

Customer Information System for Combined Road-Rail Transport

CESAR

*Co-operative European System for Advanced
Information Redistribution*

by Martin Burkhardt

From research to application

- FP4 project 1997 till 1999



UIRR

CEMAT



SGKV

- FP5 project 2000 till 2002

additional partners



novatrans



- Foundation of CIS 20/04/2004

Cesar Information Services, Brussels

Communication with operator before project

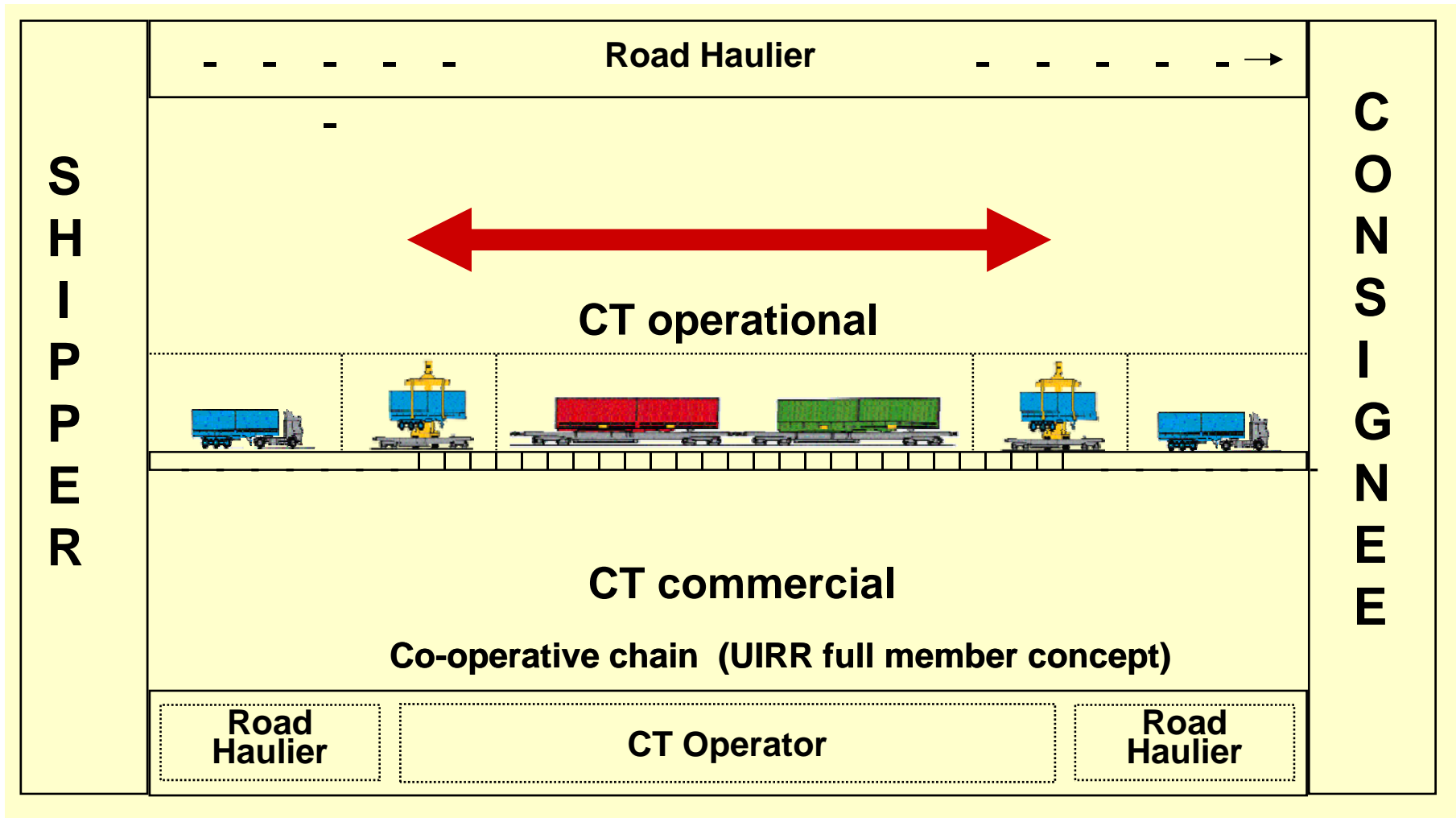
- 27% EDI
- 73% fax
- 82% telephone

Needed functions

- 50% price lists and timetables
- 64% booking
- **95% status and information on units**

