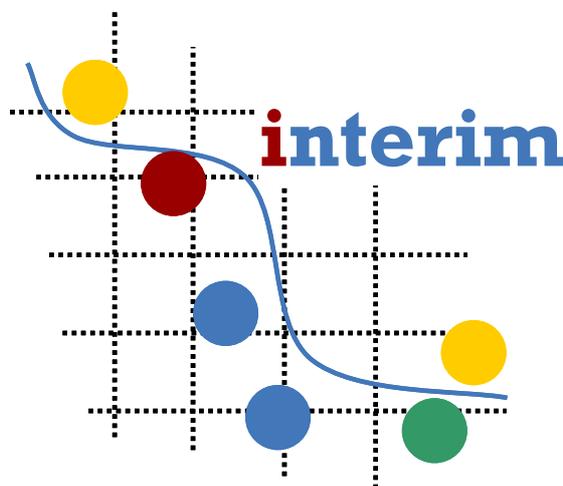


INTERIM

Integration in the intermodal goods transport of non EU states:
Rail, inland/coastal waterway modes



Report WP 3

Development of IT-instruments for the information chain

Report WP 3.5

User Manual

Date: 21.04.2008

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Worked out by: TFH Wildau – University of Applied Sciences Wildau, Germany

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1 Overview

1.1 Introduction

The specific objective of the INTERIM project is to improve the cohesion of intermodal networks, actors and approaches using spatial development instruments. Thus a model with IT tools has been elaborated to demonstrate

- with selected intermodal transport chains (rail, inland waterway and harbour-hinterland) how such integration can be implemented with respect to intermodal markets and spatial development,
- in which way to overcome the existing time gap between today and the integration of the South-Eastern European countries by showing how this process can be prepared and organised by using intermodal goods transport as an example for common implementation and learning in the field of logistics,
- how such a process can be integrated into national spatial development plans

The INTERIM-Tool Sets (INTERIM-TS) which has been developed within the context of the third work package of the INTERIM project focus on two intermodal platforms (description see below). Although the geographical focus of the project is on Central and South-Eastern Europe, the IT tool covers the area of almost whole of Europe. Countries which are not yet considered are e.g. Iceland, Russia, Belarus, Ukraine, Turkey and the Caucasian region.

A general overview of the basic structure of the IT tool is given in the figure on the right side which shows the structure of the INTERIM-Tool Set.

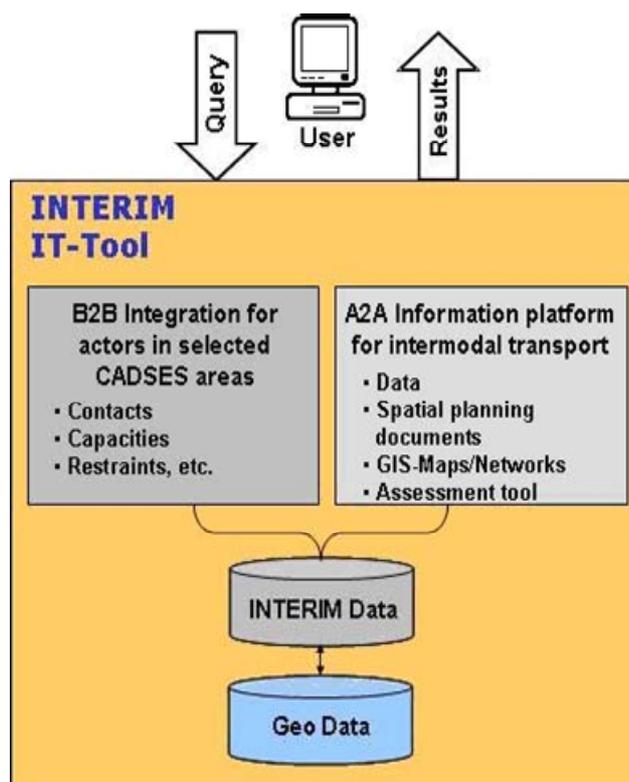


Figure 1: System Structure of INTERIM-Tool Set

1.2 Methodology / User groups

The Users of the system can be separated in three main groups which are essential for programming the INTERIM-TS. The following figure gives an overview of the main user groups.

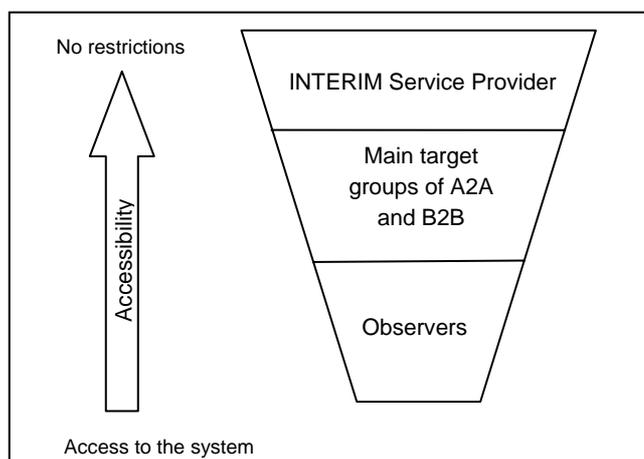


Figure 2: User Groups of INTERIM-TS

INTERIM Service Provider

INTERIM Service Provider (INTERIM-SP) is the University of Applied Sciences Wildau (TFH Wildau) which is operating the system. The TFH Wildau is authorized to run analyses on data in the system in order to optimize the provision and exchange of information.

