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DRAFT

IMPLEMENTATION GUIDE
TRANSACTION "PCO REQUEST FOR CUSTOMS ESD
IDENTIFIER"

Version: draft

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Document code: TRC21

technical Documentation: <http://www.ebiz.enea.it>

XML Schemas repository: <http://www.ebiz.enea.it/moda-ml/repository/schema/draft/default.asp>

Guides repository: <http://www.ebiz.enea.it/moda-ml/repository/guide/draft/default.asp>

Guide filename: TRC21-eBIZ-PcoRequestForCustomsEsIdentifier.pdf

0. PREMISE

This document contains a proposal for the updating and extension of eBIZ specifications starting from the eBIZ version 2018. Under the name of 'Draft version' it is reported the result of an extensive work of analysis and consultation aimed at developing and maintaining eBIZ specifications.

In particular, the content of this proposal is the result of various activities, mainly those carried out within the framework of the **TRICK project** funded by the European Commission: grant agreement 958352, call H2020-LOW-CARBON-CIRCULAR-INDUSTRIES-2020 / H2020-LCCI-2020-EASME-twostage.

The technical contents are backwards compatible with the latest official published version, with the exclusion of the totally new concepts added explicitly for the version that are thought as incremental evolution of the knowledge base.

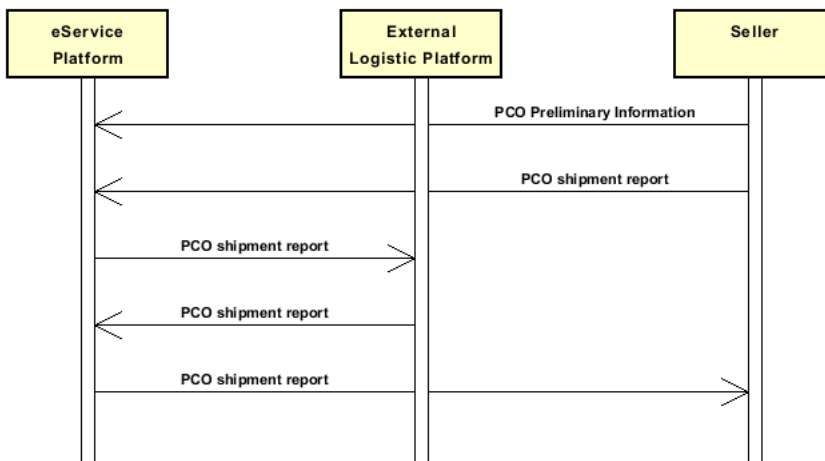
1. BUSINESS DESCRIPTION

1.1 Scope

This document is used to request a customs authority to send an identifier for an ESD (Export Shipment Dossier), which has already been internally identified by the sender, associated with a hash and placed in a position reachable by the receiver (when authorised) .

1.2. Possible scenario

S1.1 PCO service execution



2. IMPLEMENTATION GUIDE

2.1 General structure of XML document

All the business data that can be exchanged through this class of documents are shown in the following "document structure", that provides a simplified vision of the Schema.

In particular:

- the two numbers following each element define its "cardinality" (minimum and maximum number of occurrences); the minimum equal zero indicates that the element is optional, the minimum greater than zero indicates that is mandatory;
- the bold character denotes the complex elements (aggregates of simple elements) that were built for the sake of functionality and re-usability of some complex informations sets. The child elements in each parent element are easily spotted as "indented";
- the symbol "@" denotes an attribute of the preceding element; here "the usage indicator (optional, required, ...)" is shown in square brackets.

Structure

PCOResultForCustomsESDIdentifier

@version [Optional] [Default= draft]

@useProfile [Optional]

| msgN 1-1

| msgDate 1-1

| @dateForm [Optional]

| **senderParty 1-1**

| @role [Optional]

| @sender [Optional]

| | id 1-1

| | @numberingOrg [Optional]

| | legalName 0-1

| | dept 0-1

| | subDept 0-1

| | person 0-1

| | @email [Optional]

| | @phone [Optional]

| | @fax [Optional]

| | street 0-1

| | city 0-1

| | subCountry 0-1

| | country 0-1

| | postCode 0-1

| | **geoCoordinates 0-1**

| | @um [Optional] [Default= DEGD]

| | @geoRefSystem [Optional]

| | | xGeoCoord 1-1

| | | yGeoCoord 1-1

| | | zGeoCoord 0-1

| **receiverParty 1-1**

| @role [Optional]

| @sender [Optional]

| | id 1-1

| | @numberingOrg [Optional]

| | legalName 0-1

| | dept 0-1

| | subDept 0-1

| | person 0-1

| | @email [Optional]

| | @phone [Optional]

| | @fax [Optional]

