





Ralf Gutbrod, Raildata

Malmö, 24.11.2011





In March 2008, 20 of the greatest railway freight operators, such as DB Schenker, SNCF, Trenitalia and others, decided to develop and implement the ECN (Electronic Consignment Note), in order to send transport documents via EDI instead of using accompanying consignment notes.

A project group under monitoring of the CIT and the UIC elaborated the technical specifications until the beginning of 2009. In March 2009 the full specifications were provided, including a fully operational message flow model and a message scheme in xml, developed by RAILDATA





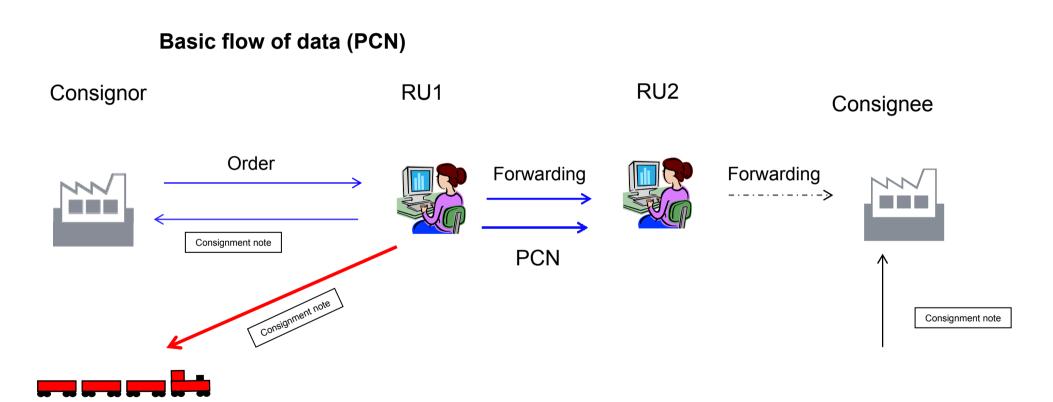
ECN/PCN consists of two basic ways of message processing:

1) PCN

The PCN flow and process is designed for transports, that still require a paper consignment note or a accompanying transport document.



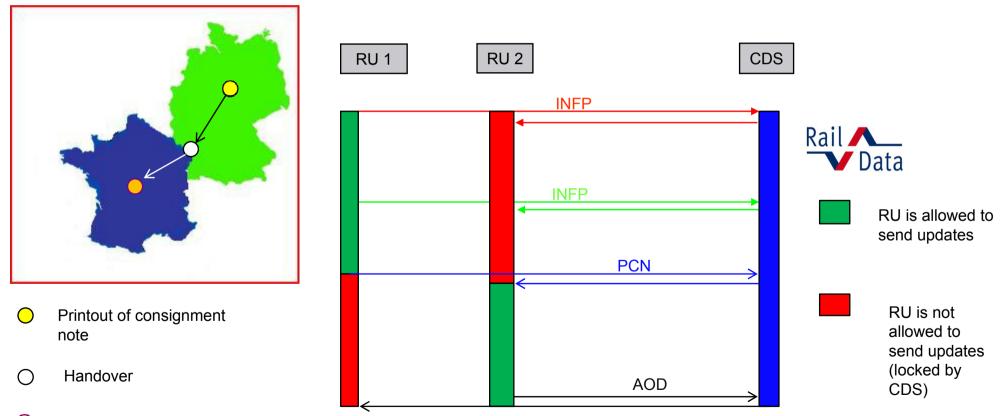








INFP and PCN contain **all** consignment note data; consignment note accompanies transport



Oconsignment arrives





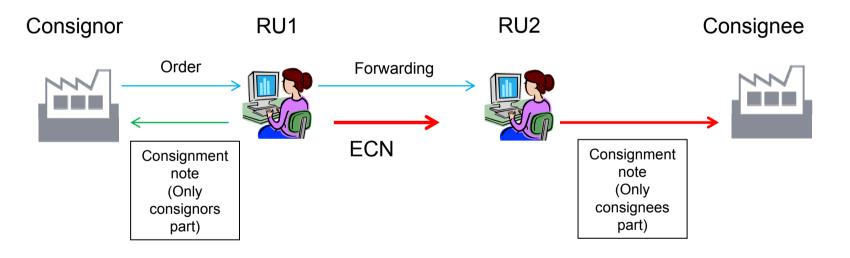
2) ECN

By using the ECN flow, RUs are able to skip the accompanying paper consignment note and spare the handling of the paper during the transport





Flow currently covered by erailfreight process (ECN)

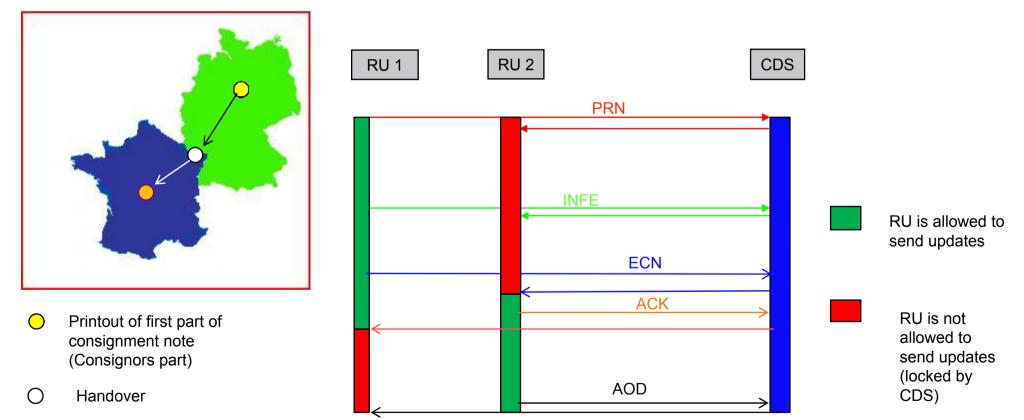








PRN, INFE, ACK, NACK, ECN and AOD contain **all** consignment note data; consignment note does not accompany transport



