edi3 Certificates 1.0 Specification

## Introduction

Regulatory processes often involve certificates that assert compliance of a shipment with some specification or legislative framework. For example

* A Certificate of Origin (CoO) is issued by an accredited body on behalf of an exporter and is required by the importing regulator. It asserts that the goods in a consignment conform to the terms of a Free Trade Agreement (FTA) and so may attract concenssional duty terms.
* A Certifictae of Non Manipulation (CoNM) is issued by an accredited body on behalf of a transhipment port/country and it asserts that goods in a consignment were not altered during transhipment.
* A PhtoSanitary certificate is issued by an accredity authority on behalf of an exporter of food products and is required to meet the food safety standards of the importing regulator.
* And dozens of others.

In most cases certificates are about a consignment of goods. Accordingly, the edi3 approach to defining the data model of certifictaes is to “attach” certificate data to the existing UN/CEFACT trade and transport data models.

## Goals

To publish a consistent suite of data models and state lifecycles for various certifictaes used to satisfy regulatory processes and to support the [Inter Customs Ledger](https://edi3.org/icl/) project.

## Status

* This specification is in draft state. This means that design consensus has been reached and the specification is ready for implementation verification.

## Glossary

|  |  |
| --- | --- |
| Phrase | Definition |
| CoO | Certificate of Origin |
| CoNM | Certificate of Non Manipulation |
| FTA | Free Trade Agreement |
| RDM | Reference Data Model |

## Licence

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## Change Process

This document is governed by the [2/COSS](http://rfc.unprotocols.org/spec:2/COSS/) (COSS).

## Language

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in RFC 2119.

# Certificate Of Origin

## Data Model

The Certificate of Origin (CoO) Data model is drawn from the UN/CEFACT Buy-Ship-Pay reference data model and conforms to the edi3 [UML profile specification](https://edi3.org/specs/edi3-uml-profile/master/)

CoO

CoO

## State Lifecycle

The certificate state lifecycle is shown below. The “status” property of the “CertificateOfOrigin” entity in the API model MUST equal one of these values.

CoO Lifecycle

CoO Lifecycle

## API Specification

The Data Model has been used to generate a [CoO REST API specification](https://edi3.org/specs/edi3-regulatory/develop/certificates/CertificateOfOrigin.html) in accordance with the [Open API3.0](https://github.com/OAI/OpenAPI-Specification/blob/master/versions/3.0.0.md) standard.

The full open API schema definition is provided below.

