_____

# AUDIT
# REPORT

**OF THE**

# D06B ACC and BIE CCL Directories

**27th of November 2006 to 6th of March 2007**

**Team members :**

      **Chair: M. Conroy**

          **F. Bourge**

          **I. Bedini**

          **D. Dobbing**

          **S. Lim**

          **Y. Yeh**

## Table of Contents

_____

## 1. Introduction.

We are pleased to announce that the D06B directory has been produced in conformance with existing procedures and we consider it satisfactory for publication.

During the audit a question was raised concerning the verification of core components that had been audited in the previous CCL 06A audit. The ICG would like to stress that in the interests of ensuring a quality product any anomalies that are brought to light concerning existing core components will systematically be identified and a request for correction will be made.

There are still some questions that have not been resolved during the audit period and that have to be addressed by TBG17 in the coming months.

## 2. CCL publication structure

Once again the ICG has noted that the released documents were not in conformance with the boilerplate format for the published library. Experience has shown that the standardisation of the boilerplate for released UN/CEFACT documents is essential to their successful use in the marketplace.

The ICG has already raised this issue and recommended that the publication format be the same as for the previous audit.

**Recommendation 1:** *TBG17 define in cooperation with ICG a standardised publication format including an appropriate XML/XSLT evolution at a later stage.*

## 3. Problems with the ACC CCL

The following problems were identified in the ACC CCL:

1. Existing BCCs and ASCCs have been assigned new UIDs. The CEFACT UID uniquely identifies each object (included in the Registry) and should not be subject to change. The changed UIDs were reverted to their original values:

2. The multiplicity of a BCC was changed from "unbounded" to "1". This was a non-upwards compatible modification and is not permitted. Leaving the value "unbounded" does not impede the use of the BCC in ABIEs where the multiplicity can be restricted. The Multiplicity was reverted to its original value.

3. An existing BCC was repositioned within an ACC. Such a change is unnecessary and confusing. The BCC was repositioned to its original position.

4. A number of duplicate UIDs were found between the ACC and BIE components. These have been corrected.

## 4. Use of CCTS Rule C17

A closer analysis of the correct application of the CCTS naming convention brought to light a number of core components that were not in conformance with the CCTS rule C17:

> *[C17] The Dictionary Entry Name shall be extracted from the Core Component definition.*

Some corrections have been applied by adding at the beginning of the definition the phrase *"A {name} is…".* However, the core component names in question still do not figure naturally in the definition and in addition, this change is contrary to the spirit of ISO 11179. For example taking the currently named ACC "Delivery Details" which has

_____

the definition of "A delivery is the action of distributing goods or services to their destination.". This would be better expressed in the spirit of ISO 11179 as "The action of delivering goods or services to their destination".

It is worthwhile reminding ourselves of the ISO 11179 guidance on this point: "Precise and unambiguous data element definitions are one of the most critical aspects of ensuring data shareability. When two or more parties exchange data, it is essential that all are in explicit agreement on the meaning of that data. One of the primary vehicles for carrying the data's meaning is the data element definition. Therefore, it is mandatory that every data element have a well-formed definition; one that is clearly understood by every user. Poorly formulated data element definitions foster misunderstandings and ambiguities and often inhibit successful communication."

**Recommendation 2:** *The ICG recommends that TBG17 review all current definitions to remove the starting phrase "A {name} is" and realign the definition or name to come into conformance with rule C17.*

## 5. Use of CCTS Rule C19

Several instances of non conformity with the CCTS C19 were brought to light and these were corrected.:

> *[C19] The Dictionary Entry Name and all its components shall be in singular form unless the concept itself is plural.*

## 6. Use of CCTS Rule C21

Three cases of the use within a core component name of the word "of" were brought to light. The ICG requested that these be modified to respect rule C21 which is:

> *[C21] The Dictionary Entry Name shall only contain verbs, nouns and adjectives (i.e. no words like and, of, the, etc.). This rule shall be applied to the English language, and may be applied to other languages as appropriate.*

TBG17 in agreement with TMG decided to change the rule to read as follows:

> [C21] The *Dictionary Entry Name* shall only contain verbs, nouns and adjectives unless a different part of speech is part of an official title, part of a term listed in the *Oxford English Dictionary*, or part of a *Controlled Vocabulary*.

The ICG feels that this action was not justified since the current rule has been applied successfully to over 1900 names and the modified rule significantly weakens the effectiveness of the naming convention.

