

Determining user interface semantics using agents

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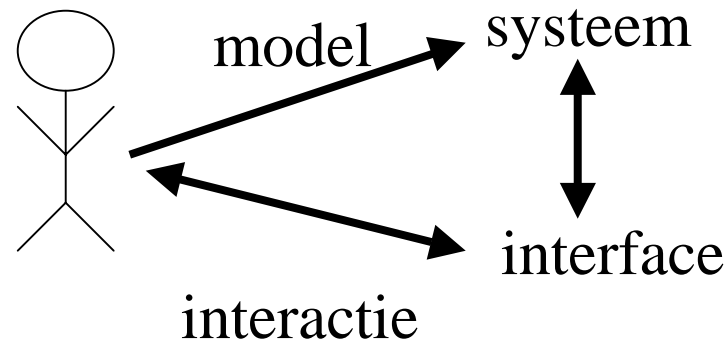
Overzicht

- Probleemstelling
- Reisplanners
- Agents
- SMART
- Voorbeeld agent
- Conclusie

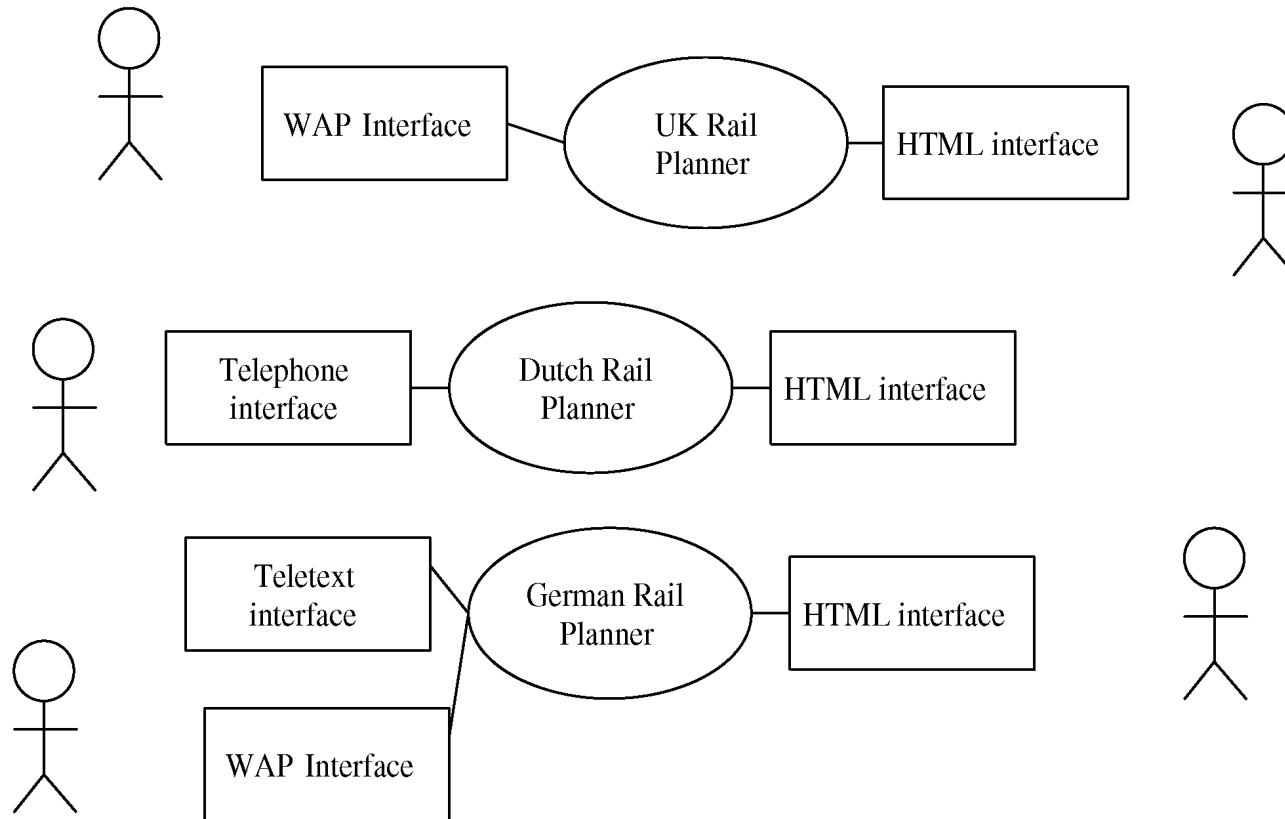
Probleemdefinitie

- Opgave
 - Door interactie met systeem betekenis achterhalen
- Aanpak
 - Systeem: www trein reisplanners
 - Interactie via HTML Framework
 - Interactie door agents