| | street 0-1

| | city 0-1

| | subCountry 0-1

| | country 0-1

| | postCode 0-1

| | **geoCoordinates 0-1**
| | @um [Optional] [Default= DEGD]
| | @geoRefSystem [Optional]
| | | xGeoCoord 1-1
| | | yGeoCoord 1-1
| | | zGeoCoord 0-1

| ESDId 1-1

| **externalReference 1-1**
| | uri 1-1
| | @isURL [Optional] [Default= true]
| | mimeTypeCode 0-1
| | formatCode 0-1
| | encodingCode 0-1
| | characterSetCode 0-1

| hashFootprint 1-1
| @schemeID [Optional]
| @hashMethod [Required]

| **blockChainReference 0-9**
| | uri 1-1
| | @isURL [Optional] [Default= true]
| | transactionReceipt 1-9

2.2 Detailed description of document elements

Following tables show all elements (complex and simple) used in this document. Description includes: 1) element's information: xml tag, name, brief description, 2) data type and syntax constraints, 3) information about usage of the element in a particular position in the document: aggregation notes..

2.2.1 Complex elements (Aggregate Business Information Entities)

Complex elements are those elements whose content is composed of other elements (childs).Complex elements are alphabetically ordered.

blockChainReference	blockchain reference - base type: string, max length: 80, XPath PCOResultForCustomsESDIentifier/blockChainReference: 0-9 - note for this position: <i>blockchain references related to the ESD document</i>
externalReference	details about an external object, such as a document stored at a remote location XPath PCOResultForCustomsESDIentifier/externalReference: 1-1 - note for this position: <i>the child element 'uri' must contain the link to access the ESD file</i>
geoCoordinates	geographical coordinates
receiverParty	Details of the party receiving the document. - base type: Nad,
senderParty	Details of the party sending the document. - base type: Nad,

2.2.2 Simple elements (Basic Business Information Entities)

Simple elements are those elements whose content is characterized by a data type plus a domain of possible values. Simple elements are alphabetically ordered.

characterSetCode	the character set of an external document (examples UTF-8, UTF-16, Windows-1252, ISO-8859-7,..) - base type: normalizedString,
city	name of the city (town, village) - base type: string, max length: 40,
country	code of the nation - base type: string, cod. table: T10 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_T10.xml
@dateForm	format used for the date - base type: string, cod. table: NT29 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT29.xml
dept	name or code of a department - base type: string, max length: 40,
@email	electronic mail address of the contact person within a Party - base type: string, max length: 250,
encodingCode	the encoding/decoding algorithm used with the external object (example is 'base64Binary') - base type: normalizedString,
ESDIId	Identifier shipping dossier associated to the customs declaration - base type: string,
@fax	fax number of the contact person within a Party - base type: string, max length: 35,

formatCode	the format of the external object (examples xml, pdf, doc,...) - base type: normalizedString,
@geoRefSystem	georeference system adopted for the coordinate (in example wgs84 with decimal degree o degree with minute and seconds) - base type: string,
hashFootprint	footprint obtained by applying an hashing algorithm - base type: string, max length: 1024, XPath <i>PCOResultForCustomsESDIIdentifier/hashFootprint: 1-1</i> - note for this position: <i>footprint of ESD</i>
@hashMethod	type of used hashing algorithm - base type: string, max length: 80, cod. table: NT333 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT333.xml
id	primary identification code of a Party; it is recommended to use an EORI number (with @numberingOrg= "EO") or the format: nation code (ISO 3166) + national tax code (i.e. VAT identification number) with @numberingOrg= "MF" - base type: string, max length: 15,
@isURL	it indicates if the referred element is an URL (true) or not (false) - base type: boolean, XPath <i>PCOResultForCustomsESDIIdentifier/blockChainReference/uri/@isURL: [Optional] [Default= true]</i> - note for this position: <i>usage of URLs is recommended</i> XPath <i>PCOResultForCustomsESDIIdentifier/externalReference/uri/@isURL: [Optional] [Default= true]</i> - note for this position: <i>usage of URLs is recommended</i>
legalName	legal name - base type: string, max length: 250,
mimeCode	mime type of the external object - base type: normalizedString,
msgDate	date of issue of the present message (xml document), according to one of the patterns YYYY-MM-DD, YYYY-MM-DD:HH-MM or YYYY-WW. - base type: string,
msgN	identification number given to the message (xml document) by its issuer. In case of more despatches of the same business document, it changes. - base type: string, max length: 35,
@numberingOrg	code specifying the organisation who has created or owns the coding or numbering system - base type: string, cod. table: NT6 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT6.xml
person	name of a person (e.g. contact person within an organization) - base type: string, max length: 40,
@phone	phone number of the contact person within a Party - base type: string, max length: 35,
postCode	code defining the postal zone - base type: string, max length: 10,
@role	Third Party role qualifier - base type: string, cod. table: NT2 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT2.xml XPath <i>PCOResultForCustomsESDIIdentifier/receiverParty/@role: [Optional]</i> - note for this position: <i>The use of this attribute is mandatory when the element to which it is associated has TRCHeader as its parent.</i> XPath <i>PCOResultForCustomsESDIIdentifier/senderParty/@role: [Optional]</i> - note for this position: <i>The use of this attribute is mandatory when the element to which it is associated has TRCHeader as its parent.</i>
@schemeID	identifier of an identification scheme - base type: string,

