SECTION

II LIMITS Declaration process

Version 5.0

prototype release C for Proof of concept implementation

EASEE-gas/Edig@s Workgroup

Document version: C

COPYRIGHT & LIABILITY

The Edig@s Workgroup disclaims and excludes, and any user of the Edig@s Workgroup Implementation Guidelines acknowledges and agrees to the Edig@s Workgroup disclaimer of, any and all warranties, conditions or representations, express or implied, oral or written, with respect to the guidelines or any part thereof, including any and all implied warranties or conditions of title, non-infringement, merchantability, or fitness or suitability for any particular purpose (whether or not the Edig@s Workgroup knows, has reason to know, has been advised, or is otherwise in fact aware of any such purpose), whether alleged to arise by law, by reason of custom or usage in the trade, or by course of dealing. Each user of the guidelines also agrees that under no circumstances will the Edig@s Workgroup be liable for any special, incidental, exemplary, punitive or consequential damages arising out of any use of, or errors or omissions in, the guidelines.

TABLE OF CONTENTS

LIST OF FIGURES

1 GENERAL OVERVIEW

This document provides the definition of the Edig@s Limits declaration process to be used in Electronic Data Interchange (EDI) between Gas Companies for the transmission of the limits information of any quantity variable. The activity is outlined in the use case in figure 1.

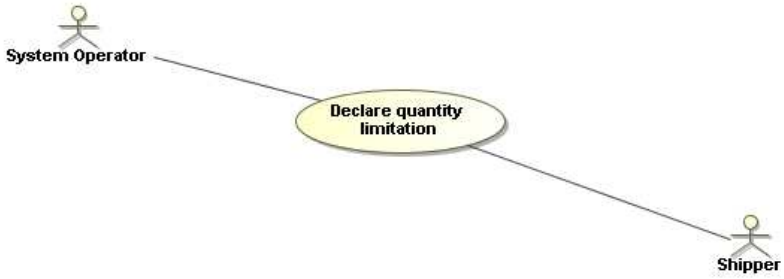

FIGURE 1: LIMITS DECLARATION USE CASE

The Limits declaration process enables a System Operator to make use of a Limits document to report to a Shipper or an Ultimate Customer a limit value that may influence the Shipper's or Ultimate Customer's activities, e.g. limits of imbalance, limits of supply or off-take.

1.1 LIMITS OF IMBALANCE

In the process of a commercial balancing, the System Operator providing balancing services is obliged to inform the Shipper of the imbalance limits.

The imbalance limits are defined in the Transmission Network Code. There are daily limits defined as the percentage of the quantity of gaseous fuel introduced by the shipper for transmission at the entry points in a given gas day, and also cumulative limits defined as the percentage of the nominal monthly quantity of gaseous fuel for the given gas month specified in the approved annual nomination at the entry points divided by the number of days in the given gas month.

Depending on these limits the Shipper may be obliged to pay different charges for imbalance (for balancing in excess of the limits).

1.2 LIMITS OF SUPPLY OR OFF-TAKE

In particular cases there may be a need to introduce some limits of supply to or off-take by specific Ultimate Customers (exit points). This is a means of dealing with gas system congestion or the security of supply.

There are 10 levels of supply: from the 1st to the 10th where the 1st level signifies normal supply and the 10th level signifies the maximum supply reduction. The limit values are given in daily and hourly measure units.

According to the Transmission Network Code the System Operator is obliged to inform the Shipper of the limits of supply at particular exit points. The maximum quantities of gaseous fuel in given levels of supply become an integral part of the transmission contract.

It is strongly recommended to read the Introduction to the Edig@s MIG before implementing this process since it contains a number of general rules that are applicable for all the Edig@s messages.

2 FUNCTIONAL DEFINITION

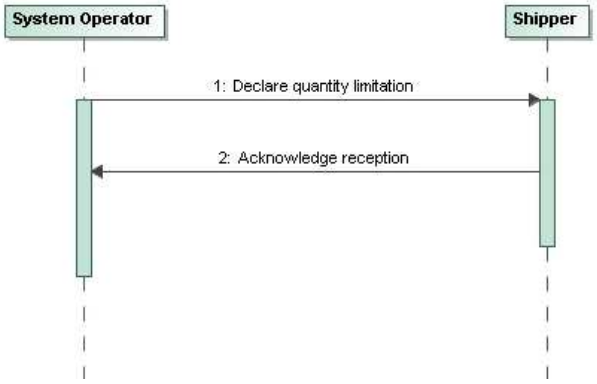

FIGURE 2: INFORMATION FLOW SEQUENCE

The Limits declaration process may be triggered in two circumstances:

1. During the process of finalising the transmission contract , the System Operator may send to a Shipper a Limits declaration informing him of the imbalance limits for a transmission contract. The Shipper shall comply with the limits declared. Exceeding the limits will result in a charge imposed on the Shipper.

