

The 1st mobile cobot in Europe is tested at BA Robotic Systems Group

Press Release - Rennes (FR), September 14, 2017 – Under P-RC2 project (ie "Platform for Robot Controller Construction") which aims at developing a collaborative software environment dedicated to robotics in the Factory of the Future, BA Robotic Systems Group has developed a mobile cobot to evaluate and validate the results of the project, a first in Europe!

A development platform dedicated to robotics

Part of the digital transformation of the industry, software developments of robotic applications remain complex. New applications areas emerge and require ever greater functionalities.

The objective of P-RC2 project is to build a generic platform for the development of ergonomic and industrial grade robotic controllers that will allow to normalize the description of these controllers and develop all the architecture and algorithm integration tools.

Funded by the "Logiciel Embarqué et Objets Connectés" (LEOC) i.e. "Embedded Software and Connected Objects" call for projects of the French Investissements d'Avenir (Future Investment) Program, P-RC2 project combines the scientific expertise of CEA-List Institute with the know-how of Akéo Plus, Sarrazin Technologies, Arcure and BA Systèmes companies.¹

Addressing new industrial challenges raised by robotics, P-RC2 project must play an important role in facilitating the programming of robotic systems, securing their functioning and accelerating development times.

A demonstrator / mobile cobot resulting of several years of innovation



To illustrate and confirm the results of the project, BA Systèmes, responsible for the technical management of the project, has developed a new integrated and modular cobotic system.

As a collaborative robot for co-manipulation of heavy loads, it associates an AGV-type mobile base with a robotic arm for gripping. It integrates two operating modes which can both be used in industrial context: an autonomous mode and a mode in which the effector is hand-manipulated by an operator.

BA Systèmes has developed on P-RC2 platform all the robotics application functions of the mobile base and the embedded handling robot (Cobomanip²); the mobile platform expanding the scope of action of the arm and multiplying the possible applications in the Factory of the Future or Industry 4.0.

¹ For more information, consult P-RC2 dedicated website: <http://www.p-rc2.com>

² Cobomanip is a collaborative robot developed by the CEA-List and Sarrazin Technologies

Innovation lies precisely in the successful association of these two heterogeneous systems. Indeed, a moving cobot is much more than the juxtaposition of a mobile base and a cobotic arm (Cobomanip): it is the combination of two mechanisms in a single system, controlled by a single controller, capable of optimizing the coupling between the base and the arm in a transparent way for the user. This problem is particularly important in the context of heavy loads handling, which requires a very strong interaction between the mobile base and the arm.

Tests must allow to qualify and to quantify the gains made by the software platform for cobotics applications in terms of reduction of applications' development times.

The first French mobile cobot stemmed from Robm@rket, an ANR innovation project conducted in partnership with BA Systèmes, CEA, INRIA and the University of CAEN in 2010. Addressing the issues raised by the Factory of the Future, BA Robotic Systems Group has since continued to invest in similar cobotic research and innovation solutions, combining a mobile base and robotic/poly-articulated arm, including, for example, Asimov (a mobile cobot dedicated to assembly operations for Airbus) developed with IRT Jules Verne, and Stamina (mobile robot for parts handling for PSA), stemming from a H2020 European project.

Cobotics replaces humans on more value-added tasks

In addition to this advanced technology, P-RC2 project is supporting the shift in the robotics market towards high-value services and cobotic solutions.

Several industrial uses are currently identified in the fields of construction or mechanical assembly, for heavy load handling applications. These tasks are nowadays carried out by hand, by one or more operators, or thanks to winch or bridge crane systems. Moving an articulated robot with an AGV provides a technical solution to reduce MSDs (Musculoskeletal Disorders), while maintaining the flexibility of the human operator.

About BA Robotic Systems Group

Involved in a permanent innovation process recognized by international awards, BA Robotic Systems Group offers its customers its expertise in mobile robotics and allows them to benefit from the cutting-edge technologies and develop as close to their needs as possible innovative industrial prototypes addressing the challenges of the Factory of the Future. Innovative applications are implemented by dedicated activities in intralogistics, industrial robotics and medical fields.

Among them, BA Systèmes, French leader in intralogistics systems based on AGV, supports industrial companies in the full automation of their flows. Over 300 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.

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

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