openapi: 3.0.0  
info:  
 description: ''  
 title: CertificateOfOrigin  
 version: ''  
servers: []  
paths:  
 /CertificatesOfOrigin:  
 get:  
 tags:  
 - CertificatesOfOrigin  
 description: Get a list of CertificateOfOrigin  
 parameters: []  
 responses:  
 '200':  
 description: OK  
 content:  
 application/json:  
 schema:  
 items:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
 type: array  
 post:  
 tags:  
 - CertificatesOfOrigin  
 description: Create a new CertificateOfOrigin  
 requestBody:  
 content:  
 application/json:  
 schema:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
 description: ''  
 required: true  
 responses:  
 '201':  
 content:  
 application/json:  
 schema:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
 description: Created  
 '/CertificatesOfOrigin/{id}':  
 get:  
 tags:  
 - CertificatesOfOrigin  
 description: Get single CertificateOfOrigin by id  
 parameters:  
 - name: id  
 in: path  
 description: missing description  
 required: true  
 schema:  
 type: string  
 responses:  
 '200':  
 description: OK  
 content:  
 application/json:  
 schema:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
 put:  
 tags:  
 - CertificatesOfOrigin  
 description: Update an existing CertificateOfOrigin  
 parameters:  
 - name: id  
 in: path  
 description: missing description  
 required: true  
 schema:  
 type: string  
 requestBody:  
 content:  
 application/json:  
 schema:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
 description: ''  
 required: true  
 responses:  
 '200':  
 description: OK  
 content:  
 application/json:  
 schema:  
 $ref: '#/components/schemas/CertificateOfOrigin'  
components:  
 schemas:  
 CertificateOfOrigin:  
 description: ''  
 type: object  
 properties:  
 status:  
 description: missing description  
 type: string  
 isPreferential:  
 description: missing description  
 type: boolean  
 freeTradeAgreement:  
 description: missing description  
 type: string  
 SupplyChain\_Consignment:  
 allOf:  
 - description: ''  
 - $ref: '#/components/schemas/SupplyChain\_Consignment'  
 allOf:  
 - $ref: '#/components/schemas/Exchanged\_Document'  
 - type: object  
 required:  
 - status  
 - isPreferential  
 - SupplyChain\_Consignment  
 CrossBorder\_RegulatoryProcedure:  
 description: >-  
 A set of formal steps to satisfy a cross-border regulation, law or  
 convention.  
 type: object  
 properties:  
 originCriteriaText:  
 description: >-  
 The origin criteria, expressed as text, for this cross-border  
 regulatory procedure.  
 type: string  
 Document\_Authentication:  
 description: A proof that a document is genuine.  
 type: object  
 properties:  
 actualDateTime:  
 description: >-  
 The actual date, time, date time, or other date time value of this  
 document authentication.  
 type: string  
 statement:  
 description: 'The statement, expressed as text, for this document authentication.'  
 type: string  
 Exchanged\_Document:  
 description: >-  
 A collection of data for a piece of written, printed or electronic  
 matter that is exchanged between two or more parties.  
 type: object  
 properties:  
 iD:  
 description: The unique identifier of this exchanged document.  
 type: string  
 issueDateTime:  
 description: >-  
 The date, time, date time or other date time value for the issuance  
 of this exchanged document.  
 type: string  
 name:  
 description: 'A name, expressed as text, of this exchanged document.'  
 type: string  
 attachedFile:  
 allOf:  
 - description: A binary file attached to this exchanged document.  
 - $ref: '#/components/schemas/Specified\_BinaryFile'  
 firstSignatoryAuthentication:  
 allOf:  
 - description: >-  
 The first or primary signature that authenticates this exchanged  
 document.  
 - $ref: '#/components/schemas/Document\_Authentication'  
 issueLocation:  
 allOf:  
 - description: The location where this exchanged document has been issued.  
 - $ref: '#/components/schemas/Logistics\_Location'  
 issuer:  
 allOf:  
 - description: The party that issues this exchanged document.  
 - $ref: '#/components/schemas/Trade\_Party'  
 Logistics\_Location:  
 description: A logistics related physical location or place.  
 type: object  
 properties:  
 iD:  
 description: >-  
 A unique identifier for this logistics related location, such as a  
 United Nations Location Code (UNLOCODE) or GS1 Global Location  
 Number (GLN).  
 type: string  
 name:  
 description: 'A name, expressed as text, of this logistics related location.'  
 type: string  
 Logistics\_Package:  
 description: >-  
 A self-contained wrapping or container within which goods can be  
 contained for logistics purposes, such as a box or a barrel which can be  
 filled, partially filled or empty.  
