

Online Rail Transport Spot Exchange: A first prototype

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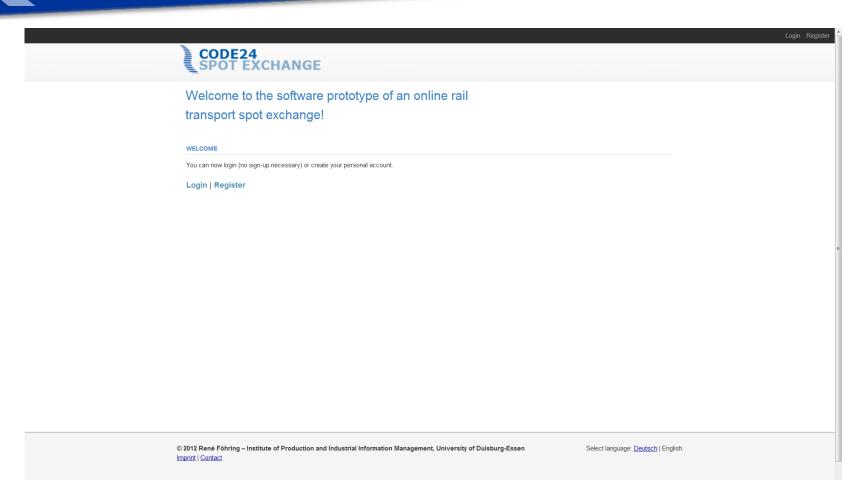






A first prototype

GENOA







Agenda

- 1. Background of development
- 2. Use-Cases and their current implementation
- 3. Outlook for the future





Who am I?

- software developer
- scientific assistant at the university
- diploma thesis: "Implementation of the software prototype of an online rails transport spot exchange"





Requirements engineering (1/2)

An online spot exchange has to support...

- finding new potential business partners
- matching of supply and demand
- existing business processes





Requirements engineering (2/2)

An online spot exchange has to provide an...

- easily understandable user interface
- interface for third party software





Goals of the prototype (1/2)

The prototype has to...

- implement findings of requirements engineering
- provide usable software
- provide solid framework for further research





Goals of the prototype (2/2)

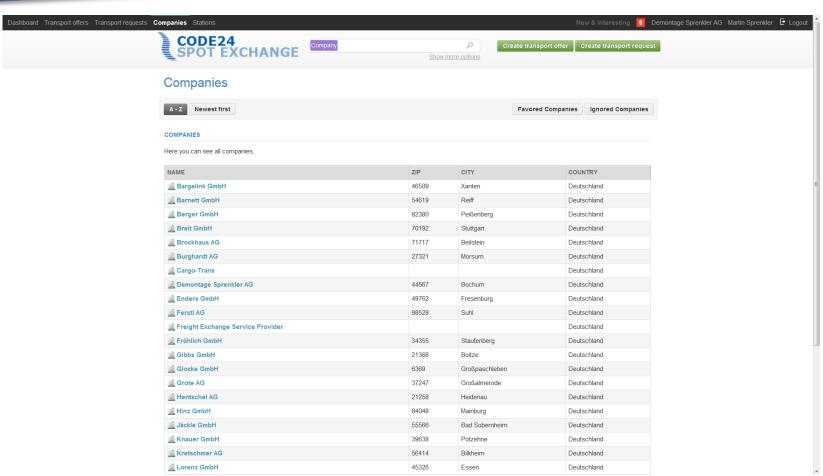
The prototype has to...

- value functionality, user experience and extensibility
- ignore maintainability and security concerns
- enable a dialog between relevant parties



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The result





Use-Cases

Users...

- create postings
- lookup postings
- list postings by other companies





There are two types of postings:

- Offers to transport freight ("transport offers")
- Requests for transportation ("transport requests")





Users want to...

- signal a business opportunity
- describe the opportunity as good as possible





code Spot Exchange	Transport request	Show more options	New & interesting Demontage Sprenkler AG Martin Sprenkler I Create transport offer Create transport request
New transport reques	t		
NEW TRANSPORT REQUEST			
The fields with an asterix (*) are mandatory.			
Contractor Contractor*	Demontage Sprenkler AG		
Posting valid until*	2012-04-28 (MM/DD/YYYY)		
Loading site: Sidetrack available? • Yes • N Loading station Search by number or	9	Unloading station	
Contractor		Contractor	
Street (continued)		Street (continued)	
ZIP		ZIP	
Origin city		Destination city	
Country	•	Country	Germany