 Consignment arrives, printout for the consignee is generated





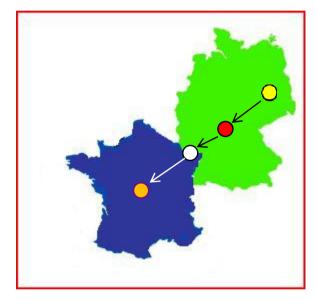
The mixed procedure

If necessary, it may be switched from ECN to PCN. If a printout of the consignment note is done during the transport, the process changes from ECN to PCN, but **never** the other way round. This enables tansports to begin in ECN-scenario and to change to PCN-scenario

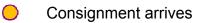


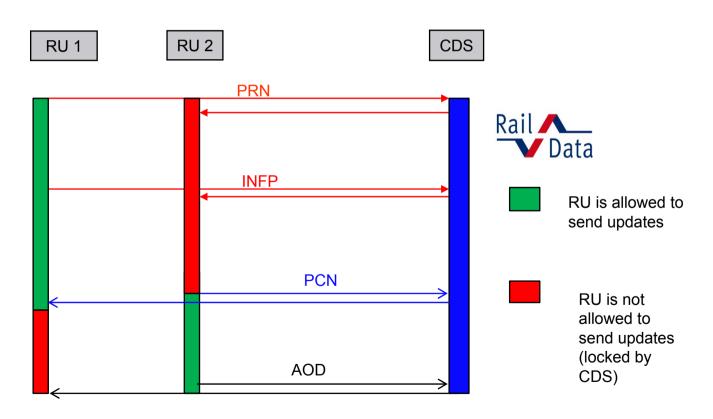


PRN, INFP, PCN and AOD contain **all** consignment note data; at the beginning of transport, consignment note does not accompany transport; after printout it does



- Printout of first part of consignment note (Consignors part)
- Printout of all other parts due to various reasons
- O Handover









The message

The current version is the ECN-xml 1.31, based on xml-version 1.0, encoding =,,ISO-8859-1".





The ECN xml-message contains all consignment note data according to the Appendix 7a GTM-CIT and the Appendix 5a GLW-CUV CIM as well as additional information to be used between railways. It may be used for conventional and intermodal traffic.





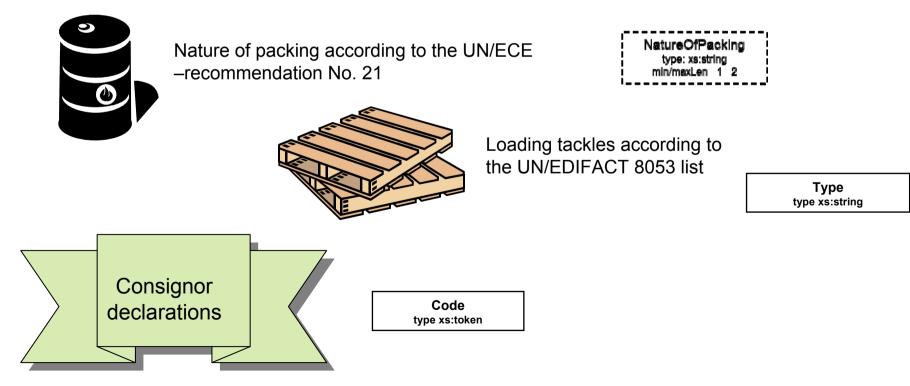






To guarantee interoperability, sensitive information is protected by either the use of codes or the implementation of enumerations,

such as



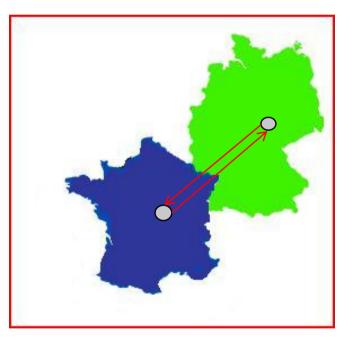




Since November, the 2. of 2011 all conventional transports (wagonload) between DB and SNCF are based on the erailfreight scenario.

Common transports run paperless (ECN)

Transports under special conditions like dangerous goods, customs surveillance etc. are still accompanied by a paper consignment note (PCN)





