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DIN ISO/TS 17262:2005-04

Entwurf

**Intelligente Transportsysteme –
Automatische Fahrzeug- und Ausstattungsidentifizierung –
Nummerierung und Datenstruktur (ISO/DIS 17262:2011);
Englische Fassung prEN ISO 17262:2011**

Intelligent transport systems –
Automatic vehicle and equipment identification –
Numbering and data structures (ISO/DIS 17262:2011);
English version prEN ISO 17262:2011

Systèmes intelligents de transport –
Identification automatique des véhicules et des équipements –
Numérotation et structures des données (ISO/DIS 17262:2011);
Version anglaise prEN ISO 17262:2011

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Gesamtumfang 72 Seiten

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DKE Deutsche Kommission Elektrotechnik Elektronik Informationstechnik im DIN und VDE

Nationales Vorwort

Dieses Dokument (prEN ISO 17262:2011) wurde vom Technischen Komitee CEN/TC 278 „Telematik für den Straßen-Verkehr und -Transport“ ausgearbeitet, dessen Sekretariat vom NEN (Niederlande) gehalten wird.

Das zuständige deutsche Normungsgremium ist der Gemeinschaftsarbeitsausschuss NA 052-02-71 GA „Telematik“ des Normenausschusses Automobiltechnik (NAAutomobil).

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Diese internationale Norm spezifiziert Daten, die eine zukünftige Abwärtsintegration und Erweiterung für internationale Gütertransportsysteme (en: AVI/AEI). Diese Norm hat eine öffnende statt verordnende Struktur.

Änderungen

Gegenüber DIN ISO/TS 17262:2005-04 wurden folgende Änderungen vorgenommen:

- a) Standard wurde von einer technischen Spezifikation in einen internationalen Standard überführt;
- b) Verschiedene Datendefinitionen und Datentypen wurden ergänzt.

Nationaler Anhang NA (informativ)

Begriffe

3 Begriffe

Für die Anwendung dieses Dokuments gelten die folgenden Begriffe.

3.1

AEI Koordinator

(en: AEI manager)

Komponente, welche Daten von „AEI Lesegeräten“ empfängt und mit Daten in einer Datenbank vergleicht. Eine entsprechende OK- oder Fehlermeldung wird generiert und an die Anzeigekomponente übermittelt

3.2

Lesegerät

(en: reader)

komplette Menge einer Einrichtung auch wenn sie aus mehr als einer Komponente besteht, um Daten in einem Anhänger abzufragen, zu empfangen und zu interpretieren um die Identifikation darstellen zu können

3.3

AEI System

(en: AEI system)

AEI Anwendung in einem RTTT/TICS System entweder als eigenständiges System oder als Teil einer RTTT/TICS Anwendung

3.4

Komponente

(en: component)

Typ, Klasse oder jeder andere Arbeitsprodukt des speziell zur Wiederverwendung entwickelt wurde (Anhänger, Lesegerät, AEI Koordinator)

3.5

Spedition

(en: conveyance)

Transportmittel

3.6

intermodaler Transport

(en: intermodal transport)

die Bewegung von Gütern in einer oder mehreren Beladungseinheiten oder Fahrzeugen, die sukzessive verschiedene Transportbetriebsarten benutzen ohne dabei die Handhabung der Güter bei Betriebswechseln selbst zu berücksichtigen

3.7

Ladungseinheit

(en: load unit)

Fracht Transporteinheit, welche auf Transportmittel geladen werden darf

ANMERKUNG Synonym: Paket, Container.

3.8**Botschaftsanzeige**

(en: message display)

empfängt Daten vom AEI Koordinator, und zeigt die Daten in variabler Form den Fahrer an

3.9**Anhänger**

(en: tag)

Einrichtung, die an Einheiten, Fahrzeuge oder Elemente angepasst wurde, um deren eindeutige Identifizierung und wenn gewünscht weiter Daten festzustellen

ANMERKUNG In speziellen Fällen kann der Anhänger an einer festen Position mit einem mobilen Lesegerät installiert werden.

3.10**Terminal Überwachungspunkt**

(en: terminal monitoring point)

Punkt, welcher vom AEI Koordinator verwaltet wird an dem die Überwachung von Transportobjekten stattfindet. Synonym: „Terminal Zugriffüberwachungspunkt“

3.11**Transportmittel**

(en: transport means)

Fahrzeuge, welches für den Gütertransport verwendet wird, z. B. Seefahrzeug, Zug, Lastwagen, siehe auch Spedition

3.12**Transportobjekt**

(en: transport object)

Transportmittel, Ladungseinheit oder Güterelement

English Version

Intelligent transport systems —
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(ISO/DIS 17262:2011)

Systèmes intelligents de transport —
Identification automatique des véhicules
et des équipements —
Numérotation et structures des données
(ISO/DIS 17262:2011)

Intelligente Transportsysteme —
Automatische Fahrzeug- und Ausstattungsidentifizierung —
Nummerierung und Datenstruktur
(ISO/DIS 17262:2011)

This draft European Standard is submitted to CEN members for parallel enquiry. It has been drawn up by the Technical Committee CEN/TC 278.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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Foreword

This document (prEN ISO 17262:2011) has been prepared by Technical Committee CEN/TC 278 “Road transport and traffic telematics”, the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 204 “Intelligent transport systems”.

