InteGRail → InteGRail Technology Platform
Demonstration Scenario 1 → Planning and running a new freight service
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Planning and running a new freight service

Demonstration Scenario 1 of the InteGRail project

Integration of information is the key for further growth of railway transport volume. InteGRail has defined a standard approach for architecture and communication that allows easier information integration and sharing. Using this standard approach a number of example applications were developed. InteGRail has chosen three demonstration scenarios, where the developed functions get the chance to prove that they work, that the methodology proposed by InteGRail works, and that they are actually able to help improve the performance of railway processes. One of them is the 1st Demonstration Scenario, the one where information is provided to help plan and run a new cross-border freight service.

What is Demonstration Scenario 1?

This demonstration scenario deals with two phases of a new cross-border freight service:

- the planning of the route including the check of the match of train and infrastructure characteristics in all countries on one side,
- the actual running of the service, where we have to deal with the expected and unexpected temporary situations of unavailability of infrastructure in each country.

Since the scenario deals with both the preparation and the running of the service, two information systems with these different timeframes were developed and are demonstrated:

- Network Statement Checker: For the preparation phase a tool was developed that allows direct access to the national databases with the network characteristics (electrification, train protection system, maximum axle load). When used in combination with the rolling stock characteristics this information allows the selection of the appropriate route/train combination for the new service.
- Infrastructure Availability Checker: When the time has come to run the actual service, the operator can benefit from cross-border accessibility of information on actual availability on that day, or better: deal with unavailability, e.g. due to planned maintenance or an unexpected disturbance. Naturally, the information on planned maintenance can also be used for longer-term planning purposes.

Who can benefit?

Using these tools, the operator and the traffic or capacity manager can decide much quicker which routes are optimal for the use of the new service and can acquire quicker information on whether the route is available for running the service.

Which benefit?
This will save a lot of preparation time, and will allow the improvement of the quality of service provided by both the traffic manager and the train operator.

Present status, availability and future possibilities
The Network Statement Checker and the Infrastructure Availability Checker are available in Summer 2008. The emphasis of the demonstration activities of these two tools will be during InnoTrans 2008 in Berlin, where dedicated sessions with possible users of these new information systems will be asked to express their expectations regarding possible benefits.

No function like the Network Statement Checker is currently available for operators, and adoption of the technique by an European network of Infrastructure Managers is a serious option.
The Infrastructure Availability Checker is a possible response to the TAF TSI obligation for the Infrastructure Managers of Europe to publish an Infrastructure Restriction Notice Database.

Other results of InteGRail

Architecture definition of integrated information systems: IGRIS

Semantic data structure of the railway domain, the InteGRail ontology

Example user applications: ODSS for on-line operational decision support, IAC for on-line infrastructure availability, IDT for on-line vehicle maintenance information

Description of interdependence of performance of railway processes: the railway KPI tree, and a tool to assess and visualise performance

InteGRail - Facts and Figures

InteGRail started on 1/1/2005 and ends on 31/12/2008

Total project budget:
20 million Euros

EC funding : 11 million Euros

Total effort over 125 person-years

39 partners from 11 countries

Partners of InteGRail:
UNIFE • Alstom Transport • AnsaldoBreda • Bombardier Transportation • Siemens Mobility • UIC • Trenitalia • D'Appolonia • TSB-FAV • DeltaRail • ATSF • CAF • Nortel Networks • Laboratori Guglielmo Marconi • FAR Systems • MER MEC • Italcertifer • ATOC • České dráhy • MAV • UNICONTROLS • Strukton Railinfra • Deuta-Werke • Heriot-Watt University • IMEC • OFFIS • Televic • Seebyte • Kontron • University of Chile • INRETS • Wireless Future • University of Birmingham • ADiF • RFF • ARGE Corridor X • Network Rail • ProRail • SNCF

More information:
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InteGRail
INTElligent inteGration of RAILway systems