Example of ECN-Printout



		N° DC: 3245499/2 Id Message: 710110		Nu		0893103 Vers
Ner solf-randon ser stever mot a cut ang cases and and solen the construction of solen the construction for solen the constructio	te X	CUV Consignment No Lettre wagon CUV	ote	40		
Additor, Recorders Derver Terma andread Daniel Tormandond Derver Terma andread Derver Terma a	oditace (norm, admisse)	0076331	0	Consignor's declarations Noclarations de l'expériment	78959 430	annun - Reférence expéditeur
In address to be a set to be a set of the se	5	0076331-15			76959 430	
F-57190 57 - FLORANGE		E Mail				
for the function of the second	63	Tel. +33				
h-adden the misant O Consigning (harms, addings), country h-adden the misant Operational Operation (harms, addings), country	iyi	Ö	0	Decoments Related - Annexes		
the state states of the states		٥.				
Tastersenert Iss	ALLEMA	f-Mad				
Sen an sure esplicibles The transform contractive Destable as de formation de transport fernances de transport fernances MAT Inc. DE128725369		lel. 0049 421437310				
C Delivery point O		8 0 1 3 7	0	Acceptance inorth - day - hore false en charge inoti - jour - hare	110506	20008
		00137	040		110506	
PREYMES BO, BREMEN				LLAC EBANGE France		_
Station - Gore BREMEN HEMELINGEN	Courtey - PA	Allemagne		Wagon nu Wagon Ni		D Sector - Pacault Sy - per
1: FORBACH FRE		- 1 901453	۷	3187 477	6698 4	
			0	Payment instructions ====================================		
Information for the consignee – informations pour to des	sinstano			Palement des frais Carriage changes paid Franco de port		
				Incoterms		
Description of the pands Designation de la marchandles	Ø	Exceptional consignment you Transport exceptioned gui	@RI	D yes and the state	Mass (weight) Masse	Declaration of value
				72103	^{3 0} 49471 Kg Tare:21800	Curvinoy
BOBINE DE TOLE A FROID France(FR), A	lamagaa/DE1 -	for : 7515802-7515070			Tare:21800	Interval in dationy Interval a la Boraiger
BOBINE DE TOLE APROID Prance(PR), A	diemagne(bc) m	108.191909-1919910-				2.1
				(39) Cuatorna ambre Indications dae	sarreets Zrikers	Cash on delivery Reinboursemant Currance Cash on delivery Reinboursemant Cash on delivery Cash on delivery Verification
				La La La La Group and and a second se	L . Narrents Joseffres	Sunarcy
D0 10	(2)				servers Sources	Sunarcy
(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)						Sunarcy
A 8 0 1 3 7 6 4 6 E U		0 3 0	0.00	The second se		Sunarcy
$A_{\underline{0}}^{\underline{0}} \xrightarrow{8,7}{1,9,1,0,1,5,0,0} \xrightarrow{8,7,1,9,1,0,1,5,0,0} \xrightarrow{10,0,0,0} \xrightarrow{8,7,1,9,1,0,1,5,0,0} \xrightarrow{10,0,0,0,0} \xrightarrow{10,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0,0,0} \xrightarrow{10,0,0,0,0,0,0,0,0,0,0} 10,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,$	UR 49		FO	Trensport of the other states of the other states but the The other states BBACH(87).	1 2 1 1	Sunarcy
$A_{\underline{0}} = \begin{bmatrix} 8 & 7 & 1 & 9 & 1 & 0 & 1 & 5 & 0 & 0 \\ \hline & 8 & 0 & 1 & 3 & 7 & 6 & 4 & 6 & E & L \\ \hline & 9 & 0 & 1 & 4 & 5 & 2 & \\ \hline & & & & & & & & & & & \\ \hline & & & &$	UR 49		FOI	Instantion Contract of the second sec	disconnects	Mr - pr
$A_{\underline{0}} = \begin{bmatrix} 8 & 7 & 1 & 9 & 1 & 0 & 1 & 5 & 0 & 0 \\ \hline & 8 & 0 & 1 & 3 & 7 & 6 & 4 & 6 & E & U \\ \hline & 9 & 0 & 1 & 4 & 5 & 2 & 2 & 0 \\ \hline & & & & & & & & & & & & & & & & \\ \hline & & & &$	U R 4 9		Fol	Instantion instantional inst		Mr - pr
$A \begin{bmatrix} 8 & 7 & 1 & 9 & 1 & 0 & 1 & 5 & 0 & 0 \\ 8 & 0 & 1 & 3 & 7 & 6 & 4 & 6 & E & U \\ \hline & 9 & 0 & 1 & 4 & 5 & 2 & & & & \\ \hline & & & & & & & & & & & & & &$	U R 4 9		FOI FOI B) B) B) B) B) B) B) B) B) B) B) B) B)	The second secon	20-01045 20-01045 20-01-014 20-01-01-014 20-01-01-014 20-01-01-01-014 20-01-01-01-01-01-01-01-01-01-01-01-01-01	
$A = \begin{bmatrix} 3 & 3 & 7 & 1 & 9 & 1 & 0 & 1 & 5 & 0 & 0 \\ \hline & & 8 & 0 & 1 & 3 & 7 & 6 & 4 & 6 & E & U \\ \hline & & & & & & & & & & & & & & & \\ \hline & & & &$	UR 49 10 10 10 10 10 10 10 10 10 10 10 10 10		FOI	The second secon	Bostronst The State of State o	Arrent Ar
A B 1 1 1 1 1 1 5 0 C B 0 1 1 3 7 6 4 6 E 1 9 0 1 1 4 5 2 B 0 0 1 4 5 2 C 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	UR 10 10 10 10 10 10 10 10 10 10 10 10 10		FOI	The second secon	Bostronst The State of State o	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	UR 149		FOI	The second secon	Bostopost	Connection C
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	UR 149			The second secon	Bostopost	Arrent Ar
A 8 0 1 3 7 6 4 6 E 9 0 1 4 5 2 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	UR 20 20 20 20 20 20 20 20 20 20 20 20 20	5 0 0 0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Andread Andrea		
A B 0 1 3 7 6 4 6 E C 9 0 1 4 5 2 9 7 7 7 8 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7	UR 20 20 20 20 20 20 20 20 20 20 20 20 20	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	The second secon	Abdresses	
A 8 7 1 9 1 0 1 5 0 0 A 9 0 1 4 5 2 7 0 B 0 1 4 5 2 7 0 C 0 0 0 1 4 5 2 7 0 C 0 0 0 0 1 4 5 2 7 0 C 0 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 PHENE ON CHARGE OF THE OWNER C 0 0 PHENE OWNER C 0 PHENE OWNER	UR 20 20 20 20 20 20 20 20 20 20 20 20 20	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Andread Andrea		
A 8 7 1 9 1 0 1 5 0 0 A 9 0 1 4 5 2 0 B 0 1 4 5 2 0 C 0 0 1 4 5 2 0 C 0 0 0 1 4 5 2 0 C 0 0 0 1 4 5 2 0 C 0 0 0 0 1 4 5 2 0 C 0 0 0 0 0 0 Prise an charge - Districted C 0 0 0 0 0 0 Prise an charge - Districted C 0 0 0 0 0 0 C 0 0 0 C 0 0 C	UR 20 20 20 20 20 20 20 20 20 20 20 20 20	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Andread Andrea	Abdresses	
A B 7 1 9 1 0 1 5 0 0 A B 0 1 3 7 6 4 6 E 9 0 1 4 5 2 C 0 Prove an charge - 05/11/2011 10600 B 0 B 0 B 0 B 0 B 0 B 0 B 0 B	U R 4 9 7 7 7 7 7 7 7 7 7 7 7 7 7	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Andread Andrea	Abdresses	

