

EEG6/WG5

E-BUSINESS BOARD FOR EUROPEAN STANDARDISATION
EXPERT GROUP 6 – STATISTICS
WORKING GROUP 5 – FOREIGN TRADE STATISTICS

WORKING DOCUMENT

Intrastat system implementation model, version 6.2

Use Case, Activity, Sequence and Class diagrams in UML

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INTRODUCTION

The purpose of this document is to provide different models described in UML (Unified Modeling Language) as a basis for the definition of a DTD or an XML schema of the Intrastat declaration, called INSTAT/XML and its optional response, called INSRES/XML.

The context of the models is:- a company called PSI (Provider of Statistical Information) or a TDP (third declaring agent making declarations on behalf of PSIs) reports monthly statistics of intra-Community trade called Intrastat declaration to their CNA (Competent National Administration responsible for compiling statistics relating to the trading of goods between Member States). For this, the PSI or the TDP creates one or several Intrastat declarations and sends them to a Collecting Centre depending of the CNA located in one Member State of the European Union. When validating the received Intrastat declarations, the Collecting Centre can send a response related to these declarations to the PSI or the TDP.

The Intrastat regulation (Council Regulation (EEC) No 3330/91 of 7 November 1991 on the statistics relating to the trading of goods between Member States (OJ No L 316, 16.11.91)) is the legal basis specifying the data collection system for intra-Community trade statistics.

Information and notices from the Commission on the "Explanatory notes to the INTRASTAT forms referred to in Article 2 of Commission Regulation (EEC) No 3590/92" (OJ No C 349, 31.12.92) give the necessary guidelines to complete the Intrastat forms and provide the statistics on trade between Member States.

These models are the following:

- **Use case diagram of collection of intra-Community trade statistics (Intrastat system);** this diagram shows the main function (use case) of the Intrastat system, the actors who perform or are involved in this function and the relationships between the actors and the use case. The use case **Submit Intrastat declaration (INSTAT)** is related to the submission and collection of the Intrastat declaration called INSTAT, subject of this specification. The activity and sequence diagrams detail this use case.
- **Activity diagram associated with the use case "Submit Intrastat declaration";** this diagram shows actors, chain of activities, decisions and flows inside this function.
- **Sequence diagram associated with the use case "Submit Intrastat declaration";** this diagram shows object interactions arranged in time sequence. In particular, it shows the actors participating in the interactions and the sequence of messages exchanged.
- **Class diagram of the Intrastat system;** this class diagram shows the static structure of the Intrastat system for application purpose, it describes the application domain. The classes are a set of objects that share the same attributes, operations, methods, relationships and semantics.
- **Class diagram of the INSTAT message;** this class diagram is based on the class diagram of the Intrastat system and shows the structure of the INSTAT message. The INSTAT/XML schema or DTD is derived from this class diagram.
- **Class diagram of the INSRES message;** this class diagram is based on the class diagram of the Intrastat system and shows the structure of the INSRES message, response to INSTAT message. The INSRES/XML schema or DTD is derived from this class diagram.

The models have been designed, validated and approved by delegates of Member States and Eurostat within the framework of the EEG6/WG5.

DEFINITIONS, SYMBOLS AND ABBREVIATIONS

Definitions

INSTAT: INSTAT is the name of the Intrastat declaration reported in EDI. The traders report monthly statistics of intra-Community Trade called Intrastat declarations to the Competent National Administration responsible for compiling statistics relating to the trading of goods between Member States. When validating the received Intrastat declarations, the Competent National Administration can send a response related to these declarations.

INTRASTAT: The Intrastat system (EC regulation) is the statistical collection system set up for compiling statistics relating to the trading of goods between Member States (or statistics of intra-Community Trade).

INSRES: When validating the received Intrastat declarations, the Competent National Administration can send a response to these declarations of the traders. INSRES is the name of the response reported in EDI to the Intrastat declarations.

Abbreviations

For the purposes of the present document, the following abbreviations apply:

CNA	Competent National Administration responsible for compiling statistics relating to the trading of goods between Member States
EDI	Electronic Data Exchange
INSTAT	Name of the Intrastat declaration
INSRES	Name of the application response to the Intrastat declaration
MIG	Message Implementation Guideline
PSI	Party responsible for providing statistical information in the Intrastat system
TDP	Declaring Third Party submitting the Intrastat declarations on behalf of a PSI
XML	eXtended Markup Language

Conventions

For the purposes of the present document, the following conventions are used for the diagrams:

- Information combining several names contains these names separated by an upper-case, for example "statisticalValue" for "statistical value";
- In class diagrams:
 - each class has its name beginning by an upper-case, for example "Envelope" and each attribute has its name beginning by a lower-case, for example "flowCode";
 - acronyms are in upper-case, for example "PSI" for "Party responsible for providing statistical information in the Intrastat system";
 - "Id" is the abbreviation of "Identification", for example "envelopeId" for "envelopeIdentification" (identification of the envelope);
 - "r" is the abbreviation of "received", for example "rTotalInvoicedAmount" for "receivedTotalInvoicedAmount" (Total invoiced amount of goods, for the received Intrastat declaration).

In class diagrams, attributes have the following types:

- string, "string" represents a character string;
- boolean, "boolean" represents the set of literals {true, false};
- date, "date" is represented by CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day [ISO 8601];
- time, "time" is represented by hh:mm:ss where "hh", "mm", "ss" represent hour, minute and second respectively [ISO 8601];
- integer, "integer" is represented by a finite-length sequence of decimal digits (#x30-#x39) with an optional leading sign; if the sign is omitted, "+" is assumed;
- anyURI, "anyURI" represents finite-length character sequences, which result in strings which are legal URIs according to [RFC 2396], as amended by [RFC 2732];
- decimal, "decimal" is a finite-length sequence of decimal digits (#x30-#x39) separated by a decimal indicator; an optional leading sign is allowed; if the sign is omitted, "+" is assumed.

VERSION

The difference between this version 6.2 and the previous version 6.1 is only the change of the title of the document. This title was “INSTAT Message Implementation Model” in version 6.1 and is now “Intrastat System Implementation Model” because this document describes the Intrastat system with the INSTAT and INSRES messages and not only the INSTAT message.

USE CASE DIAGRAM

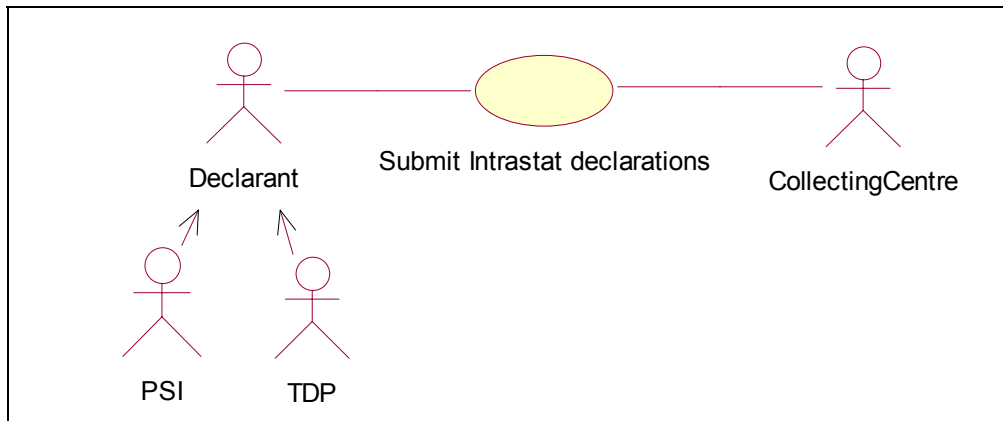


Figure 1: Use case diagram of collection of intra-Community Trade statistics (Intrastat system)

Description

Collection of intra-Community Trade statistics (Intrastat system)

This use case diagram describes the Intrastat system for the collection of intra-Community trade statistics. This diagram shows the different functions (use cases) of the Intrastat system, the actors who performed or are involved in these functions and the relationships between the actors and the use cases.

