Workshop on
Formal verification of ETCS specifications
EURAILCHECK
Hosted by FBK-irst, Trento, Italy
9-10 October 2008

http://es.fbk.eu/events/formal-etcs/training.html

The aim of this two days workshop is to present and discuss the results of the "Formal verification of ETCS specifications" EURAILCHECK project, response to the Invitation to Tender of the European Railway Agency ERA/2007/ERTMS/OP/01.

The project addressed the problem of providing techniques and tools for the analysis of ETCS specifications. The project has led to three main classes of results:
- The definition of a methodology for the analysis for requirements by means of formal methods. the formalization of the ETCS specifications and for their automatic formal verification to capture possible errors or inconsistencies.
- The EURAILCHECK tool, that supports the methodology by means of automated formal verification techniques.
- The formalization of a significant subset of requirements for ETCS.

The goal of the workshop is to provide an overview of the project results, and a theoretical foundation that is prerequisite for the subsequent hands-on training courses.

The workshop will take place in the premises of FBK-irst, the IT center of the Fondazione Bruno Kessler. Information is available at the URL http://es.fbk.eu/events/formal-etcs/training.html.

Workshop program

FIRST DAY (October 9th, 2008)		
9.00 – 10.30	Alessandro Cimatti	WELCOME
	Angelo Chiappini	ERA goals
	Berardino Vittorini	Project Plan
	Alessandro Cimatti	Technical Overview (the problem: requirements flaws or inconsistencies; choices; results)
10.30 – 11.00		*Coffee break*
11.00 – 12.30	Alessandro Cimatti	Methodology Overview. Description of the informal and formal techniques
12.30 – 14.00		*LUNCH*
14.00 – 15.30	Angelo Susi	Methodology Formalization Phase
15.30 – 16.00		*Coffee break*
16.00 - 17.30	Stefano Tonetta	Temporal logics and semantics
	Luca Macchi	Examples
		Questions / Answers
SECOND DAY (October 10th, 2008)		
9.00 – 10.30	Alessandro Cimatti	Formal Verification and Validation techniques
10.30 – 11.00		*Coffee break*
11.00 – 12.30	Stefano Tonetta	Formal analysis of object models with temporal constraints.
12.30 – 14.00		*LUNCH*
14.00 – 15.30	Luca Macchi	Examples
	Roberto Cavada	EURAILCHECK Tool Demo
15.30 – 16.00		*Coffee break*
16.00 – 17.00		Questions / Answers

Each session will complement technical presentations with examples taken from ETCS requirements, and will include Q/A time.