Tracking & tracing as most important feature

Customer requirements



CESAR covers the unaccompanied part of the chain: terminal - terminal

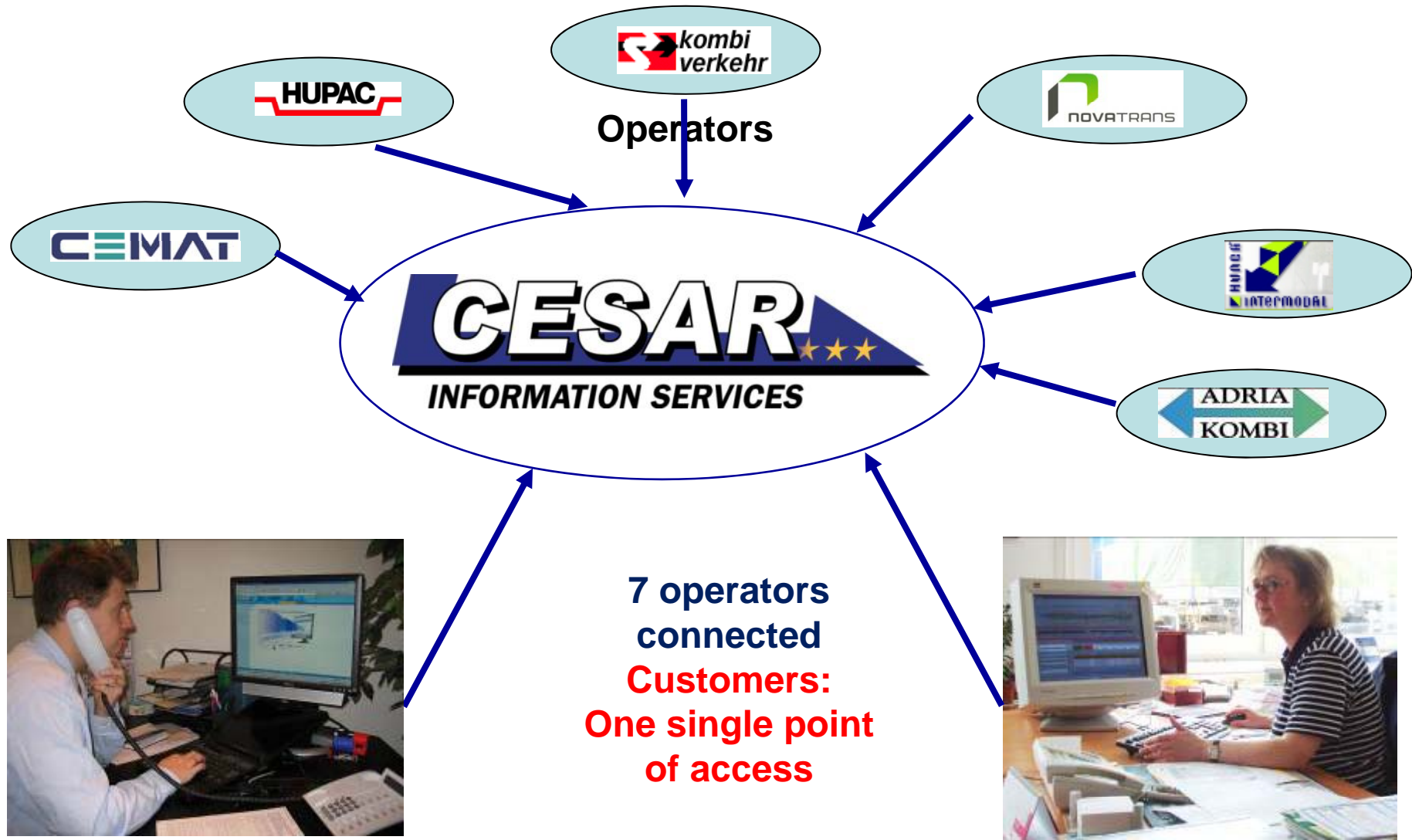
The actual situation



CIS company created in April 2004

- Cesar Information Services (CIS)
- Cooperative srl, based in Brussels
- Capital 100.000 EUR
- Shareholders: Cemat (25,1%), Hupac (25,1%), Kombiverkehr (25,1%), Novatrans (16,1%), UIRR (8,6%)
- Chairman: A. Croci (Hupac)
- Executive Secretary: M. Burkhardt (UIRR)

The architecture of CESAR



Activity (as end of 2012)

