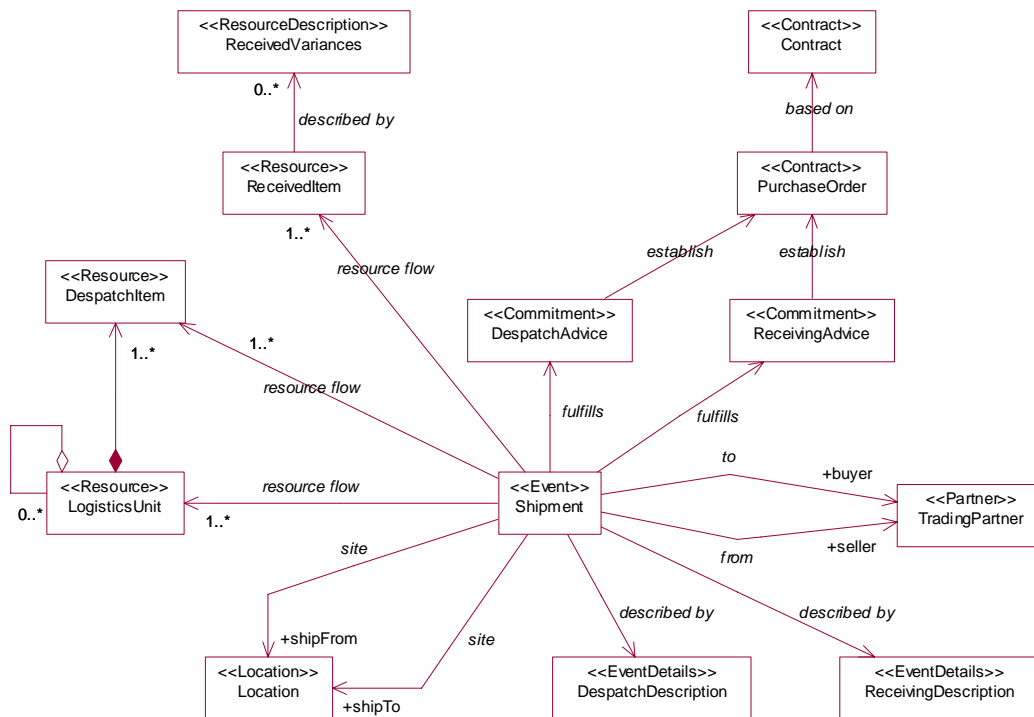
391

392 **Figure 3-6 The EAN.UCC example of a high level class diagram for Goods Delivery**

393 Following the REA approach, steps for modelling the business collaboration include: 1)
394 modelling a high-level class diagram capturing Object Classes in the collaboration
395 (Figure 3-6), 2) modelling transactional class diagrams involved in the collaboration
396 (Figure 3-7), and 3) combining transactional class diagrams to model a detail class
397 diagram (Figure 3-8). The following paragraphs describe this further. The structure of
398 the information to be exchanged is a subset of the structure that was modeled in the high

399 level Class diagram. By interviewing business experts the precise meaning of the
400 information entities is determined, including the Business Entity properties.

401 So for each Transaction or Document the information to be exchanged is defined in a
402 separate detailed Class Diagram, using Business Information Entities.

403
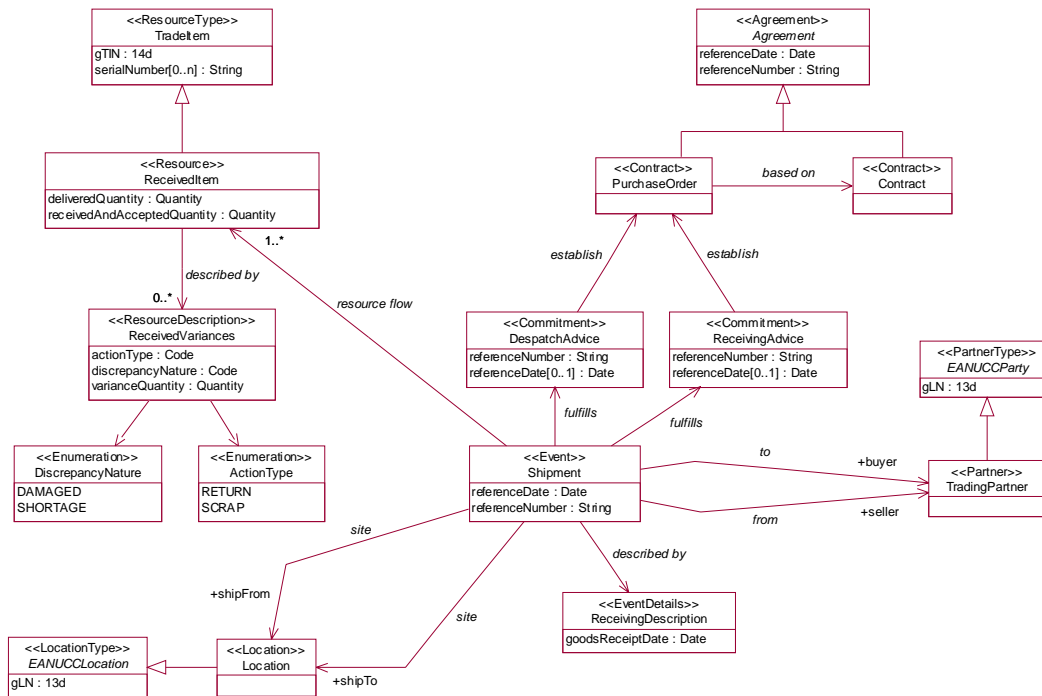
Figure 3-7 The EAN.UCC example of a transactional class diagram for Receive Advice

404

405 When the Transactional Class Diagrams are being developed, no reference should yet be
406 made to the registry or dictionary. The *actual* information requirement should be
407 modelled, not all information that possibly might be needed. The high level Class
408 Diagram only serves to offer structure, it should not be used as an inspiration to include
409 information in documents to be exchanged that is probably not needed.

410 After all Transactional Class Diagrams in the Collaboration have been modeled, the
411 Diagrams are combined (but without the Document Object Classes) into the overall
412 detailed Class Diagram (Figure 3-8) that contains *all* information that is exchanged
413 within the collaboration, and *only* the information that is being exchanged. This diagram
414 is input to the Business Information Entity and Core Component discovery process. The
415 output of that process leads to an update of the overall detailed Class Diagram with the
416 proper names of the Business Information Entities that were discovered.

417
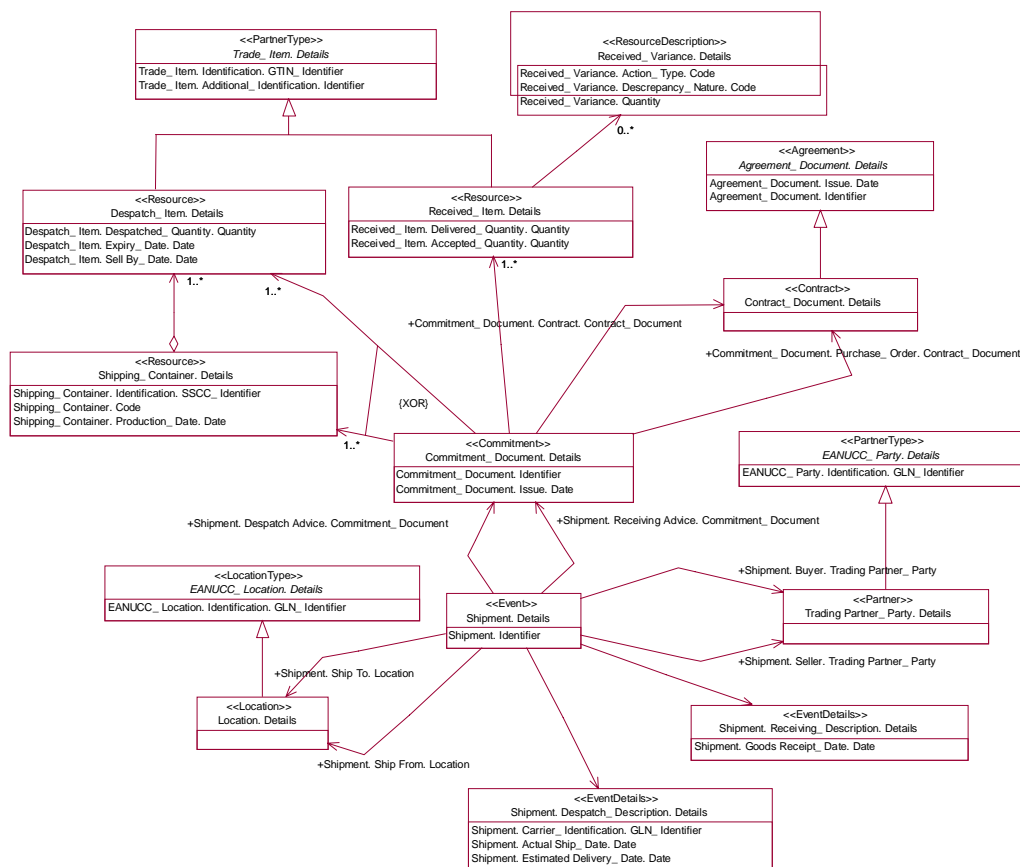
Figure 3-8 The EAN.UCC example of an overall detailed class diagram for Goods Delivery

Summarising the steps to follow when discovering Core Components:

1. Determine the scope and the boundaries of the information to be exchanged in the business process

2. Draw a high level Class Diagram, using the existing object class associations in the ebXML registry

3. For each transaction, define a subset from the high level Class Diagram

4. Investigate what detailed information needs to be exchanged in the transaction

5. Look up in the registry which Core Components and Business Information Entities fulfil these information requirements

6. Reuse where applicable existing Core Components and Business Information Entities.

7. Define where necessary new Business Information Entities and submit them for inclusion in the registry

8. Draw per transaction a detailed transactional Class Diagram

9. Combine the transactional Class Diagrams into an overall detailed Class Diagram.

434 Discovery of Core Components is defined and expanded upon later in this document in
435 Section 3.8 and illustrated in the examples of Boeing and EAN.UCC in Section 3.

436 **3.7 Naming Rules for Core Components and Business Information Entities**

437 **3.7.1 Introduction**

438 The names for Core Components and Business Information Entities should adhere to a
439 set of rules. The dictionary entry name is derived from the description of the Core
440 Component or Business Information Entity.
441
442 The dictionary entry name is unique. The dictionary entry name must be in English,
443 preferably using the spelling in the Oxford English Dictionary. The dictionary entry
444 names must be clear and concise, and not contain any sequences of redundant words.

445 The individual names of the dictionary entry names must be singular, except when the
446 concept is specifically intended for plurals. The names of the dictionary entry names
447 should consist of letters only. The words in the names can be verbs, nouns, or adjectives.
448 Abbreviations and acronyms in the dictionary entry name can be used, however they
449 must be explained in the description.

450 A dictionary entry name in principle consists of a number of terms, that each may consist
451 of multiple words. Each word in a term is separated from the others by space character
452 ( ). Each word within a term must start with an uppercase letter.

453 **3.7.2 Dictionary Entry Names for Core Components (CCT, BCC, ACC and ASCC)**

454 The dictionary entry name of a Core Component consists of the following terms:

455 Object class term –The name of an object class.

456 Property term – Represents the property of the object class.

457 Representation term – Specifies the representation type of the component.

458 The terms in the dictionary entry name are separated by a period (.) and a space character
459 ( ).

460 **3.7.2.1 Dictionary Entry Names for Core Component Types and Data Types**

461 Each Core Component Type (CCT) has its own representation terms. The following table
462 is a list of primary and secondary representation terms for the Core Component Types. A
463 Core Component Type in the dictionary entry name is represented by its primary or by
464 one of its secondary representation terms.

Core Component Type	Primary Representation Term	Secondary Representation Terms
Amount. Type	Amount	
Binary Object. Type	Binary Object	Graphic, Picture, Sound, Video
Code. Type	Code	
Date Time. Type	Date Time	Date, Time

Core Component Type	Primary Representation Term	Secondary Representation Terms
Identifier. Type	Identifier	
Indicator. Type	Indicator	
Measure. Type	Measure	
Numeric. Type	Numeric	Value, Rate, Percent
Quantity. Type	Quantity	
Text. Type	Text	Name

465

466 The dictionary entry name of a Core Component Type consists of a primary
467 representation term, followed by a period, a space character, and the expression **Type**.

468 Example:

469 Representation term: **Date Time**

470 Term: **Type**

471

Date Time	●	**Type**
Representation Term		**Term**
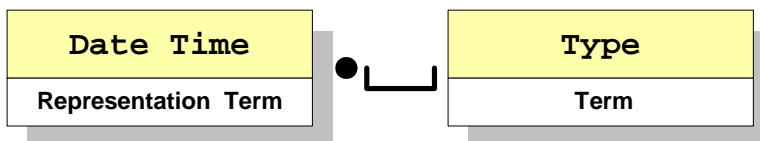
472

473

474 Dictionary Entry Name: **Date Time. Type**

475

476 More specific restrictions or distinctions for data types can be applied by adding a
477 qualifier term to the relevant secondary or primary representation term. The dictionary
478 entry name of the restricted data type then consists of a qualifier term, a primary or
479 secondary representation term, and the term **Type**.

480 An underscore (_) and a space character are placed between the qualifier term and the
481 representation term. A period (.) and a space character are placed between the
482 representation term and the term **Type**.

483 Example:

484 Qualifier term: **Language**

485 Representation term: **Code**

486 Term: **Type**

487

488
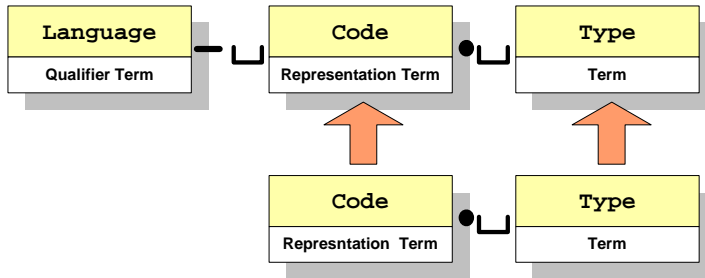
489

490   Dictionary Entry Name: **Language_ Code. Type**

491   **3.7.2.2 Dictionary Entry Names for Basic Core Components**

492   The dictionary entry name of a Basic Core Component (BCC) consists of an object class
493   term, a property term, and a representation term.

494   The representation term usually consists of a primary or secondary representation term.
495   In certain cases, data types can be used to restrict Core Component values. The
496   representation term for a data type consists of a qualifier and the representation term of
497   the Core Component Type the data type is based on. The qualifier in the representation
498   term is separated from the primary or secondary representation term of the Core
499   Component Type by an underscore and a space character.

500   If the dictionary entry name of a Basic Core Component consists of a representation term
501   that is equivalent to the last word(s) of the property term, then those last words can be
502   deleted from the property term in the dictionary entry name. This rule is called the
503   Truncation rule.

504

505   Example:

506   Object class term: **Goods**

507   Property term: **Delivery Date Time**

508   Representation term: **Date Time**

509

510

511   The dictionary entry name would be:

512   **Goods. Delivery Date Time. Date Time**

513

514   But becomes as a result of the truncation rule:

515   **Goods. Delivery. Date Time**

516

517   Another example of the application of the truncation rule would be:

518   **Party. Identification. Identifier**

519

520   That becomes:

521   **Party. Identifier**

522

3.7.2.3 Dictionary Entry Names for Aggregate Core Components

524   The Aggregate Core Components (ACC) consist only of an object class term and a
525   representation term.

526   The expression **Details** is used as the representation term.

527   Example:

528   Object class term: **Address**

529   Representation term: **Details**

Address		**Details**
Object Class Term		**Representation Term**
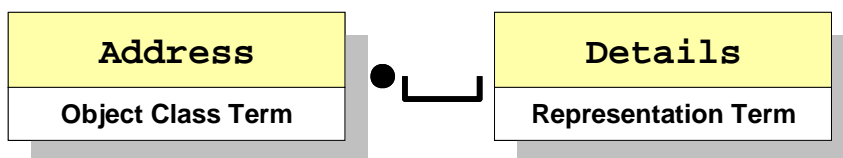
530

531   Dictionary Entry Name: **Address. Details**

3.7.2.4 Dictionary Entry Names for Association Core Components

533   Dictionary entry names for Association Core Components (ASCC) consist of the
534   following:

535   •   Object class term of the Aggregate Core Component that contains the Association
536   Core Component

537   •   Property term that represents the property of the Association Core Component

538   •   Another object class term of the Aggregate Core Component that describes the
539   structure of the Association Core Component.

540   The Truncation rule of dictionary entry names of Basic Core Components is also valid for
541   Association Core Component's.

542   Example:

543   Object class term: **Person**

544   Property term: **Residence**

545   Object class term: **Address**

546

Person		Residence		Address
Object Class Term		Property Term		Object Class Term
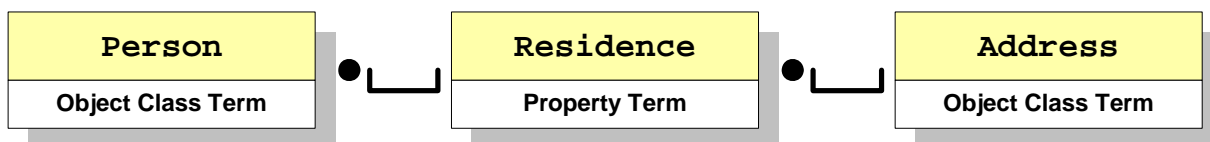
547

548 Dictionary Entry Name: **Person. Residence. Address**

549

3.7.3 Dictionary Entry Names for Business Information Entities (BBIE, ABIE, ASBIE)

552 The dictionary entry name for Business Information Enities also consists of an object
553 class term, a property term, and a representation term, but in addition may contain
554 qualifier terms that qualify the object class term or the property term to define the
555 Business Information Entity in a specific business context.

556 The qualifier term is placed before the object class term or property term. An underscore
557 (_) and a space character ( ) separate the qualifier term from the object class term or
558 property term.

559 Multiple qualifier terms can be placed before an object class term or property term. Each
560 qualifier term is separated by an underscore and a space character.

561 A different sequence of qualifier terms does not make the dictionary entry name unique.
562 For example **Stored_ Partial_ Goods. Details** and **Partial_ Stored_**
563 **Goods. Details** consist of the same qualifier terms, but in a different order. The two
564 expressions do have different semantics, but that does not make them unique.

3.7.3.1 Dictionary Entry Names for Basic Business Information Entities

566 The dictionary entry name of a Basic Business Information Entity (BBIE) consists of an
567 object class term and its qualifier terms, a property term and its qualifier terms, and
568 finally the Data Type qualifier and the appropriate representation term. The truncation
569 rule applies, but may not be used when either the property term or the representation term
570 is qualified.

571 The representation term represents the data type of the Basic Business Information
572 Entity. This data type may be further restricted and qualified. For the representation term
573 the same rules apply as for Basic Core Components.

574 Example:

575 Qualifier term: **Partial**

576 Object class term: **Cost**

577 Qualifier term: **Period**

578 Property term: **Total Amount**

579 Representation term: **Amount**

580

581

Partial	Cost	Period	Total Amount	Amount
Qualifier Term	Object Class Term	Qualifier Term	Property Term	Representation Term

Cost	Total Amount	Amount
Object Class Term	Property Term	Representation Term
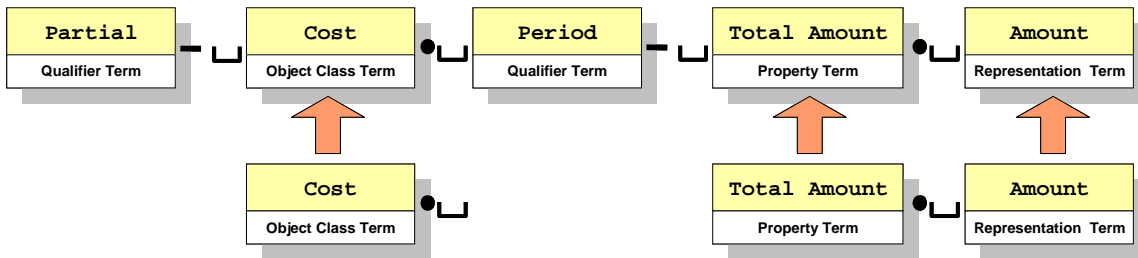
582

583

584 Dictionary Entry Name:
585 **Partial_ Cost. Period_ Total Amount. Amount**

586

587 An example of a BBIE in which the representation term is qualified with a Data Type
588 qualifier is:
589 **Despatch_ Shipment Information. Carrier_ Identification. GLN_ Identifier**

590

591 **3.7.3.2 Dictionary Entry Names for Aggregate Business Information Entities**

592 The dictionary entry name of an Aggregate Business Information Entity (ABIE) consists
593 of an object class term and its qualifier terms and the appropriate representation term,
594 which is indicated by **Details**.

595 The object class term and representation term are copied exactly from the corresponding
596 Aggregate Core Component, on which the Aggregate Business Information Entity is
597 based.

598 Example:

599 Qualifier term:　　　**Temporary**

600 Object class term:　　**Address**

601 Representation term:　**Details**

602

Temporary	Adress	Details
Qualifier Term	Object Class Term	Representation Term

Address	Details
Object Class Term	Representation Term
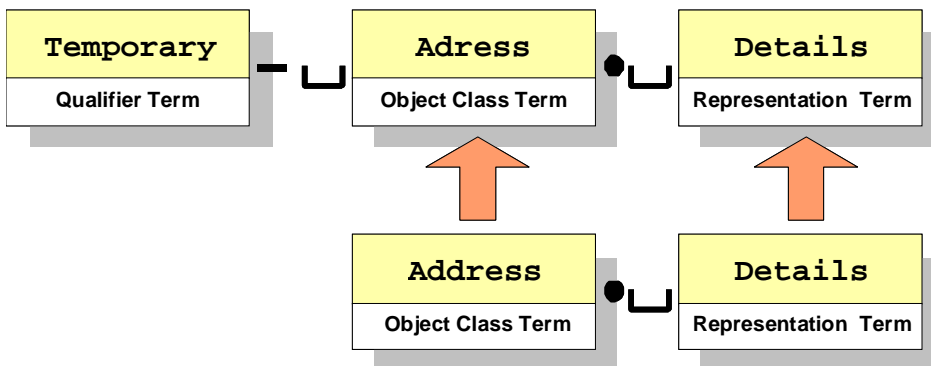
603

604 Dictionary Entry Name: **Temporary_ Address. Details**

605 **3.7.3.3 Dictionary Entry Names for Association Business Information Entities**

606 The dictionary entry name of an Association Business Information Entity (ASBIE)
607 consists of the following:

608 • Object class term and its qualifier terms

609 • Property term and its qualifier terms

610 • Another object class term of the Aggregate Business Information Entity that describes
611 the structure

612 Association Business Information Entities are always based on Association Core
613 Components.

614 The object class term, the property term, and the second object class term and
615 representation term are copied exactly from the corresponding Association Core
616 Component, on which the Association Business Information Entity is based.