The context of the model is:- a declarant called PSI or TDP (see definitions of PSI and TDP in actors description) creates one or several Intrastat declarations, gets them together in an envelope called INSTAT and sends INSTAT to a Collecting Centre located in one Member State of the European Union. The Collecting Centre validates the received Intrastat declarations and stores them on the database of intra-Community trade statistics of the Member State. The Collecting Centre can send a response about the received Intrastat declarations to the TDP or the PSI. This response is called INSRES. This response is an acknowledgement of receipt, an acceptance or a rejection of the Intrastat declaration(s).

Actors

CollectingCentre

Data collection office designated by the Competent National Authorities responsible for compiling statistics relating to the trading of goods between Member States.

Declarant

Declarant means the actor submitting Intrastat declarations which is:

- either the PSI (party responsible for providing statistical information in the Intrastat system),
- or the TDP (Declaring Third Party submitting the Intrastat declarations on behalf of a PSI).

PSI and TDP are the terms commonly used by people involved in Intrastat. The term “Declarant” is used in this diagram in order to avoid the PSI and TDP acronyms and to be informal for a better understanding by people outside the Intrastat system.

PSI

Party responsible for providing statistical information in the Intrastat system.

TDP

Declaring Third Party submitting the Intrastat declarations on behalf of a PSI.

Use Case**Submit Intrastat declarations**

The PSI (company responsible for providing statistical information) or the TDP (on behalf of the PSI) enters the Intrastat data in order to prepare the monthly Intrastat declaration (called INSTAT message).

The PSI or the TDP approves (or validates) the Intrastat declaration.

The PSI generates an envelope called INSTAT containing the approved Intrastat declarations. The TDP generates an envelope called INSTAT containing the approved Intrastat declarations for one or more PSIs. The TDP or the PSI sends the INSTAT EDI message to the Collecting Centre.

INSTAT envelope can contain optional information related to the TDP or the PSIs like their name and address.

The Collecting Centre validates the received Intrastat declarations contained in the envelope (INSTAT message) and stores them in the database of intra-Community trade statistics of the Member State.

The Collecting Centre can send a response about the received Intrastat declarations to the TDP or PSI. This response is called INSRES. This response is an acknowledgement of receipt, an acceptance or a rejection of the Intrastat declaration(s).

If this response relates errors found in the Intrastat declaration, the PSI or the TDP amends the declaration and sends it again to the Collecting Centre.

ACTIVITY DIAGRAM

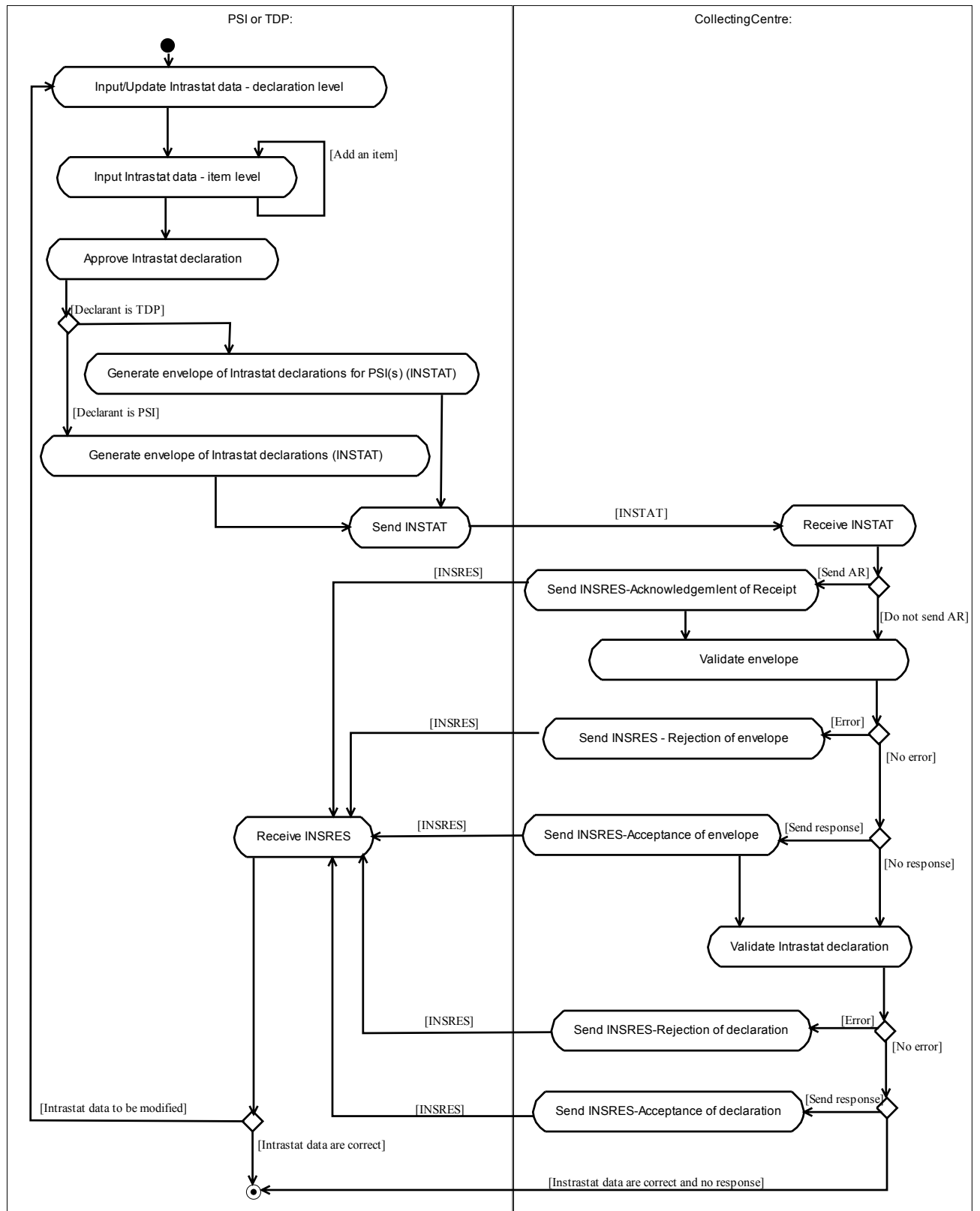


Figure 2: Activity diagram associated with the use case "Submit Intrastat declaration"

Description

Submit Intrastat declaration

The activity diagram shows the chain of activities associated with the use case **Submit Intrastat declaration** with the actors responsible for each activity. The transition between the activities **Send INSTAT** and **Receive INSTAT** is the envelope containing the Intrastat declarations called **INSTAT message**. The transition between **Send INSRES** and **Receive INSRES** is the envelope containing **INSRES message**, the response to the **INSTAT message**.

Activities

Input/Update Intrastat data – declaration level

When creating or updating a declaration the PSI or the TDP must input header (or declaration) information.

Input Intrastat data – item level

The PSI or the TDP must input information related to the items of the declaration (if any).

Approve Intrastat declaration

When the declaration is completed, the PSI or the TDP approves (or validates) it.

Generate envelope of Intrastat declarations for PSI(s) (INSTAT)

If the declarant is a TDP, he generates an envelope containing the approved Intrastat declarations for different PSIs. INSTAT envelope can contain optional information related to the TDP or the PSIs like their name and address.

Generate envelope of Intrastat declarations (INSTAT)

If the declarant is a PSI, he generates an envelope containing the approved Intrastat declarations. INSTAT envelope can contain optional information related to the PSI like his name and address.

Send INSTAT

The PSI or the TDP sends the envelope containing the Intrastat declarations called INSTAT message to the Collecting Centre.

Receive INSTAT

The Collecting Centre receives the envelope containing the Intrastat declarations called INSTAT message.

Send INRES - Acknowledgement of Receipt

When having received the INSTAT message, the Collecting Centre can send to the PSI or the TDP a response called INSRES. In this case, INSRES is an acknowledgement of receipt of the INSTAT message.

Validate envelope

The Collecting Centre validates the envelope containing the received Intrastat declarations.