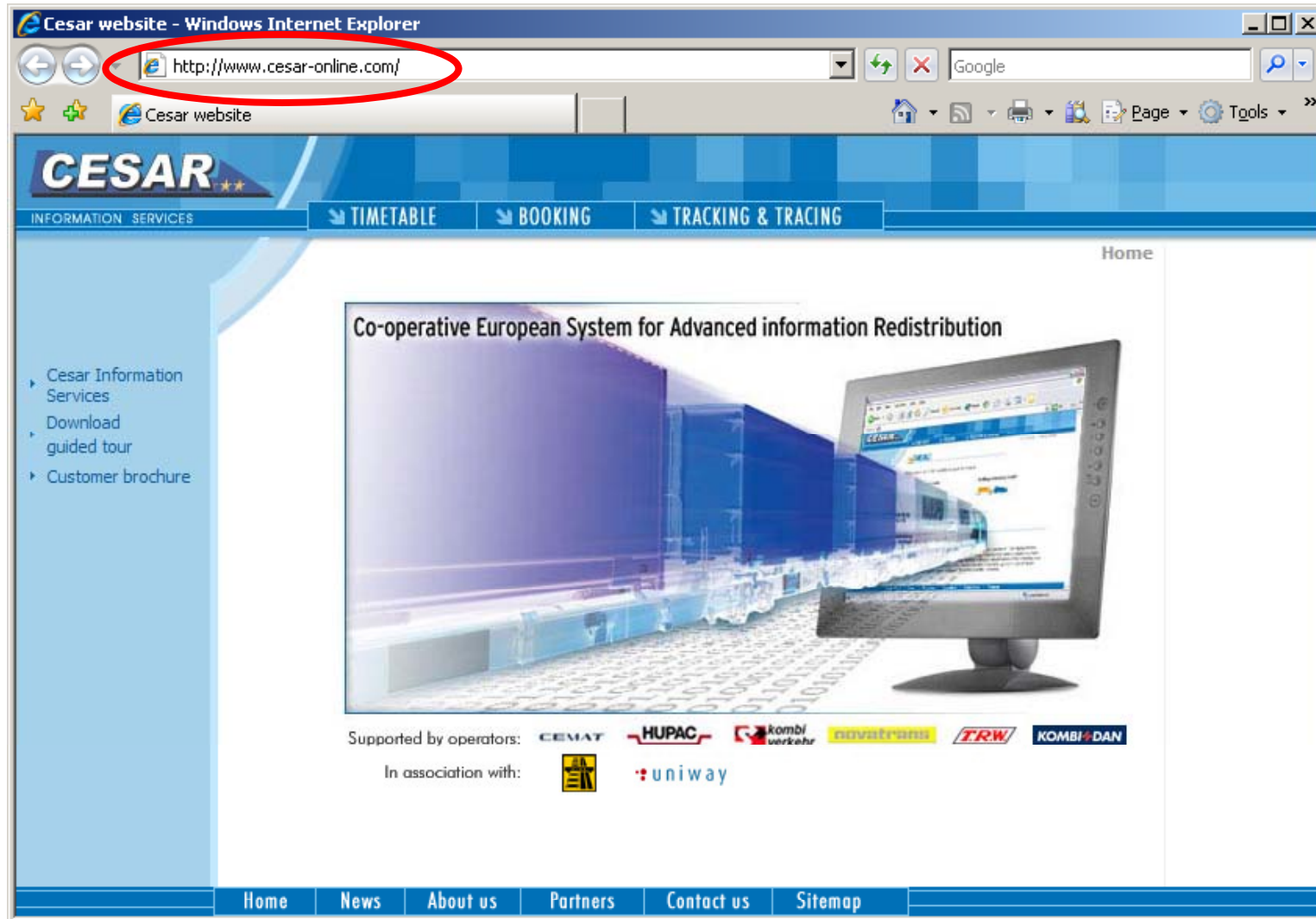


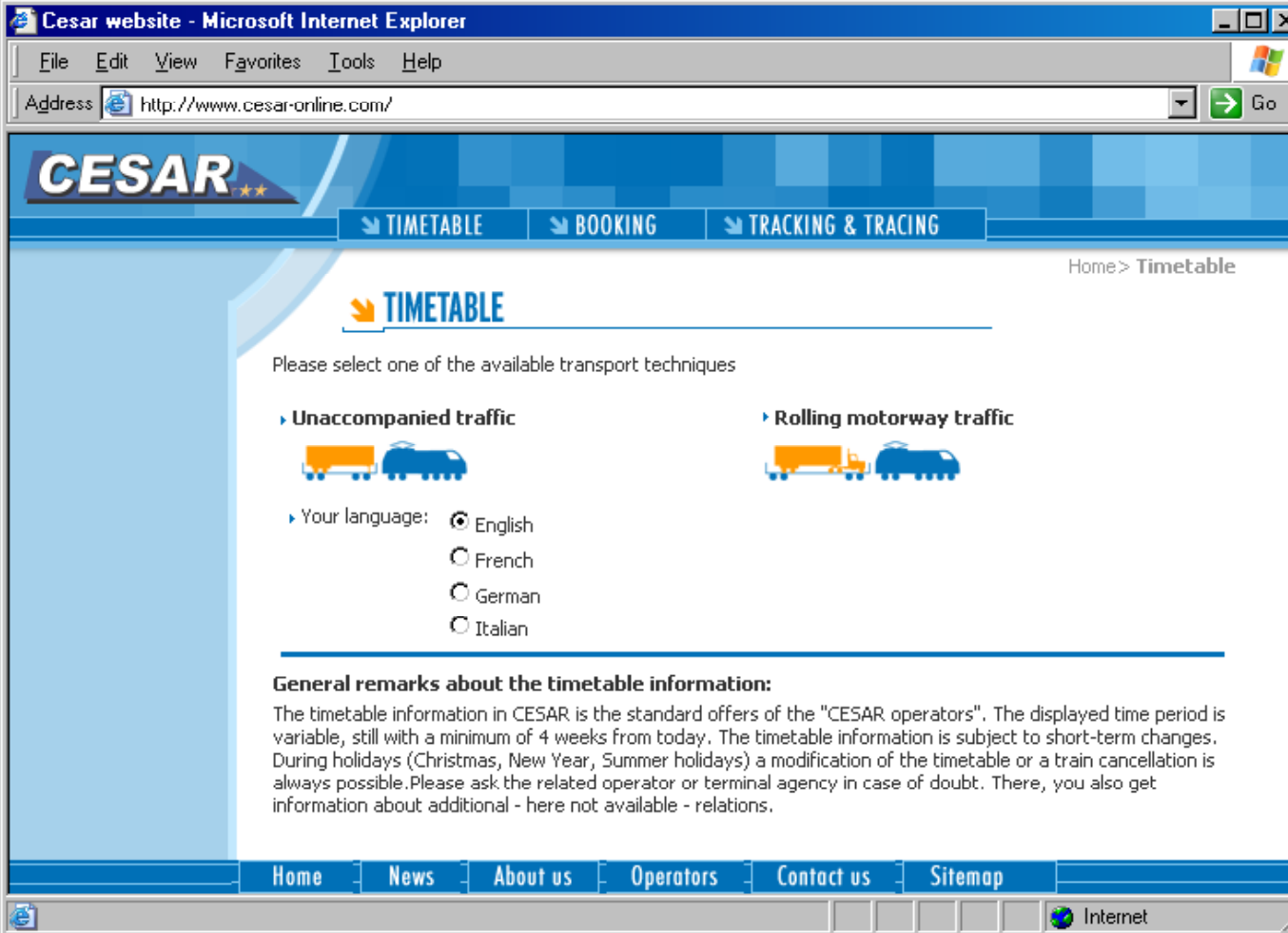
- 460 customer contracts
- 2,6 million transports yearly
- 9 million status messages yearly
- 10 customers with permanent B2B connection

A customers' staff member resumed his daily routine:

- Arrive at work
- Set-up the coffee machine
- Turn on CESAR

The customer information system







The screenshot shows a Microsoft Internet Explorer browser window displaying the CESAR website. The address bar shows <http://www.cesar-online.com/>. The website has a blue header with the CESAR logo and navigation tabs for [TIMETABLE](#), [BOOKING](#), and [TRACKING & TRACING](#). The current page is titled "Home > Timetable".

TIMETABLE

Please select one of the available transport techniques

- ▶ **Unaccompanied traffic**

- ▶ **Rolling motorway traffic**


▶ Your language:

- English
- French
- German
- Italian

General remarks about the timetable information:

The timetable information in CESAR is the standard offers of the "CESAR operators". The displayed time period is variable, still with a minimum of 4 weeks from today. The timetable information is subject to short-term changes. During holidays (Christmas, New Year, Summer holidays) a modification of the timetable or a train cancellation is always possible. Please ask the related operator or terminal agency in case of doubt. There, you also get information about additional - here not available - relations.

At the bottom of the page, there is a navigation menu with links for [Home](#), [News](#), [About us](#), [Operators](#), [Contact us](#), and [Sitemap](#). The status bar at the bottom shows "Internet".