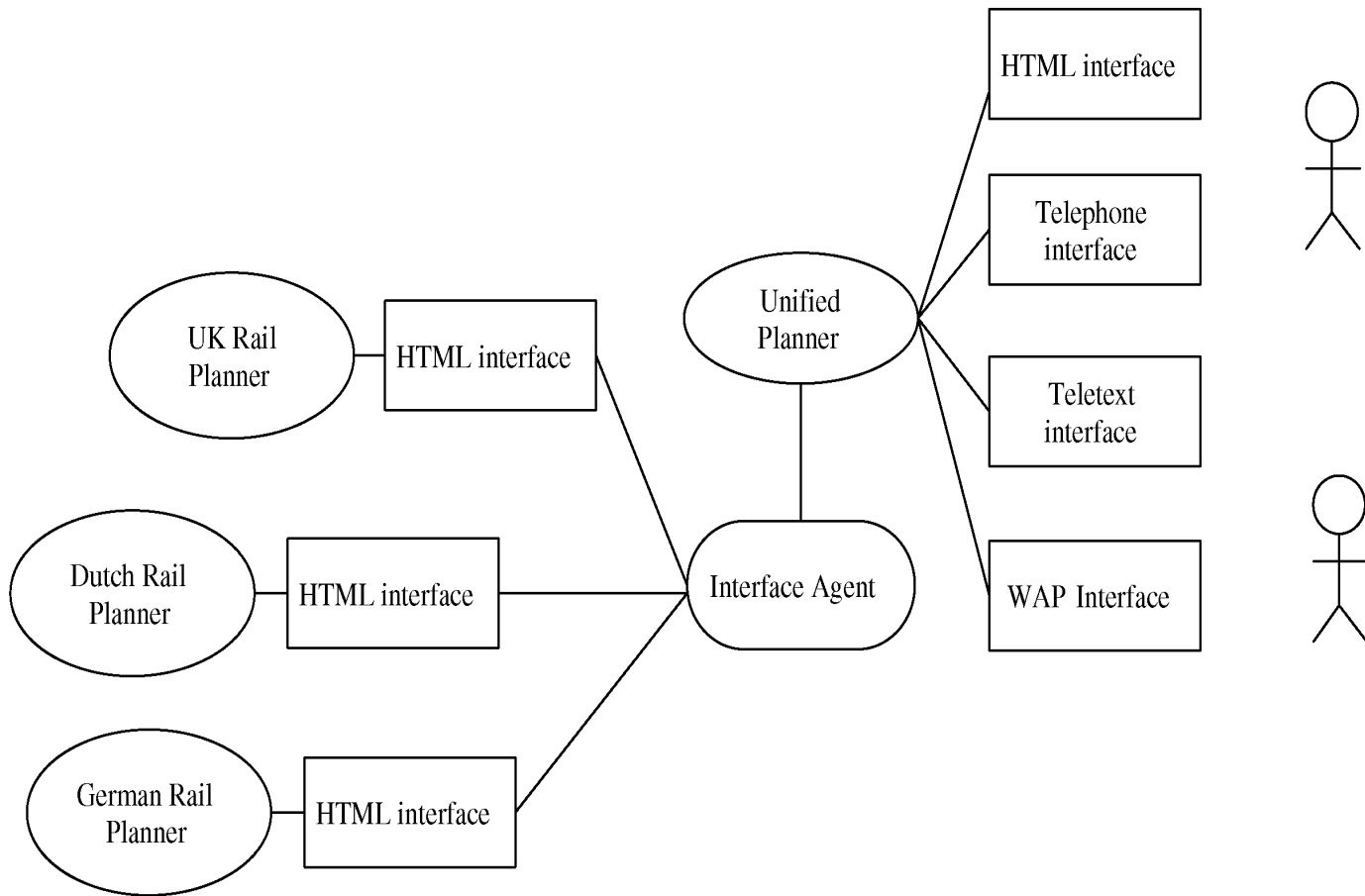
Interactie -> model



Huidige situatie



Gewenste situatie



Overzicht

- Probleemstelling
- Reisplanners
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- Conclusie

Startpagina

Ferrovie dello Stato's official timetable - Microsoft Internet Explorer von Mannesmann Arcor

File Edit View Favorites Tools Help

Address <http://orario.fs-on-line.com/fsbinx/fsqueryx?lang=en> Flyswat Off

Ferrovie dello Stato's official timetable

Valid until 9.6.2001

Please fill in the form with departure and arrival station name, date, time of departure; then click «Search».

Departure Station	<input type="text" value="Milano"/>		
Arrival Station	<input type="text" value="Roma"/>		
Departure: on	<input type="text" value="14"/> / <input type="text" value="09"/> / <input type="text" value="2000"/>	since	<input type="text" value="12"/> : <input type="text" value="00"/>
	day month year		hours mins.
