



DANGEROUS GOODS PANEL (DGP) MEETING OF THE WORKING GROUP OF THE WHOLE

Auckland, New Zealand, 4 to 8 May 2009

Agenda Item 6: Other business

DEVELOPMENT OF DATA STANDARDS FOR ELECTRONIC DATA TRANSMISSION OF THE DANGEROUS GOODS TRANSPORT DOCUMENT

(Presented by D. Brennan)

SUMMARY

This paper is provided as a follow-up to the changes incorporated into the 2009-2010 edition of the Technical Instructions with respect to provisions for electronic data transmission of the information required on the dangerous goods transport document.

1. INTRODUCTION

1.1 At the twenty-first meeting of the Dangerous Goods Panel, (DGP/21), the DGP agreed to revisions to Part 5;4 and Part 7;1 of the Technical Instructions to permit the use of electronic data transmission in lieu of a paper dangerous goods transport document and set out some conditions with respect to the use of electronic data for the information required by Part 5;4.

1.2 Following on from this work at the DGP similar proposals were put to the UN Subcommittee of Experts at the thirty-fourth session of the Subcommittee in December 2008. The proposals were adopted, which will result in changes being incorporated into the 16th revised edition of the UN Model Regulations.

1.3 In December 2008, IATA established a task force to develop the Shipper's Declaration for Dangerous Goods (dangerous goods transport document) data standards to support the IATA e-freight project. Given the decision of the Subcommittee to adopt provisions to facilitate the use of electronic data transmission, as well as the belief that any electronic data standard should be truly multi-modal, the task force included members representing shippers, freight forwarders, solutions providers, maritime transport (VOHMA) and airlines as well as representatives from UN Centre for Trade Facilitation and Electronic Business (CEFACT) and the UNECE Secretariat. While there is no person identified to represent road and rail transport, a number of the representatives have experience with ADR and were able to provide a road transport perspective for the data requirements. In establishing this task force IATA accepted that the use of electronic data transmission for the information required on the dangerous goods transport

document will always be subject to the national laws in the applicable State, notwithstanding what may be in the Technical Instructions.

1.4 From December 2008 until late March 2009 the task force convened almost weekly by teleconference, and one face-to-face meeting in Geneva in February 2009, to identify and document all of the data elements that will need to be incorporated into the standards for an electronic dangerous goods transport document. The basis for the discussions has been the Model Regulations together with the ICAO Technical Instructions, IATA Dangerous Goods Regulations, IMO IMDG Code and ADR to identify the modal differences/additions.

1.5 The initial work of the task force to identify and document all of the required data elements was completed in late March 2009 with V 1.0 of the draft functional specification, copy attached.

1.6 The next phase in the work is the development of an XML schema that will incorporate all of the possible data elements in a structure that can be used to transmit the information required in a dangerous goods transport document. The naming and structure of this XML schema will be based on the UN CEFAC Core Component Library as well as the UN CEFAC XML naming and design rules standards to ensure that the XML schema complies with the defined international standards.

1.7 Once developed, the XML schema will be tested against actual completed dangerous goods transport documents to validate that the content and structure of the schema can handle real-world shipments.

1.8 This testing phase will be followed by a proof of concept phase where actual dangerous goods consignments will be transported from consignor to consignee in parallel with a paper dangerous goods transport document to verify that all parties in the supply chain are able to manage a dangerous goods consignment using electronic data in lieu of the paper document. The target for the proof of concept is for this to commence by the fourth quarter of 2009.

2. ACTION

2.1 The DGP-WG is invited to note the progress of this work and is invited to pass this information to any parties to whom the information may be of interest.

ATA Standard Message Functional Specifications

ATA SHIPPERS' DECLARATION FOR DANGEROUS GOODS

All information used and communicated within this document is proprietary and confidential to IATA.