Main target groups of A2A and B2B

- A: The A2A User group aims at main groups like
 - Administrations and agencies (national, regional and local level representatives)
 - Observers (students, private consultancies, citizens).
- B: The B2B tool aims at main groups like
 - Logistics Chain Organizer (LCO) who have the task to organize the transport of cargo from Source S to Destination D.
 - Logistics Service Provider (LSP) which is a unit that offers logistics services (e.g. providers of transport services on rail, inland waterways and short sea shipping, providers of transshipment services, providers of additional logistics services). The geographical competence (GC) has to be at least in part within the boundaries of the INTERIM area.
 - Customers of the LCO and LSP who want to send goods from Source (S) to Destination (D)

Observers

This group uses the system to get information about intermodal transport chains. Via the B2B view the observer gets easily detailed information about the operating LCO / LSP, operating days and different routes which are possible (including use of GIS module), etc. Additionally the observer is able to retrieve information about activities and strategies of regional development agencies and planning authorities via external links. General information regarding intermodal transports and spatial planning is available, especially concepts of the European Union.

1.3 Objective

The following figures give an overview of the current problems which the future users of the INTERIM-TS face. It is the objective to create benefits which will be given by the INTERIM-TS. The main benefits are also described in the figures below.

A2A		
Problem	User group	Benefit
<ul style="list-style-type: none"> ▪ The deficient contact between the different planning institutions ▪ The deficient knowledge of the intermodal transport and the involved infrastructure ▪ The deficient knowledge about the EU and national spatial planning aims, systems and regularities Spatial “bottlenecks” for cross-border development due to different territorial governance 	A2A experts: <ul style="list-style-type: none"> ▪ Development agencies, ▪ planning authorities, ▪ international, national, regional and local public organized agencies, ▪ private organized agencies 	<ul style="list-style-type: none"> ▪ The access and exchange of information and the widen of knowledge concerning the intermodal transport and spatial planning will be possible ▪ To get a general but also a possible detailed overview of the involved infrastructure and added parameters

Figure 3: Problems and benefits of the A2A User group

B2B		
Problem	User group	Benefit
<ul style="list-style-type: none"> ▪ Deficient knowledge about the involved infrastructure (e.g. current bottlenecks) ▪ Deficient knowledge about possible partners in the intermodal transport sector 	<ul style="list-style-type: none"> ▪ Logistics Chain Organizer (LCO), ▪ Logistics Service Provider (LSP) 	<ul style="list-style-type: none"> ▪ Information about infrastructure will be provided ▪ Possibility to present skills and competences ▪ Schedules can be presented ▪ Fast access to current information ▪ Contacts to interesting occurring LSP
<ul style="list-style-type: none"> ▪ Deficient access to the intermodal market ▪ Deficient knowledge about offers 	<ul style="list-style-type: none"> ▪ Customers of LCO and LSP 	<ul style="list-style-type: none"> ▪ Fast overview of the intermodal transport market out of one hand ▪ Query concerning a certain transportation order can be set up ▪ Fast contact to LSP and LCO

Figure 4: Problems and benefits of the B2B User group

1.4 Constraints and requirements

Conceptual constraints

It is assumed that routes which are included in time table of regular traffic and traffic on demand in the context of intermodal transportation are deposited in the system. Special traffic or ad hoc traffic can not be considered in the system. In general the availability of data may be another conceptual constraint.

Geographical constraints

The INTERIM IT tool covers not only the INTERIM project area (Germany, Austria, Croatia, Serbia, Rumania and Bulgaria) as part of the CADSES area, but almost whole of Europe. Countries which are not yet considered are Iceland, Russia, Belarus, Ukraine, Turkey and the Caucasian region.

Security requirements

The admission to the INTERIM-TS will be given after filling in a registration form via the internet and the transmission to the administrator. Information like company / department name, contact person, address and email are compulsory to get an account. It is intended to generate the password automatically which means that it will be transmitted automatically to the prospective user.

User interface requirements

- So far the INTERIM-TS have been developed with an English language user interface.
- To avoid barriers concerning the usage of the INTERIM-TS no submission of installation files or executable files to potential users are necessary.
- The GIS data for the INTERIM-TS are interactive (i.e. linking selected elements in tables with their display in maps and vice versa).
- The buttons, icons and fields of the tool contain an explanation of the context (mouse over for approx. 1 sec.). Most functions provided in the system are self explaining, so that this user manual could be kept to a minimum. Nevertheless an online help is planned to be offered for features that require some more explanations.

General information

A central organised server solution has been provided. The central server is hosted at the TFH Wildau where the INTERIM-SP is operating the system. The system is internet based and the accessibility to the INTERIM-TS is possible with a common Internet Explorer.

2 Homepage

The INTERIM IT tool is hosted on www.viom.de/interim. A link to the IT tool is also provided on the INTERIM project homepage www.interim-online.eu (entry: Routing tool). To get access to the IT tool you have to register. User name and password are available from the administrator. After you have received your user name and your password, please enter on the homepage of the INTERIM tool your user name in the field "User" and your password in the field "Password". Then press the login button.

User:

Password:

You come to the following start page

INtegration in the intermodal goods Transport of non EU states: Rail, Inland/coastal waterway Modes

Visions of Mobility.

- » Interim Home
- » News
- » Disclaimer
- » Member-Login

TOOLBAR

© 2008 VIOM, Mapsolute, NAVTEQ, EUROPA TECHNOLOGIES

Transshipment Points / Terminals

> >> 1 of 496

Name	Info	LSP	Description	Coun.	ZIP	City	Street	Geocode
Aalborg NTC NORDIC		DK	9220	Aalborg	Gronlandshavnen	House
Aberdeen Harbour		GB	AB11 5SS	Aberdeen	16 Regent Quay	Street
ABP Fleetwood		GB	FY7 6PP	Fleetwood	Dock Office, Fleetwood	House
ABP Ipswich		GB	IP4 1BY	Ipswich	Old Custom House, Ke	Street
ABP Plymouth		GB	PL1 3EF	Plymouth	Millbay Road, Plymouth	Manual
Administração dos		PT	9004-518	Funchal	Av. Sá Carneiro, 5 e 6	None
Aaen Novatrans Gare	Novatrans	FR	47000	Aaen	Rue Paulin Reanier	Street
Aahii Anaravri		GR	?	?	?	House
Ahus Hamn & Stuveri		SE	29632	Ahus	Krångatan 2	Street
Ajaccio		FR	20180	Ajaccio	Quai l'Herminier, Gare	Manual
Aken	Hafenbetrieb Aken	DE	6385	Aken Elbe	Bismarckplatz	Street