This document is currently submitted to the parallel Enquiry.

This document will supersede CEN ISO/TS 17262:2003.

Introduction

Within the context of Intelligent transport systems (ITS) (previously known as RTTT/TICS), intermodal goods transport AVI/AEI systems have the specific objective of achieving a unique or unambiguous positive identification of equipment, and to make that identification automatically. this International Standard defines data to achieve this particular objective.

This International Standard specifies data that enable future upward integration and expansion for intermodal goods transport AVI/AEI systems. The standard is thus designed to be flexible and enabling rather than prescriptive.

For the definition of data, 'Abstract Syntax Notation One' (ASN.1) is applied. This usage provides maximum interoperability and conformance to existing Standards within the ITS sector.

Readers who want to familiarise themselves with ASN.1 are advised to read ANNEX C before reading the main body of this Standard. Readers may also read ISO/IEC 8824, ISO/IEC 8825 and other publications on ASN.1.

1 Scope

This International Standard defines generic numbering and data structures for unambiguous identification of equipment used for Intermodal goods transport. These data are known as 'Intermodal Goods Transport Numbering and Data Structures'.

This International Standard defines data independently of the data carrier. The modelling of data is based on 'Abstract Syntax Notation One' (ASN.1) as defined in ISO/IEC 8824. this International Standard excludes any physical aspects such as interfaces, dimensions etc. Data that form part of transmission or storage protocols (headers, frame markers and checksums) are excluded.

Data defined in this International Standard require a system for control and distribution of number series independent of the different AVI/AEI systems. This is required in order to avoid ambiguity and to provide the necessary level of security where appropriate. For this reason the registration authority defined in ENV ISO 14816 applies for this International Standard.

This International Standard enables the use of optimised encoding schemes such as ASN.1 Packed Encoding Rules' (PER).

This International Standard provides interoperability, not only between simple AVI/AEI and more complex ITS/RTTTfunctions, but also with pre-existing standards such as container (ISO 10374). Specifications for protecting against changes, classifying and qualifying security aspects of the data are out of scope of this International Standard.

This International Standard relates to AVI/AEI units, but not to smaller containers and units being transported. For smaller units (pallet loads, trays, parcels etc.) please refer to ISO 26683 and ISO/IEC SC 31 standards, ISO 18000 series, etc.. However, CS10 defined herein, provides a means to provide land conveyance content data using such standards. The numbering structure defined in this International Standard is designed to enable combinations with the data definitions from ISO18000 series. This combination is covered in CEN ISO/TS 17264.

This International Standard provides the capability to carry application data, associated with the identification, to be carried as part of the AVI/AEI message. Within this International Standard this is provided as a "black box" facility. The definition of the structure and contents of such messages are outside the scope of this International Standard (examples are shown in CEN ISO/TS 17264).

2 Normative references

This International Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this International Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13044, *Swap Bodies — Coding, Identification and Marking*

ISO/IEC 8824-1, *Information processing systems — Open Systems Interconnection — Specification of abstract syntax notation one (ASN.1) — Part 1: Specification of the Basic Notation*

ISO/IEC 8824-2, *Information processing systems — Open Systems Interconnection — Specification of abstract syntax notation one (ASN.1) — Part 2: Information Object Specification*

ISO/IEC 8824-3, *Information processing systems — Open Systems Interconnection — Specification of abstract syntax notation one (ASN.1) — Part 3: Constraint Specification*

ISO/IEC 8824-4, *Information processing systems — Open Systems Interconnection — Specification of abstract syntax notation one (ASN.1) — Part 4: Parameterisation of the ASN.1 Specifications*

ISO 26683-1, *Intelligent transport systems — Freight land conveyance content identification and communication — Part 1: Context, architecture and referenced standards*

ISO 26683-2, *Intelligent transport systems — Freight land conveyance content identification and communication — Part 2: Application interface profiles*

ENV ISO 14816:2000, *Road Traffic and Transport Telematics — Automatic Vehicle and Equipment Identification — Numbering and Data Structures (ISO/TR 14816:2000)*

ENV ISO 14906:1998, *Road Traffic and Transport Telematics — Electronic Fee Collection — Application Interface Definition Using DSRC (ISO/TR 14906:1998)*

OASIS UBL 2.1 Common Library: <http://docs.oasis-open.org/ubl/prd1-UBL-2.1/UBL-2.1.xml> (Authoritative)