The ICG did not and still does not agree with this rule change since it is less disciplined and will give rise to inconsistently named library entries. Further, it makes it difficult, if not impossible, to properly verify the correct creation of names. The Oxford English Dictionary is a multi-volume work and contains many particular terms and expressions that are not generic in the spirit of ISO 11179. In addition a "controlled vocabulary" has been introduced which has not to our knowledge been officially published.

The ICG is no longer in a position to verify the correct assignment of core component names.

**Recommendation 3:** *The ICG recommends that TBG17 correct the names "care of" and "attention of" as these still appear to contradict the newly proposed rule.*

_____

## 7.  Use of CCTS Rule C27

A closer analysis of the correct application of the CCTS naming convention brought to light a number of core components that were not in conformance with the CCTS rule C27:

> *[C27] The name of a Property Term shall occur naturally in the definition and may consist of more than one word. A name of a Property Term shall be unique within the Context of an Object Class but may be reused across different Object Classes.*

After some discussion it was established that this rule was incorrect and a corrigendum was issued correcting the rule in question and resolving the problems identified. The revised rule is as follows:

> *[C27] The name of a Property Term shall occur naturally in the definition and may consist of more than one word. A Basic Core Component Property Term plus a Representation Term, or an Association Core Component Property Term plus associated Object Class Term, shall be unique within the Context of an Object Class but may be reused across different Object Classes.*

## 8.  Inconsistent Terms

The ICG has identified a number of inconsistencies concerning the Core Components UN00000247, UN00000520 and UN00000535 which appear to have an inconsistent definition of the representation term, both "Numeric" and "Identifier" for the same property term "Sequence". These have been corrected by TBG17.

The ASCCs UN00000551, UN00000552 have an apparent inconsistent definition of the property term across a pair of corresponding ASCCs. These have been corrected by TBG17.

## 9.  Qualified DataTypes (QDTs)

A number of issues were brought to light concerning the introduction of the QTDS and are outlined below.

1.  Specific version number for codelists.

    The assignment of a specific code list version number to the individual code lists as referenced in many of QDTs will create an unnecessary overhead for schema management. A new version of schema will need to be generated every time a new version of the code list becomes available, for EDIFACT code lists this would be at least twice per year. To meet the demand by users to reduce the time it takes have code values allocated, the frequency of code list version updates in the future will likely to be shorter and as a consequence, would require more frequent schema version updates.

    It is the view of the ICG that the specific code list version number should not be specified in QDTs, unless there is a defined requirement to do so. The absence of a specific code list version number would imply the latest version of the code list in question. Accordingly, users would not necessarily need to migrate to a new schema version simply to make use of a new code. To migrate large community implementations from one schema version to another is not considered to be a trivial task.

    To allow for multiple concurrent versions of a particular code list the code list version number will likely need to be incorporated in the QDT name.

_____

**Recommendation 4:** *The ICG strongly recommends that the code list version number reference employed in published UN/CEFACT schemas address always the "current" code list and that this be identified with a generic term which does not reference a specific version of the code list, unless it is explicitly required. For example this could be handled by inserting a new guidance column in the qDT Spreadsheet and leaving the "Version Identifier" entries in the enumeration column (Column P) blank.*

2. The creation of a qualified datatype "Date mandatory". This datatype is to enable the use of a date and/or time and in order to validate its contents makes use of a pattern. The ICG believes that the pattern in question cannot correctly validate a date and strongly recommends that the few core components making use of this be switched to the standard primitive "datetime" and their definition be modified to "date and time". If a date does not have a time then a common convention can be applied to provide a time of 00h00. Alternatively if this is absolutely necessary then the ICG recommends that it be split into two attributes, one for Date and one for Time, where the Time attribute is optional this provides the correct semantic requirements. The current pattern as provided does not ensure that a legitimate date or time  is provided (e.g. 9999-99-99T99:99:99 is incorrectly permitted) nor does it allow for local or UTC time to be expressed.

    It is important to stress that the motivation to create a qualified datatype is in order to apply a strong typing against the BBIE in question. In essence it is to ensure that only valid values are permitted.

    **Recommendation 5:** *TBG17 review these comments and develop and publish an agreed policy for the use and application of qualified datatypes.*

3. The ICG also identified an issue concerning the qualified datatype  IBAN_ Identifier. Type . This qualified datatype should be based on a pattern which the ICG has supplied to TBG17 and which is currently used by Swift.

