eInvoicing Implementation Guide

Version 1.0

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Digital Business Council

Acknowledgements

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1 Audience

The intended primary audiences for this specification are application developers involved in the design, development, integration and operation of business applications dealing with invoicing. This specification may also be of interest to business analysts as a practical implementation of the eInvoicing Semantic Model (Digital Business Council, 2016c).

BUSINESS ANALYSTS	APPLICATION DEVELOPERS
Business Analysts: • Those involved in the identification of business requirements for solutions to support Accounts Receivable, Accounts Payable and the electronic transmission of the associated documents between businesses; or • Those who analyse and document business or processes or systems, assessing the business model or its integration with technology. Analysts will need to understand which aspects of their business requirements the Implementation Guide addresses (and does not address).	Application Developers: • Those involved in the design, development, operation and implementation of software and Services for the exchange of electronic Documents or messages; or • Those involved in the design, development, integration and operation of business applications dealing with invoicing.

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Primary Audience ▮▮▮ Secondary Audience ▮▮▮

Business users (such as Accounts Payable or Accounts Receivable staff) do not need to use this specification to be able to participate in eInvoicing. Their business software providers may refer to the eInvoicing Semantic Model (Digital Business Council, 2016c) to ensure their application supports these requirements and may use this specification if they choose to implement the eInvoicing Profile for their applications, but it is also not a requirement for participation in the Council's Interoperability Framework (Framework).

2 Introduction

The eInvoicing Implementation Guide specifies how to implement the Information Elements and associated business rules defined in the Council's eInvoicing Semantic Model (Digital Business Council, 2016c) using an XML Data Format based on the UBL 2.1 international standard (OASIS UBL TC, 2013).

This specification can be viewed as comprising of two sections:

- Specification of the Profile for eInvoice Document Data Formats (primarily Section 8); and
- Guidelines for how eInvoicing Documents are to be used within the Framework (primarily Section 10).

This relationship is described in Figure 1.
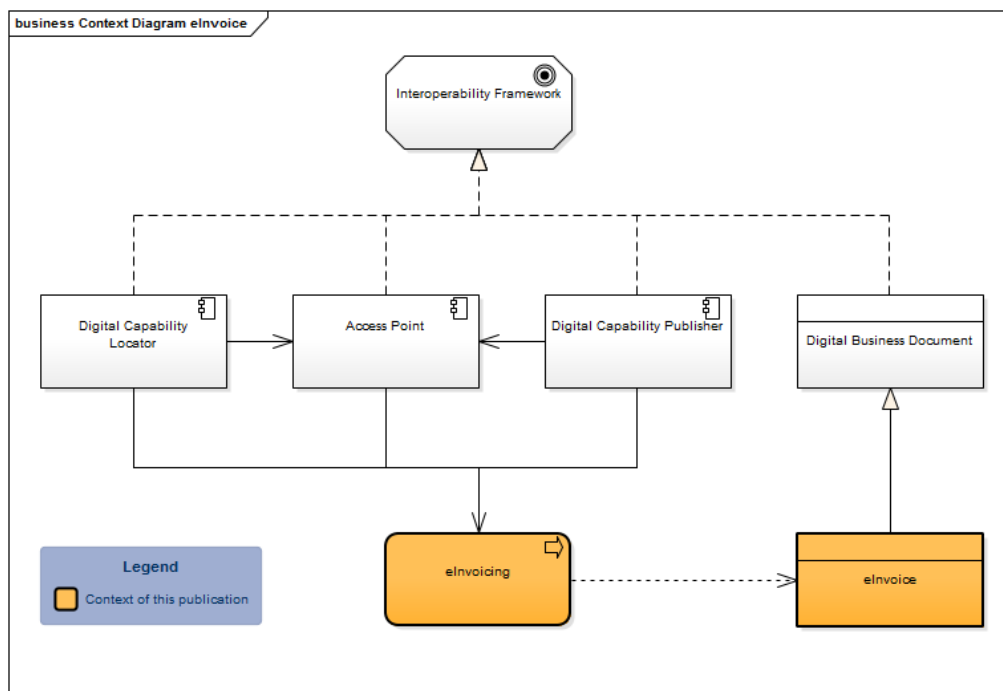
Figure 1: Context of eInvoicing within the Interoperability Framework

While it is possible to implement the Profile for eInvoice Documents independently of the Framework, it is understood that most implementations will be within this context.

3 Conformance

Conformance to the eInvoicing Implementation Guide means conformance with the sections marked as 'Normative'.

The Framework specifies that eInvoicing Documents exchanged between Access Points must conform to this eInvoicing Profile. Sending Access Points are required to send conformant Documents.

Conformance to the Profile for eInvoice Documents does not require conformance to Section 10 'Identifying Services for the Interoperability Framework'.

4 Distribution Package

The eInvoicing Implementation Guide and associated artefacts are published at:
http://resources.digitalbusinesscouncil.com.au/dbc/processes/einvoicing/implementation-1.0

This directory contains the following sub-directories:

- **codes** – containing the Genericode files for Code list Values (OASIS Code List Representation TC, 2007);
- cva - containing Context/Value Association files for defining data type qualifications (OASIS UBL TC, 2013);
- models – containing spreadsheets and hypertext linked tabular reports of the Information Elements mapped from the eInvoicing Semantic Model (Digital Business Council, 2016c);
- schematron – containing the Schematron files that may be used for validating business rules (Schematron, 2004);
- testsets – containing sample XML Document instances;
- ubl – containing links to necessary UBL 2.1 validation artefacts (OASIS UBL TC, 2013);
- val – artefacts suitable for testing XML Document instances;
- xsd - containing the normative, annotated XSD Schemas (W3C, 2012). Loading the XML Document Schemas into an XML aware application will engage the various component libraries required; and
- xsdrt - containing non-annotated XSD Schemas (W3C, 2012) that may be used for runtime validation.

The directory also contains a compressed (ZIP) file of a directory named implementation-1.0 containing the same sub-directories listed above. This may be used for localised implementations.

5 Terms and Definitions (Normative)

The terms listed in Table 1 are used as defined throughout all Council specifications.

Table 1: Terms and Definitions

Term	Definition
Business Process	A collection of related, structured activities or tasks undertaken by a business (for example, Invoicing).
Code	A set of allowed Values that have standardised meanings that can be resolved unambiguously.

Term	Definition
Core	A business requirement, rule, Information Element or supporting UBL Element that Service Interfaces must be able to recognise if they appear in a Document.
CVA	Context/Value Association is an XML Vocabulary using address expressions to specify UBL Elements and their associated constraints.
Data Format	A machine-readable language, syntax or dialect used to present the Information Elements contained in an electronic Document (for example, an eInvoice).
Data Type	A computer representation of well-known abstract concepts such as integer and date.
Distribution Package	A packaged file that contains the technical artefacts to support conformant implementation of the eInvoicing Profile.
Document	A purposeful and self-contained, structured set of Information Elements.
eInvoice	An Invoice, RCTI, Credit Note or Adjustment exchanged using the Council's Data Format.
eInvoicing	The set of processes required to create and receive eInvoices.
eInvoicing Semantic Model	A structured set of logically interrelated Information Elements used to support eInvoicing.
Extension	A business requirement, rule, Information Element or supporting UBL Element that is not part of the Core Semantic Model.
Genericode	A standard XML representation for the contents (and associated metadata) of a Code list.
Identification Scheme	The collection of Identifiers applicable for a given type of Information Element governed under a common set of rules.
Identifier	A character string used to establish the identity of, and distinguish uniquely, one instance of an object within an Identification Scheme from all other objects within the same scheme. An Identifier may be a word, number, letter, symbol, or any combination of those.

Term	Definition
Information Element	A semantic concept that can be defined independent of any particular data format.
Mandatory	A business requirement, rule, Information Element or supporting UBL Element that must always appear in a Document.
Markup Language	A computer language for marking or tagging a document that indicates its structure either as Information Elements (for data processing) or as display elements (for page layout).
Normative	Sections of a Document conveying criteria to be fulfilled if compliance with the Document is to be claimed and from which no deviation is permitted.
Optional	A business requirement, rule, Information Element or supporting UBL Element that may appear on a Document.
Profile	A conformant subset of a standard specification.
Schema	A World Wide Web Consortium (W3C) recommendation that specifies how to formally describe the UBL Elements in an XML Document.
Schematron	A standard validation language for making assertions about the presence or absence of patterns in UBL Elements.
Service	An application able to process specific Document types for specific business transactions.
Service Interface	A software interface to support a Service.
UBL	Universal Business Language (UBL) is a library of standard XML Schemas for XML Documents such as purchase orders and Invoices.
UBL Extension Element	A UBL Element that enables additions to the standard UBL Schemas.
Value	An expression that cannot be reduced any further. Values are used to express the information for an Information Element and are (generally) formatted as UBL Elements.

Term	Definition
XML	Extensible Markup Language (XML) is a Markup Language that defines a set of rules for encoding Documents in a format that is both human-readable and machine-readable.
XML Attribute	XML attributes are normally used to describe or to provide additional information about UBL Elements.
XML Document	A Document encoded using the XML Markup Language.
UBL Element	Each XML document contains one or more elements, the scope of which are either delimited by start and end tags (the characters '<' and '>'). A UBL Element is generally equivalent to an Information Element.
XML Type	An XML Type consists of a Value space, a lexical space, and a set of facets that characterise properties of the Value space, individual Values or lexical items.
XML Vocabulary	A set of UBL Element definitions for a particular industry or business function.

6 Controlled Vocabulary (Normative)

Many terms used in defining the Information Elements in the eInvoicing Semantic Model and Implementation Guide refer to the following controlled vocabulary of terms.

The terms listed in Table 2 are used as defined in the context of this Implementation Guide.

Table 2: Controlled Vocabulary

Term	Definition	Notes
Address	A defined location.	
Address Line	The Description of an Address.	*For example: 'Unit 4, Number 12 Genge Street, Canberra'*
Allowance	A reduction in the Amount payable.	*May be a discount or rebate, etc.*

Term	Definition	Notes
Allowance Reason	The reason why an Allowance applies.	
Amount	Expresses a numerical monetary Value.	*May be positive, negative or 0. For example: '1434.95', '0.0','-345.252'*
Amount Due	The outstanding Amount.	
Amount Payable	The Total Amount to be paid.	
Attached Document	A separate Document included with the Invoice for Reference or audit purposes.	*For receipts, proof of delivery, specifications, etc.*
Base Amount	The Amount that may be used, in conjunction with the Allowance or Charge rate, to calculate the Allowance or Charge Amount.	
Business Name	The name under which a Party conducts business.	*Parties must register a Business Name in Australia, unless they trade under a personal name, or fall within an exemption.* (Australian Securities and Investment Commission, 2016)*.*
Buyer	The Party that procures goods or services.	
Buyer Accounting Reference	Identifies where the Buyer may allocate the relevant transaction in their financial reports.	*A Buyer may have previously requested that the Supplier state this on their Invoice.*
Category	A term applied to a group of items with common characteristics.	

Term	Definition	Notes
Charge	An increase in the Amount payable.	*May be a penalty or surcharge, etc.*
Charge Reason	The reason why a Charge applies.	
City	The common Name of a City or town.	
Company Name	A company is a separate legal entity registered with ASIC. A company has its own name which is required to include the legal terms or abbreviations 'pty' and/or 'ltd' at the end of the name.	*A company may choose to register a Business Name if it wants to carry on as business using its name without the legal terms, or if it wants to use a different name* (Australian Securities and Investment Commission, 2016).
Contact	Contact for issues relating to the Invoice.	
Contact Point	Who to Contact.	*May be a person's Name, Contact identification, department or office identification, etc.*
Contract	A business or trading agreement.	
Country	A nation state.	
Country of Origin	The Country where an Item originated.	
Credit Note	A Document used to specify credits due to the Buyer from the Supplier.	
Currency	A medium of exchanging funds.	

Term	Definition	Notes
Date	A calendar Date.	
Description	Text used to provide details.	*For example: 'Widgets', 'Basic Rental'*
Dispatch Advice	A Document used to describe the sending of a delivery of Items.	
Electronic Address	An end point Identifier for delivering electronic Documents.	*For example: 'http://receivernetwork /accesspoint/partnerX YZ'*
End Date	The termination Date for a Period of time.	
External Document	A separate Document not included with the Invoice but identified at another location for Reference or audit purposes.	*For example: 'http://partnerX/Deliver yDocket.pdf'*
Financial Institution	An organisation that provides financial Services for its clients or members.	*Generically known as a Bank.*
Financial Institution Account	An account at a Financial Institution.	*Generally known as a Bank Account.*
Financial Institution Identifier	The office holding the Financial Institution Account.	*In Australia this is generally known as the Bank-State-Branch (BSB).*
Goods and Services Tax (GST)	The term used in Australia for consumption Tax as defined by 'A New Tax System Act' (1999) (Australian Government, 1999).	*Goods and Services Tax (GST) applies to Items sold or consumed in Australia.*

Term	Definition	Notes
Gross Price	The unit price before Allowances and Charges.	
Tax Code	A Category within the Australian indirect Taxation system.	
GST Status	The Tax status applicable to a Party within the GST system (Australian Government, 1999).	*For example, 'Registered' or 'Not registered'*
Invoice	A Document notifying an obligation to make a payment.	*Definition taken from 'A New Tax System (Pay As You Go) Act 1999' (Australian Government, 2013).*
Invoice Currency	The system of monetary exchange used for the Invoice.	*For domestic Invoicing this will be Australian Dollars in the majority of cases, but it is possible to use other Currencies.*
Invoice Level	Information that applies to the entire Invoice.	*Sometimes referred to as the Invoice header.*
Invoice Line	Defines properties of an individual Invoiced Item.	*Typically used to specify individual transactions.*
Invoice Line Extension Amount	The Net Unit Price multiplied by the Invoice Quantity.	
Invoiced Quantity	The quantity of Items being Invoiced.	
Issue Date	The Date on which the Invoice was created.	