Send INSRES – Rejection of envelope

After having checked the envelope containing Intrastat declaration(s), in case of errors, the Collecting Centre sends to the PSI or the TDP a response called INSRES. INSRES is a rejection of the envelope containing the Intrastat declaration(s).

Send INSRES – Acceptance of envelope

After having checked the envelope containing Intrastat declarations, if there is no error at this level, the Collecting Centre can send to the PSI or the TDP a response called INSRES. INSRES is an acceptance of the envelope containing the Intrastat declaration(s).

Validate Intrastat declaration

The Collecting Centre validates the received Intrastat declaration(s) contained in the envelope (INSTAT message).

Send INSRES – Rejection of declaration

After having checked the Intrastat declaration(s) contained in INSTAT, in case of errors, the Collecting Centre sends to the PSI or the TDP a response called INSRES. INSRES is a rejection of the Intrastat declaration(s) containing errors.

Send INSRES – Acceptance of declaration

After having checked the Intrastat declarations, if there is no error at this level, the Collecting Centre can send to the PSI or the TDP a response called INSRES. INSRES is an acceptance of the Intrastat declaration(s).

Receive INSRES

The PSI or the TDP can receive a response called INSRES from the Collecting Centre about previously sent Intrastat declaration(s). After evaluation of the response, he decides to amend this (these) declaration(s) if required.

SEQUENCE DIAGRAM

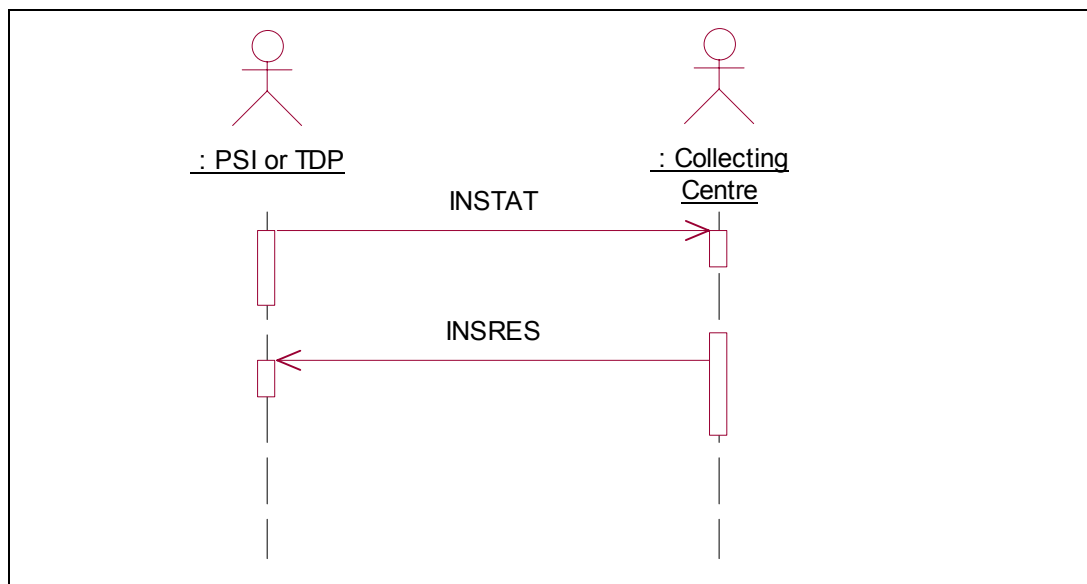


Figure 3: Sequence diagram associated with the use case "Submit Intrastat declaration"

Description

Submit Intrastat declaration

The sequence diagram associated with the use case **Submit Intrastat declaration** shows in time sequence how the different actors cooperate and the exchanged messages between these objects.

The actors are the declarant which is a **PSI** or a **TDP** submitting declarations on behalf the PSI and the **CollectingCentre**.

INSTAT message contains the Intrastat declaration(s). **INSRES** is the response to **INSTAT**.

CLASS DIAGRAM OF THE INTRASTAT SYSTEM

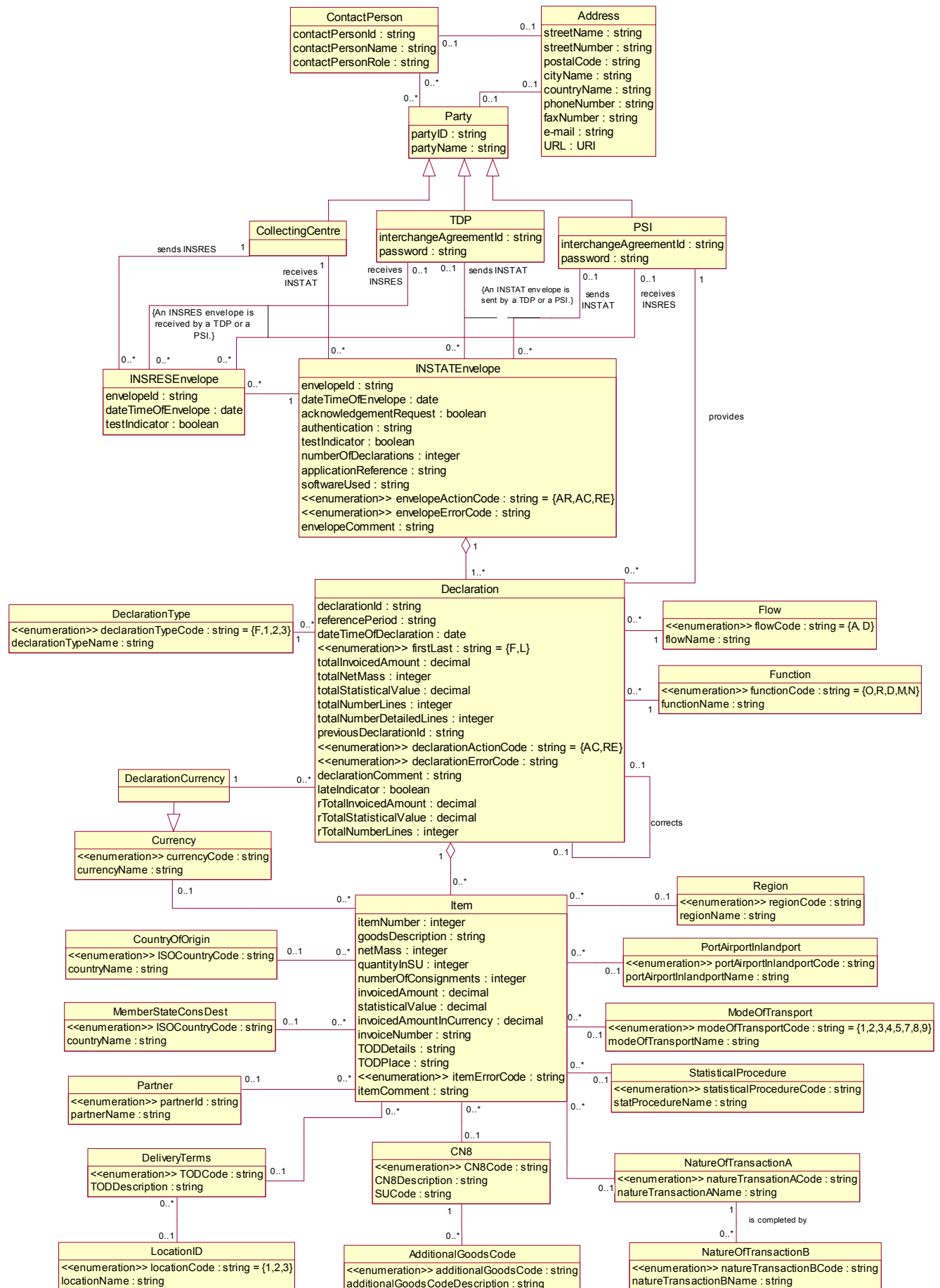


Figure 4: Class diagram of the Intrastat system

Description

Class diagram of the Intrastat system

This class diagram shows the static structure of the Intrastat system for application purpose, it describes the application domain. Class and attributes related to the optional response to the Intrastat declaration are included in this class diagram.

