

Boschung's MDSS solution

Human factors / interface issues

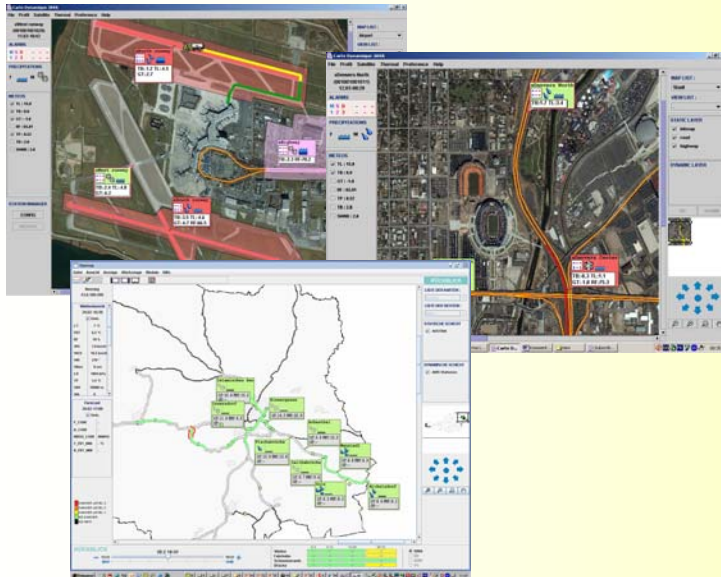
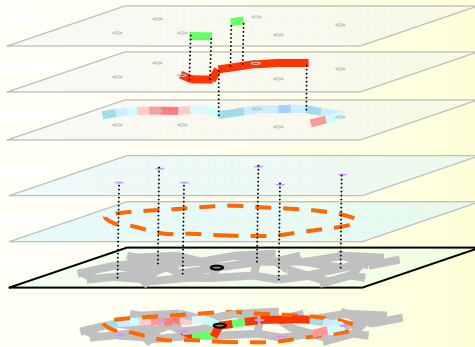
By Pierre-Alain Brodard, COO Boschung Mecatronic



- Modular approach
- Provide an ergonomic display
- Define pertinent informations that have to be displayed
- Leave the user a possibility to « dig in » for details



- Let the customer get into the MDSS step-by-step
 - → Module for RWIS management
 - → Module for AVL / reporting
 - → Module for Nowcasting / Forecasting
 - → Module for Treatment recommendations



- Dynamic map (geographical background and dynamic data layers)
- User-specific views
- GPS-driven
- Allows for various layouts depending on monitored area
- Combines the display of fixed and mobile equipment
➔ integration of all resources



- Alarms from RWIS
→ react to danger
- Alerts from Nowcasting/forecasting
→ anticipate dangers, plan and take decisions
- Status and location of resources in operation
→ « Dynamic » management
- Other measurements and information
(analysis, statistics, operation reports, etc.)



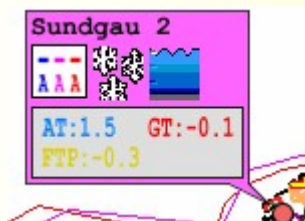
Boschung's RWIS alarm concept
(based on active freezing point measurement technology)



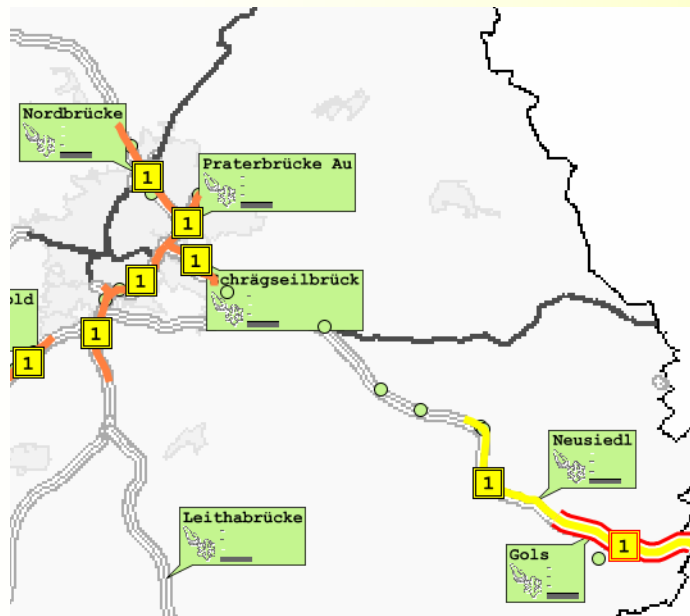
Alarm 1 : entering potentially dangerous conditions



