PROJECT PROPOSALS FOR THE 2ND CALL OF FP7

(DEC 2007 – JAN 2008)

Project synopsis - SAFECOM

1. Proposal for project name
   Standard for safe communication in freight trains

2. Problem that the project will address (why is the project being initiated?)

3. Scope of the project
   Innovative communication technologies enabling improved performance, diagnostics and monitoring in interoperable freight trains
   The project aims at the development of a standard for safe communication along freight trains to increase the performance of braking systems to allow longer and heavier freight trains, and thus enabling intelligent monitoring and diagnostic for cargo and rolling stock to ensure safety and security in the countries where the trains are operated. The project results can be used throughout Europe allowing interoperability in the different existing networks.

   a. Main (measurable) objectives
      - increase freight train capacity (number of ton-kilometer dropped)
      - increase freight performance to make the freight transport more competitive to the road transport (ton-kilometer/year)
      - decrease of operational costs (€)
      - improvement of the environmental performance of the whole transport system by shifting freight from road transport top the rail (CO_2 reduction)
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   b. Proposed solutions and deliverables
      - Recommendation for updates of existing standards / regulations (CEN – CENELEC Workshop Agreement on safe freight train communication, UIC)
      - Common validation and assessment procedures
      - Demonstrators
        - Off-board tests of the wired solution installations corresponding to a 1500 m long train
        - long freight train equipped with wired solution
        - long freight train equipped with wireless solution
        - tests on wagons equipped with sensors and on board terminals for freight monitoring (e.g. dangerous goods) and railcar diagnostics to be carried out in a specific rail corridor. The tests will include the validation of the train to ground communication link by using the infrastructure of an existing operational control centre.

4. Which section of the 2nd call draft is being addressed?
   SST.2008.2.1.3 New generation of European freight train system

5. State of the art: previous or on-going research or standardisation initiatives in this area
   INTELFRET, EDIP are direct predecessors. Other freight related IT projects such as FIRE & F-Man (which failed in implementation) plus existing products and

technologies, MITRA, MODTRAIN (in particular EUCOUPLER) will be taken into account
TAF TSI will be considered as far as train to ground communication is concerned
Special consideration will be given to the results of former and ongoing European projects, not only with regard to the technical results but also with regard to the lessons learned.

6. Estimated budget (total and EC Contribution)
(Please note that under FP7 R&D activities as well as demonstration will be 50% funded)
ca. 8 Mio € overall budget / 4Mio€ EC contribution

7. Project duration *(indicative range: between 24 and 48 months)*
36 month

8. The leader of the proposal preparation
Knorr-Bremse supported by UNIFE and D'Appolonia

9. Main potential partners (names of companies supporting the proposal as opposed to potentially interested stakeholders)
Railway industry:
Knorr-Bremse (DE), Frensistemi (IT), Faiveley (IT), ERA-Contact (DE), Cattron-Theimeg (DE), Tele Sistemi Ferroviari (IT),
Operators:
UIC, Trenitalia, Rail Cargo Austria, LKAB
Associations/Research institutes:
UNIFE (BE), D'Appolonia (IT), NEW Opera (BE), TU Berlin (DE), Univ. of Lemgo (DE), Politecnico di Torino (IT), INRETS, Università Firenze (IT); VNIIAS(Russian Institute)

10. Contributions to standards – can the results of this projects be transferred into future EN standards? *(Maximum 5 lines)*
Contribution to existing European standards / regulations (CEN – CENELEC Workshop Agreement on safe freight train communication, UIC)

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? *(Maximum 5 lines)*
The project results shall contribute to existing European standards and regulations. Moreover, the technologies/ specifications developed within the project scope will be introduced into the product development process of the involved companies.

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? *(Maximum 5 lines)*
- The availability of common frequencies or at European level is crucial element of the project. The problem could be overcome by using common frequency bands where the frequencies are tuned accordingly with the train location
- The main project objective is draft a new European standard on freight train communication. This will enable the development of new technologies in a competitive environment later on.
- The involvement of New Opera is important to ensure that the future relevant political and organizational questions are addressed
- The access / involvement of private freight operators and wagon leaders is of importance to ensure that the results will be quickly implemented

- A strong focus is placed on the demonstration and test of the specified requirements to ensure applicability and acceptance.