	<p>XPath <code>PCOResultForCustomsESDIIdentifier/hashFootprint/@schemelD</code>: [Optional] - note for this position: <i>specify for which system this hash footprint might be used as identifier (for example HDFS system..)</i></p>
@sender	<p>qualifier that specifies the Party issuing of the document - base type: boolean, XPath <code>PCOResultForCustomsESDIIdentifier/receiverParty/@sender</code>: [Optional] - note for this position: <i>This attribute is mandatory when the STYLESHEET must be used.</i> XPath <code>PCOResultForCustomsESDIIdentifier/senderParty/@sender</code>: [Optional] - note for this position: <i>This attribute is mandatory when the STYLESHEET must be used.</i></p>
street	<p>street and building number identifying a location - base type: string, max length: 80,</p>
subCountry	<p>short name or code of the sub-country entity - base type: string, max length: 9,</p>
subDept	<p>name or code of a department - base type: string, max length: 40,</p>
transactionReceipt	<p>transaction receipt on blockchain - base type: string, max length: 1024,</p>
@um	<p>specification of the unit of measure - base type: string, cod. table: NT7 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT7.xml XPath <code>PCOResultForCustomsESDIIdentifier/senderParty/geoCoordinates/@um</code>: [Optional] [Default= DEGD] - note for this position: <i>when not specified assume decimal DEGREES</i> XPath <code>PCOResultForCustomsESDIIdentifier/receiverParty/geoCoordinates/@um</code>: [Optional] [Default= DEGD] - note for this position: <i>when not specified assume decimal DEGREES</i></p>
uri	<p>Uniform Resource Identifier (URI) that identifies the external object as an Internet resource - base type: normalizedString, XPath <code>PCOResultForCustomsESDIIdentifier/blockChainReference/uri</code>: 1-1 - note for this position: <i>reference to the used blockchain (example: url https://etherscan.io/ of ethereum)</i></p>
@useProfile	<p>use profile to which the present document is compliant if it was agreed by the parties. It is suggested a URI with reference to the firms or the URL of the profile. - base type: string,</p>
@version	<p>Dictionary version from which the instance has been created - base type: string, cod. table: NT100 http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT100.xml</p>
xGeoCoord	<p>geographical coordinate x , corresponding to latitude - base type: decimal,</p>
yGeoCoord	<p>geographical coordinate y , corresponding to longitude - base type: decimal,</p>
zGeoCoord	<p>geographical coordinate z , corresponding to altitude - base type: decimal, XPath <code>PCOResultForCustomsESDIIdentifier/receiverParty/geoCoordinates/zGeoCoord</code>: 0-1 - note for this position: <i>altitude might be omitted</i> XPath <code>PCOResultForCustomsESDIIdentifier/senderParty/geoCoordinates/zGeoCoord</code>: 0-1 - note for this position: <i>altitude might be omitted</i></p>

2.3 Suggested best practices

PCORquestForCustomsESDIdentifier/externalReference/mimeCode (mime type of the external object)

Use coding from IANA <http://www.iana.org/assignments/media-types/media-types.xml>

2.4 Enumeration tables

List of enumeration tables used in the XML document. You can find all the tables with the corresponding codes at:
<http://www.ebiz.enea.it/eBIZ/imple/eBIZTCU-draft.asp?lingua=en&pag=6>

NT100 - eBIZ TCFUpstream version

NT2 - third party qualifier

NT29 - format of a date

NT333 - type of hashing algorithm

NT6 - coding system owner/issuer

NT7 - unit of measure

T10 - ISO3166 - Country

(the most relevant tables are detailed in the following Annexes too)

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DISCLAIMER

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Annex A

Representative images of the principal complex elements' structure.