Timetables unaccompanied traffic

Cesar website - Mozilla Firefox

http://www.cesar-online.com/

Home > Timetable > Unaccompanied traffic

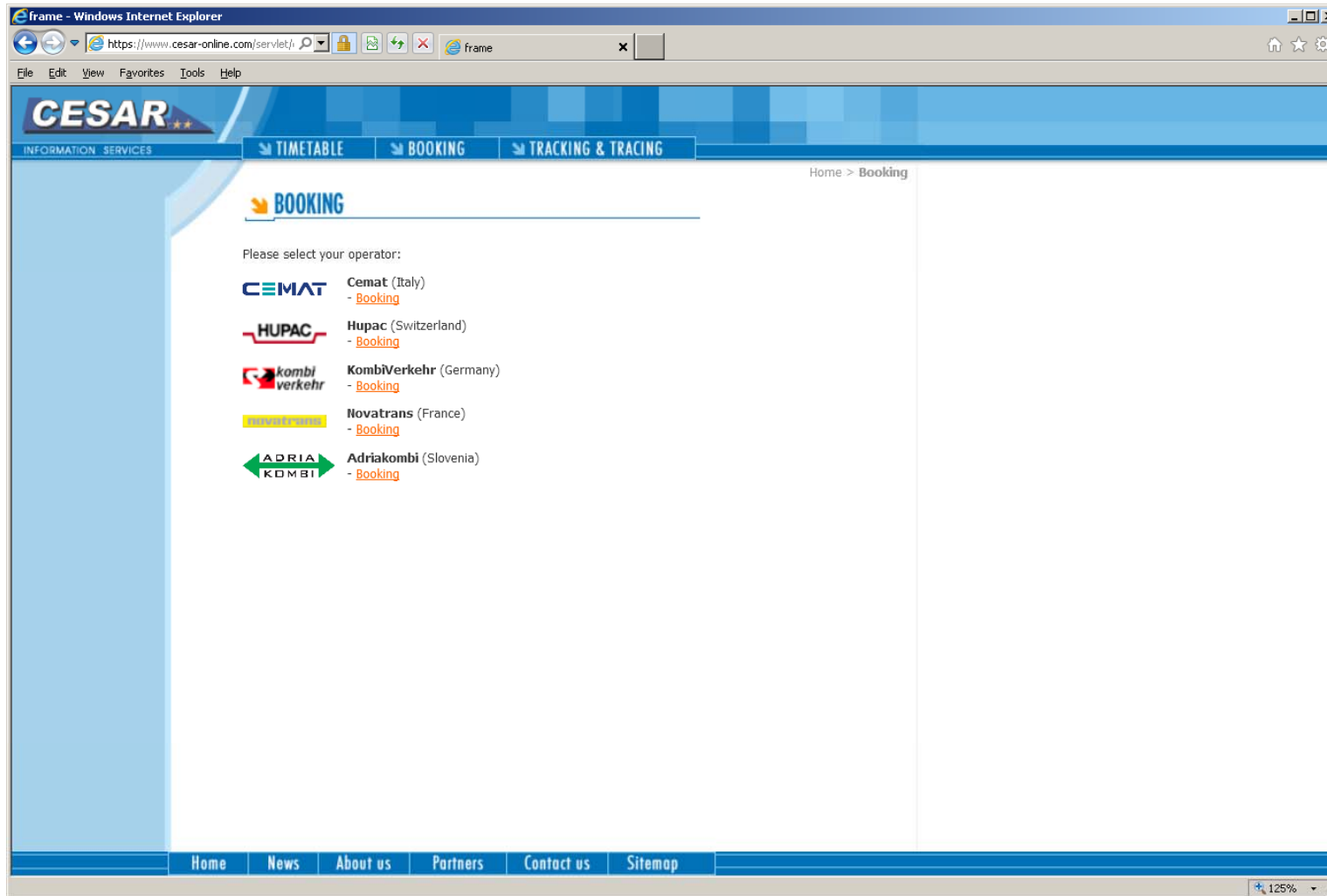
Unaccompanied traffic

[Export to CSV](#)

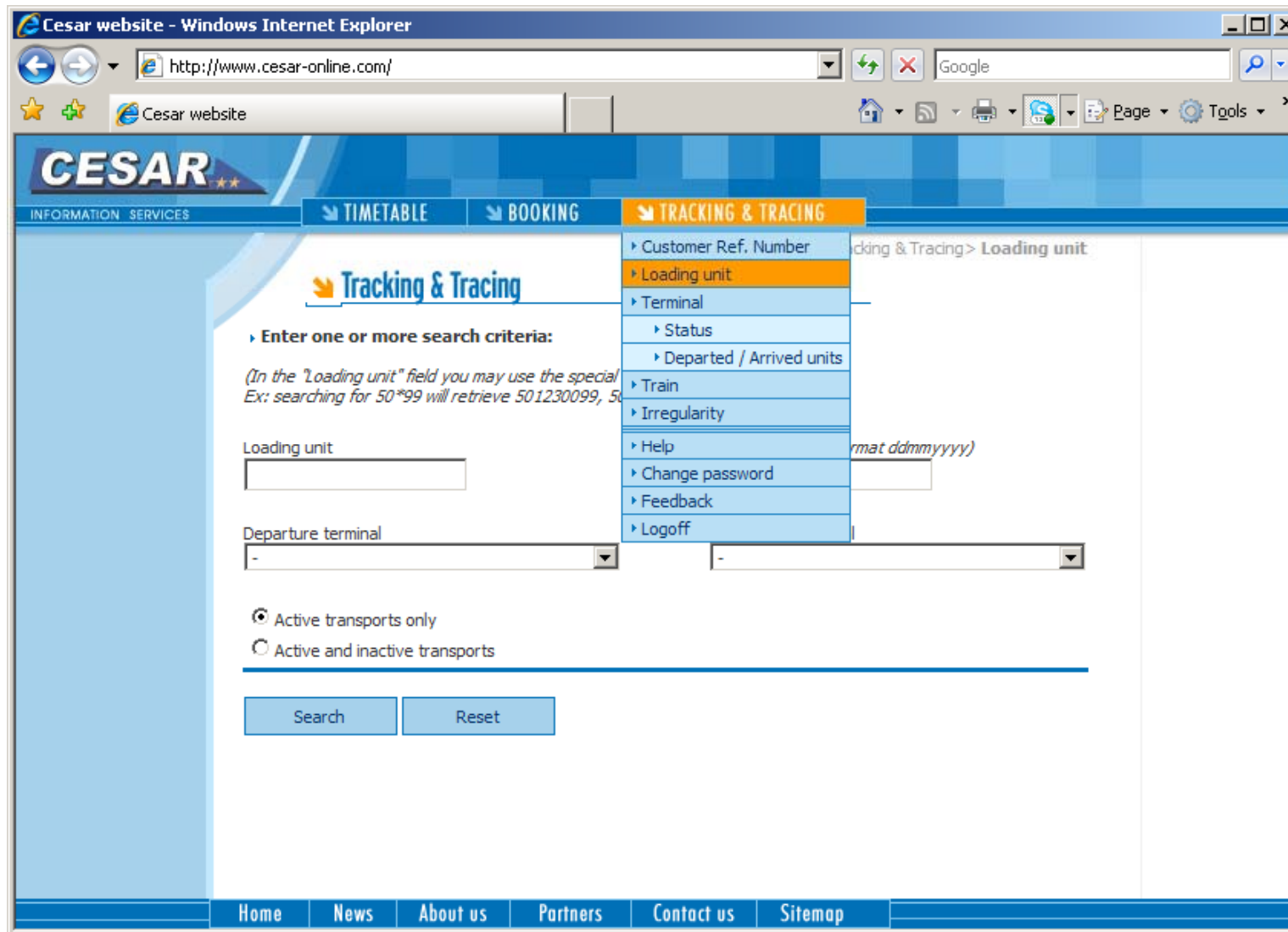
Departure terminal		Verona Quadrante Europa (I)				Destination terminal		Köln-Eifelort Ubf (D)	<Return trip>						
Details	Operator	Train no	Train type	Valid from	Valid until	Departure days		Closing time	Ready for pick-up time	Profile					
	CEMAT	43126	-	29-04-2008	-	Mo	Tu	We	Th	Fr	Sa	Su	09.00 (A)	16.15 (C)	C70,C400,P70,P400
	CEMAT	43126	-	29-04-2008	-	X	X	X	X				09.00 (A)	06.55 (B)	C70,C400,P70,P400
	CEMAT	43124	S	29-04-2008	-	Mo	Tu	We	Th	Fr	Sa	Su	11.30 (A)	00.40 (D)	C70,C400,P70,P400
	CEMAT	43124	S	29-04-2008	-					X			15.45 (A)	02.00 (D)	C70,C400,P70,P400
	CEMAT	43124	S	29-04-2008	-	X	X	X					17.45 (A)	20.45 (B)	C70,C400,P70,P400
	CEMAT	42128	-	29-04-2008	-	Mo	Tu	We	Th	Fr	Sa	Su	19.10 (A)	23.00 (C)	C70,C400,P70,P400
	CEMAT	42128	S	29-04-2008	-	X	X	X	X				19.10 (A)	19.40 (B)	C70,C400,P70,P400
	CEMAT	43122	-	29-04-2008	-	Mo	Tu	We	Th	Fr	Sa	Su	23.10 (A)	05.55 (D)	C70,C400,P70,P400
	CEMAT	43122	-	29-04-2008	-	X	X	X	X				23.10 (A)	00.40 (C)	C70,C400,P70,P400

