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## **UN/CEFACT**

### **TECHNIQUES AND METHODOLOGY WORKING GROUP REPORT TO THE UN/CEFACT PLENARY**

**SOURCE:** TMWG Chair – Klaus-Dieter Naujok  
**STATUS:**  
**ACTION:** For information and noting, 6<sup>th</sup> UN/CEFACT session,  
Agenda Item 8

# Techniques and Methodology Working Group Report

**TMWG Chair - Klaus-Dieter Naujok**

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## Abstract

This report outlines key activities by UN/CEFACT's Techniques and Methodology Working Group as they relate to its work program key priorities (see Annex B - TRADE/CEFACT/2000/2) as well as their relationship to the work of other UN/CEFACT Working Groups, such as EWG, BPAWG and ebXML.

During the 12 months since the last UN/CEFACT plenary, TMWG has worked on the Unified Process for Business Process Modelling utilizing the Unified Modelling language (UML). Further TMWG reviewed how the eXtended Markup Language (XML) could best be used in exchange of Electronic Business Information taking into account the work in regard to OO-edi and Business Modelling. TMWG also evaluated the developments within the BSR project and how the work relates to the work programs of all UN/CEFACT Working groups, including taking account of multilingual features of the BSR as well as the potential for other projects to support such features.

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## General

Since the last UN/CEFACT session, TMWG has met three times. This report will outline key activities by UN/CEFACT's TMWG.

During each of the three meetings, the priority work item for TMWG was the progression of N090 - UN/CEFACT's Unified Process for Business Process Modeling. The document describes the methodology that should be adopted by UN/CEFACT to model Business Processes and support the development of "Existing" and "Next Generation" EDI for electronic business. It is based on customizing the Unified Process Methodology developed by the Rational Corporation so as to meet UN/CEFACT needs.

Other work items progressed were related to finalizing the TMWG recommendations on XML, as well as generating input to the first ebXML meeting. TMWG also progressed the CSG request to undertake an additional item of work to evaluate the on-going and planned developments with respect to the BSR.

## Vienna, 19th - 23rd July 1999

## **TMWG XML Recommendations to UN/CEFACT (N089)**

At the March 1999 UN/CEFACT Plenary it was agreed on the need to move much closer to the World Wide Web community, particularly in regard to the significance of XML. The plenary had received a conference room paper, the draft XML recommendations of TMWG. As a follow up to that meeting, TMWG was requested by the CSG to reviewed its draft taking into account the various comments in order to produce a final recommendation for CSG approval.

CSG agreed on the TMWG recommendation on XML in principle, but suggested that the document needed some style adjustments in order to be understood by non-XML experts. e.g. the last recommendation concerning the WebBroker.

The final document can be considered as a complete rewrite. The tone was changed to a 'collaborative focused' one, bridging the XML community and the EDI community.

The documents makes recommendations on the following topics:

- Use standard semantics in XML applications
- Investigate the best method for mapping EDI data elements
- Evaluate the OASIS XML.org registry and repository effort as a mechanism for providing the UN/EDIFACT standards to the world.
- Ensure that the XML community can use SIMPL-edi.
- Generalize message design guidelines to apply XML.
- Encode UN Layout Key as formatting objects.
- Mapping of UML Models to XML schema.
- Encourage XML compliant implementations rather than simply XML aware ones in mapping and integration technology.
- Initiate cooperative and coordination efforts with other organizations creating XML standards.

The document was passed to CSG and after a few minor revisions was approved by CSG and circulated to Heads of Delegations.

## **UN/EDIFACT Working Group**

As a result of the EWG Open Forum on SIMPL-edi a request was passed to TMWG to verify whether the TMWG's "UN/CEFACT methodology" (N090) is suited for SIMPL-edi or not.

During the SIMPL-edi review a key statement was issued that "SIMPL-edi must be regarded from a technology neutral point of view. It is essential to identify the core business processes to get the core data". Taking this into account, TMWG feels strongly that N090 will be applicable to the work in regard to SIMP-edi. TMWG therefore encourages that the sub working group responsible for SIMPL-edi within EWG (T8 - Harmonization) evaluate N090 and pass comments and suggestion back to TMWG.

