

ADN4SE, the R&D project that makes embedded systems accessible

Press Release - Rennes (FR), January 21th, 2016 – Launched in September 2012 and funded by the French program Investissements d’Avenir (i.e. investments for the future), the research and development project, ADN4SE for Atelier de Développement & Noyau pour Systèmes Embarqués (i.e. Embedded systems kernel & development workshop) ended in December 2015.

ADN4SE project aims at reducing embedded software design costs by providing software development tools, generic software blocks and demonstrators implementing them.

The involved partners (Sherpa Engineering, Safran, Schneider Electric, Alstom Transport, CEA, CETIM, Krono-Safe and BA Systèmes) met on January 19th and 20th in CEA Saclay premises (French Alternative Energies and Atomic Energy Commission) to present the results of their work and the prospects opened up by the project.

ADN4SE comes up in the current economic context of a demand for smarter, more autonomous, more communicative and safer products in which the number of functionalities supported by embedded software is growing steadily in order to meet them. This trend is reflected in highly competitive environments in which mastering development times and time-to-market is essential to be competitive.

In this context, manufacturers increasingly pool their efforts and structure their developments around a called generic execution platform strategy, i.e. a real-time kernel coupled with services for complete abstraction of the hardware.

In terms of outcomes, Asterios software workshop resuming the work done in the project, will be officially presented by Krono-Safe at the Embedded World 2016 and ERTS 2016 Congresses. Asterios includes all ADN4SE developments, that is to say an integrated toolchain presented under a graphical IDE (Integrated Development Environment) which gathers a generic execution platform, design and time simulation tools and a sizing tool on target.

BA Systèmes provided the robot mobile base (AGV) which made the integration of a cobot possible (Cobot is a robot working in collaboration with humans). The cobot was provided by SYBOT, a startup stemming from CEA List. This collaborative mobile robot benefits from the results of ADN4SE project in addressing the safety constraints which are inherent to both mobile robotics and humans/robot collaboration.

The level of the demonstrator’s technological maturity validates closely-related functions of a real industrial use by the system combining BA Systèmes’ AGV and the embedded COBOT.

For BA Systèmes, the industrial perspectives opened by such a system are proven in logistics (picking, operators’ support, etc.) and will enable to integrate new and more robust software solutions for control and command.

About BA Systèmes

French leader in intralogistics systems based on AGV, BA Systèmes supports industrial companies in the full automation of their flows. Over 250 sites in Europe are equipped with BA Systèmes’ solutions, hence improving the productivity, flexibility and reliability of processes of Nestlé, L’Oréal, Kraft Food or even Heineken.

Involved in a permanent innovation process recognized by international awards, the group develops its expertise in mobile robotics to provide its industrial customers with the cutting-edge technologies. Innovative applications are also implemented by dedicated subsidiaries; BA Healthcare for the medical field and Port Automation Systems (PAS) for the port sector.

More information on: <http://www.basystemes.com>

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