Functional Name	M/O	OCC	Type	Charac. Repr.	IATA Standard Message			Description	Explanation	Conditions Required for			Code List	Example & Note	References		DATA SECURITY	
					M	O	N			Air	Road	Maritime			Rail	UNTEDD		WCO
SHIPPERS' DECLARATION FOR DG HEADER	M	1:1	AN	an...35	Grouping Element													
Shipper's Reference Number	O	0:1	AN	an...35	Reference number assigned by the shipper.										1140		Applies	
Freight Forwarder's Reference Number	O	0:1	AN	an...35	Reference number assigned by the freight forwarder.										1460			
Booking Number	O	0:1	AN	an...35	Booking reference number of the carrier.										1018			
Reference Documents	O	0:n	AN	an...35	Grouping Element													
Document Reference Number	M	1:1	AN	an...35	Contains the Number being referenced within the document (e.g. Air Waybill number).										1004			
Document Type	O	0:1	AN	an...35	Contains the Type of the referenced document. UN EDIFACT 1001 Document/message name, code list.										1001			
Document Name	M	1:1	AN	an...35	Contains the Name of the referenced document. Free Text or the UNEDIFACT 1001 Document/message name, code list can be used.										1000			
Shipper Details	M	1:1	AN	an...35	Grouping Element													
Shipper Internal ID	O	0:1	AN	an...35	Internal ID assigned to the Shipper.										3031	042		
Agency Code	O	0:1	AN	an...35	Reference identifying the Standard ID. UNEDIFACT 3055 Code list responsible agency code.										3039	238		
Shipper Standard ID	O	0:1	AN	an...35	The Standard ID is used to identify the Shipper using a 3rd Party Identifier such as EAN, DUNS etc.													
Shipper Name And Address	M	1:1	AN	an...35	Grouping Element													
Shipper Name	M	1:1	AN	an...35	Contains the Shipper's name or legal identity. In case additional names need to be specified, the different names should be separated by a specific character.										3030	041		
PO Box	O	0:1	AN	an...35	Contains the post office box number.										3042	239		
Street	M	1:1	AN	an...35	Contains the street address. In case additional street names need to be specified, the different names should be separated by a specific character.										3042	239		
Department	O	0:1	AN	an...35	Contains the company, department name or number.										3412	246		
Zip/Postal Code	O	0:1	AN	an...9	Contains the ZIP/Postal Code corresponding to the street address.										3251	245		
Region Name	O	0:1	AN	an...9	Contains the name of the region within a country specific to this address. Used to hold the state in US addresses. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3228	243		
City Name	M	1:1	AN	an...17	Contains the name of the city. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3164	241		
Country Code	M	1:1	A	a2	Contains the ISO Country Codes ISO 3166-1/1988. UNECE Recommendation N° 3 - Code for the Representation of Names of Countries.										3207	242		
Country name	O	0:1	AN	an...35	Contains the name of the country.										3206			
Shipper Contact Information	M	1:1	AN	an...35	Grouping Element													
Shipper Contact Name	O	0:1	AN	an...35	Contains the Shipper contact name of the department or person.										3412	246		
List of Contact Numbers	O	0:n	AN	an...25	Grouping Element													
Phone Number	O	0:1	AN	an...25	Contains the phone number of the contact department or person. The reference identifying the Telephone Number field is specified as "TE".										3148	240		
Consignee Details	M	1:1	AN	an...35	Grouping Element													
Consignee Internal ID	O	0:1	AN	an...35	Internal ID assigned to the Consignee.										3021	040		
Agency Code	O	0:1	AN	an...35	Reference identifying the Standard ID. Field is hardcoded to "EAN". "DunAndBradStreet", "UCS", etc.										3039	238		
Consignee Standard ID	O	0:1	AN	an...35	The Standard ID is used to identify the Consignee using a 3rd Party Identifier such as EAN, DUNS etc.													
Consignee Name And Address	M	1:1	AN	an...35	Grouping Element													