TMWG held an Open day during the EWG meeting in Atlanta. Presentations by external parties showed that Unified Modeling Language and Business Process Analysis do work. There was a positive feeling concerning the Open day. Consequently, TMWG will have some open forums in the future. The Open day resulted in the establishment of EWG T9 (Open-edi validation group).

## **UN/CEFACT Unified Modelling Methodology (N090)**

In regard to the continuing work on N090 the group took into account feedback from BPAWG and clarified the difference between first two work flows. The naming of the work flows was fixed to:

- Business scope
- Requirements
- Analysis & Design

Since it is essential to verify the proposed methodology in N090, it was agreed to test it via case study based on the Order for Catalog example. A subgroup was formed to undertake that study to report back at the next TMWG meeting. TMWG continued the work on N090 after the meeting in order to forward the updated version to BPAWG and EWG/T9 for the upcoming meeting in September.

## **Concord, 8th - 12st November 1999**

This meeting was originally to be held in New Orleans in conjunction with the ISO TC184/WG1 meeting and "Common Business Object Summit". However, due to logistical reasons, the summit was postponed and TMWG had to find a new sponsor for the meeting. The group agreed to hold the meeting in Concord, California in order to allow some of its members to stay on for the following week's ebXML meeting in San Jose, California.

A majority of the time was used by TMWG to produce an input document to the upcoming ebXML meeting that would help in getting the organization of the initiative started. Other work included the continuation of work on UN/CEFACT Unified Modelling Methodology (N090).

## **Recommendations for ebXML kick-off meeting (N104)**

A subgroup produced TMWG's recommendations for the ebXML kick-off meeting. It defines a proposal to structure ebXML into six project teams which address the key issues that TMWG sees as essential with respect to electronic exchanges of structured data for commercial and administrative activities.

It should be noted that the TMWG document was well received by the ebXML participants and became the basis for the structure now in place. (See ebXML report [CRP.1] for more details)

## **UN/CEFACT Unified Modelling Methodology (N090)**

Work on the UN/CEFACT Unified Modelling Methodology continued. The main work during the meeting focused on the following topics taking into account feedback from BPAWG and EWG:

- Consolidation of the latest contributions
- Rewrite of the analysis workflow
- Adoption of the 'Register' use case for the business domain
- e-business requirements for the analysis workflow
- Concept for traceability identifiers
- Quick reference (N105)

- Meta model

TMWG agreed that the version for EWG (March 2000 meeting) of N090 would be finalized at TMWG London meeting (27th February - 3rd March). In regard for a contribution to JTC1 SC32/WG1 it was agreed for the two editors to decide which revision and changes should serve as information for the January meeting.

It was pointed out by the convener of EWG/T9 that the document as a core deliverable of the Group and had received a very positive feedback from modeling experts. It was going to be used for the development of projects, including one in the area of cargo insurance. In that respect the document has also received comments outside from UN/CEFACT which are very positive in that the methodology is very applicable to Business Process Modelling, and area that currently is not well documented by UML experts.

## **London, 28th February - 3rd March 2000**

This meeting was one of the most demanding meetings in regard to the work load. The pressing need to continue with the finalization of N090 not only for UN/CEFACT and its working groups, but also for use by ebXML in order to ensure that UN/CEFACT's investment in resources, as well as future direction, are not jeopardized. Because of those demands, as well as the request to add new work items, such as the BSR review, TMWG members are stretching their involvement, particularly in regard to time between meetings, beyond normal expectations. Resources within the group are becoming a problem in order to ensure that its deliverables are met. The current membership of TMWG is thirty-two (32) of which fifteen (15) attend the meetings. As to the rest, their participation via the list server is almost non-existent. This raises the question, what is the benefit of virtual members that are in a "read-only" mode. The work of TMWG is crucial to the success of UN/CEFACT and its working groups as they adopt modeling. Without an increase of active participation by all members of TMWG, there is the possibility of not being able to deliver all the work items on time.