2. In the case of supply or off-take limitations, the System Operator may declare to the Shipper or the Ultimate Customer the limits of supply for particular exit points (Ultimate Customers) in compliance with the Transmission Network Code. The maximum quantity of gaseous fuel in given levels of supply becomes an integral part of the transmission contract.

3 LIMITS DECLARATION WORKFLOW

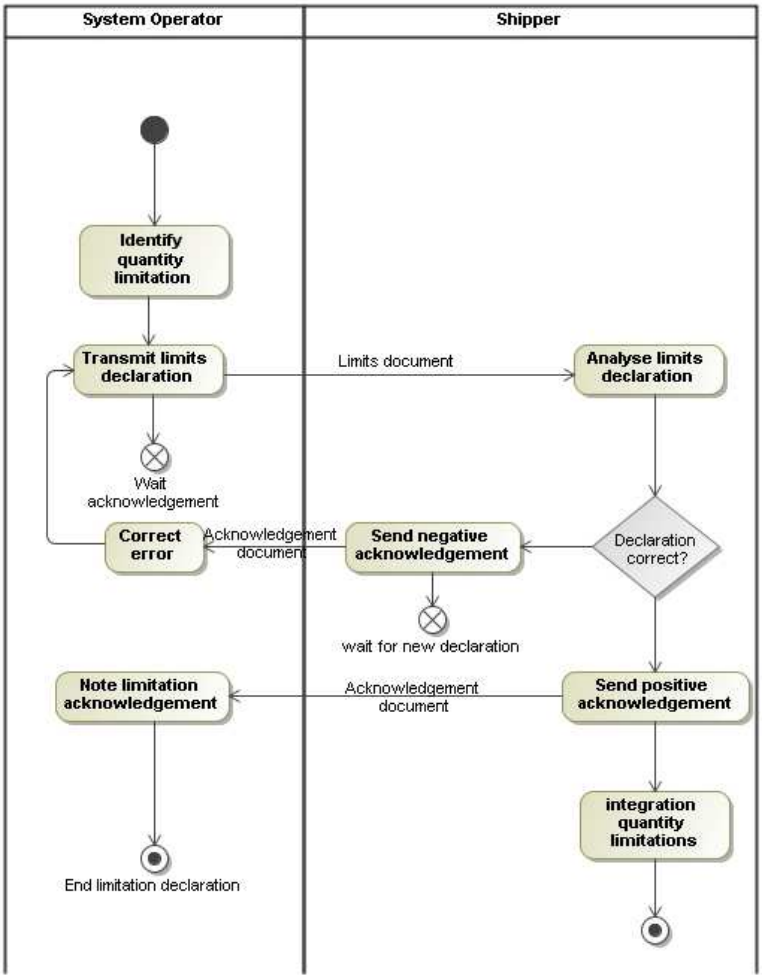

FIGURE 3: LIMIT DECLATATION WORKFLOW

The limits declaration process begins when a System Operator identifies a quantity limitation constraint that requires the action from the market participants (e.g. imbalance limits for a transmission contract, limits of supply introduced to specific Ultimate Customers /exit points which may be used as a means to handle gas system congestion).

The System Operator sends a Limits Document to the concerned Shippers or Ultimate Customers to inform them of the quantity limitations

On reception of the document the recipient verifies its correctness.

If the document is incorrect, the recipient sends a negative acknowledgement and then waits for the reception of a revised limits declaration.

If the document is correct, the recipient sends a positive acknowledgement and then takes the necessary action to take into consideration the quantity limitation.

4 REFERENCES

The content of the LIMITS message is based on the definition of terms and codes as agreed by the Edig@s Workgroup.