Home News About us Partners Contact us Sitemap

Booking: link to operators



Tracking and tracing: loading unit



The screenshot shows a web browser window titled "Cesar website - Windows Internet Explorer" with the URL "http://www.cesar-online.com/". The browser's address bar and search bar are visible. The website's navigation menu includes "TIMETABLE", "BOOKING", and "TRACKING & TRACING". The "TRACKING & TRACING" menu is expanded, showing options like "Customer Ref. Number", "Loading unit", "Terminal", "Status", "Departed / Arrived units", "Train", "Irregularity", "Help", "Change password", "Feedback", and "Logoff". The "Loading unit" option is selected, leading to a search page titled "Tracking & Tracing > Loading unit". The search page features a form with the following elements:

- Enter one or more search criteria:** (In the "Loading unit" field you may use the special Ex: searching for 50*99 will retrieve 501230099, 501230099, 501230099)
- Loading unit:** A text input field.
- Departure terminal:** A dropdown menu with a "-" selection.
- Active transports only:** A radio button that is selected.
- Active and inactive transports:** A radio button that is unselected.
- Search and Reset buttons:** Two buttons at the bottom of the form.

The footer of the website contains links for "Home", "News", "About us", "Partners", "Contact us", and "Sitemap".

Status messages terminals



Cesar website - Windows Internet Explorer

http://www.cesar-online.com/

Cesar website

CESAR INFORMATION SERVICES

TIMETABLE BOOKING TRACKING & TRACING

Home > Tracking & Tracing > Terminal

Tracking & Tracing

Export to CSV

Detail	Last status	Irreg.	G T W	ITU code	• Departure terminal • Destination terminal • Final terminal	Full/ Empty	• Net weight (kg) • Gross weight (kg)	Status date	Departure date	• Invoicing • Sender • Receiver	• Customer ref. number • Operator reference number
<input type="radio"/>				VAEU4417072	• Köln-Eifelort Ubf • Busto 2 • -	Full	• 8000 • 12000	23/02/2007 16:57	20/02/2007 18:41	• Har Vaessen Transport - RA Swalmen (NL) • Har Vaessen Transport - RA Swalmen (NL) • Har Vaessen Transport - RA Swalmen (NL)	• 57021610 • 5505470114
<input type="radio"/>				BUKU4933430	• Köln-Eifelort Ubf • Busto 2 • -	Full	• 26560 • 29490	23/02/2007 16:55	20/02/2007 23:10	• Bertschi - Dürrenäsch (CH) • Bertschi - Köln (D) • BERTSCHI ITALIA S.R.L. - BUSTO ARSIZIO (IT)	• 6108297 • 5505500774
<input checked="" type="radio"/>				MI139987	• Köln-Eifelort Ubf • Busto 2 • -	Full 	• 16955 • 23955	23/02/2007 16:54	23/02/2007 00:34	• DHL EXPRESS ITALY - BUSTO ARSIZIO (IT) • DHL EXPRESS ITALY - BUSTO ARSIZIO (IT) • DHL EXPRESS ITALY - BUSTO ARSIZIO (IT)	• K • 5505540052
<input type="radio"/>				BIDU4983215	• Köln-Eifelort Ubf • Busto 2 • -	Full 	• 23180 • 27680	23/02/2007 16:51	23/02/2007 00:34	• Bertschi - Dürrenäsch (CH) • Bertschi - Köln (D) • BERTSCHI ITALIA S.R.L. - BUSTO ARSIZIO (IT)	• 708529 • 5505530560
<input type="radio"/>				BUKU4977320	• Köln-Eifelort Ubf • Busto 2 • Pomezia S. Palomba	Full	• 26380 • 28230	23/02/2007 16:50	23/02/2007 00:34	• Bertschi - Dürrenäsch (CH) • Bertschi - Köln (D) • BERTSCHI ITALIA S.R.L. - BUSTO ARSIZIO (IT)	• 6108953 • 5505520574

