1 Roll Call

<table>
<thead>
<tr>
<th>Participant</th>
<th>Membership Status</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Crawford (Chair)</td>
<td>Member</td>
<td>P</td>
</tr>
<tr>
<td>Jostein Fromyr (Secretary)</td>
<td>Member</td>
<td>P</td>
</tr>
<tr>
<td>Gunther Stuhec</td>
<td>Member</td>
<td>P</td>
</tr>
<tr>
<td>Hisanao Sugamata</td>
<td>Member</td>
<td>P</td>
</tr>
<tr>
<td>Paula Heilig</td>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Margaret Pemberton</td>
<td>Member</td>
<td></td>
</tr>
<tr>
<td>Garret Minakawa</td>
<td>Member</td>
<td>P</td>
</tr>
<tr>
<td>Greg Wilson</td>
<td>Observer</td>
<td>P</td>
</tr>
<tr>
<td>Clifford Chaney</td>
<td>Observer</td>
<td>P</td>
</tr>
<tr>
<td>Michael Dill</td>
<td>Observer</td>
<td>P</td>
</tr>
<tr>
<td>Nada Reinprecht</td>
<td>Observer</td>
<td></td>
</tr>
</tbody>
</table>

Mark to add Greg to the eRoom
Mark to add Nada to the list server and the eRoom.

The meeting reviewed and updated membership list based on the meeting rooster. ATG2 how has 7 voting members. Quorum is constituted with 4 members present.

2 Agenda

The agenda for the week was adjusted and agreed as follows:

Monday 13:30 – 17:00
- Agenda and schedule for the week
- Review minutes from Wollongong
- Review action list
- Schema production procedures

Tuesday 13:30 – 17:00
- Joint meeting with TBG17 on Schema production procedures
- Joint meeting with ICG to discuss XML schema representation of Rec 20 (at 16:00)

Wednesday – no meeting
(Discussion on SBDH in TBG17)

Thursday 13:30 – 17:00
- Schema production procedures (continued)
- Joint meeting with TBG6 - tentatively

Friday - no meeting

3 Reviewed action list

The group reviewed and updated the list of open action items.

Most, but not all schemas are now available at the specified location on the UN web site.

4 Review minutes from Wollongong

No comments received. Minutes approved.
5 Schema production procedures

The official input into ATG is an RSM prepared by the TBG. That RSM will include:

- Conceptual and Canonical Data Model
- UML representation of the Canonical Data Model
- XMI file of Canonical Data Model
- BIEs in table form in word document

When reviewing the RSM (version 0p5) if was noted that this document is in itself not sufficient to support automated generation of schemas. It was also noted that currently TBG17 requires a process models and the TBG17 spreadsheet as input for the harmonization process.

The RSM itself will only be used as a reference document in the preparation of schema. It could be used as an audit document of submitted schema.

The XMI file may be the basis for future work, but it currently does not exist. The TBG17 submission template provides almost all requisite information necessary to generate a schema. The submission template will only include delta’s – add, change, delete. It may not include all ABIEs required to create a schema.

The meeting identified a number of issues related to information that is required in order to produce NDR compliant schemas, but that is currently not captured in the RSM or the TBG17 submission template:

1. type of association – composition or aggregation
2. Requirements for ABIEs/BBIEs to be in internal schema
3. Import requirements from existing schema
   a. Other UN/CEFACT root schema
   b. External Standards body schema
      i. Must also provide namespace string and token and schema location
      ii. Must clearly identify the xsd constructs to be re-used and how/where in the overall schema
4. Sequence of ABIE properties with individual ABIEs - may not be a problem – TBG17 now allows for ABIEs to have different sequences than the underlying ACC.
5. Sequence of ABIEs at the document level message assembly
6. BBIEs in the document level message assembly ABIE
7. Choice
8. SBDH Use
9. Code lists and identifier lists
   a. Identified as
      i. Supplementary component
   b. If existing in XSD, then namespace string, token, and schema location
   c. If new, then source code list
10. Data type Information

It was recognized that a number of these issues were related to the Message Assembly and should preferably be resolved in the CCMA project.