It is the basis of the class diagrams associated with the INSTAT EDI message and the INSRES EDI message. This EDI messages can be in XML format for example.

The classes contain attributes, which are not sent in the Intrastat declaration neither in the response but are necessary for the application of entry of Intrastat data and generation of the Intrastat declaration and its optional response.

Operations are not defined for the classes. Attributes have a type defined in the W3C recommendation on XML schema. The following types of attributes are described:

- "string": represents a character string,
- "decimal": is a finite-length sequence of decimal digits (#x30-#x39) separated by a decimal indicator; an optional leading sign is allowed; if the sign is omitted, "+" is assumed.,
- "integer": is represented by a finite-length sequence of decimal digits (#x30-#x39) with an optional leading sign; if the sign is omitted, "+" is assumed,
- "anyURI": represents finite-length character sequences, which result in strings which are legal URIs according to [RFC 2396], as amended by [RFC 2732],
- "boolean": represents the set of literals {true, false},
- "date": is represented by CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day [ISO 8601],
- "time": is represented by hh:mm:ss where "hh", "mm", "ss" represent hour, minute and second respectively [ISO 8601].

Code lists associated with attributes are represented by the stereotype "enumeration". Codes of small code lists are enumerated into brackets.

Classes

AdditionalGoodsCode

Additional national subdivision of the Commodity code provided by the Member States in accordance with the combined nomenclature.

Public Attributes:

additionalGoodsCode : string - enumeration

Additional goods code associated with a CN8 code.

additionalGoodsCodeDescription : string

Description of the additional goods code.

Address

Address. This class contains the address attributes common to the PSI, TDP, Collecting Centre, CNA, Contact person like postal address, phone, fax, e-mail, URL.

Public Attributes:**streetName : string**

Name of the street.

streetNumber : string

Number identifying the position of a building on a street.

postalCode : string

Postal Code.

cityName : string

Name of the city.

countryName : string

Country name.

phoneNumber : string

Phone number.

faxNumber : string

Fax number.

e-mail : string

Electronic mail address.

URL : URI

Uniform Resource Locator.

CN8

Commodity code: eight-digit code of the appropriate subdivision in the version of the combined nomenclature in force at the time.

Public Attributes:**CN8Code : string - enumeration**

Eight-digit code of the combined nomenclature.

CN8Description : string

Description of the eight-digit code of the combined nomenclature.

SUCode : string

Supplementary units code attached to the CN8 code (if any).

CollectingCentre

Data collection office designated by the Competent National Authorities.

Derived from Party**ContactPerson**

Person to be contacted for the Intrastat declaration.

Public Attributes:**contactPersonId : string**

Identification of the contact person.

contactPersonName : string

Name of the contact person for the Intrastat declaration.

contactPersonRole : string

Role of the contact person.

CountryOfOrigin

Country where the goods originate for Intrastat purposes, when flow is arrival.

Public Attributes:

ISOCountryCode : string - enumeration

ISO code of the country.

countryName : string

Name of the country.

Currency

Currency.

Public Attributes:

currencyCode : string - enumeration

Currency code (including Euro).

currencyName : string

Name of the currency.

Declaration

Intrastat declaration: Statistical declaration of intra-Community trade in goods.

Public Attributes:

declarationId : string

Identification of the Intrastat declaration.

referencePeriod : string

Reference period is composed of:

- Periodicity: monthly, quarterly or yearly,
- Year of the period,
- Period number:
 - 1 to 12 for a monthly declaration,
 - 1 to 4 for a quarterly declaration,
 - Nothing for a yearly declaration.

dateTimeOfDeclaration : date

Date and time of creation of the Intrastat declaration.

firstLast : string - enumeration = {F,L}

Information indicating if the declaration is the first declaration of the PSI or the last declaration of the PSI.

totalInvoicedAmount : decimal

Total invoiced amount of the goods.

totalNetMass : integer

Total quantity of goods in net mass.

totalStatisticalValue : decimal

Total statistical value of the goods.

totalNumberLines : integer

Total number of lines of the declaration.

totalNumberDetailedLines : integer

Total number of detailed lines of the declaration before aggregation.

previousDeclarationId : string

Identification of the declaration to be corrected.

declarationActionCode: string - enumeration = {AC,RE}

Used in response only: Code indicating acceptance or rejection (the action taken) of the received Intrastat declaration.

declarationErrorCode: string - enumeration

Used in response only: Code of the application error found in the received Intrastat declaration.

declarationComment: string

Used in response only: Comment or description of the application error found in the received Intrastat declaration.

lateIndicator: boolean

Used in response only: Indicates if the Intrastat declaration arrived late in the Collecting Centre.

rTotalInvoicedAmount: decimal

Used in response only: Total invoiced amount of the goods, for the received Intrastat declaration.

rTotalStatisticalValue: decimal

Used in response only: Total statistical value of the goods, for the received Intrastat declaration.

rTotalNumberLines: integer

Used in response only: Total number of lines of the received Intrastat declaration.

DeclarationCurrency

Euro or currency of the Member State in which the declaration is made.

Derived from Currency

DeclarationType

Depending on the MS, the statistical threshold ranges imply different types of declarations:

- Fiscal return (F),
- Simplified return (1),
- Detailed return (2),
- Very detailed return (3).

Public Attributes:

declarationTypeCode : string - enumeration = {F,1,2,3}

Code of the declaration type.

declarationTypeName : string

Name of the declaration type.

DeliveryTerms

Terms of delivery (TOD) for the goods.

Public Attributes:

TODCode : string - enumeration

Code of the Delivery terms.

The code list is {EXW, FCA, FAS, FOB, CFR, CIF, CPT, CIP, DAF, DES, DEQ, DDU, XXX}

TODDescription : string

Description of the delivery terms.

INSRESEnvelope

Used in response only: Header for the submission of one or more responses to received Intrastat declarations.

Public Attributes:

envelopeId : string

Identification code of the envelope.

dateTimeOfEnvelope : date

Date and time of creation of the envelope.

testIndicator: boolean

Code indicating if the submission is a test.

INSTATEnvelope

Header for the submission of one or more Intrastat declarations.

Public Attributes:

envelopeId : string

Identification code of the envelope.

dateTimeOfEnvelope : date

Date and time of creation of the envelope.

acknowledgementRequest : boolean

Request for acknowledgement of the receipt of the envelope.

authentication : string

Authentication code resulting from an authentication procedure (e.g. use of PSI password in France or electronic signature in Austria).

testIndicator : boolean

Code indicating if the submission is a test.

numberOfDeclarations : integer

Number of declarations contained in the envelope (check).

applicationReference : string

Application reference assigned by the CNA to the application, which must receive the message.

softwareUsed : string

Software used by the PSI or TDP for generating the declarations (e.g. IDEP/CN8).

envelopeActionCode: string – enumeration = {AR,AC,RE}

Used in response only: Code indicating acknowledgement of receipt, acceptance or rejection (the action taken) of the envelope containing the received declarations.

envelopeErrorCode: string - enumeration

Used in response only: Code of the application error found in the envelope containing the Intrastat declarations.

envelopeComment: string

Used in response only: Comment or description of the application error found in the envelope containing the Intrastat declarations.

Flow

Flow of goods reported in the Intrastat declaration:

-Arrival,

-Dispatch.

Public Attributes:**flowCode : string - enumeration = {A, D}**

Code of the flow of the goods reported in the Intrastat declaration.

flowName : string

Name of the flow of the goods reported in the Intrastat declaration.

Function

Function of the declaration:

-Original (O),

-Replace (R),

-Delete (D),

-Modification (M),

-Nil return (N).

Public Attributes:**functionCode : string - enumeration = {O,R,D,M,N}**

Code of the function of the declaration.

functionName : string

Name of the function of the declaration.

Item

Item or line of the Intrastat declaration.