g	19	D		7/1	nin	0						Ð		0		۲	
chrifte	Į.	Frachtbrie			Jhi	Wage	enbrief					6	-	Ð		1	
tichen Rechtsvorschri n Referienungsbedin-		Absender (Name, AM ATL ET 1	Anschrift)	ANGE		0			Erklaru	ngen des Abse	nders		Absender	Referenz	z	78959	
Rech	and the second s	AL ALL DI .	5010,1 1010	ALC D		0	(07633115	-			L				10333	-
flicher Refis	1	17 AVENUE I	DES TILL	EULS				7.0									
meinen 1	dbar.	F 57190 57		NGE				+33 Fax									
Mon	UNAD A	FR4744471856	3					E-Mail	-								_
chung dia	COTS 2	Empfänger (Name PREYMES BO	, Anschnit, Lan , BREMEN	d)		0	1	L00393651	C Berage	n							
Abma am sir	eförde								1								
Intelligen Abmachung den Aussentem sind die Alton	des 1	ANTON-TUCHI D D-28309 1					0040	1011027010									
MI AL	nugen	DE128725369		D.D.D. UT			0049 42	121437310 Fax 214373119 E-Mail									
A	tiefer	DE128725369 ungsort	0			Ð			() Überna	hme		Monat	Tag Stun	de D			
RE	YME	ES BO, BREMI 7646 BREMEN		N/CIENI		8,0	137	64-6	SOLLA	-	L	11	05 06	5	FR	20008	_
0	137	/646 BREMEI	N HEMELT	NGEN					87 19	1015 EBA							
									()	NGE Fran	ice				Strecke	문 durch	_
hn	nof B	REMEN HEME	LINGEN			æ	Allema	agne Land	3187	177 6698	-4				Jue Che	Lei L	
		BACH FRE				1		901452								Fransitiaktu	
									Achse	n: 4						Trans	
									Zahlun	g der Kosten	Seirhschließ	ich			bis		
Vi	rmeri	ke für den Empfänge	r						Fran	o Fracht							
									Incot	erms							
B	zeich	nnung des Gutes			Ausor	argewähnliche Si	andung ia	_ ● R	ID ja	2 NHM		1	Masse		1 Wert d	les Gutes	
	AGE									721	030		4941	71,0	Wahrung		
51	580	E DE TOLE 3 037515978	B												2 Interes	ise an der Lief	ńen.
															Wahrung		
												-	494	71.0	2 Nachn	ahme	_
										99 Zollar	ntiche Ver	merke	494	71,0	Nachn Wahung	ahme	
										(1) Zollar	ntiche Ver	merke	494	71,0	Wahrung		
										(g) Zollar	ntiche Ver	merke	494	71,0			
										(1) Zollar	ntiche Ver	merke	4947	71,0	Wahrung		
										(g) Zolar	ntiche Ver	merko	4947	71,0	Wahrung		
										(g) Zolar	ntiche Ver	merko	4947	71,0	Wahrung		
et	rie	abl. Sonder	rbeh.: 3	9						(1) Zotar	ntiche Ver	merko	4947	71,0	Webung 49 Überpi		
et	_	ebl. Sonder	rbeh.: 3	(2)	0		0				ntliche Ver	merke	494	71,0	Wahrung		
-	9	87		0		721030			Frankature	ode 10	ntiche Ver	merko	494*	71,0	Webung 49 Überpi		
6	9	87 80 80	00	0 G	UR @	49500,0			@ Frankaturi @Leitun 87 76	ode 10	ntiche Ver	merko	4941	71,0	Webung 49 Überpi		
0	9	87	00	0 0 E	UR B	49500,0	Gebähren		Frankature B Leitun 8776	ode 10	ntiche Ver	merko	494*	71,0	Webung 49 Überpi		
000	9	87 80 90145:	00	0 0 0	07 UR (9 (0	49500,0	Gebühren		Solution States	ode 10	ntliche Ver	merke	4947		Wahung Oberpa durch		
0 0	9	87 80 80	00	0 0 0 0	07 UR (9 (0 (0) (9)	49500,0	ren		Frankaturi BLeitun 87 76 SJ Zoilbe	ode 10 percent		marka	494 	2.05	Withung durch uckgesandt	Cifung	
000	9	87 80 90145:	00	0 0 0	07 UR (9 (0	49500,0	Gebühren		Frankaturi BLeitun 87 76 SJ Zoilbe	ode 10				2.05	Wahung Oberpa durch		
0 0	9	90145: 90145:	00	0 0 0 0	07 UR (9 (0 (0) (9)	49500,0	ren		Frankaturi SQ Leitun 87 76 SQ Zoilbe SQ Franks SQ Nachr	ode 10 percent	nein Nr.			205	Withung durch uckgesandt	Cifung	
	9	87 80 90145:	00	0 0 0 0	07 UR (9 (9 (9) (9) (9) (9) (9) (9) (9) (9) (9	49500,0	Gebürren Gebürren		Frankaturi Si Leitun 87 76 Si Zolibe Si Zolibe Si Tatber	ode 1.0 swege	nein Nr.			205 205 6rs	Wething durch uckgesandt uckgesandt teilt durch	Difung Monat Monat	1
0 0 0	3	87 80 90145: 	00		077 UR (9 (0) (0) (0) (0) (0)	49500,0 3	Gebürren 2 Gebürren		Frankaturi Si Leitun 87 76 Si Zolibe Si Zolibe Si Tatber	sde 10 sevege	nein Nr.	bis		205 205 6rs	Withung Withung durch uckgesandt ückgesandt	Difung Monat Monat	
	9	90145: 90145: 90145:	00 23 0 0 0 0		07 UR (9 (0 (0 (0 (0) (0) (0) (0) (0) (0) (0) (0	49500,0	Gebürren Gebürren		Frankaturi Si Leitun 87 76 Si Zolibe Si Zolibe Si Tatber	ode 1.0 swege	nein Nr.			205 205 6rs	Wething durch uckgesandt uckgesandt teilt durch	Monat Menat	
	9 9 9 9 9	90145: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9010	00 23 @ @		07 UR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	49500,0	Gebürren Gebürren		Frankaturu G Leitun 87 76 1 Zolibe 2 D Zolibe 2 Ranka 3 Nachn 2 Tatbet 3 Leifent 3 Nachn 3 S Leifent 3 Nachn	ode 1.0 percent	hein Nr.	bis	ja	205 205 6rs	Wething durch uckgesandt uckgesandt teilt durch	Monat Eigens	1
	9 9 9 9 9	90145: 90145: 90145: 90145: 90145:	00 23 @ @		07 UR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	49500,0	Cabuhren @ Cabuhren @ Cabuhren	hland AG	Frankaturi G Leitun 87 76 10 Zoilbe 10 Z	ode 10 la			ja [2.0.5 2.0.5 0.55	Wething durch uckgesandt uckgesandt teilt durch	Monat Eigens	