4. The ICG has also identified an issue with the QDT Payment Terms_ Identifier. Type. This datatype cannot really be considered a datatype since it makes reference to Recommendation 17 that simply defines a method of abbreviating terms in a standard manner rather than being a codelist per se. It is not therefore not possible to provide a pattern or to provide a code list.

    **Recommendation 6:** *TBG17 to introduce the supplied pattern for the IBAN QDT and to define how Recommendation 17 can restrict the BBIE in question or to remove it if it is not possible.*

5. The ICG has requested the addition of the unqualified datatypes in order to make the library consistent. TBG17 has not reacted to this request.

    **Recommendation 7:** *TBG17 to introduce the unqualified datatypes in the library.*


**10. The use of "0..unbounded" with BBIEs**

The RSM, approved in a Forum plenary at theUN/CEFACT forum in Bonn, explicitly states that a BBIE can only have a multiplicity of 0..1. After some discussion it was agreed that this constraint should be relaxed under very defined conditions.

_____

If a multiplicity of zero or one to unbounded (0..unbounded, 1..unbounded) is used against a BBIE within an ABIE, it shall only enable the identification of a different representation of the same BBIE content being described. Consequently such cases do not break the basic principle of only one occurrence of an BBIE.

The following table has been developed by the ICG to indicate where the unbounded multiplicity is possible with the metadata enabling the different representations to be provided:

_____

| CCT<br><br>Dictionary Entry Name | CCT Components | 0..unbounded use, permitted or not permitted |
|---|---|---|
| Amount. Type | • Amount. Content, Amount Currency. Identifier, Amount Currency. Code, List Version. Identifier | Permitted |
| Binary Object. Type | • Binary Object. Content, Binary , Object. Format. Text, Binary Object. Mime. Code, Binary Object. Encoding. Code, Binary Object. Character Set. Code, Binary Object. Uniform Resource. Identifier, Binary Object. Filename. Text | Not permitted |
| Code. Type | • Code. Content, 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 | Permitted |
| Date Time. Type | • Date Time. Content, Date Time. Format. Text | Not permitted |
| Identifier. Type | • Identifier. Content, 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 | Permitted |
| Indicator. Type | Indicator. Content, Indicator. Format. Text, | Not permitted |
| Measure. Type | • Measure. Content, Measure Unit. Code Measure Unit. Code List Version. Identifier | Permitted |
| Numeric. Type | • Numeric. Content, Numeric. Format. Text | Not permitted |
| Quantity. Type | • Quantity. Content, Quantity. Unit. Code, Quantity Unit. Code List. Identifier, Quantity Unit. Code List Agency. Identifier, Quantity Unit. Code List Agency Name. Text | Permitted |
| Text. Type | • Text. Content, Language. Identifier, Language. Locale. Identifier | Permitted |

In the majority of the cases where unbounded is used, it is clearly possible to accept several instances of the same concept. For example where the BBIE is coded it is possible to provide several coded representations of the concept. Again, if it is text it is possible to provide several translations of the text in question.

However, in the case of a Binary Object this rule does not work. The metadata used for the binary object describes the file characteristics and has no semantics associated with it. The only semantics consequently are to be found in the name (e.g. Basic _ Work Item. Reference File. Binary Object). Consequently if one wanted to provide plans, directives, explanations etc…it would not be possible to differentiate these objects.

**Recommendation 8:** *The ICG recommends that an ACC and corresponding ABIE is developed to handle the association of files or documents with another object. Such an ABIE should be similar to the ABIE UN01001241 (Lodging House_ Picture. Details).*

_____

**Recommendation 9:** *The ICG recommends that it should be clearly stated that a BBIE with the multiplicity of unbounded merely is the repetition of different codifications of the same thing.*


## 11. Tourism RSM

The ICG was surprised that TBG17 did not make use of nor validate the RSMs produced by the different groups. As indicated in the workflow this is the key transmission document between the TBG, ICG and ATG and is published when the development process is finished. It provides the approved input to the ICG concerning draft core components that are to be added to the library and in addition all restrictions that are to be applied to existing core components to make BBIEs or ASBIEs. The document is required by the ATG to know what technological solution it is to apply.