Steps of creating a posting

- Define basic conditions
- Define details
- Set transparency
- Publish





NEW TRANSPORT REQUEST						
The fields with an asterix (*) are mandatory:						
Contractor Contractor*	Demontage Sprenkler AG					
	Domontago opronicio Ac					
Posting valid until*	2012-04-27					
	(MM/DD/YYYY)					
Landingarita		Halandina atta				
Loading site: Sidetrack available?	o Ver o Ne	Unloading site: Sidetrack available?	o Ver o Me			
Sidetrack available?		Sidetrack available?	Yes No			
Loading station		Unloading station				
Search by number or name		Search b	y number or name			
Contractor		Contractor				
Street		Street				
(continued)		(continued)				
ZIP		ZIP				
Origin city		Destination city				
Country	Germany	Country	Germany			





Freight description:			
Product name*			
State of product*	•		
Harzardous material*	⊚ Yes No		
NHM-No.			
Total weight (t)*			
Timeframe and Transports			
Frequency*	v		
Weight per transport (in t)*			
Desired means of transport*	tank wagon ▼		
Own means of transport present?*	⊚ Yes ⊚ No		
Requirements for means of transport			
I		2	
Requirements for loading of transport			
Requirements for unloading of transport			





Requirements for means of transport	
Requirements for loading of transport	
Requirements for unloading of transport	
Desired proposal type*	price per ton
Additional information: Contact Person	
Company categories:	Railway undertakings
	Forwarding agents
	Operators of combined cargo
	Loading agents
	Create Transport request





Use-Case: Looking at a posting

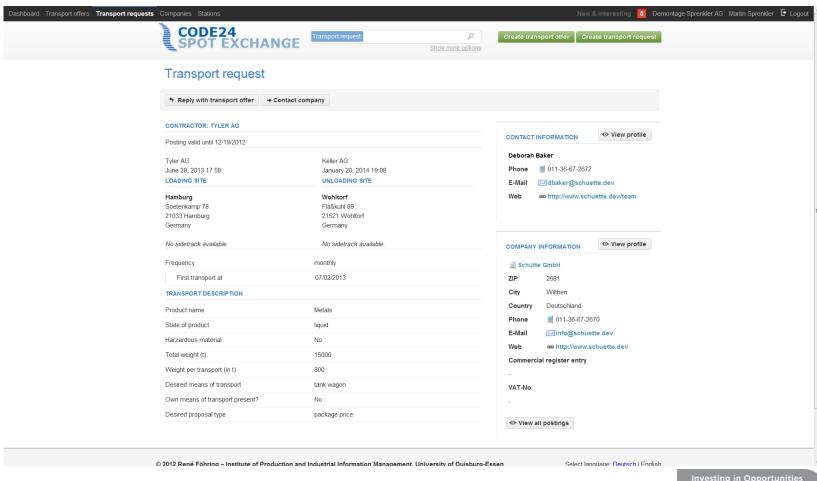
Users want to...

- know the details about your posting
- know who to contact if they need further information