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General menu navigation:

Links:

	Link to the homepage of the University of Applied Sciences Wildau (Technische Fachhochschule Wildau) www.tfh-wildau.de
	Link to www.viom.de
» Interim Home	Link to the INTERIM project web page
» News	Link to INTERIM project news page
» Disclaimer	Link to the INTERIM disclaimer page
» Member-Login	Link to the INTERIM Member-Login page

Toolbar:

	Return to previous map view
	Step forward to next map view
	Navigate to the map's origin
	Zoom in
	Zoom out
	Zoom out for quick orientation
	Toggle pan mode on/off
	Distance measuring on/off
	Print map cutout
	Maximize applet / reinsert into browser window

	3D-view
	Show / hide navigable overview window
	Zoom to selected local position

3 Calculation of a route – without fixed relations

3.1 From terminal to terminal

If you want to calculate an intermodal route from a terminal to another terminal



, proceed as described in the following steps

Select a given terminal from the terminal list through one of the following options:

- a.) Filter by country-specific ISO code
- b.) Filter by city name
- c.) Filter by name
- d.) Filter by Zip code
- d.) Filter by street name
- e.) Filter by description

Example here: selection by country-specific ISO code

- Select e.g. "GB" and click on the terminal you want to choose as start. (Use eventually to get to the next page of the list or to get to the end of the list)

- The map zooms to the selected terminal and shows a red star at the local position of the terminal

The terminal list contains all relevant information about a terminal / TSP (transshipment point). The user can sort the table by Name, Description, Country, ZIP code, City name, Street name or Geo code through clicking on the header of each column. The list will be sorted in alphabetic order or vice versa.

The screenshot shows the interim web application interface. At the top, there's a navigation menu with 'S' and 'D' buttons. Below it is a map of a coastal area with a red star marking a terminal. Below the map is a table titled 'Transshipment Points / Terminals' with the following data:

Name	Info	LSP	Description	Coun.	ZIP	City	Street	Geocode
Aberdeen Harbour				GB	AB11 5SS	Aberdeen	16 Reoent Quay	Street
ABP Fleetwood				GB	L17 6PF	Fleetwood	Deck Office, Fleetwood	House
ABP Ipswich				GB	IP4 1BY	Ipswich	Old Custom House, Kev	Street
ABP Plymouth				GB	PL1 3EF	Plymouth	Milbay Road, Plymouth	Manual
Associated British Ports				GB	DN14 5RB	Goole	Bridae Street Goole	Manual
Associated British Ports				GB	EC1N 2LR	Hull	150 Holborn, London	Manual
Barkina		Freightliner		GB	IG11 0SE	Barkina	Box Lane Renwick Rd.	Street
Belfast		Lamrod Eireann		GB	?	Belfast	Adelaide Road	Manual
Belfast				GB	BT1 3AL	Belfast	Corcoration Square	Manual
Birmingham		Freightliner		GB	B8 1BT	Birmingham	Lander St	Street
Bristol Port Company				GB	BS11 9DG	Bristol	St Andrews Road.	Street

Name	Info	LSP	Description	Coun.
ZIP	City	Street	Geocode	

The link in the Column "Info" leads to detailed information about the TSP



<p>Example: Aalborg</p>	<p>interim</p> <p>Transshipment Point Name: Aalborg Description:</p> <p>Company Name: Aalborg NTC NORDIC TRANSPORT CENTRE Phone: +45 99 - 30 20 10 Email: Website:</p> <p>Address Opening Times <input type="button" value="v"/> Country/ZIP: DK 9220 City: Aalborg Street: Gronlandshavnen</p> <p>Technical Information TEU capacity per day No. of container storage slots Max. lifting capacity gantry crane: 50 Max. lifting capacity reach stacker No. of gantry cranes: 1 No. of reach stackers No. of loading tracks</p> <p>Containers <input checked="" type="checkbox"/> 20 ft <input checked="" type="checkbox"/> 40 ft <input type="checkbox"/> Semi <input type="checkbox"/> Swap <input type="checkbox"/> Trailers</p> <p>Services <input checked="" type="checkbox"/> Dangerous <input checked="" type="checkbox"/> Temperature Controlled <input checked="" type="checkbox"/> Refrigerated <input type="checkbox"/> Container Storage</p>																																																							
<p>The link in the Column "LSP" leads to a list of Logistics Service Provider running to and from the TSP</p> <p>Example: LSP for Aalborg</p>	<p>LSP</p> <p>interim</p> <p>Transshipment Point Name: Aalborg Description:</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Company</th> <th>supported Modes</th> <th>Container</th> <th>Special Goods</th> </tr> </thead> <tbody> <tr><td>...</td><td>...</td><td>...</td><td>...</td><td>...</td></tr> </tbody> </table>	Name	Company	supported Modes	Container	Special Goods
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<p>Click after the selection of a TSP on the blue "assign to start" button</p>																																																								

<p>The name of the assigned terminal will be indicated. The red star in the map turns into the “start icon”.</p>																																																																																																													
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<p>Optional: Repeat the same procedure for the selection of one or two via-points and click on the blue “assign to via1” / “assign to via2” button (see more details at the end of this chapter)</p>																																																																																																													
<p>Press the “Routing” button to get to the routing page</p>																																																																																																													