	<input type="button" value="Search"/> <input type="button" value="Cancel"/>		

[Help](#)

Internet

Resultaatpagina

Cannot find server - Microsoft Internet Explorer von Mannesmann Ar...
File Edit View Favorites Tools Help
Address [12&tism=00&lang=en](#) Flyswat Off

Search results:

From	To	Departure	
		on	from
Milano	Roma (Tutte Le Stazioni)	14/9/2000	12:00

[Help](#)

Sorted for:
Departure time [New Enquiry](#)
[Journey time](#)
[Number of connections](#)

details	Departure	Arrival	Trains	Services	Journey time
1.	12:00	16:30	ES*		04:30
2.	13:00	17:30	ES*		04:30
3.	13:15	18:53	IC		05:38
4.	13:55	21:17	E		07:22

Internet

Tussenpagina

Ferrovie dello Stato's official timetable - Microsoft Internet Explorer von M...

File Edit View Favorites Tools Help

Address www.

Flyswat Off

Ferrovie dello Stato's S.p.A. official timetable

Valid until 9.6.2001

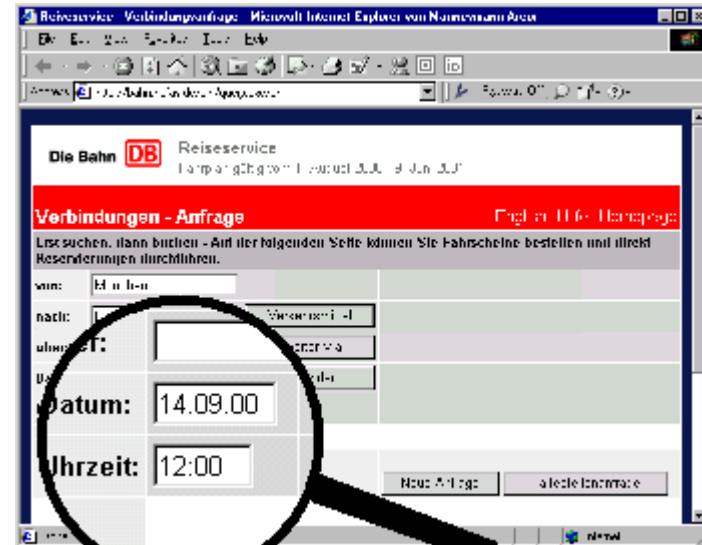
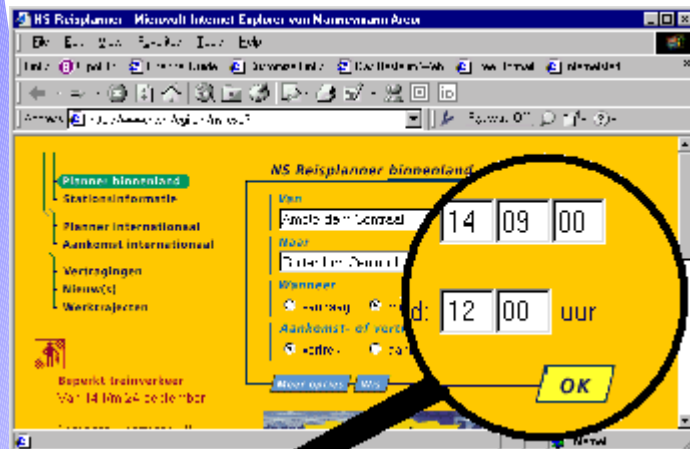
Wrong or missing data:

You may correct the wrong data or choose among the proposed ones, then click again «Search».

Departure station	<input type="text" value="Mi"/>		
Arrival station	<input type="text" value="Ro"/>		
Departure: on	<input type="text" value="14"/> / <input type="text" value="09"/> / <input type="text" value="2000"/>	since	<input type="text" value="12"/> : <input type="text" value="00"/>
	day month year		time mins

Done Internet

Vergelijking NS en DB

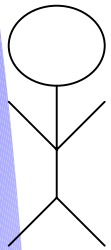


Kennis categorieen

- 1
- 2
- 3

Kennis over reisplanners

domeinkennis



Vandaag van A'dam
naar R'dam om 12:30?



Vertrek om 12:47 vanaf
spoor 1, duur is 55 minuten

NS Reisplanner binnenland

Van
Amsterdam Centraal

Naar
Rotterdam Centraal

Wanneer
 vandaag morgen anders: 14 | 09 | 00

Aankomst- of vertrektijd
 vertrek aankomst tijd: 12 | 00 uur

[Meer opties](#) [Wis](#) [OK](#)

Kennis over reisplanners

Logica

Reiseservice - Verbindungsanfrage - Microsoft Internet Explorer von Mannesmann Arcor

File Edit View Favorites Tools Help

Address <http://bahn.hafas.de/bin/query.exe/dn> Flyswat Off

Die Bahn DB Reiseservice
Fahrplan gültig vom 1. August 2000 - 9. Juni 2001

Verbindungen - Anfrage [English](#) | [Hilfe](#) | [Homepage](#)

Erst suchen, dann buchen - Auf der folgenden Seite können Sie Fahrscheine bestellen und direkt Reservierungen durchführen.

von:

Ihre Starthaltestelle ist nicht eindeutig. Bitte wählen Sie oben aus der Liste.

nach:

Ihre Zielhaltestelle ist nicht eindeutig. Bitte wählen Sie oben aus der Liste.

über:

Datum: morgen

Uhrzeit: Abfahrt Ankunft

Done Internet

Kennis over reisplanners

Applicatie kennis



Select a train time (local hours)

OUTWARD JOURNEY		leaving	arriving		train type	price category	
Choice 1	(5'49")	PARIS MONTPARNASSE 1 ET 2	15:55	BORDEAUX ST JEAN	18:55	TGV Reservation obligatory	-
		BORDEAUX ST JEAN	19:31	TOULOUSE MATABIAU	21:44	Train	-
Choice 2	(6'25")	PARIS AUSTERLITZ	17:00	TOULOUSE MATABIAU	23:25	Train Reservation recommended	-
Choice 3	(5'14")	PARIS MONTPARNASSE 1 ET 2	17:20	TOULOUSE MATABIAU	22:34	TGV Reservation obligatory	-

Kennis over reisplanners

Common sense

The screenshot shows a web interface for a timetable search. At the top, there is a navigation menu with five items: 'Home' (green), 'Timetables' (red), 'Lines' (blue), 'Service' (dark blue), and 'Others' (black). Below the menu is a red header bar with the text 'Timetable search step 2'. The main form area contains two dropdown menus for 'Departure station' (set to 'ABRANTES') and 'Arrival station' (set to 'ANCORA'). Below these are three date selection dropdowns: 'Date' (set to '14'), 'Month' (set to '9'), and 'Year' (set to '2000'). At the bottom, there is a 'Search' button, a 'New Search' link, and a 'More options >>' button.

