EWG D1&D2

Barcelona

March 19th 2002

Library Content sub-committee

Charter: To rapidly develop standard XML business library content by taking an existing library as a starting point and modifying it to incorporate the best features of other existing business and core component libraries.

Some Key Deliverables

While developing schemas for the basic library, the LCSC will …

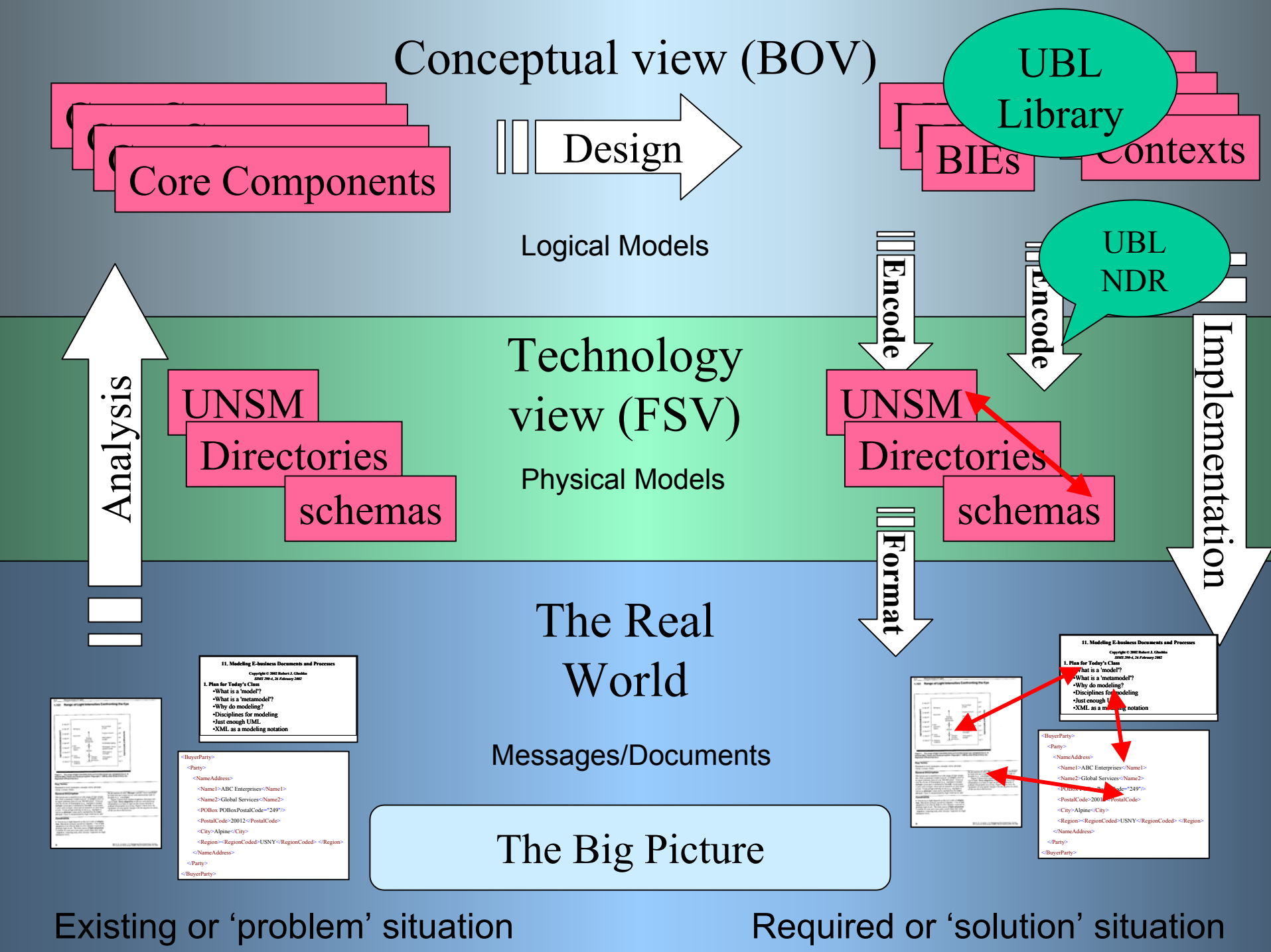
- Validate and contribute to the set of ebXML Context Drivers
- Apply and contribute to the ebXML Core Components

What does the NDR SC do?