Term	Definition	Notes
Item	An individual article or unit.	*May be goods or services.*
Item Classification	The formal classifying of an Item by its type or nature.	*Classification Codes are used to allow grouping of similar Items for a various purposes e.g. public procurement (CPV), e-Commerce (UNSPSC), exports (AHECC) etc.*
Item Property	Features of an Item.	*For example lengths, colours, sizes.*
Item Specification	A formal set of Item attributes used to satisfy the conditions of sale.	
Net Amount	The Amount is 'net' without GST, i.e. inclusive of Allowances and Charges as well as other relevant Taxes.	
Net Unit Price	The unit price of an item without GST, i.e. inclusive of Allowances and Charges as well as other relevant Taxes.	
Party	An individual, a group, or an organisation having a role in a Business Process.	
Payee	The Party that receives the payment.	
Payer	The Party that makes the payment.	
Payment Means	How a payment is expected to be or has been settled.	
Period	A length or portion of time.	

Term	Definition	Notes
Postal Address	Identifies the end point of a postal system.	
Postcode	The Identifier for an addressable group of properties according to the Australian postal Service.	*Known as Postal Zone in some countries.*
Price Base Quantity	The number of Item units to which a price applies.	
Price Discount	The total discount subtracted from the Gross Price to calculate the Net Price.	
Purchase Order	A Document used to order Items issued by the Buyer.	
Receipt Advice	A Document used to describe the acceptance of delivery of Items.	
Recipient Created Tax Invoice (RCTI)	A Tax Invoice issued by the Party that receives the goods and services, rather than the Supplier.	
Reference	The action of mentioning or alluding to something.	
Referenced Document	A Document referenced in the Invoice to substantiate the claims made. These may be exchanged as either Attached or External documents.	
Related Invoice	A previously issued Invoice.	
Response	A Document to acknowledge receipt of preceding Document.	*For example, acknowledging receipt of an Invoice or Credit Note.*
Sales Order Identifier	An Identifier for a Buyer's Purchase Order, issued by the Seller.	

Term	Definition	Notes
Start Date	The starting Date for a Period of time.	
State	A Country sub-division or region.	*An Australian State or Territory.*
Supplier	The Party responsible for providing goods or services to the Buyer.	
Tax	A compulsory contribution to public revenue, levied by the government on workers' income and business profits, or added to the cost of some goods, Services and transactions.	
Taxation Branch	A Branch of an Australian Business registered with the Australian Tax Office for Tax reporting purposes.	
Tax Invoice	An Invoice may be a Tax Invoice under the meaning given by subsections 29-70(1) and 48-57(1) of the GST Act (Australian Government, 1999).	*See 7.1.1.*
Tax Rate	The rate that applies for a Tax.	*For example, GST rate.*
Taxable Amount	The Amount that is Taxable.	
Telephone Number	Identifies the end point of a telephony system.	
Total Amount	The sum of all Amounts.	

Term	Definition	Notes
Trading Name	The term previously used by the Australian Business Register (ABR) for Business Name.	*Taken from the Australian Securities and Investment Commission definitions* (Australian Securities and Investment Commission, 2016)*.*

7 Business Processes

Business process activity flows are provided to assist in understanding the context of use for eInvoicing Documents. These processes are indicative only and not a Mandatory requirement for using eInvoicing. It is understood that many variants on these processes exist.

The purpose of providing these process descriptions is to inform Implementers of the context in which these documents are used and not to suggest these are the only processes in which they are used.

7.1 Invoicing

This section describes a generic Invoicing process, where a Supplier (Accounts Receivable) issues an Invoice to a Buyer of goods or services (Accounts Payable). Figure 2 describes the flow of a common Invoicing process.

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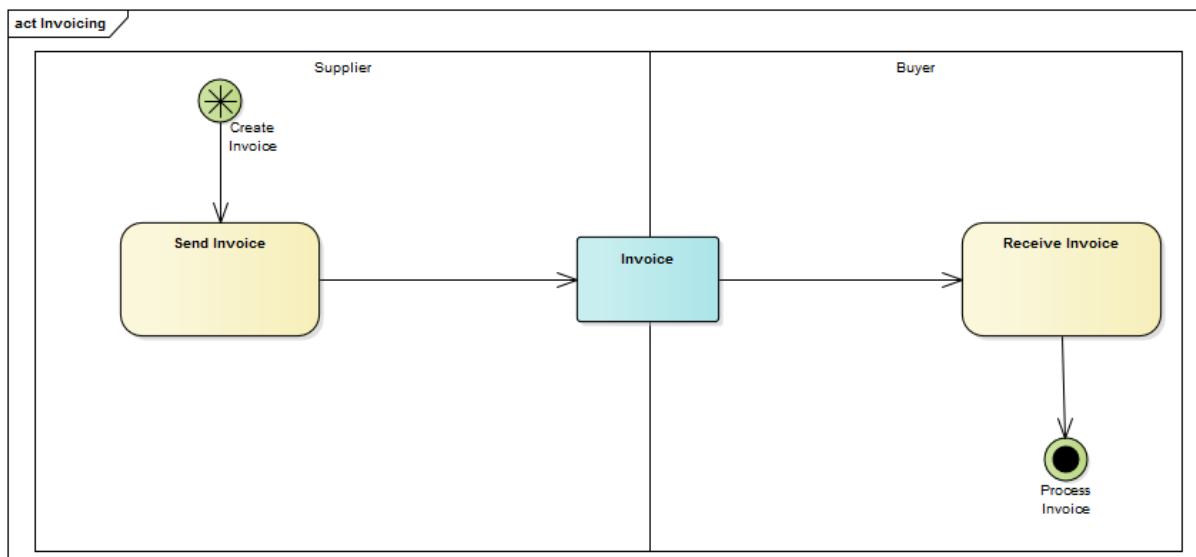
Figure 2: The Common Invoicing Process

7.1.1 Tax Invoices

Tax Invoices are defined by law and need to be retained in order for a business to claim GST credits on purchases and demonstrate the amount of GST that has been collected by the business during the sale of Taxable supplies.

Tax Invoices in Australia have various requirements set out in the GST Act and GST rulings made by the Australian Taxation Office (Australian Government, 1999) (Australian Government, 2013). These requirements can be found here:

https://www.ato.gov.au/Business/GST/Issuing-tax-invoices/

eInvoices that support the eInvoicing Semantic Model (Digital Business Council, 2016c) and this Implementation Guide provide for these requirements.

7.1.2   Recipient Created Tax Invoicing (RCTI)

Recipient Created Tax Invoicing is a specialised type of Invoicing process. With RCTIs the Tax Invoice is issued by the Party receiving the goods and services rather than the Supplier.

7.2 Adjustment Invoicing

After an eInvoice is created, it is sometimes necessary to adjust the information. For example, an adjustment may be needed when:

- There is an error in the relevant Invoice, for example it is to the wrong Buyer, at the wrong time or the wrong amount was charged;
- The Amount of the original Invoice no longer reflects the amount the Buyer owes, for example due to Items being returned or a dispute about Items provided; or
- The supply becomes Taxable or stops being Taxable.

Two common processes for adjustment Invoicing are described below.

7.2.1 Credit Notes

The Supplier may create and issue a Credit Note that acts as a 'negative Invoice' to offset a previous Invoice.

Credit Notes may also be known as Adjustment Notes for Tax reporting purposes (Australian Government, 1999) and ATO GST ruling GSTR 2013/2 (Australian Government, 2013).

7.2.2 Copy, Duplicate and Replacement Invoices

After an Invoice has been received, additional versions of the Invoice may be sent.

A copy of the original Invoice may be sent.

A duplicate Invoice may be sent accidentally.

A replacement Invoice, with different details, may be sent to replace an existing Invoice.

The eInvoicing Implementation Guide recognises these conditions of Invoicing but does not prescribe how these processes are managed. These are defined by business arrangements between Suppliers and Buyers.

7.3 Acknowledging Invoices

With an eInvoicing process it is not uncommon for the recipient (e.g. Buyer) to respond to the eInvoice by sending an acknowledgement in the form of a Response document (see Section 8.4).

Figure 3 describes the flow of a common eInvoicing process with an acknowledgement.
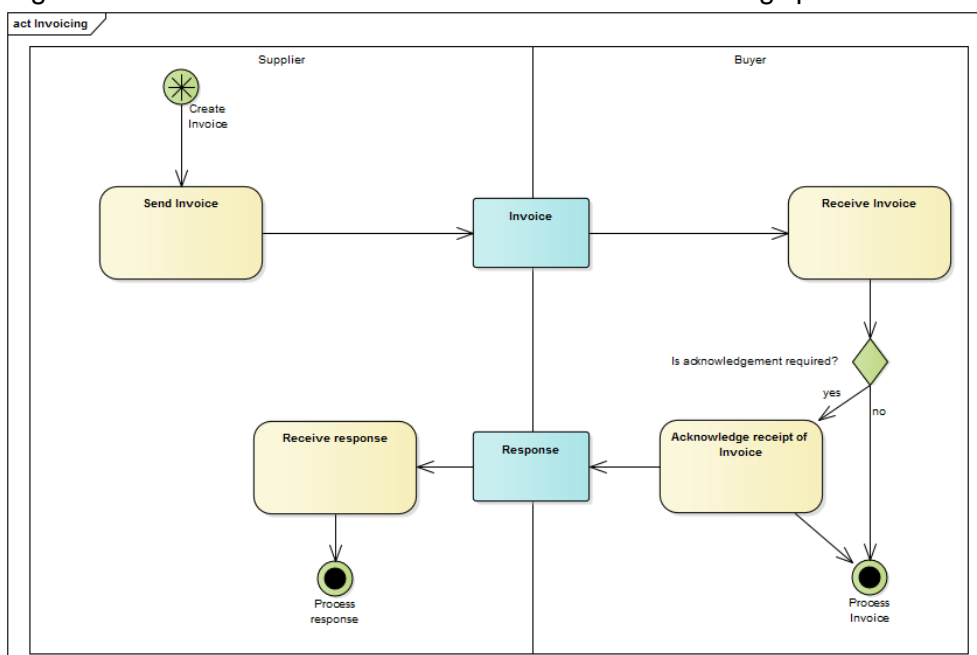
Figure 3: An Invoicing Process with Acknowledgement

Note: Responses may also be sent to acknowledge Recipient Created Tax Invoices and Credit Notes.

8 eInvoicing Profiles (Normative)

This section defines the Profiles of the Data Formats to be used for XML Document exchanges as part of the eInvoicing process.

Following from the eInvoicing Semantic Model (Digital Business Council, 2016c) the eInvoicing Profiles has been defined to include only the essential UBL Elements (the Core) that an eInvoicing Document needs to satisfy operational, financial and regulatory (e.g. GST) requirements.

Core UBL Elements are those that business applications or Service Interfaces must be able to recognise if they appear in a Document. Not all Core UBL Elements need appear in all eInvoice Documents, these are noted as Optional in the Profile. Core UBL Elements noted as Mandatory in the Profile and must appear in every eInvoice Document.

Using these Core UBL Elements for eInvoices means that businesses are able to:

a. Interpret and understand the meaning of the common, essential information on an eInvoice; and
b. Inform their software or Service providers to process these Core UBL Elements based on the eInvoicing Semantic Model (Digital Business Council, 2016c).

These Profiles are a conformant subset of the OASIS Universal Business Language (UBL) v2.1 (ISO/IEC 19845:2015) (OASIS UBL TC, 2013). XML Documents conforming to these Profiles also conform to the UBL standard.

8.1 Document Constraints

All XML Documents must conform the UBL rules for Document constraints (OASIS UBL TC, 2013). Specifically:

> *[IND5] UBL conformant instance documents MUST NOT contain an element devoid of content or containing null values, except in the case of extension, where the UBL Extension Content element is used.*

> This means that a Mandatory UBL Element must not be empty. If they appear in an XML Document, Optional Elements must also not be empty.

And:

> *[IND2] All UBL instance documents MUST identify their character encoding within the XML declaration.*

> *[IND3] In conformance with ISO IEC ITU UN/CEFACT eBusiness Memorandum of Understanding Management Group (MOUMG) Resolution 01/08 (MOU/MG01n83) as agreed to by OASIS, all UBL SHOULD be expressed using UTF-8.*

8.2 Diagram Notation

The remainder of this section provides a description of the UBL Elements within the eInvoice Schemas.

The diagramming notation used has the following key:
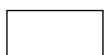
Mandatory Element   Optional Element
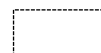
Examples of the use of these Elements are also provided.

In addition, a tabular version of the mapping between the eInvoicing Semantic Model and UBL is provided in Annex B of the eInvoicing Semantic Model (Digital Business Council, 2016c) and also in the tables available at:

http://resources.digitalbusinesscouncil.com.au/dbc/documents/core-invoice/summary/core-invoice-01.html

8.3 Core Invoice XML Schema

The Core Invoice Schema is used for defining the following eInvoicing Document types:

- Invoice;
- Recipient Created Tax Invoice (RCTI), and;
- Credit Note.

The specific Document type is identified by the Value of the InvoiceTypeCode Element.

The remainder of this section walks through the various structures in the Core Invoice Schema.

The Response Document type is described in Section 8.4.

8.3.1 Invoice Document Type

The Invoice Element is the top level (often referred to as the root element) of the Invoice. The overall structure is describes in Figure 4.