 type: object  
 properties:  
 sequenceNumber:  
 description: The sequence number of this logistics package.  
 type: string  
 grossVolume:  
 description: The measure of the gross volume of this logistics package.  
 type: string  
 grossWeight:  
 description: >-  
 The measure of the gross weight (mass) of this logistics package and  
 its contents.  
 type: string  
 Logistics\_TransportMeans:  
 description: >-  
 The devices used to convey goods or other objects from place to place  
 during logistics cargo movements.  
 type: object  
 properties:  
 iD:  
 description: >-  
 An identifier of this logistics means of transport, such as the  
 International Maritime Organization number of a vessel.  
 type: string  
 name:  
 description: 'The name, expressed as text, of this logistics means of transport.'  
 type: string  
 Logistics\_TransportMovement:  
 description: >-  
 The conveyance (physical carriage) of goods or other objects used for  
 logistics transport purposes.  
 type: object  
 properties:  
 iD:  
 description: >-  
 The unique identifier for this logistics transport movement, such as  
 a voyage number, flight number, or trip number.  
 type: string  
 information:  
 description: >-  
 Information, expressed as text, for this logistics transport  
 movement.  
 type: string  
 usedTransportMeans:  
 allOf:  
 - description: >-  
 The means of transport used for this logistics transport  
 movement.  
 - $ref: '#/components/schemas/Logistics\_TransportMeans'  
 Product\_Classification:  
 description: >-  
 A systematic arrangement of products in classes or categories according  
 to established criteria.  
 type: object  
 properties:  
 classCode:  
 description: The code specifying the class for this product classification.  
 type: string  
 className:  
 description: 'A class name, expressed as text, for this product classification.'  
 type: string  
 Referenced\_Document:  
 description: 'Written, printed or electronic matter that is referenced.'  
 type: object  
 properties:  
 iD:  
 description: A unique identifier for this referenced document.  
 type: string  
 attachedBinaryFile:  
 allOf:  
 - description: A specified binary file attached to this referenced document.  
 - $ref: '#/components/schemas/Specified\_BinaryFile'  
 Specified\_BinaryFile:  
 description: A specified computer file or program stored in a binary format.  
 type: object  
 properties:  
 uRI:  
 description: >-  
 The unique Uniform Resource Identifier (URI) for this specified  
 binary file.  
 type: string  
 encodingCode:  
 description: The code specifying the encoding of this specified binary file.  
 type: string  
 mIMECode:  
 description: >-  
 The code specifying the Multipurpose Internet Mail Extensions (MIME)  
 type for this specified binary file.  
 type: string  
 size:  
 description: The measure of the size of this specified binary file.  
 type: string  
 SupplyChain\_Consignment:  
 description: >-  
 A separately identifiable collection of goods items to be transported or  
 available to be transported from one consignor to one consignee in a  
 supply chain via one or more modes of transport where each consignment  
 is the subject of one single transport contract.  
 type: object  
 properties:  
 iD:  
 description: A unique identifier for this supply chain consignment.  
 type: string  
 exportCountry:  
 allOf:  
 - description: The export country for this supply chain consignment.  
 - $ref: '#/components/schemas/Trade\_Country'  
 exporter:  
 allOf:  
 - description: The party who exports this supply chain consignment.  
 - $ref: '#/components/schemas/Trade\_Party'  
 importCountry:  
 allOf:  
 - description: The import country for this supply chain consignment.  
 - $ref: '#/components/schemas/Trade\_Country'  
 importer:  
 allOf:  
 - description: The party who imports this supply chain consignment.  
 - $ref: '#/components/schemas/Trade\_Party'  
 includedConsignmentItem:  
 items:  
 $ref: '#/components/schemas/SupplyChain\_ConsignmentItem'  
 type: array  
 description: A consignment item included in this supply chain consignment.  
 loadingBaseportLocation:  
 allOf:  
 - description: >-  
 The baseport location at which this supply chain consignment is  
 to be loaded on a means of transport according to the transport  
 contract.  
 - $ref: '#/components/schemas/Logistics\_Location'  
 mainCarriageTransportMovement:  
 allOf:  
 - description: >-  
 A main carriage logistics transport movement for this supply  
 chain consignment.  
 - $ref: '#/components/schemas/Logistics\_TransportMovement'  
 transportPackage:  
 items:  
 $ref: '#/components/schemas/Logistics\_Package'  
 type: array  
 description: Transport packages for this supply chain consignment.  