617 The dictionary entry name has the following structure:

618 Qualifier term: **Important**

619 Object class term: **Person**

620 Qualifier term: **Temporary**

621 Property term: **Residence**

622 Object class term: **Address**

623
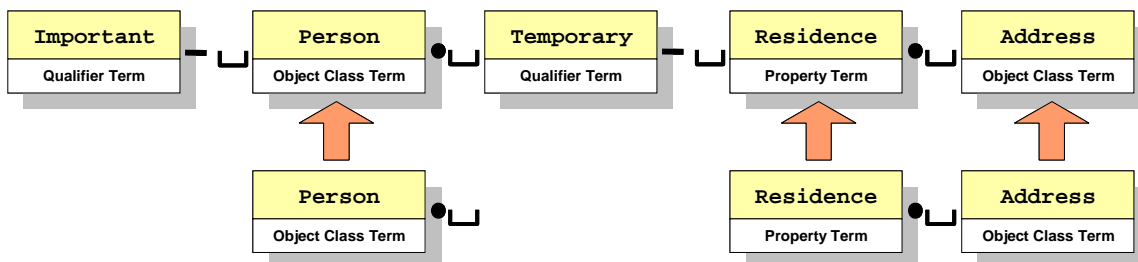
624
625
626 Dictionary Entry Name:
627 **Important_ Person. Temporary_ Residence. Address**

628 **3.7.4 Business Terms**

629 A business term represents a synonym of a Core Component or Business Information
630 Entity. Various business terms can exist for different Core Components and Business
631 Information Entities. The business term can be the preferred everyday business or
632 industry term. A Core Component can contain multiple business terms.

633 The business terms need not be based on any naming rule.

634 **3.8 Discovery of Core Components**

635 Discovery and design are a series of steps that utilise the business process definitions and
636 result in standard business documents. The Core Components Technical Specification
637 (CCTS) outlines the discovery and design process at a high-level. This description is
638 supplemented and expanded upon in this User Guide, with inputs from the Core
639 Components Supplementary Documents (CCSD) team and other business process experts
640 and users.
641

642 **3.8.1 The Discovery Process**

643 A business process should be modeled using a standard approach, the UN/CEFACT
644 Modeling Methodology (UMM), with one of the results being a class diagram. The class
645 diagram shows the business information and inter-relationships.
646

647 The high-level steps from business process to Core Component discovery are:

648 1. Determine the scope and the boundaries of the information to be exchanged in the
649   business process

650 2. Draw a high level Class Diagram, using the existing object class associations in the
651   ebXML registry

652 3. For each transaction, define a subset from the high level Class Diagram

653 4. Investigate what detailed information needs to be exchanged in the transaction

654 5. Look in the registry for Core Components and Business Information Entities which
655   fulfil these information requirements

656 6. Reuse where applicable existing Core Components and Business Information Entities.

657 7. Define where necessary new Business Information Entities and Core Components and
658   submit them for inclusion in the registry

659 8. Draw per transaction a detailed transactional Class Diagram

660 9. Combine the transactional Class Diagrams into an overall detailed Class Diagram.

661 An explanation of steps 1-3 can be found in Sections 3.1 and 3.6. The search of the
662 registry/repository (3.8.3.1) is a process that may be re-used throughout these detailed
663 steps for discovery of each element.

664 **3.8.2 Detailed Core Component Identification Steps**

665 This section explains in detail the steps that should be taken in core component discovery
666 and development. The steps outlined are graphically represented in process flow
667 diagrams. Template examples of the resulting Business Information Entities and Core
668 Components in a spreadsheet are also included to show the progress in executing the
669 process steps. Additional details are defined to assist in this process where appropriate.

670 The Business Information Entities and Core Components that result from this process can
671 be documented in a spreadsheet prior to submission to the registration and harmonisation
672 process. It is recommended that a spreadsheet with the columns shown in the template

673 examples be used to capture the data during the discovery process to ensure that all data
674 needed is completed. The process steps are described in a logical manner, although it is
675 recognized that the step order can depend on the business information compiled, library
676 availability, and other business needs. The basic steps are:

677 • Identify detailed information
678 • Identify Business Information Entities
679 • Identify Core Components
680

3.8.2.1 Identify Detailed Information

682 The first step is to investigate and compile the relevant business information in the
683 context of the business process. Analyze each piece of data to determine if it is a Basic
684 Business Information Entity (BBIE), Aggregate Business Information Entity (ABIE) or
685 Association Business Information Entity (ASBIE).
686
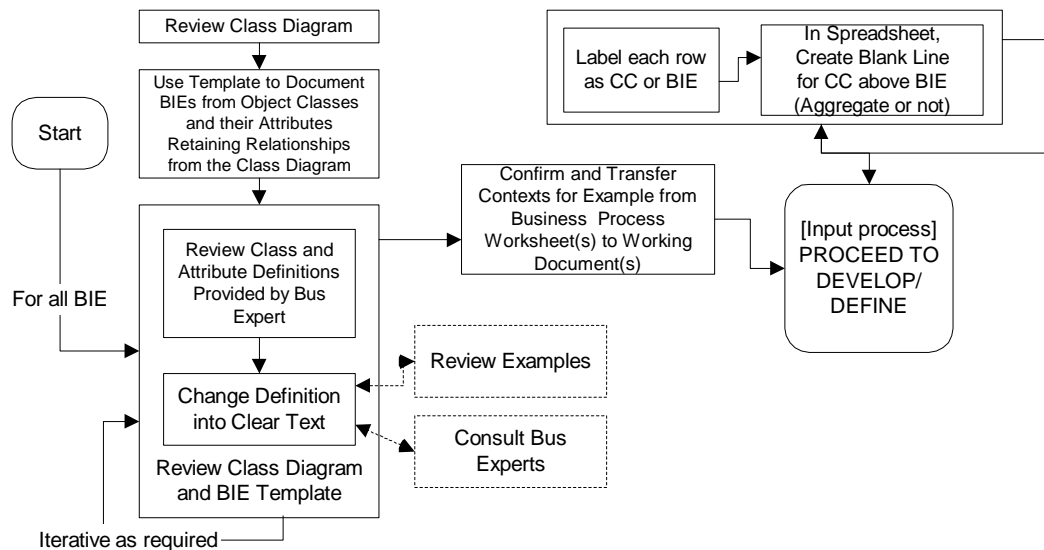
Figure 3-9 Review Class Diagram to Identify Detailed Information

688

689 The template below (Table 3-2) provides an example of a Basic Business Information
690 Entity, an Aggregate Business Information Entity, and an Association Business
691 Information Entity that were identified during the review of the following part of the
692 class diagram.
693
694
695
696
697
698

Seller		Seller	Part	
Identifier			Part Number	

699

700

Business Term	Object Class Qualifier	Object Class	Property Term Qualifier	Property Term	Data Type Qualifier	Representation Term	Dictionary Entry Name	ACC/BCC/ABIE/BBIE/ASBIE/ASCC	Semantic Description	Comments
Part								ABIE	A subject part, assembly, kit or material.	
Part Number								BBIE	The manufacturer's, supplier's or industry standard identity for the subject part, assembly, kit or material.	
Seller								ASBIE	The seller of the part.	
Seller								ABIE	Party selling spare parts to a buyer.	

701

702 **Table 3-2**

703 **3.8.2.2 Refine Business Information Entities**

704 Once the detailed information has been collected in the spreadsheet, the next step is to
705 refine the definition and name of each BIE and to discover or define the CC's on which
706 to base the BIE. The diagram below shows the process for completing this step.

707

708
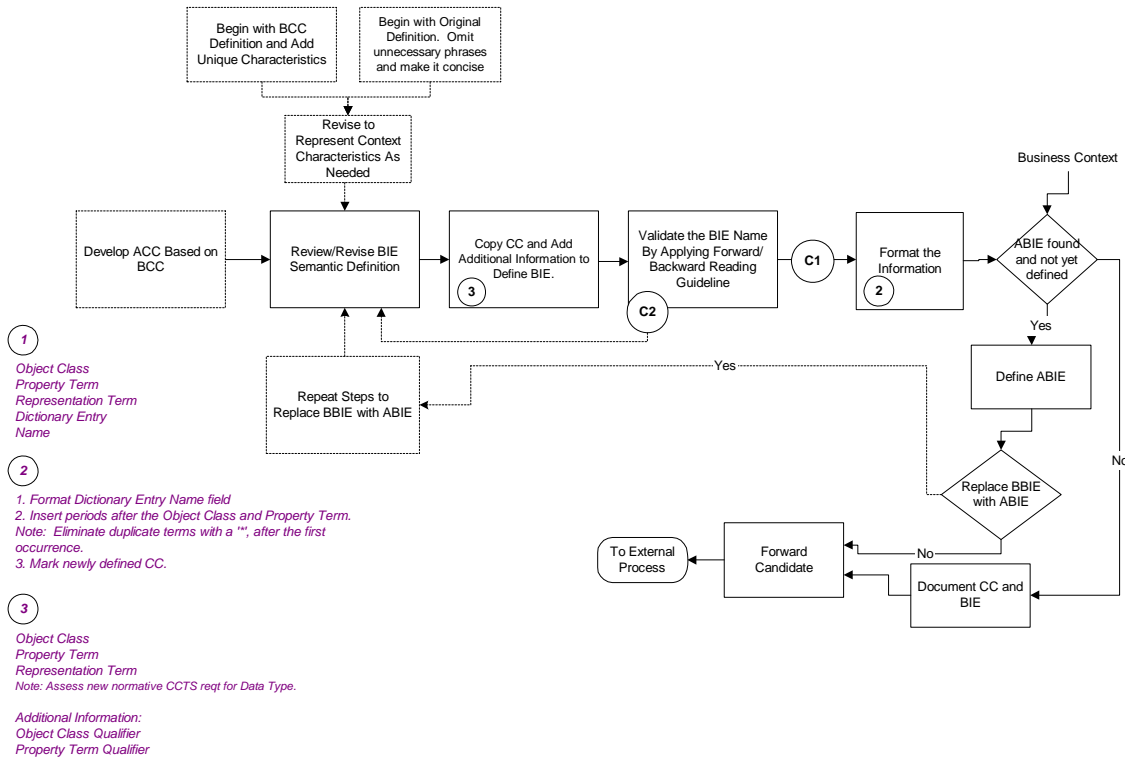
709
710 *Note: References are given to other diagrams in this section, with following alphabetical keys:*
711   *A: Create CC or BIE.*
712   *B: Use the Forward-Backward Reading Guideline (entry).*
713   *C1: Exit the guideline successfully.*
714   *C2: Exit the guideline and rework the CC or BIE in order to apply the guideline again .*
715

Figure 3-10 Refine BIE's and define CC's

717

718 This process primarily involves reviewing and revising the definitions of each BIE to
719 ensure that it has a unique semantic business meaning and that the context characteristics
720 are clear. Whenever possible the applicable Core Component Technical Specification
721 defined context parameters should be documented. The qualifier used in naming a BIE
722 associates a context semantic to a Core Component to create the BIE. If a CC exists on
723 which to base the BIE, one approach to defining the BIE is to start with the CC definition
724 and add any unique characteristics. The other approach is to take the extensive definition
725 of the BIE (business term) and delete phrases/terms that are not meaningful.
726

727 Once the definition is completed, then the name is created.   Some helpful hints in
728 completing the spreadsheet for either an ABIE or a BBIE or an ASBIE:
729

730 • If a CC has been found on which to base the BIE, then in a blank row above the
731   BIE, copy the Object Class and Representation Term of the CC into the
732   appropriate columns. If a BBIE, then also copy the Property Term.
733 • When naming an ASBIE the Object Class, Property Term and Representation
734   Term should be consistent with the ABIE on which it is based.
735 • Add any appropriate qualifiers for the Object Class and Property Term.

736   • If an ABIE, then concatenate Object Class Qualifier(s), Object Class, and
737   Representation Term.
738   • If a BBIE or ASBIE, then concatenate Object Class Qualifier(s), Object Class,
739   Property Term Qualifier(s), and Representation Term.
740   • An underscore followed by a space should be inserted between a qualifier and the
741   term. The Object Class and Property Term are followed by a period and a space.
742   • Eliminate duplicate terms per the truncation rule in 3.7.2.2.
743   • The name may then be validated by applying the Forward/Backward Reading
744   Guideline (see 3.8.3.2)
745
746 The template (Table 3-3) below shows BIE's that have been properly defined and named.
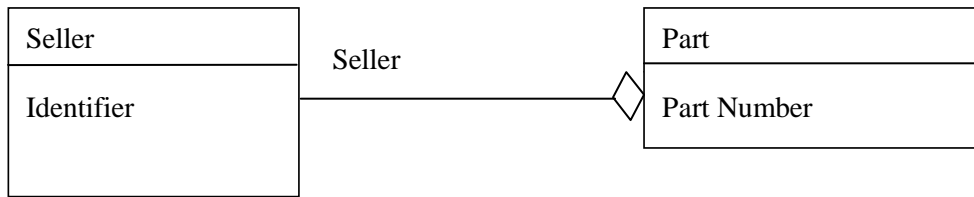747

Business Term	Object Class Qualifier	Object Class	Property Term Qualifier	Property Term	Data Type Qualifier	Representation Term	Dictionary Entry Name	ACC/BCC/ABIE/BBIE/ASBIE/ASCC	Semantic Description	Comments
Part	Spare Part	Item				Details	Spare Part_ Item. Details	ABIE	A subject part, assembly, kit or material.	
Part Number	Spare Part	Item	Manufacturer	Identification		Identifier	Spare Part_ Item. Manufacturer _ Identification. Identifier	BBIE	Revise – The manufacturers identification of a spare part item	Was: The manufacturer's, supplier's or industry standard identity for the subject part, assembly, kit or material
Seller	Spare Part	Item	Spare Part	Seller	Spare Part	Seller	Spare Part_ Item. Spare Part_ Seller. Spare Part_ Seller	ASBIE	The seller of the part.	
Seller	Spare Part	Seller				Details	Spare Part_ Seller. Details	ABIE	Party selling spare parts to a buyer.	Merchandise Seller_Party. Details

748
749   **Table 3-3**

750 3.8.2.3 Identify and Create Core Components

751 If no existing CC's were found during the initial search of the registry/repository, then
752 new CC's need to be created for the BIE's that were defined. The diagram below
753 identifies the steps that should be taken for Basic Core Components (BCC), Aggregate
754 Core Components (ACC), and Association Core Components (ASCC).

755

Create Candidate CC
(BCC or ACC)

A — BCC or ACC — ACC → Note ACC

BCC — ACC

Create Semantic Description of Entity

Develop ACC Based on BCC

Define Proposed CC
1

Mark Newly Defined CC

Validate the Name By Applying Forward/Backward Reading Guideline
B

C2   C1

Format the Information
2

Forward as Candidate

To External Process
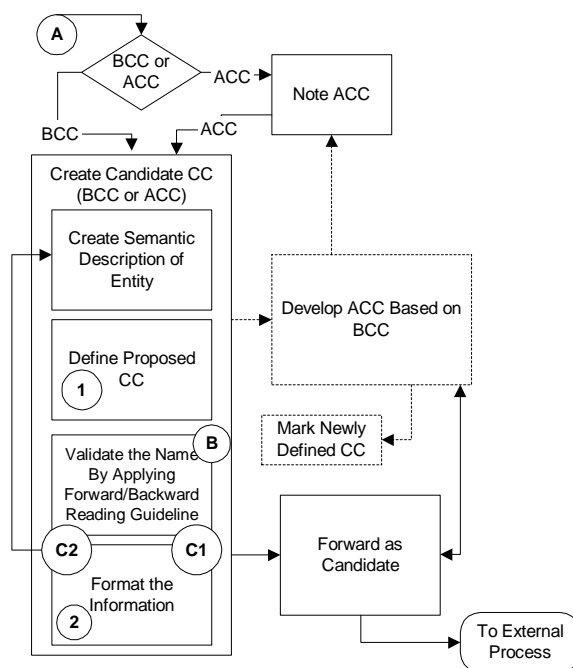
1

Object Class
Property Term
Representation Term
Dictionary Entry
Name

2

1. Format Dictionary Entry Name field
2. Insert periods after the Object Class and Property Term.
Note: Eliminate duplicate terms with a '', after the first occurrence.*
3. Mark newly defined CC.

Note: Alphabetical letters link to other diagrams.

756
757 *Note: References are given to other diagrams in this section, with following alphabetical keys:*
758 *A: Create CC or BIE.*
759 *B: Use the Forward-Backward Reading Guideline (entry).*
760 *C1: Exit the guideline successfully.*
761 *C2: Exit the guideline and rework the CC or BIE in order to apply the guideline again.*
762 **Figure 3-11: Create CC's**

763

764 The process of creating and naming CC's is similar to that of a BIE except that the goal is
765 to define reusable CC's that can then be used to create additional BIE's by applying
766 context.

767

768 The definition should be developed first and then the name is extracted from the
769 definition. Some helpful hints in completing the spreadsheet for either an ACC or a BCC
770 or an ASCC:

771 • After filling in the definition in the spreadsheet, then add the Object Class,
772   Property Term and Representation Term for a BCC and an ASCC.
773 • If an ACC, then only the Object Class and Representation Term columns are
774   completed.
775 • Concatenate the Object Class, Property Term (for BCC's and ASCC's) and
776   Representation Term to form the Dictionary Entry Name. A period and a space
777   should be inserted between each of the terms.
778 • Eliminate duplicate terms per the Truncation rule in 3.7.2.2.

779 • The name may then be validated by applying the Forward/Backward Reading
780 Guideline (see 3.8.3.2)
781
782 The template (Table 3-4) below gives examples of new CC's.
783
784

Business Term	Object Class Qualifier	Object Class	Property Term Qualifier	Property Term	Data Type Qualifier	Representation Term	Dictionary Entry Name	ACC/BCC/ABIE/BBIE/ASBIE/ASCC	Semantic Description	Comments
Part		Item				Details	Item. Details	ACC	An item of merchandise	
Part	Spare Part	Item				Details	Spare Part_ Item. Details	ABIE	A subject part, assembly, kit or material.	
Item		Item		Identification*		Identifier	Item. Identifier	BCC	The manufacturers identification of an item	
Part Number	Spare Part	Item	Manufacturer	Identification		Identifier	Spare Part_ Item. Manufacturer_ Identification. Identifier	BBIE	Revise – The manufacturers identification of a spare part item	Was: The manufacturer's, supplier's or industry standard identity for the subject part, assembly, kit or material
Part Number	Spare Part	Item	Manufacturer	Identification		Identifier	Spare Part_ Item. Manufacturer_ Identification. Identifier	BBIE	Revise – The manufacturers identification of a spare part item	Was: The manufacturer's, supplier's or industry standard identity for the subject part, assembly, kit or material
Seller		Item		Seller		Seller	Item. Seller	ASCC	The seller of the item.	
Seller	Spare	Item	Spare	Seller	Spare	Seller	Spare Part_	ASBIE	The seller of	

Part		Part		Part			Item. Spare Part_ Seller. Spare Part_ Seller		the part.	
Seller		Seller				Details	Seller. Details	ACC	Party selling merchandise to a buyer.	
Seller	Spare Part	Seller				Details	Spare Part_ Seller. Details	ABIE	Party selling spare parts to a buyer.	Merchandise Seller_Party. Details

785
Table 3-4
786

787 ### 3.8.3 Processes Applicable to Multiple Steps

788 #### 3.8.3.1 Searching the Registry / Repository for Core Components

789 In step 5 the registry is searched on the Aggregate Business Information Entity/Aggregate
790 Core Component level. Searching starts once the relevant business information has been
791 compiled.
792

793 • Searching on ABIE level:

794 • Search the registry for an appropriate ABIE.

795 • If an ABIE is found that fully meets requirements, register re-use.

796 • If a similar ABIE is found that could meet the requirements with modification,
797 prepare a change request to submit to the harmonization and approval process.

798 • If no ABIE is found, search for an ACC that meets the business needs.

799 • If an ACC is found that fully meets requirements, register its re-use and create an
800 ABIE.

801 • If similar ACC is found that could meet the requirements with modification,
802 prepare a change request to submit to the harmonization and approval process.

803 • If no ACC is found, define and submit an ACC and ABIE that meet the business
804 needs.

805 • Suggestion - in searching the repository:

806 • Compare the Object Classes of the Class Diagram with the Object Class terms.

807 • Compare the Properties identified in the Class Diagram with known property terms
808 of BBIE's, BCC's, ASBIE's and ASCC's.