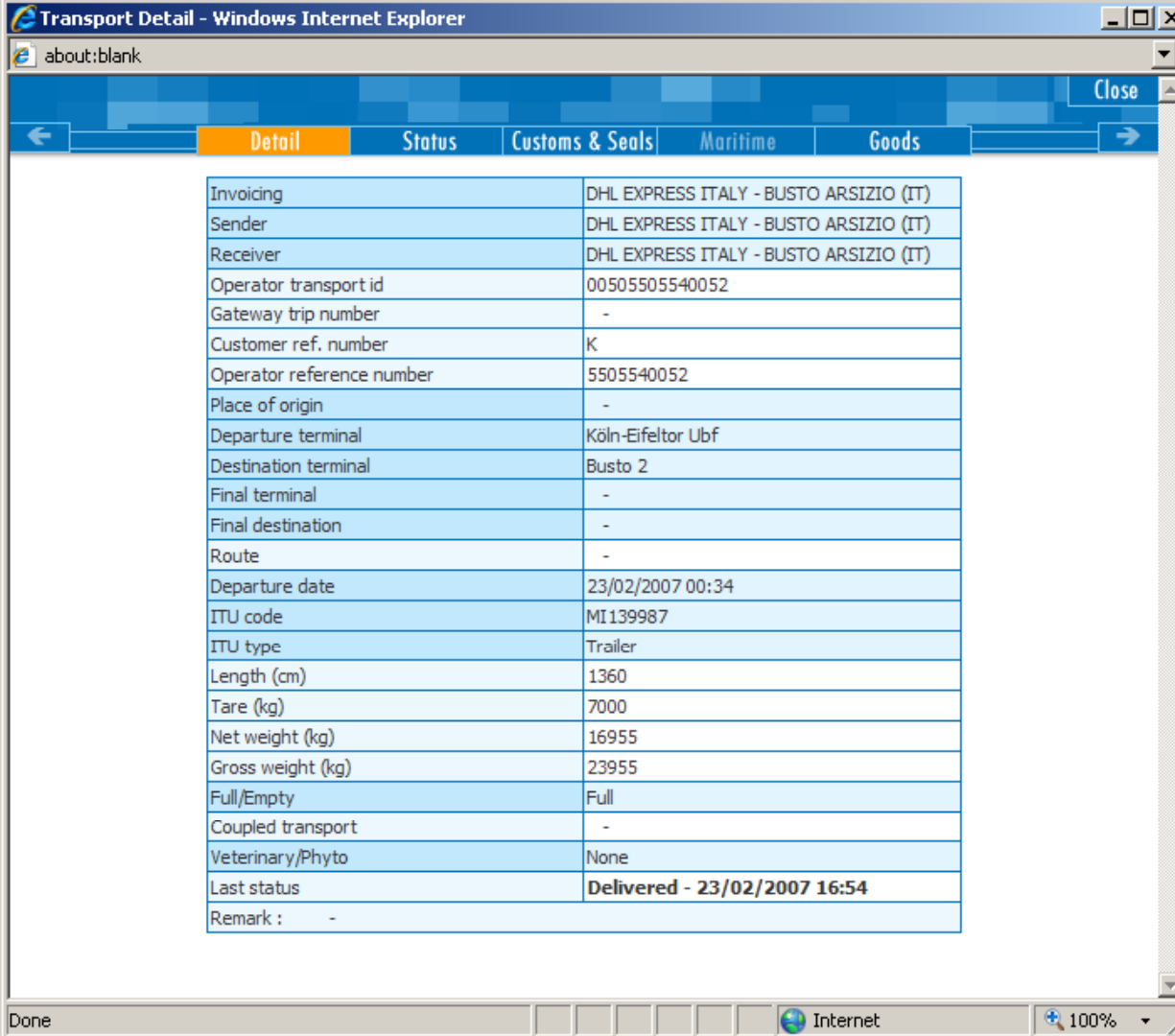
Home News About us Partners Contact us Sitemap

Legend:

: Booked	: Delivered	: Departed
: Ready for pick-up	: Arrived for gateway	: Picked-up
: Out of Cesar	: Gateway	: Dangerous

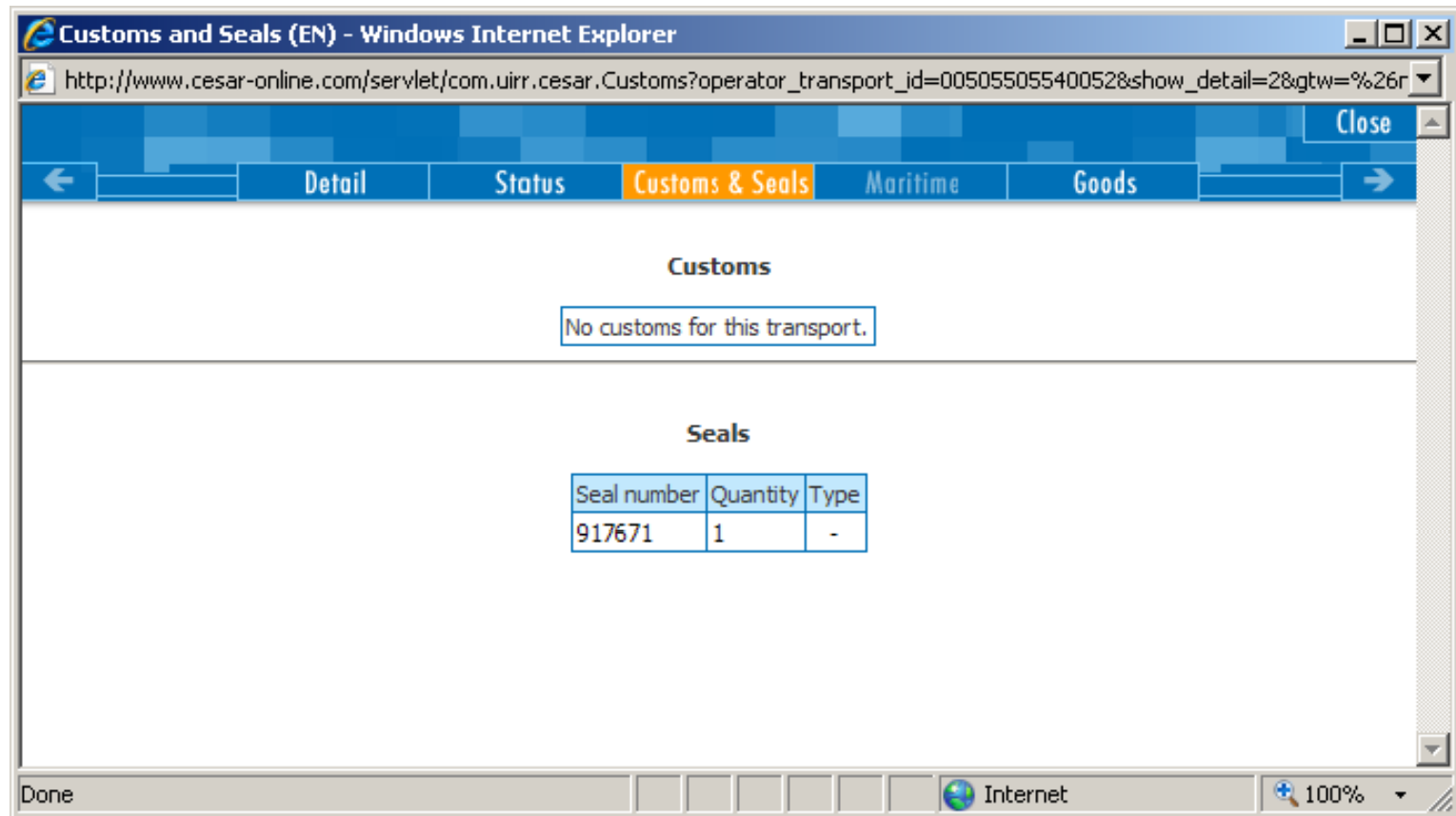
Status messages terminals

Details screen



Invoicing	DHL EXPRESS ITALY - BUSTO ARSIZIO (IT)
Sender	DHL EXPRESS ITALY - BUSTO ARSIZIO (IT)
Receiver	DHL EXPRESS ITALY - BUSTO ARSIZIO (IT)
Operator transport id	00505505540052
Gateway trip number	-
Customer ref. number	K
Operator reference number	5505540052
Place of origin	-
Departure terminal	Köln-Eifeltor Ubf
Destination terminal	Busto 2
Final terminal	-
Final destination	-
Route	-
Departure date	23/02/2007 00:34
ITU code	MI139987
ITU type	Trailer
Length (cm)	1360
Tare (kg)	7000
Net weight (kg)	16955
Gross weight (kg)	23955
Full/Empty	Full
Coupled transport	-
Veterinary/Phyto	None
Last status	Delivered - 23/02/2007 16:54
Remark :	-

Customs & seals



Customs and Seals (EN) - Windows Internet Explorer

http://www.cesar-online.com/servlet/com.uirr.cesar.Customs?operator_transport_id=00505505540052&show_detail=2>w=%26r

Close

← Detail Status **Customs & Seals** Maritime Goods →

Customs

No customs for this transport.