5 INFORMATION MODEL FOR THE LIMITS DECLARATION

5.1 INFORMATION MODEL STRUCTURE

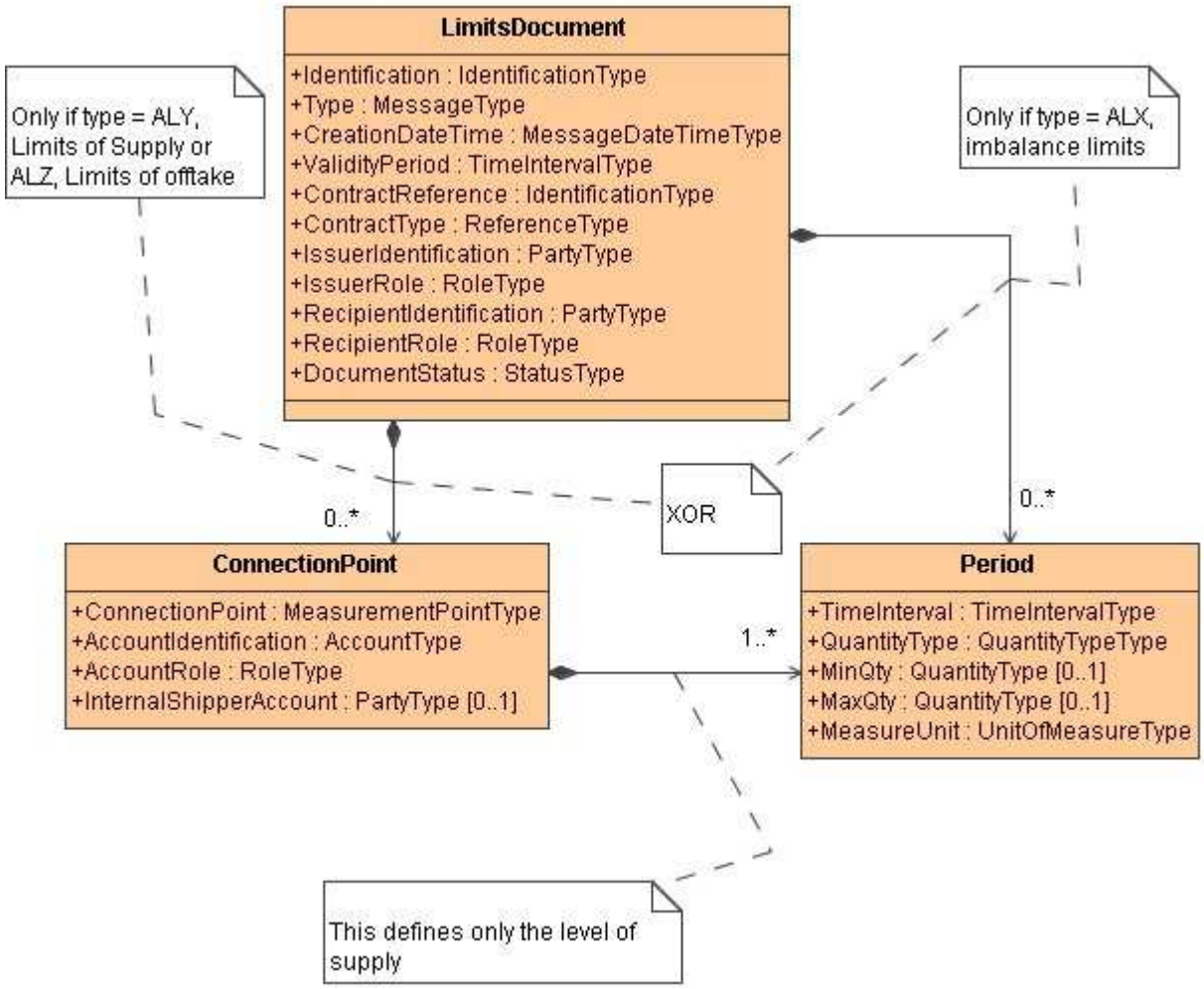

FIGURE 4: LIMITS INFORMATION MODEL

145 ## 5.2 INFORMATION MODEL DESCRIPTION

146 ### 5.2.1 Rules governing the Limits Document Class

147 #### 5.2.1.1 IDENTIFICATION

ACTION	DESCRIPTION
Definition of element	Unique identification of the document describing the Limits Document.
Description	A Limits Document must have an identification assigned by the Issuer of the document to be sent to a recipient. The identification may take the following form: LIMITS followed by the date in the form YYYYMMDD followed by the letter "A" followed by a 5 character sequential number (e.g. 00001) providing the unique identification of the document. Example "LIMITS20100101A00001". The sender must guarantee that this identification is unique over time. A document is uniquely identified by the concatenation of the following attributes: • Identification • Issuer Identification
Size	The identification of a Limits Document may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