- *"Recommend to the TC rules and guidelines for normative-form schema design, instance design, and markup naming, and write and maintain documentation of these rules and guidelines"*
- For the benefit of the modelers/coders of UBL libraries, developers of UBL-aware software, designers of extensions to UBL, and readers of UBL messages
- Individual position papers will be collected into a single recommendation document soon

Sampling of draft positions

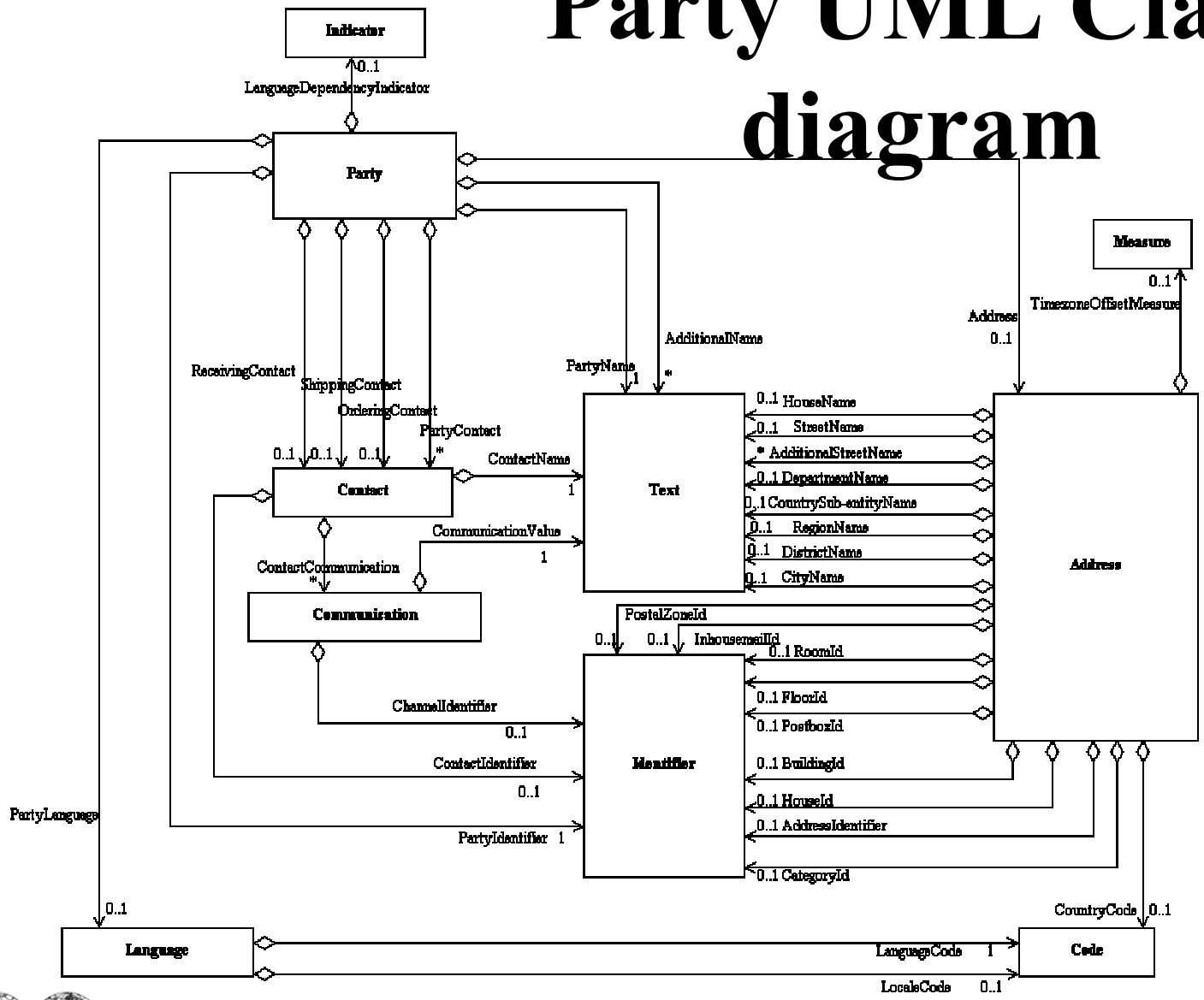
- Schema modularity, namespace strategy, and versioning strategy
- Relationship and naming of XML elements and attributes and XSD types
  - Always with reference back to CC semantics
- Choosing elements vs. attributes
- How to define and handle code lists
  - Particularly external ones (most/all of them)
- Strategies for XSD type derivation
  - Largely invisible in XML messages, but important for efficient tools support