The group then discussed the availability of tools to support the production process. It was noted that, to the knowledge of the group, the EDIFIX tool from GEFEG is currently the only tool available that could support generation of NDR compliant schemas.

Michael Dill informed that the current version of the tool does not comply with the published version of the NDR. He further stated that GEFEG would be prepared to allow free of charge use by CEFACT. He anticipates that GEFEG could start working on the required upgrades in about 3
weeks, and that a revised version could be ready for the June ATG meeting. ATG2 will make this a priority item for its weekly conference calls.

Freddy De Vos, TBG1, confirmed that the RSM for the Cross Industry Invoice is expected to be ready during this week. ATG2 agreed to use this RSM as test case for its schema production process.
6 Joint meeting with TBG17 on Schema production procedures

Present: representatives from TBG17, TBG6 and ATG2.

TBG6 presented their experience from generation of XML schemas compliant to the ATG2 NDR (see Annex A). The following issues were identified, elements missing in the RSM:

- Version information
- Root element for each root schema module
- Association type

TBG 17 has developed programming code to automatically generating xsd from Enterprise Architect.

The resulting ABIE schema resulted in more than 8000 lines including annotation (only some 800 lines without annotation) for 51 ABIEs.

The meeting then reviewed the list of issues from ATG2.

1. Type of association – composition or aggregation
   - TBG17 will evaluate to include this information in their submission template
2. Requirements for ABIEs/BBIEs to be in internal schema
   - To be captured as additional information in the RSM document
3. Import requirements from existing schema
   - To be captured as additional information in the RSM document.
   - TBG17 may want to capture also external ABIEs in their library for completeness.
     a. Other UN/CEFACT root schema
     b. External Standards body schema
        i. Must also provide namespace string and token and schema location
        ii. Must clearly identify the xsd constructs to be re-used and how/where in the overall schema
4. Sequence of ABIE properties with individual ABIEs - may not be a problem – TBG17 now allows for ABIEs to have different sequences than the underlying ACC.
   - ATG2 will apply the sequence as captured in the registry (spreadsheet)
   - TBG17 to verify that their tool don’t change the sequence
5. Sequence of ABIEs at the document level message assembly
   - To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
6. BBIEs in the document level message assembly ABIE
   - To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
7. Choice
   - To be addressed by CCTS and BCSS. Until this specification is ready, this should be captured as additional information in the RSM document.
8. SBDH Use
   - To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
9. Code lists and identifier lists
   a. Identified as
      i. Supplementary component
         - Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work
      ii. If existing in XSD, then namespace string, token, and schema location
         - This should be captured as additional information in the RSM document.
iii. If new, then source codelist
   → TBG17 to review how enumerations (values, name and description) is captured in the submission template

10. Datatype Information
   → Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work

In closing the discussion it was agreed that ATG2 should:

- Discuss these issues and their proposed resolution with ICG
- Present these issues and their proposed resolution for TBG
- Prepare a document and submit to ICG as basis for updating RSM. A copy should be provided to TBG.

Based on this discussion a separate paper was developed (Annex B) and presented to the TBG steering for information.

7 Joint meeting with ICG to discuss XML schema representation of Rec. 20 (at 16:00)

Present: Representatives from ICG and ATG2.

Members of ICG had noted that the XML schema as published by ATG2 was not conformant to the latest version of Rec. 20. The inconsistencies are related to the following issues:

1. Some of the codes in Rec. 20 as marked as deleted. This should be reflected in the description provided in the XSD or the codes should not be included in the XSD at all. It was agreed that as the XSD’s as published by ATG2 are for validation purposes, the code values marked as deleted should not be included.
2. Codes published in Rec. 21 are allowed for use in Rec. 20. When used as part of the Rec. 20 code list, the code value in Rec. 21 is prefixed with the letter X. The XSD should reflect this merger of code lists.
3. Some of the codes in the XSD have wrong definition – this need to be corrected.