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Figure4: The Invoice Document Structure

8.3.2 Document Reference Type

A Document Reference is a structure used to define a Reference to another Document.
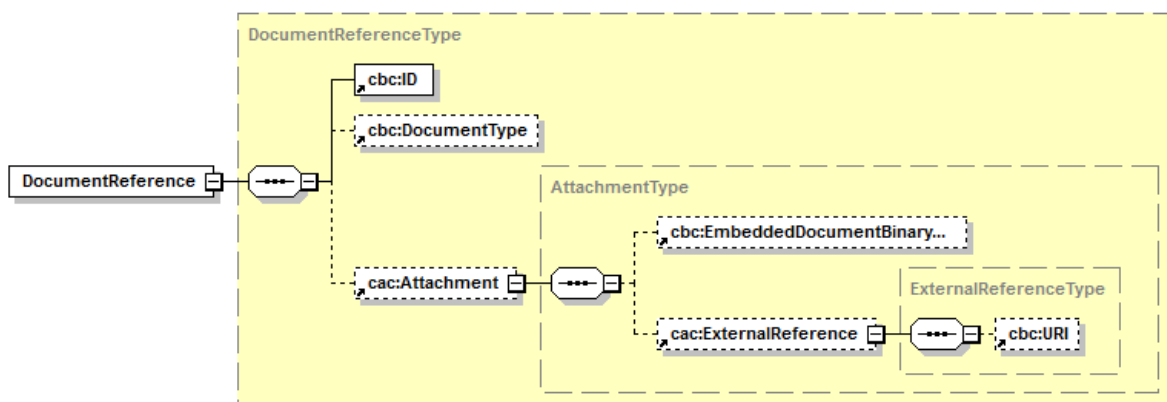
Figure 5: Document Reference Structure

```
<cac:DocumentReference>

<cbc:ID>TOSL-108-A</cbc:ID>

<cbc:DocumentType>Invoice</cbc:DocumentType>

</cac:DocumentReference>
```

Figure 6: Example of a Document Reference

The structure supports both Documents embedded or included with the Invoice and those referred to at an external URI.

8.3.3 Supplier Party Type

Both Buyer and Supplier share the same Party structures.

Within the Core Invoice Schema the Supplier (who claims the payment and is responsible for resolving billing issues and arranging settlement) is identified using the UBL Element AccountingSupplierParty.

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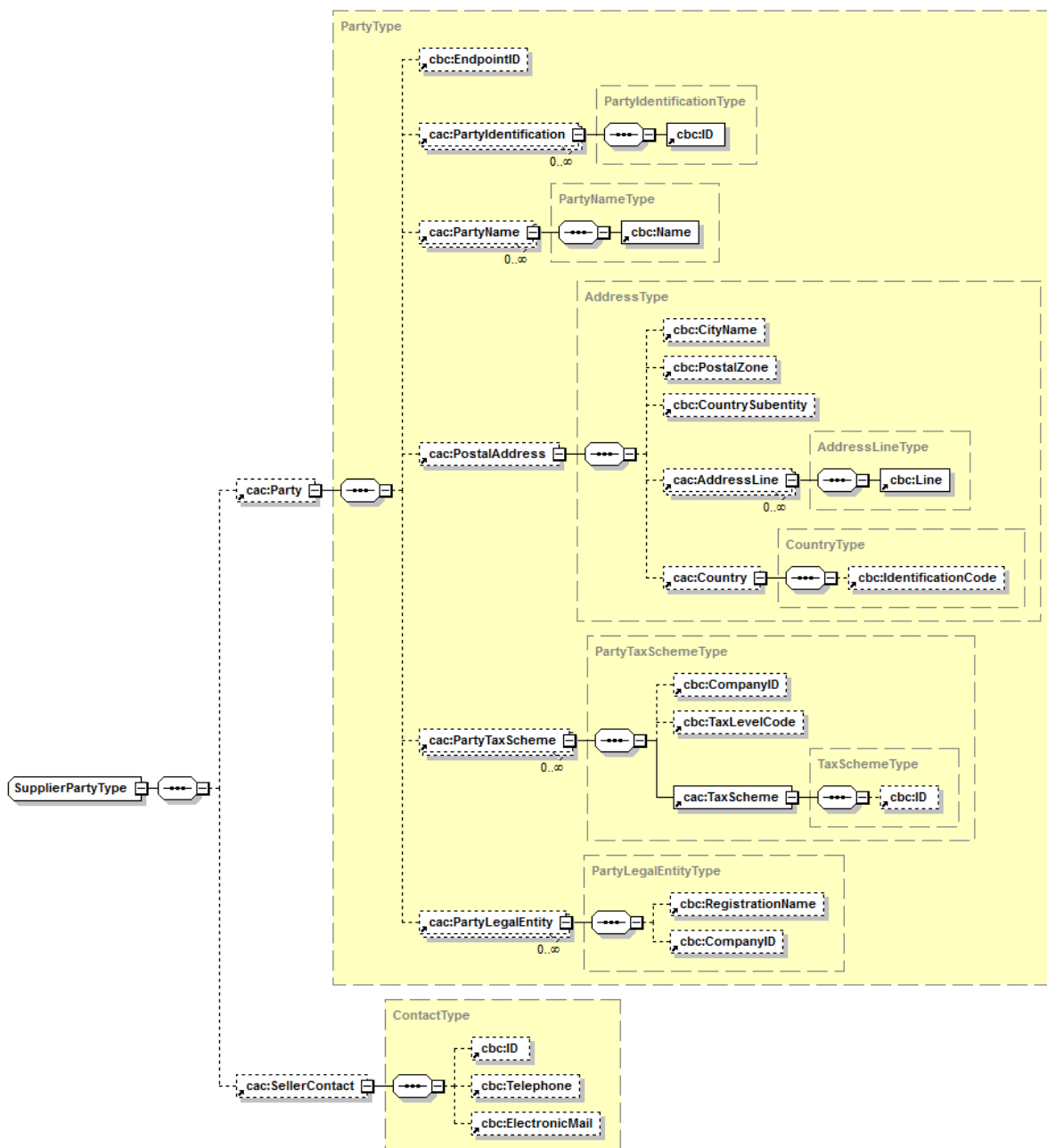
Figure 7: Supplier Party Structure

```
<cac:AccountingSupplierParty>

<cac:Party>

<cac:PartyIdentification>

<cbc:ID schemeID="urn:oasis:names:tc:ebcore:partyid-type:iso6523:088"
schemeAgencyID="GS1">

4035811611014</cbc:ID>

</cac:PartyIdentification>

<cac:PartyName>

<cbc:Name>ACME Holdings</cbc:Name>

</cac:PartyName>

<cac:PostalAddress>

<cbc:CityName>Adelaide</cbc:CityName>

<cbc:PostalZone>5000</cbc:PostalZone>

<cbc:CountrySubentity>South Australia</cbc:CountrySubentity>

<cac:AddressLine>

<cbc:Line>88 Grenfell St</cbc:Line>

</cac:AddressLine>

<cac:Country>

<cbc:IdentificationCode listName="Country Identification Code"
listAgencyID="5">AU</cbc:IdentificationCode>

</cac:Country>

</cac:PostalAddress>

<cac:PartyLegalEntity>

<cbc:CompanyID schemeID="urn:oasis:names:tc:ebcore:partyid-type:iso6523:0151">

987654321</cbc:CompanyID>

</cac:PartyLegalEntity>

</cac:Party>

</cac:AccountingSupplierParty>
```

Figure 8: Example of a Supplier Party

8.3.4 Buyer Party Type

AccountingCustomerParty is the UBL Element used for identifying the Buyer (the Party making settlement relating to a purchase and resolving billing issues).
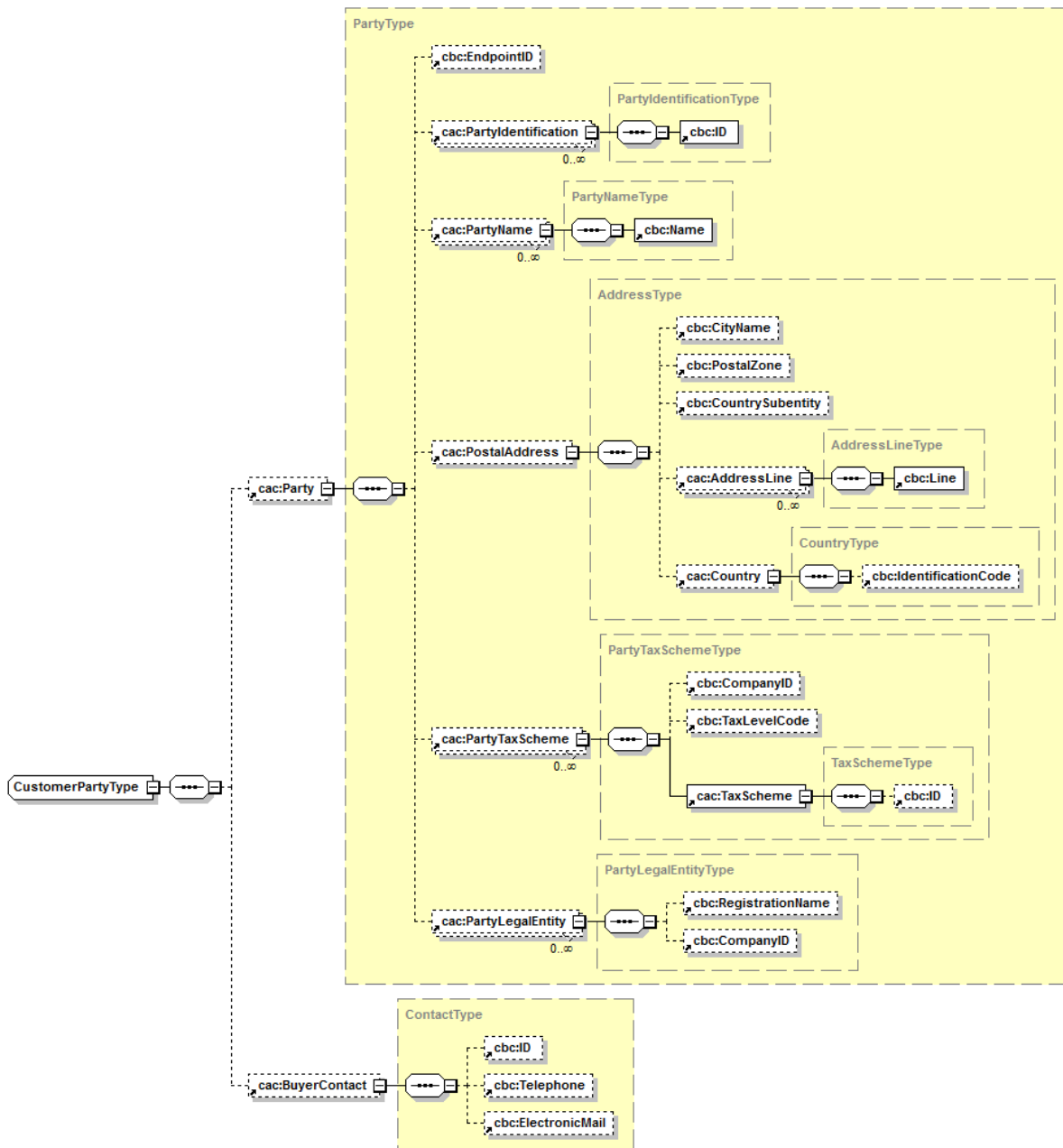
Figure 9: Customer Party Structure

```
<cac:AccountingCustomerParty>
<cac:Party>
<cac:PartyIdentification>
<cbc:ID schemeID="urn:oasis:names:tc:ebcore:partyid-
type:iso6523:0151">51083392303</cbc:ID>
</cac:PartyIdentification>
<cac:PartyName>
<cbc:Name>Governmment Agency</cbc:Name>
</cac:PartyName>
<cac:PostalAddress>
<cbc:CityName>Willunga</cbc:CityName>
<cbc:PostalZone>5172</cbc:PostalZone>
<cbc:CountrySubentity>South Australia</cbc:CountrySubentity>
<cac:AddressLine>
<cbc:Line>Delabole Road</cbc:Line>
</cac:AddressLine>
<cac:Country>
<cbc:IdentificationCode listName="Country Identification Code"
listAgencyID="5">AU</cbc:IdentificationCode>
</cac:Country>
</cac:PostalAddress>
<cac:PartyLegalEntity>
<cbc:CompanyID  schemeID="urn:oasis:names:tc:ebcore:partyid-
type:iso6523:0151">51083392303</cbc:CompanyID>
</cac:PartyLegalEntity>
</cac:Party>
<cac:BuyerContact>
<cbc:ID>Tony Curtis</cbc:ID>
<cbc:Telephone>(08) 8556 2345</cbc:Telephone>
<cbc:ElectronicMail>curtis@willunga.gov.au</cbc:ElectronicMail>
</cac:BuyerContact>
</cac:AccountingCustomerParty>
```