809
810
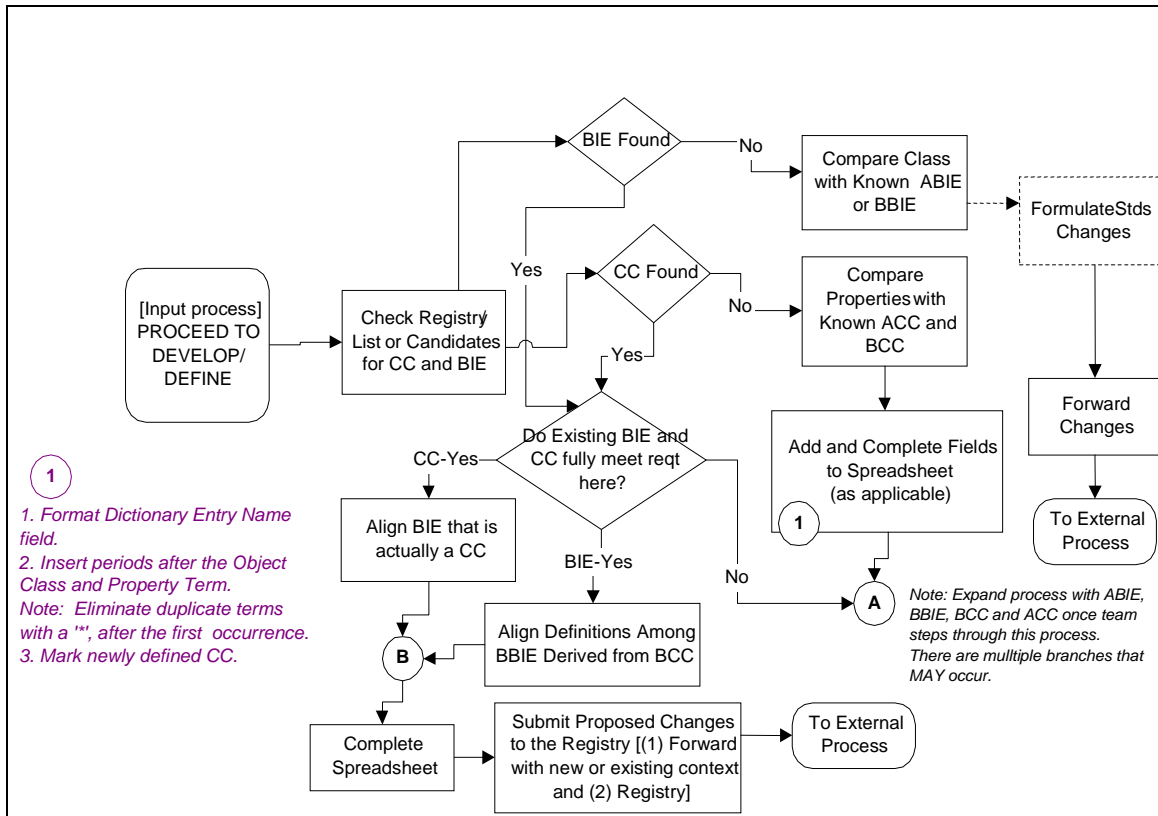
811

812   *Note: References are given to other diagrams in this section, with following alphabetical keys:*
813   *A: Create CC or BIE.*
814   *B: Use the Forward-Backward Reading Guideline (entry).*
815   *C1: Exit the guideline successfully.*
816   *C2: Exit the guideline and rework the CC or BIE in order to apply the guideline again.*

817   **Figure 3-12 Searching the Registry/Repository**

818

819   Following the search and discovery process, submissions should be prepared for the
820   harmonization and approval process.

821

822 **3.8.3.2 Forward/Backward Reading Guideline**

823 This guideline should be used to validate the name of each CC and BIE.

824
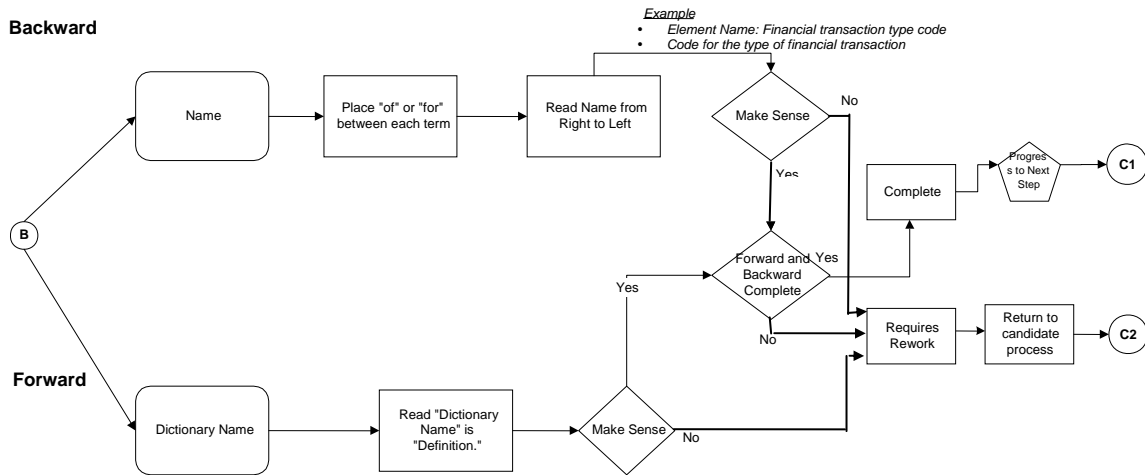
825

826 *Note: References are given to other diagrams in this section, with following alphabetical keys:*
827   *A: Create CC or BIE.*
828   *B: Use the Forward-Backward Reading Guideline (entry).*
829   *C1: Exit the guideline successfully*
830   *C2: Exit the guideline and rework the CC or BIE in order to apply the guideline again.*

831 **Figure 3-13 Forward/Backward Reading Guideline**

832 # 4. Examples

833 This User Guide contains two implementation examples of the Core Components
834 Technical Specification. These examples show how the guidelines and steps, as
835 elaborated in the previous chapters of this User Guide, may be applied in real business
836 situations.
837
838 Two independent teams have prepared the two examples teams. One example was
839 prepared by a team from Boeing company, the other by a team of EAN International /
840 Uniform Code Council. As the teams operated separately from each other, the approach
841 taken differs somewhat and the outcomes are different.
842
843 The examples are only meant as illustration. The resulting Business Information Entities
844 and Core Components have not been harmonised. The approaches were the interpretation
845 of the respective teams, and are not normative in any way.
846
847 Note: Due to concurrent development of this document and the UMM User's Guide,
848 there are differences in the diagrams, worksheets, etc.
849

850 **4.1 The Boeing Company Spare Parts Procurement Example**

851 The Boeing Spare Parts Procurement example is an implementation of the UN/CEFACT
852 Core Components Technical Specification. Traditionally, the airline industry has used
853 the Air Transport Association (ATA) standard in Electronic Interchange format to
854 describe this business process. In order to capture the business and data requirements of
855 this process for the purpose of discovering the core components, the UN/CEFACT
856 Modeling Methodology (UMM) was used.
857
858 The original Boeing example contains a number of use cases and the documents (BDV,
859 BRV, and BTV) to support the different use case processesbut for the purpose of
860 inclusion of an example in the User Guide, only some of the artefacts of the Place Order
861 Process are shown. Section 4.1.1 shows the Business Process Worksheet that captures
862 information to describe the business process. Section 4.1.2 shows the Business
863 Collaboration Protocol that represents the dynamics of the process and introduces the
864 different Business Entity States. Section 4.1.3 shows how Business Information is
865 derived from the analysis of the Business Entity States. Section 4.1.4 shows the dynamics
866 of one of the Business Transactions within the Business Collaboration Protocol. Section
867 4.1.5 shows the Business Information Model. Section 4.1.6 through 4.1.10 show the
868 discovery process of Business Information Entities. Section 4.1.11 through 4.1.15 show
869 syntax implementation examples in EDIFACT and XML.

870 **4.1.1 Business Requirements View (BRV) - Business Process Use Case Description**

871 One of these worksheets is filled out for each detail business process.

Form: Business Process	
Business Process Name	**Spare parts Ordering on-line.**
Description	1. **Parts Ordering System has identified that required spare parts should be ordered from the Order Management System.** 2. **Order Management System evaluates the order information and either acknowledges the order or rejects the order.** 3. **Order Management System notifies Parts Ordering System when the part is shipped by the supplier.**
Business Requirements	**Reference to the source requirements documents from Parts Ordering System**
Definition	Procure spare parts
Participants	• **Parts Ordering System** • **Order Management System**
Preconditions	**Customer identifies a need for a spare part. Parts Ordering System is the system for placing an order to procure this part. The Order Management System has links to the suppliers of this spare part.**
Begins When	**Parts Ordering System submits a spare parts purchase order transaction to the Order Management System.**
Ends When	**Order Management System sends a final shipped transaction to Parts Ordering System**
Exceptions	**none**
Postconditions	**Parts Ordering System received shipment notification from Order Management System.**
Supporting Business Collaborations and/or Business Processes	**TBD**
Lifecycle(s)	**TBD**

872

873 **4.1.2 Business Transaction View (BTV) – Business Collaboration Protocol**
874 **(Business Collaboration Object Flow Diagram)**
875
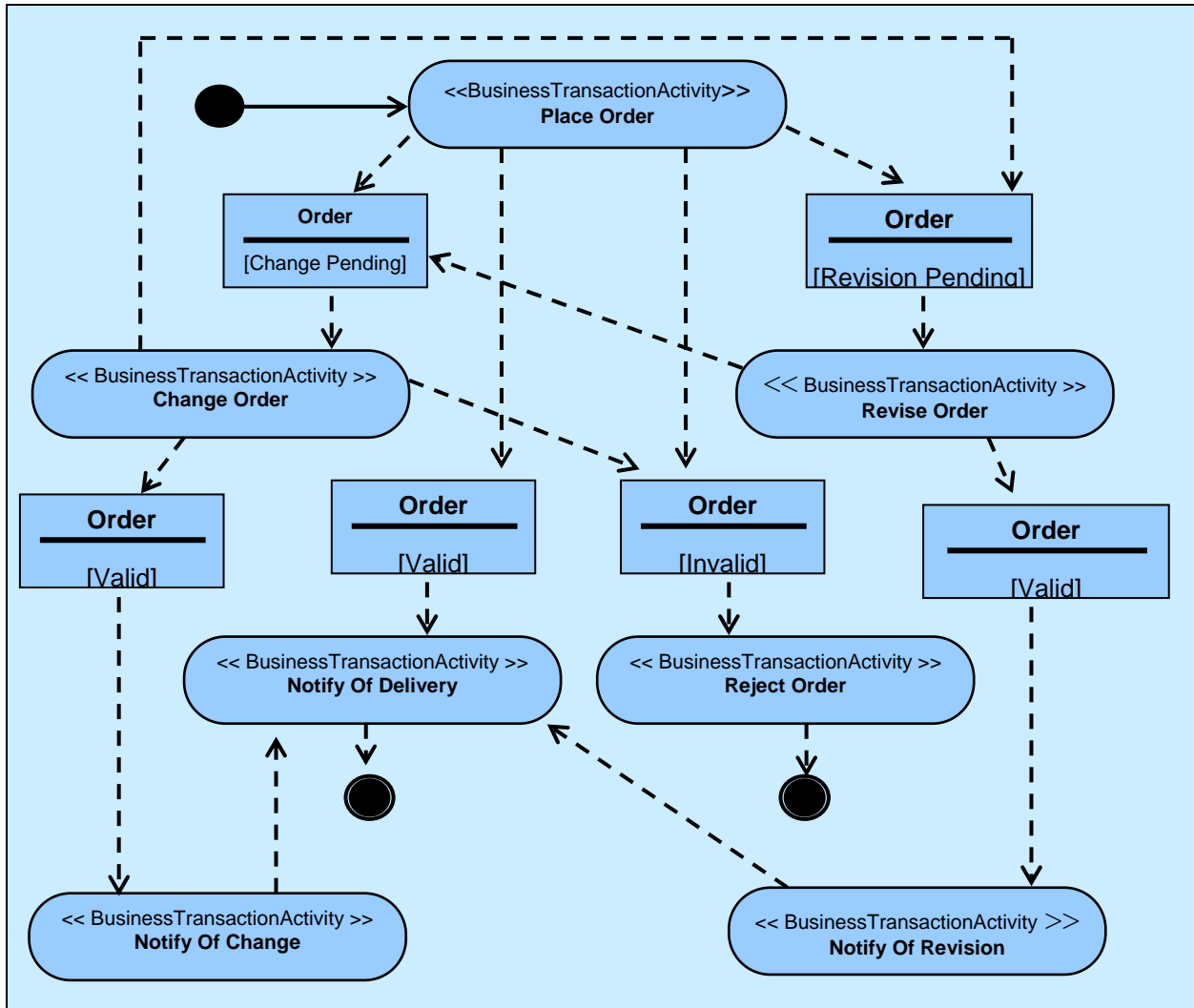
876 **Figure 4-1 Business Collaboration Object Flow Diagram**

877

878

879

880

881

882

883

884   **4.1.3 Business Transaction View (BTV) – Business Information**

885   The business information must reference all the business entities changing state as a
886   result of the exchange. For each of these business entities the minimum information re-
887   quired to change the state must be identified. In this case different states of the "Order"-
888   entity have been analyzed and produced the "Business Information Worksheet" below.
889   This business information serves as input to the discovery of Business Information
890   Entities in Section 4.1.9.
891
892
893   Describe each element or group of elements in the document. Logically related elements
894   can be placed in separate forms (For example, a document may have logically three parts,
895   a header**,** body, and summary. The body may have further logical partitioning.). Possible
896   values for Occurs include: 1 (one instance), 0..1 (zero on one instance), 0..* (zero or more
897   instances), 1..* (one or more instances), or n..m (n to m instances where n is less than m).
898   Information "looping" is specified through appropriate occurs values. Possible values for
899   Data Type include primitive data types – such as integer, string, date-type – or a Form Id
900   of another Content Description Form. Referencing another Content Description Form Id
901   represents information hierarchy and nesting. If you happen to know the name of a
902   reusable component from a domain library or the Catalogue of Core Components, then
903   you may reference it. The Semantic Description shall be stated in business terms and
904   shall be unambiguous.
905

Form: Business Information			
Business Information Name:	Purchase Order Placement		
Description:	Placement of a purchase order		
Business Information Characteristics			
Characteristics or Attributes	Name	Type	Constraint
	Command Code	String	1
	Part Number	String	1
	Unit Price Amount	Float	1
	Specified Shipping Method	String	0..1
Business Information Behavior			
Name:	Procure spare parts		
Lifecycle:	Order lifecycle		

906

907 **4.1.4 Business Transaction View (BTV) – Business Transaction (Business**
908 **Transaction Object Flow Diagram)**

909

Place Order

910
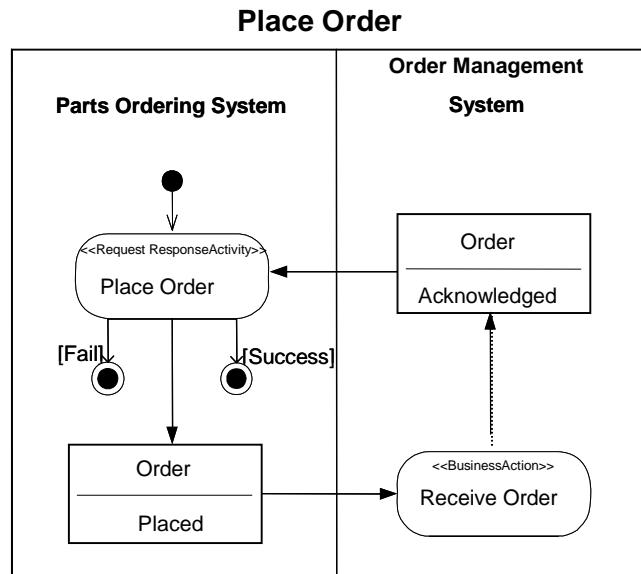
911 **Figure 4-2 Business Transaction Object Flow Diagram**

912
913

914 **4.1.5 Business Transaction View - Business Information Model**
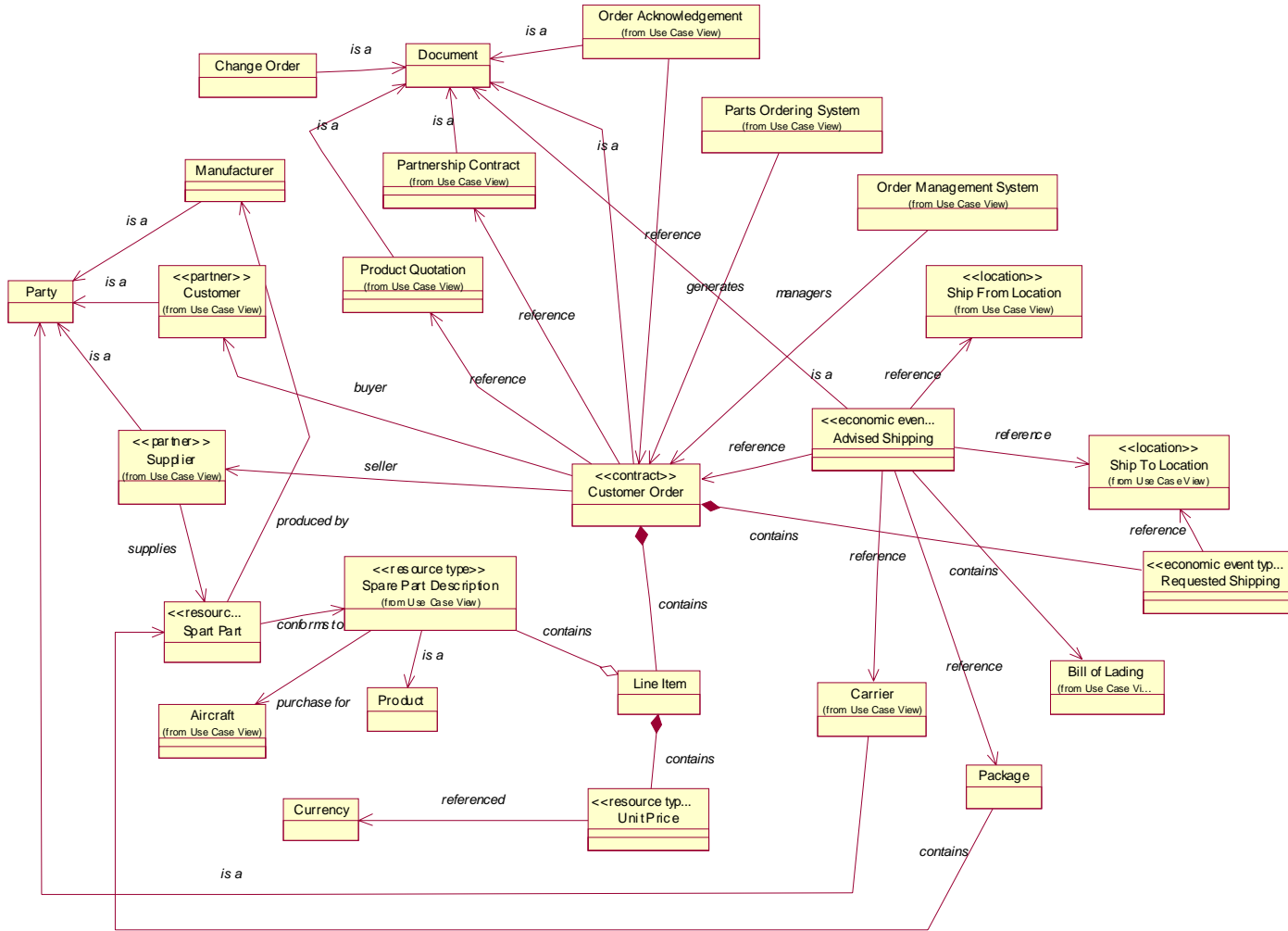
915 **Figure 4-3 Business Information Model**

4.1.6 Business Service View (BSV) - Sequence Diagram

Buyer place an order to the seller. The order is either accepted or rejected. If accepted, the seller will send an order acknowledgement document to the buyer, otherwise a rejection email will be sent. Sometimes the seller will make changes to the order, an order exception document will be sent to the buyer showing the changes. In the case the buyer make changes to the original order, a new order will be submited, the seller will sent an order exception document to the buyer noting the changes are received, serving like an acknowledgement function. If no change to the order, seller will send a shipment notification to the buyer and this completes the process of the order. At anytime, the buyer may choose to cancel the order, cancellation is handle similar to the order change, buyer will send a new order to the seller and an acknowledgement will be returned by the seller.

917   **Figure 4-4 Sequence Diagram**

918

4.1.7 Business Information Context

920   The Business Information Context form is provided as convenience for aggregating contextual
921   values that affect the analysis of business information. It is intended that this information be
922   obtained from other forms. For example, Industry Segment is specified in the Business
923   Reference Model form. If there is no value for an entry, enter NOT APPLICABLE or NONE
924   whichever is appropriate.