148 #### 5.2.1.2 TYPE

ACTION	DESCRIPTION
Definition of element	The type of the document being sent.
Description	This identifies the type of the Limits Document that is being sent. The following types of Limits Document are currently permitted: ALX = Imbalance limits document ALY = Limits of supply document ALZ = Limits of off-take document.
Size	A type may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

149 #### 5.2.1.3 CREATIONDATETIME

ACTION	DESCRIPTION
Definition of element	Date and time of the creation of the Document.
Description	The date and time that the document was prepared for transmission by the application of the Issuer.
Size	Refer to section 1.20 of the Edig@s General Guidelines for information on the attribute structure.
Applicability	This information is mandatory.
Dependence requirements	None.

150 #### 5.2.1.4 VALIDITY PERIOD

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the period of validity covered in the document.
Description	This information provides the start and end date and time of the period of validity of the document. This covers the whole period covered in the document
Size	Refer to section 1.20 of the Edig@s General Guidelines for information on the attribute structure.
Applicability	This information is mandatory.
Dependence requirements	None.

151 #### 5.2.1.5 CONTRACT REFERENCE

ACTION	DESCRIPTION
Definition of element	Reference to the contract referred to in the document.
Description	The contract reference identifies the contract that is used to qualify the information in the document.
Size	The contract reference may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

152 #### 5.2.1.6 CONTRACT TYPE

ACTION	DESCRIPTION
Definition of element	The type of the contract identified in the Contract Reference.
Description	This identifies the type of the contract reference identified in the Contract Reference attribute. The following types of Contract Type are currently permitted: CT =Contract number.
Size	A type may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

153 #### 5.2.1.7 ISSUERIDENTIFICATION – CODINGSCHEME

ACTION	DESCRIPTION
Definition of element	Identification of the party who has initiated the document.
Description	The Issuer of the document is identified by a unique coded identification. This code identifies the party that is the "owner" of the information being transmitted in the document. The codification scheme used for the coded identification is indicated by the coding scheme attribute and should indicate either the code "321" if it is an Edig@s code or the code "305" if it is an EIC code.
Size	The maximum length of an Issuer's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

154 **5.2.1.8 ISSUERROLE**

ACTION	DESCRIPTION
Definition of element	Identification of the role that the party who has initiated the document is playing.
Description	The role being played by the Issuer of the document for this transmission. In the case of the transmission of a Capacity Limits Document the following roles have been identified: ZSO = System Operator
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

155 **5.2.1.9 RECIPIENTIDENTIFICATION – CODINGSCHEME**

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the document.
Description	The recipient of the document is identified by a unique coded identification. The codification scheme used for the coded identification is indicated by the coding scheme attribute and should indicate either the code "321" if it is an Edig@s code or the code "305" if it is an EIC code.
Size	The maximum length of a recipient's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

156 **5.2.1.10 RECIPIENTROLE**

ACTION	DESCRIPTION
Definition of element	Identification of the role that the party who receives the document is playing.
Description	The role being played by the recipient of the document for this transmission. In the case of the transmission of a Capacity Limits Document the following roles have been identified: ZSH = Shipper UD = Ultimate Customer
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

157 **5.2.1.11 DOCUMENTSTATUS**

ACTION	DESCRIPTION
Definition of element	The identification of the status of the document.
Description	The status of the document. In the case of the transmission of a Capacity Limits Document the following status codes have been identified: 04G = Provisional value 05G = Definitive value
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

158 ### 5.2.2 Rules governing the ConnectionPoint class

159 The Connection Point class is provided only where there is a specific limit on supply or off-take for
160 a given connection point. The document Type must be equal to "ALY", Limit of supply or "ALZ",
161 Limit of Off take.