Alarm 2 : icy conditions within 3.2°F from current pavement temperature



Alarm 3 : icy pavement



	0-3	3-12	12-30	30-72	
Wetter	W	W	W	W	<input checked="" type="radio"/> SWA
Fahrbahn	W	W	W	W	<input type="radio"/> BB
Schneeverweh...	W	W	W	W	<input type="radio"/> ABM
Brücke	M	M	M	M	<input type="radio"/> SG

- Winter road segments are colored against 4 levels of danger
- Warnings about oncoming dangerous events are issued (escalation at -12h, -6h, -2h, -1h)
- Information is broken down into 4 areas (weather, pavement, snow drift, bridges)
- Information is summarized over 72 hours

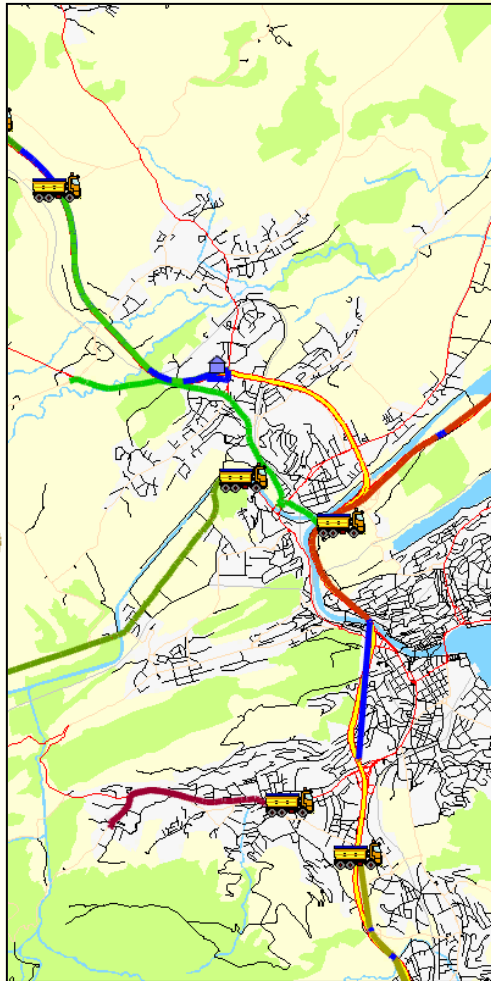


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Status and location of resources

hoschung



- Display of vehicles
 - Current location (GPS)
 - Currently carried-out operation
 - Current dosage / tool information
 - Knowledge basis for future recommendations
- « by-product » : complete reporting of carried-out operations
 - Events list
 - Complete mileage, duration, consumption report
 - User specific breakdowns of reports



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Other measurements and information



ABM Seewalchen LIVE

Freitag, 04.11.2006:
 Von Nordwesten her erreichen Wärmefronten die Steiermark was am Nachmittag im Norden zu einer Intensivierung der Schneefälle führen wird. Im Süden am Nachmittag meist stark bewölkt, allerdings nur recht geringe Niederschlagsneigung.
Nacht, 04.05.11.2006:
 In der Nacht vorüber Schneeschauer bis zur Müllwäldchenferse, südlich davon bei starker Bewölkung kaum Niederschläge. Schon in den Nachmittagsstunden beginnt die Schneefallgrenze wieder langsam in höhere Regionen zu steigen.




KT Luarn - Einzelte Februar

Tag	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
...

- Detailed RWIS measurements
- Detailed Weather forecast
- Weather alarms
- Satellite pictures, etc.
- Operation reports, statistics, invoicing, etc.



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Thank you !