Public Attributes:**itemNumber : integer**

Serial item (or line) number.

goodsDescription : string

Description of the goods (CN8 or PSI description): Usual trade name of the goods.

netMass : integer

Quantity of goods in net mass, net of all packaging.

quantityInSU : integer

Quantity of goods in supplementary units, in so far as the combined nomenclature provides for a supplementary unit of measurement for the goods in question.

numberOfConsignments : integer

Number of consignments relating to the goods.

invoicedAmount : decimal

Invoiced amount of goods, exclusive of VAT.

statisticalValue : decimal

Statistical value of the goods.

invoicedAmountInCurrency : decimal

Invoiced amount of goods in a currency different from the currency of the Member State in which the declaration is made.

invoiceNumber : string

Invoice number associated with the item.

TODDetails : string

Precise statement of the terms of delivery, if the TOD code is "XXX".

TODPlace : string

Place of delivery terms.

itemErrorCode: string - enumeration

Used in response only: Error code related to the item.

itemComment: string

Used in response only: Comment or description of the application error found in the item of the received Intrastat declaration.

LocationID

Identification of the second subdivision of delivery terms.

Public Attributes:**locationCode : string - enumeration = {1,2,3}**

Code of the location of the delivery terms:

- 1: Place located in the territory of the MS concerned,
- 2: Place located in another MS,
- 3: Other (place located outside the Community).

locationName : string

Name of the location of the delivery terms.

MemberStateConsDest

Member State of the European Union of consignment of destination of the goods.

Public Attributes:**ISOCountryCode : string - enumeration**

ISO code of the country.

countryName : string

Name of the country.

ModeOfTransport

Presumed mode of transport of the goods.

Public Attributes:

modeOfTransportCode : string - enumeration = {1,2,3,4,5,7,8,9}

Code of the presumed mode of transport.

modeOfTransportName : string

Name of the presumed mode of transport.

NatureOfTransactionA

Nature of transaction column A.

Public Attributes:

natureTransactionACode : string - enumeration

Code from column A of the table "Nature of transaction".

natureTransactionAName : string

Name from column A of the table "Nature of transaction".

NatureOfTransactionB

Nature of transaction column B.

Public Attributes:

natureTransactionBCode : string - enumeration

Code from column B of the table "Nature of transaction", corresponding to A.

natureTransactionBName : string

Name from column B of the table "Nature of transaction", corresponding to A.

Partner

Partner in one Member State of the European Union involved in the exchange of the goods (different from the Member State in which the declaration is made).

Public Attributes:

partnerId : string - enumeration

Identification of the partner.

partnerName : string

Name of the partner.

Party

Party means the entities involved in the exchange of the envelope containing the Intrastat declarations which are:

- the Collecting Centre which will receive the envelope,
- either the PSI sending the envelope,
- or the TDP sending the envelope and 1 to n PSIs responsible of the declarations contained in the envelope.

Public Attributes:**partyID : string**

Identification code of the Party, which can be:

- CCId: Identification code of the Collecting Centre,
- PSIId: Identification code of the PSI,
- TDPIId: Identification code of the Declaring Third Party.

partyName : string

Name of the party, which can be:

- CCName: Name of the Collecting Centre,
- PSIName: Name of the PSI,
- TDPName: Name of the TDP.

PortAirportInlandport

Port, airport or inland port of loading or unloading of goods in the Member State in which the declaration is made.

Public Attributes:**portAirportInlandportCode : string - enumeration**

Code of the port/airport/inland port of loading/unloading of goods defined by the Member State in which the declaration is made.

portAirportInlandportName : string

Name of the port/airport/inland port of loading/unloading of goods defined by the Member State in which the declaration is made.

PSI

Party responsible for providing statistical information in the Intrastat system.

Derived from PartyPublic Attributes:**interchangeAgreementId : string**

Identification code of the interchange agreement existing between the two parties.

password : string

Password to permit access to the CNA system. This would be specified in a prior interchange agreement between the parties.

Region

Region of origin or destination of goods in the Member State in which the declaration is made.

Public Attributes:**regionCode : string - enumeration**

Code of the region of origin or destination of goods defined by the Member State in which the declaration is made.

regionName : string

Name of the region of origin or destination of goods defined by the Member State in which the declaration is made.

StatisticalProcedure

Statistical procedure defined by the Member State in which the declaration is made.

Public Attributes:

statisticalProcedureCode : string - enumeration

Code of the statistical procedure defined by the Member State in which the declaration is made.

statProcedureName : string

Name of the statistical procedure defined by the Member State in which the declaration is made.

TDP

Declaring Third Party submitting the Intrastat declarations on behalf of a PSI.

Derived from Party

Public Attributes:

interchangeAgreementId : string

Identification code of the interchange agreement existing between the two parties.

password : string

Password to permit access to the CNA system. This would be specified in a prior interchange agreement between the parties.

CLASS DIAGRAM OF THE INSTAT MESSAGE

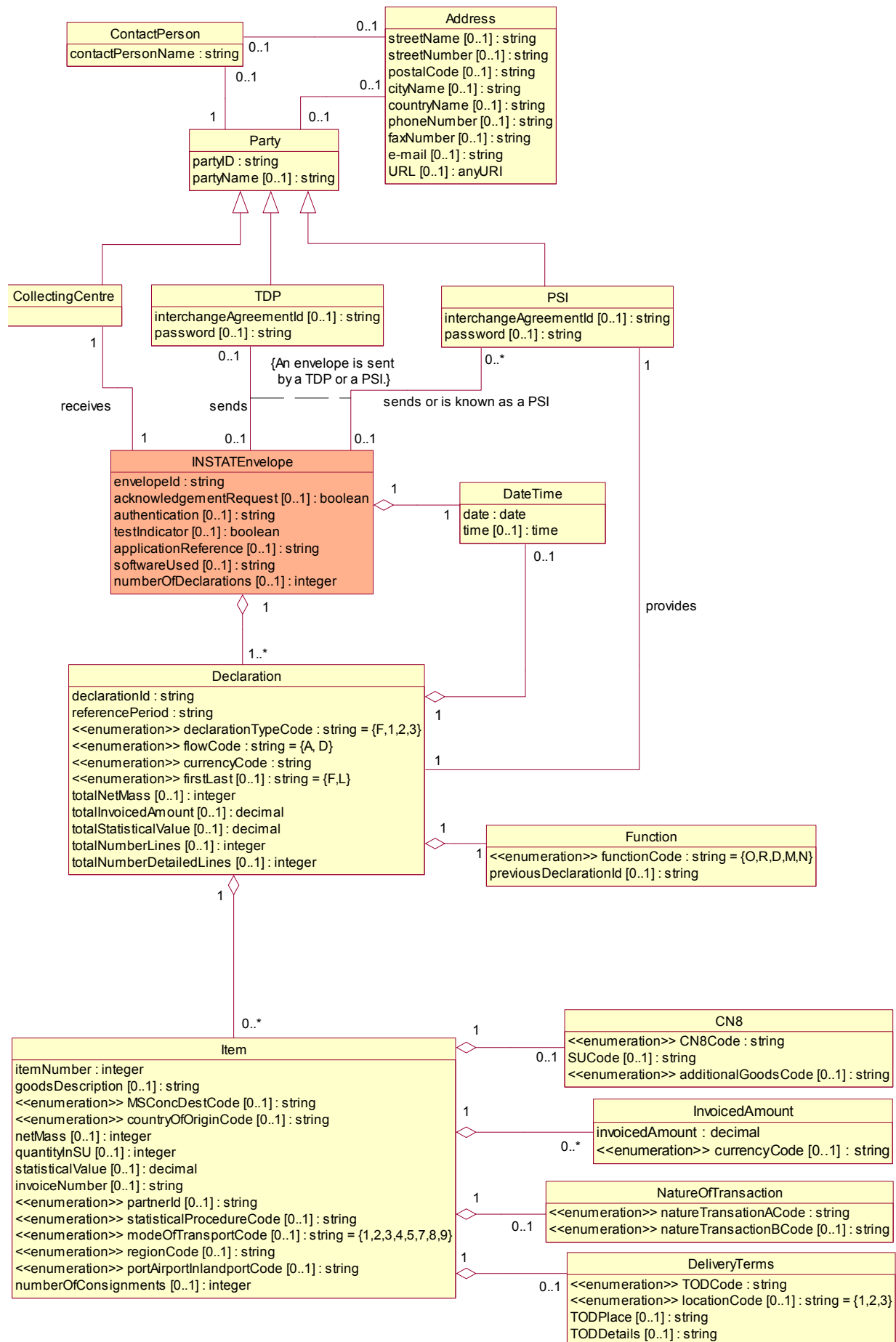


Figure 5: Class diagram of the INSTAT message

Description

Class diagram of the INSTAT message

This class diagram is based on the class diagram of the Intrastat system. It shows the structure basis of the INSTAT EDI message. The purpose of this model is to provide a basis for the definition of a DTD or an XML schema of the Intrastat declaration.