Home Timetables Lines Service Others

Timetable search step 2

Departure station: ABRANTES Arrival station: ANCORA

Date Day: 14 Month: 9 Year: 2000

Search [New Search](#) More options >>

Kennis over reisplanners

Geometrie en taal

NS Reisplanner - Microsoft Internet Explorer von Mannesmann Arcor

File Edit View Favorites Tools Help

Links S ISpotOn Channel Guide Customize Links Das Beste im Web Free Hotmail Internetstart

Address <http://www.ns.nl/cgi-bin/nsi.exe?> Flyswat Off

Planner binnenland

- Stationsinformatie
- Planner internationaal
- Aankomst internationaal
- Vertragingen
- Nieuw(s)
- Werktrajecten

NS Reisplanner binnenland

Van
Amsterdam Centraal

Naar
Rotterdam Centraal


Wanneer

vandaag morgen anders: 14 | 09 | 00

Aankomst- of vertrektijd

vertrek aankomst tijd: 12 | 00 uur

Meer opties Wis OK

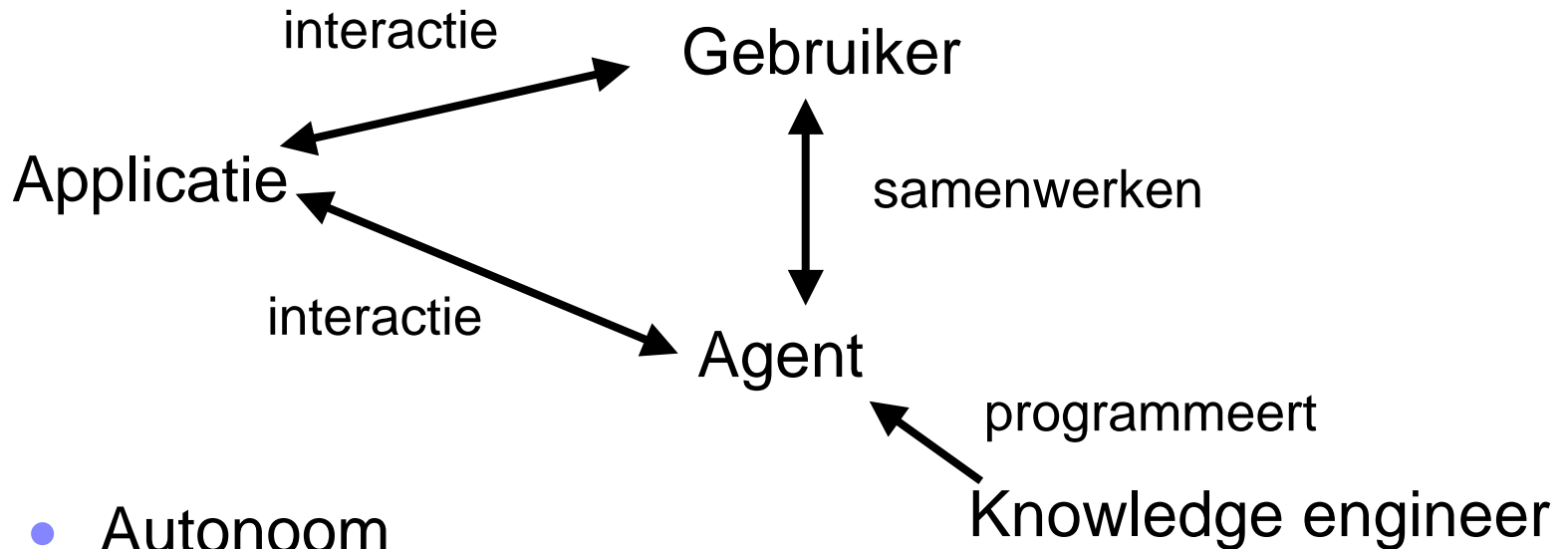
 Beperkt treinverkeer
Van 14 t/m 24 september