	9 9 9 9 9	90145: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9010	00 23 @ @		07 UR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	49500,0 3 3 3 derer	Cabuhren @ Cabuhren @ Cabuhren	bland AG	Frankaturi G Leitun 87 76 10 Zoilbe 10 Z	ode 1.0 jawege turrschnung ahmebegletact tandaaufnahm istverlängerun; von			ja [2.0.5 2.0.5 0.55	Wething durch uckgesandt uckgesandt teilt durch	Monat Eigens	i 1 1 scha
C C C C EBbe	9 9 9 9	87 87 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452	00 23 @ @		UR UR (C (C (C) (C) (C) (C) (C) (C) (C) (C) (49500,0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Cabuhren @ Cabuhren @ Cabuhren		Frankaturi S Leiden T 76 T 76	ode 10 gavege handlung turrechnung ahmabegistact tandasufnahmu retverlängerung Strecke 87 1930 FORBACH	0-3 - BR	. bis 80 1	ja [2.0.5 2.0.5 0.55	Wething durch uckgesandt uckgesandt teilt durch	Ulung Monat Monat Egeni	1
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	90145: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9015: 9010	00 23 @ @	0 c c c c c c c c c c c c c c c c c c c	107 UR C C C C C C C C C C C C C C C C C C	49500,0	Cabuhren @ Cabuhren @ Cabuhren		Frankaturi G Leitun 87 76 10 Zoilbe 10 Z	ode 10 gavege handlung turrechnung ahmabegistact tandasufnahmu retverlängerung Strecke 87 1930 FORBACH	0-3 - BR	bis 80 1 EMEN-	ja [2um 2um eng	Utersung durch ukgesandt Ukgesandt Dikgesandt	Ulung Ulung Monat Monat Egenu	i l
C C C C EBbe	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	87 87 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452 901452	00 23 @ @		UR UR C C C C C C C C C C C C C C C C C	49500,0 9 9 9 9 9 9 9 9 9 9 9 9 9	Cabuhren @ Cabuhren @ Cabuhren	@ B	Frankaturu S Leitun S T 76 S Zoilbe S Franka S Nachri S Nachri S Liefert Code	ode 1.0 jawege handlung turrechnung ahmsbegietact satværlångerung Strecke 87 1930 FORBACH Monat	0-3 - BR	bis 80 1 EMEN-	ja [3764 - 6 HEMELIJ	2ue 2um end NGEN Land 87	Ukersen durch Ukersen Ukersen teil durch Ot Bahnh	Utung Utung Monat Konat	1
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	gg 87 80 90145: 90145: gg	00 23 @ @ 		Andere Beför Andere Beför Ankunftsdatum Ankunftsdatum D11-11-1 REMEN HE	49500,0	Cabuhren @ Cabuhren @ Cabuhren	@ B	Frankaturi S Leiden T 76 T 76	ode 1.0 jawege handlung turrechnung ahmsbegietact satværlångerung Strecke 87 1930 FORBACH Monat	0-3 - BR	bis 80 1 EMEN-	ja [2um 2um end NGEN Land 87 hmmon	Veranne Veranne durch Uckgesandt Uckgesandt Uckgesandt Ock Bahenh Cel	Monat Monat Monat Monat Monat Monat Monat Monat Monat dot 19101-5	1 1
Q Q Q Q BA	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	89 87 80 90145: 80 90145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 10: 145: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140:	00 23 0 23 0 23 0 23 0 20 20 20 20 20 20 20 20 20 20 20 20 20	0 El 0 El 0 C 0 C 0 C 0 C 0 C 0 C 0 C 0 C	UR UR C C C C C C C C C C C C C C C C C	49500,0 9 9 9 9 9 9 9 9 9 9 9 9 9	Cabuhren @ Cabuhren @ Cabuhren	@ B	Frankaturu S Leitun S T 76 S Zoilbe S Franka S Nachri S Nachri S Liefert Code	ode 1.0 jawege handlung turrechnung ahmsbegietact satværlångerung Strecke 87 1930 FORBACH Monat	0-3 - BR	bis 80 1 EMEN-	ia [3764-6 HEMELII dungs- militation Unterne 21	2um 2um erst NGEN Land 87 87.	Untring durch durch Loidegeandt Loidegeandt Col	Utung Utung Monat Konat	1 1
Q Q Q Q BA	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	gg 87 80 90145: 90145: gg	00 23 0 23 0 23 0 23 0 20 20 20 20 20 20 20 20 20 20 20 20 20	0 20 0 35 0 35 0 0 0 0 0 0 0 0 0 0 0 0 0	Ankunftsdatum Ankunftsdatum Dillen HE Banga Nr.	49500,0 3 5 5 MELINGEN	Deutsc?	@ B	Frankaturu S Leitun S T 76 S Zoilbe S Franka S Nachri S Nachri S Liefert Code	ode 1.0 jawege handlung turrechnung ahmsbegietact satværlångerung Strecke 87 1930 FORBACH Monat	0-3 - BR	bis BO 1 EMEN-	ja [3764-6 HEMELDI HEMELDI Unternet Distance	2um 2um erst NGEN Land 87 hmen . 87	Ukbersent ukbersent	Monat Monat Monat Monat Monat Monat Monat Monat Monat dot 19101-5	1 1 1
C C C C BA	Vertra Vertra Varei	89 87 80 90145: 80 90145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 90 145: 90 10: 145: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140: 90 10: 140:	00 23 0 23 0 23 0 23 0 20 20 20 20 20 20 20 20 20 20 20 20 20	0 20 0 35 0 35 0 0 0 0 0 0 0 0 0 0 0 0 0	Ankunftsdatum Ankunftsdatum Dillen HE Banga Nr.	49500,0 9 9 9 9 9 9 9 9 9 9 9 9 9	Deutsc?	@B	Frankaturu S Leitun S T 76 S Zoilbe S Franka S Nachri S Nachri S Liefert Code	ooe 10 gewrgs gewrgs gelyn yw yn yw yr yw yn ywar yw yn yw y	0-3 - BR	bis BO 1 EMEN-	ia [3764-6 HEMELII dungs- militation Unterne 21	2um 2um erst NGEN Land 87 hmen . 87	Ukbersent ukbersent	Monat Monat Monat Monat Monat Monat Monat Monat Monat dot 19101-5	1