925

Form: Business Information Context	
Business Information Context Name	[Provide a name for the business information context. Typically this is the name of the associated business transaction. However, it may be appropriate to name it after the name of the associated business collaboration, or higher-level business process construct.]
Form Id:	
Business Process	**Spare Parts Order Fulfillment.**
Product Classification	**Aircraft Spare Parts**

Industry Classification	**Aerospace Manufacturing Procurement**
Geo-Political	**International**
Official Constraints	**Air Transport Association, Federal Aviation Administration**
Business Process Role	**Purchaser and Manufacturer of Aircraft Spare Parts**
Supporting Role	**Carrier**
System Capabilities	**Spare Parts Procurement System**

926 **4.1.8 Document Class View**
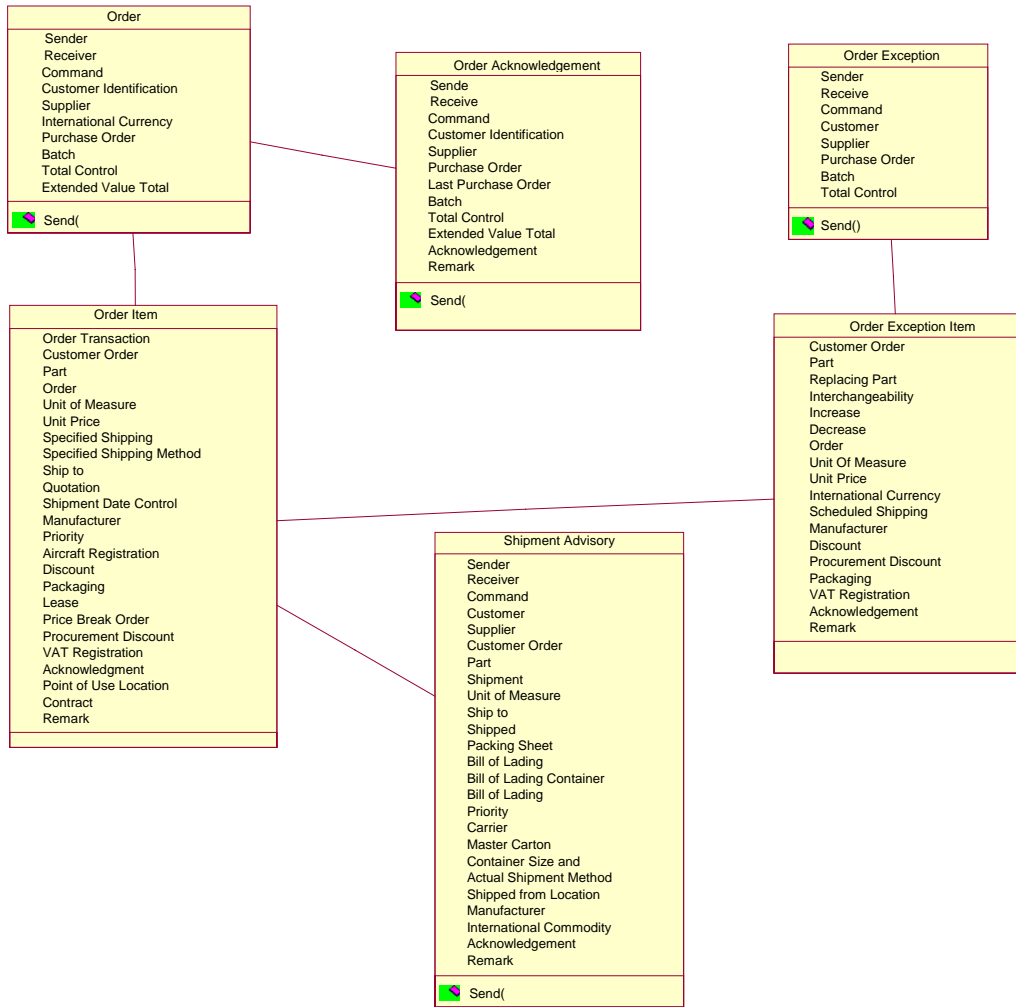
927
928 **Figure 4-5 Document Class View**

929
930

931 **4.1.9 Completing the Core Component Model**

932 Apply the core component identification process for each of the business term on the spreadsheet. The following tables
933 show the results of the data analysis. It is important to note that data that is outside of the business process boundary is
934 discarded (i.e. command code)

Business Term	Object Class Qualifier	Object Class.	Property Term Qualifier	Property Term.	Data Type Qualifier	Representation Term	Dictionary Entry Name	BCC/ACC/BBIE/ABIE/ ASCC/ASBIE	Semantic Description	Comments
Command Code									Command Code identifies the specific type of telecommunication message or supplemental information used in (1) updating on-line files, (2) initiating procurement and quotation actions, and (3) transmitting inquiry, response and advisory messages.	Not PO Content Data
International Currency Code									International Currency Code specifies the national currency corresponding to the Unit Price Amount or Repair Price Amount.	
Purchase Order Count									Purchase Order Count specifies the number of individual purchase orders contained in S1BOOKED.	Not PO Content Data
Batch Number									Batch Number identifies a transmission grouping of part orders (S1BOOKED).	Not PO Content Data
Total Control Quantity									Total Control Quantity is the sum of all Order Quantities in an S1Booked order transmission.	PO Content Data Not use
Extended Value Total Amount									Extended Value Total Amount is a transmission control for the S1Booked Command and computed by summing the products	PO Content Data Not use

									of Unit Price Amount times Order Quantity subtracting the discount (DIS) or procurement discount percentage (PDP) for each order transaction within a given S1BOOKED Command.	
Order Transaction Code									Order Transaction Code specifies the type, category and condition of a customer purchase order (S1BOOKED transactions)	See TNC file. Not useful as aggregate data.
		Document				Details	Document. Details	ACC	The details of a document	
		Document		Processing		Code	Document. Processing. Code	BCC	The code specifying the document processing type	
Type of Order	Purchase Order	Document		Processing		Code	Purchase Order_ Document. Processing. Code	BBIE	The code specifying the order processing type	
		Document		Type		Code	Document. Type. Code	BCC	The code specifying the type of a document	
Category of Order	Purchase Order	Document		Type		Code	Purchase Order_ Document. Type. Code	BBIE	The code specifying the type of order	
		Document		Purpose		Code	Document. Purpose. Code	BCC	The code specifying the document purpose	
Condition of Order	Purchase Order	Document		Purpose		Code	Purchase Order_ Document. Purpose. Code	BBIE	The code specifying the order purpose	
Contract Number	Purchase order	Document	Sales contract	Identification		Identifier	Purchase Order_ Document. Sales Contract_ Identification. Identifier	BBIE	Revise - an identifier of a sales contract between parties original - Contract Number is a reference number mutually agreed upon between the supplier and customer that represent a Special Business	A reference number refers to a sales contract between parties.

									Agreement.	
Quotation Number	Purchase order	Document	Supplier Quotation	Identification		Identifier	Purchase Order_ Document. Supplier Quotation_ Identification. Identifier	BBIE	revise - The identification assigned by the supplier to a quotation original - Quotation Number is the identity assigned by the supplier to his quotation of price and Lead Time for the subject part.	Price and Lead Time for the subject part.
Customer Order Number	Purchase Order	Document	Customer	Identification		Identifier	Purchase Order_ Document. Customer_ Identfication. Identifier	BBIE	revise - The identification assigned by the customer to an order original - Customer Order Number is the customer's identity number assigned to a specific order for a given part or a specific order for repair/overhaul services for a given part.	
	Purchase Order	Document		Customer	Customer	Party	Purchase Order_ Document . Customer. Customer_ Party	ASBIE		
	Purchase Order	Document		Contract	Contract	Document	Purchase Order_ Docment. Contract. Contract_Document	ASBIE		
	Purchase Order	Document		Quote	Quotation	Document	Purchase Order_ Document. Quote. Quotation_ Document	ASBIE		
		Item				Details	Item. Details	ACC	The details of a spare part	
		Item		Leasing		Indicator	Item. Leasing. Indicator	BCC	An indicator specifying if an item is for leasing	
	Spare Part	Item		Manufacturer	Manufacturer	Party	Spare Part_ Item. Manufacturer. Manufacturer_ Party	ASBIE		

	Spare Part	Item		Aircraft	Aircraft	Equipment	Spare Part_ Item. Aircraft. Aircraft_Equipment	ASBIE		
Part Number	Spare Part	Item	Manufacturer	Identification		Identifier	Spare Part_ Item. Manufacturer_ Identification. Identifier	BBIE	revise - The manufacturer's identification of a spare part item original - Part Number is the manufacturer's supplier's or industry standard identity for the subject part, assembly, kit or material. Part Number when linked with its Manufacturer Code provides a unique identity for the given item. (note: serial number will be used in the future to replace mfg. code to give uniqueness to the part number)	Part Number when linked with its Manufacturer Code provides a unique identity for the given item.
Lease Indicator	Ordered	Item	Onward	Leasing		Indicator	Ordered_ Item. Onward_ Leasing. Indicator	BBIE	revise - An indicator specifying if an item is ordered for onward leasing Original - Lease Indicator denotes that subject order is placed for lease of the referenced part number.	mple from ATA: s or No code to indicate part is bought for lease or not. The lease indicator on the PO signifies that the part ordered is designated for a lease project or lease inventory.
		Line item				Details	Line Item. Details	ACC	The details of a line item	line item needs to be in the control vocabulary that represents a logical grouping of information such as part number, quantity, price, etc.
Order Quantity		Line item		Ordered quantity*		Quantity	Line Item. Ordered. Quantity	BBIE	se - The quantity ordered of a line item original - Order Quantity is the quantity (conforming to the Unit of Measure) originally ordered by the	

									customer or subsequently revised for the specified Customer Order Number, Part Number, Specified Shipping Date and Ship To Code.	
		Line Item		Purchase Order	Purchase Order	Docume nt	Line Item. Purchase Order. Purchase Order_ Document	ASBIE		
		Base charge price		Quantity*		Quantity	Base Charge Price. Quantity	BCC	The base quantity of the charge / price unit amount	please consider dictionary name: Unit Price. Base. Quantity
Unit of Measure Code		Base charge price		Quantity*		Quantity	Base Charge Price. Quantity	BBIE	revise - The base quantity of the unit price original - Unit of Measure Code specifies the type of count, measurement, container or form of the subject part and correlates to the Unit Price Amount.	
		Unit charge price		Amount*		Amount	Unit Charge Price. Amount	BCC	The charge/price amount per unit.	unit price needs to be defined in the control vocabulary or in an aggregate
Unit Price Amount		Unit charge price		Amount*		Amount	Unit Charge Price. Amount	BBIE	revise - The charge/price amount per unit. original - Unit Price Amount is the sell price for one unit of the subject part conforming to the Currency Code, Unit of Measure, and when applicable, Price Break Quantity range.	
		Transp ort		Method		Code	Transport. Method. Code	BCC	The method of transport used for the conveyance of goods or person	Harmonisation please consider the difference between transportation method and transportation mode
Specified Shipping Method		Transp ort		Method		Code	Transport. Method. Code	BBIE	revise - The method of transport used for the conveyance of goods or person	First 2 characters identify method of shipment. Last character identifies

									original - Specified Shipping Method Code specifies the method to be used for transporting a given shipment from the supplier's facility plus the method for paying the transportation costs.	payment method.
		Transport		Timeframe		Indicator		Transport. Timeframe. Indicator	BCC	The indicator that specifies a timeframe in relation to the transport date	
Shipment Date Control Indicator		Transport	Not before fifteen days	Timeframe		Indicator		Transport. Not Before Fifteen Days_ Timeframe. Indicator	BBIE	revise - The indicator that specifies that an item cannot be transported earlier than fifteen days before the transport date original - Shipment Date Control Indicator specifies that subject order is not to be shipped earlier than fifteen days prior to customer's Specified Shipping Date.	
		Payment		Method		Code		Payment. Method. Code	BCC	The code specifying how payment is made	
	Transport	Payment		Method		Code		Transport_ Payment. Method. Code	BBIE	revise - The code specifying how payment is made for transport costs original - Specified Shipping Method Code specifies the method to be used for transporting a given shipment from the supplier's facility plus the method for paying the transportation costs.	
		Processing		Priority		Code		Processing. Priority. Code	BCC	The code specifying the priority of a process	
Priority Code	Purchase Order	Processing	Response	Priority		Code		Purchase Order_ Processing. Response_ Priority. Code	BBIE	revise - The code specifying the priority of the response to the order original - Priority Code is a precedence rating (assigned by the customer) designation the urgency for processing and responding to the	

									subject quotation or purchase order.	
		Equipment		Identification*		Identifier	Equipment. Identifier	BCC	The identification of a unit of an equipment	
Aircraft Registration Number	Aircraft	Equipment	Aviation Authority Assigned	Identification		Identifier	Aircraft_ Equipment. Aviation Authority Assigned_ Identification. Identifier	BBIE	revise - The registration identifier assigned to each individual aircraft by the applicable aviation authority. original - Aircraft Registration Number is the registration identity assigned to each individual aircraft by the cognizant national authority.	
Discount Percent									Discount Percent specifies the trade discount applicable to Unit Price Amount.	See Procurement Discount Percent
		Packaging		Instruction		Code	Packaging. Instruction. Code	BCC	A code providing a packaging instruction	Packaging is the process of putting the material around the item
Packaging Code	Aircraft part	Packaging		Instruction		Code	Aircraft Part_ Packaging. Instruction. Code	BBIE	revise - A code specifying a packaging instruction for an aircraft part original- Packaging Code specifies the type of container, packaging requirements or material handling devices to be used when shipping subject parts per specified Customer Order Number.	mple from ATA: erence to ATA SPEC300, Packaging Code defines packing condition, material, and container for shipping aircraft part. Specific condition for aircraft regulation on packaging condition so part will not bend or contaminated, i.e. "2" = part container is also build when the part is build. Could have more than one BCC
		Packaging		Spart Part	Spare Part	Item	Packaging. Spare Part. Spare Part_ Item	ASBIE		
		Unit Price				Details	Unit Price. Details	ACC, ABIE	The details of unit price	

		Unit price discount		Base quantity*		Quantity	Unit Price Discount. Base. Quantity	BCC	The base quantity when calculating a unit price discount	
Price Break Order Count		Unit price discount	Order	Base quantity		Quantity	Unit Price Discount. Order_ Base Quantity. Quantity	BBIE	revise - number of individual purchase orders to be considered when calculating an item price discount original - Price Break Order Count specifies the number of individual purchase orders for a common part number within a group of orders which are to be combined for an applicable quantity price break.	Not aircraft Industry specific. For evaluation of price vs quantity. What is more economical. Buy 3 will get a discount verses buy 2 at regular price.
		Unit price discount		Percent*		Percent	Unit Price Discount. Percent	BCC	The percentage of a unit price discount.	
Procurement Discount Percent		Unit price discount		Percent*		Percent	Unit Price Discount. Percent	BBIE	revise - The percentage of a unit price discount. original - Procurement Discount Percent specifies the trade discount percent (to two decimal places) applicable to the Unit Price Amount and Repair Price Amount. The associated price break information is discounted also.	
		Unit Price		Line Item		Line Item	Unit Price. Line Item. Line Item.	ASBIE		
		Organization		Tax identification*		Identifier	Organisation. Tax. Identifier	BCC	The registered national tax identification of an organisation.	C harmonisation - is this a party or an organisation, Should it be an identification or a registration? Organisation.tax registration.identifier
VAT Registration	Customer	Organisation	VAT	Tax identification		Identifier	Customer_ Organisation. VAT_ Tax	BBIE	revise - The Value Added Tax (VAT) registration number of the Customer	European tax apply to import and export comply at placing an

Number							Identification. Identifier		Original - VAT Registration Number is the tax registration number of the Customer	order
		Transaction		Reference		Identifier	Transaction. Reference. Identifier	BCC	An identifier to enable reference to a transaction	Note: Obtain BP definition of the word 'transaction'
Acknowl edgment Number		Transa ction		Referenc e		Identifier	Transaction. Reference. Identifier	BBIE	revise - an identifier that is sent in a message to ensure transaction traceability. original - acknowledgement Number is a value associated with a particular command, sent to ensure traceability.	Unique number generated when creating a PO, for tracking.
		Locati on		Identifica tion		Code	Location. Identification. Code	BCC	the identifier of a location	Based on CCSD discussion on Code vs Identifier, we recommend this should be location. Identifier.
Point of Use Location Name	Receivin g Storage	Locati on		Identifica tion		Code	Receiving Storage_ Location. Identification. Code	BBIE	se - an identifier of the receiving location for storage original - Point of Use Location Name identifies specific stocking/binning location in a user's facility.	ine 'stocking/binning' ATA definition - Location for placing the inventory in a warehouse, the place is called a bin.
		Locati on		Identifica tion*		Identifier	Location. Identifier	BCC	The identification of a location	suggested revision to 000061 location identification code, should be an identifier not code
Ship to Code	Shipment destinati on	Locati on		Identifica tion*		Identifier	Shipment Destination_ Location. Identifier	BBIE	se - The identifier of the shipment destination location original - Ship To Code identifies the shipment destination address including required marks and information that must be displayed on shipping containers. Ship To Code may also convey applicability or exclusion of specific taxes or charges	

									relating to the shipment destination.	
		Inform ation		Text*		Text	Information. Text	BCC	A text providing information	
Remarks Text	Miscellan eous	Inform ation		Text*		Text	Miscellaneous _ Information. Text	BBIE	revise - A text providing miscellaneous information original - Remarks Text provides miscellaneous information not otherwise provided for by dedicated Text Element Identifiers (TEI's) in variable record systems.	
		Party				Details	Party. Details	ACC	Details of an individual, a group or a body having a role in a business function.	
Manufact urer Code	Manufact urer	Party		Identifica tion*		Identifier	Manufacturer_ Party. Identifier	BBIE	revise - The identification of the manufacturer of an item original - Manufacturer Code identifies the manufacturer, government agency or other organization controlling the design and the part number assignment of the subject part.	ATA definition - Manufacturer is the creator of the part, and the assigner of the part number. Manufacturer code is not part of the part number, although it might be.
Supplier Code	Vendor	Party		Identifica tion*		Identifier	Vendor_ Party. Identifier	BBIE	revise - The identifier of the vendor original - Supplier Code identifies the originator of Procurement Data and a source of supply for the subject part in Procurement Planning, Provisioning V File and Delivery configuration Data application.	e: Supplier usually refers to parties who supply data information, "Vendor" is used by ATA for supplier who supplies products like spare parts. Distributor vs supplier. Airlines can be a supplier if they want to sell parts, they will have a supplier code, and parts has airline's part number. ATA suggest using Vendor Party. Identifier
Custome r	Custome r	Party		Identifica tion*		Identifier	Customer_ Party.	BBIE	revise - The identifier of the buyer of goods and	t 2 characters identify an airline. Last

Identification Code						Identifier		services. Original - Customer Identification Code identifies the airline customer plus the office and or individual receiving or transmitting S1BOOKED and several other transactions.	character is for product identification. Harmonization of synonyms (Customer/Buyer)
	Vendor	Party		Spare Part	Spare Part	Item	Vendor_ Party. Spare Part. Spare Part_ Item	ASBIE		
Currency									Currency of the associated amount	does not stand alone, rather it is the CCT aligned with an amount
		Package				Details	Package. Details	ACC, ABIE	The details of a package	
		Package		Spart Part	Spare Part	Item	Package. Spare Part. Spare Part_ Item	ASBIE		
		Ship to Location				Details	Ship to Location. Details	ACC, ABIE	The details of ship to location	
		Shipping				Details	Shipping. Details	ACC	The details of shipping	
		Shipping		Date*		Date	Shipping. Date	BCC	a date when the shipping from a facility takes place	
Specified Shipping Date	Customer required	Shipping		Date*		Date	Customer Required Shipping. Date	BBIE	revise - The date the customer requires material to be shipped from the supplier's facility original - Specified Shipping Date is the date the customer requires material to be shipped from the supplier's facility for a given purchase order.	
	Customer Required	Shipping		Purchase Order	Purchase Order	Docume nt	Customer Requied_ Shipping. Purchase Order. Purchase	ASBIE		

						Order_ Document			
	Custome r Required	Shippi ng		Ship to Location	Shipment Destinati on	Location	Customer Required_ Shipping. Ship to Location. Shipment Destination_ Location	ASBIE		
	Advised	Shippi ng				Details	Advised_ Shipping. Details	ABIE	The details of advised shipping	
	Advised	Shippi ng		Purchase Order	Purchase Order	Docume nt	Advised_ Shipping. Purchase Order. Purchase Order_ Document	ASBIE		
	Advised	Shippi ng		Purchase Order	Purchase Order	Docume nt	Advised_ Shipping. Purchase Order. Purchase Order_ Document	ASBIE		
	Advised	Shippi ng		Ship to Location	Shipment	Location	Advised _ Shipping. Ship to Location. Shipment_ Location	ASBIE		
	Adviced	Shippi ng		Package		Package	Adviced_ Shipping. Package. Package	ASBIE		
	Request ed	Shippi ng				Details	Requested_ Shipping. Details	ABIE	The details of requested shipping	
	Custome r Required	Shippi ng		Ship to Location	Shipment Destinati on	Location	Customer Required_ Shipping. Ship to Location. Shipment Destination_ Location	ASBIE		

4.1.10 Detailed Class Diagram with Core Components
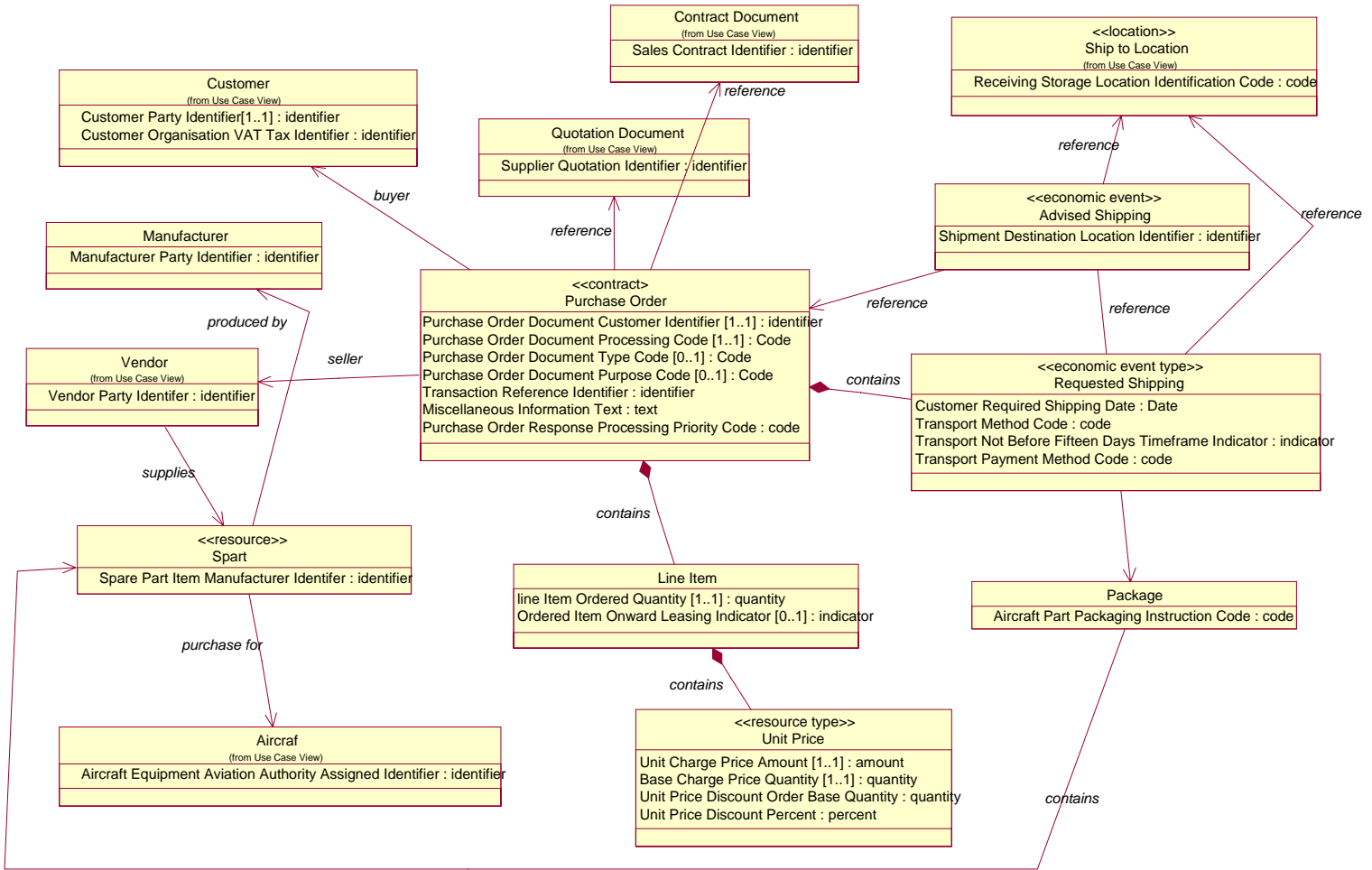
Figure 4-6 Detailed Class Diagram