162 #### 5.2.2.1 CONNECTION POINT – CODING SCHEME

ACTION	DESCRIPTION
Definition of element	The identification of a Connection Point.
Description	The identification of a connection point within a System Operator's system. The codification scheme used for the coded identification is indicated by the coding scheme attribute and should indicate either the code "321" if it is an Edig@s code, the code "305" if it is an EIC code, the code "9" if it is a GS1 code or the code "ZSO" if it is a System Operator code.
Size	The maximum length of the connection point identification is 16 alphanumeric characters. The maximum length of the coding scheme is 3 alphanumeric characters
Applicability	Both the connection point identification and the coding scheme are mandatory
Dependence requirements	None.

163 #### 5.2.2.2 ACCOUNT IDENTIFICATION– CODING SCHEME

ACTION	DESCRIPTION
Definition of element	The identification of an account defined by a System Operator.
Description	The identification of an Account that has been defined by a System Operator. The codification scheme used for the coded identification is indicated by the coding scheme attribute and should indicate either the code "321" if it is an Edig@s code, the code "305" if it is an EIC code, the code "9" if it is a GS1 code or the code "ZSO" if it is a System Operator code.
Size	The maximum length of the Account Identification is 35 alphanumeric characters. The maximum length of the coding scheme is 3 alphanumeric characters
Applicability	Both the Account Identification and the coding scheme are mandatory.
Dependence requirements	None.

164 #### 5.2.2.3 ACCOUNT ROLE – CODING SCHEME

ACTION	DESCRIPTION
Definition of element	The identification of the role played by the account
Description	The identification of the role played by the Account Identification. The following Roles are permitted: UD = Ultimate customer ZSH = Shipper
Size	The maximum length of the Account Role is 3 alphanumeric characters.
Applicability	Both the Account Role and the coding scheme are mandatory.
Dependence requirements	None.

165 #### 5.2.2.4 INTERNAL SHIPPER ACCOUNT – CODING SCHEME

ACTION	DESCRIPTION
Definition of element	The identification of the shipper account that is known to a System Operator.
Description	The identification of the internal shipper account within a System Operator's system for which the document is referencing. The codification scheme used for the coded identification is indicated by the coding scheme attribute and should indicate either the code "321" if it is an Edig@s code, the code "305" if it is an EIC code, the code "9" if it is a GS1 code or the code "ZSO" if it is a System Operator code.
Size	The maximum length of the Internal Shipper Account is 35 alphanumeric characters. The maximum length of the coding scheme is 3 alphanumeric characters
Applicability	Both the Internal shipper Account and the coding scheme are Dependent.
Dependence requirements	This is only used when an internal shipper account is identified

5.2.3 Rules governing the Period Class

The Period class is present at the Document Header level only if the Document Type corresponds to "ALX", Imbalance limits. In all other cases it must not be present at this level.

The Period class is present at the Connection Point level only if the Document Type corresponds to "ALY", Limit of supply or "ALZ", Limit of off take. In all other cases the Connection Point/Period classes shall not be present.

At the Limits Document header level the Period class shall provide the imbalance limits for the document Issuer.

At the Connection Point class level the Period class shall provide the limit of supply or off take for the connection point in question.

5.2.3.1 TIMEINTERVAL

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question.
Description	This information provides the start and end date and time of the duration of the period for which the limits apply.
Size	Refer to section 1.20 of the Edig@s General Guidelines for information on the attribute structure.
Applicability	This information is mandatory.
Dependence requirements	None.

5.2.3.2 QUANTITYTYPE

ACTION	DESCRIPTION
Definition of element	The identification of the type of quantity for which the limits are being expressed.
Description	This identifies the type of quantity for which the limits are being defined. Intended codes are: ZWP = Nomination limit ZWQ = Top daily imbalance limit ZWR = Daily imbalance limit ZWS = Maximum cumulative imbalance ZWT = Supply level 1 ZWU = Supply level 2 ZWV = Supply level 3 ZWW = Supply level 4 ZWX = Supply level 5 ZWY = Supply level 6 ZWZ = Supply level 7 ZXA = Supply level 8 ZXB = Supply level 9 ZXC = Supply level 10
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

178 **5.2.3.3 MINQTY**

ACTION	DESCRIPTION
Definition of element	The minimum quantity limit.
Description	This information defines the minimum limit of the available quantity. The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”). All quantities are non-signed values.
Size	The maximum length of this information is 17 numeric characters (decimal mark and sign, if used, included). All leading zeros are to be suppressed. The number of decimal places identifying the fractional part of the quantity depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is mandatory if there is no maximum quantity.