Use-Case: Looking at a posting

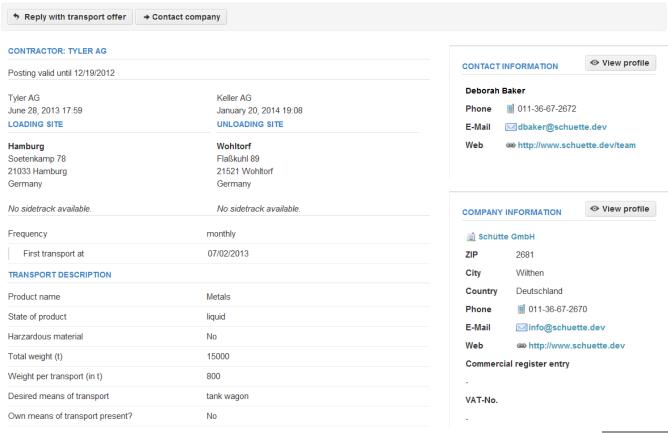






Use-Case: Looking at a posting

Transport request





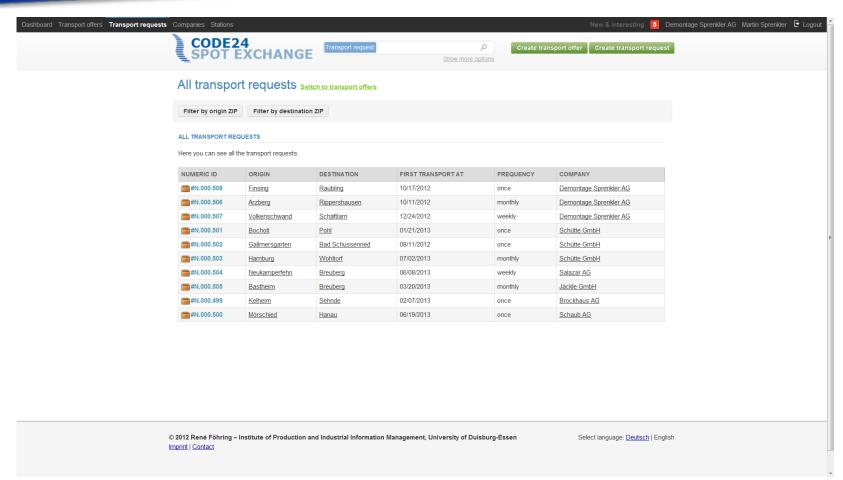


Users want to...

- be able to list postings from other companies
- filter the resulting listings



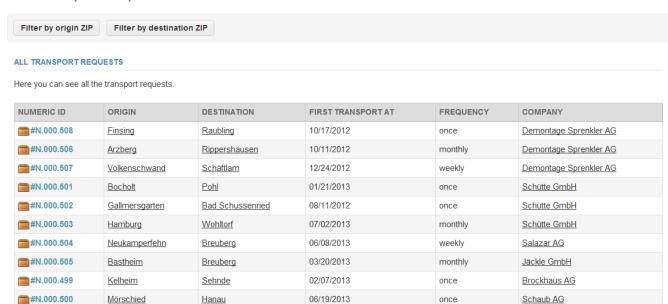








All transport requests Switch to transport offers







Users can filter listings by

- date
- originating station/city/zip-code
- destined station/city/zip-code
- full-text search
- company





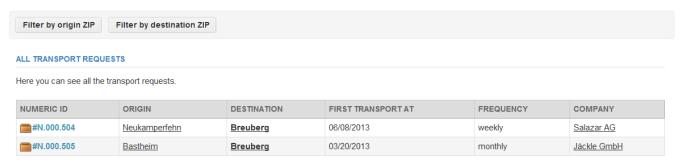
All transport requests Switch to transport offers

Filter by origin ZIP Filter by destination ZIP ALL TRANSPORT REQUESTS Here you can see all the transport requests. NUMERIC ID ORIGIN DESTINATION FIRST TRANSPORT AT FREQUENCY COMPANY 10/17/2012 Demontage Sprenkler AG **MN.000.508** Finsing Raubling once **M**W.000.506 Arzberg 10/11/2012 Demontage Sprenkler AG Rippershausen monthly 12/24/2012 **MN.000.507** Volkenschwand Schäftlarn weekly Demontage Sprenkler AG **Bocholt** Pohl Pohl 01/21/2013 Schütte GmbH **MN.000.501** once **MN.000.502** Gallmersgarten **Bad Schussenried** 08/11/2012 Schütte GmbH once Hamburg Wohltorf 07/02/2013 Schütte GmbH **MIN.000.503** monthly 06/08/2013 m#N.000.504 Neukamperfehn **Breuberg** weekly Salazar AG **Bastheim Breuberg** 03/20/2013 Jäckle GmbH **MN.000.505** monthly m#N.000.499 **Kelheim** <u>Sehnde</u> 02/07/2013 Brockhaus AG once **MN.000.500** Mörschied <u>Hanau</u> 06/19/2013 once Schaub AG





All transport requests Switch to transport offers







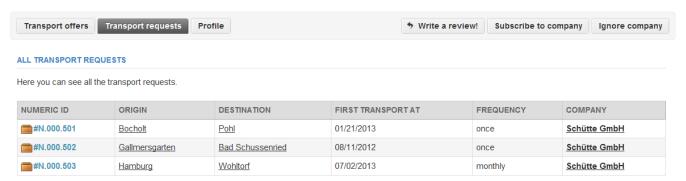
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Schütte GmbH







More Features

Notifications

- about relevant postings (by email)
- users define rules

Rate business partners

- based on performance
- reviews appear on profile





Outlook for the future (1/2)

What do we have?

- Solid foundation
- Lots of potential
- But just a first prototype
- Not a final product





Outlook for the future (2/2)

What do we need?

- Further research and development
- Dialog between researchers, industry experts and software engineers
- Professional re-implementation





The prototype is available today!

Try the latest version of the prototype:

http://pim-code24.wiwinf.uni-due.de/

Download the source code of the prototype:

https://github.com/rrrene/code24-exchange





Feel free to contact me

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