### **UN/CEFACT Unified Modelling Methodology (N090)**

In regard to the target audience for N090, TMWG agreed to targeted ONLY to personnel knowledgeable in UML modelling. It is NOT targeted to business domain experts without experience in modelling. TMWG will write a separate high-level document for business domain experts.

As to the work progress on N090, a visual overview will be included showing, via a use case diagram, who will participate in which workflow of N090. Furthermore a table will show which UML diagram type is used in which workflow of N090. The design workflow was rewritten. A Naming and Style Guide will be included in N090.

The following work is planned for the next revision of N090 (17th March):

- Completion of all current contained activity diagrams.
- Addition of a class diagram for capturing the artifacts.
- Additions of activity diagrams for business domain and electronic business requirements.

### **TMWG support to EWG**

During this TMWG meeting it became apparent that there has been no following up in regard to actions required to realize the EWG decision to adopt UML as the modeling technique. Together with a previous decision to make modelling a prerequisite for UN/EDIFACT message design no later than March 2001, it is vital that over the next two coming EWG meetings actions are in place to make this a reality.

Since there were EWG members present at this TMWG meeting, they urged that TMWG should be proactive and prepare presentation for the upcoming EWG meeting to the membership what does it really mean "Using UML for UN/EDIFACT message design".

It was therefore suggested to the EWG/MT (which accepted the offer) that the TMWG chair present to EWG/T9 a draft implementation plan for final approval during the week to the EWG Steering Committee (StC). Further, that a presentation be given to the StC with an introduction to the "UN/CEFACT Unified Modelling Methodology" document which will be the basis for implementing modeling. Other presentation should include for the StC a short version of the UML tutorial, which is not meant to turn someone into a modeler, but to provide enough information in order to be able to read a UML diagram. TMWG also suggested that the UML tutorial should be expanded to two General sessions in order to allow most (if not all) EWG members to attend one of the sessions. It was also suggested to present, one if not two sessions, of the "Introduction to UN/CEFACT Unified Modelling Methodology" (N090) to the EWG membership.

TMWG feels that those presentations are the first step towards implementing UML modelling in that they provide background in regard to the processes required by EWG to adopt. Starting with those presentations EWG must continue to review the impact on its current processes in order to be ready to implement the requirement for UML models as a prerequisite to message design by March 2001. TMWG for its part is ready to help and assist EWG in any way it can by having made this its top priority.

### **CSG request for BSR review**

TMWG reviewed the documents as supplied by ISO TC154/WG1 and performed an analysis with the focus on for areas:

- UN/CEFACT directory naming
- Naming and defining in many languages
- Naming and defining for modelling
- Naming and defining for ebXML

During the meeting TMWG came to an agreement on the general direction of the recommendations back to CSG. A first draft was produced with the intent that the group finalize the document by end of March in order to present to CSG.

### **ebXML activity review and recommendations**

During presentation by TMWG participants to ebXML on the work in the Business Process and Core Component Project Teams it became evident that there is some disconnect between the two teams. TMWG believes that there must be a consistent methodology for describing business processes to ensure that artifacts compliant to a meta-model are semantically compatible.

TMWG recommends that Business Process Project Team adapt a UML based methodology for ebXML. This methodology should follow the approach used in N090.

The current approach in regard to Core Components is that they are identified only from a data perspective. The Core Components team seems to reverse engineer legacy without a process to do so. Their approach is to describe context via attributes. It seems that the Core Components Project Team is completely disregarding modelling. It is TWMG's firm belief that it is absolutely necessary that the team defines a methodology based on UML modelling which allows them to review/identify/select core components. The methodology must be in-line with the meta-model of the Business Process Project Team. The definition of core components should be based on outside modelling work contribution. The development of core components should be based on the concept of design patterns (patterns for classes as well as for activities) and utility classes.

TMWG drafted a set of recommendations during its closing session in regard to the work of ebXML Core Components and Business Process Team. TMWG will present the recommendations to the CSG, before passing them on to the Executive Committee of ebXML. TMWG members will also pursue the issues from within their respective project teams.

### **Officers Election**

Klaus-Dieter Naujok (Chair), Peter Wilson (Vice-Chair) and Christian Huemer (Secretary) were asked to continue to serve another term in office.