ICG informed that they are in the process of finalizing version 4 of Rec. 20 during this week. This will be published on the UN web site as an excel spreadsheet. Also Rec. 21 are in the process of being finalized as version 5, and will be published as an excel spreadsheet.

- It was agreed that ICG (David Dobbing) will inform ATG2 as soon as the revised versions of Rec. 20 and 21 are ready. ATG2 will then use these published spreadsheet to generate corrected XML schemas.

ICG also noted that there are now several XML schemas available representing Rec. 20, i.e. from ATG2, from UNeDocs and UBL. This represents a potential problem and confusion for the user community.

ICG also informed that they are working on a project to providing XML versions of all UN recommendations, the UNCL migration project. ATG2 should be involved in this project.

As part of the Registry project ICG are working on defining the complete content of the Registry, including its ability to hold information related to descriptive information such as Business Terms, Definition, status etc. Such information will also be provided as annotation in the ATG2 XML schemas. It was also noted that the CCTS defines this type of information. These three initiatives should be aligned.
8 Joint meeting with ICG on Schema production procedures

Present: Representatives from ICG and ATG2.

The representatives of ICG noted that the RSM specification has now been approved as version 1.0. They further noted that the use of XML files will continue to be optional for a period of time.

When TBG17 send information to ICG they will submit a package of information from TBG17. During the harmonization process a number of changes may be agreed with the TBG. These changes need to be reflected in the RSM before submission to ICG for audit and publication in the registry. TBG17 is responsible for submitting the spreadsheet containing approved components. The TBG group is responsible for submitting the corrected RSM.

ATG will have to extract the RSM as well as any supporting components (BIEs) from the registry as input to the schema production process.

1. Type of association – composition or aggregation
   - **Proposal**: TBG17 will evaluate to include this information in their submission template
     - ICG noted that the current RSM only allows for composition. It was further noted that this issue requires a more fundamental discussion and that there are different schools of thought on the issue.

2. Requirements for ABIEs/BBIEs to be in internal schema
   - **Proposal**: To be captured as additional information in the RSM document.
     - ICG see this as an advanced feature that is not likely to be used in the near future. If there is a business need to use this feature, its use needs to be reflected in the canonical model as this will be that basis on which ICG will populate the registry. In addition it should be captured as informative text in the RSM document.

3. Import requirements from existing schema
   - a. Other UN/CEFACT root schema
   - b. External Standards body schema
     - i. Must also provide namespace string and token and schema location
     - ii. Must clearly identify the xsd constructs to be re-used and how/where in the overall schema
   - **Proposal**: To be captured as additional information in the RSM document.
     - **Proposal**: TBG17 may want to capture also external ABIEs in their library for completeness.
     - AS with issue 2, ICG see this as an advanced feature that is not likely to be used in the near future. If there is a business need to use this feature, its use needs to be reflected in the canonical model as this will be that basis on which ICG will populate the registry. In addition it should be captured as informative text in the RSM document.

4. Sequence of ABIE properties with individual ABIEs - may not be a problem – TBG17 now allows for ABIEs to have different sequences than the underlying ACC.
   - **Proposal**: ATG2 will apply the sequence as captured in the registry (spreadsheet)
     - **Proposal**: TBG17 to verify that their tool don't change the sequence
     - ICG noted that sequence of attributes in a class is to be captured in the canonical model. This will be carried in to the registry and be the basis for ATG2 when developing schemas. It was further noted that for associations there is not seen to be any business requirements for a defined sequence. ATG2 need to develop a consistent algorithm (e.g. alphabetic order, mandatory before conditional).
5. Sequence of ABIEs at the document level message assembly
   **Proposal:** To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
   See discussion under item 5.

6. BBIEs in the document level message assembly ABIE
   **Proposal:** To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
   ICG see this type of information reflected in the canonical model as attributes of the document level class. The definition of this class should then be used by ATG2 as the base for schema production.

7. Choice
   **Proposal:** To be addressed by CCTS and BCSS. Until this specification is ready, this should be captured as additional information in the RSM document.
   ICG informed that this should be captured in the canonical model as an xor constraint.

