ARTEMIS Call 2008 Project
100039

CHARTER

Critical and High Assurance Requirements Transformed through Engineering Rigour

EXECUTIVE *summary*

Ease, accelerate, and reduce the cost of verifying and certifying of critical embedded systems thereby contributing to the safety and security of citizens who rely on embedded systems.

RELEVANCE CALL *2008 objectives*

Increase productivity of developers through a 10% reduction in the cost of critical system design by 2013, along with a 15% reduction in the software development cycles in critical Automotive, Medical, Surveillance and Aviation sectors that demand verified or certified embedded systems.

MARKET *innovation*

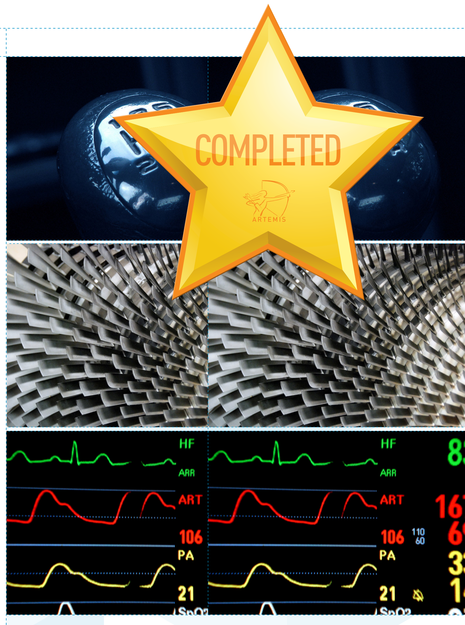
CHARTER will advance real-time system development technologies so that the safety and robustness of critical embedded systems can be boo ost. Availability of new verification technologies will enable many more applications to achieve higher safety standards.

Improving European competitiveness

European companies that rely on the design and integration of safety critical embedded systems for their products will be more competitive through reduced costs and shorter time to market. The reduction of re-certification costs for product releases will make EU companies more receptive and competitive.

TECHNICAL *innovation*

- Advanced engineering process requirements to cover deductive formal verification and test generation driven by requirements
- Hyperlinked traceability evidence containing base lined artefacts, their certification evidence, including verification traces, and their traceability relationships
- Automatic Test Case Generation methods capable of addressing extra-functional properties of embedded systems
- Lightweight, portable, repository independent graph rewriting tool that can be retargeted to different languages and metamodels
- New technology for the certification of model-driven development that translates partial models to more complete models, models to source codes and source code to binary code
- Rule driven compilation methods able to demonstrate code correctness



CHARTER

PROJECT COORDINATOR Scott Hansen	START April 2009
INSTITUTION The Open Group (UK)	DURATION 36 months
EMAIL s.hansen@opengroup.org	TOTAL INVESTMENT €2.5 M
WEBSITE www.charter-project.org	PARTICIPATING ORGANISATIONS 12
	NUMBER OF COUNTRIES 6