Internet

Overzicht

- Probleemstelling
- Reisplanners
- Agents
- SMART
- Voorbeeld agent
- Conclusie

Software agent (Maes)



- Autonom
- Adaptief
- Gepersonaliseerd

Overzicht

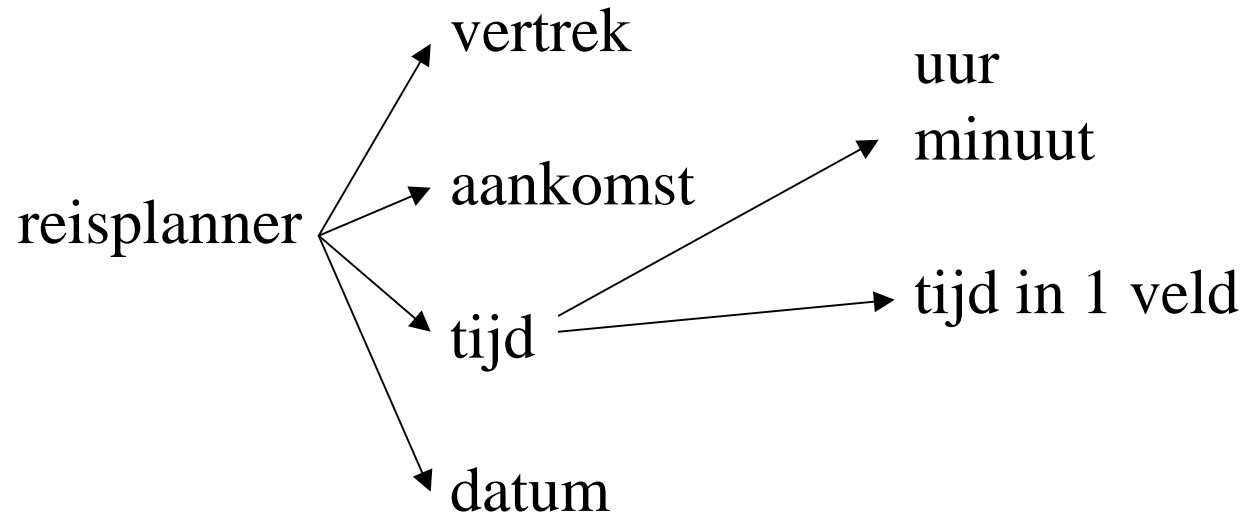
- Probleemstelling
- Reisplanners
- Agents
- SMART
 - Representatie van invoer
 - HTML Framework
 - Tester
 - Interface naar de Agent
- Voorbeeld agent
- Conclusie