8.3.5 Payment Means Type

The Payment Means is the structure used to describe how payments are to be made.
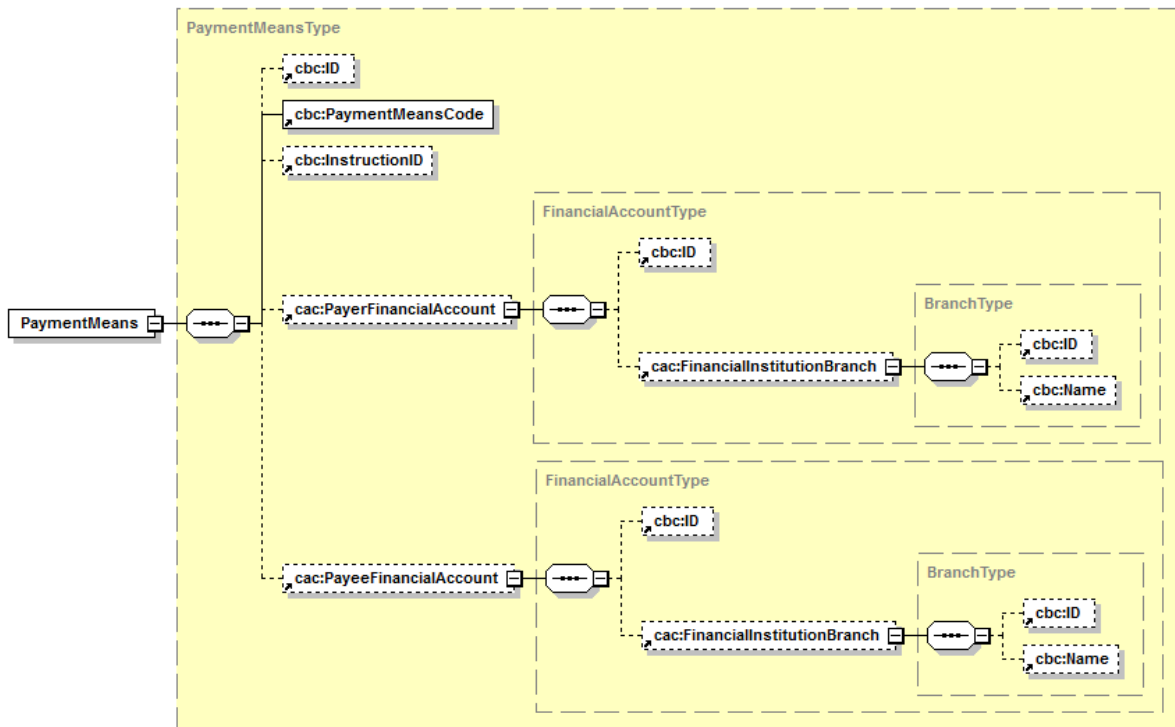
Figure 11: Payment Means Structure

```
<cac:PaymentMeans>

<cbc:ID>EFT</cbc:ID>

<cbc:PaymentMeansCode listID="UN/ECE 4461">2</cbc:PaymentMeansCode>

<cbc:InstructionID>888276612262653</cbc:InstructionID>

<cac:PayeeFinancialAccount>

<cbc:ID>2000987211</cbc:ID>

<cac:FinancialInstitutionBranch>

<cbc:ID schemeName="BSB">086016</cbc:ID>

<cbc:Name>NAB Adelaide</cbc:Name>

</cac:FinancialInstitutionBranch>

</cac:PayeeFinancialAccount>

</cac:PaymentMeans>
```

Figure 12: Example of a Payment Means

8.3.6   Allowance and Charges Type

Both Allowances (e.g. discounts) and Charges (e.g. penalties) are described by a common structure with an indicator (ChangeIndicator) to say whether this is a Charge (true) or an Allowance (false).
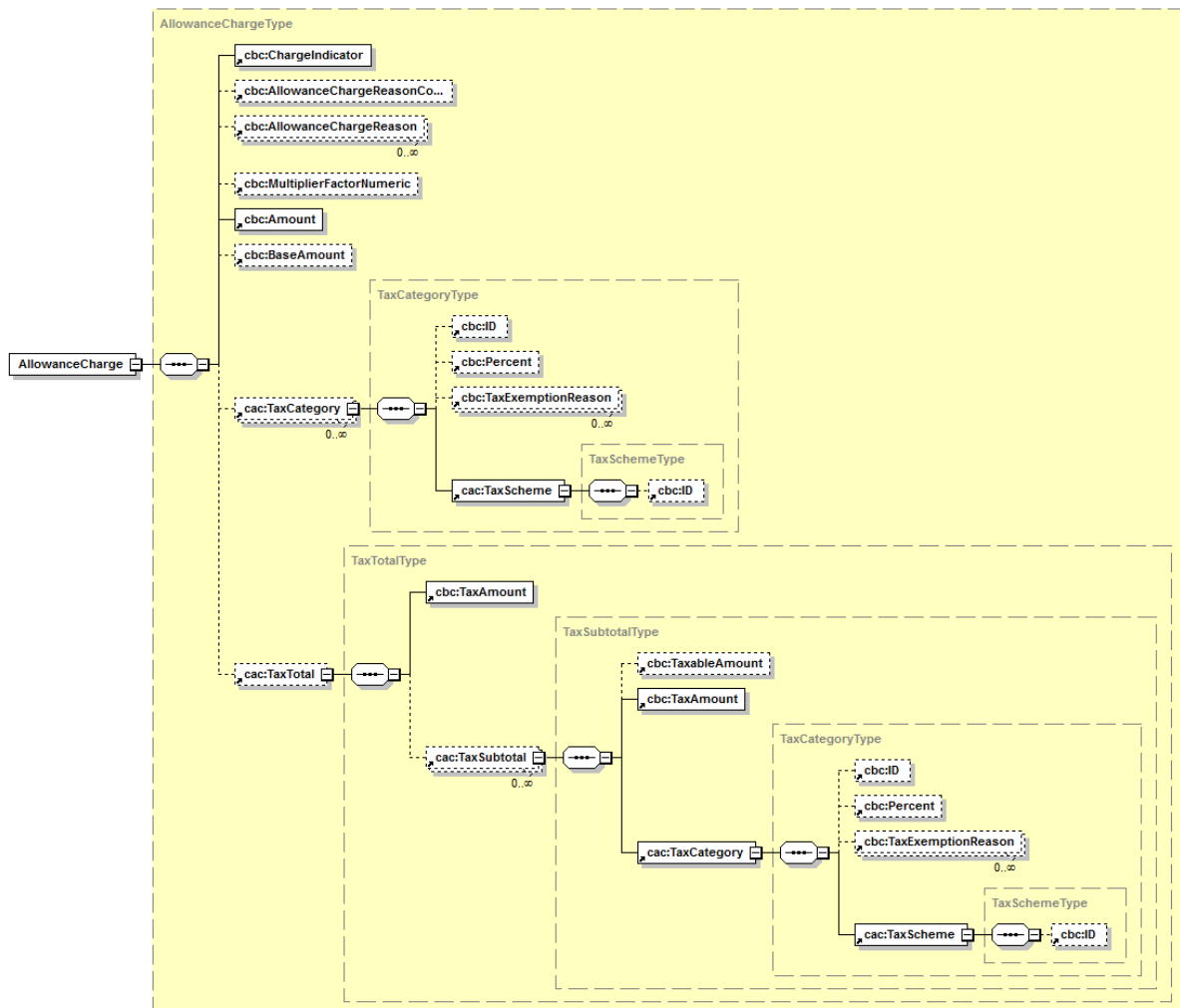
Figure 13: Allowance Charge Structure

```
<cac:AllowanceCharge>

<cbc:ChargeIndicator>false</cbc:ChargeIndicator>

<cbc:AllowanceChargeReason>Special Offer</cbc:AllowanceChargeReason>

<cbc:Amount currencyID="AUD">20.00</cbc:Amount>

</cac:AllowanceCharge>
```

Figure 14: Example of an Allowance Charge

8.3.7 Monetary Total Type

The overall Amount to be paid for an eInvoice Document is described using a MonetaryTotal UBL Element.
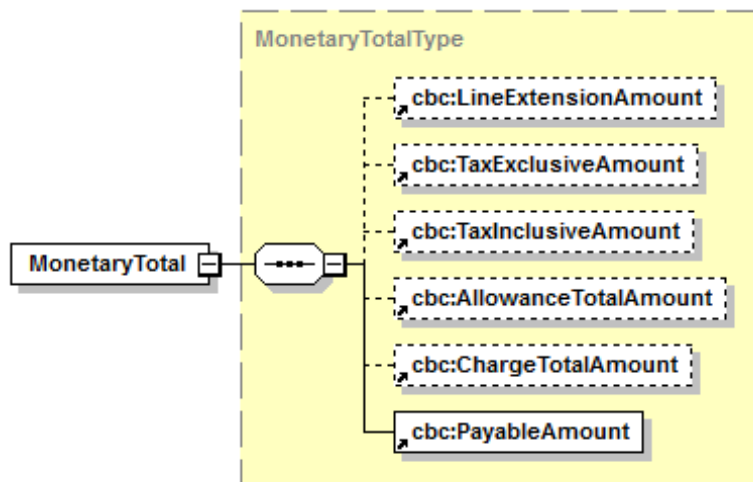
Figure 15: Monetary Total structure

```
<cac:LegalMonetaryTotal>
<cbc:LineExtensionAmount currencyID="AUD">2500.00</cbc:LineExtensionAmount>
<cbc:TaxExclusiveAmount currencyID="AUD">2500.00</cbc:TaxExclusiveAmount>
<cbc:TaxInclusiveAmount currencyID="AUD">2750.00</cbc:TaxInclusiveAmount>
<cbc:PayableAmount currencyID="AUD">2750.00</cbc:PayableAmount>
</cac:LegalMonetaryTotal>
```

Figure 16: Example of a Monetary Total

8.3.8 Tax Total Type

The overall Taxes involved are described using the Tax Total structure.
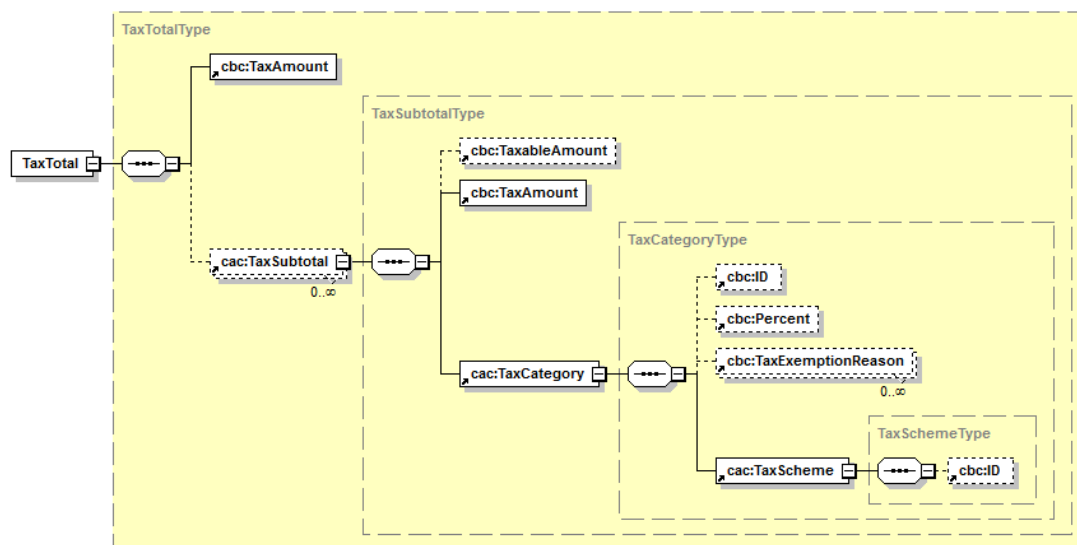
Figure 17: Tax Total Structure

```
<cac:TaxTotal>

<cbc:TaxAmount currencyID="AUD">200.00</cbc:TaxAmount>

<cac:TaxSubtotal>

<cbc:TaxAmount currencyID="AUD">10.00</cbc:TaxAmount>

<cac:TaxCategory>

<cac:TaxScheme>

<cbc:ID>GST</cbc:ID>

</cac:TaxScheme>

</cac:TaxCategory>

</cac:TaxSubtotal>

</cac:TaxTotal>
```

Figure 18: Example of a Tax Total

Multiple and mixed Tax Categories (for example, additional GST Categories) and their totals are supported.

8.3.9 Invoice Line Type

Charges for individual Items or transactions are often described as 'lines' on an Invoice. The Invoice Line structure describes the attributes of an individual Invoiced Item.
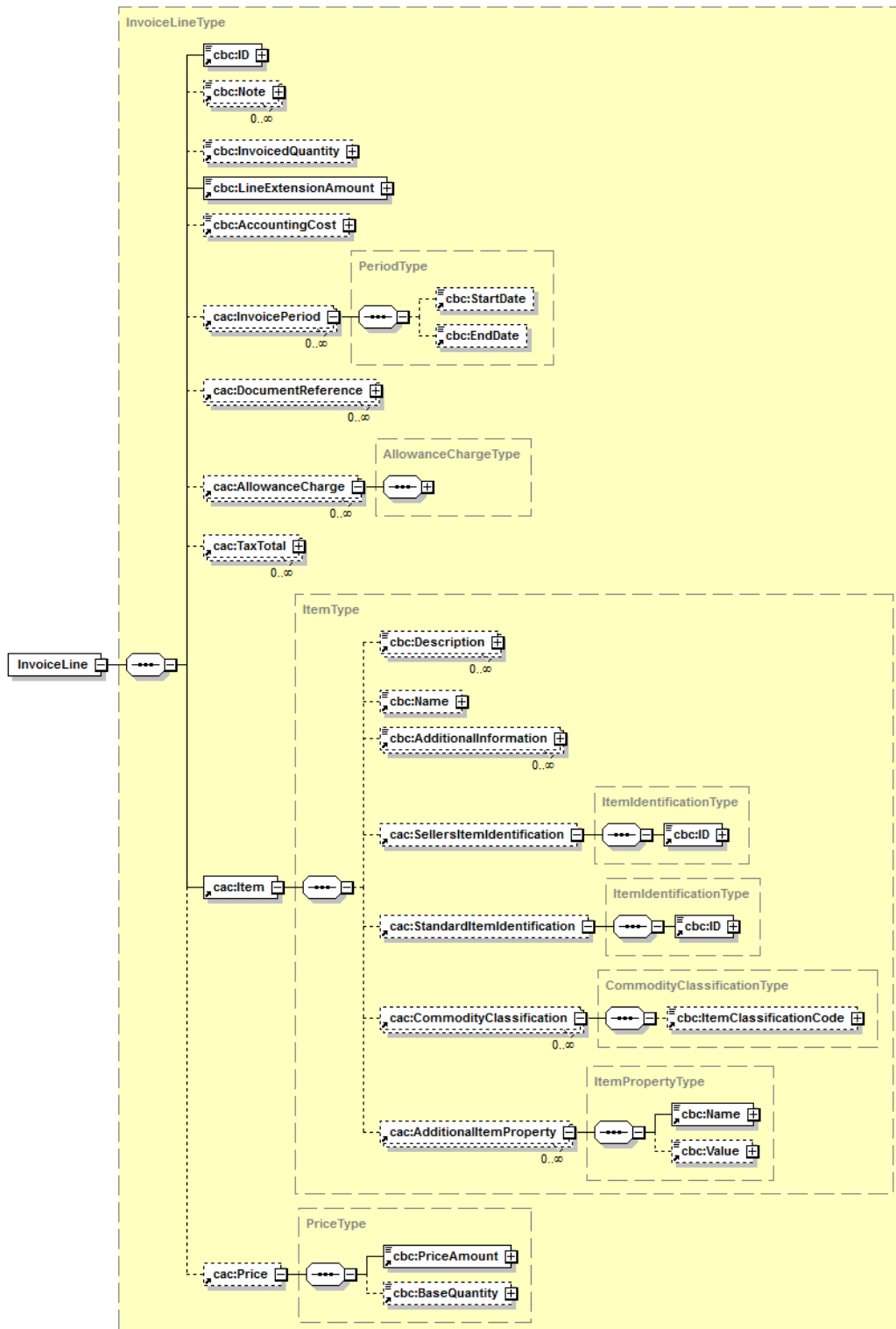
Figure 19: Invoice Line structure