8. SBDH Use
   **Proposal:** To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
   The representatives from ICG expressed an opinion that the use of SBDH is not relevant for the individual business document as this is envelope information. If there is a business need to use this feature, its use needs to be reflected in the canonical model as this will be that basis on which ICG will populate the registry. In addition it should be captured as informative text in the RSM document.

9. Code lists and identifier lists
   c. Identified as
      i. Supplementary component
         **Proposal:** Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work.
         ICG informed that this should be captured as constraints in the canonical model, as well as in a dedicated table in the RSM document.
      ii. If existing in XSD, then namespace string, token, and schema location
         **Proposal:** This should be captured as additional information in the RSM document.
         If there is a business need to use this feature it should be captured as informative text in the RSM document.
      iii. If new, then source code list
         **Proposal:** TBG17 to review how enumerations (values, name and description) are captured in the submission template.
         This requirement should be captured as informative text in the RSM document, as well as be reflected in the canonical model.

10. Data type Information
    **Proposal:** Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work.
     Any required data types should be captured as part of the canonical model as reflected in the RSM.

11. Root element identification
    **Proposal:** To be addressed by CCTS and BCSS. Until this specification is ready, this should be captured as additional information in the RSM document.
The root element (root class) is part to the canonical model, i.e. the root is the class with no association ends (i.e. no arrow pointing to it).

9 Joint meeting with TBG6 on Schema production

Present: Representatives from TBG6 and ATG2.

CCTS calls for a list of Common Business Process to be used as the value in the relevant context driver. This in under development by TBG14. This has an implication on the actual name of the root schema.

TBG6 will create their own schemas, thus the role of ATG2 will be to validate the conformance of the schemas provided to the ATG2 NDR. This validation will include verification of the annotation.

TBG6 informed that they do not intend to make use of the SBDH in their submissions.

During the discussion ATG2 informed about the recent discussion and agreement with ICG with respect to information to be provided.

In agreement with ICG, ATG2 has decided that all ASBIEs in the root element will be compositions and thus be represented as locally declared elements.

ATG2 informed that all of the schemas published by ATG2 in support of the NDR are now available at their stated schema location. This includes the templates for the RSM and QDT schema modules. These templates could be used as a basis for the schema generation within TBG6.

The current plan of TBG6 indicates that ATG2 could expect to receive their schema for verification at their meeting in June (week of June 5). In invitation was extended to TBG6 to participate during this meeting.

ATG2 are responsible for production of the final schemas, thus ATG2 will update the schemas as required during the review process. At the end of this process ATG2 will provide the schemas back to the TGB for confirmation and submission to ICG for publication.

ATG2 need to develop rules for naming of associations at message level. One alternative is not to require a property name at message assembly level. This is however not in compliance with the current CCTS.

10 Schema production

AGT2 will work together with GEFEG on providing schemas for TBG1. The TBG17 editor will load the GEFEG tool with the required data. The main acceptance criteria for the tool is the ability to provide schemas conformant to the NDR. In order to verify schemas submitted to us we should develop a check list.

Garret will develop a first draft for the check list.

During the week the following tools have been identified:
- GEFEG
- UMM plug in to Enterprise Architect developed by the University of Vienna.

Nada will contact XML Spy to verify their interest in develop such tool.

Garret informed that he has already developed a schema template expression of the TBG17 submission template. The intent is to have an alternative to the GEFEG tool.
Garret will publish the draft to the ATG list.

This template needs to be validated against the NDR, the CCTS and the TBG submission template.

Greg agreed to provide this validation (subject to confirmation).

Mark suggested that we should develop a schema expression of the CC library. This could be used to feed a modeling tool.

Greg will develop a first draft for this schema module (subject to confirmation).

The aim should be to publish the CC library prior to the ATG F2F.

Greg informed that LMI has tool that can validate the XML schema in several different tools. He further stated that it is likely that LMI is prepared to provide a service to run this validation once the IPR issue is resolved.

Jostein to provide an updated version with the procedure document, including a high level flow chart.