938 The Purchase Order Class Diagram is now updated to show the names of the BIE's that were
939 discovered.
940
941
942
943
944
945
946
947

948 **4.1.11 Examples Using Core Components to Build Business Documents**

949 Examples of applying the same Core Components on an ATA Purchase Order Placement
950 document and an EDIFACT document is shown below.
951
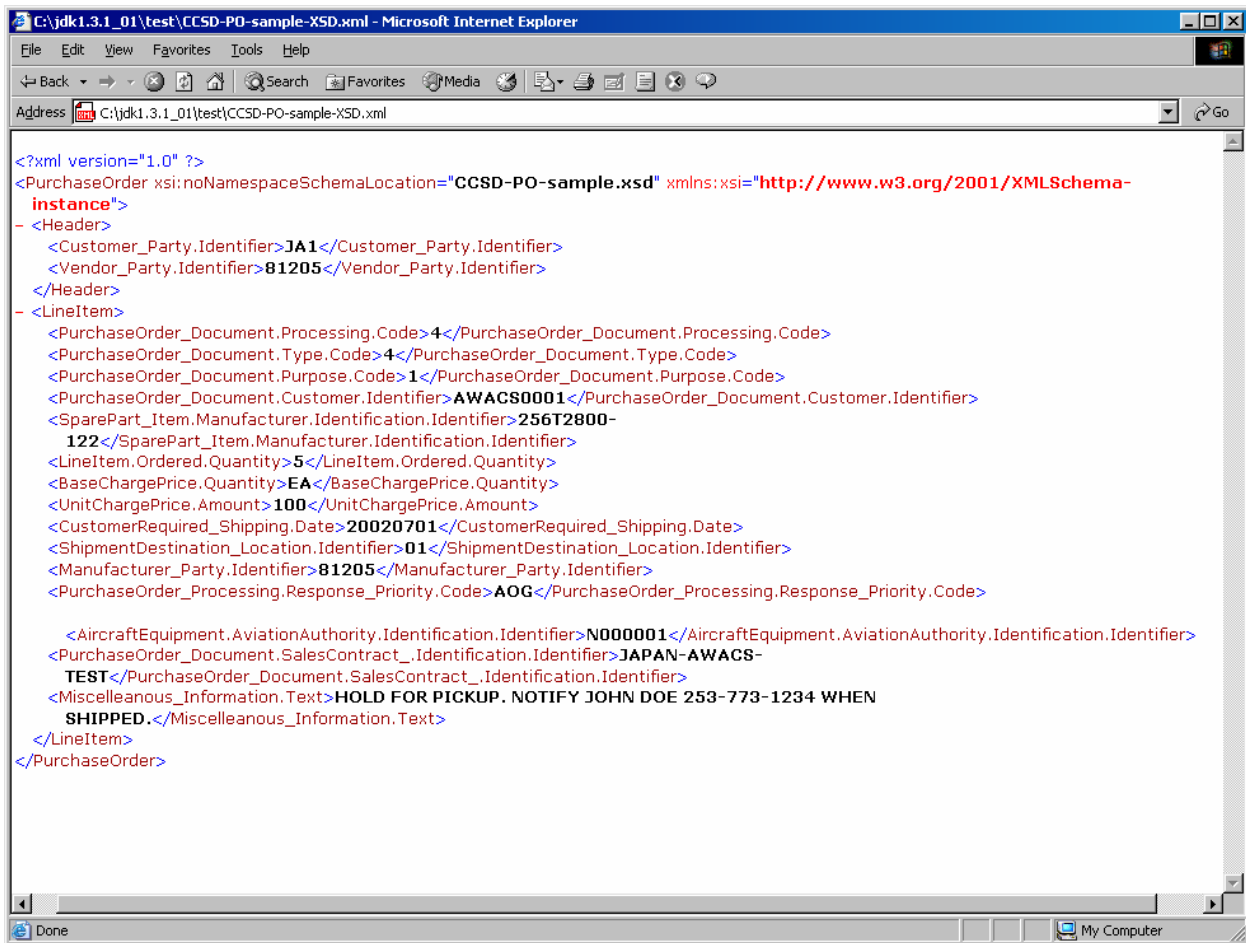
952 **Figure 4-7 ATA Purchase Order Placement document**

953 This example shows the use of Core Components as XML metadata tag.

954 **4.1.12 The Document Type Definition (DTD) File Describes the Document Data Structure**
955 **Requirements**

```
956 <!ELEMENT BaseChargePrice.Quantity (#PCDATA)>
957 <!ELEMENT Customer_Party.Identifier ( #PCDATA ) >
958 <!ELEMENT CustomerRequired_Shipping.Date ( #PCDATA ) >
959 <!ELEMENT Header ( Customer_Party.Identifier, Vendor_Party.Identifier ) >
960 <!ELEMENT LineItem ( PurchaseOrder_Document.Processing.Code,
961 PurchaseOrder_Document.Type.Code,
962 PurchaseOrder_Document.Purpose.Code,
963 PurchaseOrder_Document.Customer.Identifier,
964 SparePart_Item.Manufacturer.Identification.Identifier, LineItem.Ordered.Quantity,
965 BaseChargePrice.Quantity, UnitChargePrice.Amount,
966 CustomerRequired_Shipping.Date, ShipmentDestination_Location.Identifier,
967 Manufacturer_Party.Identifier,
968 PurchaseOrder_Processing.Response_Priority.Code,
969 AircraftEquipment.AircraftAuthority Identification.Identifier,
970 PurchaseOrder_Document.SalesContract_.Identification.Identifier,
971 Miscelleanous_Information.Text ) >
972 <!ELEMENT LineItem.Ordered.Quantity ( #PCDATA ) >
973 <!ELEMENT Manufacturer_Party.Identifier ( #PCDATA ) >
974 <!ELEMENT Miscelleanous_Information.Text ( #PCDATA ) >
975 <!ELEMENT PurchaseOrder_Document.Customer.Identifier ( #PCDATA ) >
976 <!ELEMENT PurchaseOrder_Document.Processing.Code ( #PCDATA ) >
977 <!ELEMENT PurchaseOrder_Document.Purpose.Code ( #PCDATA ) >
978 <!ELEMENT PurchaseOrder_Document.Type.Code ( #PCDATA ) >
979 <!ELEMENT PurchaseOrder_Processing.Response_Priority.Code ( #PCDATA) >
980 <!ELEMENT PurchaseOrder ( Header, LineItem ) >
981 <!ELEMENT PurchaseOrder_Document.SalesContract_Identifier.Identifier ( #PCDATA) >
982 <!ELEMENT ShipmentDestination_Location.Identifier ( #PCDATA ) >
983 <!ELEMENT SparePart_Item.Manufacturer.Identification.Identifier ( #PCDATA ) >
984 <!ELEMENT Transaction.Reference.Identifier ( #PCDATA ) >
985 <!ELEMENT UnitChargePrice.Amount ( #PCDATA ) >
986 <!ELEMENT Vendor_Party.Identifier ( #PCDATA ) >
987
```

988　**4.1.13　The XML Schema File Describes the Document Data Structure and Data Type**
989　**Requirements**

990

991　**Figure 4-8 XML Schema (1)**

Figure 4-9 XML Schema (2)

992

993

994

995 **4.1.14 A Browser View of the Purchase Order**

996
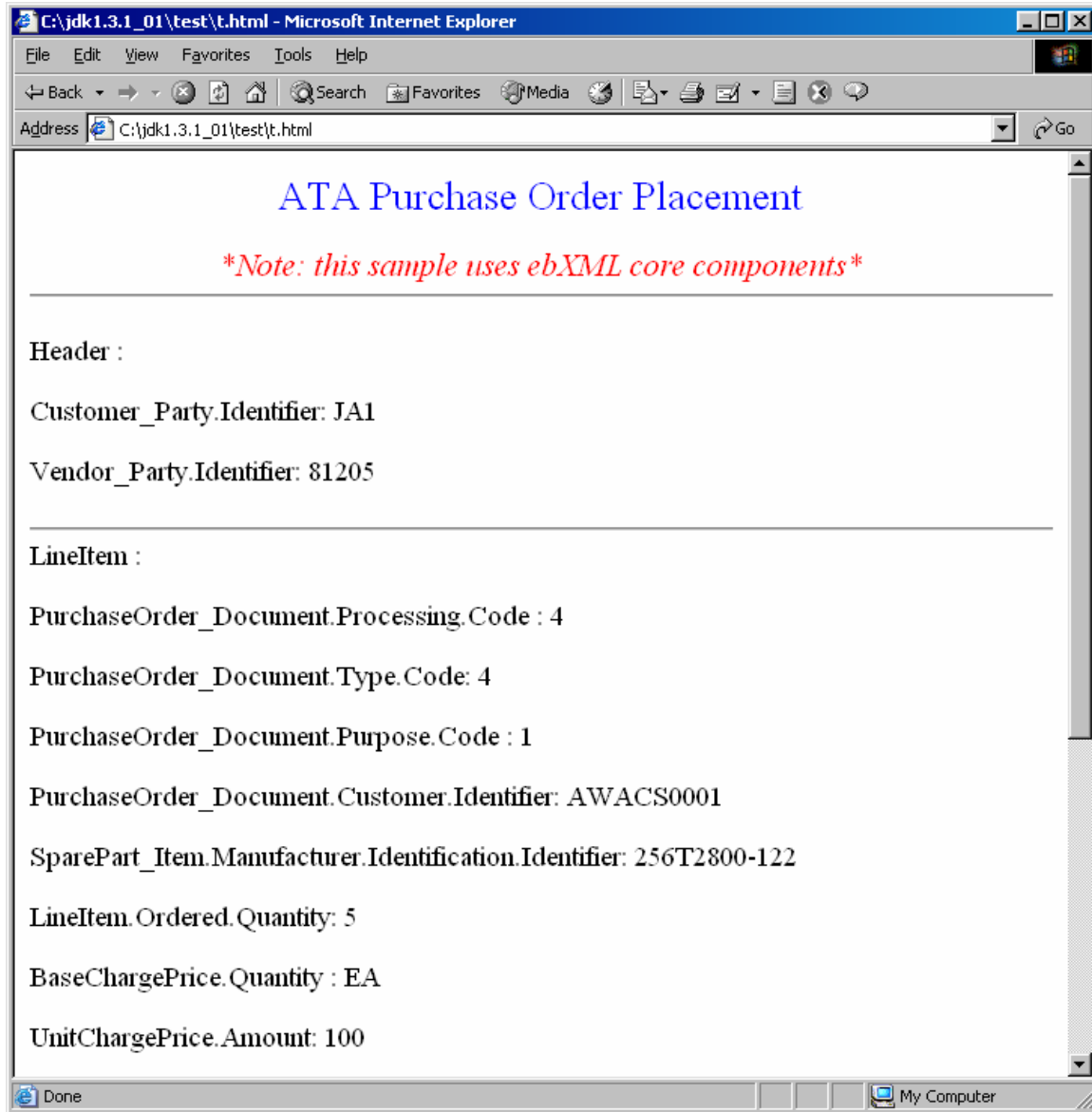
997 **Figure 4-10 Browser view (1)**

998
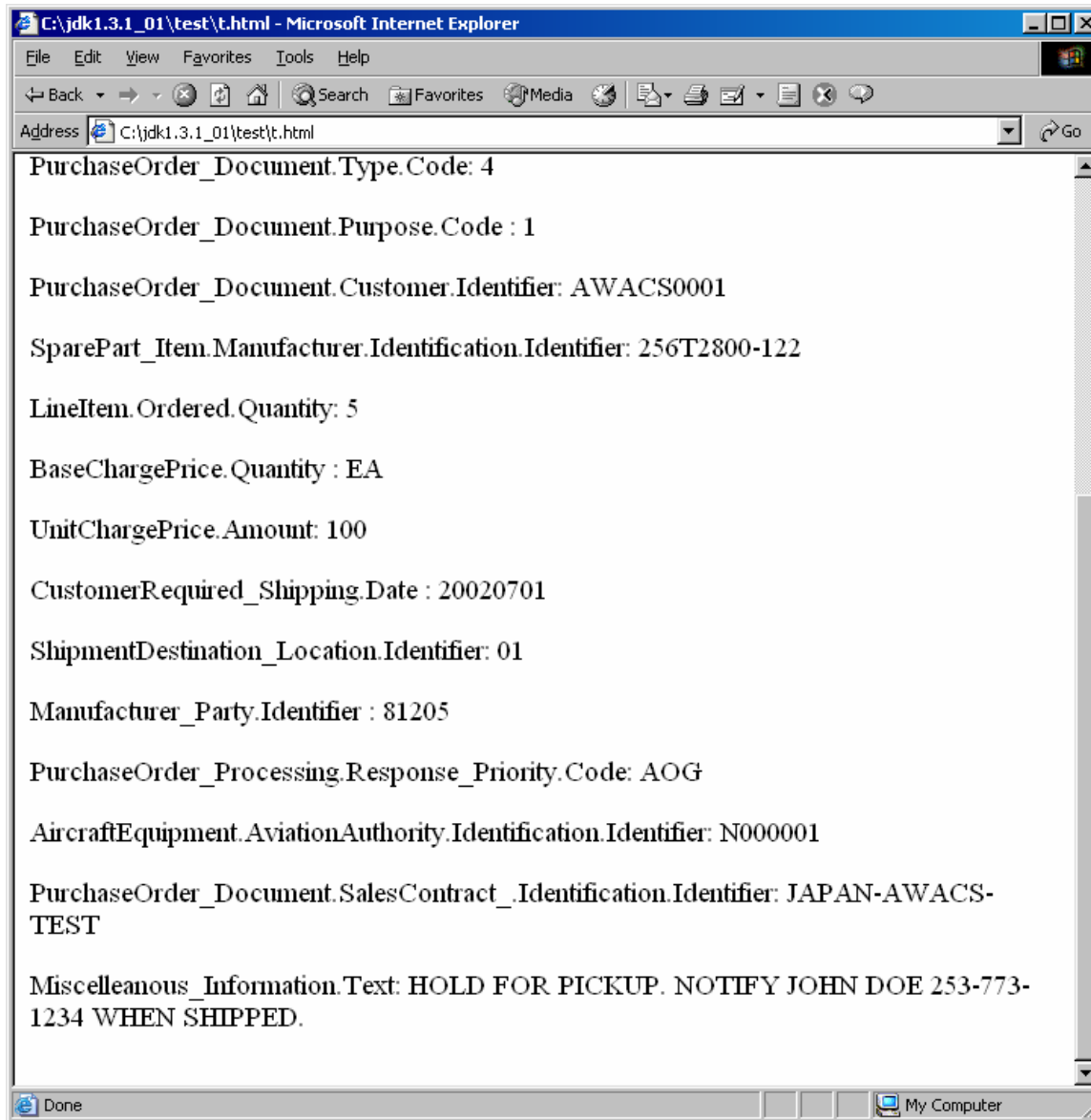
Figure 4-11 Browser view (2)

1002   **4.1.15 EDIFACT Example**

1003   **4.1.15.1 Introduction**

1004   The CCSD project identified the Business Information Entities that are to be exchanged in the
1005   Aerospace Parts Order Document. As an example, in this document a rendering of that order
1006   document in the EDIFACT syntax has been performed.
1007
1008   Rendering in EDIFACT is a manual process, as long as no cross-reference mapping is available
1009   between the semantics of EDIFACT segments, elements and codes and BIE's that have been
1010   discovered through the process as defined in the Core Components Technical Specification. Still
1011   the rendering has been performed as an activity as straightforward as possible. The BIE
1012   definitions should contain sufficient information so that it should not be necessary to go back to
1013   the business experts.
1014
1015   This has been achieved for approximately 90% of the BIE's. The remaining 10% uncertainty has
1016   been worded in remarks, that may be used to improve the discovery process in general or to
1017   clarify the way the process should be carried out.
1018

1019   **4.1.15.2 Table**

1020   The following table shows the mapping of the BIE's to EDIFACT qualified segments and
1021   elements. The BIE's are mapped to the segments and elements present in the EDIFACT
1022   ORDERS message, as the functional definition of that message ("A message specifying details
1023   for goods or services ordered under conditions agreed between the seller and the buyer.")
1024   matches the description of the document as it is used in the Aerospace industry.
1025
1026   Most BIE's have been mapped to data elements present in qualified segments. The "EDIFACT
1027   name" column in such case lists both the name of the qualified segment and the data element.
1028
1029   Most data in electronic messages is coded. The code values have not been discovered in the
1030   CCTS process. When the code values, used in this specific context, are not present in EDIFACT
1031   code lists, either they should be requested to be added, or a private code list (identified in the
1032   message) should be used.
1033

1034

Dictionary Entry Name	BCC/ BBIE	Semantic Description	EDIFACT Segment-Qualifier	EDIFACT element	EDIFACT name
	ABIE ???	Order Transaction Code specifies the type, category and condition of a customer purchase order (S1BOOKED transactions)	UNH	0065	Message Type = ORDERS
Purchase Order_ Document. Processing. Code	BBIE	The code specifying the order processing type	?	?	Remark: Definition is not clear enough without examples. May be placed in envelope (UNB/UNH), in BGM or in GIS.
Purchase Order_ Document. Type. Code	BBIE	The code specifying the type of order	BGM	1001	Document name code
Purchase Order_ Document. Purpose. Code	BBIE	The code specifying the order purpose	BGM	1225	Message function code
Purchase Order_ Document. Sales Contract_ Identification. Identifier	BBIE	An identifier of a sales contract between parties	RFF-CT	1154	Contract number
Purchase Order_ Document. Supplier Quotation_ Identification. Identifier	BBIE	The identification assigned by the supplier to a quotation	RFF-AGG	1154	Offer number
Purchase Order_ Document. Customer_ Identification. Identifier	BBIE	The identification assigned by the customer to an order	BGM	1004	Document Identifier

1035

Spare Part_ Item. Manufacturer_ Identification. Identifier	BBIE	The manufacturer's identification of a spare part item	LIN-BZ	7140	Item identifier Original equipment number Remark: Qualifier = 7143
Line Item. Ordered. Quantity	BBIE	The quantity ordered of a line item	QTY-21	6060	Ordered quantity
Base Charge Price. Quantity	BBIE	The base quantity of the charge / price unit amount	PRI-CAL	5284	Unit price basis value
	Supp. Component	The base quantity of the unit price	PRI-CAL	6411	Measurement unit code Remark: In CC-spec defined as supplementory component. In EDIFACT separate element.
Unit Charge Price. Amount	BBIE	The charge/price amount per unit.	PRI-CAL	5118	Price amount
Customer Required Shipping. Date	BBIE	The date the customer requires material to be shipped from the supplier's facility	DTM-10	2380	Shipment date/time, requested
Transport. Method. Code	BBIE	The method of transport used for the conveyance of goods or person	TDT	8067	Transport mode name code. Remark: only the 10 UN/ECE Rec.19 codes are allowed here. Probably more options are needed, indicating the transport service requested rather than the mode.
Payment. Method. Code	BBIE	The code specifying how payment is made for transport costs	TOD-5	4215	Transport charges payment method code
Shipment Destination_ Location. Identifier	BBIE	The identifier of the shipment destination location	NAD-ST	3039	Ship to party identifier
Transport. Not Before Fifteen Days Timeframe. Indicator	BBIE	The indicator that specifies that an item cannot be transported earlier than fifteen days before the transport date	SCC-1	4493	Firm Delivery instruction code
Purchase Order_ Processing. Response_ Priority. Code	BBIE	The code specifing the priority of the response to the order	GIS	7365	Processing indicator description code Remark: This segment will be removed effective with directory D.02B. The GIS segment is only present on detail level
Aircraft_ Equipment. Aviation	BBIE	The registration identifier assigned to each individual aircraft by the applicable	GIR-?	7402	Related identification number, object identifier

Authority Assigned_ Identification. Identifier		aviation authority.			Remark: New code to be requested for 7297:Set type code qualifier E.g.: "Target equipment"
Aircraft Part_ Packaging. Instruction. Code	BBIE	A code specifying a packaging instruction for an aircraft part	PAC	7073 7065	Packaging terms and conditions code Package type description code
Ordered_ Item. Onward_ Leasing. Indicator	BBIE	An indicator specifying if an item is ordered for onward leasing	ALI	4183	Special condition code Remark: If code 104: Rental does not apply, a new code must be requested (e.g. "Item is ordered for onward leasing")
Unit Price Discount. Order_ Base. Quantity. Quantity	BBIE	Number of individual purchase orders to be considered when calculating an item price discount	ALC-H QTY-398	6060	Line item allowance Maximum number of purchase orders allowed
Unit Price Discount. Percent	BBIE	The percentage of a unit price discount.	ALC-H PCD-1	5482	Line item allowance
Customer_ Organisation. VAT_ Tax Identification. Identifier	BBIE	The Value Added Tax (VAT) registration number of the Customer	NAD-OY RFF-VA	1154	Ordering customer VAT registration number
Transaction. Reference. Identifier	BBIE	An identifier that is sent in a message to ensure transaction traceability.	RFF-AIH	1154	Common transaction reference number
Receiving Storage_ Location. Identification. Code	BBIE	An identifier of the receiving location for storage	NAD-ST LOC-88	3225	Ship to party identifier Place of receipt
Miscellaneous_ Information. Text	BBIE	A text providing miscellaneous information	FTX-AAJ	4440	General information
Manufacturer_ Party. Identifier	BBIE	The identification of the manufacturer of an item	NAD-MF	3039	Manufacturer of goods
Vendor_ Party. Identifier	BBIE	The identifier of the vendor	NAD-VN	3039	Vendor
Customer_ Party. Identifier	BBIE	The identifier of the buyer of goods and services.	NAD-OY	3039	Ordering customer
	Supp. Component	Currency of the associated amount	CUX-2	6345	Reference currency Remark: In CC spec this is a supplementory component, belonging to an Amount. Type. In EDIFACT the CUX segment may be placed in the header of the message as default currency, but also in CUX

					segments under the applicable segments that carry the amounts.

1036
1037

4.1.15.3 Segment Table

1038

In the following table the BIE's have been mapped to the EDIFACT ORDERS message.