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```
<cac:InvoiceLine>
<cbc:ID>1</cbc:ID>
<cbc:Note>A variety of Widgets</cbc:Note>
<cbc:InvoicedQuantity>200</cbc:InvoicedQuantity>
<cbc:LineExtensionAmount currencyID="AUD">2000.00</cbc:LineExtensionAmount>
<cac:TaxTotal>
<cbc:TaxAmount currencyID="AUD">200.00</cbc:TaxAmount>
<cac:TaxSubtotal>
<cbc:TaxAmount currencyID="AUD">10.00</cbc:TaxAmount>
<cac:TaxCategory>
<cac:TaxScheme>
<cbc:ID>GST</cbc:ID>
</cac:TaxScheme>
</cac:TaxCategory>
</cac:TaxSubtotal>
</cac:TaxTotal>
<cac:Item>
<cbc:Description>Widget</cbc:Description>
<cac:SellersItemIdentification>
<cbc:ID>WDGT-A1733-0436</cbc:ID>
</cac:SellersItemIdentification>
<cac:StandardItemIdentification>
<cbc:ID schemeID="GTIN" schemeAgencyID="GS1">9501101021037</cbc:ID>
</cac:StandardItemIdentification>
</cac:Item>
<cac:Price>
<cbc:PriceAmount currencyID="AUD">10.00</cbc:PriceAmount>
<cbc:BaseQuantity>1</cbc:BaseQuantity>
</cac:Price>
</cac:InvoiceLine>
```

Figure 20: Example of an Invoice Line

8.3.10 Item Type

The Item structure describes an Item of trade. It includes a generic Name and Description applicable to all examples of the Item together with various methods of uniquely identifying the Item.
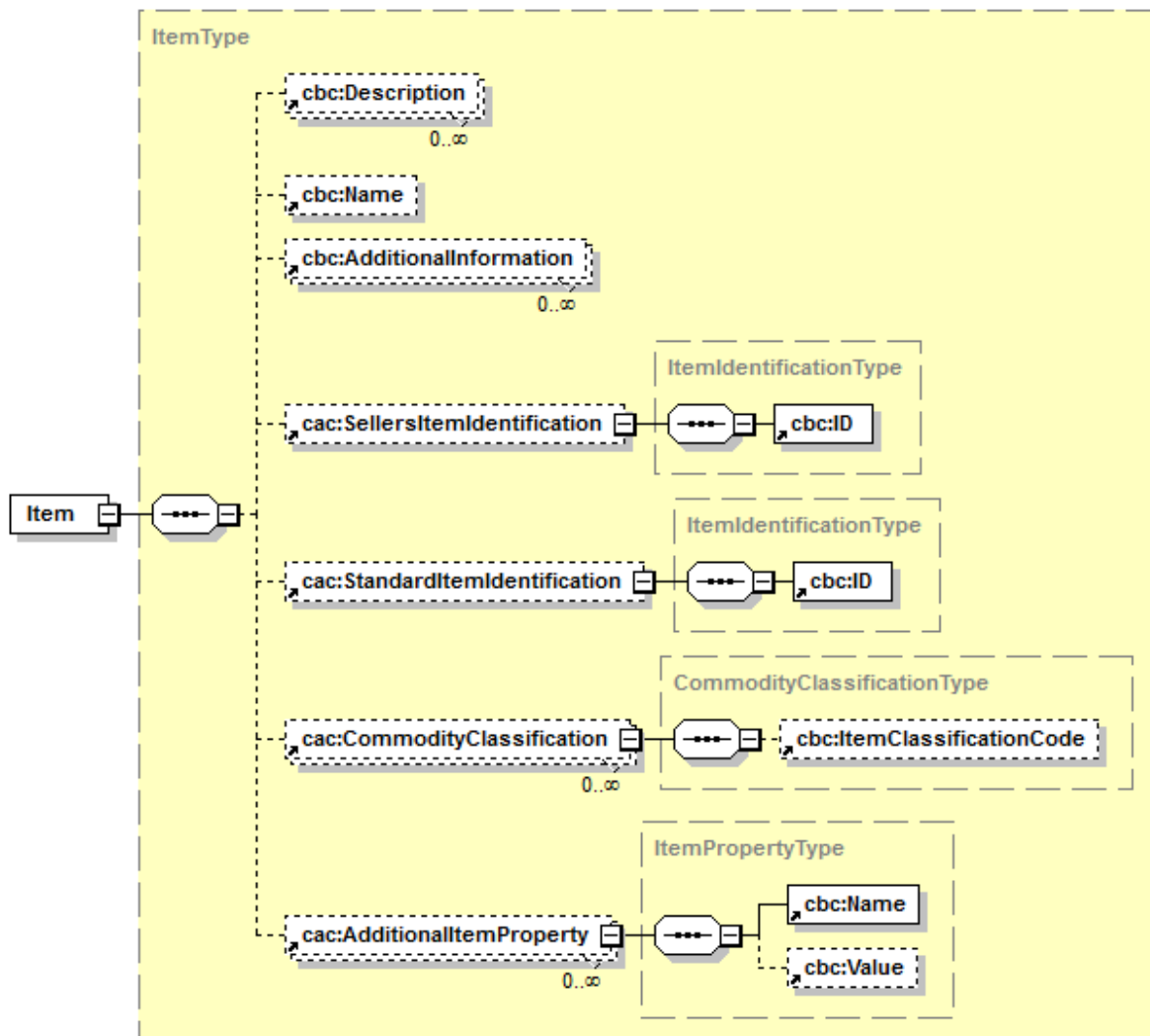
Figure 21: Item Structure

```
<cac:Item>

<cbc:Description>Widget</cbc:Description>

<cac:SellersItemIdentification>

<cbc:ID>WDGT-A1733-0436</cbc:ID>

</cac:SellersItemIdentification>

<cac:StandardItemIdentification>

<cbc:ID schemeID="GTIN" schemeAgencyID="GS1">9501101021037</cbc:ID>

</cac:StandardItemIdentification>

</cac:Item>
```

Figure 22: Example of an Item

Items can be identified and described by various (optional) Item Identification Schemes and Properties, and classified using various (optional) Item Classification schemes.

8.4 Response Document Schema

In an eInvoicing environment it is not uncommon for the recipient (either the Buyer or Supplier) to acknowledge the receipt of an eInvoice with a Response Document. This Response may also be used to specify the status of the transaction.

Using Responses is an opt-in system. Sending Response documents is at the discretion of the eInvoice recipient (typically the Buyer). Whether a Response Document is returned is based on the Invoice sender's (typically the Supplier's) registered capability to support that Service (see Section 10).

Figure 23 (below) describes the structure of the Response document and Figure 24 gives an example.
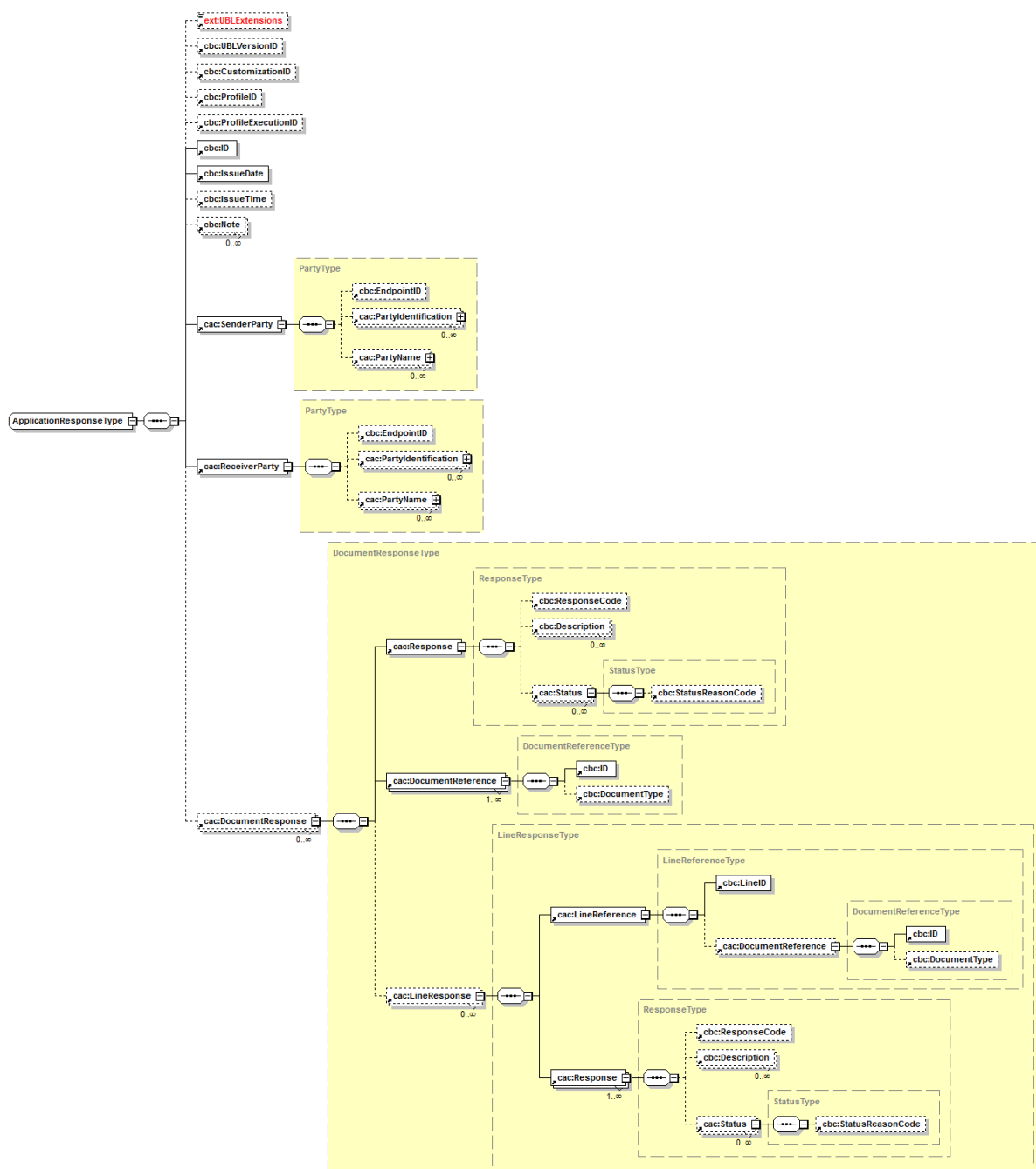
Figure 23: Response Document Structure

```
<n2:ApplicationResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:n2="urn:oasis:names:specification:ubl:schema:xsd:ApplicationResponse-2"
xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
xsi:schemaLocation="urn:oasis:names:specification:ubl:schema:xsd:ApplicationResponse-2 Response-1.0.xsd">

<cbc:UBLVersionID>2.1</cbc:UBLVersionID>

<cbc:CustomizationID
schemeAgencyID="dbc">urn:resources.digitalbusinesscouncil.com.au:dbc:invoicing:documents:response:xsd::response
1##urn:resources.digitalbusinesscouncil.com.au:dbc:einvoicing:process:einvoicing04:ver1.0</cbc:CustomizationID>

<cbc:ProfileID schemeAgencyID="dbc">urn:resources.digitalbusinesscouncil.com.au:dbc:einvoicing:ver1.0</cbc:ProfileID>

<cbc:ID>RESP-0201991</cbc:ID>

<cbc:IssueDate>2016-05-01</cbc:IssueDate><cbc:IssueTime>09:30:47+05:00</cbc:IssueTime>

<cac:SenderParty>

<cac:PartyIdentification>

<cbc:ID schemeID="urn:oasis:names:tc:ebcore:partyid-type:iso6523:0151">51083392303</cbc:ID>