Consignee Name	M	1:1	AN	an...35	Contains the Consignee's name or legal identity. In case additional names need to be specified, the different names should be separated by a specific character.										3020	039		
PO Box	O	0:1	AN	an...35	Contains the post office box number.										3042	239		
Street	M	1:1	AN	an...35	Contains the street address. In case additional street names need to be specified, the different names should be separated by a specific character.										3042	239		
Department	O	0:1	AN	an...35	Contains the company, department name or number.										3412	246		
Zip/Postal Code	O	0:1	AN	an...9	Contains the ZIP/Postal Code corresponding to the street address.										3251	245		
Region Name	O	0:1	AN	an...9	Contains the name of the region within a country specific to this address. Used to hold the state in US addresses. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3228	243		
City Name	M	1:1	AN	an...17	Contains the name of the city. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3164	241		
Country Code	M	1:1	A	a2	Contains the ISO Country Codes ISO 3166-1/1988. UNECE Recommendation N° 3 - Code for the Representation of Names of Countries.										3207	242		
Country name	O	0:1	AN	an...35	Contains the name of the country.										3206			
Consignee Contact Information	M	1:1	AN	an...35	Grouping Element													
Consignee Contact Name	O	0:1	AN	an...35	Contains the Consignee contact name of the department or person.										3412	246		
List of Contact Numbers	O	0:n	AN	an...25	Grouping Element													
Phone Number	O	0:1	AN	an...25	Contains the phone number of the contact department or person. The reference identifying the Telephone Number field is specified as "TE".										3148	240		
List of Other Party Details	O	0:n	AN	an...25	Grouping Element - If more than one Party is specified a business logic should be designed to establish a sequence of additional parties if required. Standard codes from UNEDIFACT 3035 Party function code qualifier can be used.													
Party Type	M	1:1	AN	an...25	Internal ID assigned to the Party.										3035		7	
Other Party Internal ID	O	0:1	AN	an...25	Internal ID assigned to the Party.										3039			
Agency Code	O	0:1	AN	an...25	Reference identifying the Standard ID. Field is hardcoded to "EAN". "DunAndBradStreet", "UCS", etc.										3039	238		
Other Party Standard ID	O	0:1	AN	an...25	The Standard ID is used to identify the Carrier using a 3rd Party Identifier such as EAN, DUNS etc.													
Other Party Name And Address	M	1:1	AN	an...25	Grouping Element													
Other Party Name	M	1:1	AN	an...25	Contains the name or legal identity of the Other Party. In case additional names need to be specified, the different names should be separated by a specific character.										3036			
PO Box	O	0:1	AN	an...25	Contains the post office box number.										3042	239		
Street	M	1:1	AN	an...25	Contains the street address. In case additional street names need to be specified, the different names should be separated by a specific character.										3042	239		
Department	O	0:1	AN	an...25	Contains the company, department name or number.										3412	246		
Zip/Postal Code	O	0:1	AN	an...9	Contains the ZIP/Postal Code corresponding to the street address.										3251	245		
Region Name	O	0:1	AN	an...9	Contains the name of the region within a country specific to this address. Used to hold the state in US addresses. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3228	243		
City Name	M	1:1	AN	an...17	Contains the name of the city. The code related to the name can be identified in the UNECE Recommendation N° 16 - LOCODE - Code for Trade and Transport Locations.										3164	241		
Country Code	M	1:1	A	a2	Contains the ISO Country Codes ISO 3166-1/1988. UNECE Recommendation N° 3 - Code for the Representation of Names of Countries.										3207	242		

