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Multimodal Promotion – Tool for intelligent bundling of transport flows

Innovation
Innovation

Neutralität
Neutrality

Beratung
Consulting

Achim Klukas

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Project targets

- Development of a Web 2.0 tool for the simple design of multimodal door-2-door transport chains without previous knowledge about the combined transport
- Implementation of a company-wide consolidation of transport streams
- Bundling small quantities into large volumes
- Improvements of sustainability and efficiency

Trimodal D2D transport chain design

Company-wide consolidation

Evaluation of alternatives (cost, time, CO2e)

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Project consortium

MultimodalPromotion

duisport
excellence in logistics

Dortmund Hafen 21

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- The multimodal transport networks of the ports Duisburg und Dortmund offer a variety of transport alternatives
- Logistic and scientific know-how of Fraunhofer IML
- IT expertise of VCE GmbH

- Term July 2010 – June 2013
- Project volume 1.17 million €

GEFÖRDERT VOM
Bundesministerium für Bildung und Forschung

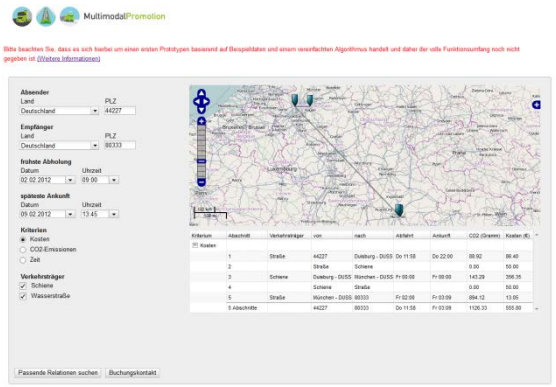
INVENTED IN GERMANY

EffizienzCluster LogistikRuhr

Methodology / Results

- Cost function for Combined Transport
  - Inland waterway
  - Railway
  - Road
- Analysis of transport flows (NUTS3 / group of goods / industry sector)
- Algorithm to consolidate transport volumes
  - LTL to FTL
  - Road transport to block trains and/or vessel transport
- Trimodal door-2-door routing

Platform’s main functions
Schedule check



- Aim is the assignment of appropriate schedules to the transportation orders
- Simple or detailed examination of own transport volumes
- Possibility for door-2-door-analysis
- Contact details of relevant transport operators are shown
- Market price are used for optimization, if not available the cost function gives a price indication

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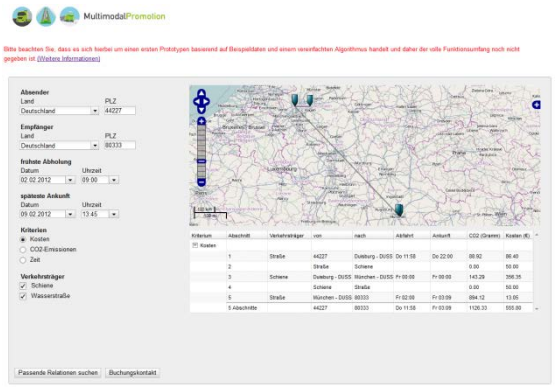
Platform’s main functions
Consolidation of transport volumes



- Aim is to consolidate the transportation amounts and to create new transportation alternatives
- Calculations are based on transport data all entered by the users
- Local traffic planning
  - Goal is the reduction of truck trips in pre- and post stages through a comprehensive customers tours planning
  - Building of FTL by bundling LTL

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Results

- Optimization according to
  - Costs
  - Time
  - CO2
- Taking into account
  - Waiting times in terminals
  - Time slots
  - Handling
  - Schedules from rail and barge transport

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MultimodalPromotion

Bitte beachten Sie, dass es sich hierbei um einen ersten Prototypen basierend auf Beispieldaten und einem vereinfachten Algorithmus handelt und daher der volle Funktionsumfang noch nicht gegeben ist.(Weitere Informationen)