179 **5.2.3.4 MAXQTY**

ACTION	DESCRIPTION
Definition of element	The maximum quantity limit.
Description	This information defines the maximum limit of the available quantity. The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”). All quantities are non-signed values.
Size	The maximum length of this information is 17 numeric characters (decimal mark and sign, if used, included). All leading zeros are to be suppressed. The number of decimal places identifying the fractional part of the quantity depends on local market rules.
Applicability	This information is dependent.
Dependence requirements	This information is mandatory if there is no minimum quantity.

180 **5.2.3.5 MEASUREUNIT**

ACTION	DESCRIPTION
Definition of element	The unit of measure which is applied to all the quantities in the Period class of the document.
Description	The unit of measurement used for all the quantities expressed within an Agreement class. The following is the code recommended for use: KW1 Kilowatt-hour per hour (kWh/h)
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6 XML IMPLEMENTATION OF THE LIMITS DOCUMENT

6.1 XML STRUCTURE

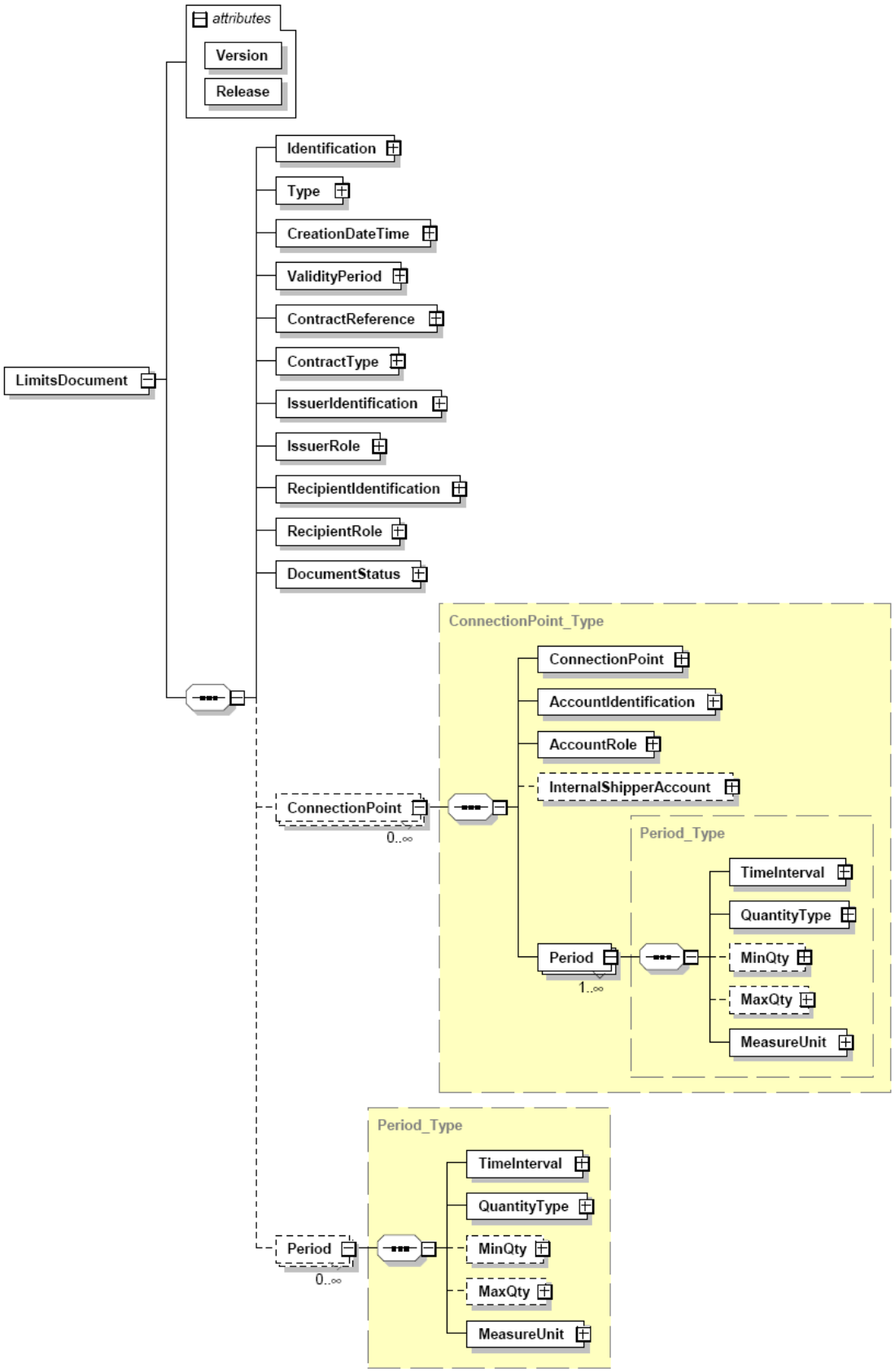

FIGURE 5: CAPACITY LIMITS DOCUMENT XML SCHEMA MODEL

6.2 XML SCHEMA

6.2.1 Introduction

All electronic documents using this Implementation guide Specification shall complete the document Version and Release attributes as follows:

- Version: "EGAS50". This corresponds to the Edig@s package identification.
- Release: "C". This corresponds to the Message Implementation Guide Version number.

6.2.2 Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:ecc="core-cmpts.xsd" xmlns:xsd="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified"
attributeFormDefault="unqualified" ecc:VersionRelease="1.0">
	<xsd:import namespace="core-cmpts.xsd" schemaLocation="../cclib/core-cmpts.xsd"/>
	<!--
			EDIGAS Document Automatically generated from a UML class diagram using XMI.
			Generation tool version 1.7
		-->
	<xsd:element name="LimitsDocument">
		<xsd:complexType>
			<xsd:annotation>
				<xsd:documentation/>
			</xsd:annotation>
			<xsd:sequence>
				<xsd:element name="Identification" type="ecc:IdentificationType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="Type" type="ecc:MessageType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="CreationDateTime" type="ecc:MessageDateTimeType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="ValidityPeriod" type="ecc:TimeIntervalType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="ContractReference" type="ecc:IdentificationType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="ContractType" type="ecc:ReferenceType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="IssuerIdentification" type="ecc:PartyType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="IssuerRole" type="ecc:RoleType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="RecipientIdentification" type="ecc:PartyType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="RecipientRole" type="ecc:RoleType">