3 Terms and definitions

For the purposes of this International Standard, the following definitions apply:

3.1

AEI manager

component, which receives data from 'AEI Readers' and compares it with information in a data base. An ok or error message is generated and transferred to the message display component

3.2

reader

complete set of equipment even if it consists of more than one components required to interrogate, receive and interpret the data in the TAG in order to present the identification

3.3

AEI system

AEI application in a RTTT/TICS system either as a stand-alone system or as part of a RTTT/TICS application

3.4

component

type, class or any other work-product that has been specifically engineered to be reusable. (TAG, reader, AEI manager)

3.5

conveyance

means of transport

3.6

intermodal transport

movement of goods in one and the same loading unit or vehicle that uses successively several modes of transport without handling of the goods themselves when changing modes

3.7

load unit

cargo transportation unit, which may be loaded on a transport means

NOTE Synonym: package, container

3.8

message display

receives data from AEI manager, and display the data on a variable message sign to the driver

3.9
TAG
equipment fitted to the unit, vehicle or item to be identified and containing the unambiguous identification, and if required some further data.

NOTE For special purposes the TAG can be installed in a fixed position with a mobile reader

3.10
terminal monitoring point
point administered by the AEI manager where the monitoring of transport objects is performed. Synonym: 'Terminal Access Control Point'

3.11
Transport means
vehicle used for the transport of goods, e.g. vessel, train, truck, see also *conveyance*

3.12
transport object
transport means, load unit or goods item

4 Symbols (and abbreviated terms)

For the purposes of this International Standard, the following definitions apply:

4.1
AEI
Automatic Equipment Identification

4.2
ASN.1
'Abstract Syntax Notation number One'

4.3
DSRC
Dedicated Short Range Communication

4.4
ITS
Intelligent Transport System(s)

4.5
RTTT
Road Transport and Traffic Telematics (CEN/TC 278)

NOTE Legacy European name for ITS

4.6
TICS
Transport Information and Control Systems (ISO/TC 204)

NOTE now known as ITS

5 Components of AVI/AEI for intermodal goods transport

5.1 General

The components, which are involved in the AVI/AEI intermodal goods transport are the:

- AEI manager,
- Reader,
- Message display,
- Transport object/TAG.

The overview of components are illustrated in Figure 1:

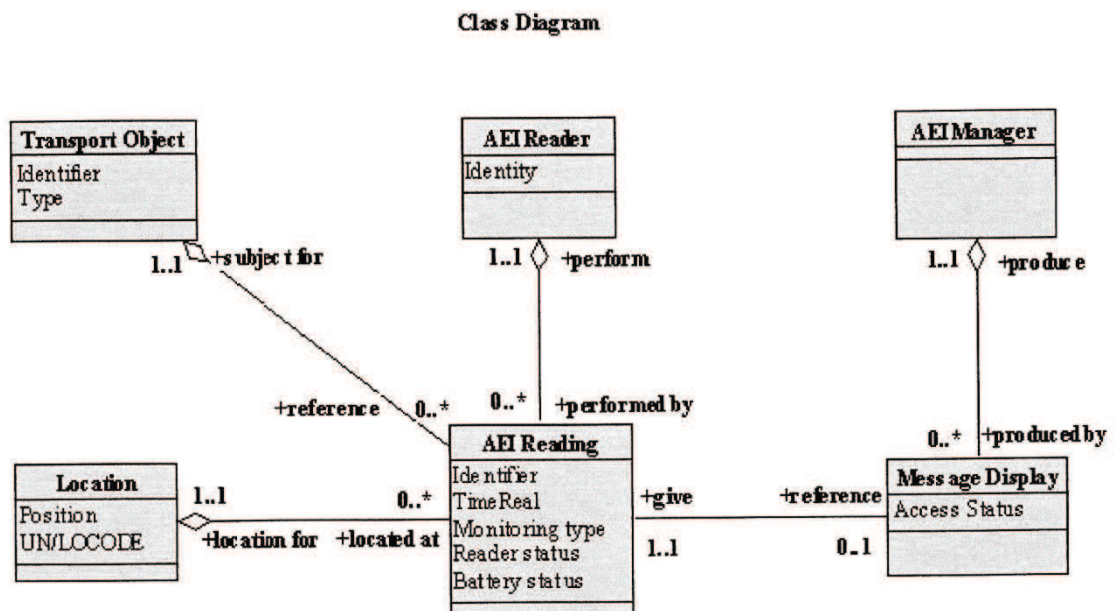


Figure 1 — Components of AVI/AEI for intermodal goods transport

6 Overview of data definitions

This clause contains an overview of the data content of ASN.1 types defined in this International Standard.