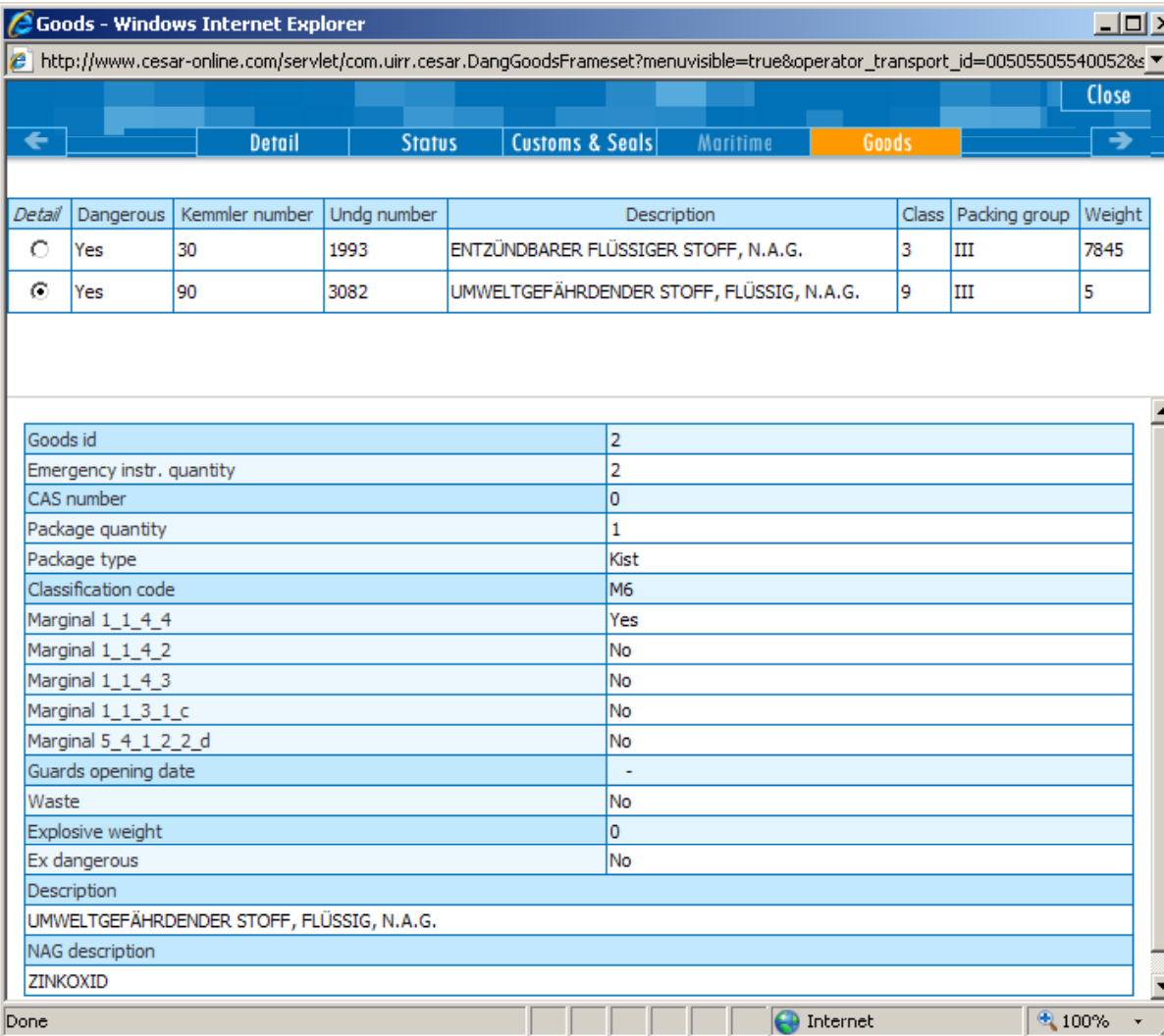
Seals

Seal number	Quantity	Type
917671	1	-

Done Internet 100%

Status messages terminals

Goods



Goods - Windows Internet Explorer
http://www.cesar-online.com/servlet/com.uirr.cesar.DangGoodsFrameset?menuvisible=true&operator_transport_id=005055055400528&

Close

← Detail Status Customs & Seals Maritime Goods →

Detail	Dangerous	Kemmler number	Undg number	Description	Class	Packing group	Weight
<input type="radio"/>	Yes	30	1993	ENTZÜNDBARER FLÜSSIGER STOFF, N.A.G.	3	III	7845
<input checked="" type="radio"/>	Yes	90	3082	UMWELTGEFÄHRDENDER STOFF, FLÜSSIG, N.A.G.	9	III	5

Goods id: 2
Emergency instr. quantity: 2
CAS number: 0
Package quantity: 1
Package type: Kist
Classification code: M6
Marginal 1_1_4_4: Yes
Marginal 1_1_4_2: No
Marginal 1_1_4_3: No
Marginal 1_1_3_1_c: No
Marginal 5_4_1_2_2_d: No
Guards opening date: -
Waste: No
Explosive weight: 0
Ex dangerous: No
Description: UMWELTGEFÄHRDENDER STOFF, FLÜSSIG, N.A.G.
NAG description: ZINKOXID

Done Internet 100%

Tracking and tracing: Irregularities

1. Operator sends message to customer
2. Customer may query CESAR

Irregularities

CESAR

TIMETABLE | BOOKING | TRACKING & TRACING

HomePage > Tracking & tracing > Irregularity

Tracking & Tracing

Detail	Block.	Irreg. date	Departure date	Train / Wagon	Description	Departure terminal Destination terminal	Location	Estimated delay
<input type="radio"/>		20/11/2002 09:30	19/11/2002	42036 / ITU list	Train - Missing capacity to continue (Loc/Personnel/Ferry/...)	- Busto 2 - Duisburg Ruhrort-Hafen	Lorchhausen	vsl. 5
<input type="radio"/>		20/11/2002 09:21	19/11/2002	42045 / ITU list	Train - Lost path or connection	- Köln-Eifelort - Busto 2	BASEL BAD RBF	-
<input type="radio"/>		20/11/2002 06:20	16/11/2002	42710 / 8385+9332107 ITU list	ITU - Loading mistake	- Desio - Hamburg-Billwerder	Desio	-
<input type="radio"/>		20/11/2002 06:49	18/11/2002	53279 / 318045162795 ITU list	Wagon - Technical problems on	- Hamburg-Billwerder		

Legend:
 : Blocking

Irregularities list

Each time an irregularity occurs, the customer is usually contacted by fax or phone. From this time on, the evolution of the problem can be followed with CESAR.