<p>On the following page specify your query by selecting</p> <ol style="list-style-type: none"> 1. "Optimization Mode" 2. "Allowed Modes" 3. "Transport Capacities (TEU)" 4. "Transport Quantity (TEU)" <p>1. The "Optimization Mode" allows to determine the fastest route (Duration), the cheapest route (Costs), the most energy-saving route (ECO) or the shortest route (Distance)</p> <p>2. "Allowed Modes" allow to select one or more mode of transport for the routing</p> <p>3. "Transport Capacities (TEU)" allow to state maximum transport capacities for each mode of transport</p> <p>NOTE: Changes are only recommended for experienced users!</p> <p>4. In the field "Transport Quantity (TEU)" enter the volume you want to transport</p>	
<p>Press "Show routing points" in order to see in the map the area covered</p>	
<p>- If buttons are in grey colour, no changes can be made.</p> <p>- If changes concerning the selection of the terminals have to be done, use the button "Terminals" to get back to the terminal list</p> <p>- With the "Clear" button the terminal settings can be deleted</p> <p>- With the "Routing" button you get again to the routing page</p>	

- Press the “Start query” button to start the routing process



Main calculating operations:

- GIS based generation and display of intermodal transport routes on the basis of underlayed networks (road, rail, inland waterway, transshipment terminals) and according to defined criteria and transport requirements (Basic function)
- Parallel calculation and comparison of route alternatives by the criteria distance, time, costs and energy consumption (Alternative Routes function)
- Calculation of up to 2 defined via-points for the source-destination relation in case of selection of preferred specific transport corridors or transshipment terminals (Via-point function)
- Presentation of information (contacts, service portfolio) of suitable logistics service providers (e.g. special provider for inland navigation) and transshipment terminals for each part of the generated transport chains (Information function)

- If a routing request has already be done, the last result can be displayed by pressing the button “Show last result”



The next page shows the routing result based on the chosen optimization mode: The following information for the whole transport chain as well as for individual routing segments are available:

- Quantity to be transported
- Duration
- Distance
- Energy consumption
- Costs

A segment is a section from one TSP to another TSP without changing the mode of transport

From	To	Mode	No. V.	Duration	Distance	Eco	Costs
ABP Fleetwood	Euroterminal British	Street	1	9	507 872	5291	471 89
Euroterminal British	Ulm GVZ	Rail	1	9	914 396	4906	314 31
Ulm GVZ	Augsburo. GVZ	Street	1	1	73 221	814	102 24
Augsburo. GVZ	Budapest Port	Rail	1	10	806 936	4331	281 78

If changes e.g. concerning the selection of optimization mode, mode of transport or quantities etc. have to be done, use the blue button “Back” to get back to the routing page



Geographical details of the routing segments can be displayed in the map through the selection of an individual segment in table “Routing Segments”:

1. Click on routing segment
2. Map zooms to the segment
3. Chosen segment turns into red colour
4. Segment details change (in the table “Segment Details”)

The screenshot shows the Viom routing software interface. At the top, there's a map of Europe with a route highlighted in red. Below the map, there are two tables:

Routing Segments							
From	To	Mode	No. V.	Duration	Distance	Eco	Costs
ABP Fleetwood	Euroterminal British	Street	1	9	507.872	5291	471.69
Euroterminal British	Ulm GVZ	Rail	1	9	914.356	4906	314.31
Ulm GVZ	Auasbura. GVZ	Street	1	1	73.221	814	102.24
Auasbura. GVZ	Budapest Port	Rail	1	10	805.936	4331	281.78

Segment Details			
Name	Info	Typ	Category
Euroterminal British	Railfreight	TSP	
Ulm GVZ	?	TSP	

Geographical details of the TSP of the chosen routing segment can then be displayed through selection of a terminal name in the table “Segment Details” on the right side

- Sequence of columns:
- Name of Start TSP of a segment
 - Name of End TSP of a segment
 - Mode of transport within the segment
 - Transport volume/quantity in segment
 - Duration per segment
 - Distance per segment
 - Energy Consumption per segment
 - Costs per segment
- Sequence of row entries:
- From Start TSP to TSP (segment 1)
 - From TSP to TSP (segment 2)
 - From TSP to TSP (segment 3)
 - From TSP to End TSP (segment 4)

Table “Routing Segments”

Routing Segments							
From	To	Mode	No. V.	Duration	Distance	Eco	Costs
ABP Fleetwood	Euroterminal British	Street	1	9	507.872	5291	471.69
Euroterminal British	Ulm GVZ	Rail	1	9	914.356	4906	314.31
Ulm GVZ	Auasbura. GVZ	Street	1	1	73.221	814	102.24
Auasbura. GVZ	Budapest Port	Rail	1	10	805.936	4331	281.78

- Sequence of columns:
- Name of TSP of chosen segment
 - Related Log. Service Provider (LSP)
 - Type of terminal
- Sequence of row entries:
- Start TSP of chosen segment
 - End TSP of chosen segment

Table “Segment Details”

Segment Details			
Name	Info	Typ	Category
Euroterminal British	Railfreight	TSP	
Ulm GVZ	?	TSP	