The main classes are **Party**, **Address**, **INSTATEnvelope**, **Declaration** and **Item**.

The classes contain only the attributes, which will be sent in the INSTAT message. Some attributes leave their classes defined for application purpose for classes defined for EDI message purpose. **Function**, **CN8**, **InvoicedAmount**, **NatureOfTransaction**, **DeliveryTerms** classes contain attributes for which the existence depends on the first attribute of the class.

Cardinalities of the associations change in order to describe a message and parts of this message.

Operations are not defined for the classes.

Attributes have a type defined in the W3C recommendation on XML schema. The following types of attributes are described:

- "string": represents a character string,
- "decimal": is a finite-length sequence of decimal digits (#x30-#x39) separated by a decimal indicator; an optional leading sign is allowed; if the sign is omitted, "+" is assumed.,
- "integer": is represented by a finite-length sequence of decimal digits (#x30-#x39) with an optional leading sign; if the sign is omitted, "+" is assumed,
- "anyURI": represents finite-length character sequences, which result in strings which are legal URIs according to [RFC 2396], as amended by [RFC 2732],
- "boolean": represents the set of literals {true, false},
- "date": is represented by CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day [ISO 8601],
- "time": is represented by hh:mm:ss where "hh", "mm", "ss" represent hour, minute and second respectively [ISO 8601].

Code lists associated with attributes are represented by the stereotype "enumeration". Codes of small code lists are enumerated into brackets.

The main differences between this diagram and the class diagram of the Intrastat system are:

- "[0..1]" indicates that an attribute is optional;
- **INSTATEnvelope** root class is identified in a colour different from the other classes; this root class corresponds with the first and the second elements of the generated INSTAT message: **INSTAT** and **Envelope**;
- **INSRESEnvelope** class and the attributes used only by the response to the Intrastat declaration are not included this class diagram; theses attributes are **actionCode**, **errorCode** and **comment** in **INSTATEnvelope** class, **actionCode**, **errorCode**, **comment**, **lateIndicator**, **rTotalInvoicedAmount**, **rTotalStatisticalValue** and **rTotalNumberLines** in **Declaration** class, **errorCode** and **comment** in **Item** class;

- **contactPersonId** and **ContactPersonRole** attributes of **ContactPerson** class are not sent in the INSTAT message;
- **DateTime** class has been created with the **date** and **time** attributes; this class replaces **dateTimeOfEnvelope** attribute of **INSTATEnvelope** class and **dateTimeOfDeclaration** attribute of **Declaration** class;
- **Flow** class is deleted, **flowCode** becomes an attribute of **Declaration** class, **flowName** is not sent in the INSTAT message;
- **DeclarationType** class is deleted, **declarationTypeCode** becomes an attribute of **Declaration** class, **declarationTypeName** is not sent in the INSTAT message;
- **DeclarationCurrency** class is deleted, **currencyCode** becomes an attribute of **Declaration** class, **currencyName** is not sent in the INSTAT message;
- **previousDeclarationId** attribute becomes an attribute of **Function** class, **functionName** is not sent in the INSTAT message;
- **Region** class is deleted, **regionCode** becomes an attribute of **Item** class, **regionName** is not sent in the INSTAT message;
- **PortAirportInlandPort** class is deleted, **portAirportInlandportCode** becomes an attribute of **Item** class, **portAirportInlandportName** is not sent in the INSTAT message;
- **ModeOfTransport** class is deleted, **modeOfTransportCode** becomes an attribute of **Item** class, **modeOfTransportName** is not sent in the INSTAT message;
- **StatisticalProcedure** class is deleted, **statisticalProcedureCode** becomes an attribute of **Item** class, **statProcedureName** is not sent in the INSTAT message;
- **NatureOfTransaction** class replaces **NatureOfTransactionA** and **NatureOfTransactionB** classes; **NatureOfTransactionACode** and **NatureOfTransactionBCode** attributes become attributes of **NatureOfTransaction** class, **NatureOfTransactionAName** and **NatureOfTransactionBName** are not sent in the INSTAT message;
- **AdditionalGoodsCode** class is deleted, **additionalGoodsCode** becomes an attribute of **CN8** class, **additionalGoodsName** is not sent in the INSTAT message, **CN8Description** is not sent in the INSTAT message;
- **TODDetails**, **TODPlace**, **locationCode** attributes become attributes of **DeliveryTerms** class, **locationName** is not sent in the INSTAT message, **LocationID** class is deleted;
- **Partner** class is deleted, **partnerId** becomes an attribute of **Item** class, **partnerName** is not sent in the INSTAT message;
- **MemberStateConsDest** class is deleted, **ISOCountryCode** becomes **MSConsDestCode** attribute in **Item** class, **countryName** is not sent in the INSTAT message;
- **countryOfOrigin** class is deleted, **ISOCountryCode** becomes **countryOfOriginCode** attribute in **Item** class, **countryName** is not sent in the INSTAT message;
- **InvoicedAmount** class is created; **invoicedAmount** and **invoiceAmountInCurrency** attributes move from **Item** class to only one attribute **invoicedAmount** in **InvoicedAmount** class;

- **Currency** class is deleted, **currencyName** is not sent in the INSTAT message, **currencyCode** becomes an attribute of **InvoicedAmount** class.

Classes

Address

Address. This class contains the address attributes common to the PSI, TDP, Collecting Centre, CNA, Contact person like postal address, phone, fax, e-mail, URL.

Public Attributes:

streetName [0..1]: string

Name of the street.

streetNumber [0..1]: string

Number identifying the position of a building on a street.

postalCode [0..1]: string

Postal Code.

cityName [0..1]: string

Name of the city.

countryName [0..1]: string

Country name.

phoneNumber [0..1]: string

Phone number.

faxNumber [0..1]: string

Fax number.

e-mail [0..1]: string

Electronic mail address.

URL [0..1]: URI

Uniform Resource Locator.

CN8

Commodity code: eight-digit code of the appropriate subdivision in the version of the combined nomenclature in force at the time.

Public Attributes:

CN8Code : string - enumeration

Eight-digit code of the combined nomenclature.

SUCode [0..1]: string

Supplementary units code attached to the CN8 code (if any).

additionalGoodsCode [0..1]: string - enumeration

Additional goods code associated with a CN8 code.

CollectingCentre

Data collection office designated by the Competent National Authorities.

Derived from Party

ContactPerson

Person to be contacted for the Intrastat declaration.

Public Attributes:

contactPersonName : string

Name of the contact person for the Intrastat declaration.

DateTime

Date and time of creation of:

- the envelope,
- the declaration.

Public Attributes:

date : date

Date.

time [0..1]: time

Time.

Declaration

Intrastat declaration: Statistical declaration of intra-Community trade in goods.

Public Attributes:

declarationId : string

Identification of the Intrastat declaration.

referencePeriod : string

Reference period is composed of:

- Periodicity: monthly, quarterly or yearly,
- Year of the period,
- Period number:
 - 1 to 12 for a monthly declaration,
 - 1 to 4 for a quarterly declaration,
 - Nothing for a yearly declaration.

declarationTypeCode : string – enumeration = {F,1,2,3}

Code of the declaration type.

