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Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure

Twenty-first session

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Item 5 of the provisional agenda

Dematerialization of documents attached to the TIR Carnet

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Note by the secretariat

I. Introduction

1. At its previous session, the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (further referred to as "the Expert Group"), aware of the various options available to dematerialize attached documents, requested the secretariat to prepare a document for its next session presenting concrete amendments to the eTIR Reference Model to reference, link or send dematerialized attached documents. To the extent possible, the amendments should be based on the WCO Data Model and, if necessary, the secretariat should submit data modification requests (DMR) to the Data Model Project Team (DMPT) with the aim to include the missing options in the "Attached documents" class.

2. Further to this request, the secretariat requested the necessary changes of the WCO Data Model and prepared this document.

II. The new BinaryFile class

3. The secretariat submitted a DMR at the DMPT, proposing to amend the "attached Document" class in a way that would allow not only to include an image file containing a scanned version of an attached document, but also to provide links to repositories and/or a "finger print" of the document (hash-code).

4. The modeling experts of the DMPT were of the view that rather than adding new attributes to the Attached Document class they would rather create a new class that would contain all the necessary attributes to include and / or link documents. Therefore, they decided to use the BinaryFile class structure from the UN Core Components Library (CCL) and complemented it with a “hash code” and a “hash code algorithm ID, coded” attributes (see the complete list of attributes in Table 1). In order to keep the WCO data model in line with the CCL, the WCO secretariat will request the inclusion of these 2 additional attributes in the next version of the CCL.

Table 1

Attributes and definitions of the BinaryFile class

<i>Attribute</i>	<i>Definition</i>
Identifier	A unique identifier for this binary file
Title	A title, expressed as text, for this binary file
Author Name	An author name, expressed as text, of this binary file
Version	A unique version identifier for this binary file
Name	A file name, expressed as text, of this binary file
URI	A unique Uniform Resource Identifier (URI) for this binary file
MIME, coded	A code specifying the Multipurpose Internet Mail Extensions (MIME) type for this binary file
Encoding, coded	A code specifying the encoding of this binary file
Character Set, coded	A code specifying the character set for this binary
Included Binary Object	An included binary object for this binary file
Access Information	Access information, expressed as text, for this binary file such as security and download parameters
Description	A textual description of this binary file
Size	A measure of the size of this binary file
Type, coded	The code specifying the type of binary file, such as photo, spreadsheet
Hash Code	Hash code of the linked document
Hash Code Algorithm ID, coded	Code indicating the algorithm used to calculate the hash code (e.g. MD5, ..)

5. In the WCO data model, the new BinaryFile class is associated (with cardinality 1 to 1) with the AttachedDocument class. In the eTIR data model, the AttachedDocuments class is used twice, once generically and once specifically for the certificate of approval of the vehicle. Consequently, in the eTIR class diagrams (see chapter 2.4 and 3.2.2 of the eTIR Reference Model) the BinaryFile is now linked to the CertificateOfApproval and AttachedDocument classes as shown in Figure 1.

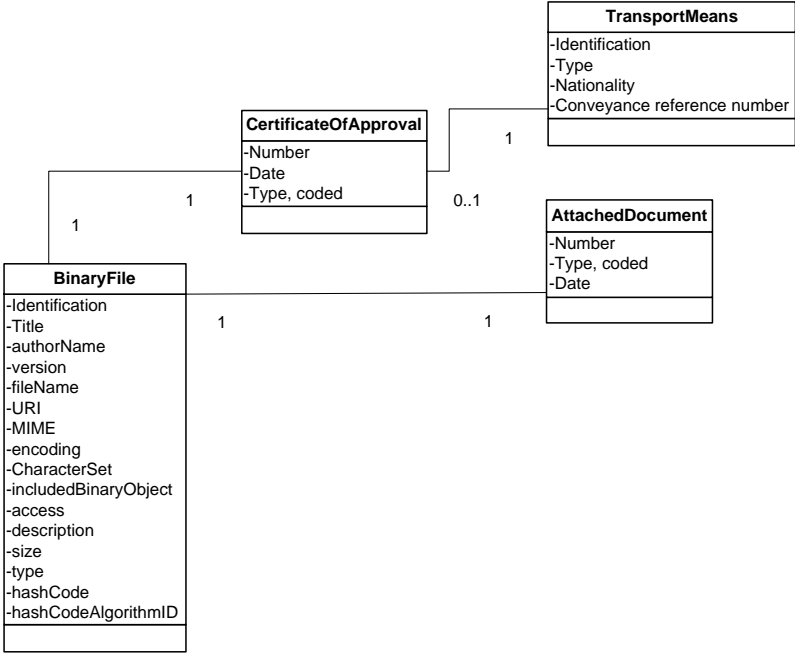


Figure.1 – Class diagram – associations to the new BinaryFile class

6. The Expert group may also wish to note that the inclusion of the attached document in the messages is only possible in XML. The fixed structure of the UN/EDIFACT message does not allow this possibility. Consequently, only declaration mechanisms accepting XML will also allow for attached documents to be included in the declaration message. Alternatively, it will remain possible to provide links or “finger prints” of the document when using UN/EDIFACT messages.

III. Future steps

7. The Expert group may wish to endorse the proposed inclusion of the BinaryFile class in the eTIR class diagrams as well and in the messages (including the XSD files).