Conceptual view (BOV)
Core Components
Design
UBL Library
BIEs
Contexts
Logical Models
Encode
Encode
UBL NDR
Analysis
Technology view (FSV)
UNSM Directories schemas
Physical Models
UNSM Directories schemas
Implementation
Format
The Real World
Messages/Documents
The Big Picture
Existing or 'problem' situation
Required or 'solution' situation

UBL Approach

- Analyze the Order constructs to identify the Basic Information Entities (*components*):
    - Basic BIE (*content component*)
    - Aggregate BIE (*instance of a structural component*)
- Establish context and semantics:
    - Naming, context and definitions
- Establish cardinality/optionality
- Identify missing BIEs
- Develop a Library of re-usable types (*structural components*)
- Assemble new Order document

Party UML Class diagram



UBL Library Content

UBL Name	BIE Dictionary Entry Name	Object Class	Property Qualifier	Property Term	Representation Term	Type	Occurrence	Basic/Aggregate	UBL Definition
OrderHeader	OrderHeader. Details	OrderHeader			Details	OrderHeader			contains the header information of the order
IssueDateTime	Order. Issue. Date Time	Order		Issue	Date Time	DateTime	1..1	Basic	OrderIssueDatetime holds a time stamp provided by the application that issued the Order document.
Identifier	Order. Identifier	Order		Identifier	Identifier	Identifier	0..n	Basic	The OrderId element is a unique number assigned to the Order
BuyerIdentifier	Order. Buyer. Identifier	Order	Buyer	Identifier	Identifier	Identifier	0..1	Basic	The unique number assigned by the buyer to the Order.
SellerIdentifier	Order. Seller. Identifier	Order	Seller	Identifier	Identifier	Identifier	0..1	Basic	The unique number assigned by the seller to the Order.
BuyerAccountId	Order. Buyer Account. Identifier	Order	Buyer	Account	Identifier	Identifier	0..1	Basic	BuyerAccountId is the unique identification assigned to the buyer
Quote	Order. Quote. Details	Order		Quote	Details	Quote	0..n	Aggregate	Provides the details of any quotes relevant to the Order
Contract	Order. Contract. Details	Order		Contract	Details	Contract	0..n	Aggregate	Provides the details of the purchase contract between trading partners.

UBL MetaModel

BIE Metadata (Names)

Each BIE has both a UBL Name and a BIE Dictionary Entry Name.

- UBL Names are XML Tags
- Dictionary Entry Names are CCTS BIE names

A proper analysis of name components should allow us to say…

"A [Representation Term] represents the [Property Qualifier, Property Term] of the Object Class."

- 'an Identifier represents the Identifier of the Party', or
- 'a Contact represents the Shipping Contact of the Party', or
- 'a Code represents the Identification of a Language'

Object Class

- Object Class is a 'logically related group of properties', i.e. a collection that makes business sense.
- We also refer to these things as Re-usable Types, but they are also known as Classes (to the OO and UML world) or Entities (to database designers).

Property Qualifier

- Property Qualifier is only used for Aggregate BIEs. It is the 'context' of the relationship with another Re-usable Type. That is, it is the role this object plays within its association with the 'parent' type.
- This does not apply to Basic BIEs. If it appears that a Basic BIE needs a property qualifier then it is either:
- (a) an inadequate property name,
- (b) two distinct Basic BIEs, or
- (c) a candidate group of Basic BIEs that may be another Aggregate (ie Re-usable Type).

