

Filling in the additional metadata in the document model (or columns of the spreadsheet) is something of a tricky business, but there are rules to be followed. Here's are some guidelines, based on the UBL 1.0 release and documentation:

Name – These are automatically generated based on UBL NDR rules using a subset of the Dictionary Entry Name (see below) that is suitable for XML tagnames. The spreadsheet should do this for you. Copy and paste the naming equation from an extant spreadsheet example (taking care to choose the appropriate rule for the appropriate row color).

Dictionary Entry Name – These are automatically generated based on a complicated set of rules. Basically, for the pink rows, it will be the object class (plus an optional qualifier) followed by “. Details”. For the white rows, it's the object class (plus optional qualifier) followed by a period followed by the property term (plus optional qualifier and possessives) followed by a period followed by the representation term. I know this is confusing. The spreadsheet should do it for you. Copy and paste the naming equation from an extant spreadsheet example (taking care to choose the appropriate rule for the appropriate row color).

Object Class Qualifier – UBL never actually uses this. It is part of the ebXML CCTS requirements, but no one has found a use or need for it.

Object Class – This is basically the name of the appropriate ABIE (aggregate), but with spaces inserted between the words. Every BBIE and ASBIE underneath has the same Object Class.

Property Qualifier/Property Term Possessive(s)/Property Term Noun – These are difficult but important concepts for the proper application of ISO 11179.

With aggregates (ABIEs – pink rows) the property columns are not applicable (an ABIE is not a property - it HAS properties).

With elements and associations (BBIEs – white rows and ASBIEs -green rows) the combination of Object Class and its Property Term, should give the basic semantic meaning of the item. For example, Event and Speaker or Event and Occurrence gives the basic semantics as does the combination of Time Period and Duration.

The Property Term itself may consist of several words. Some may be qualifiers and some may be possessive nouns. However, there must be a least one primary noun.

With associations (ASBIEs – green rows) the primary Property Term noun is the Object Class name of the associated ABIE – the aggregate it has an association with. This value

is updated by formula from the Associated Object Class and should not be entered. The spreadsheet should do this for you. Copy and paste the formula from an extant spreadsheet example.

With elements (BBIEs – white rows), the primary noun is generally obvious – the term that gives the best basic semantics when used with just the Object Class. Go back to your elements, and pick out the basic noun which describes the element. This is what we typically think of as the name of the element. It can be more than one word (for example Ticket Required is a primary noun that cannot be split any smaller.) This is not a science but a craft and is subject to continuous refinement (and sometimes great debate!).

The next tricky part is to work out what (if any) is a qualifier and what is a possessive noun.

A qualifier is a word or words which help define and differentiate one BIE from another. Qualifiers specialize or modify the noun – that is, an adjective. An example is when the BIE is used in another context, as in the event model, where an event can have a corporate sponsor and/or a local sponsor. Within an event, both are ASBIEs with the ABIE Sponsor, so their property term is Sponsor, but they have qualifiers (Local and Corporate) to distinguish the two.

Possessive nouns, on the other hand, identify ownership of the noun.

The test is to take any multi-word Property Terms and try and form a statement that says "PropertyTermNoun OF THE PropertyTermPossessive" or "PropertyTermPossessive's PropertyTermNoun". If this works then the word is a possessive noun - if not then it is either a multi-word noun or one word is a qualifier.

For example, the two word "Street" and "Name". "Name of the Street" or "Street's Name" works for StreetName, so Street is the Property Term Possessive. Whereas, with the two words "Postal" and "Zone", "Zone of the Postal" or "Postal's Zone" does not make sense for PostalZone, so Postal is a Property Term Qualifier. We say it is a qualifier, because we may have other types of zone, for example "Trading Zone". In the event calendar model we may have "Start" and "Time". "Time of the Start" makes sense, so this means Start is a Property Term Possessive. Whereas, with "Location" and "Physical", "Location of the Physical" means nothing – so "Physical" is the Property Term Qualifier for "Location".

Representation Term – Again, this applies only to BBIE's and ASBIE's.

For ASBIE's, it is again the same as the object class of the referenced aggregate. This is updated by formula from the Associated Object Class and should not be entered. Copy and paste the formula from an extant spreadsheet example.

For BBIE's, it is drawn from the values in the ebXML core components technical specification. All BBIE's should use one of the following terms: Amount (= amount of money), BinaryObject (= graphic, video, etc.), Code, Date Time, Identifier, Indicator (= boolean), Measure, Numeric, Quantity, Text.

Amount, Measure, and Quantity require units, which differentiates them from Numeric.

Data Type Qualifier/Data Type – Again, this applies only to BBIE's and ASBIE's. Data Type Qualifier is the link with the CCTS type for the representation term. For the purpose of the modeling it is irrelevant. On the spreadsheet we enter the representation term plus “. Type”.

Associated Object Class Qualifier/Associated Object Class – For ASBIE's only, this should be copied exactly from the Object Class Qualifier and the Object Class of the aggregate being associated. This value updates the Property Term and the Representation Term for the ASBIE.

Business Terms (Synonyms) – Here is where you can clarify your model for other users. List whatever synonyms might be used to describe equivalent elements in the world. For instance, some event calendars might indicate “enrollment required” while some indicate “reservations required.” You might decide that these amount to the same logical element, and you might decide to call it “Reservations Required.” So then you should list “Enrollment Required” under the business terms.

Occurrence – Again, only for BBIE's and ASBIE's. Occurrence indicates how many times the element can occur within the given aggregate.

It should be based on the cardinality in your conceptual model, though it can be a refinement. In some contexts/document models, an optional element in the conceptual model may become mandatory. For example, some document types, such as a seminar booking, may insist on having a speaker for an event.

The converse is not a good idea, however. You should not make a mandatory element optional – it would weaken interoperability with other document models.

BIE Type – Just a place to indicate ABIE, BBIE, or ASBIE. It will correspond with the color of the row. The application to generate schemas uses this, since it cannot read colors.

Definition – This will be up to you to decide. We're still working on guidelines for controlled vocabularies and definitions and the like.

Examples – Self-explanatory.

Documentary Namespace Prefix – This is under review within UBL, but a present it is

the namespace prefix to indicate how to identify which code set to use in the schemas. Think of it as a mnemonic for the code name, e.g. 'cur' means currency code.

Spreadsheet files

The ABIE that defines the root document, e.g. Order, Seminar, EventCalendar, should be in its own spreadsheet, together with the definitions of any other ABIEs that are felt to only be applicable to that document (this is rare).

All other ABIEs should be defined in a single spreadsheet – we call 're-usable'.

Crib Notes

Here are the fields which need to be filled out for each entity type:

ABIE – Object Class, BIE Type, Definition, Examples (optional)

BBIE – Object Class, Property Qualifier/Possessive (optional), Property Term Noun, Representation Term, Data Type, Business Terms (optional), Occurrence, BIE Type, Definition, Examples (optional), Namespace Prefix (optional)

ASBIE – Object Class, Associated Object Class, Occurrence, BIE Type, Definition, Examples (optional)

NB Copy and paste the rows from an extant spreadsheet example (taking care to choose the appropriate rule for the appropriate row color) to enable formula to populate the correct values where possible.

Completed ABIE definitions should look like ...

Pink ABIE row – always one

White BBIE row(s) – at least one

Green ASBIE rows(s) – optional