 unloadingBaseportLocation:  
 allOf:  
 - description: >-  
 The baseport location at which this supply chain consignment is  
 to be unloaded from a means of transport according to the  
 transport contract.  
 - $ref: '#/components/schemas/Logistics\_Location'  
 SupplyChain\_ConsignmentItem:  
 description: >-  
 An item within a supply chain consignment of goods separately identified  
 for transport and customs purposes.  
 type: object  
 properties:  
 iD:  
 description: A unique identifier for this supply chain consignment item.  
 type: string  
 information:  
 items:  
 description: >-  
 Information, expressed as text, for this supply chain consignment  
 item.  
 type: string  
 type: array  
 crossBorderRegulatoryProcedure:  
 allOf:  
 - description: >-  
 A cross-border regulatory procedure applicable to this supply  
 chain consignment item.  
 - $ref: '#/components/schemas/CrossBorder\_RegulatoryProcedure'  
 manufacturer:  
 allOf:  
 - description: The party which manufactured this supply chain consignment item.  
 - $ref: '#/components/schemas/Trade\_Party'  
 tradeLineItem:  
 allOf:  
 - description: >-  
 A trade line item included in this supply chain consignment  
 item.  
 - $ref: '#/components/schemas/SupplyChain\_TradeLineItem'  
 SupplyChain\_TradeLineItem:  
 description: >-  
 A collection of information specific to an item being used or reported  
 on for supply chain trade purposes.  
 type: object  
 properties:  
 sequenceNumber:  
 description: A sequence number for this supply chain trade line item.  
 type: string  
 description:  
 description: >-  
 The code specifying a description of this supply chain trade line  
 item.  
 type: string  
 invoiceReference:  
 allOf:  
 - description: A document referenced for this supply chain trade line item.  
 - $ref: '#/components/schemas/Referenced\_Document'  
 tradeProduct:  
 allOf:  
 - description: The product specified for this supply chain trade line item.  
 - $ref: '#/components/schemas/Trade\_Product'  
 Trade\_Address:  
 description: >-  
 The location at which a particular trade related organization or person  
 may be found or reached.  
 type: object  
 properties:  
 line1:  
 description: missing description  
 type: string  
 line2:  
 description: missing description  
 type: string  
 cityName:  
 description: >-  
 The name, expressed as text, of the city, town or village of this  
 trade address.  
 type: string  
 postcode:  
 description: A code specifying the postcode of this trade address.  
 type: string  
 countrySubDivisionName:  
 description: >-  
 A name, expressed as text, of the sub-division of a country for this  
 trade address.  
 type: string  
 countryCode:  
 allOf:  
 - description: The unique identifier of a country for this trade address.  
 - $ref: '#/components/schemas/ISO3166\_Code'  
 ISO3166\_Code:  
 $ref: >-  
 https://edi3.org/shared/openapi/ISO/codes.yml#/components/schemas/ISO3166\_Code  
 Trade\_Country:  
 description: >-  
 The area of land that belongs to a nation together with its properties,  
 such as population, political organization, etc., used or referenced for  
 trade purposes.  
 type: object  
 properties:  
 code:  
 allOf:  
 - description: A unique identifier for this trade country.  
 - $ref: '#/components/schemas/ISO3166\_Code'  
 name:  
 description: 'A name, expressed as text, of this trade country.'  
 type: string  
 Trade\_Party:  
 description: >-  
 An individual, a group, or a body having a role in a trade business  
 function.  
 type: object  
 properties:  
 iD:  
 description: A unique identifier of this trade party.  
 type: string  
 name:  
 description: 'The name, expressed as text, for this trade party.'  
 type: string  
 postalAddress:  
 allOf:  
 - description: The postal address for this trade party.  
 - $ref: '#/components/schemas/Trade\_Address'  
 Trade\_Product:  
 description: >-  
 Any tangible output or service produced by human or mechanical effort or  
 by a natural process for trade purposes.  
 type: object  
 properties:  
 iD:  
 description: A unique identifier for this trade product.  
 type: string  
 description:  
 description: A textual description for this trade product.  
 type: string  
 harmonisedTariffCode:  
 allOf:  
 - description: A product classification designated for this trade product.  
 - $ref: '#/components/schemas/Product\_Classification'  
 originCountry:  
 allOf:  
 - description: A country of origin for this trade product.  
 - $ref: '#/components/schemas/Trade\_Country'

# Certificate of Non Manipulation

To be completed

# Related Material

* [CHAFTA CoO Template PDF](chafta-coo-template.pdf)
* [JAEPA CoO Template](jaepa-coo-template.pdf)
* [CoO data mapping UN / WCO Excel](CertificateOfOriginDataElementMapping.xlsx)