'Access Control Status'

- Access OK
- Access denied
- Access pending

'AEI Message Type'

- TimeReal
- ReaderLocation
- TerminalMonitoringType
- TransportObjectMessageType

'Display Message Type'

- AccessControlStatus
- TransportObjectMessageType
- MsgInfo

'Position'

- x co-ordinate
- y co-ordinate
- z co-ordinate

'Reader Location'

- Readeridentity
- Un/Locode
- Geographic point location
- 'Position'

'Transport Component Status'

- OK
- Malfunction
- Battery low

'Swap body Structure'

- owner code
- equipment category identity
- serial number
- check digit
- length (in centimetres);
- height (in centimetres);
- width (in centimetres);
- container type code
- maximum gross mass (in hundreds of kilograms);
- tare mass (in hundreds of kilograms);

'Freight Land Conveyance Content Information'

- All data specified by ISO 26683 family of standards deliverables

'Terminal Monitoring Type'

- Entry
- Exit
- Loading
- Unloading
- Stacking
- Unstacking
- Stuffing
- Stripping
- Registration

'Transport Object Type'

- Goods item
- Package item
- Transport

'Transport Object Identifier'

- Issuer identifier
- Manufacturer identifier
- Licence plate number
- Vehicle identification number
- Freight container number (ISO 10374)
- Tax code
- Swap body structure (EN 13044)
- Freight conveyance identifier

'Transport Object Message Type'

- 'Transport Object Identifier'
- Transport component status

-represented as specified in CS10

'ITS consignment in UBL format'

-represented as specified in CS11

7 Data definitions

7.1 'Access Control Status'

7.1.1 Description

'Access Control Status' is a code issued by the AEI manager to indicate the status of the access control of a transport means, load unit or a goods item to a terminal monitoring point.

7.1.2 ASN.1 type

```
AccessControlStatus ::= ENUMERATED {  
    accessOk (0),  
    accessDenied (1),  
    accessPending (2) -- "Please Wait" indication  
}
```

7.2 'AEI Message Type'

7.2.1 Description

'AEI Message Type' is the complete message, which is transferred from the AEI reader to the AEI manager.

7.2.2 ASN.1 type

```
AEIMessageType ::= SEQUENCE {  
    TimeReal, -- Local time reference (precision in seconds)  
    ReaderLocation,  
    TerminalMonitoringType,  
    TransportObjectMessageType -- Transport Means, Package, Goods Item  
}
```

7.3 CS9 :SwapBodyStructure

7.3.1 Description

The 'Swap Body' data structure shall be based on EN 13044 and consist of the following:

- owner code, in accordance with EN 13044;
- equipment category identity, in accordance with EN 13044;
- serial number, in accordance with EN 13044;
- check digit, in accordance with EN 13044;

- length (in centimetres);
- height (in centimetres);
- width (in centimetres);
- container type code, in accordance with EN 13044;
- maximum gross mass (in hundreds of kilograms);
- tare mass (in hundreds of kilograms);
-

7.3.2 ASN.1 type

CS9 ::= SwapBodyStructure

```
SwapBodyStructure ::= SEQUENCE {  
    ownerCode BIT STRING(SIZE(15)), -- EN 13044  
    equipCategoryId BIT STRING(SIZE(3)), -- EN 13044  
    serialNumber INTEGER(0 .. 1000000), -- EN 13044  
    checkDigit INTEGER(0 .. 10), -- EN 13044  
    length INTEGER(1 .. 2048), -- cm  
    height INTEGER(1 .. 512), -- cm  
    width INTEGER(200 .. 327), -- cm (7bits)  
    containerTypeCode INTEGER(0 .. 63), -- EN 13044  
    maximumGrossWeight INTEGER(1 .. 512), -- 100 kg  
    tareWeight INTEGER(0 .. 63) -- 100 kg  
}
```

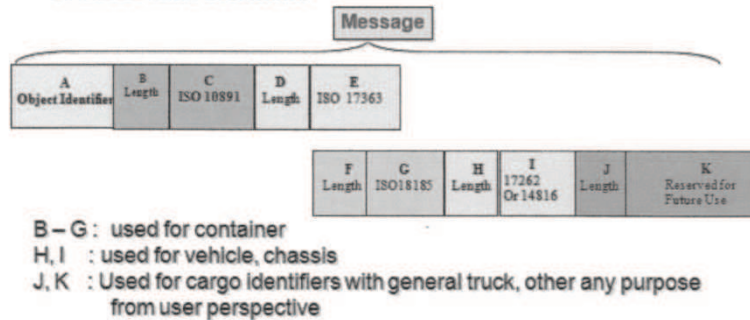
7.4 CS10 : 'Freight Land Conveyance Content Information'

7.4.1 Description

The 'Freight conveyance identifier' is defined as an octet string that shall contain the corresponding identifier in ISO PWI 26683 compliant "Freight Conveyance Content Identification" data".