					<xsd:annotation>
						<xsd:documentation/>
					</xsd:annotation>
				</xsd:element>
				<xsd:element name="DocumentStatus" type="ecc:StatusType">
```

```
                                        <xsd:annotation>
                                                <xsd:documentation/>
                                        </xsd:annotation>
                                </xsd:element>
                                <xsd:element name="ConnectionPoint" type="ConnectionPoint_Type" minOccurs="0"
maxOccurs="unbounded"/>
                                <xsd:element name="Period" type="Period_Type" maxOccurs="unbounded"/>
                        </xsd:sequence>
                        <xsd:attribute name="Version" type="xsd:string" use="required"/>
                        <xsd:attribute name="Release" type="xsd:string" use="required"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:complexType name="Period_Type">
                <xsd:annotation>
                        <xsd:documentation/>
                </xsd:annotation>
                <xsd:sequence>
                        <xsd:element name="TimeInterval" type="ecc:TimeIntervalType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="QuantityType" type="ecc:QuantityTypeType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="MinQty" type="ecc:QuantityType" minOccurs="0">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="MaxQty" type="ecc:QuantityType" minOccurs="0">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="MeasureUnit" type="ecc:UnitOfMeasureType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                </xsd:sequence>
        </xsd:complexType>
        <xsd:complexType name="ConnectionPoint_Type">
                <xsd:annotation>
                        <xsd:documentation/>
                </xsd:annotation>
                <xsd:sequence>
                        <xsd:element name="ConnectionPoint" type="ecc:MeasurementPointType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="AccountIdentification" type="ecc:AccountType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="AccountRole" type="ecc:RoleType">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="InternalShipperAccount" type="ecc:PartyType" minOccurs="0">
                                <xsd:annotation>
                                        <xsd:documentation/>
                                </xsd:annotation>
                        </xsd:element>
                        <xsd:element name="Period" type="Period_Type" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:schema>
```

7 DOCUMENT CHANGE LOG

Package	Version	Date	Description
5.0	A	2010-03-10	Initial release of the prototype for proof of concept implementation
5.0	B	2010-03-16	To make an XOR between the Period at the Header and the Connection Point
5.0	C	2010-03-30	Approved for Prototype implementation. New Codes assigned