</cac:PartyIdentification>

</cac:SenderParty>

<cac:ReceiverParty>

<cac:PartyIdentification>

<cbc:ID schemeID="urn:oasis:names:tc:ebcore:partyid-type:iso6523:088"
schemeAgencyID="GS1">4035811611014</cbc:ID>
```

Figure 24: Example of a Response Document

8.5 Data Types

All UBL XML Elements have an assigned Data Type taken from the UBL Unqualified Data Type set listed in Table 3 (OASIS UBL TC, 2013). Table 3 also indicates which XML Attributes must be used (mandatory) and which may be used (optional) with the UBL Elements of that Data Type.

Table3: Data Types for UBL Elements

Data Type	Definition	Mandatory Attributes	Optional Attributes
AmountType	A number of monetary units specified using a given unit of Currency.	currencyID	currencyCodeListVersionID

Data Type	Definition	Mandatory Attributes	Optional Attributes
BinaryObjectType	A set of finite-length sequences of binary octets.	mimeCode	Format encodingCode characterSetCode uri filename
CodeType	A character string (letters, figures, or symbols) that for brevity and/or language independence may be used to represent or replace a definitive Value or text of an attribute, together with relevant supplementary information.		listID listAgencyID listAgencyName listName listVersionID name languageID listURI listSchemeURI
DateType	One calendar day according the Gregorian calendar.	xsd:date	
TimeType	An instance of time that occurs every day.	xsd:time	

Data Type	Definition	Mandatory Attributes	Optional Attributes
IdentifierType	A character string to identify and uniquely distinguish one instance of an object in an Identification Scheme from all other objects in the same scheme, together with relevant supplementary information.		schemeID schemeName schemeAgencyID schemeAgencyName schemeVersionID schemeDataURI schemeURI
IndicatorType	A list of two mutually exclusive Boolean Values that express the only possible states of a property.		format
MeasureType	A numeric Value determined by measuring an object using a specified unit of measure.	unitCode	unitCodeListVersionID
NumericType	Numeric information that is assigned or is determined by calculation, counting, or sequencing. It does not require a unit of quantity or unit of measure.		format

Data Type	Definition	Mandatory Attributes	Optional Attributes
PercentType	Numeric information that is assigned or is determined by calculation, counting, or sequencing and is expressed as a percentage. It does not require a unit of quantity or unit of measure.		format
RateType	A numeric expression of a rate that is assigned or is determined by calculation, counting, or sequencing. It does not require a unit of quantity or unit of measure.		format
QuantityType	A counted number of non-monetary units, possibly including a fractional part.		unitCode unitCodeListID unitCodeListAgencyID unitCodeListAgencyName
TextType	A character string (i.e. a finite set of characters), generally in the form of words of a language.		languageID languageLocaleID

Data Type	Definition	Mandatory Attributes	Optional Attributes
NameType	A character string that constitutes the distinctive designation of a person, place, thing, or concept.		languageID languageLocaleID

9 Use of Identifiers

Identification Schemes constrain the possible Values of UBL Elements. Identifiers have no meaning except to uniquely identify an object. Table 4 categorises some of the possible Identification Schemes for Identifiers that may be used in eInvoice Documents.

Table 4: Possible Identification Schemes

Information Element	UBL Element	Definition	Possible Identification Schemes
Invoice Identifier	cbc:ID	The Identifier for the Invoice.	Issued by Supplier
Financial Institution Identifier	cac:PaymentMeans/cac:PayeeFinancialAccount/cac:FinancialInstitutionBranch	The office holding the Financial Institution Account.	BSB (Australia), BIC (International)
Contact Identifier	cac:AccountingCustomerParty/cac:BuyerContact /cbc:ID	An Identifier for this Contact.	Mutually agreed by trading partners.
Document Reference Identifier	cac:DocumentReference/cbc:ID	An Identifier for the referenced Document.	Issued by Document creator.
Financial Institution Account Identifier	cac:FinancialAccount/cbc:ID	The Identifier for this Financial Account for example, the bank account number.	Account Number (Australia), IBAN (International).

Information Element	UBL Element	Definition	Possible Identification Schemes
Item Identifier	cac:Item/cac:ItemIdentification/cbc:ID	An Identifier for an Item.	May be issued by Supplier, Buyer, manufacturer or issued by a third Party (e.g. a GTIN from GS1).
Purchase Order Identifier	cac:OrderReference/cbc:ID	An Identifier for a Purchase Order.	Issued by the Buyer.
Sales Order Identifier	cac:OrderReference/cbc:SalesOrderID	An Identifier for a Purchase Order, assigned by the Seller.	Issued by the Supplier.
Electronic Address	cac:Party/cbc:EndpointID	An Identifier for the end point of the routing Service.	Issued by the Service provider.
Party Identifier	cac:Party/cac:PartyIdentification/cbc:ID	An Identifier for the Party.	Mutually agreed by trading partners.
Party Company Identifier	cac:Party/cac:PartyLegalEntity/cbc:CompanyID	An Identifier for the Party as registered within a business registration scheme.	Australian Business Number (ABN) issued by ABR (Australia).
Taxation Branch Identifier	cac:Party/cac:PartyTaxScheme/cbc:CompanyID	An Identifier for the registered Branch of a Party that supplements the ABN as required for Tax reporting purposes. (See 9.1)	A 3-digit value issued by the ATO (Australia).
Payment Means Identifier	cac:PaymentMeans/cbc:ID	An Identifier for a means of payment.	Mutually agreed by trading partners.

Information Element	UBL Element	Definition	Possible Identification Schemes
Payment Means Instruction Identifier	cac:PaymentMeans/cbc:InstructionID	An Identifier for a payment instruction.	Issued by the Financial Institution.
Tax Category Identifier	cac:TaxCategory/cbc:ID	An Identifier for a Tax Category.	Issued by accounting software providers (Simpler BAS programme may provide these)
Tax Scheme Identifier	cac:TaxScheme/cbc:ID	An Identifier for this Taxation scheme.	Issued by Australian Taxation Office.

9.1 Identifying a Tax Branch

Under section 54-50 of the GST Act, a branch of a Party can be registered with the ATO (Australian Government, 1999). The branch receives a 3-digit representing this registration. All Tax Invoices issued by the branch must include the Taxation Branch Identifier in addition to the Australian Business Number for all of the Branch's Tax Invoices, even when Invoicing the parent Party.

10 Identifying Services for the Interoperability Framework (Normative)

Within the Framework businesses register their capability to receive specific Documents as defined for specific business processes - known as Services.

For eInvoicing there are three processes defined (Invoicing, Recipient Created Tax Invoicing and Adjustment Invoicing). These may be used in conjunction with the Response process.

Within the Council's Interoperability Framework a business may register its capability to receive Documents based on these Services (Digital Business Council, 2016b). The possible Values for these Identifiers are listed in Table 5.

Table5: Framework Services Available for eInvoicing

Service Name	Exchange (transactions)	CustomizationID or Process ID (See 10.2)	ProfileID or DocTypeID (See 10.2)
Invoicing	Buyer can receive an eInvoice	Invoicing01-1	Core-Invoice-1
Recipient Created Tax Invoicing	Supplier can receive an RCTI eInvoice	Invoicing02-1	Core-Invoice-1
Adjustment Invoicing	Buyer can receive an eInvoice	Invoicing03-1	Core-Invoice-1
	Buyer can receive an Adjustment eInvoice		Core-Invoice-1
Response	Supplier can receive a Response	Invoicing04-1	Response-1

To receive Documents using the Framework requires a business to register one Service only. Registering the capability to support other Services is entirely optional.

For example, if a Buyer is wishes to acknowledge receiving an eInvoice Document with a Response Document they can only do so if the Supplier is registered for the appropriate Service (in this case, 'Invoicing04-1' and 'Response-1').

10.1 Document Identification

To identify a Document when used within the Framework some additional Elements are applicable. These are listed in Table 6.

Table 6: Document Identification Elements

Information Element	Definition	Scheme Agency	Value
UBLVersionID	Identifies the earliest version of the UBL 2 Schema for this Document type.	N/A	2.1

Information Element	Definition	Scheme Agency	Value
CustomizationID	Identifies a user-defined customization of UBL for a specific use.	@schemeAgencyID='dbc-au'	See Table 5 DocTypeID (above).
ProfileID	Identifies a user-defined profile of the customization of UBL being used.	@schemeAgencyID='dbc-au'	See Table 5 ProcessID (above).
ProfileExecutionID	Identifies an instance of executing a profile, to associate related transactions within a business collaboration.	N/A	Determined by the business transaction

10.2 Identifying Services and Documents

The XML Document Elements known as CustomizationID and ProfileID are the means of aligning a UBL Document with the ProcessID and DocTypeID of the Council's eDelivery Services. The Values for the eInvoicing processes are given in Table 5. These identifiers are prefixed with the namespace of the relevant artefacts (see Section 11).

Implementers may use the Values in these UBL Elements to validate that the correct Document is being sent (or has been delivered) to the correct Endpoint.

An example of how these would appear in an UBL Document is given in Figure 25 below.

```
<cbc:CustomizationID schemeAgencyID="dbc-docid">
urn:resources.digitalbusinesscouncil.com.au:dbc:invoicing:documents:core-invoice:xsd::core-invoice-1##urn:resources.digitalbusinesscouncil.com.au:dbc:einvoicing:process:einvoicing01:ver1.0
</cbc:CustomizationID>