IATA Standard Message Functional Specifications

IATA SHIPPERS' DECLARATION FOR DANGEROUS GOODS

All information used and communicated within this document is proprietary and confidential to IATA

Functional Name	M/O	OCC	Type	Charac. Repr.	Description	Conditions			Code	Code List	Example & Note	References		DATA SECURITY
						Explanation	Required For					UNTTED	WCO	
							Air	Road						
Flashpoint	O	0:1	AN		The lowest temperature at which a liquid produces enough vapor to form an ignitable mixture in air.							7088		
Marine Pollutant	O	0:1	AN		An indicator if these transported dangerous goods have a marine pollutant content.			X						
Tunnel Restriction Code	O	0:1	AN		Code related to the restrictions for the transport of dangerous goods in Tunnels			X						
Hazard Identification Code	O	0:1	AN		Code indicating the hazards of the substance transporter				X					
SP 640	O	0:1	AN		Indicates that the Special provision number 640 applies			X						
Transport Category	O	0:1	AN		Code indicating the hazards of the transport category			X						
IMDG Code Segregation Group	O	0:1	AN		IMDG Code Segregation Group and number			X						
Temperature	O	0:1	AN		Grouping Element									
Control Temperature	O	0:1	AN		Specifies the control temperature in °C									
Emergency Temperature	O	0:1	AN		Specifies the emergency temperature in °C							6242		
Unit of measurement	M	1:1	A		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used. In case of transport of radioactive materials the units of measure to be used is Becquerel, multiples of Becquerel, Grams or multiples of Grams					Litre, L, ml, kilogram, kg, gram, etc.				
Quantity	M	1:1	N		The total quantity of dangerous goods transported of this line item.									
Packing instruction number	O	0:1	AN		The packing instruction number applicable to the UN number / proper shipping name entry. A three-numeric value which may be preceded by the letter "Y".			X		372, Y305				
Authorisations	O	0:1	AN		Contains additional information relating to an approval, permission or other specific detail applicable to the commodity (e.g. Dangerous Goods in excepted quantities)					LTD QTY, A2, certificate number, etc.				
All packed in one	O	0:1	AN		A statement identifying that the dangerous goods listed above are all contained in the same outer packaging. Takes the form "All packed in one aaaa (description of packaging type) x nn (number of packages)".			X		All packed in one fiberboard box x 3				
Q' value	O	0:1	AN		Most instances of "all packed in one" will require the addition of the Q value which ≤ 1.			X		Q = 0.8				
Overpack	O	0:1	AN		Required to be shown when individual packages are assembled into a single unit for handling. The statement "Overpack used" must be inserted immediately after all of the relevant entries relating to the packages within the overpack.			X						
Radioactive materials	O	0:1			Grouping Element					In case of transport of radioactive materials this grouping element is mandatory				
Radionuclide	M	1:1	AN		The name or symbol of each radionuclide or for mixtures of radionuclides, an appropriate general description, or a list of the most restrictive radionuclides.					Sr-90, Iridium - 192				
Description	M	1:1	AN		A description of the physical and chemical form of the material.					metal solid, special form				
Physical and chemical form	O	0:1	AN											
Special Form	O	0:1	AN		A notation that the material is "special form"									
LDM	O	0:1	AN		A notation that the material is "low dispersible radioactive material".									
Category	M	1:1	A		The category of the package, overpack or freight container. I.e. I-White, II-Yellow, III-Yellow.					TI 3.0				
Transport Index	O	0:1	AN		Applies to categories II-Yellow and III-Yellow only. A numeric value expressed to one decimal place preceded by the letters "TI".					CSI 12				
Criticality Safety Index	O	0:1	AN		Applies to fissile material only, other than fissile excepted. A numeric value expressed to one decimal place preceded by the letters "CSI".									
Fissile excepted	O	0:1	AN		Indicates if Fissile is excepted									
Line Item Note	O	0:1	AN		Contains an item level text note. Free text									
SHIPPERS' DECLARATION FOR DG PACKAGING DETAIL	M	1:1			Grouping Element									Applies
List of Package Detail	O	0:1			Grouping Element - Repeated per unique Logistics Unit									
Package Details	M	1:1			Grouping Element									
Packaging Type Code	M	0:1	AN		Identifies the Logistic Unit package type. UN Recommendation on Transport of Dangerous Goods, Model Regulations							7065	141	
Packaging Type Description	M	1:1	AN		Free text. Describes the package type.							7064		
Number of Packages	M	1:1	AN		Identifies the number of logistics unit that are being described.							7224		
List of Packages	O	0:1			Grouping Element									
Package Item ID	O	0:1	AN		Logistics Unit ID. The package ID is an incremental number that identifies each logistic unit being described.							7075		
Package ID From	O	0:1	AN		Logistics Unit ID. The package ID from is the first incremental number that identifies each logistic unit being described.							7070		
Package ID To	O	0:1	AN		Logistics Unit ID. The package ID to is the last incremental number that identifies each logistic unit being described.							7070		
Package Gross Weight Unit Of Measurement	O	0:1	AN		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used					CODED	KECE Rec.	6022		
Package Gross Weight	O	0:1	AN		Package gross weight									
Package Net Weight Unit Of Measurement	O	0:1	AN		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used					CODED	KECE Rec.	6026		
Package Net Weight	O	0:1	AN		Package net weight									
Package Volume Unit Of Measurement	O	0:1	AN		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used					CODED	KECE Rec.	6028		
Package Volume	O	0:1	AN		Package volume									
Package Length Unit Of Measurement	O	0:1	AN		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used					CODED	KECE Rec.	6096		
Package Length	O	0:1	AN		Package length									
Package Width Unit Of Measurement	O	0:1	AN		Indicates the Unit of Measure from the Code List. UNECE Recommendation N° 20 - Codes for Units of Measure Used in International Trade - Annex 1 can be used					CODED	NECE Rec 20	6098		

