ARTEMIS Call 2012 Project
332933

HoliDes

Holistic Human Factors and System Design of Adaptive Cooperative Human-Machine Systems

PROJECT *description*

HoliDes addresses development and qualification of Adaptive Cooperative Human-Machine Systems (AdCoS) where many humans and many machines act together, cooperatively, in a highly adaptive way to guarantee fluent and cooperative task achievement.

RELEVANCE CALL *2012 objectives*

HoliDes will investigate new ways to pro-actively communicate system adaptations to human operators by keeping them sufficiently in the loop based on the operators' situational load and capacities. We will design innovative AdCoS in four domains: **Health, Aeronautics, Control Rooms and Automotive**.

MARKET *innovation*

HoliDes will offer a combined model-based and empirical approach to the development and qualification of AdCoS, which will significantly ease compliance to human-factor and safety regulations, and will allow to realize adaptation strategies in a transparent, fluent, explicit and controllable way. HoliDes therefore will:

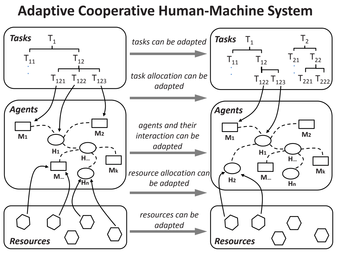
1. **reduce the cost** of System Development in particular compliance with human factors and safety,
2. **reduce needed development cycles** when applied to innovative and ambitious AdCoS,
3. foster Embedded Systems for AdCoS that are **reusable in different safety critical domains**.

TECHNICAL *innovation*

HoliDes will research affordable means of compliance, which enable to formalize adaptation strategies on global many humans - many machines levels and local HMI levels in a coordinated way.

We will develop techniques & tools on 5 dimensions:

1. automated AdCoS re-configuration based on real-time predictive human models;
2. holistic formal modelling and accelerated analysis;
3. new empirical task, exploration and validation analyses;
4. a formalized synergetic empirical and model-based methodology;
5. integration of all techniques & tools in a Human Factors Reference Technology Platform to foster interoperability and to support human factors along the whole engineering life-cycle. The platform will be connected to CESAR-RTP to enable holistic development & qualification from both perspectives: human factors and technical systems design.



PROJECT COORDINATOR	START
Andreas Lüdtke	October 2013
INSTITUTION	DURATION
OFFIS e.V.	36 months
EMAIL	TOTAL INVESTMENT
andreas.luedtke@offis.de	€23.28 M
WEBSITE	PARTICIPATING ORGANISATIONS
www.holides.eu	31
	NUMBER OF COUNTRIES
	7