1039
1040
1041

```
1042  Pos     Tag Name                                            S    R

1043
1044          HEADER SECTION

1045
1046  0010    UNH Message header                                  M    1
1047              0065 = "ORDERS"

1048
1049  0020    BGM Beginning of message                            M    1
1050              1001 = Purchase Order_ Document. Type. Code
1051              1004 = Purchase Order_ Document. Customer_
1052                     Identification. Identifier
1053              1225 = Purchase Order_ Document. Purpose. Code

1054
1055  0030    DTM Date/time/period                                M    1
1056              2005 = 10 Shipment date/time, requested
1057              2380 = Customer Required Shipping. Date

1058
1059  0070    FTX Free text                                       C    99
1060              4451 = AAI General information
1061              4440 = Miscellaneous_ Information. Text

1062
1063  0090    ----- Segment group 1  ---------------- C    3-----|
1064  0100    RFF Reference                                       C    1    |
1065              1153 = CT Contract number                             |
1066              1154 = Purchase Order_ Document. Sales Contract_  |
1067                     Identification. Identifier                    |
1068                                                                   |
1069  0100    RFF Reference                                       C    1    |
1070              1153 = AGG Offer number                               |
1071              1154 = Purchase Order_ Document. Supplier             |
1072                     Quotation_Identification. Identifier          |
1073                                                                   |
1074  0100    RFF Reference                                       C    1    |
1075              1153 = AIH Common transaction reference number   |
1076              1154 = Transaction. Reference. Identifier --------|

1077
1078  0120    ----- Segment group 2  ---------------- C    4-----|
```

```
1079   0130    NAD Name and address                           C    1    |
1080                  3035 = OY Ordering customer                        |
1081   0160           ----- Segment group 3  ---------------- C    1----||
1082   0170    RFF Reference                                 M    1    ||
1083                  1153 = VA VAT registration number                ||
1084                  1154 = Customer_ Organisation. VAT_ Tax          ||
1085                         Identification. Identifier --------------||
1086                                                                    |
1087   0130    NAD Name and address                           C    1    |
1088                  3035 = ST Ship to party                           |
1089                  3039 = Shipment Destination_ Location. Identifier |
1090                                                                    |
1091   0140    LOC Place/location identification              C    1    |
1092                  3227 = 88 Place of receipt                        |
1093                  3225 = Receiving Storage_ Location.               |
1094                         Identification. Code                       |
1095                                                                    |
1096   0130    NAD Name and address                           C    1    |
1097                  3035 = MF Manufacturer of goods                   |
1098                  3039 = Spare Part_ Item. Manufacturer_            |
1099                         Identification. Identifier                 |
1100                                                                    |
1101   0130    NAD Name and address                           M    1    |
1102                  3035 = VN Vendor                                  |
1103                  3039 = Vendor_ Party. Identifier ----------------|
1104
1105   0410           ----- Segment group 10 ---------------- C    1-----|
1106   0420    TDT Details of transport                       M    1    |
1107                  8051 = 20 Main-carriage transport                 |
1108                  8067 = Transport. Method. Code ------------------|
1109
1110   0460           ----- Segment group 12 ---------------- C    1-----|
1111   0470    TOD Terms of delivery or transport             M    1    |
1112                  4055 = 5 Transport charges payment method code    |
1113                  4215 = Payment. Method. Code --------------------|
1114
1115   0490           ----- Segment group 13 ---------------- C    1-----|
1116   0500    PAC Package                                    M    1    |
1117                  7073 = Aircraft Part_ Packaging. Instruction. Code|
1118                         (conditions)                               |
1119                  7065 = Aircraft Part_ Packaging. Instruction. Code|
1120                         (description)----------------------------|
1121
1122   0620           ----- Segment group 16 ---------------- C    1-----|
1123   0630    SCC Scheduling conditions                      M    1    |
1124                  4017 = 1 Firm delivery instruction code           |
1125                  4493 = Delivery instruction code                  |
```

```
1126                (= ? Transport. Not Before Fifteen Days Timeframe.  |
1127                   Indicator)           --------------------------|
1128
1129             DETAIL SECTION
1130
1131   1030           ----- Segment group 28 ----------------- M   1-----|
1132   1040     LIN Line item                                  M   1     |
1133             7140 = Spare Part_ Item. Manufacturer_              |
1134                      Identification. Identifier                 |
1135             7143 = BZ Original equipment number                 |
1136              (= Original equipment number allocated             |
1137               to spare parts by the manufacturer.)              |
1138                                                                 |
1139   1080     QTY Quantity                                   M   1     |
1140             6063 = 21 Ordered quantity                          |
1141             6060 = Line Item. Ordered. Quantity                 |
1142                                                                 |
1143   1100     ALI Additional information                     C   1     |
1144             4183 = 10 Ordered_ Item. Onward_ Leasing.           |
1145                      Indicator                                  |
1146                                                                 |
1147   1130 X GIS General indicator                           C   1     |
1148             7365 = ? Order_ Processing. Response_ Priority.     |
1149                      Code                                       |
1150                                                                 |
1151   1150     GIR Related identification numbers             C   1     |
1152             7297 = ? Target equipment                           |
1153             7402 = Aircraft_ Equipment. Aviation Authority      |
1154                      Assigned_ Identification. Identifier       |
1155                                                                 |
1156   1320----------- Segment group 32 ----------------- M   1----||
1157   1330     PRI Price details                             M   1    ||
1158             5125 = CAL Calculation price                      ||
1159             5118 = Unit Charge Price. Amount                  ||
1160             5284 = Base Charge Price. Quantity                ||
1161             6411 = Measurement Unit. Code                     ||
1162                                                               ||
1163   1340     CUX Currencies                                 M   1    ||
1164            6347 = 2 Reference currency                        ||
1165            6345 = Currency identification code--------------||
1166                                                               |
1167   1780           ----- Segment group 43 ----------------- C   1----||
1168   1790     ALC Allowance or charge                        M   1    ||
1169             5463 = H Line item allowance                      ||
1170                                                               ||
1171   1820           ----- Segment group 44 ----------------- C   1---|||
1172   1830     QTY Quantity                                   M   1    |||
```

```
1173                   6063 = 398 Maximum number of purchase orders    |||
1174                          allowed                                   |||
1175                   6060 = Unit Price Discount. Order_ Base.         |||
1176                          Quantity. Quantity ---------------------|||
1177                                                                   ||
1178    1850          ----- Segment group 45 ----------------- C   1---|||
1179    1860   PCD Percentage details                          M   1   |||
1180                   5245 = 1 Allowance                               |||
1181                   5482 = Unit Price Discount. Percent -----------|||
1182
1183              SUMMARY SECTION
1184
1185    2330   UNS Section control                             M   1
1186    2400   UNT Message trailer                             M   1
1187
1188
1189
```

4.1.15.4 Steps

Steps that were followed to render the Spare Parts Order Message in the EDIFACT syntax:

1. Compare the functional definition of the document with the definitions of EDIFACT messages. If a definition matches or matches satisfactory, take the message as a basis and request extension of the EDIFACT functional definition with the missing functions. Otherwise, request a new message.
2. For each assembly construct and ABIE, find a segment of which the definition matches, possibly at a more generic level of abstraction. If no segment matches, request a new (generic) segment.
3. If the segment found is qualified, look in the segment's qualifier code list for a qualifier that matches the specific definition of the ABIE. If none is found, request a new one. If the definition of an existing qualifier may be slightly adapted, request a change.
4. Check the structure of the segment. In many cases the structure will not match the structure of the ABIE. Assess whether the BBIE's contained in the ABIE can be accommodated by using in a segment group, and by finding segments for each (cluster of) BBIE('s). If the element and sub-element structure of the segment match the BBIE structure, and if the definitions also match, use the elements. Request changes and additions to the segment structure where appropriate.
5. In matching BBIE's and elements, do not forget to assess the supplementory components as well. They may need to be represented by separate elements or even by separate segments.

Note that these steps and the resulting EDIFACT message is only an example to illustrate that Core Components may be used to define messages in various syntaxes. They are by no means normative. UN/CEFACT may later publish real guidelines and rules on how EDIFACT rendering of Core Components should take place.

1218 **4.1.16 Conclusion**

1219 In this example, we did a walk thru of identifying Core Components from business terms based
1220 on the CC Technical Specification V1.9. When the CC is initially identified, it does not contain
1221 any business context or syntax, therefore it can map to any industry's business data.
1222
1223 In the Boeing example, the CC is mapped to the ATA standard. The EDIFACT example in
1224 4.1.15 demonstrates how the same CC can be mapped to another message standard format. The
1225 mapping demonstrates that different industries using different terms to represent the same idea
1226 make business communication and data integration difficult. Core Components can be
1227 used/reused for the same data terms/concept defined in different industries.
1228
1229 Using CC's to define business documents or system data improves the overall business process,
1230 and thus, the data is understood by more people in the supply chain, which can result in more
1231 business opportunities.
1232

1233 **4.2 The EAN.UCC FMCG Retail Delivery Example**

1234 Currently, there are no standard global eBusiness models and message sets that cover the
1235 Delivery business process in the FMCG Retail business area. In order to improve efficiency and
1236 business information interoperability for the FMCG Retail delivery process and to support syntax
1237 neutral eBusiness solutions, the business process was modeled using UML. As a result of the
1238 creation of the detailed class diagram, Core Components were discovered using the Core
1239 Components Technical Specification.
1240
1241 **4.2.1 Business Requirements View (BRV)**

1242 **4.2.1.1 Business Process Use Case Description**

Form: Business Process	
Business Process Name	Delivery
Description	Seller advises ShipTo party of the despatch of goods Buyer receives despatch of goods notification Carrier delivers goods to specified location on specified date/time Buyer/ShipTo receives and accepts goods Buyer/ShipTo verifies delivery against despatch advice Carrier informs the Seller that the goods have been delivered
Business Requirements	The seller needs to supply specified goods as per the accepted order to the buyer at a given location and date/time.
Definition	Deliver goods
Participants	Buyer, Seller, ShipTo, ShipFrom and Carrier
Preconditions	Order has been accepted and goods/documentation have been prepared for despatch. One order relates to one delivery. Goods are available to fulfil the order. Location and date/time for delivery are known to the Carrier and Seller. Seller has prepared goods for delivery. Carrier collects goods for delivery.
Begins When	Seller creates despatch advice
Ends When	Buyer/ShipTo has informed the seller what materials were received / not received against the original order and what materials were accepted / not accepted
Exceptions	<u>**N/A**</u>
Postconditions	Buyer/ShipTo – Accepts the delivery Carrier – Has delivered the goods and notified the seller of the delivery acceptance by the Buyer Buyer/ShipTo – Has verified goods delivered against the order Buyer/ShipTo - Has informed the seller what materials were received / not received against the original order and what materials were accepted / not accepted Seller - Is ready to prepare the invoice for the buyer

Supporting Business Collaborations and/or Business Processes	TBD
Lifecycle(s)	TBD

1243

1244 **4.2.1.2 Business Process Activity Model**
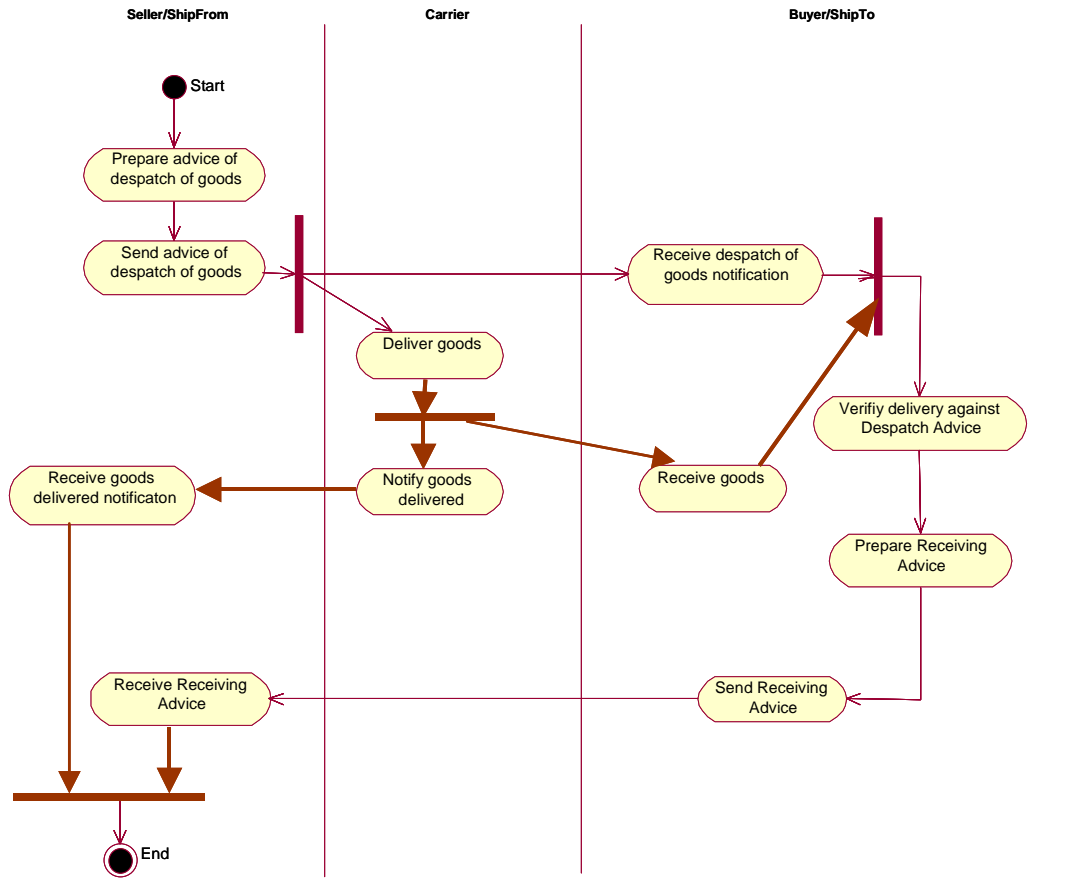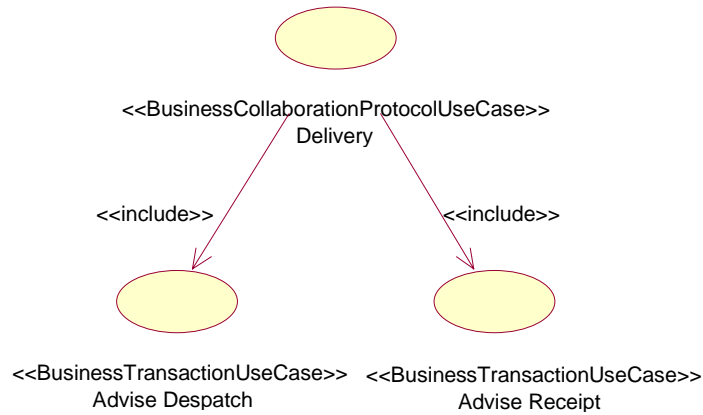

1245

1246 **Figure 4-12 Business Process Activity Model**

1247

1248 **4.2.1.3 Business Collaboration Use Case Diagram**

1249

<<BusinessCollaborationProtocolUseCase>>
Delivery

<<include>>   <<include>>

<<BusinessTransactionUseCase>>   <<BusinessTransactionUseCase>>
1250   Advise Despatch   Advise Receipt

1251   **Figure 4-13 FMCGDelivery-BC2.Delivery**

1252   In the activity diagram each time control is handed from one actor to another some kind of
1253   collaborative activity takes place. The Business Collaboration depicted above does describe the
1254   Business Transactions that will be developed in order to support these collaborative activities.
1255
1256   Note: It does not contain all required Business Transactions. For example the transactions
1257   between Carrier and Seller are not included in the business model.
1258

1259   **4.2.1.4 Business Process Use-case Diagram**

Carrier

Seller   Buyer

<<businessProcess>>
Delivery

Consignor   Consignee
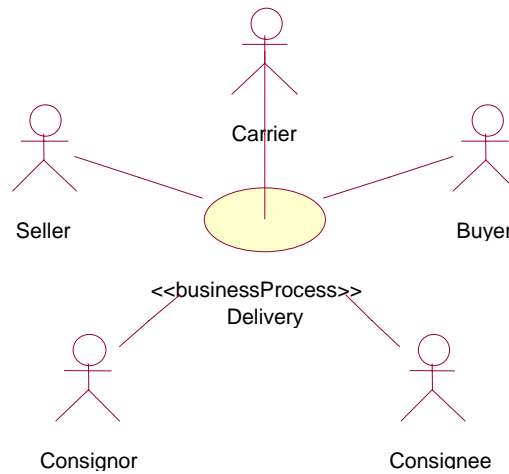
1260

1261   **Figure 4-14 Use Case**

1262
1263
1264
1265

1266 **4.2.1.5 Requirements List**

1267

Req. #	Statement	Source	Date	Status
1	The seller MUST send a despatch advice for each shipment.	Example	11/7/2002	To be included in MIG
2	The seller MUST send the despatch advise prior to delivery of the goods on the Ship-to location.	Example	11/7/2002	Included in activity diagram.
3	The despatch advise MUST contain a identifier that is unique for the seller.	Example	11/7/2002	Included in detailed class diagram, in Document class.
4	Each party MUST be identified using a GLN.	Example	11/7/2002	Included in detailed class diagram.
5	A despatch advise advice MAY reference a maximum of one order.	Example	11/7/2002	Included in detailed class diagram
6	A despatch advise advice MAY reference a maximum of one contract.	Example	11/7/2002	Included in detailed class diagram
7	Each despatch advise MUST indicate the date or datetime of its issue.	Example	11/7/2002	Included in detailed class diagram
8	The despatch advice MUST indicate the buyer and seller, and SHALL indicate the ship-to and/or ship-from where these differ from the buyer and / or seller.	Example	11/7/2002	Included in detailed class diagram, also to be included in MIG.
9	The despatch advise MAY indicate the carrier.	Example	11/7/2002	Add further explanation. Already included in detailed class diagram.
10	A despatch advise advice CAN reference a maximum of one delivery note.	Example	11/7/2002	Included in detailed class diagram
11	A despatch advise advice CAN reference a maximum of one consignment number.	Example	11/7/2002	Included in detailed class diagram
12	Parties agree to use only ISO pallets.	Example	11/7/2002	Requirement needs to be refined. Included in detailed class diagram
13	Parties agree to use only cartons.	Example	11/7/2002	Requirement needs to be refined.
14	Each logistic unit MUST be identified using an SSCC.	Example	11/7/2002	Included in detailed class

15	Each item MUST be identified using a GTIN.	Example	11/7/2002	Included in detailed class diagram
16	The despatch advice SHOULD enable a hierarchical description of the shipment, starting with the pallet level and ending with the item level.	Example	11/7/2002	Included in detailed class diagram
17	The despatch advice MUST indicate the items and quantities that have been shipped. Optionally the expiry date and sell by date MAY be included.	Example	11/7/2002	Included in detailed class diagram

1268

1269 ### 4.2.1.6 Business Objects Glossary

1270 *(This section details the initial Business Objects, which meet the requirements specified by the use case)*

1271

Business Term	GDD key	UID ebXML	Dictionary Entry Name	Definition	Remarks
Buyer	00000001	999960	Buyer Party. Details	Trading partner to which merchandise is sold.	
Seller	00000002	999959	Seller Party. Details	Trading partner selling merchandise to a buyer.	
Carrier	00000003	999956	Carrier Party. Details	Third party undertaking or arranging transport of goods between named points.	
Consignee	00000004	999957	Receiver Party. Details	Identification of the location to where goods will be or have been shipped.	
Consignor	00000005	999958	Ship From Party. Details	Identification of the location from where goods will be or have been shipped.	
Purchase Order	00000006	999999	Related Purchase. Details	Document/message by means of which a buyer initiates a transaction with a seller involving the supply of goods or services as specified, according to conditions set out in an offer, or otherwise known to the buyer	
Delivery Note				Paper document attached to a consignment informing the receiving party about contents of this consignment.	
Logistics Unit				An item of any composition established for transport and/or storage that needs to be	

				managed through the supply chain.	
Despatch Advice				Document/message by means of which the supplier or consignor informs the buyer or consignee about the despatch of goods.	
Receiving Advice				Message addressing the business needs related to the goods receipt or advising discrepancies between despatched or ordered/planned goods.	
Consignment				Consignment is a logical grouping of goods (one or more physical entities) that has been consigned to a freight forwarder and is intended to be transported as a whole.	
Shipment				Shipment is the event that moves the goods between trading partners.	
Contract				Formal agreement between two or more parties. (Definition still to be approved)	
Despatch Item				The individual despatched item.	
Trade Item				Any item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.	
Party				Organisation or entity within an organisation playing a specific role in a business process. (Definition still to be approved)	

1272

1273   4.2.2   Business Transaction View (BTV)

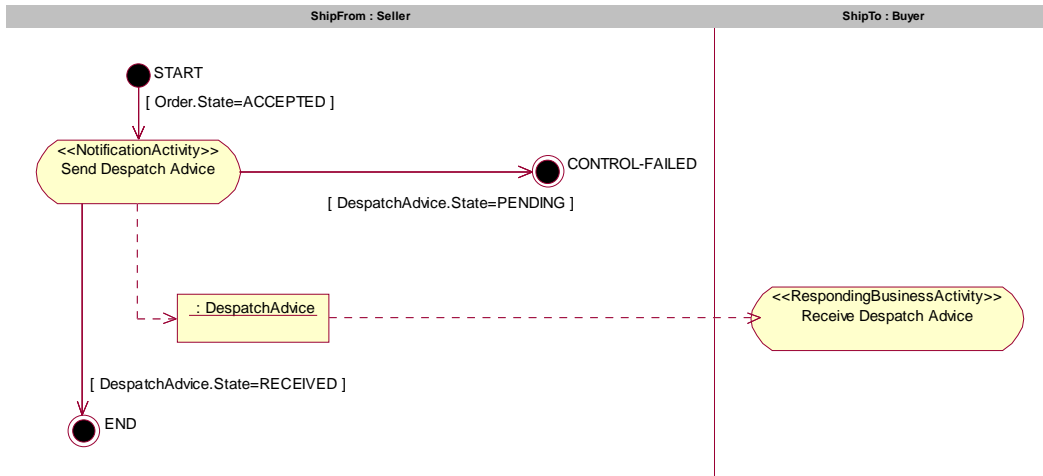### 1274   4.2.2.1   Business Transaction (Business Transaction Object Flow Diagram)

1275 A Business Transaction Activity executes a specified business transaction. A business
1276 transaction is a set of business information and business signal exchanges between two business
1277 partners that must occur in an agreed format, sequence and time period.