Depending on the MS, the statistical threshold ranges imply different types of declarations:

- Fiscal return,(F),
- Simplified return (1),
- Detailed return (2),
- Very detailed return (3).

flowCode : string - enumeration = {A, D}

Code of the flow of the goods reported in the Intrastat declaration:

- Arrival,
- Dispatch.

currencyCode : string - enumeration

Currency code (including Euro).

firstLast [0..1]: string - enumeration = {F,L}

Information indicating if the declaration is the first declaration of the PSI or the last declaration of the PSI.

totalNetMass [0..1]: integer

Total quantity of goods in net mass.

totalInvoicedAmount [0..1]: decimal

Total invoiced amount of the goods.

totalStatisticalValue [0..1]: decimal

Total statistical value of the goods.

totalNumberLines [0..1]: integer

Total number of lines of the declaration.

totalNumberDetailedLines [0..1]: integer

Total number of detailed lines of the declaration before aggregation.

DeliveryTerms

Terms of delivery (TOD) for the goods.

Public Attributes:**TODCode : string - enumeration**

Code of the Delivery terms.

The code list is {EXW, FCA, FAS, FOB, CFR, CIF, CPT, CIP, DAF, DES, DEQ, DDU, XXX}

locationCode [0..1]: string - enumeration = {1,2,3}

Code of the location of the delivery terms:

- 1: Place located in the territory of the MS concerned,
- 2: Place located in another MS,
- 3: Other (place located outside the Community).

TODPlace [0..1]: string

Place of delivery terms.

TODDetails [0..1]: string

Precise statement of the terms of delivery, if the TOD code is "XXX".

Function

Function of the declaration:

- Original (O),
- Replace (R),
- Delete (D),
- Modification (M),
- Nil return (N).

Public Attributes:**functionCode : string - enumeration = {O,R,D,M,N}**

Code of the function of the declaration.

previousDeclarationId [0..1]: string

Identification of the declaration to be corrected.

INSTATEnvelope

Header for the submission of one or more Intrastat declarations. Root class corresponding with the first and the second elements of the generated INSTAT message: **INSTAT** and **Envelope** elements.

Public Attributes:

envelopeId : string

Identification code of the envelope.

acknowledgementRequest [0..1]: boolean

Request for acknowledgement of the receipt of the envelope.

authentication [0..1]: string

Authentication code resulting from an authentication procedure (e.g. use of PSI password in France or electronic signature in Austria).

testIndicator [0..1]: boolean

Code indicating if the submission is a test.

applicationReference [0..1]: string

Application reference assigned by the CNA to the application, which must receive the message.

softwareUsed [0..1]: string

Software used by the PSI or TDP for generating the declarations (e.g. IDEP/CN8).

numberOfDeclarations [0..1]: integer

Number of declarations contained in the envelope (check).

InvoicedAmount

Invoiced amount of goods.

Public Attributes:

invoicedAmount: decimal

Invoiced amount of goods:

- exclusive of VAT,

- in a currency different from the currency of the Member State in which the declaration is made.

currencyCode [0..1]: string - enumeration

Currency code of the invoiced amount of goods in a currency different from the currency of the Member State in which the declaration is made.

Item

Item or line of the Intrastat declaration.

Public Attributes:

itemNumber : integer

Serial item (or line) number.

goodsDescription [0..1]: string

Description of the goods (CN8 or PSI description): Usual trade name of the goods.

MSConcDestCode [0..1] : string - enumeration

ISO code of Member State of the European Union of consignment of destination of the goods.

countryOfOriginCode [0..1] : string - enumeration

ISO code of the country where the goods originate for Intrastat purposes, when flow is arrival.

netMass [0..1]: integer

Quantity of goods in net mass, net of all packaging.

quantityInSU [0..1]: integer

Quantity of goods in supplementary units, in so far as the combined nomenclature provides for a supplementary unit of measurement for the goods in question.

statisticalValue [0..1]: decimal

Statistical value of the goods.

invoiceNumber [0..1]: string

Invoice number associated with the item.

partnerId [0..1]: string - enumeration

Identification of the partner in one Member State of the European Union involved in the exchange of the goods (different from the Member State in which the declaration is made).

statisticalProcedureCode [0..1]: string - enumeration

Code of the statistical procedure defined by the Member State in which the declaration is made.

modeOfTransportCode [0..1]: string - enumeration = {1,2,3,4,5,7,8,9}

Code of the presumed mode of transport.

regionCode [0..1]: string - enumeration

Code of the region of origin or destination of goods defined by the Member State in which the declaration is made.

portAirportInlandportCode [0..1]: string - enumeration

Code of the port/airport/inland port of loading/unloading of goods defined by the Member State in which the declaration is made.

numberOfConsignments [0..1]: integer

Number of consignments relating to the goods.

NatureOfTransaction

Nature of transaction.

Public Attributes:**natureTransactionACode : string - enumeration**

Code from column A of the table "Nature of transaction".

natureTransactionBCode [0..1]: string - enumeration

Code from column B of the table "Nature of transaction", corresponding to A.

Party

Party means the entities involved in the exchange of the envelope containing the Intrastat declarations which are:

- the Collecting Centre which will receive the envelope,
- either the PSI sending the envelope,
- or the TDP sending the envelope and 1 to n PSIs responsible of the declarations contained in the envelope.

Public Attributes:**partyID : string**

Identification code of the Party, which can be:

- CCId: Identification code of the Collecting Centre,
- PSIId: Identification code of the PSI,
- TDPIId: Identification code of the Declaring Third Party.

partyName [0..1]: string

Name of the party which can be:

- CCName: Name of the Collecting Centre,
- PSIName: Name of the PSI,
- TDPName: Name of the TDP.

PSI

Party responsible for providing statistical information in the Intrastat system.

Derived from PartyPublic Attributes:**interchangeAgreementId [0..1]: string**

Identification code of the interchange agreement existing between the two parties.

password [0..1]: string

Password to permit access to the CNA system. This would be specified in a prior interchange agreement between the parties.

TDP

Declaring Third Party submitting the Intrastat declarations on behalf of a PSI.

Derived from PartyPublic Attributes:**interchangeAgreementId [0..1]: string**

Identification code of the interchange agreement existing between the two parties.

password [0..1]: string

Password to permit access to the CNA system. This would be specified in a prior interchange agreement between the parties.