<p>If the field “Accumulated values” is checked, the transport costs for the total number of TEU will be evaluated (compare entry in the field “Transport Quantity (TEU)” on the routing page)</p>	<p><input checked="" type="checkbox"/> accumulated values</p>												
<p>The link in the Column “Typ” leads to detailed information about the selected TSP</p> <p>Example: Budapest Port</p>	<p>Typ TSP TSP</p> <div data-bbox="694 651 1302 1585"> <p>interim</p> <p>Transshipment Point Name: Budapest Port Description: MAHART Container Center Kft.</p> <p>Company Name: MAHART Container Center Kft. Phone: +36 1 278 3232 Email: b.biro_szanyi@containercenter.hu Website: http://www.containercenter.hu</p> <p>Address Opening Times <input type="button" value="v"/> Country/ZIP: HU 1211 City: Budapest Street: Szabadkikóto út 5-7</p> <p>Technical Information TEU capacity per day No. of container storage slots: 3500 Max. lifting capacity gantry crane: 32 Max. lifting capacity reach stacker: 28 No. of gantry cranes No. of reach stackers: 2 No. of loading tracks</p> <table border="0"> <tr> <td>Containers</td> <td>Services</td> </tr> <tr> <td><input checked="" type="checkbox"/> 20 ft.</td> <td><input checked="" type="checkbox"/> Dangerous</td> </tr> <tr> <td><input checked="" type="checkbox"/> 40 ft.</td> <td><input checked="" type="checkbox"/> Temperature Controlled</td> </tr> <tr> <td><input type="checkbox"/> Semi</td> <td><input checked="" type="checkbox"/> Refrigerated</td> </tr> <tr> <td><input type="checkbox"/> Swap</td> <td><input checked="" type="checkbox"/> Container Storage</td> </tr> <tr> <td><input type="checkbox"/> Trailers</td> <td></td> </tr> </table> </div>	Containers	Services	<input checked="" type="checkbox"/> 20 ft.	<input checked="" type="checkbox"/> Dangerous	<input checked="" type="checkbox"/> 40 ft.	<input checked="" type="checkbox"/> Temperature Controlled	<input type="checkbox"/> Semi	<input checked="" type="checkbox"/> Refrigerated	<input type="checkbox"/> Swap	<input checked="" type="checkbox"/> Container Storage	<input type="checkbox"/> Trailers	
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<input type="checkbox"/> Semi	<input checked="" type="checkbox"/> Refrigerated												
<input type="checkbox"/> Swap	<input checked="" type="checkbox"/> Container Storage												
<input type="checkbox"/> Trailers													

There is also the option to calculate an intermodal route from a terminal to another terminal via specific TSP. This via-point function offers the possibility to define up to 2 via-points for the source-destination relation in order to prefer specific transport corridors or transshipment terminals. The inclusion of via-points affect the routing process as it is seen as a compulsory element.



<p>- If you are not already on the page showing the terminal list, go to it by pressing the “Terminals icon”</p> <p>- With the blue buttons “assign to via1” and “assign to via2” there is the option to include one or two TSP in the route. The selection occurs as described for start and destination.</p>	
<p>The name of the assigned via-points will be indicated.</p>	

3.2 From free address to free address

<p>Beginning from the start page, click on the button “Address search”</p>	
<p>To search an address there are several options. After the selection of the country-specific ISO code</p> <p>a.) Search by City name</p> <p>b.) Search by Zip code</p> <p>c.) Search by City name + Street name</p> <p>Example here: selection by City name + Street name</p> <p>- Select e.g. “DE” and enter city name and street name.</p>	
<p>Press the “Start search” button to start the query</p>	

- Then click on the address line you want to choose as start. (Use eventually > to get to the next page of the list)
- The map zooms to the selected starting point and shows a red star at the local position of the address
- Click on the blue "assign to start" button
- The assigned address will be indicated.
- The red star in the map turns into the "start icon"

The screenshot shows the Viom routing software interface. On the left, there is a sidebar with the Viom logo and navigation links: Interim Home, News, Disclaimer, and Member-Login. Below these are icons for Start, Previous, Next, and Done. The main area features a map of Berlin with a red star indicating the starting point. Below the map is an "Address Search" table with the following data:

Country	ZIP	City	Street	District/State	Quality
DE	13467	Berlin, Hermsdorf	Schlossstr.	Berlin, Berlin	Street
DE	12165	Berlin, Steglitz	Schlossstr.	Berlin, Berlin	Street
DE	13607	Berlin, Tegel	Schlossstr.	Berlin, Berlin	Street
DE	10565	Berlin, Charlottenburg	Schlossstr.	Berlin, Berlin	Street
DE	12161	Berlin, Friedenau	Schlossstr.	Berlin, Berlin	Street
DE	12163	Berlin, Steglitz	Schlossstr.	Berlin, Berlin	Street
DE	14059	Berlin, Charlottenburg	Schlossstr.	Berlin, Berlin	Street

Press the "Clear search" button in order to delete all filled in address fields



Then repeat the same procedure for the selection of your destination address and assign to destination

NOTE: Free addresses can only be used as start or destination of a routing query. Therefore as via-points only TSP from the terminal list can be selected.

The screenshot shows the Viom routing software interface. On the left, there is a sidebar with the Viom logo and navigation links: Interim Home, News, Disclaimer, and Member-Login. Below these are icons for Start, Previous, Next, and Done. The main area features a map of Ennsdorf with a red star indicating the starting point. Below the map is an "Address Search" table with the following data:

Country	ZIP	City	Street	District/State	Quality
AT	4482	Ennsdorf		Amstetten, Niederösterreich	ZIP
AT	4482	Ennsdorf, Windpassing		Amstetten, Niederösterreich	ZIP

Press the "Routing" button to get to the routing page and continue as already described in the previous chapter



4 Calculation of a route – with fixed relations

The INTERIM IT tool offers the possibility to include fix relations in the routing process. Fix relations are relations where intermodal service offers already exist and which will be run by a transport operator. The routing taking into account the existing market offer will be included as backbone. That means it serves as main run for the complete and entire routing process.

The calculation of a route with fix relations can be realised after the determination of a start and destination (either terminal and/or free address).