<cbc:ProfileID schemeAgencyID="dbc-procid">
urn:resources.digitalbusinesscouncil.com.au:dbc:einvoicing:ver1.0
</cbc:ProfileID>
```

Figure 25: An Example of using CustomisationID

11 Validation Artefacts

Two types of validation artefacts have been provided to support compliance to the eInvoicing Profile that could be used in a few scenarios in the eInvoicing process (detailed below)

11.1 XML Schemas (Normative)

The eInvoice Document Schemas are conformant subsets of the UBL Schema and should be used to validate the structure of eInvoicing XML Documents.

Only the eInvoicing Profile XML Schema are considered normative (the official form of validation). All eInvoicing XML Documents must be valid instances of these XML Schema.

All Information Elements noted as Mandatory in the eInvoicing Semantic Model (Digital Business Council, 2016c) must have Values provided in every eInvoice. The eInvoice XML Schema will validate the existence of (most) mandatory Core Information Elements (see 11.2).

Optional Core Information Elements need not appear in an eInvoice but will be validated by the XML Schema if they do.

The eInvoice XML Schema will also check eInvoices for the existence of UBL Elements that are not defined in the Core eInvoice Semantic Model and fail if anything unexpected is found.

11.1.1 Core Invoice (Normative)

The target namespace for the Core Invoice XML Schema is:

http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/doctype/core-invoice/xsd/current

The target namespace for a runtime version of the Core Invoice XML Schema (without annotations) is:

http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/doctype/core-invoice/xsdrt/current

The UBL 2.1 Invoice (OASIS UBL TC, 2013) on which the Core Invoice XML Schema is based is:

http://docs.oasis-open.org/ubl/os-UBL-2.1/xsd/maindoc/UBL-Invoice-2.1.xsd

11.1.2 Response (Normative)

The target namespace for the Response XML Schema is:

http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/doctype/response/xsd/current

The target namespace for a runtime version of the eInvoicing Response XML Schema (without annotations) is:

http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/doctype/response/xsdrt/current

The UBL 2.1 Application Response (OASIS UBL TC, 2013) on which the Response XML Schema is based is:

http://docs.oasis-open.org/ubl/os-UBL-2.1/xsd/maindoc/UBL-ApplicationResponse-2.1.xsd

11.2 Schematron Rules (Informative)

Only the semantics of the business rules as defined in the eInvoicing Semantic Model (Digital Business Council, 2016c) are normative. The technologies for how they are validated are not mandated by this specification.

A set of informative Schematron (Schematron, 2004) test rules have been provided that may be used to validate Core Business Rules that are not checked by the XML Schema.

Each is labelled with reference to the Business Rule identified in the eInvoicing Semantic Model (Digital Business Council, 2016c).

The Schematron rules are provided as informative tools to encourage consistent validation of eInvoicing XML Documents against the business rules defined in the eInvoicing Semantic Model (Digital Business Council, 2016c). However other technologies are available and may be used to validate these business rules.

The target namespaces for the eInvoicing Schematron Rule validation artefacts are:

• Invoicing
  http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/process/invoicing01/schematron/current
• Recipient Created Tax Invoicing
  http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/process/invoicing03/schematron/current
• Adjustment Invoicing
  http://resources.digitalbusinesscouncil.com.au/dbc/einvoicing/process/invoicing05/schematron/current

11.3 Two Phase Validation

The two sets of artefacts described in Sections 11.1 and 11.2 may be used in a two-phase validation process as shown in Figure 26.

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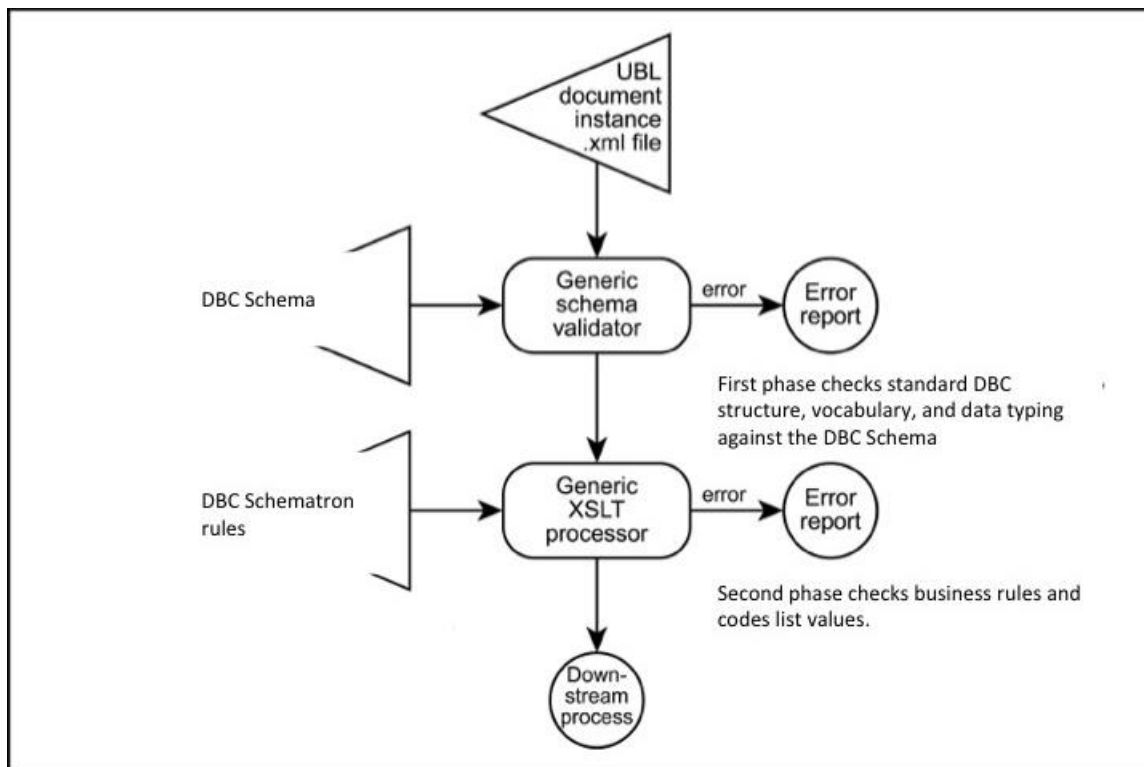
Figure 26: The Two Phase Validation Approach

11.4 Validating Coded Values

To aid interoperability and avoid ambiguity it is sometimes useful to use Coded sets of possible Values for Information Elements. Examples are Currencies, Countries, etc.

In some cases standardised Code sets are Mandatory and must be used. The following table identifies the Code sets for implementing the eInvoicing Documents.

To validate the use of specific Code sets against Values in UBL Elements the following approach is supported (but not mandated):

1. A Genericode standard for Code list representation is used to specify sets of enumerated Values, be they Codes or identifiers or any other set of Values.
2. A Context/Value Association (CVA) file (OASIS UBL TC, 2013) specifies the relationship of information items in Document contexts to both external enumerations of Values allowed for each item and to arbitrary evaluations processed for each item.

The Distribution Package contains Genericode and associated CVA files for validating the Code lists specified in Table 7.

Table 7: Mandatory Code Lists

Information Element	UBL Element	Definition	Applicable Code List	Mandatory Code values
Document Type Code	cbc:InvoiceTypeCode	A Code signifying the Type of the Document.	UNECE TRED 1001 (customised)	Document Type Codes
Invoice Currency Code	cbc:DocumentCurrencyCode	A Code signifying the default Currency for this Document.	ISO 4217	Currency Codes
Amount Currency Code	…/cbc:Amount@currencyID	A Code signifying the Currency for an Amount.	ISO 4217	Currency Codes
Country Code	.../cac:Address/cac:Country/cbc:IdentificationCode	A Code signifying a Country.	ISO 3166-1.	Country Codes

There are other code lists that can be determined by agreement between trading partners. These are listed in Table 8 together with some possible values.

Table 8: Optional Code Lists

Information Element	UBL Element	Definition	Applicable Code List	Optional Code values
Allowance Reason Code	…/cac:AllowanceCharge/cbc:AllowanceChargeReasonCode	A mutually agreed Code signifying the reason for this Allowance.	Mutually agreed by trading partners.	Allowance Charge Reason Codes
Charge Reason Code	.../cac:AllowanceCharge/cbc:AllowanceChargeReasonCode	A mutually agreed Code signifying the reason for this Charge.	Mutually agreed by trading partners.	Allowance Charge Reason Codes

Information Element	UBL Element	Definition	Applicable Code List	Optional Code values
Item Classification Code	cac:InvoiceLine/cac:Item/cac:CommodityClassification/cbc:ItemClassificationCode	A Code signifying the trade classification of the commodity.	Mutually agreed by trading partners.	Item Classification Codes
GST Category Tax Code	.../cac:TaxScheme/cbc:TaxTypeCode	A Code signifying the Tax level applicable within a Taxation scheme.	Dependent on the specific Tax Scheme.	
Response Code	…/cac:Response/cbc:ResponseCode	A code signifying the type of Response.	Mutually agreed by trading partners.	
Status Reason Code	…/cac:Status/cbc:StatusReasonCode	A Code that describes the issue and nature of the status.	Council defined Values (to be defined).	Status Reason Codes

11.4.1 References to Applicable Code Lists

- UNECE TRED 1001, Document Name code
- http://www.unece.org/fileadmin/DAM/trade/untdid/d15b/tred/tred1001.htm
- ISO 3166-1, Codes for the representation of Names of countries and their subdivisions — Part 1: Country Codes (alpha-2 representation) https://www.iso.org/obp/ui/#search
- ISO 4217, Codes for the representation of Currencies (alpha-3 representation) http://www.currency-iso.org/en/home/tables/table-a1.html
- UNECE TRED 4461, Payment Means Code http://www.unece.org/trade/untdid/d04a/tred/tred4461.htm
- UNECE TRED 4343, Response type, coded

- http://www.unece.org/fileadmin/DAM/trade/edifact/code/4343cl.htm

12 Support Artefacts

To aid in the implementation of this specification several supporting resources are available.

12.1 Sample XML Instances

The directory located at;

http://resources.digitalbusinesscouncil.com.au/dbc/documents/core-invoice/xml/

- contains a set of sample UBL Documents that can be used to verify the conformance of eInvoicing Documents.

They are identified by reference to the business rules that they check.

12.2 Schema Creation Tools

The official community information resource for UBL (OASIS UBL TC, 2013) has several open source tools that can be applied to analysing, customising and extending UBL Schema. These are located at;

http://ubl.xml.org/products

12.3 Visualisation Tools

The file located at;

http://resources.digitalbusinesscouncil.com.au/dbc/documents/core-invoice/summary/core-invoice-01.html

- provides a HTML (web browser) interface to navigate the data structures in the Core Invoice and Response Documents.

The file located at;

http://resources.digitalbusinesscouncil.com.au/dbc/documents/core-invoice/mod/core-invoice-01.ods

- also contains a tabular version of the mapping between the eInvoicing Semantic Model (Digital Business Council, 2016c) and the equivalent UBL Element.

13 Extensions to the Core Invoice

In addition to the Core Invoice Elements, eInvoices may require additional Extension Elements to satisfy specific business requirements. Figure 27 describes the relationship of these principles.
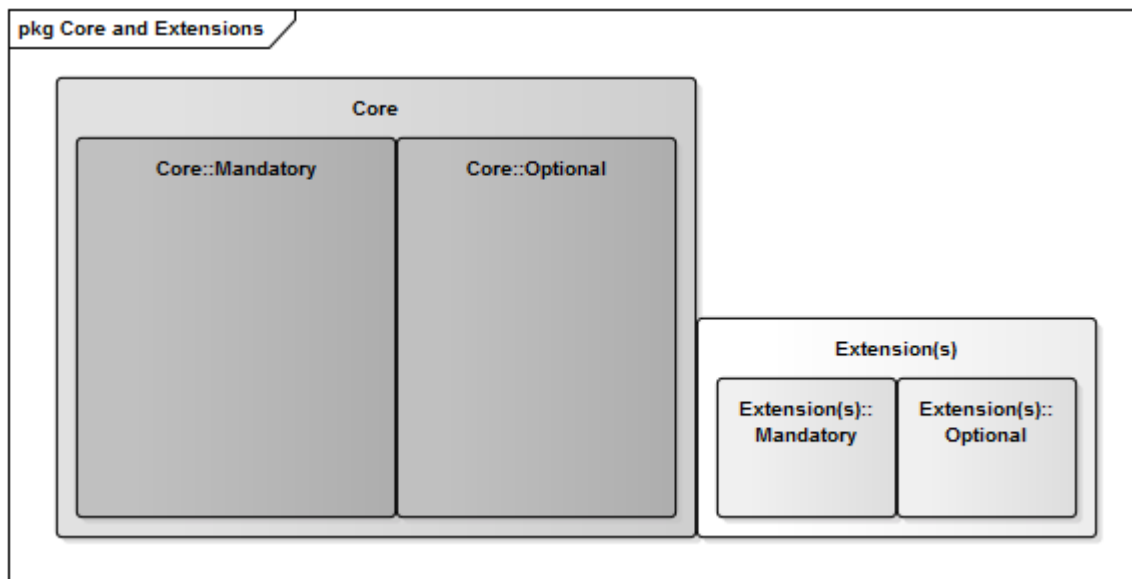

Figure 27: The Principles of Core Plus Extensions

If an Information Element is required for a specific Business Process (such as an industry sector's specific Invoicing practices) and it is not defined in the eInvoicing Semantic Model (Digital Business Council, 2016c) then it should be defined as an Extension to the Core.

An Extension adds to the eInvoicing Semantic Model (Digital Business Council, 2016c) and may include both Mandatory and Optional Information Elements.

Extensions may be specific to a community (such as the retail supply chain or the healthcare sector) or they may apply to more than one community (such as exporter's Invoicing internationally). Any of these scenarios may have specific, additional business requirements and the rules that support them could require additional Information Elements not present in the eInvoicing Semantic Model (Digital Business Council, 2016c).

For consistency and re-use, any Extensions to this Profile specification should be implemented as Extension UBL Elements using either of the following approaches:

1. Enabling existing UBL Elements.
    The underlying data structures used for the Core Invoice are based on the UBL data model (OASIS UBL TC, 2013). This data model defines many other Information Elements that may be used as Extensions to the Core while still remaining compliant.
    An example is given in Annex A.1.

An Extension Profile for a UBL Schema (and associated business rules) may be created to describe these additional UBL Elements. Software tools suitable for this purpose are listed in section 12.2.

These new XML Schema may be registered as new Services within the Framework.

2. The UBL standard also supports Extensions to the UBL Schemas. This allows for any type of data (such as Digital Signatures, data in legacy formats, etc.) to be included within a conformant eInvoicing Document. The UBL Customization Methodology defines how to design these Extensions (OASIS UBL TC, 2009) and the UBL Extension Validation Methodology (OASIS UBL TC, 2013) describes how to implement these in a consistent way.

An example is given in Annex A.2 showing the addition of an additional business identifier.

XML Schema and/or business rules describing these UBLExtensions Elements may be registered as new Services within the Council's Interoperability Framework.

Only organisations that register Service Interfaces capable of processing these new Services would be expected to be able to process these Extension UBL Elements (see Section 10; Identifying Services for the Interoperability Framework).

To aid in standardising Extensions, the Council will provide guidance on their governance; for example how to identify, specify and register it for possible re-use by others.

ANNEX A: Examples of Extensions

A1: Extension Using the UBL Library

Additional UBL Library Elements can simply be added by engaging then from the common library.

Extended eInvoice Documents can be validated against an extended Core Invoice Schema or the general UBL Schema (OASIS UBL Invoice, 2013).

In this example, a set of additional UBL Elements are being engaged to provide more information about an Item (Figure 28).

Figure 28: Example of an Item Structure Using Additional Elements