Suggested Data Element Structure (Draft)

- Suggested data structure comprises of identifiers of container or cargo identifiers directly stored onto truck. Cargo identifiers with general truck shall be stored to reserved area. A user is to be able to communicate by exploiting combination of these data element.



EXAMPLE

7.4.2 ASN.1 type

```
CS10 ::= FreightConveyanceIdentifier
FreightConveyanceIdentifier ::= SEQUENCE {
multipleFreightConveyanceIdentification MultipleFreightConveyanceIdentification,
multipleLoadIdentification MultipleLoadIdentification
}
```

```
MultipleFreightConveyanceIdentification ::= SEQUENCE {
identifierCode INTEGER {
nofreightConveyanceIdentifier (0),
freightContainerIdentification (1),
multipleFreightContainerIdentification (2)
} (0 .. 31),
freightContainerTypeIdentification CS7
}
```

```
MultipleLoadIdentification ::= SEQUENCE {
identifierCode INTEGER {
noLoadIdentifier (0),
transportMeansIdentification (1), --ISO14816
intermodalGoodsTransportationIdentification (2), --ISO17262
freightContainerIdentification (3), --ISO17363
returnableTransportItemsIdentification (4), --ISO17364
transportUnitsIdentification (5), --ISO17365
productPackagingIdentification (6), --ISO17366
goodsItemsIdentification (7), --ISO17367
unused1 (8), -- 8-14 unused
unused2 (9), -- 8-14 unused
unused3 (10), -- 8-14 unused
unused4 (11), -- 8-14 unused
unused5 (12), -- 8-14 unused
}
```

```
unused6 (13), -- 8-14 unused
unused7 (14), -- 8-14 unused
electronicSealsIdentification (15) --ISO18185
--16-999 Reserved for future use (0 .. 999)
} (0 .. 999),
noLoadIdentifier PrintableString OPTIONAL,
transportMeansIdentification PrintableString OPTIONAL,
-- Automatic vehicle and equipment identification-Numbering and data structure,
-- containing the corresponding identifier to be defined in ISO 14816,
intermodalGoodsTransportIdentification PrintableString OPTIONAL,
--Automatic vehicle and equipment identification- Numbering and data structures,
-- containing the corresponding identifier to be defined in ISO17262
freightContainerIdentification PrintableString OPTIONAL,
--Supply chain applications of RFID,
--containing the corresponding identifier to be defined in ISO17363
returnableTransportItemsIdentification PrintableString OPTIONAL,
--Supply chain applications of RFID,
--containing the corresponding identifier to be defined in ISO17364
transportUnitsIdentification PrintableString OPTIONAL,
--Supply chain applications of RFID,
--containing the corresponding identifier to be defined in ISO17365
productPackagingIdentification PrintableString OPTIONAL,
--Supply chain applications of RFID,
--containing the corresponding identifier to be defined in ISO17366
goodsItemsIdentification PrintableString OPTIONAL,
--Supply chain applications of RFID,
--containing the corresponding identifier to be defined in ISO17367
electronicSealsIdentification PrintableString OPTIONAL
--Freight containers
--Part 4: Data protection,
-- containing the corresponding identifier to be defined in ISO18185
}
```

7.5 CS11: ITS consignment in UBL format

7.5.1 Description

CS11 profiles how to populate the UBL transport library data concept : Transport Library::Consignment with data obtained from a freight land conveyance.

CS11 does not specify the air interface used to provide data, it solely provides the means to convert freight consignment data obtained by interrogating a freight land conveyance for data in the format specified by UBL Transport library data concept : 'Transport Library::Consignment' for all of the data concept or for or elements of this data concept as defined in UBL 2.1.

The use of CS11 is OPTIONAL.

In order to comply with ISO 17262, sequence of the OPTIONAL scripts is at the senders' choice (there is no required sequence in ISO 17262).

NOTE 1 These provisions are designed to provide the flexibility to enable only enable parts of the UBL::Consignment data concept to be stored on board and forwarded to a destination where they can be input to the compilation of a UBL data concept, but where it is impracticable or undesirable to hold the whole UML:consignment data concept on board; but to enable those parts stored to be in .xsd form compatible with that required in elements of the UBL::Consignment data concept.

However, in order to claim compliance to UBL2.1, additional discipline is required. Although the use of data element scripts in ISO 17272 is OPTIONAL, and there are no requirements as to sequence, in UBL version 2.1, their use may be mandatory (depending on cardinality), and the order of the sequence is mandatory as specified in UBL 2.1. Those wishing to claim compliance to UBL 2.1 shall refer and comply to <http://docs.oasis-open.org/ubl/prd1-UBL-2.1/UBL-2.1.xml> (Authoritative) or a subsequent version of UBL.

NOTE 2 UBL 2.1 Cardinality:

The optionality and potential occurrences of the BIE.