Example: Kiel (DE) – Debrecen (HU)

Transshipment Points / Terminals

Name	Info	LSP Description	Coun.	ZIP	City	Street	Seacode
Baia		Áti Deo	HU	6500	Baia	Szentánosi út 12	Manual
Békéscsaba			HU	6600	Békéscsaba	Vasutallomas	House
Budaörs Józsefvaros		BILK Kombiterminal	HU	1239	Budaörs	Európa út 4	Manual
Budaörs Port		MAHART Container	HU	1211	Budaörs	Szabadkiköte út 5-7	Manual
Debrecen			HU	4002	Debrecen	Petőfi tér 12	Manual
Dunaújváros		Dunaferri Kikötő Rt.	HU	2440	Dunaújváros	Ruhovani út 4	Manual
Gyor-Gonv		no container	HU	9011	Gyor	Kikötő 1	Manual
Kaposvár			HU	7400	Kaposvár	Vasutallomas	Manual
Kiskundorozsma			HU	6791	Kiskundorozsma	Vasutallomas	Manual
Körmörc		MAHART FAU River	HU	2900	Körmörc	Vasutallomas	Manual
Miskolc		Áti Deo	HU	3526	Miskolc	Revolúcióni út 6-8	Manual

After the assignment of a start and a destination as described in the previous chapters, press the button "Fix relations"

You get to the page as pictured on the right

Fixed Relations

Search Rad (km) 300

from Terminal	to Terminal	Info	Company	Link to

- Press the red button "Search fix relations between Start and Destination"

<p>NOTE: The default setting of the search for fix relations is within a radius of 300km from a Start or Destination. If no values were found increase the radius</p>																																																			
<p><i>Results at radius 300km:</i></p> <p>NOTE: If no fix relation is suitable, increase the radius again to get further options for fix relations.</p> <p>Select from the list a fix relation by clicking on the relation. (Use eventually > to get to the next page of the list)</p> <p>The selected fix relation turns into white colour</p>	<table border="1"> <thead> <tr> <th>From Terminal</th> <th>to Terminal</th> <th>Info</th> <th>Company</th> <th>Link to</th> </tr> </thead> <tbody> <tr> <td>Hamburg CT Burchardkai</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>Intercontainer</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>Link to TSP</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Budapest Port</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Gyor-Gonyu</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Hamburg CT Altenwerder</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>intercontainer</td> <td></td> </tr> <tr> <td>Bremen</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Bremen</td> <td>Gyor-Gonyu</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Bremerhaven ECT</td> <td>Budapest Port</td> <td>...</td> <td>intercontainer</td> <td></td> </tr> <tr> <td>Bremerhaven ECT</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>Link to TSP</td> <td></td> </tr> </tbody> </table>	From Terminal	to Terminal	Info	Company	Link to	Hamburg CT Burchardkai	Budapest Jozsefvaros (26)	...	Intercontainer		Hamburg Billwerder	Budapest Jozsefvaros (26)	...	Link to TSP		Hamburg Billwerder	Budapest Port	...	kombiverkehr		Hamburg Billwerder	Gyor-Gonyu	...	kombiverkehr		Hamburg CT Altenwerder	Budapest Jozsefvaros (26)	...	intercontainer		Bremen	Budapest Jozsefvaros (26)	...	kombiverkehr		Bremen	Gyor-Gonyu	...	kombiverkehr		Bremerhaven ECT	Budapest Port	...	intercontainer		Bremerhaven ECT	Budapest Jozsefvaros (26)	...	Link to TSP	
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<p>Press the arrow “Assign fix relations between Start and Destination”</p>																																																			

<p>The fix relation is assigned when it turns into red colour</p> <p>The name of the company (if available) which operates the chosen fix relation will be indicated</p>	<table border="1"> <caption>Fixed Relations</caption> <thead> <tr> <th>from Terminal</th> <th>to Terminal</th> <th>Info</th> <th>Company</th> <th>Link to</th> </tr> </thead> <tbody> <tr> <td>Hamburg CT Burchardkai</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>intercontainer</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>Link to TSP</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Budapest Port</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Hamburg Billwerder</td> <td>Gyor-Gonyu</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Hamburg CT Altenwerder</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>intercontainer</td> <td></td> </tr> <tr> <td>Bremen</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Bremen</td> <td>Gyor-Gonyu</td> <td>...</td> <td>kombiverkehr</td> <td></td> </tr> <tr> <td>Bremerhaven ECT</td> <td>Budapest Port</td> <td>...</td> <td>intercontainer</td> <td></td> </tr> <tr> <td>Bremerhaven ECT</td> <td>Budapest Jozsefvaros (26)</td> <td>...</td> <td>Link to TSP</td> <td></td> </tr> </tbody> </table>	from Terminal	to Terminal	Info	Company	Link to	Hamburg CT Burchardkai	Budapest Jozsefvaros (26)	...	intercontainer		Hamburg Billwerder	Budapest Jozsefvaros (26)	...	Link to TSP		Hamburg Billwerder	Budapest Port	...	kombiverkehr		Hamburg Billwerder	Gyor-Gonyu	...	kombiverkehr		Hamburg CT Altenwerder	Budapest Jozsefvaros (26)	...	intercontainer		Bremen	Budapest Jozsefvaros (26)	...	kombiverkehr		Bremen	Gyor-Gonyu	...	kombiverkehr		Bremerhaven ECT	Budapest Port	...	intercontainer		Bremerhaven ECT	Budapest Jozsefvaros (26)	...	Link to TSP	
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<p>- The links in the Column "Info" lead to detailed information about the fix relation</p> <p>Example: fix relation of intercontainer</p>	<p>Fixed Relation</p> <p>Company: intercontainer</p> <p>Website: ...</p> <p>From: Hamburg CT Burchardkai</p> <p>To: Budapest Jozsefvaros (26)</p> <p>Available on</p> <p><input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Friday</p> <p><input type="checkbox"/> Tuesday <input type="checkbox"/> Saturday</p> <p><input checked="" type="checkbox"/> Wednesday <input type="checkbox"/> Sunday</p> <p><input type="checkbox"/> Thursday</p> <p>Service Informations</p> <p><input checked="" type="checkbox"/> Containers <input type="checkbox"/> Swap <input type="checkbox"/> Trailers</p> <p>Duration: D</p> <p>Clearance restrict: ...</p> <p>Capacity: 0</p>																																																		
<p>An assigned fix relation can be removed by pressing the button "Clear fix relations between Start and Destination"</p>																																																			
<p>Press the button "Routing" to get to the routing page and continue as already described previously (individual settings)</p>																																																			
<p>Then press the "Start search" button to start the query</p>																																																			

The chosen fix relation is considered in the further routing process

The screenshot displays the VIOM routing software interface. At the top, there is a map of Europe with a route highlighted from Hamburg to Debrecen. Below the map, the route details are shown: Route: Kiel - Debrecen, Optimization Mode: Duration, Quantity: 1, Duration (d,h): 5, Distance (km): 335, ECO (M.): 1898, Costs (€): 181. The 'accumulated values' checkbox is checked.