1278

1279

1280

1281   **NOTIFICATION PATTERN FOR ADVISE DESPATCH**
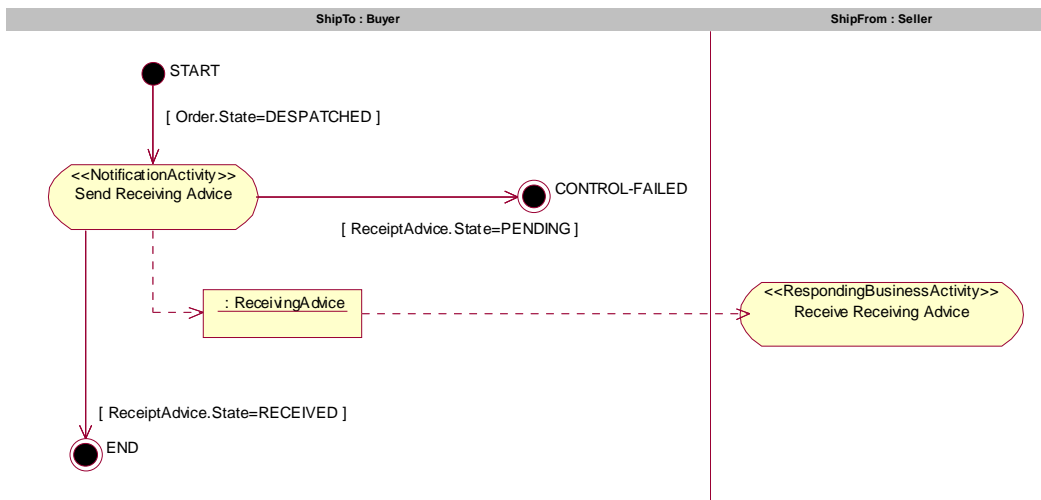

1282

1283   **Figure 4-15 – Business Transaction Object Flow Diagram**

1284
1285   NOTIFICATION PATTERN FOR ADVISE RECEIPT

1286

1287   **Figure 4-16: Business Transaction Object Flow Diagram**

1288

4.2.2.2 High-level Class Diagrams

1289

1290 Business objects from the glossary (see 4.2.1.5) are used to create the high-level class diagram.
1291 Business objects contained in the GDD are also used to discover candidates for classes and
1292 attributes in the high-level class diagram.
1293
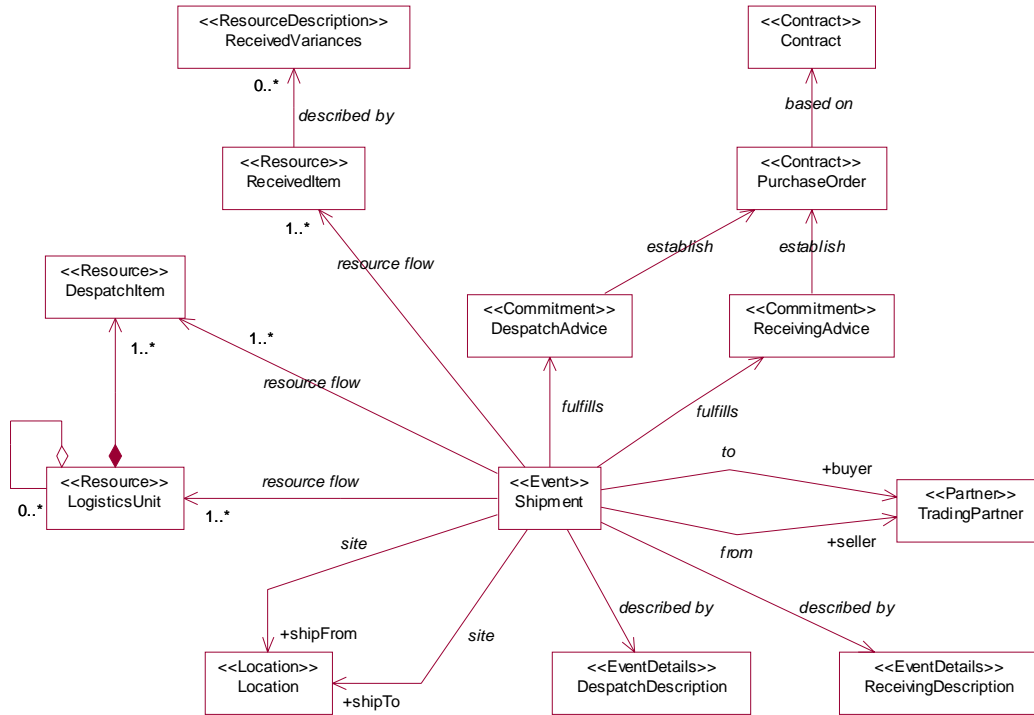
4.2.2.2.1 Delivery Business Process

1294

1295

1296 **Figure 4-17**

1297 4.2.2.2.2 Despatch Advice Business Document
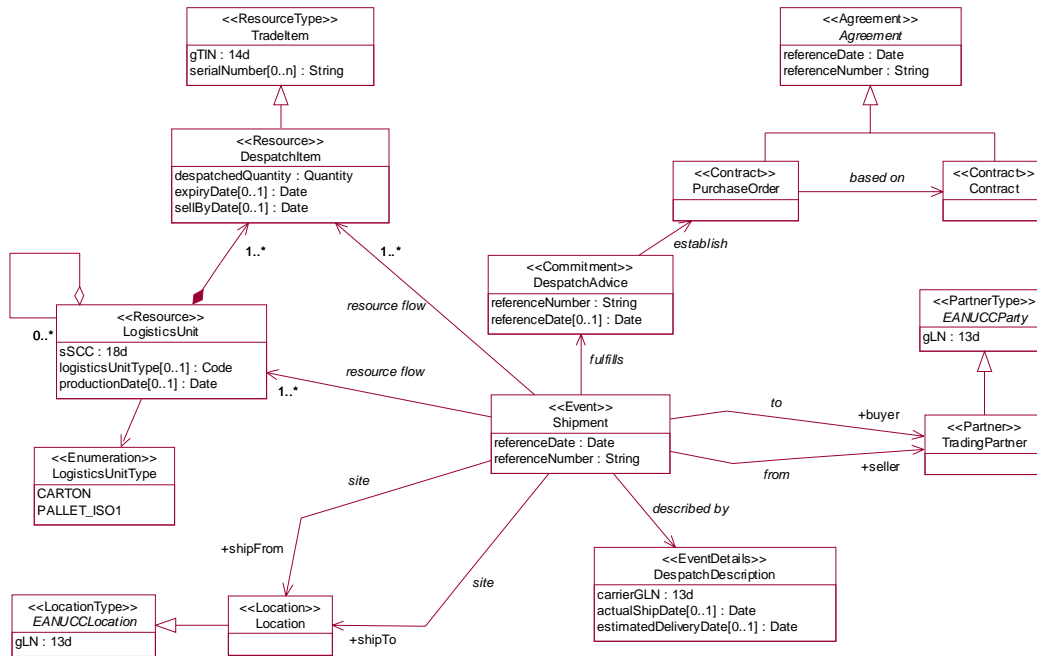
1298

Figure 4-18

1299

1300 4.2.2.2.3 Receiving Advice Business Document
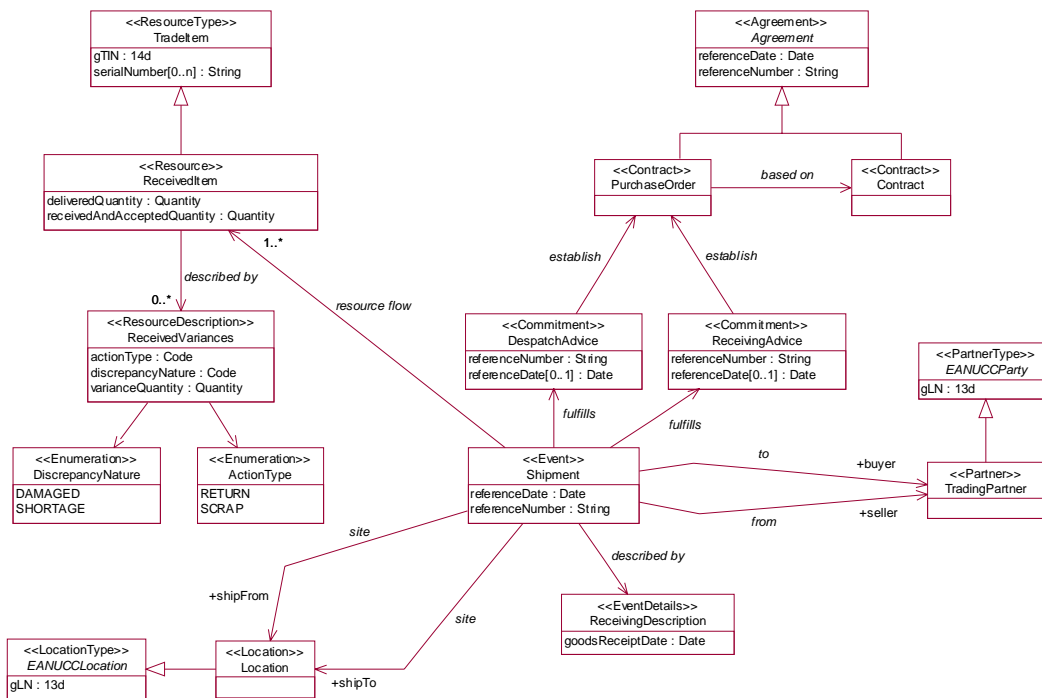
1301

Figure 4-19

1302

1303 **4.2.3 Business Service View (BSV)**

1304 **4.2.3.1 Sequence Diagram**

1305 A service interaction is a mutually binding interaction between an initiating service and a
1306 responding service.

1307
1308
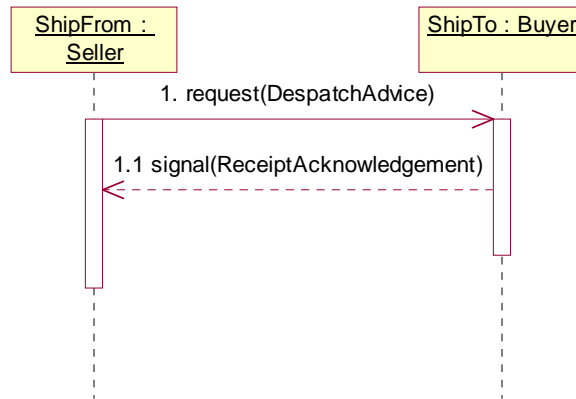
1309
1310
1311

1312 **Figure 4-20 BC2.Delivery-BT1.AdviseDespatch-SI1.AdviseDespatch**

1313
1314 Note: Service-to-Service interaction pattern E is used to design SI1.AdviseDespatch
1315
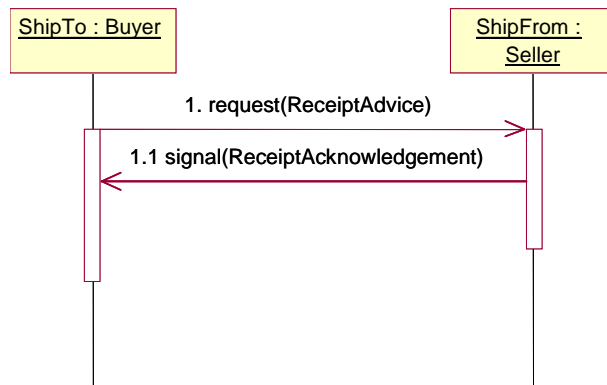
1316
1317

1318 **Figure 4-21 BC2.Delivery-BT1.AdviseDespatch-SI2.AdviseReceipt**

1319 Note: Service-to-Service interaction pattern E is used to design SI2.AdviseReceipt

1320 **4.2.3.2 Context Classification Scheme**

1321 This is the final scheme to specify the values of the 8 context categories of the business process.
1322

Context Categories	Values
Business Process	Delivery
Product Classification	Consumer Goods, Trade Items
Industry Classification	FMCG Retail
Geopolitical	Global
Official Constraint	None
Business Process Role	In All Contexts
Supporting Role	In All Contexts
System Capabilities	EAN.UCC System

1323

1324   **4.2.3.3 Detailed Class Diagram**
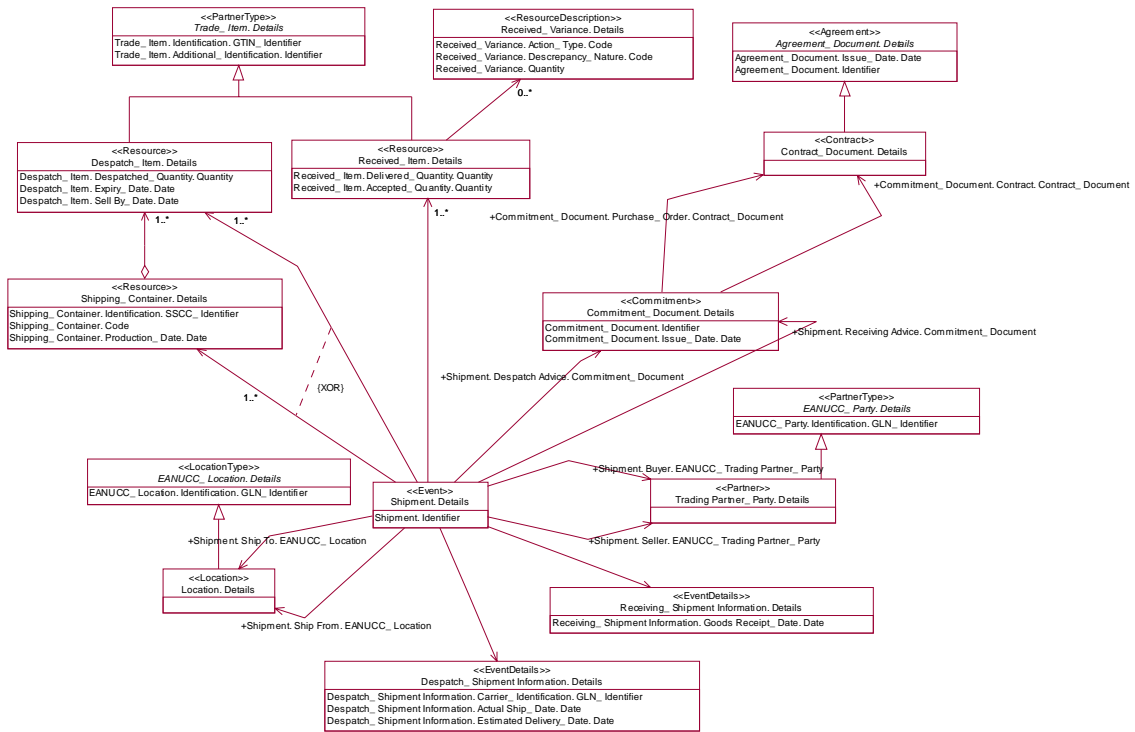
1325

1326   **Figure 4-22 Detailed Class Diagram**

1327 **4.2.3.4 Sub-set Business Document Class Diagram (detailed)**

1328 The detailed class diagram from the BSV (see 4.2.3.3) is used as a base to create the subset class
1329 diagram for each business document)

1330 **4.2.3.4.1 Despatch Advice Business Document (Class Diagram):**
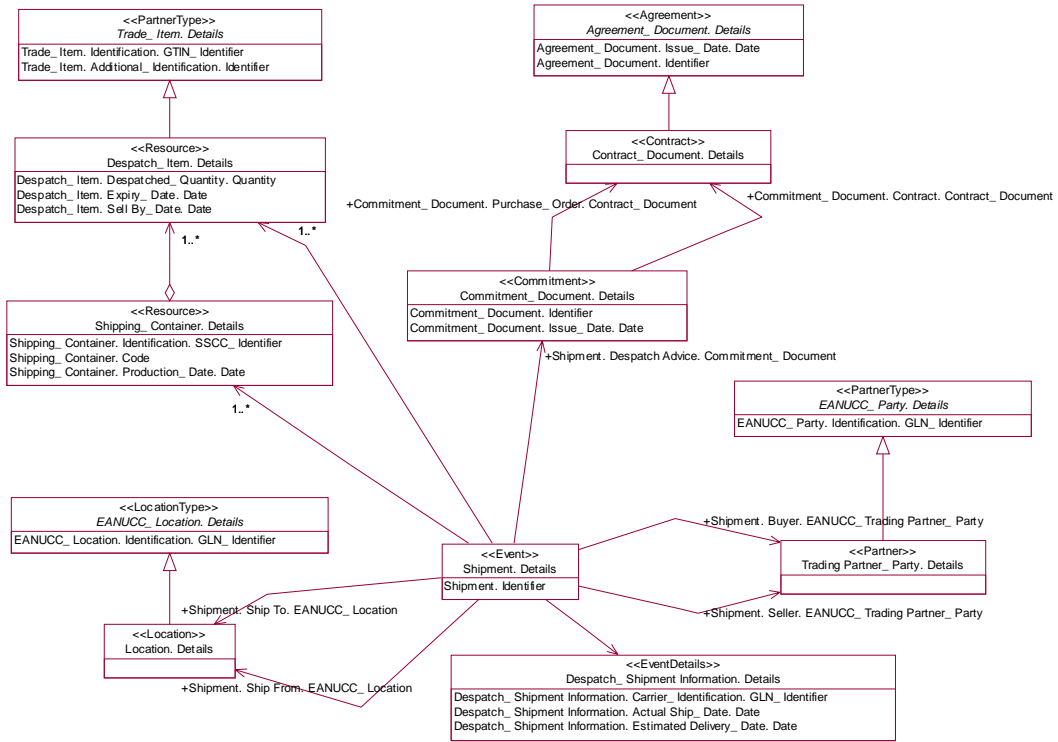
1331

1332 **Figure 4-23 Document Class Diagram**

1333 **4.2.3.4.2 Receiving Advice Business Document (Class Diagram)**

1334

1335 **Figure 4-24 Document Class Diagram**

1336 ## 4.2.4 Core Component Reference Lists

1337

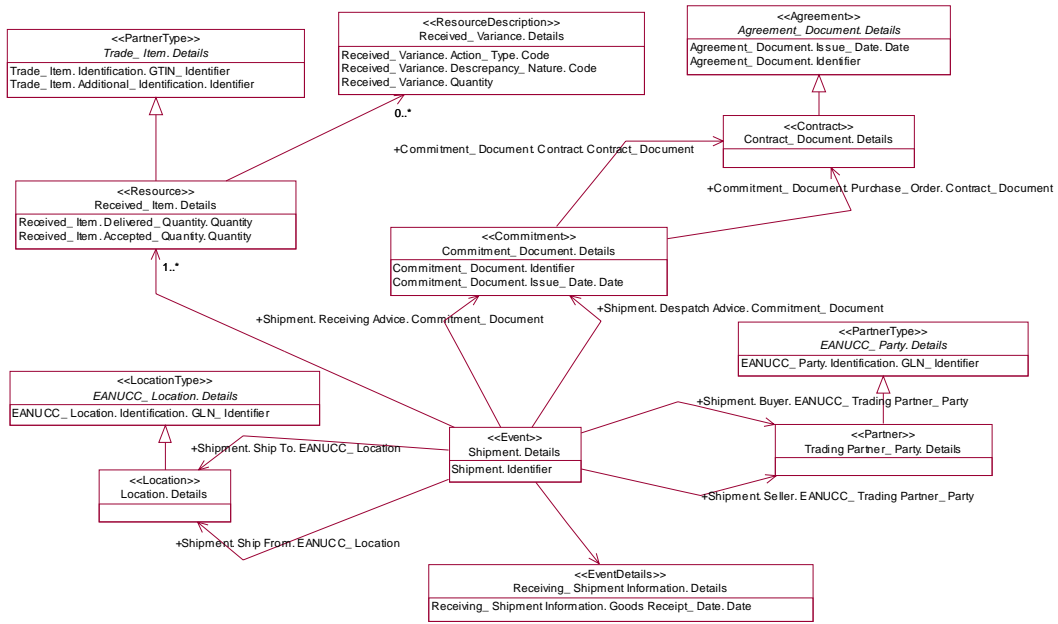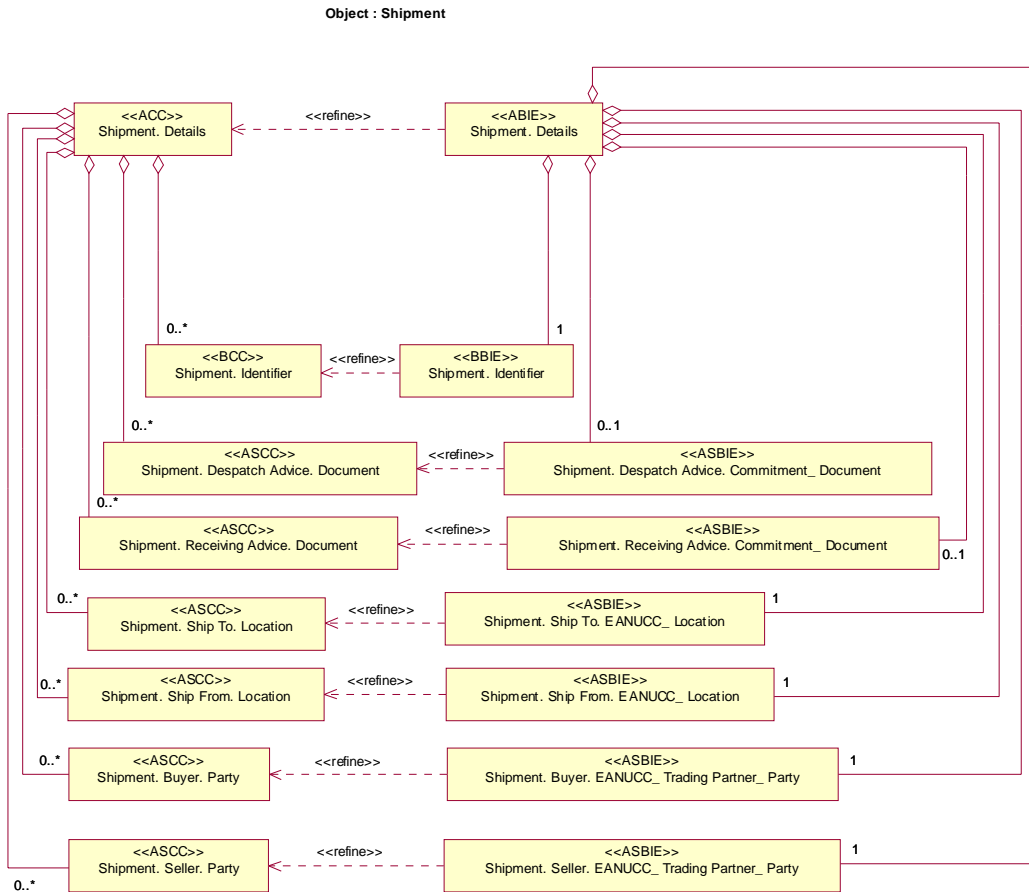|							Dictionary Entry Name	Type	Definition
		Document				Details	Document. Details	ACC	Details of a document.
Commitment	Commitment	Document				Details	Commitment_ Document. Details	ABIE	Details of a commitment document.
		Document		(Identification)		Identifier	Document. Identifier	BCC	A character string used to uniquely identify a document.
Reference Number	Commitment	Document		(Identification)		Identifier	Commitment_ Document. Identifier	BBIE	A character string used to uniquely identify a commitment.
		Document		(Date)		Date	Document. Date	BCC	A date relevant to a document.
Reference Date	Commitment	Document	Issue	Date		Date	Commitment_ Document. Issue_ Date. Date	BBIE	The date on which the commitment is issued.
Purchase Order	Commitment	Document	Purchase	Order	Contract	Document	Commitment_ Document. Purchase_ Order. Contract_ Document	ASBIE	Document by means of which a buyer initiates a transaction with a seller involving the supply of goods or services as specified, according to conditions set out in an offer, or otherwise known to the buyer.
Contract	Commitment	Document		Contract	Contract	Document	Commitment_ Document. Contract. Contract_ Document	ASBIE	Formal agreement between two or more parties.
		Shipment				Details	Shipment. Details	ACC	Details of a shipment event.
Shipment		Shipment				Details	Shipment. Details	ABIE	Shipment is the event that moves the goods between trading partners.
		Shipment		(Identification)		Identifier	Shipment. Identifier	BCC	A character string used to uniquely identify a shipment.
Reference Number		Shipment		(Identification)		Identifier	Shipment. Identifier	BBIE	A character string used to uniquely identify a shipment.
Buyer		Shipment		Buyer	EANUCC Trading Partner	Party	Shipment. Buyer. EANUCC_ Trading Partner_ Party	ASBIE	Party to which the goods are sold.
Seller		Shipment		Seller	EANUCC Trading Partner	Party	Shipment. Seller. EANUCC_ Trading Partner_ Party	ASBIE	Party selling goods to a buyer.
Ship To		Shipment		Ship To	EANUCC	Location	Shipment. Ship To. EANUCC_ Location	ASBIE	Location to where goods will be or have been shipped.
Ship From		Shipment		Ship From	EANUCC	Location	Shipment. Ship From. EANUCC_ Location	ASBIE	Location from where goods will be or have been shipped.
Despatch Advice		Shipment		Despatch Advice	Commitment	Document	Shipment. Despatch Advice. Commitment_ Document	ASBIE	Document by means of which the seller informs the buyer and/or the carrier about the despatch of goods.
Receiving Advice		Shipment		Receiving Advice	Commitment	Document	Shipment. Receiving Advice. Commitment_ Document	ASBIE	Document addressing the business needs related to the goods receipt or advising discrepancies between despatched or ordered/planned goods.
		Shipment Information				Details	Shipment Information. Details	ACC	Details of shipment information.
Despatch Description	Despatch	Shipment Information				Details	Despatch_ Shipment Information. Details	ABIE	Details of despatch information.
Receiving Description	Receiving	Shipment Information				Details	Receiving_ Shipment Information. Details	ABIE	Details of receiving information.
		Shipment Information		(Identification)		Identifier	Shipment Information. Identifier	BCC	A character string used to uniquely identify a shipment.
Carrier GLN	Despatch	Shipment Information	Carrier	Identification	GLN	Identifier	Despatch_ Shipment Information. Carrier_ Identification. GLN_ Identifier	BBIE	The EAN.UCC Global Location Number (GLN) using the EAN.UCC-13 Data Structure to identify a carrier.
		Shipment Information		(Date)		Date	Shipment Information. Date	BCC	A date related to a shipment.
Actual Ship Date	Despatch	Shipment Information	Actual Ship	Date		Date	Despatch_ Shipment Information. Actual Ship_ Date. Date	BBIE	The actual date of the shipment of the goods.
		Shipment Information		(Date)		Date	Shipment Information. Date	BCC	A date related to a shipment.
Estimated Delivery Date	Despatch	Shipment Information	Estimated Delivery	Date		Date	Despatch_ Shipment Information. Estimated Delivery_ Date. Date	BBIE	The estimated date of the delivery of the goods.
		Shipment Information		(Date)		Date	Shipment Information. Date	BCC	A date related to a shipment.
Goods Receipt Date	Receiving	Shipment Information	Goods Receipt	Date		Date	Receiving_ Shipment Information. Goods Receipt_ Date. Date	BBIE	The date of the receipt of the goods.