CLASS DIAGRAM OF THE INSRES MESSAGE

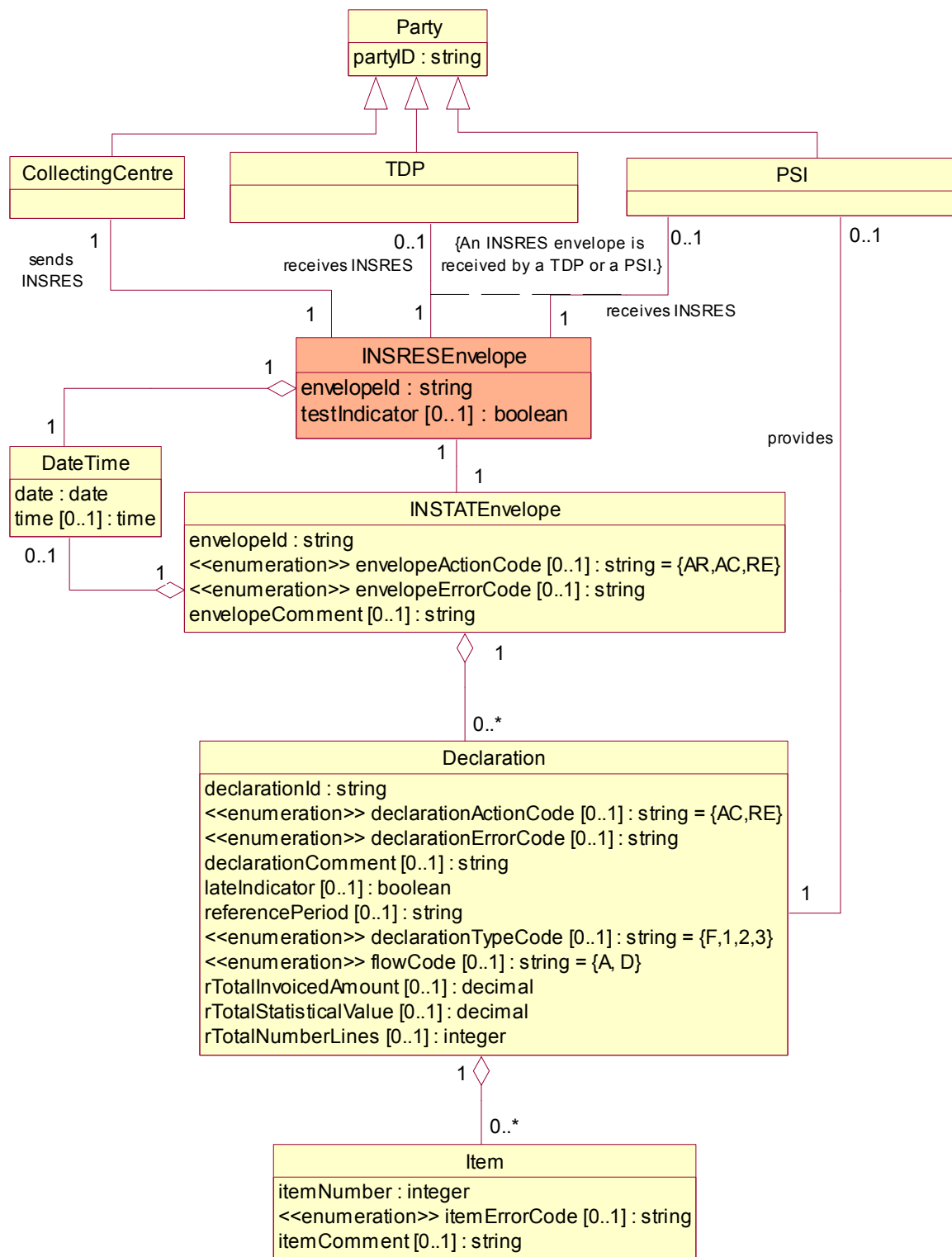


Figure 6: Class diagram of the INSRES message

Description

Class diagram of the INSRES message

This class diagram is based on the class diagram of the Intrastat system. It shows the structure basis of the INSRES EDI message. The purpose of this class diagram is to provide a basis for the definition of a DTD or an XML schema of INSRES/XML response to INSTAT/XML, the XML format of the Intrastat declaration.

This optional application response can be an acknowledgement of receipt, acceptance or rejection of INSTAT/XML at envelope or declaration level. Errors can be reported at envelope, declaration or item level.

The diagram shows only classes and attributes, which will be sent in INSRES message. Cardinalities of the associations change in order to describe a message and parts of this message.

Operations are not defined for the classes.

Attributes have a type defined in the W3C recommendation on XML schema. The following types of attributes are described:

- "string": represents a character string,
- "decimal": is a finite-length sequence of decimal digits (#x30-#x39) separated by a decimal indicator; an optional leading sign is allowed; if the sign is omitted, "+" is assumed.,
- "integer": is represented by a finite-length sequence of decimal digits (#x30-#x39) with an optional leading sign; if the sign is omitted, "+" is assumed,
- "boolean": represents the set of literals {true, false},
- "date": is represented by CCYY-MM-DD where "CC" represents the century, "YY" the year, "MM" the month and "DD" the day [ISO 8601],
- "time": is represented by hh:mm:ss where "hh", "mm", "ss" represent hour, minute and second respectively [ISO 8601].

Code lists associated with attributes are represented by the stereotype "enumeration". Codes of small code lists are enumerated into brackets.

The main differences between this diagram and the class diagram of the Intrastat system are:

- "[0..1]" indicates that an attribute is optional;
- **INSRESEnvelope** root class is identified in a colour different from the other classes; this root class corresponds with the first and the second elements of the generated INSRES message: **INSRES** and **Envelope**;
- **Party**, **CollectingCentre**, **TDP**, **PSI**, **INSRESEnvelope**, **INSTATENvelope**, **Declaration**, **Item** are the classes moving from the class diagram of the Intrastat system to the class diagram of the INSRES message; these classes contain only attributes relevant to the response;
- **DateTime** class has been created with the **date** and **time** attributes; this class replaces **dateTimeOfEnvelope** attribute of **INSRESEnvelope** class, **dateTimeOfEnvelope** attribute of **INSTATENvelope** class and **dateTimeOfDeclaration** attribute of **Declaration** class;
- **Flow** class is deleted, **flowCode** becomes an attribute of **Declaration** class, **flowName** is not sent in the INSRES message;

- **DeclarationType** class is deleted, **declarationTypeCode** becomes an attribute of **Declaration** class, **declarationTypeName** is not sent in the INSRES message.

Classes

CollectingCentre

Data collection office designated by the Competent National Authorities.

Derived from Party

DateTime

Date and time of creation of the:

- INSTAT envelope,
- INSRES envelope,
- declaration

Public Attributes:

date : date

Date.

time [0..1]: time

Time.

Declaration

Intrastat declaration: Statistical declaration of intra-Community trade in goods.

Public Attributes:

declarationId: string

Identification of the Intrastat declaration.

declarationActionCode [0..1]: string – enumeration = {AC,RE}

Code indicating acceptance or rejection (the action taken) of the received Intrastat declaration.

declarationErrorCode [0..1]: string - enumeration

Code of the application error found in the received Intrastat declaration.

declarationComment [0..1]: string

Comment or description of the application error found in the received Intrastat declaration.

lateIndicator [0..1]: boolean

Indicates if the Intrastat declaration arrived late in the Collecting Centre.

ReferencePeriod [0..1]: string

Reference period is composed of:

- Periodicity: monthly, quarterly or yearly,
- Year of the period,
- Period number:
 - 1 to 12 for a monthly declaration,
 - 1 to 4 for a quarterly declaration,
 - Nothing for a yearly declaration.

declarationTypeCode [0..1]: string - enumeration= {F,1,2,3}

Code of the declaration type.

Depending on the MS, the statistical threshold ranges imply different types of declarations:

- Fiscal return,(F),
- Simplified return (1),
- Detailed return (2),
- Very detailed return (3).

flowCode [0..1]: string –enumeration = {A, D}

Code of the flow of the goods reported in the Intrastat declaration:

- A for Arrival,
- D for dispatch.

rTotalInvoicedAmount [0..1]: decimal

Total invoiced amount of the goods, for the received Intrastat declaration.

rTotalStatisticalValue [0..1]: decimal

Total statistical value of the goods, for the received Intrastat declaration.

rTotalNumberLines [0..1]: integer

Total number of lines of the received Intrastat declaration.

INSRESEnvelope

Header for the submission of responses to received Intrastat declarations.

Public Attributes:

envelopeId: string

Identification code of the envelope.

testIndicator [0..1]: boolean

Code indicating if the submission is a test.

INSTATEnvelope

Header for the submission of one or more Intrastat declarations.

Public Attributes:

envelopeId : string

Identification code of the envelope.

envelopeActionCode [0..1] : string - enumeration= {AR,AC,RE}

Code indicating acknowledgement of receipt, acceptance or rejection (the action taken) of the envelope containing the received declarations.

envelopeErrorCode [0..1] : string - enumeration

Code of the application error found in the envelope containing the Intrastat declarations.

envelopeComment [0..1] : string

Comment or description of the application error found in the envelope containing the Intrastat declarations.

Item

Item or line of the Intrastat declaration.

Public Attributes:**ItemNumber: integer**

Serial item (or line) number.

itemErrorCode [0..1]: string - enumeration

Error code related to the item.

itemComment [0..1]: string

Comment or description of the application error found in the item of the received Intrastat declaration.

Party

Party means the entities involved in the exchange of the envelope containing the responses to received Intrastat declarations which are:

- the Collecting Centre which sends the INSRES envelope,
- either the PSI or the TDP receiving the INSRES envelope.

Public Attributes:**PartyID: string**

Identification code of the Party, which can be:

- CCId: Identification code of the Collecting Centre,
- PSId: Identification code of the PSI,
- TDPIId: Identification code of the Declaring Third Party.

PSI

Party responsible for providing statistical information in the Intrastat system.

Derived from Party**TDP**

Declaring Third Party submitting the Intrastat declarations on behalf of a PSI.

Derived from Party