IATA Standard Message Functional Specifications

IATA SHIPPERS' DECLARATION FOR DANGEROUS GOODS

All information used and communicated within this document is proprietary and confidential to IATA

Functional Name	M/O	OCC	Type	Charac. Repr.	IATA Standard Message				Description	Conditions			Codes		Example & Note	References		DATA SECURITY	
					Explanation	Required for				Code	Code List	UNTTED	WCO						
						Air	Road	Maritime						Rail					
Package Width	O	0-1	AN																
Package Height	O	0-1	AN																
Line Item Reference Number	O	0-1	AN																
Dangerous Goods Line-Item Reference Number	O	0-1	AN																
Sub-Package Detail	O	0-1	AN																
Base Unit Package Type Code	M	1-1	AN																
Base Unit Package Type Description	M	1-1	AN																
Number of Base Units	M	1-1	AN																
List of Sub-Packages/Units	M	1-1	AN																
Package Item ID	O	0-1	AN																
Package ID From	O	0-1	AN																
Package ID To	O	0-1	AN																
Package Gross Weight Unit Of Measurement	O	0-1	AN																
Package Gross Weight	O	0-1	AN																
Package Net Weight Unit Of Measurement	O	0-1	AN																
Package Net Weight	O	0-1	AN																
Package Volume Unit Of Measurement	O	0-1	AN																
Package Volume	O	0-1	AN																
Package Length Unit Of Measurement	O	0-1	AN																
Package Length	O	0-1	AN																
Package Width Unit Of Measurement	O	0-1	AN																
Package Width	O	0-1	AN																
Package Height Unit Of Measurement	O	0-1	AN																
Package Height	O	0-1	AN																
Line Item Reference Number	O	0-1	AN																
Dangerous Goods Line-Item Reference	M	1-1	AN																
ADDITIONAL HANDLING INFORMATION																			
Other information	O	0-1	AN																
Exclusive use shipment	O	0-1	AN																
SHIPPERS' DECLARATION FOR DG SUMMARY																			
Total Tare Unit Of Measurement	M	1-1	AN																
Total Tare Weight	O	0-1	AN																
Total Gross Weight including Tare Unit Of Measurement	O	0-1	AN																
Total Gross including Tare Weight	O	0-1	AN																
Declaration Details	O	0-1	AN																
Consignor Declaration	M	1-1	AN																
Consignor Name	M	1-1	AN																
Consignor Declaration Date	M	1-1	D																
Consignor Declaration Place	M	1-1	AN																
Consignor Declaration Text	M	1-1	AN																
Consignor Declaration signature	M	1-1	AN																
Container/Vehicle Packing Certificate	O	0-1	AN																
Declarant Company Name	O	0-1	AN																
Declarant Name	M	1-1	AN																
Declarant Title/Status	O	0-1	AN																
Declarant Declaration Date	M	1-1	D																
Declarant Declaration Place Name	O	0-1	AN																
Declarant Declaration Text	M	1-1	AN																
Declarant Signature	M	1-1	AN																
Driver Information	O	0-1	AN																
Driver Name	O	0-1	AN																
Driver reference	O	0-1	AN																
Driver signature	O	0-1	AN																
Driver Declaration Date	O	0-1	D																
Summary Note	O	0-1	AN																

Control temperature: 35° C. Responsible person: Dr. I. Brown, Tel: + 1 514 123 4567

6156

6012

131

3336

2179

3410

4428

4427

3036

3036

2001

3410

4426

4427

3036

1153

4427

2001

4150