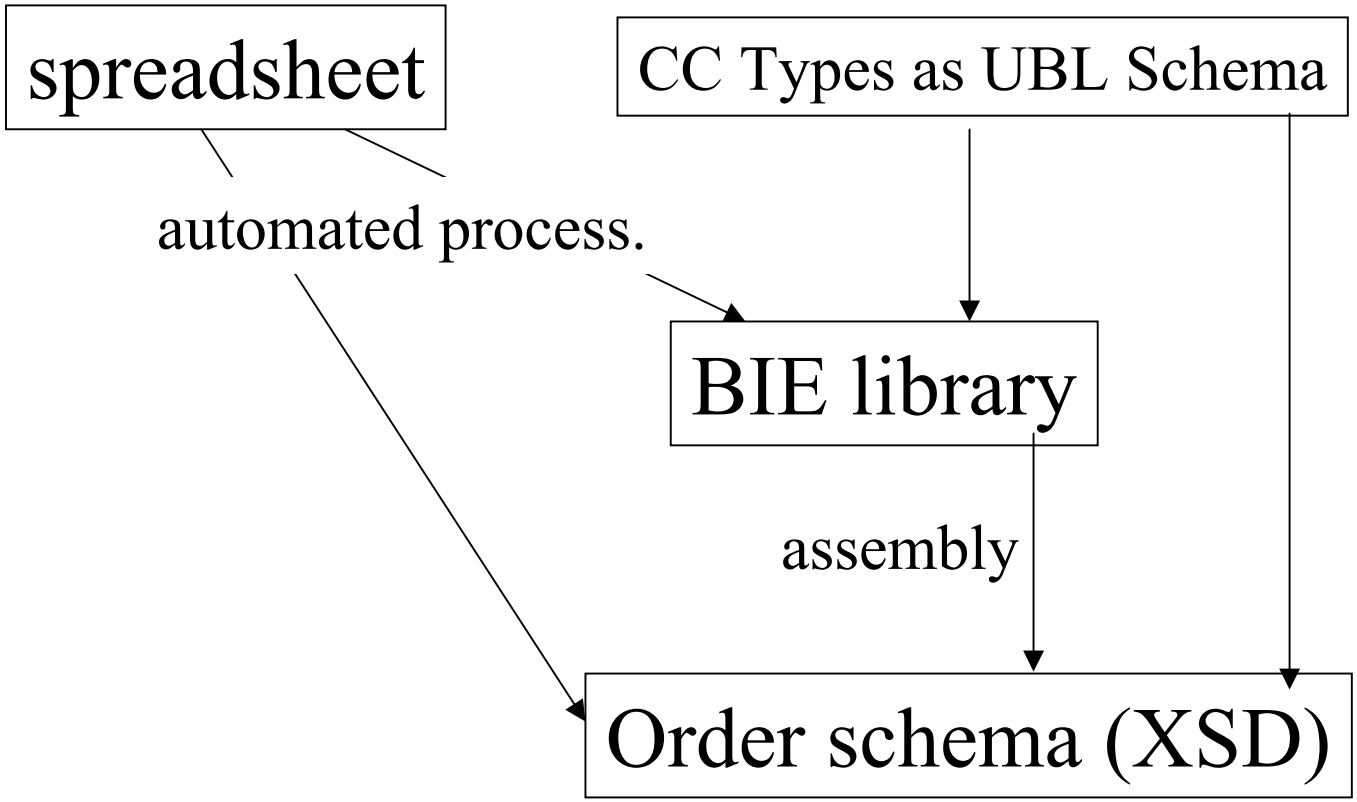
Property Term

- A Property Term identifies the specific item within its Object Class.
- Represents the distinguishing characteristic or property of the dominant area of interest and shall occur naturally in the definition.
- It may also be known as an attribute (to database designers).
- The combination of Object Class, Property Qualifier (if appropriate) and its Property Term, should give the basic semantic meaning of the item.

