

PROJECT PROPOSALS FOR THE 2ND CALL OF FP7

(DEC 2007 – JAN 2008)

Template for the project synopsis

1. Proposal for project name
New Generation of Freight Trains – Technologies and Demonstration
2. Problem that the project will address (why is the project being initiated?)
Railway freight transport decline also due to missing technological innovation and harmonization in the past 100 years.
3. Scope of the project
NOTE:
 - Many of the items listed below correspond with the ones of SafeCom that should be integrated here.
 - Main (measurable) objectives
 1. Monitoring system for payload.
 2. Diagnostics of wagons running gear.
 3. Distributed traction control.
 4. Remote brake pipe control.
 5. Distributed brake control.
 6. Wheels Slide Protection.
 7. Automatic brake test.
 8. Train integrity monitoring.
 9. Fast shunting at terminals.
 10. Transport of refrigerated containers (TBV).
 - Proposed solutions and deliverables
 1. Specification and demonstration of the wired train communication network.
 2. Specification and demonstration of the wireless train “point to point” communication network.
 3. Integrated electro-pneumatic brake control for wagons.
 4. Axial generator.
 5. Automatic coupler.
 6. Power converter for refrigerated containers (TBV).
4. Which section of the 2nd call draft is being addressed?
 - SST.2008.2.1.3 *New generation of European freight train System.*
 - SST.2008.4.1.1 *Safety and security by design.*
5. State of the art: previous or on-going research or standardisation initiatives in this area
 - EDIP (2002 – 2005): Development of an on-board radio-based communication system for the operation of freight trains using distributed traction.
 - BRAVO (2004-2007): Ensuring increase of the international rail freight transport, both conventional rail and intermodal, on Brenner corridor.
 - TR 50452:05-2007 "Railway applications - Radio remote control system of traction vehicle for freight traffic in multiple traction operation".
 - EN 50239:2000 "Railway applications – Radio remote control system of traction vehicle for freight traffic".

6. Estimated budget (total and EC Contribution)
16 M€
7. Project duration (*indicative range: between 24 and 48 months*)
36 months.
8. The leader of the proposal preparation
Faiveley Transport (or Knorr-Bremse in case of integration of SafeCom)
9. Main potential partners (names of companies supporting the proposal as opposed to potentially interested stakeholders)
Potentially interested stakeholders:
 - Locomotives manufacturers: Alstom, AnsaldoBreda, Bombardier, Siemens, Vossloh.
 - Systems suppliers.
 - Wagons manufacturers/lessors: Ferriere Cattaneo, Greenbrier, AAE
 - Operators: CEMAT, Kombiverkehr.
 - Railway Undertakings and Traction Companies: Veolia, Railion, FRET SNCF, Trenitalia Cargo, RCA, RTC...
10. Contributions to standards – can the results of this projects be transferred into future EN standards? (*Maximum 5 lines*)
Where interoperability of components and systems will be addressed, clear and open standards will be issued. Such documents will be presented to the relevant standardization bodies.
Examples:
 - Wired power supply system.
 - Wired communication system.
 - Wireless, point to point, communication system.
 - Specification for distributed braking.
 - Specification for distributed traction.
 - Specification for automatic brake testing
 - ...
11. Implications of the project for current individual company products and practices – is the proposal supported internally within each major partner at the strategic level?
It is supported by Faiveley Transport Group R&D Management.
12. Risk factors that could jeopardize the implementation of results. How to ensure market up-take and who will have the responsibility over the implementation?
Risks:
 - Low quality of the standardization documents produced, taking to a lack of interoperability of products.
 - Delay between the end of the project and the availability of industrial products.
 - Lack of commitment by the operators, railway undertakings and traction companies in investing in the new technologies.
 - Lack of representativeness, by the partners, of the market, invalidating the implementation.

How to ensure market uptake and responsibility of the implementation:

 - Ensuring high quality of the standardization documents produced, including interoperability test specifications. Responsibility is up to the project partners.

- Demonstrators should continue to run after the end of the project, during the industrialization phase. Responsibility is up to the project partners.
- The results of the demonstration phase of the project shall be elaborated in the focus of the advantages respect to the previous art. Figures shall be produced in order to allow the elaboration of a business case for proving the competitive advantages of the operators that will implement the project. Responsibility is up to the project partners.
- Involvement in the project of major European actors. Responsibility is up to the project preparation leader and to the main partners.