The list only displays irregularities currently opened. In other words, the list contains irregularities still having

Home Page | News | About us | Operators | Contact us | Sitemap

Tracking and tracing: Irregularity event

Irregularities

Detail - Microsoft Internet Explorer provided by Uniway

Irregularity Details


Description	Train - Missing capacity to continue (Loc/Personnel/Ferry/...)
Irreg. date	20/11/2002 09:30
Operator	Kombiverkehr
Operator irreg. id	0050000000046913
Blocking	No
Train	42036 ITU Ltd
Wagon	-
Departure date	19/11/2002
Departure terminal	Busto 2
Destination terminal	Duisburg Ruhrort-Hafen
Location	Lochhausen
Closest station	-
Estimated delay	-
Irreg. comment	-

Irregularity events

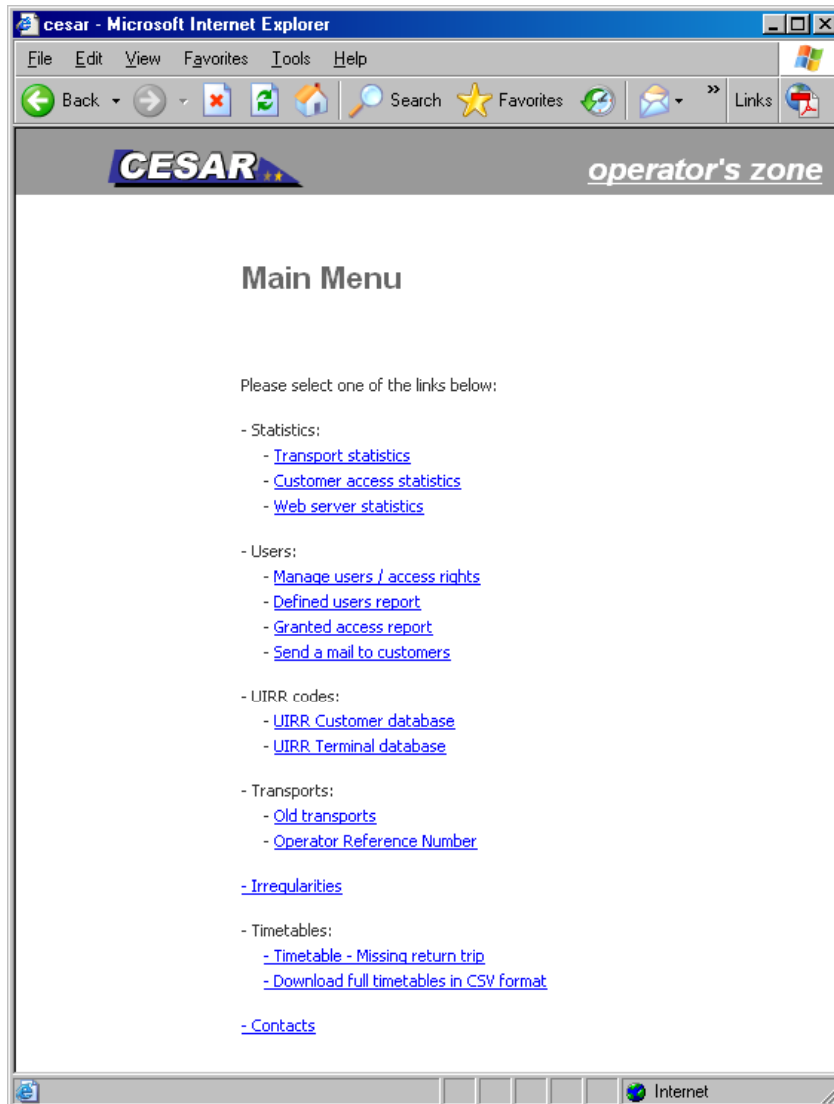
The detail of an irregularity can be obtained by clicking on the bullet in front of each row. Each event is indicated with the initial of the author and the date. This allows following in near real time, the evolution of the situation. If there are many irregularities for the same transport, arrows allow navigating through them.

Date - Author	Description
- 20/11/2002 09:53 - MAG	DER ZUG FÄHRT VON HALTINGEN MIT CA. 275 MINUTEN VERSPÄTUNG.
- 20/11/2002 05:53 - MAG	VORGESEHENE ANKUNFT IN DUISBURG CA. UM 12:00 UHR.
- 20/11/2002 11:26 - ROM	DER ZUG VERKEHRT MIT 541" VERSPÄTUNG
- 20/11/2002 11:26 - ROM	VSL ANKUNFTSZEIT IN DUISBURG UM 17.00 UHR.
- 20/11/2002 11:26 - ROM	MELDUNG ÜBER DIE BEREITSTELLUNG FOLGT.

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Interface for operators



Statistic split by operators

	Total	Co
Number of transports	69440	
Number of status	265449	
Number of errors (warnings excluded) <i>Detail by segment type</i>	802	
<i>Percentage (against total number of status)</i>	0,30 %	
Number of transports with errors	216	
<i>Percentage (against total number of transports)</i>	0,31 %	
Number of fixed errors (estimate)	80	
<i>Percentage (against total number of transports with errors)</i>	37,04 %	
Number of cross-operator errors	49	
<i>Percentage (against total number of errors)</i>	6,11 %	
Number of warnings	1379	
<i>Percentage (against total number of status)</i>	0,52 %	

CESAR is “the” Co-operative European System for Advanced Information Redistribution

- CESAR enables operators to use one common interface
- CESAR is an application daily used by CT customers
- Prerequisite for use is a quite high level of adaptation of the operators in-house system
- Therefore CESAR is up to now mainly used by CT-operators with similar transport offers and focus on continental transport of Loading Units