More railways currently using and developing PCN/ECN (including common forwarding with ECN-xml):











In the beginning of 2011, the next version of the ECN-message, ECN-xml 1.4, was approved.

Previously it will be implemented until the end of 2011, a converter will assure, that both versions may run on the CDS and may be used by participating railways in parallel.

Further developments of the current message will take care about changing legal requirements





In 2012, a printing module will be implemented in the CDS

This will assure, that every participating railway will be able to generate printouts, the parts for consignor and consignee as well as the parts foreseen to be printed out in the mixed procedure







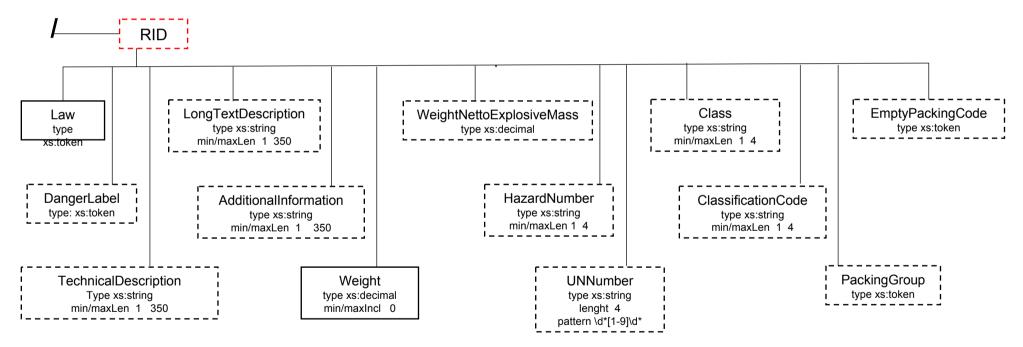
Additional implication as the use of ECN for RID-transports is basically already possible and only has to be approved by national authorities!

The ECN-xml message is capable to carry all information required for the transportation of dangerous goods according to the description in RID 5.4





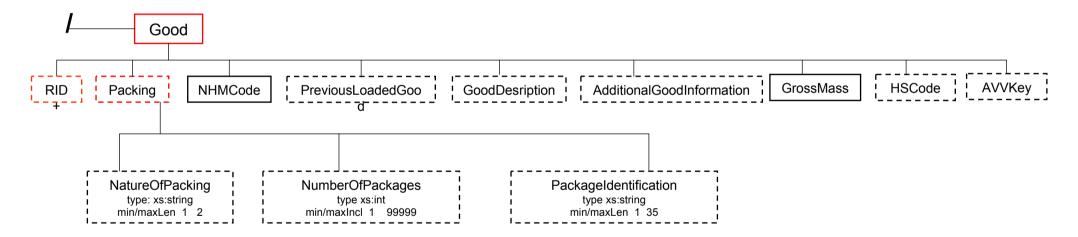
The complex datatype "RID" is included in the complex datatype "Good" which is repeatable 999 times per loading unit. Most information as described in RID 5.4 is transmitted in here







To keep the structure suitable for any kind of transport, some elements described in RID 5.4 are transmitted in other segments of the message, for example name and adress of consignor and consignee or the information about packing

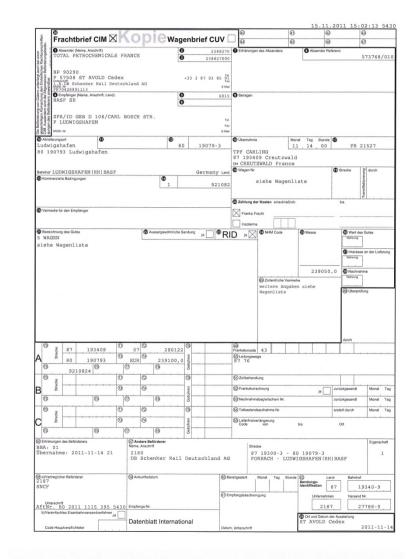




ECN with RID (successfully tested in backup-environment)