Routing Segments							Segment Details				
From	To	Mode	No. V.	Duration	Distance	Eco	Costs	Name	Info	Type	Category
Kiel	Hamburo CT	Rail	1	2	110	641	73	Kiel	Baltic Terminal Kiel	TSP	
Hamburo CT	Budapest	TSP	1	---	---	---	---	Hamburo CT	HHLA-Container-	TSP	
Budapest	Debrecen	Rail	1	3	226	1257	108				

5 Analysis of accessibility

The INTERIM IT tool offers the possibility to analyse the accessibility of transshipment points regarding criteria like duration, distance, costs and energy consumption.

<p>The accessibility analysis can be realised after the determination of a start (TSP). The additional selection of a destination is optional.</p>	<p>The screenshot shows the Visions of Mobility interface. On the left, there are navigation buttons: a red 'S' for 'Start', a green 'R' for 'Region', a blue 'D' for 'Destination', and a green arrow for 'Region'. The main area displays a map of Glauchau with a red circle indicating a selected start point. Below the map is a table titled 'Transshipment Points / Terminals' with columns: Name, Info, LSP, Description, Coun., ZIP, City, Street, Geocode. The table contains one entry: Glauchau GVZ, uncertain, DE, 8371, Glauchau, Kohlenstr, ZIP.</p>
<p>After the assignment of a start (and optional of a destination) as described previously, press the button "Region"</p>	
<p>If you want to start the accessibility analysis from your chosen start, click the button "Zoom to start"</p> <p>If you want to start the accessibility analysis from a chosen destination, click the button "Zoom to destination"</p>	
<p>You get to the page as shown on the right</p> <p>Select an optimization mode:</p> <ul style="list-style-type: none"> - Duration - Distance - Energy consumption (ECO) - Costs <p>Example here: Duration</p>	<p>The screenshot shows the Visions of Mobility interface with the 'Accessible Region' settings. The 'Start Point' is 'Glauchau GVZ Südwestsachsen'. The 'Optimization Mode' is set to 'Duration'. The 'max. Duration' is set to '3 hours'. There are buttons for 'Start Query' and 'Zoom to Area'. Below the settings is an empty table with the same columns as the previous screenshot: Name, Info, LSP, Description, Coun., ZIP, City, Street, Geocode.</p>

<p>Enter a maximum value as basis for the analysis</p>	<p>max. Duration <input type="text" value="3"/> hours</p>																																																																																										
<p>Start query NOTE: The higher the entered value, the more time needs the evaluation process (exponential progression)</p>																																																																																											
<p>The next page lists the results of the accessibility analysis based on chosen optimization mode and maximum value.</p> <p>The map pictures the results as isochrones:</p> <ul style="list-style-type: none"> - value of outer line = 100% - value of middle line = 66% - value of inner line = 33% <p>All terminals will be indicated which can be reached within the requested time (or if chosen as optimization mode within the requested distance, costs or energy consumption)</p>	<table border="1"> <thead> <tr> <th>Name</th> <th>Info</th> <th>LSP</th> <th>Description</th> <th>Country</th> <th>ZIP</th> <th>City</th> <th>Street</th> <th>Accesscode</th> </tr> </thead> <tbody> <tr> <td>Aken</td> <td>...</td> <td>...</td> <td>Hafenbetrieb Aken</td> <td>DE</td> <td>6305</td> <td>Aken Elbe</td> <td>Bismarckplatz</td> <td>Street</td> </tr> <tr> <td>Decin</td> <td>...</td> <td>...</td> <td>Ceske Pristavy a.s.</td> <td>CZ</td> <td>405 01</td> <td>Decin</td> <td>Labaka 137/17</td> <td>Manual</td> </tr> <tr> <td>Dresden-Friedrichstadt</td> <td>...</td> <td>...</td> <td>to be determined</td> <td>DE</td> <td>1107</td> <td>Dresden</td> <td>Waltherstr. 36</td> <td>ZIP</td> </tr> <tr> <td>Dresden-Neustadt</td> <td>...</td> <td>...</td> <td>DUSS Deutsche</td> <td>DE</td> <td>1127</td> <td>Dresden</td> <td>Erfurter Str.</td> <td>Manual</td> </tr> <tr> <td>Erfurt-Vieselbach</td> <td>...</td> <td>...</td> <td>DUSS Deutsche</td> <td>DE</td> <td>99096</td> <td>Erfurt</td> <td>August-Borsio-Str.</td> <td>Street</td> </tr> <tr> <td>Glauchau GVZ</td> <td>...</td> <td>...</td> <td>uncertain</td> <td>DE</td> <td>8371</td> <td>Glauchau</td> <td>Kohlenstr.</td> <td>ZIP</td> </tr> <tr> <td>Halle</td> <td>...</td> <td>...</td> <td>Hafen Halle GmbH</td> <td>DE</td> <td>6118</td> <td>Halle Saale</td> <td>Am Saalehafen 1</td> <td>ZIP</td> </tr> <tr> <td>Leipzig-Wahren</td> <td>...</td> <td>...</td> <td>DUSS Deutsche</td> <td>DE</td> <td>4158</td> <td>Leipzig</td> <td>Hans-Grade-Str. 2</td> <td>Manual</td> </tr> <tr> <td>Lovosice</td> <td>...</td> <td>...</td> <td>Pristav Lovosice</td> <td>CZ</td> <td>410 02</td> <td>Lovosice</td> <td>Prosmvcká ul.</td> <td>Manual</td> </tr> </tbody> </table>	Name	Info	LSP	Description	Country	ZIP	City	Street	Accesscode	Aken	Hafenbetrieb Aken	DE	6305	Aken Elbe	Bismarckplatz	Street	Decin	Ceske Pristavy a.s.	CZ	405 01	Decin	Labaka 137/17	Manual	Dresden-Friedrichstadt	to be determined	DE	1107	Dresden	Waltherstr. 36	ZIP	Dresden-Neustadt	DUSS Deutsche	DE	1127	Dresden	Erfurter Str.	Manual	Erfurt-Vieselbach	DUSS Deutsche	DE	99096	Erfurt	August-Borsio-Str.	Street	Glauchau GVZ	uncertain	DE	8371	Glauchau	Kohlenstr.	ZIP	Halle	Hafen Halle GmbH	DE	6118	Halle Saale	Am Saalehafen 1	ZIP	Leipzig-Wahren	DUSS Deutsche	DE	4158	Leipzig	Hans-Grade-Str. 2	Manual	Lovosice	Pristav Lovosice	CZ	410 02	Lovosice	Prosmvcká ul.	Manual
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<p>Press on the blue stars in the map in order to receive detailed TSP information</p> <p>Example: Leipzig-Wahren</p>	<p>Transshipment Point</p> <p>Name: Leipzig-Wahren Description: DUSS Deutsche Umschlaggesellschaft Schiene-Straße mbH</p> <p>Company</p> <p>Name: DUSS Deutsche Umschlaggesellschaft Schiene-Straße mbH Phone: (03 41) 24 15 - 311 Email: Leipzig-Wahren@duss-terminal.de Website: http://www.duss-terminal.de</p> <p>Address</p> <p>Country/ZIP: DE 4158 City: Leipzig Street: Hans-Grade-Str. 2</p> <p>Technical Information</p> <p>TEU capacity per day: 215 No. of container storage slots: 600 Max. lifting capacity gantry crane: 41 Max. lifting capacity reach stacker: ... No. of gantry cranes: 2 No. of reach stackers: ... No. of loading tracks: ...</p> <p>Containers</p> <p><input checked="" type="checkbox"/> 20 ft <input checked="" type="checkbox"/> 40 ft <input checked="" type="checkbox"/> Semi <input checked="" type="checkbox"/> Swap <input checked="" type="checkbox"/> Trailers</p> <p>Services</p> <p><input checked="" type="checkbox"/> Dangerous <input type="checkbox"/> Temperature Controlled <input type="checkbox"/> Refrigerated <input type="checkbox"/> Container Storage</p>																																																																																										