Absender

Land: Deutschland — PLZ: 44227

Empfänger

Land: Deutschland — PLZ: 80333

frühste Abholung

Datum: 02.02.2012 — Uhrzeit: 09:00

späteste Ankunft

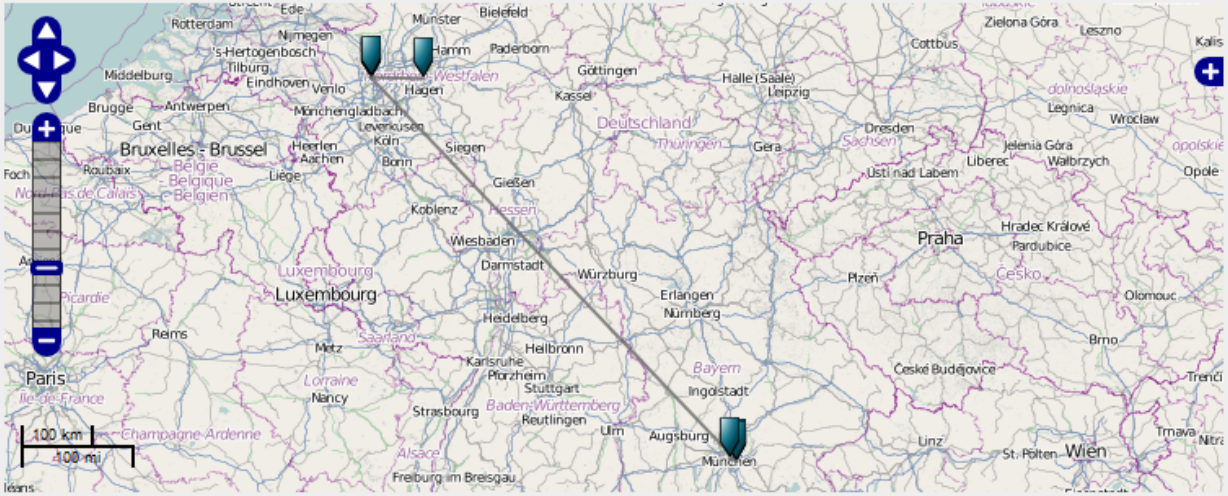
Datum: 09.02.2012 — Uhrzeit: 13:45

Kriterien

- (•) Kosten
- ( ) CO2-Emissionen
- ( ) Zeit

Verkehrsträger

- [x] Schiene
- [x] Wasserstraße



Kriterium	Abschnitt	Verkehrsträger	von	nach	Abfahrt	Ankunft	CO2 (Gramm)	Kosten (€)
− Kosten								
	1	Straße	44227	Duisburg - DUSS	Do 11:58	Do 22:00	88.92	86.40
	2		Straße	Schiene			0.00	50.00
	3	Schiene	Duisburg - DUSS	München - DUSS	Fr 00:00	Fr 00:00	143.29	356.35
	4		Schiene	Straße			0.00	50.00
	5	Straße	München - DUSS	80333	Fr 02:00	Fr 03:09	894.12	13.05
	5 Abschnitte		44227	80333	Do 11:58	Fr 03:09	1126.33	555.80

Passende Relationen suchen | Buchungskontakt

MultimodalPromotion

logout

Eingabeassistenten

- Adresse
- Transport
- Fahrplan
- Terminal

Ergebnisauswahl

Szenarien

JuniRegensburg_TEDi

Costs - Barge/Train

Übersicht anzeigen

- Relationen
  - Dortmund Westerholz Ubf - Regensburg Ost Ubf

Ergebnisse der Optimierung

Bereitstellungen und Analyse.

Ergebnisauswahl Dialog

Transportaufträge

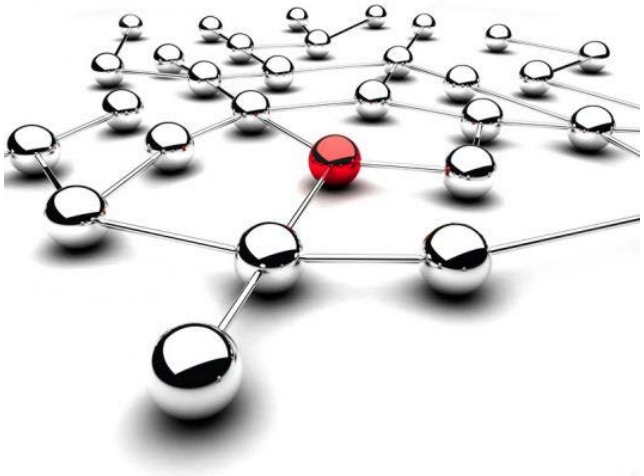
Auftrags-Nr.	von	nach	Datum	Ladeeinheit
Auftrags-Nr.	von	nach	Auftr. Datum	Ladeeinheit
168	Dortmund	Obertraubling	06.06.2012	92 Paletten
169	Dortmund	Obertraubling	08.06.2012	76 Paletten
170	Dortmund	Obertraubling	11.06.2012	49 Paletten
171	Dortmund	Obertraubling	12.06.2012	106 Paletten
172	Dortmund	Obertraubling	13.06.2012	118 Paletten
173	Dortmund	Obertraubling	14.06.2012	69 Paletten
174	Dortmund	Obertraubling	15.06.2012	64 Paletten
175	Dortmund	Obertraubling	18.06.2012	34 Paletten
176	Dortmund	Obertraubling	19.06.2012	80 Paletten
177	Dortmund	Obertraubling	20.06.2012	120 Paletten

< > 1 2

Details

Daten	Abschnitt	Verkehrsträger	von	nach	CO2	Kosten (€)	Zeit (Std.)
Ist (6 Wechselbrücke)	1 Abschnitte		TEDi Logistik GmbH	Lager Regensburg	393.17	2302.20	09h:34m
Opt. (6 Wechselbrücke)	4 Abschnitte		TEDi Logistik GmbH	Lager Regensburg	205.40	1680.00	2d:09h:00m
Vergleich			TEDi Logistik GmbH	Lager Regensburg	187.77	622.20	-14h:-55m

Use cases
Transport network management



- Application in enterprise and cooperation networks
- Description of intra-enterprise and intra-network transport alternatives and offers
- Simple examination of multimodal transport alternatives
- Local traffic planning to realize a reduction of empty runs and examine consolidation potential
- Data import through data interface or file import
- Possible Customers
  - Transport operators
  - Major enterprises
  - Company networks

Use cases
Location marketing

- Integration of Multimodal Promotion on homepages as a marketing tool
- Data administration and import arranged by the terminals, logistics service provider or port authorities
- Data import through data interface or file import
- Contact information after examination of transport chain alternatives
- Customers
  - Seaports
  - Inland Ports

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Additional use cases

- Freight exchange platforms
  - Trimodal transport chains
  - Combined transport
- Adding additional transport modes like Short Sea Shipping or Deep Sea Shipping
- Adding other transport possibilities like single wagonload transport

Contact data

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