Cardinality 0..1 – optional and only one

1 – mandatory and only one

Cardinality 0..n – optional and maximum of n

1..n - mandatory and maximum of n

where the letter 'n' represents an unlimited number, and an actual number in place of the letter 'n' is the maximum.

NOTE 3 BIE 'Business Information Entity'

In UBL 2.1 there are three BIE Types:

Basic BIE (BBIE --),

Associate BIE (ASBIE -- “an association”), and

Aggregate BIE (ABIE -- “an aggregate”).

Figure 2 shows the data elements comprising ITS consignment in UBL format. The .xsd script for each element can be obtained from the ASN.1 type definition in 7.5.2 below.

UBL Name	Dictionary Entry Name
<i>Consignment</i>	<i>Consignment Details</i>
ID	Consignment. Identifier
CarrierAssignedID	Consignment. Carrier Assigned_ Identifier. Identifier
ConsigneeAssignedID	Consignment. Consignee Assigned_ Identifier. Identifier
ConsignorAssignedID	Consignment. Consignor Assigned_ Identifier. Identifier
FreightForwarderAssignedID	Consignment. Freight Forwarder Assigned_ Identifier. Identifier
BrokerAssignedID	Consignment. Broker Assigned_ Identifier. Identifier
ContractedCarrierAssignedID	Consignment. Contracted Carrier Assigned_ Identifier. Identifier
PerformingCarrierAssignedID	Consignment. Performing Carrier Assigned_ Identifier. Identifier
SummaryDescription	Consignment. Summary_ Description. Text
TotalInvoiceAmount	Consignment. Total_ Invoice Amount. Amount
DeclaredCustomsValueAmount	Consignment. Declared Customs_ Value. Amount
TariffDescription	Consignment. Tariff Description. Text
TariffCode	Consignment. Tariff Code. Code
InsurancePremiumAmount	Consignment. Insurance Premium Amount. Amount
GrossWeightMeasure	Consignment. Gross_ Weight. Measure
NetWeightMeasure	Consignment. Net_ Weight. Measure
NetNetWeightMeasure	Consignment. Net Net_ Weight. Measure
ChargeableWeightMeasure	Consignment. Chargeable_ Weight. Measure
GrossVolumeMeasure	Consignment. Gross_ Volume. Measure
NetVolumeMeasure	Consignment. Net_ Volume. Measure
LoadingLengthMeasure	Consignment. Loading_ Length. Measure
Remarks	Consignment. Remarks. Text
HazardousRiskIndicator	Consignment. Hazardous Risk_ Indicator. Indicator

AnimalFoodIndicator	Consignment. Animal_ Food Indicator. Indicator
HumanFoodIndicator	Consignment. Human_ Food Indicator. Indicator
LivestockIndicator	Consignment. Livestock_ Indicator. Indicator
BulkCargoIndicator	Consignment. Bulk Cargo_ Indicator. Indicator
ContainerizedIndicator	Consignment. Containerized_ Indicator. Indicator
GeneralCargoIndicator	Consignment. General Cargo_ Indicator. Indicator
SpecialSecurityIndicator	Consignment. Special_ Security Indicator. Indicator
ThirdPartyPayerIndicator	Consignment. Third Party Payer_ Indicator. Indicator
CarrierServiceInstructions	Consignment. Carrier Service_ Instructions. Text
CustomsClearanceServiceInstructions	Consignment. Customs Clearance Service_ Instructions. Text
ForwarderServiceInstructions	Consignment. Forwarder Service_ Instructions. Text
SpecialServiceInstructions	Consignment. Special Service_ Instructions. Text
SequenceID	Consignment. Sequence Identifier. Identifier
ShippingPriorityLevelCode	Consignment. Shipping Priority Level Code. Code
HandlingCode	Consignment. Handling Code. Code
HandlingInstructions	Consignment. Handling_ Instructions. Text
Information	Consignment. Information. Text
TotalGoodsItemQuantity	Consignment. Total_ Goods Item Quantity. Quantity
TotalTransportHandlingUnitQuantity	Consignment. Total_ Transport Handling Unit Quantity. Quantity
InsuranceValueAmount	Consignment. Insurance_ Value. Amount
DeclaredForCarriageValueAmount	Consignment. Declared For Carriage_ Value. Amount
DeclaredStatisticsValueAmount	Consignment. Declared Statistics_ Value. Amount
FreeOnBoardValueAmount	Consignment. Free On Board_ Value. Amount
SpecialInstructions	Consignment. Special_ Instructions. Text
SplitConsignmentIndicator	Consignment. Split Consignment_ Indicator. Indicator
DeliveryInstructions	Consignment. Delivery_ Instructions. Text
ConsignmentQuantity	Consignment. Consignment_ Quantity. Quantity
ConsolidatableIndicator	Consignment. Consolidatable_ Indicator. Indicator
HaulageInstructions	Consignment. Haulage_ Instructions. Text
LoadingSequenceID	Consignment. Loading_ Sequence Identifier. Identifier
ConsigneeParty	Consignment. Consignee_ Party. Party
ExporterParty	Consignment. Exporter_ Party. Party
ConsignorParty	Consignment. Consignor_ Party. Party
ImporterParty	Consignment. Importer_ Party. Party
CarrierParty	Consignment. Carrier_ Party. Party
FreightForwarderParty	Consignment. Freight Forwarder_ Party. Party
NotifyParty	Consignment. Notify_ Party. Party
OriginalDespatchParty	Consignment. Original Despatch_ Party. Party
FinalDeliveryParty	Consignment. Final Delivery_ Party. Party
PerformingCarrierParty	Consignment. Performing Carrier_ Party. Party
SubstituteCarrierParty	Consignment. Substitute Carrier_ Party. Party
LogisticsOperatorParty	Consignment. Logistics Operator_ Party. Party
TransportAdvisorParty	Consignment. Transport Advisor_ Party. Party
HazardousItemNotificationParty	Consignment. Hazardous Item Notification_ Party. Party
InsuranceParty	Consignment. Insurance_ Party. Party
MortgageHolderParty	Consignment. Mortgage Holder_ Party. Party
BillOfLadingHolderParty	Consignment. Bill Of Lading Holder_ Party. Party