```
<cac:Item>
        <cbc:Description>Widgets</cbc:Description>
        <cbc:PackQuantity>10</cbc:PackQuantity>
        <cbc:PackSizeNumeric>1</cbc:PackSizeNumeric>
        <cbc:CatalogueIndicator>true</cbc:CatalogueIndicator>
        <cbc:HazardousRiskIndicator>true</cbc:HazardousRiskIndicator>
        <cbc:ModelName>GREEN</cbc:ModelName>
        <cac:CatalogueItemIdentification>
                <cbc:ID>ABDCEFG11119999</cbc:ID>
        </cac:CatalogueItemIdentification>
        <cac:ItemSpecificationDocumentReference>
                <cbc:ID>00-1000</cbc:ID>
                <cbc:DocumentType>PDF</cbc:DocumentType>
                <cac:Attachment>
                        <cac:ExternalReference>
                        <cbc:URI>http://resources.digitalbusinesscouncil.com.au/not-here</cbc:URI>
                        </cac:ExternalReference>
                </cac:Attachment>
        </cac:ItemSpecificationDocumentReference>
        <cac:HazardousItem>
                <cbc:ID>Aluminium Sulphate</cbc:ID>
                <cbc:TechnicalName>Aluminium Sulphate</cbc:TechnicalName>
                <cbc:CategoryName>Flammable</cbc:CategoryName>
        </cac:HazardousItem>
```
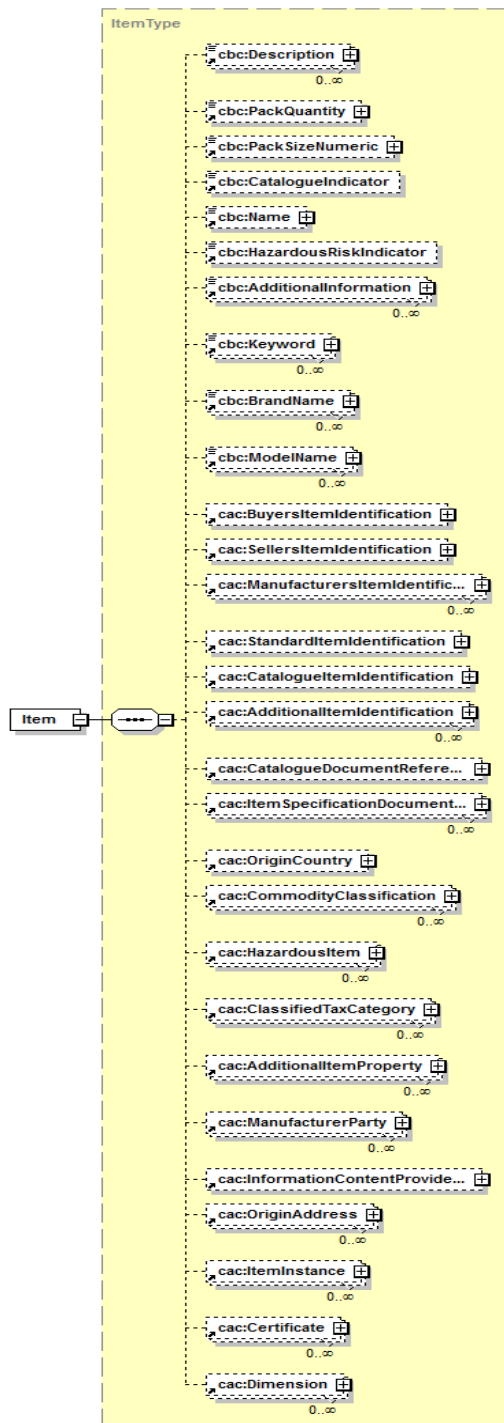
Figure 29: Example of Using Additional Elements for an Item

Figure 29 illustrates how this would be expressed in an eInvoice Document.

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A2: Extension Using the UBLExtensions Element

The standard UBL Schema provides an UBLExtensions Element that allows any type of content to be included inside the eInvoice and remain conformant to the Core Invoice Schema. For more information see the UBL Extension Validation Methodology (OASIS UBL Extensions, 2013).

Processing information contained inside the UBLExtensions Element should be based on prior agreements between trading partners. These may be specified as new Services and registered as capabilities in the Framework.

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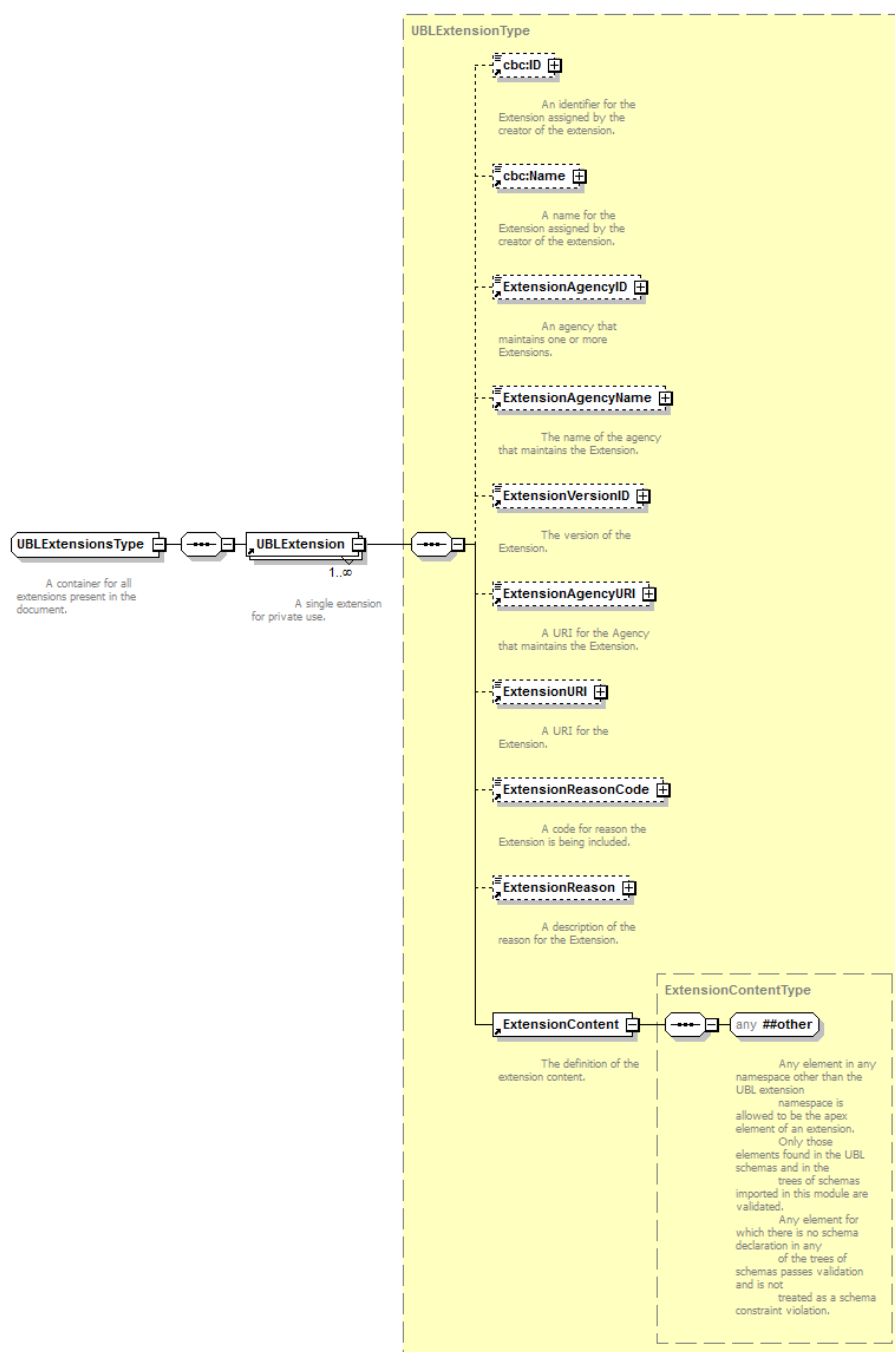Council | Transforming the ways
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Figure 30: UBL Extensions Structure

Figure 30 describes the structure of the UBL Extension Element.

In the following example (Figure 31), an additional type of business identifier is described inside an eInvoice Document.

```xml
<n2:Invoice xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:n1="http://www.altova.com/samplexml/other-namespace"
xmlns:n2="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2"
xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
xmlns:ext="urn:oasis:names:specification:ubl:schema:xsd:CommonExtensionComponents-2" xmlns:mycac="urn:x-mycompany:aggregates"

xmlns:mycbc="urn:x-mycompany:basics"

xmlns:myext="urn:x-mycompany:extension"

xsi:schemaLocation="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2
CoreInvoice-1.0.xsd">

<ext:UBLExtensions>

<ext:UBLExtension>

<ext:ExtensionURI>dummy1</ext:ExtensionURI>

<ext:ExtensionContent>

<dummy1:AnExtension xmlns:dummy1="urn:X-dummy1"></dummy1:AnExtension>

</ext:ExtensionContent>

</ext:UBLExtension>

<ext:UBLExtension>

<ext:ExtensionURI>dummy2</ext:ExtensionURI>

<ext:ExtensionContent>

<dummy2:AnotherExtension xmlns:dummy2="urn:X-
dummy2"></dummy2:AnotherExtension>

</ext:ExtensionContent>

</ext:UBLExtension>

<ext:UBLExtension
xmlns:sig="urn:oasis:names:specification:ubl:schema:xsd:CommonSignatureComponents-2"
xmlns:sac="urn:oasis:names:specification:ubl:schema:xsd:SignatureAggregateComponents-2"
```

Figure 31: Example of UBL Extension for an Additional Business Identifier

ANNEX B: Common Business Scenarios

The following section identifies some common scenarios that are supported by the eInvoicing Implementation Guide.

Invoicing

1. Supplier issues Tax Invoice – Amount less than $1,000.
2. Supplier issues Tax Invoice – Amount greater than $1,000.
3. Supplier issues Tax Invoice – mix of Taxable and non-Taxable supplies.
4. Supplier issues Tax Invoice – all for non-Taxable supply.

Recipient Created Tax Invoicing

1. Buyer issues Recipient Created Tax Invoice (RCTI – Taxable supply).
2. Buyer issues RCTI – including partial Taxable supply.
3. Buyer issues zero dollar amount RCTI (as delivery docket for pooling of commodity).

Adjustment Invoicing

1. Supplier issues Credit Note for Tax Invoice – Buyer has not yet made Payment.
2. Buyer issues Credit Note for Recipient Created Tax Invoice – debit.
3. Supplier issues Credit Note for Tax Invoice – part payment received.
4. Supplier issues Credit Note allocated to several different Tax Invoices.
5. Supplier issues Adjustment Note for Tax Invoice – credit, awaiting payment.

References

1. Australian Government, 1999. A New Tax System (Goods and Services Tax Administration) Act 1999. [Online]
    Available at: http://www.austlii.edu.au/au/legis/cth/consol_act/antsasta1999402/s195.1.html

2. Australian Government, 2013. Goods and Services Tax Ruling 2013/1: Tax Invoices. [Online]
    Available at:
    https://www.ato.gov.au/law/view/pdf?DocID=GST%2FGSTR20131%2FNAT%2FATO%2F0000
    1&filename=law/view/pdf/pbr/gstr2013-001.pdf&PiT=99991231235958

3. Australian Securities and Investment Commission, 2016. The difference between a trading name, business name and company name. [Online]
    Available at: http://asic.gov.au/for-business/registering-a-business-name/before-you-start/trading-names/the-difference-between-a-trading-name-business-name-and-company-name/

4. Bradner, S., 1997. Key words for use in RFCs to Indicate Requirement Levels. [Online]
    Available at: https://www.ietf.org/rfc/rfc2119.txt

5. CEN Technical Committee 434, 2016. Electronic invoicing - Semantic Data Model of the Core Elements of an Electronic Invoice. [Online]
    Available at:
    http://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_LANG_ID:60602,25&cs=1EDAF8ACA5277C7EF32DC6EFAEF077D41

6. Dierks, T. & Rescorla, E., 2008. The Transport Layer Security (TLS) Protocol Version 1.2. [Online]
    Available at: https://tools.ietf.org/html/rfc5246

7. Digital Business Council, 2016a. Digital Capability Locator Implementation Guide. Canberra: Digital Business Council.

8. Digital Business Council, 2016b. Digital Capability Publisher Implementation Guide. Canberra: Digital Business Council.

9. Digital Business Council, 2016c. eInvoicing Semantic Model. [Online]
    Available at:
    http://resources.digitalbusinesscouncil.com.au/dbc/processes/einvoicing/semanticmodel/current.docx

10. Leach, P., Mealling, M. & Salz, R., 2005. A Universally Unique IDentifier (UUID) URN Namespace. [Online]
    Available at: https://www.ietf.org/rfc/rfc4122.txt

11. OASIS Code List Representation TC, 2007. Code List Representation (Genericode) Version 1.0. [Online]

Available at: http://docs.oasis-open.org/codelist/cs-genericode-1.0/doc/oasis-code-list-representation-genericode.html

12. OASIS UBL TC, 2009. UBL 2 Guidelines for Customization, First Edition, Committee Specification 01. [Online]
Available at: http://docs.oasis-open.org/ubl/guidelines/UBL2-Customization1.0cs01.html#_Toc243466457

13. OASIS UBL TC, 2013. Context/value association using genericode 1.0.. [Online]
Available at: http://docs.oasis-open.org/codelist/cs01-ContextValueAssociation-1.0/doc/context-value-association.html

14. OASIS UBL TC, 2013. Universal Business Language (UBL) 2.1 (ISO/IEC 19845). [Online]
Available at: http://docs.oasis-open.org/ubl/os-UBL-2.1/

15. OASIS UBL TC, 2013. Universal Business Language (UBL) 2.1 (ISO/IEC 19845) Application Response. [Online]
Available at: http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#T-APPLICATION-RESPONSE

16. OASIS UBL TC, 2013. Universal Business Language (UBL) 2.1 (ISO/IEC 19845) Invoice. [Online]
Available at: http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#T-INVOICE

17. OASIS UBL TC, 2013. Universal Business Language 2.1 Extension Validation Methodology. [Online]
Available at: http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#d0e16276

18. OASIS UBL TC, 2013. Universal Business Language Version 2.1. Data Model. [Online]
Available at: http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#A-THE-UBL-2.1-DATA-MODEL

19. OASIS, 2007. ebXML Messaging Services Version 3.0: Part 1, Core Features. [Online]
Available at: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/core/os/ebms_core-3.0-spec-os.html

20. OASIS, 2010. OASIS ebCore Party Id Type Technical Specification Version 1.0. [Online]
Available at: https://docs.oasis-open.org/ebcore/PartyIdType/v1.0/CD03/PartyIdType-1.0.html

21. OASIS, 2011. ebXML Messaging V3, Part 2: Advanced Features. [Online]
Available at: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/part2/201004/csd03/rddl-ebms3-part2.html

22. OASIS, 2011. ebXML Messaging V3, Part 2: Advanced Features. [Online]
Available at: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/part2/201004/csd03/rddl-ebms3-part2.html

23. OASIS, 2013. AS4 Profile of ebMS 3.0 Version 1.0. [Online]
Available at: http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/os/AS4-profile-v1.0- os.html

24. Object Management Group, 2015. Unified Modeling Language™ (UML®). [Online]
Available at: http://www.omg.org/spec/UML/

25. Schematron, 2004. A language for making assertions about patterns found in XML documents. [Online]
Available at: http://schematron.com/spec.html

26. UN/CEFACT, 2003. Core Component Technical Specification - Part 8 of the ebXML Framework version 2.01. [Online]
Available at: http://www.unece.org/fileadmin/DAM/cefact/codesfortrade/CCTS/CCTS_V2-01_Final.pdf

27. W3C, 2012. W3C XML Schema Definition Language (XSD) 1.1 Part 2: Datatypes. [Online]
Available at: http://www.w3.org/TR/xmlschema11-2/