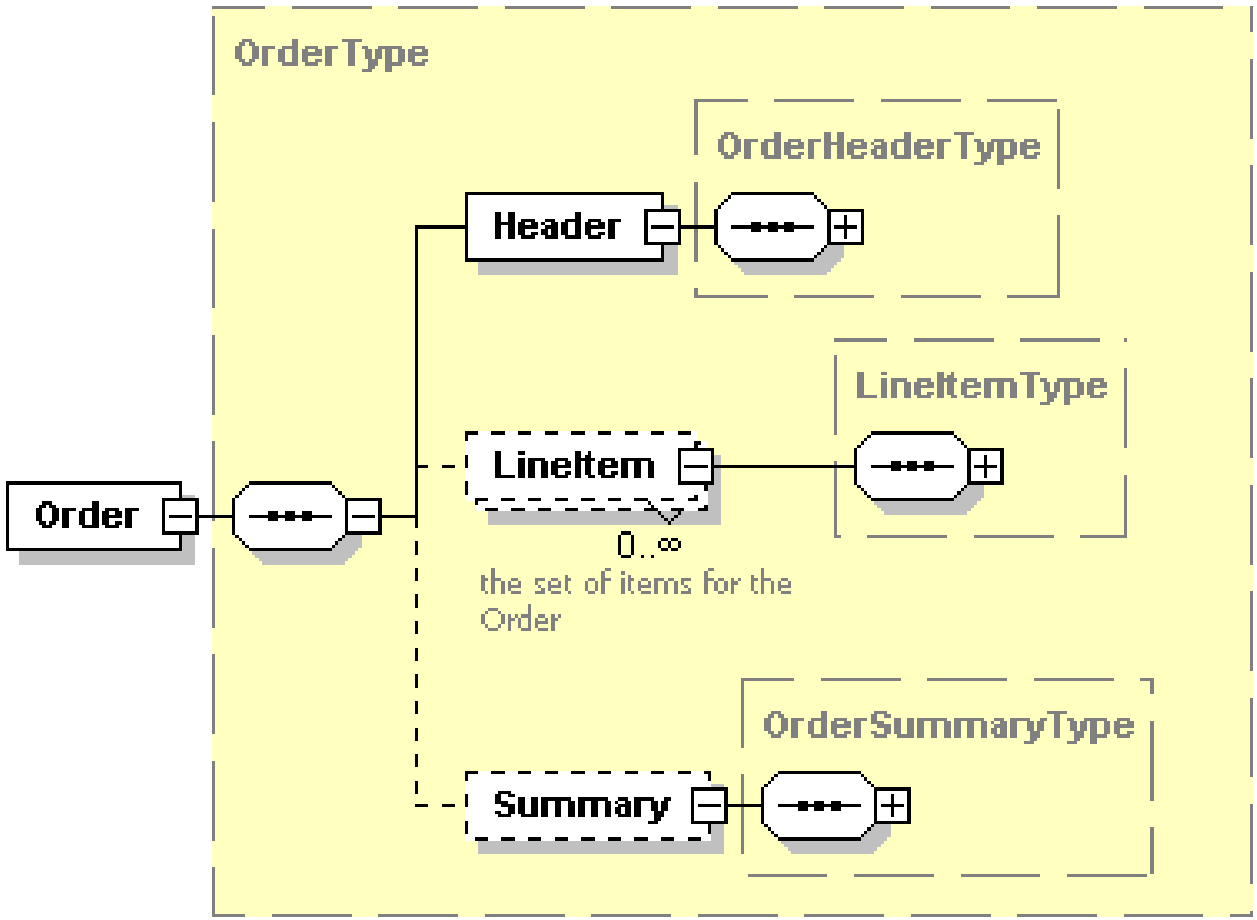
Representation Term

- Defines the structure of valid values for BIEs.
- Basic BIEs use one of the Core Component Representation Terms as defined by CCTS.
- Aggregate BIEs use the Representation Term of “Details” as defined by CCTS.
- NB. The property of 'unique identification' may be provided by any of the three Representation Terms.