OriginalDepartureCountry	Consignment. Original Departure_ Country. Country
FinalDestinationCountry	Consignment. Final Destination_ Country. Country
TransitCountry	Consignment. Transit_ Country. Country
TransportContract	Consignment. Transport_ Contract. Contract
OriginalDespatchTransportationService	Consignment. Original Despatch_ Transportation Service. Transportation Service
FinalDeliveryTransportationService	Consignment. Final Delivery_ Transportation Service. Transportation Service
DeliveryTerms	Consignment. Delivery Terms
PaymentTerms	Consignment. Payment Terms
CollectPaymentTerms	Consignment. Collect_ Payment Terms. Payment Terms
DisbursementPaymentTerms	Consignment. Disbursement_ Payment Terms. Payment Terms
PrepaidPaymentTerms	Consignment. Prepaid_ Payment Terms. Payment Terms
FreightAllowanceCharge	Consignment. Freight_ Allowance Charge. Allowance Charge
ExtraAllowanceCharge	Consignment. Extra_ Allowance Charge. Allowance Charge
MainCarriageShipmentStage	Consignment. Main Carriage_ Shipment Stage. Shipment Stage
PreCarriageShipmentStage	Consignment. Pre Carriage_ Shipment Stage. Shipment Stage
OnCarriageShipmentStage	Consignment. On Carriage_ Shipment Stage. Shipment Stage
TransportHandlingUnit	Consignment. Transport Handling Unit
FirstArrivalPortLocation	Consignment. First Arrival Port_ Location. Location
LastExitPortLocation	Consignment. Last Exit Port_ Location. Location
ConsolidatedShipment	Consignment. Consolidated_ Shipment. Shipment

Figure 2 UBL Transportation library ::Consignment
(Source: OASIS : UBL-CommonLibrary-2.1)

7.5.2 ASN.1 type

The following script is draft to be passed through an ASN.1 compiler

NOTE **bold font** is used within this clause to enable easy identification of the separate elements of this long data concept. The script when used should not be in bold font.

7.5.2.1 Summary of UBL 2.1 ::Consignment

The ITS consignment in UBL format data concept is summarised as follows:

```

ConsignmentType ::= SEQUENCE {
    id                                     ID-1,
    carrierAssignedID                     CarrierAssignedIDOPTIONAL,
    consigneeAssignedID                   ConsigneeAssignedIDOPTIONAL,
    consignorAssignedID                   ConsignorAssignedIDOPTIONAL,
    freightForwarderAssignedID            FreightForwarderAssignedIDOPTIONAL,
    brokerAssignedID                      BrokerAssignedIDOPTIONAL,
    contractedCarrierAssignedID            ContractedCarrierAssignedIDOPTIONAL,
    performingCarrierAssignedID            PerformingCarrierAssignedIDOPTIONAL,
    summaryDescription-list               SummaryDescription,
    SEQUENCEOF summaryDescription SummaryDescription,
    totalInvoiceAmount                    TotalInvoiceAmountOPTIONAL,
    declaredCustomsValueAmount             DeclaredCustomsValueAmountOPTIONAL,
    tariffDescription-list                 TariffDescription,
    SEQUENCEOF tariffDescription TariffDescription,
    tariffCode                             TariffCodeOPTIONAL,
    insurancePremiumAmount                 InsurancePremiumAmountOPTIONAL,
    grossWeightMeasure                     GrossWeightMeasureOPTIONAL,
    netWeightMeasure                       NetWeightMeasureOPTIONAL,
    netNetWeightMeasure                     NetNetWeightMeasureOPTIONAL,
    chargeableWeightMeasure                 ChargeableWeightMeasureOPTIONAL,