Annex B

NT100 - eBIZ TCFUpstream version

dictionary version

Agency name: eBIZ

Decoding table: NT100

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT100.xml

Code	Description	Adoption note	Date of insertion
2013-1	v2013-1		01/07/2013
2018-1	v2018-1		04/11/2018
draft	draft		08/09/2017

NT2 - third party qualifier

Third Party role qualifier

Agency name: eBIZ

Decoding table: NT2

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT2.xml

Code	Description	Adoption note	Date of insertion
AG	Sales Agent		
AU	Auditor		08/04/2019
BU	Buyer		13/06/2022
CE	Certification authority		08/04/2019
CM	Commissioner		13/06/2022
CO	Quality Controller		
CU	Customs authority		13/06/2022
DC	Response to		
DF	Invoicee		
DI	Copy to (CC)		28/10/2014
DM	Consignee		
DP	Consignment address (Delivery Party)		
EX	Expert		13/06/2022
IM	Importer		
OR	Originator		10/09/2014
SC	Sub contractor		10/04/2019
SM	Service/ePlatform manager		08/04/2019

SP	Forwarder		
SU	Supplier		13/06/2022
TL	Test or analysis laboratory		13/06/2022
TX	Tax Representative		

NT29 - format of a date

format used for the date

Agency name: eBIZ

Decoding table: NT29

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT29.xml

Code	Description	Adoption note	Date of insertion
D	YYYY-MM-DD		
M	YYYY-MM-DD:HH-MM (date and time)		
S	AAAA-MM-GG:HH-MM-SS (date and time with seconds)		13/06/2022
W	YYYY-WW		

NT333 - type of hashing algorithm

type of hashing algorithm

Decoding table: NT333

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT333.xml

Code	Description	Adoption note	Date of insertion
ADLER32	ADLER32		26/05/2023
HMAC	HMAC		26/05/2023
MD2	MD2		26/05/2023
MD4	MD4		26/05/2023
MD5	MD5		26/05/2023
MDC-2	MDC-2		26/05/2023
PANAMA	PANAMA		26/05/2023
RIPEMD-160	RIPEMD-160		26/05/2023
SHA-1	SHA-1		26/05/2023
SHA-2 256	SHA-2 256		26/05/2023
SHA-2 384	SHA-2 384		26/05/2023
SHA-2 512	SHA-2 512		26/05/2023
TIGER	TIGER		26/05/2023

NT6 - coding system owner/issuer

code specifying the organisation who has created or owns the registers of the present coding or numbering system

Agency name: eBIZ

Decoding table: NT6

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT6.xml

Code	Description	Adoption note	Date of insertion
CBR	National customs brokers registry		12/06/2023
CL	Customer/buyer		
CO	Quality Controller		
DU	D-U-N-S registry (Data Universal Numbering System)		04/05/2023
EB	eBIZ	replaces 'ML'	18/03/2019
EN	GS1 (ex-EAN International)		
EO	Registro EORI (Economic Operators Registration and Identification number)		04/03/2023
ES	e-Stockflow	DEPRECATED	
FO	Supplier		
GS	GS1		01/07/2013
MF	national taxation authority (i.e. VAT codes registry)		
ML	Moda-ML	DEPRECATED	
PL	Application Platform		13/06/2022
REX	Registered Exporter system (REX)		19/05/2023
SP	Service Provider		
SU	Enterprise Identification Number UID	Only switzerland	04/03/2023

NT7 - unit of measure

specification of the unit of measure, it is a sub set of table Unit of Measure Code - UN/ECE REC 20 delivered by United Nations Economic Commission for Europe (UN/ECE)

Agency name: eBIZ / UN/ECE

Decoding table: NT7

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_NT7.xml

Other link: <http://docs.oasis-open.org/ubl/os-UBL-2.1/cl/gc/default/UnitOfMeasureCode-2.1.gc#>

Code	Description	Adoption note	Date of insertion
CMK	square centimetre		20/12/2017
CMQ	cubic centimetre		20/12/2017
CMT	centimetre		
CNE	centiNewton		

CO2TON	ton of CO2		10/09/2014
COUPLES	couples		
DAY	day		22/08/2022
DEGD	decimal degrees		04/07/2022
DEGMS	degrees with minutes and seconds		01/07/2022
DMQ	cubic decimetre		
E37	pixel		11/04/2018
GRM	gram		
HUR	hour		
INH	inch		
KGM	kilogram		
KMT	kilometer		
KWH	kilowatthours		10/09/2014
LBR	pound		
MCG	microgram		23/08/2022
MG	milligram		23/08/2022
MIN	minute		
MMK	square millimetre		20/12/2017
MONTH	month		22/08/2022
MSEC	millisecond (time)		22/08/2022
MTK	square metre		20/12/2017
MTQ	cubic metre		
MTR	metre		
NMB	numero		
ONZ	ounce		
P1	percent		
PPM	parts per milion		
PZ	piece		
RPM	rounds per metre		
SEC	second (time)		22/08/2022
YEAR	year		22/08/2022
YRD	yard		

T10 - ISO3166 - Country

code of the nation

Agency name: ISO

Decoding table: T10

File codes list (Generic code): http://www.ebiz.enea.it/moda-ml/repository/codelist/draft/gc_T10.xml

Table not printed: there are 240 elements, more than the maximum specified for printing: 99.