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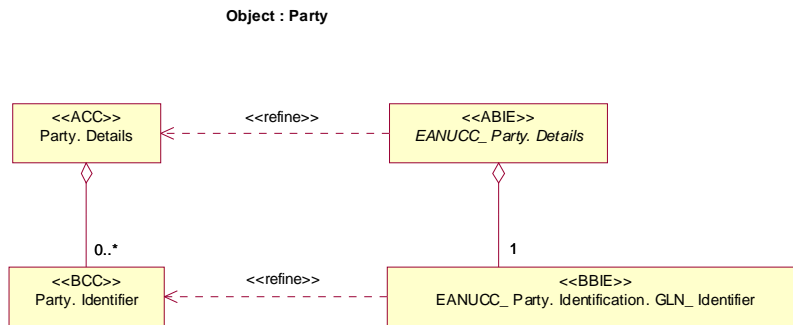|									
		Item				Details	Item. Details	ACC	Details of an item.
Trade Item	Trade	Item				Details	Trade_ Item. Details	ABIE	Any trade item (product or service) upon which there is a need to retrieve pre-defined information and that may be priced, or ordered, or invoiced at any point in any supply chain.
		Item		(Identification)		Identifier	Item. Identifier	BCC	A character string used to uniquely identify an item.
GTIN	Trade	Item		Identification	GTIN	Identifier	Trade_ Item. Identification. GTIN_ Identifier	BBIE	The EAN.UCC Global Trade Item Number (GTIN) using the EAN.UCC-8, UCC-12, EAN.UCC-13 or EAN.UCC-14 Data Structure.
		Item		(Identification)		Identifier	Item. Identifier	BCC	A character string used to uniquely identify an item.
Serial Number	Trade	Item	Additional	Identification		Identifier	Trade_ Item. Additional_ Identification. Identifier	BBIE	A serial number used to refer to a trade item.
		Item				Details	Item. Details	ACC	Details of an item.
Despatch Item	Despatch	Item				Details	Despatch_ Item. Details	ABIE	The individual despatched item.
		Item		(Quantity)		Quantity	Item. Quantity	BCC	The quantity of an item.
Despatched Quantity	Despatch	Item	Despatched	Quantity		Quantity	Despatch_ Item. Despatched_ Quantity. Quantity	BBIE	The despatched quantity of a despatched item.
		Item		(Date)		Date	Item. Date	BCC	A date related to an Item.
Expiry Date	Despatch	Item	Expiry	Date		Date	Despatch_ Item. Expiry_ Date. Date	BBIE	The date of a despatched item on which the item expires.
Sell By Date	Despatch	Item	Sell By	Date		Date	Despatch_ Item. Sell By_ Date. Date	BBIE	The date of a despatched item on which the item needs to be sold.
		Item				Details	Item. Details	ACC	Details of an item.
ReceivedItem	Received	Item				Details	Received_ Item. Details	ABIE	The individual received item.
		Item		(Quantity)		Quantity	Item. Quantity	BCC	The quantity of an item.
Delivered Quantity	Received	Item	Delivered	Quantity		Quantity	Received_ Item. Delivered_ Quantity. Quantity	BBIE	The quantity of a received item which is delivered.
Received And Accepted Quantity	Received	Item	(Receipt And) Accepted	Quantity		Quantity	Received_ Item. Accepted_ Quantity. Quantity	BBIE	The quantity of a received item, which is accepted.
		Container				Details	Container. Details	ACC	Details of a container.
Logistics Unit	Shipping	Container				Details	Shipping_ Container. Details	ABIE	A container of any composition established for transport and/or storage that needs to be managed through the supply chain.
		Container		(Identification)		Identifier	Container. Identifier	BCC	A character string used to uniquely identify a container.
SSCC	Shipping	Container		Identification	SSCC	Identifier	Shipping_ Container. Identification. SSCC_ Identifier	BBIE	The Serial Shipping Container Code (SSCC), which is a unique identification of a logistic unit (I.e. shipping container) using an 18-digit data structure.
		Container		(Code)		Code	Container. Code	BCC	A code related to a container.
Logistics Unit Type	Shipping	Container	Type	Code		Code	Shipping_ Container. Type_ Code. Code	BBIE	The code for the type of a shipping container.
		Container		(Date)		Date	Container. Date	BCC	The date related to a container.
Production Date	Shipping	Container	Production	Date		Date	Shipping_ Container. Production_ Date. Date	BBIE	The production date related to a container.
		Variance				Details	Variance. Details	ACC	Details of a variance.
Received Variances	Received	Variance				Details	Received_ Variance. Details	ABIE	Details of a received variance.
		Variance		Type		Code	Variance. Type. Code	BCC	A type code of a variance.
Action Type	Received	Variance	Action	Type		Code	Variance. Action_ Type. Code	BBIE	The action type code of a received variance.
Discrepancy Nature	Received	Variance	Discrepancy	Type		Code	Variance. Descrepancy_ Type. Code	BBIE	The discrepancy type code of a received variance.
		Variance				Quantity	Variance. Quantity	BCC	A quantity of a variance.
Variance Quantity	Received	Variance				Quantity	Received_ Variance. Quantity	BBIE	A quantity of a received variance.

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1345 **4.2.5 Core Component Overview**

1346 The Core Component overview provides a graphical presentation of the structure of the ABIE's
1347 and their associated BBIE's and ASBIE's. It also shows on which CC's the BIE's are based.
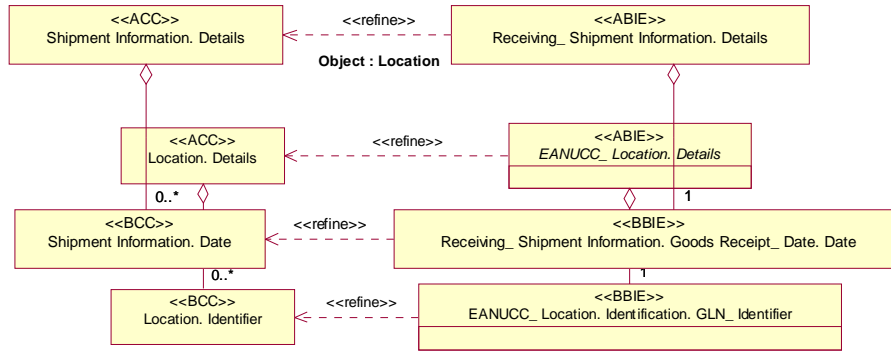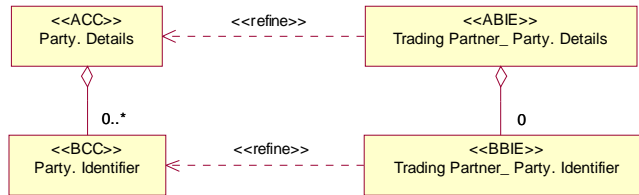
Object : Shipment

1348 **Figure 4-25**

Object : Party

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1350 **Figure 4-26**

Object : Shipment Information

<<ACC>> Shipment Information. Details	<<refine>> <<ABIE>> Receiving_ Shipment Information. Details

Object : Location

<<ACC>> Location. Details	<<refine>> <<ABIE>> *EANUCC_ Location. Details*

0..*

<<BCC>> Shipment Information. Date	<<refine>> <<BBIE>> Receiving_ Shipment Information. Goods Receipt_ Date. Date

1

0..*

<<BCC>> Location. Identifier	<<refine>> <<BBIE>> EANUCC_ Location. Identification. GLN_ Identifier

1

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Figure 4-27

Object : Party

<<ACC>> Party. Details	<<refine>> <<ABIE>> Trading Partner_ Party. Details

0..* 0

<<BCC>> Party. Identifier	<<refine>> <<BBIE>> Trading Partner_ Party. Identifier

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Figure 4-28

Object : Party

<<ACC>> Party. Details	<<refine>> <<ABIE>> EANUCC_ Trading Partner_ Party. Details

0..* 1

<<BCC>> Party. Identifier	<<refine>> <<BBIE>> EANUCC_ Trading Partner_ Party. Identifier

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Figure 4-29

Object : Shipment Information

<<ACC>> Shipment Information. Details	<<ABIE>> Despatch_ Shipment Information. Details
<<BCC>> Shipment Information. Date	<<BBIE>> Despatch_ Shipment. Estimated Delivery_ Date. Date
	<<BBIE>> Despatch_ Shipment. Actual Ship_ Date. Date
<<BCC>> Shipment Information. Identifier	<<BBIE>> Despatch_ Shipment Information. Carrier_ Identification. GLN_ Identifier

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Figure 4-30

Object : Document

<<ACC>> Document. Details (from Document)	<<ABIE>> Commitment_ Document. Details
<<BCC>> Document. Date (from Document)	<<BBIE>> Commitment_ Document. Issue_ Date. Date
<<BCC>> Document. Identifier (from Document)	<<BBIE>> Commitment_ Document. Identifier
<<ASCC>> Document. Order. Document (from Document)	<<ASBIE>> Commitment_ Document. Purchase_ Order. Contract_ Document
<<ASCC>> Document. Contract. Document (from Document)	<<ASBIE>> Commitment_ Document. Contract. Contract_ Document

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Figure 4-31

Object : Document

<<ACC>> Document. Details	<<ABIE>> Contract_ Document. Details
<<BCC>> Document. Identifier	<<BBIE>> Contract_ Document. Identifier
<<BCC>> Document. Date	<<BBIE>> Contract_ Document. Issue_ Date. Date

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Figure 4-32

Object : Document

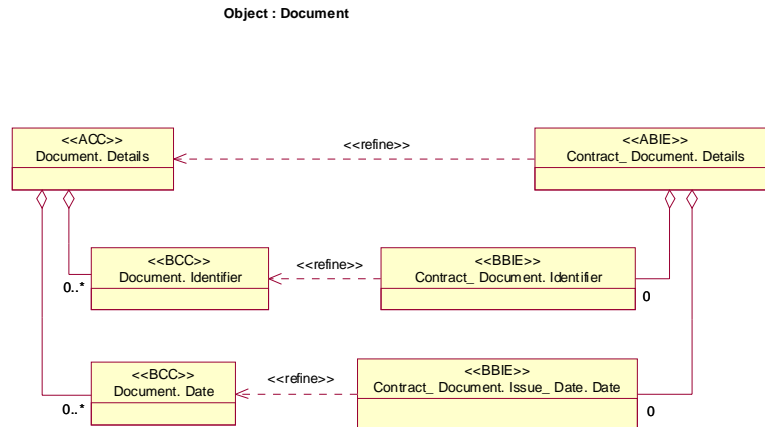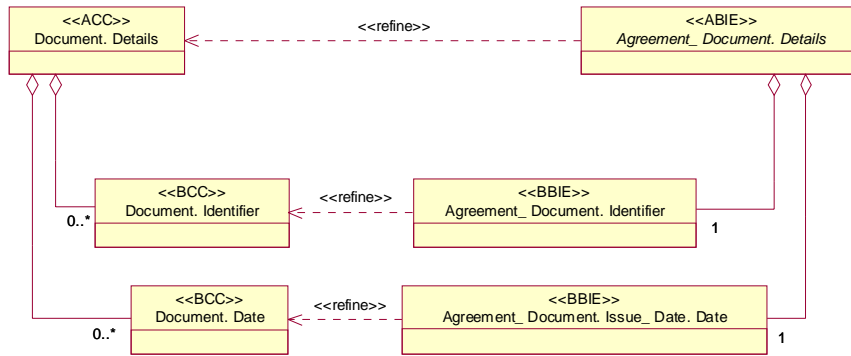1361   **Figure 4-33**

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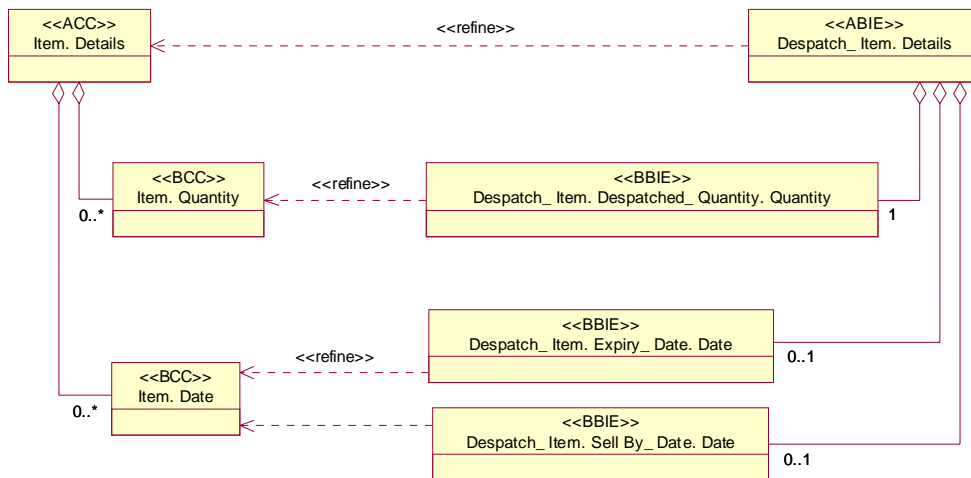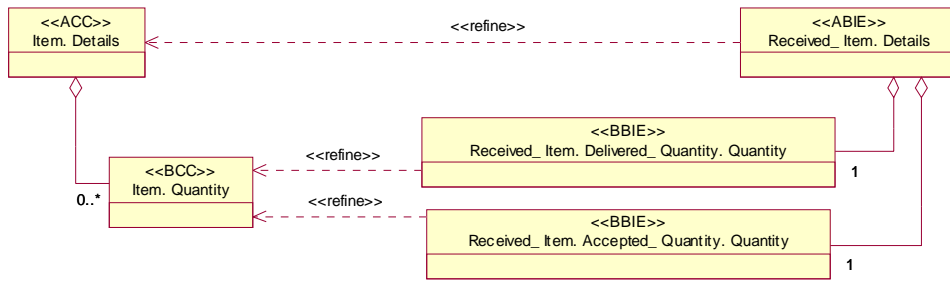1363   **Figure 4-34**

Object : Item
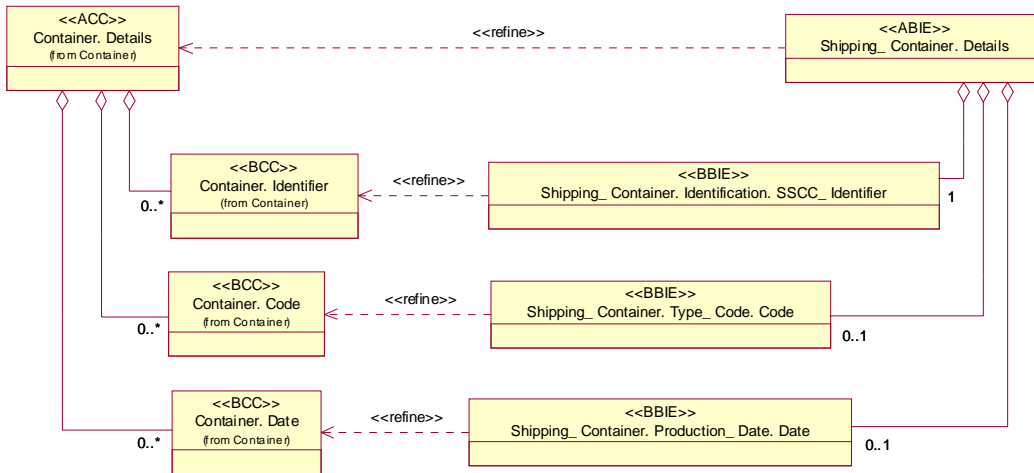

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1365   **Figure 4-35**
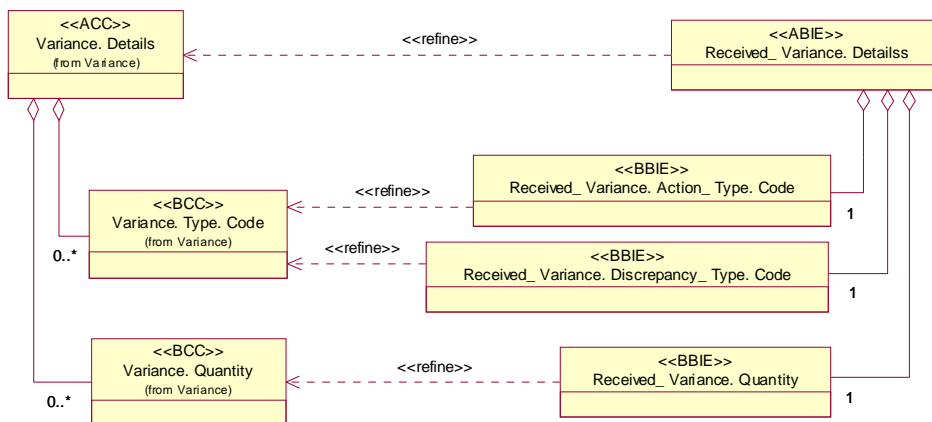
Object : Item

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1367 **Figure 4-36**

Object : Container

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1369 **Figure 4-37**

Object : Variance

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1371 **Figure 4-38**

5. Glossary

1372	**5. Glossary**	
1373	ABIE	Aggregate Business Information Entity
1374	ACC	Aggregate Core Component
1375	ANSI	American National Standards Institute
1376	ASBIE	Association Business Entity
1377	ASC	Accredited Standards Committee
1378	ATA	Air Transport Association
1379	BBIE	Basic Business Information Entity
1380	BCC	Basic Core Component
1381	CC	Core Component
1382	CCSD	Core Component Supplemental Document
1383	CCTS	Core Component Technical Specification
1384	EbXML	Electronic Business Extensive Markup Language
1385	EDI	Electronic Data Interchange
1386	UMM	UN/CEFACT Modeling Methodology
1387	UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
1388	OASIS	Organization for the Advancement of Structured Information Standards
1389	XML	Extensive Markup Language

Appendix A

1390

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1426 Appendix B - Administrative Information

1427

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1432 design.

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