```

grossVolumeMeasure	GrossVolumeMeasureOPTIONAL,
netVolumeMeasure	NetVolumeMeasureOPTIONAL,
loadingLengthMeasure	LoadingLengthMeasureOPTIONAL,
remarks-list	SEQUENCEOF remarks Remarks,
hazardousRiskIndicator	HazardousRiskIndicatorOPTIONAL,
animalFoodIndicator	AnimalFoodIndicatorOPTIONAL,
humanFoodIndicator	HumanFoodIndicatorOPTIONAL,
livestockIndicator	LivestockIndicatorOPTIONAL,
bulkCargoIndicator	BulkCargoIndicatorOPTIONAL,
containerizedIndicator	ContainerizedIndicatorOPTIONAL,
generalCargoIndicator	GeneralCargoIndicatorOPTIONAL,
specialSecurityIndicator	SpecialSecurityIndicatorOPTIONAL,
thirdPartyPayerIndicator	ThirdPartyPayerIndicatorOPTIONAL,
carrierServiceInstructions	CarrierServiceInstructionsOPTIONAL,
customsClearanceServiceInstructions	CustomsClearanceServiceInstructionsOPTIONAL,
forwarderServiceInstructions	ForwarderServiceInstructionsOPTIONAL,
specialServiceInstructions	SpecialServiceInstructionsOPTIONAL,
sequenceID	SequenceIDOPTIONAL,
shippingPriorityLevelCode	ShippingPriorityLevelCodeOPTIONAL,
handlingCode	HandlingCodeOPTIONAL,
handlingInstructions	HandlingInstructionsOPTIONAL,
information	InformationOPTIONAL,
totalGoodsItemQuantity	TotalGoodsItemQuantityOPTIONAL,
totalTransportHandlingUnitQuantity	TotalTransportHandlingUnitQuantityOPTIONAL,
insuranceValueAmount	InsuranceValueAmountOPTIONAL,
declaredForCarriageValueAmount	DeclaredForCarriageValueAmountOPTIONAL,
declaredStatisticsValueAmount	DeclaredStatisticsValueAmountOPTIONAL,
freeOnBoardValueAmount	FreeOnBoardValueAmountOPTIONAL,
specialInstructions-list	SEQUENCEOF specialInstructions SpecialInstructions,
splitConsignmentIndicator	SplitConsignmentIndicatorOPTIONAL,
deliveryInstructions-list	SEQUENCEOF deliveryInstructions DeliveryInstructions,
consignmentQuantity	ConsignmentQuantityOPTIONAL,
consolidatableIndicator	ConsolidatableIndicatorOPTIONAL,
haulageInstructions-list	SEQUENCEOF haulageInstructions HaulageInstructions,
loadingSequenceID	LoadingSequenceIDOPTIONAL,
consigneeParty	ConsigneePartyOPTIONAL,
exporterParty	ExporterPartyOPTIONAL,
consignorParty	ConsignorPartyOPTIONAL,
importerParty	ImporterPartyOPTIONAL,
carrierParty	CarrierPartyOPTIONAL,
freightForwarderParty	FreightForwarderPartyOPTIONAL,
notifyParty	NotifyPartyOPTIONAL,
originalDespatchParty	OriginalDespatchPartyOPTIONAL,
finalDeliveryParty	FinalDeliveryPartyOPTIONAL,
performingCarrierParty	PerformingCarrierPartyOPTIONAL,
substituteCarrierParty	SubstituteCarrierPartyOPTIONAL,
logisticsOperatorParty	LogisticsOperatorPartyOPTIONAL,
transportAdvisorParty	TransportAdvisorPartyOPTIONAL,
hazardousItemNotificationParty	HazardousItemNotificationPartyOPTIONAL,
insuranceParty	InsurancePartyOPTIONAL,
mortgageHolderParty	MortgageHolderPartyOPTIONAL,
billOfLadingHolderParty	BillOfLadingHolderPartyOPTIONAL,
originalDepartureCountry	OriginalDepartureCountryOPTIONAL,
finalDestinationCountry	FinalDestinationCountryOPTIONAL,
transitCountry-list	SEQUENCEOF transitCountry TransitCountry,
transportContract	TransportContractOPTIONAL,
originalDespatchTransportationService	OriginalDespatchTransportationServiceOPTIONAL,
finalDeliveryTransportationService	FinalDeliveryTransportationServiceOPTIONAL,
deliveryTerms	DeliveryTermsOPTIONAL,
paymentTerms	PaymentTermsOPTIONAL,
collectPaymentTerms	CollectPaymentTermsOPTIONAL,