CIM Consignment Note Lettre de voiture CIM	X CUV Consignment Note Lettre wagon CUV	0000005737680000000010 Nun	00	
In addition, the control for the control of the con		~	G (4)	0
TOTAL PETROCHEMICALS FRA	Inore 2388270	 Constignor's réclérusions Déclinations de l'expéditeur 	573768/01	0
Aufleyetermet.th Soft even setupated 57508 ST AVOLD Cedex	© 2388270-00			
variont la tangonia; Storatore	5-Mel Tel. +33 3 87 93 85 91			
Affer the Analysis of the Shortson angles shortson of the Shortson Production for eventson and and angle shortson Composition of the Shortson	Fax O	Decompter studied - America		
		Cocumpta Record - America		
dial and/ Enformation particular Information particular Information particular Information particular				
wiges who of some so heads above solve and Soft 4 - Ann approximation ins some soft and approximately with a some soft and approximately with a soft approximat	E Mail Tel.			
Dativery part. Doe de Invessee	801907	9 3 Acceptante meth-day-har Prise en charge mes-gar-tere	1 1 1 4 0 0	21527
Branken - Gam Ludwigshafen	Coursy - Peys Germany	TPF CARLING Creutzwald Fran		Dictor -Picture by -pe
Commencial specification - Conditions commenciales	1 921082	Détails liste wagons dans n		interest interest
Forbach, border FR-DE, FR		5 wagons	medoue louit	
		Payment instructionsreliding - s co	10.8	1 1 82 1 1010 - josenči
Information for the consignee - Informations pour is destinatas		Carriage charges paid Franco de port		
	V	X Incoterms CPT		Pays : 80 Gare : 190793
Description of the posts Designation de la manchandisc	Exceptional consignment yes	RID yes X New code	Mass involutes Masse	Declaration of value Declaration de value
Détails liste wagons dans relevé wagons j	alat		239050 Kg	1.1
betand inte wagend dans receve wagena j	onn			Internet in delivery Interite a la Russiann Elivernau
				1 I I
				Cosh on delivery Remboursement
		(9) Customer and over	rens	Control Control Revolution Control Beamingtion Venification
01 00	2 14	2	rents	Careford
1 8 7 1 9 3 4 0 9 7 0 0 7	14	 Beneficial and a second second		Careford
80190793	2 3 9 1 0 0	American Antonio de la 3		Entrinzi Examination Ventification by-par
8 0 1 9 0 7 9 3 9 2 1 0 8 2 9 2 1 0 8 2	2 3 9 1 0 0 0	All Programmers Comparison of 3 PontBacci(87)		Entrinzi Examination Ventification by-par
No. No. <td>(1) 2 3 9 1 0 0 (1) (1) (2) (2) (2) (3) (3) (3) (4) (4) (5) (4) (5) (5) (5) (5) (5) (5) (5) (5</td> <td>A gamma reaction of the second second</td> <td></td> <td>Control (a) Castriantin (b) Castrianti</td>	(1) 2 3 9 1 0 0 (1) (1) (2) (2) (2) (3) (3) (3) (4) (4) (5) (4) (5) (5) (5) (5) (5) (5) (5) (5	A gamma reaction of the second		Control (a) Castriantin (b) Castrianti
Mail 8 0 1 9 7 9 3 10 9 2 1 0 8 2 10 8 2 10 9 3 10 <td< td=""><td>10 2 3 9 1 0 0 10 0 0 0 0 0 10 0 0 0 0 0 10 0 0 0 0 0</td><td>A granness A granness ForeAccelers Concernations</td><td>VES returned out</td><td>Correct (a) Categories (b) Categories (b) (b) par. (b) (b) par. (b) (b) (b) (b)</td></td<>	10 2 3 9 1 0 0 10 0 0 0 0 0 10 0 0 0 0 0 10 0 0 0 0 0	A granness A granness ForeAccelers Concernations	VES returned out	Correct (a) Categories (b) Categories (b) (b) par. (b) (b) par. (b) (b) (b) (b)
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30 2 3 9 1 0	Bit instance 4.3 Bit instance 4.3 Bit instance instance 5.0	Vis aturned schoole Returned namoge	Correct (a) Categories (b) Categories (b) Categories (b) Categories (b) (b) (b) (b) Categories (b) (b) (b) (b) (b) Categories (b)
		Bit instance Participant Participant <	Yis returned rsthickyd returned rannogé mado ost by erobit par	Correct (a) Categories (b) Categories (b) (b) par. (b) (b) par. (b) (b) (b) (b)
1 1 0 1 0 7 9 8 1 0 7 9 1 0 10 <		Bit instance 4.3 Bit instance 4.3 Bit instance instance 5.0	Yis returned rsthickyd returned rannogé mado ost by erobit par	Correct (a) Categories (b) Categories (b) Categories (b) Categories (b) (b) (b) (b) Categories (b) (b) (b) (b) (b) Categories (b)
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	3.3.9.1.0.0	Bit regimesting parallelinearies 4,3 FOREACU(F) FOREACU(F) IV Contractions paralleline IV Depleting of the paralleline	Yis returned rsthickyd returned rannogé mado ost by erobit par	Conversion Image: Conversion of the conversi
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	3 3 9 1 0 1 10 1 1 1 1 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Bit regimesting parallelinearies 4,3 FOREACU(F) FOREACU(F) IV Contractions paralleline IV Depleting of the paralleline	Yis returned rsthickyd returned rannogé mado ost by erobit par	Conversion Image: Conversion of the conversi
$\begin{bmatrix} 1 & 1 & 2 & 0 & 1 & 9 & 0 & 7 & 9 & 3 \\ \hline 0 & 9 & 2 & 1 & 0 & 8 & 2 \\ \hline 0 & 1 & 2 & 1 & 0 & 8 & 2 \\ \hline 0 & 1 & 1 & 0 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 & 1 & 1 \\ \hline 0 & 1 $	3) 3) 1) 0) 0 0 100 0 0 0 0 0 100 0 0 0 0 0 0 100 0 <td< td=""><td>Bit segment presentation 4,3 FOREACUTY Bit of Presentation Di Deplete of Presentation Deplete of Presentation</td><td>Yis returned rsthickyd returned rannogé mado ost by erobit par</td><td>Conversion Image: Section of the sect</td></td<>	Bit segment presentation 4,3 FOREACUTY Bit of Presentation Di Deplete of Presentation Deplete of Presentation	Yis returned rsthickyd returned rannogé mado ost by erobit par	Conversion Image: Section of the sect
A A B 0 1 9 0 9 0 G G 2 1 0 0 7 0 7 A A A A 0 0 7 0 7 B 2 1 0 2 0	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Biological Strength 4.3 1 Productions 1 Productions 1	the control of the second seco	Conversion Image: Section of the sect
1 1 0 1 9 0 7 9 10 1 9 2 1 0 8 1 10 <td< td=""><td>30 39 10 0 1 10 39 1 0 1 10 1 1 1 1 10 1 1 1 1 10 1 1 1 1 1 10 1 <td< td=""><td>Image: Second Second</td><td>VE Hitsoud encode encode Hitsoura de suitable Hitsoura de suitable Hitsoura</td><td>Image: Second second</td></td<></td></td<>	30 39 10 0 1 10 39 1 0 1 10 1 1 1 1 10 1 1 1 1 10 1 1 1 1 1 10 1 <td< td=""><td>Image: Second Second</td><td>VE Hitsoud encode encode Hitsoura de suitable Hitsoura de suitable Hitsoura</td><td>Image: Second second</td></td<>	Image: Second	VE Hitsoud encode encode Hitsoura de suitable Hitsoura	Image: Second
1 1 0 1 9 0 7 9 10 1 9 2 1 0 8 1 10 <td< td=""><td>30 39 10 0 1 10 39 1 0 1 10 1 1 1 1 10 1 1 1 1 10 1 1 1 1 1 10 1 <td< td=""><td>Biological Strength 4.3 1 Productions 1 Productions 1</td><td>the control of the second seco</td><td>Image: Second second</td></td<></td></td<>	30 39 10 0 1 10 39 1 0 1 10 1 1 1 1 10 1 1 1 1 10 1 1 1 1 1 10 1 <td< td=""><td>Biological Strength 4.3 1 Productions 1 Productions 1</td><td>the control of the second seco</td><td>Image: Second second</td></td<>	Biological Strength 4.3 1 Productions 1 Productions 1	the control of the second seco	Image: Second
A A A A A A A A A A A A A A A A A A A	30 39 10 0 1 10 39 1 0 1 10 1 1 1 1 10 1 1 1 1 10 1 1 1 1 1 10 1 <td< td=""><td>Bit Participant 4.3 Les Researchement 5.3 Portacoversition 5.0 Di Conservatione 5.0 Di Conservatione</td><td>Yes historial school of the school of the sc</td><td>Image: state of the s</td></td<>	Bit Participant 4.3 Les Researchement 5.3 Portacoversition 5.0 Di Conservatione	Yes historial school of the school of the sc	Image: state of the s
A A A A A A A A A A A A A A A A A A A	30 30 10 0 0 1 30 1 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 1 1 0 0 0 0 1 1 0 0 0 0 0 1 1 0 <td>Bit Participant 4.3 Les Researchement 5.3 Portacoversition 5.0 Di Conservatione 5.0 Di Conservatione</td> <td>Yes historial school of the school of the sc</td> <td>Синка</td>	Bit Participant 4.3 Les Researchement 5.3 Portacoversition 5.0 Di Conservatione	Yes historial school of the school of the sc	Синка