Representatie van invoer

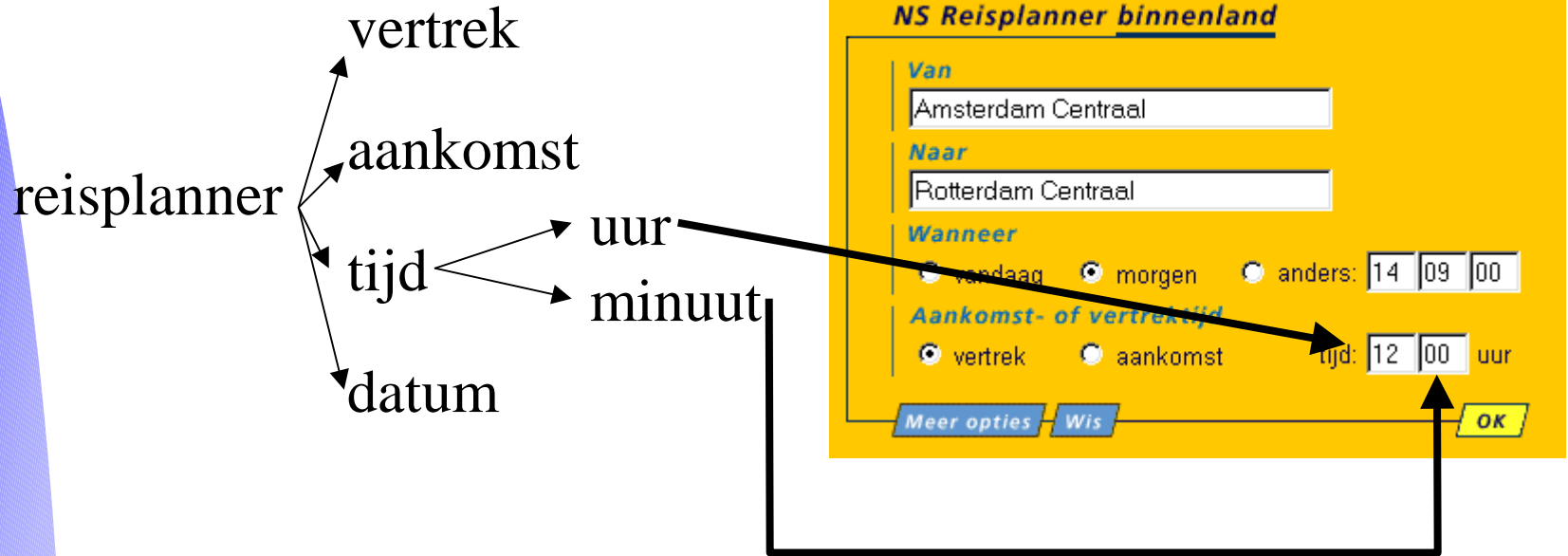
- Structures: welke functionaliteit?
- Configurations: welke invoervelden
- Assumptions: Structures -> Elementen
- LeftOvers: overgebleven elementen

Representatie van invoer

- Structures: welke functionaliteit?
 - Primitive Structures
 - Samengestelde Structures

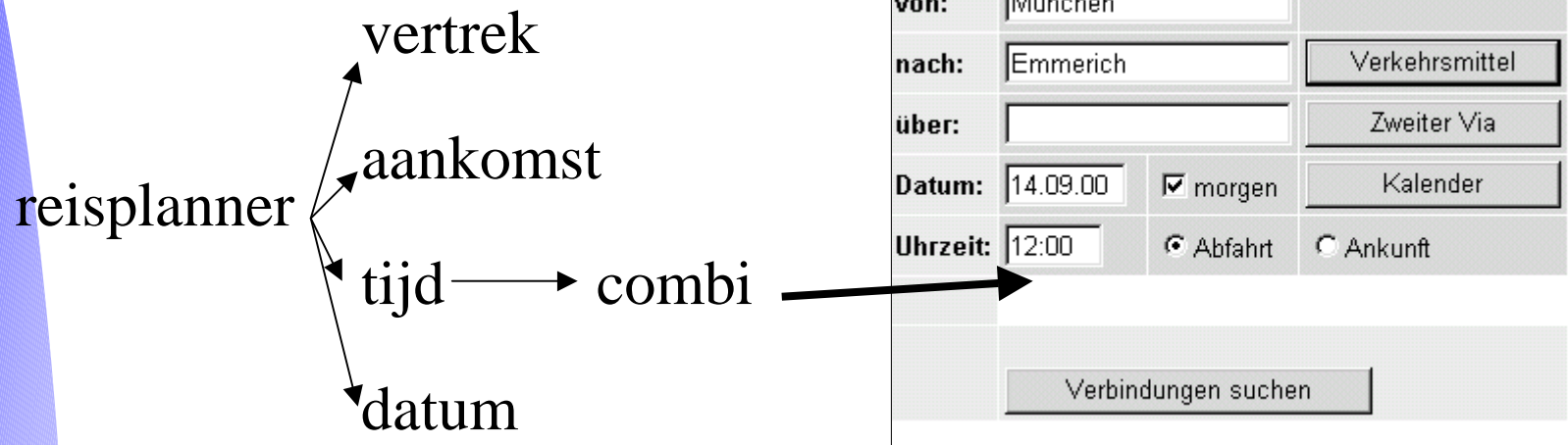


Structures en Configurations



Afbeelding van de reisplanner structure op de NS reisplanner

Structures en Configurations



Afbeelding van reisplanner structure tijd op de Duitse planner

HTML Framework

Tester

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