The CII and E-Tendering RSMs are conformant with the RSM boilerplate. However the Tourism RSM is not and is clearly represents an unfinished document.

It is surprising to see that the conceptual model and canonical model are identical. Normally the conceptual model is orientated towards business in the spirit of the Business Operational View and the Canonical model is oriented towards Functional Service View. Consequently the information requirements are typically not the same.

The RSM does not contain the Use cases and Activity diagrams as exposed in the BRS. It is not a copy of the BRS. The RSM should not contain explanatory text from the boilerplate.

Until the UN/CEFACT Registry can be put into place the RSM document will be key to the maintenance and evolution of the Registry artefacts. As soon as the Registry is in place the RSM per se, will disappear to be replaced by the UN/CEFACT Registry working libraries.

Finally this RSM was targeted for the D.07A but was changed on the 20th of February to target the D.06B directory. .It has nevertheless been included in this release.

**Recommendation 10:** *TBG to revise the Tourism RSM to make it conformant and usable by other parties.*


## 12. Audit Cutoff

The ICG has received several additions to the Core Component Library since it was first released for audit on the 23rd of October 2006. The Tourism RSM was provided on the 6th of February with a correction to it on the 20th of February. The CII RSM was first received on the 16th of February.

It is not possible to audit a library with constantly changing contents. Once the library is submitted the contents should be frozen. It is the TBG that decides what contents goes in what library and this should be decided at the end of each forum meeting.

**Recommendation 11:** *The TBG to provide the ICG with a formal list of what is expected in a given library release at the end of each Forum meeting.*


## 13. Publication Ready

The ICG expects that the libraries that it receives to be publication ready. Greater attention needs to applied to the presentation content and layout to ensure that it is a consistent and a quality deliverable. The following items were noted in the latest CCL release, "CCL06B_28FEB07.xls":

_____

1.  Input CC. Columns F, G & I have no entries. However the colour highlighted row should extend across the cells in these columns

2.  Input qDT. Column A (Action) entries should be top aligned, as per other worksheets.

3.  Input qDT: Delete Columns X to AE as these appear to be for internal UN/CEFACT use.

4.  Input qDT. Bottom border for Rows 2 & 5 uses different border line thickness across the row. Cells A42, B42, A92 & B92 should be yellow highlighted.  Row 90 cell borders are missing.

These have since been corrected by TBG17.

**Recommendation 12:** *The ICG recommends that a quality verification process be implemented prior to forwarding the libraries to the ICG.*

_____

## 14. Summary of ICG Recommendations

**Recommendation 1:** TBG17 define in cooperation with ICG a standardised publication format including an appropriate XML/XSLT evolution at a later stage.

**Recommendation 2:** The ICG recommends that TBG17 review all current definitions to remove the starting phrase "A {name} is" and realign the definition or name to come into conformance with rule C17.

**Recommendation 3:** The ICG recommends that TBG17 correct the names "care of" and "attention of" as these still appear to contradict the newly proposed rule.

**Recommendation 4:** The ICG strongly recommends that the code list version number reference employed in published UN/CEFACT schemas address always the "current" code list and that this be identified with a generic term which does not reference a specific version, unless it is explicitly required. For example this could be handled by inserting a new guidance column in the qDT Spreadsheet with and leaving the "Version Identifier" entries in the enumeration column (Column P) blank.

**Recommendation 5:** TBG17 review these comments and develop and publish an agreed policy for the use and application of qualified datatypes.

**Recommendation 6:** TBG17 to introduce the supplied pattern for the IBAN QDT and to define how Recommendation 17 can restrict the BBIE in question or to remove it if its nots not possible..

**Recommendation 7:** TBG17 to introduce the unqualified datatypes in the library.

**Recommendation 8:** The ICG recommends that an ACC and corresponding ABIE is developed to handle the association of files or documents with another object. Such an ABIE should be similar to the ABIE UN01001241 (Lodging House_ Picture. Details).

**Recommendation 9:** The ICG recommends that it should be clearly stated that a BBIE with the multiplicity of unbounded merely is the repetition of different codifications  of the same thing.

**Recommendation 10:** TBG to revise the Tourism RSM to make it conformant and usable by other parties.

**Recommendation 11:** The TBG to provide the ICG with a formal list of what is expected in a given library release at the end of each Forum meeting.

**Recommendation 12:** ICG recommends that a quality verification process be implemented prior to forwarding the libraries to the ICG.