ECN with RID (successfully tested in backup-environment)



5 80	Creutzw h Ludwigs				6	000090	9			/ 1	N.C.F. 4à21h ^{Ild} 3409				1
10 Exp Abr Mit	editeur tender TOTAL	PETROCHEMICAL	S FRAM	ICE		BASF SE		12 A dédoua Zu verzol Da sóga	ner å en in 2) nare a			13 Torin, utile fis Festiges, Net Torin, utile fis	eë train tomasse 3) is, treno		
14 No	15 Wagon Wagen Carro	1)	16 Ess. Achs. Assi		de la marchandise			18 NF		UD 1				221 t	Part See Part
		24 Long x larg, x haut. Länge x Breite x Höhe Lungh, x larg, x alt.	Assi chg.vide bei.leer	25 Marque et no Zeichen und Marca e num		26 No bulletin de remin Übergabeschein Nr. No bollettino di cons	e 1901a			ľ	Masse march. Masse Lad. Massa merKg	Tare (UTI)	Brut (UTI)		-
			car. vuota	27 Document de Zolidokumen Documento o	Douane					ľ					
1	3380 78	1 4053-4		Documento o	roganale					1	48000	35100	83100	1	1
										+				-	ŧ
				PROPYLEN		00 Ka da : 22 UN 4		2.4		x				+	÷
					France(FR), G	00 Kg de : 23, UN 1	UTT PROPTLENE,		90122	4	48000			H	t
				Infos: PRO		sermany(DE)		2	50122	+	40000				t
2	3380 78	1 4341-3		11103.1110	There				-	$^{+}$	48000	35500	83500	H	t
-									-	+				T	t
				PROPYLEN						1				T	Ť
				Wagon c	hargé de 480	00 Kg de : 23, UN 1	077 PROPYLENE,	2.1		x				1	Î
				PROPYLENE	France(FR), G	Germany(DE)		2	90122		48000			1	Ī
				Infos: PRO	PYLENE										1
3	3380 78	1 4352-0									47050	35650	82700		Ī
															1
				PROPYLEN	E					\downarrow					1
						50 Kg de : 23, UN 1	077 PROPYLENE,		2	X					1
					France(FR), G	Germany(DE)		2	90122	+	47050				+
			\vdash	Infos: PRO	PYLENE					+				-	ļ
4	3380 78	1 8780-8								+	47950	35150	83100	+	ł
				PROPYLEN	-					+				+	ł
						50 Kg de : 23, UN 1	77 PROPULENE	2.4		x				+	t
			+		France(FR), G		UTT PROPTLENE,		90122	4	47950			+	t
			H	Infos: PRO		Jermany(DE)		~ ~	50122	+	47350			t	t
5	3387 78	1 3711-1			- The last the				-	+	48050	35550	83600	1	t
-									-	+				T	t
				PROPYLEN	E					T					t
				Wagon c	hargé de 480	50 Kg de : 23, UN 1	077 PROPYLENE,	2.1	2	x					Ī
		1		PROPYLENE	France(FR), G	Germany(DE)		2	90122		48050				T
				Infos: PRO	PYLENE					T					ĺ
										1					Í
										1					1
										4				1	ļ
										+				-	ļ
										+				H	ŧ
			\vdash							+				+	ŧ
			+			MAC	SES TOTALES			+	220050	176950	416000	H	t
						MAS	SES TUTALES :					176950	416000	L	Ŧ
									Emetteur et Ersteller um Emittente e	d Date	tum -				

ł	(0	p	W	a	genliste (WL	_V)		Sendungsident	Unterne 21	hmen Vers	hof 9340-9 and Nr. 17788-9
Zug				n		Detum 2011-11-14					
Abse TO		TROC	HEMICALS	FRJ	INCE	Empfänger BASF SE					
Abg. CR	angsbahnho EUTZWA	LD				Ankunfisbahnhof LUDWIGSHAFEN (RH) BAS	F				
Leh 87	ngswege 76				Zolbehandlung		21 SN 80	ragicher Beförder 87 CF 2011 111 AVOLD Ce	5 395 54		011-11-
Nr.	Wagen		5	Achs bel. k	n Bezeichnung des Gutes er NHM	R	вD	Masse Ladung	Tara (Wg)	Brutto (Wg)	Besonderhe
1	3380	781	4053-4	4	23, UN 1077, PROPEN, 2.1, PROPYLENE GEFZET: 2.1, 13 NHM: 290122; 48000,0 kg Betriebl. Sonderbeh.: 02	2	ĸ	48000,0	34660,0	82660,0	
2	3380	781	4341-3	4	23, UN 1077, PROPEN, 2.1, PROPYLENE GEFZET: 2.1, 13 NHM: 290122; 48000,0 kg	د	x	48000,0	34930,0	82930,0	
3	3380	781	4352-0	4	Betriebl. Sonderbeh.: 02 23, UN 1077, PROPEN, 2.1, PROPYLENE GSFZET: 2.1, 13 NHM: 290122; 47050,0 kg	د	ĸ	47050,0	34360,0	81410,0	
4	3380	781	8780-8	4	Betriebl. Sonderbeh.: 02 23, UN 1077, PROPEN, 2.1, PROPYLENE GEFZET: 2.1, 13 NHM: 290122; 47950,0 kg	د	x	47950,0	34550,0	82500,0	
5	3387	781	3711-1	4	<pre>Betriebl. Sonderbeh.: 02 23. UN 1077, PROPEN, 2.1, PROPTLENE GEFZET: 2.1, 13 NHM: 290122; 48050,0 kg Betriebl. Sonderbeh.: 02</pre>	2	x	48050,0	34940,0	82990,0	





Thank you for your attention !