11 Next meetings

The next F2F is scheduled to take place in Waldorf during the week of June 5. Main items will include:

- Final review of TBG1 schemas.
- Validation of TBG6 schemas.

First conference call will be on March 27, at the usual time (13:30 CET, 7:30 ET)
12 Annex A – TBG6 Schema Development

TBG6 XML Schema Development of the eTendering Project

8th UN/CEFACT Forum Meeting in Vancouver, Canada
13-17 March, 2006

Agenda

- Objective
- Preclusion of XSD development
- Draft Version of XSD Development
- XSD Development Summary
- Impact of “NDR2.0”
- Issues
- Action Item
Objective

- XML Schemas (XSD) Development of the eTendering Project.
  - The XML Schemas hold business semantics of the RSM
  - The XML Schemas are based on “XML Naming and Design Rules Draft 2.0 (NDR2.0)”
  - NDR2.0 approved as UN/CEFACT technical specification on March 2006

- Building XSD development skill throughout generating draft version of XSD, and preparing for a standard XSD development of eTendering project.
  - Search out technical impeding problems about XSD development.
  - Find out technical solutions for those problems.

- The XSD need to support developed by an application from the RSM.
  - “UN/CEFACT XML design rules will support schema creation through handcrafting as well as automatic generation.” by NDR 2.0.

Preclusion of XSD development

- RSM need to support all information for developing XSD.
  - Lacking information
    - Annotation information:
      - For each BIE.
      - For each root element of each Root Schema Modules
    - Association Type
      - “composition” or “not composition”
Draft version of XSD development
- Premise -

- Reference Specification
  - NDR 2.0.
- Reference RSM
  - Submitted to TBG17 on TBG17 Washington interim meeting Feb. 2006.
    - External schema modules are developed from the BIE table.
    - A root schema is developed from a business document class diagram.
- Target Business Documents and ABIEs
  - All Business Documents only for the eTendering Project without “Prior Information Notice” (PIN) business document.
  - The BoQ part is imported as a other standard body (CEN).
- Substitution
  - Annotation of each BIE:
    - Version info. Is omitted.
    - Root element for each Root schema module is omitted.
  - Association type
    - An association type of all ASBIEs belong to the Reusable ABIE module is considered as composition.
    - An association type of all ASBIEs belong to a Root Schema Module is consider as not composition.

With above condition, successfully developed an XSD.

Draft Version of XSD Development
- Mapping Relationship -
XSD Development Summary

- RSM
  - 18 Business Documents
    - Exclude: PIN and BoQ.
  - 51 ABIEs

- XSD
  - 3 Root Schema modules
    - Less than 100 lines without annotation
  - 1 Reusable ABIE module
    - More than 8000 lines with annotation
    - More than 800 lines without annotation
  - 1 Qualified Data Type Module
    - A data type (YES/NO indicator)

Impact of “NDR2.0”

- Reusability Scheme has been changed.
  - Type Base Approach in NDR1.1a → Hybrid Approach in NDR2.0.

  “[R109] For every ASBIE whose ccts:AssociationType is a composition, a name xsd:element MUST be locally declared.

  [R112] For every ASBIE whose ccts:AssociationType is not a composition, the globally declared element for the association ABIE must be referenced using xsd:ref.” by NDR2.0.

  - Need to Specify an Association Type of each ASBIEs -
Issues

- **Technical Issue**
  - Lacking information
    - An annotation information for BIE such as version or association type.
      - Fill out these information in BIE spreadsheet.
        
        - "Version" (Predicable task period)
        
        - "Association Type" (Unpredictable task period)
    - An annotation information for a root schema module.
      - specify of Unique ID, Name, Version, and Business Contexts of Root Schema Module at leased.

- **Other Issue**
  - Target Business Document
    - Depend on amendment of RSM. (Predicable)

Action Item

- **Preparation Phase**
  - Technical
    - Fill out appropriate annotation information.
  - Other
    - Wait for finishing harmonization work with TBG17.