6 Glossary

Term	Explanation
A	
A2A experts	Development agencies, planning authorities, international, national, regional and local public organized agencies, private organized agencies
A2A tool	The A2A tool (Administration to Administration) is one of the two IT tools that has been developed during the INTERIM project. Regional development agencies and planning authorities obtain the possibility to provide and exchange information regarding intermodal transport modes and their impacts to regional development plans using GIS technology and impact evaluation features.
B	
B2B tool	The B2B tool (Business to Business) is one of the two IT tools that has been developed during the INTERIM project. Operators, forwarders and shippers (mainly small and medium-sized enterprises) obtain the possibility to provide and exchange information regarding offers and demands of intermodal transports and contacts, capacities, technical requirements and constraints.
Bottleneck	Overloaded segment or point/node (e.g. border crossing point). Bottlenecks are specially marked in the GIS mode and additional data (e.g. average waiting time) are shown
D	
Destination (D)	Destination of cargo
E	
Element	Elements of a logistics chain. Collective term for segments and nodes.
F	
Fix relation	Relations where intermodal service offers already exist and which will be run by a transport operator
G	
GIS	Geographical Information Systems are both, hard- and software systems, for saving, filtering, analyzing and also managing data which allow a spatial relatedness. Within GIS geographical data are combined with informational data

Term	Explanation
GIS data	Collective term for all map, network and location data that are basic data of the GIS module
Geographical Competence (GC)	Geographical area, in which the LSP offers the logistics services
I	
INTERIM-SP	INTERIM-Service Provider: Is operating the INTERIM system
INTERIM-TS	INTERIM-Tool Sets, preliminary name of the INTERIM IT system (consisting of Toolsets A2A and B2B)
L	
Logistics Chain	Describes the transport route the box (with cargo) takes from Source S to Destination D. The logistics chain consist of segments (S ₁ to S _n) with Transshipment points (T ₁ to T _n) in between. Example: S → S ₁ → T ₁ → S ₂ → T ₂ → S ₃ → D
LCO	Logistics Chain Organizer; Person/Organizational unit, that is tasked to organize the complete logistics chain from Source to Destination
LSP	Logistics Service Provider; Collective term of providers of logistics services, that are represented in the INTERIM system and area (LSP)
M	
Mode of transport	Rail, Inland Waterways, Short Sea Shipping Routes
N	
Node	Element of the logistics chain marking start and end of a segment. In general transshipment of cargo takes place at a node.
Q	
Query	Query addressed to the system (access to data base) based on user input
Query result	Result of query that is presented to the user by the system
S	
Segment	Section from one TSP to another TSP without changing the mode of transport
Start (S)	Starting point of cargo e.g. location of consigner
T	
Time table	Time table of a planned transport executed by a transport operator
Transport operator	Provider of cargo transport services (all modes of transport)
TSP	Transshipment point

Term	Explanation
U	
User	User of the INTERIM system
User group	Group of users of the INTERIM system with rights assigned according to their role of using the system i.e.: INTERIM-SP Logistics Chain Organizers (LCO) Logistics Service Providers (LSP) Observer Administrator
V	
Via-point	TSP between Start and Destination which will be served. Via-points for the source-destination relation can be selected in order to prefer specific transport corridors or transshipment terminals.

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