UBL Library Content



‘Order’ structure



UBL Library Content

```
<Order xmlns:cct="CoreComponentTypes.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="./UBL_Order-0p64.xsd">
  <Header>
    <IssueDateTime DateTimeFormatText="token">20020305</IssueDateTime>
    <Identifier>4500004875</Identifier>
    <CurrencyCode>GBP</CurrencyCode>
    <Language>
      <IdentificationCode>en-us</IdentificationCode>
    </Language>
    <BuyerParty>
      <Identifier IdentificationSchemeName="R3" IdentificationSchemeAgencyName="SAP" LanguageCode="en-
us">R300</Identifier>
      <Name LanguageCode="en-us">IDES Retail INC US</Name>
      <Address>
        <HouseId>3999</HouseId>
        <PostboxId>NJ 07054</PostboxId>
        <StreetName LanguageCode="en-us">West Chester Pike</StreetName>
        <CityName>Parsippany</CityName>
        <CountryIdentificationCode CodeListIdentifier="ISO 3166-1" CodeListAgencyIdentifier="ISO" CodeName="United
States" LanguageCode="en">US</CountryIdentificationCode>
      </Address>
</BuyerParty>
```

XML instance

Stylesheet to HTML view

Stylesheet to EDIFACT view?!

UNB+UNOC:3+496227741862:12+16106611000:12+020314:2306+IntRef12345678'UNH+MsgRef12345678+ORDERS:D:01C:UN'BGM+220:::PurchaseOrder+4500004875'DTM+4:20020305:102'NAD+BY+R300:R3:SAP+IDESRetailINCUS++WestChesterPike:3999+Parsippany+US-NJ+07054+US'CTA+BJ+:RetailDepartment'COM+?+1-650-849-8888:TE'NAD+SE+R3002:R3:SAP+MeyerHardwareInc.++SouthHollowRoad:136+HotSprings++71901+US'CTA+OC+:PeterSmith'COM+?+1-501-321-3443:TE'RCS+26'FTX+AAG+++Writtenconfirmationofthispurchaseorderwillberequiredbeforetheorderisprocessed.+en'RCS+20'FTX+PMT+++OurtermsareNet20daysfordomesticordersandNet30daysforforeignorders.F.O.B.isAlbuquerque,NewMexicoUSA.Wewillship,prepay,andaddtotheinvoice.+en'LIN+10++R100009:BP'IMD+F++:::Screwdriver(cross-head)::en'QTY+21:20:CT'MOA+66:400.00:USD'PRI+NTP:20.00:::1'TAX+7+VAT++0'LIN+20++R100010:BP'IMD+F++:::Hammer,20ozframing::en'QTY+21:20:CT'MOA+66:2000.00:USD'PRI+NTP:100.00:::1'TAX+7+VAT++0'LIN+30++R100011:BP'IMD+F++:::Basketball?'Professional?'::en'QTY+21:20:CT'MOA+66:3232.40:USD'PRI+NTP:13.51:::1'TAX+7+VAT++0'LIN+40++R100012:BP'IMD+F++:::Skateboard?'HellsBells?'::en'QTY+21:60:PC'MOA+66:4020.00:USD'PRI+NTP:67.00:::1'TAX+7+VAT++0'LIN+60++R100016:BP'IMD+F++:::TunerX300::en'QTY+21:60:PC'MOA+66:9420.00:USD'PRI+NTP:157.00:::1'TAX+7+VAT++0'UNS+D'MOA+124:0.00:USD'MOA+128:19082.40:USD'CNT+2:5'CNT+8:60:CT'CNT+8:120:PC'UNT+50+MsgRef12345678'UNZ+1+IntRef12345678'

Workplan

- Develop UBL logical library of BIEs
  - ebXML CCTS
- Encode these into physical models
  - XML Schema
  - UBL Naming and Design rules
- Assemble the BIEs necessary for an Order
- Invite liaison group input
  - EWG
- Repeat the process for other documents

Review Distribution Pack

- Model as spreadsheet
- Model as XSD
- Order document XSD
- Sample Instances of Order
- Stylesheet?
- Methodology Document
- Review Guide
- Comment and Disposition Form

Library Review

- Announced 14th March
- UBL-comment and UBL Liaisons
- Closes 8th April
- Review methodology and artifacts
  - Are we on the right track?