- **Development Phase**
  - Role
    - Root schema modules: Japan delegation
    - Reusable ABIE Module: Japan delegation
    - Qualified Data type module: Japan delegation
    - BoQ part (include External Schema modules): EU delegation
  - Development
    - A fix version of XSD with the amendment RSM.

- **Review Phase**
  - Reviewer
    - Review within TBG6 members
    - Review by ATG2

- **Other**
  - BoQ
    - BoQ won’t be developed as other standard body.

    - It will be included in UN/CEFACT Reusable ABIE with amendment RSM.
Contact

- If you have any questions about XML Schema Development of the tendering Project, please contact us.
  
  e-mail addresses
  sakaguchi-sxa@zx.necst.nec.co.jp
  or adachi-txa@necst.nec.co.jp

Thank you very much.
13 Annex B – Schema Production Issues

The official input into ATG is an RSM prepared by the TBG. That RSM will include:

- Conceptual and Canonical Data Model
- UML representation of the Canonical Data Model
- XMI file of Canonical Data Model
- BIEs in table form in word document

When reviewing the RSM (version 0p5) it was noted that this document is in itself not sufficient to support automated generation of schemas. It was also noted that currently TBG17 requires a process models and the TBG17 spreadsheet as input for the harmonization process.

The RSM itself will only be used as a reference document in the preparation of schema. It could be used as an audit document of submitted schema.

The XMI file may be the basis for future work, but it currently does not exist. The TBG17 submission template provides almost all requisite information necessary to generate a schema. The submission template will only include delta’s – add, change, delete. It may not include all ABIEs required to create a schema.

A number of issues related to information that is required in order to produce NDR compliant XML schemas, but that is currently not captured in the RSM or the TBG17 submission template have been identified. It was recognized that a number of these issues were related to the Message Assembly and should preferably be resolved in the CCMA project.

11. Type of association – composition or aggregation
   Proposal: TBG17 will evaluate to include this information in their submission template

12. Requirements for ABIEs/BBIEs to be in internal schema
   Proposal: To be captured as additional information in the RSM document

13. Import requirements from existing schema
   a. Other UN/CEFACT root schema
   b. External Standards body schema
      i. Must also provide namespace string and token and schema location
      ii. Must clearly identify the xsd constructs to be re-used and how/where in the overall schema
   Proposal: To be captured as additional information in the RSM document.
   Proposal: TBG17 may want to capture also external ABIEs in their library for completeness.

14. Sequence of ABIIE properties with individual ABIIEs - may not be a problem – TBG17 now allows for ABIEs to have different sequences than the underlying ACC.
   Proposal: ATG2 will apply the sequence as captured in the registry (spreadsheet)
   Proposal: TBG17 to verify that their tool don’t change the sequence

15. Sequence of ABIIEs at the document level message assembly
   Proposal: To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.

16. BBIEs in the document level message assembly ABIE
   Proposal: To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.
17. Choice

**Proposal**: To be addresses by CCTS and BCSS. Until this specification is ready, this should be captured as additional information in the RSM document.

18. SBDH Use

**Proposal**: To be addressed by CCMA. Until this specification is ready, this should be captured as additional information in the RSM document.

19. Code lists and identifier lists

a. Identified as
   i. Supplementary component
      **Proposal**: Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work
   ii. If existing in XSD, then namespace string, token, and schema location
      **Proposal**: This should be captured as additional information in the RSM document.
   iii. If new, then source code list
      **Proposal**: TBG17 to review how enumerations (values, name and description) is captured in the submission template

20. Data type Information

**Proposal**: Is captured in the TBG17 submission template. TBG17 need to verify this against the RSM as part of their harmonization work

21. Root element identification

**Proposal**: To be addresses by CCTS and BCSS. Until this specification is ready, this should be captured as additional information in the RSM document.

The process this week:

- ATG2 developed a list of issues
- Discussion between ATG2 and TBG17 during which proposed resolutions were identified.
- Presentation of the issues and their proposed resolution for TBG steering
- Discussion of the issues and their proposed resolution with ICG
- Prepare a document and submit to ICG as basis for updating RSM.