The EMBrACE R&D project has started with the participation of BME VIK

The "Environment for model-based rigorous adaptive co-design and operation of CPS" (EMBrACE) international ITEA 3 project has started with the participation of the VIK-MIT department at BME. Twenty partners, including SAAB, Siemens and EDF, will work together to create innovative engineering languages and tools to design complex digital systems.

Budapest, 15th June 2020. The concept of the "Internet of Things" (IoT) and cyber-physical systems (CPS) has led to some of the most grandiose IT projects of our time. From the energy sector through the automotive industries to the production infrastructure, we rely on highly safety-critical systems with vast complexity, typically designed and implemented by different stakeholders and specialists. There is barely any framework that supports the co-design of large-scale heterogeneous systems peculiar to CPS. Without a common language, subcontractors are not able to precisely define their assumptions, guarantees or requirements, which leads to failures and accidents at worst and over-specification and cost inefficiency at best.

The EMBRaCE project will tackle these challenges with novel and innovative approaches. With the cooperation of nearly 50 international corporations and research institutes, including the Department of Measurement and Information Systems at BME VIK and IncQuery Labs Ltd., the project aims to connect representatives of different disciplines and tool vendors to design a common requirement language and methodology for the co-design of large-scale cyber-physical systems. With the specification and standardization of the Common Requirements Modelling Language (CRML), as well as the integration of existing tools with and around the language, accompanied by methodologies guiding the design process, system designers and integrators will get a framework, an efficient tool to help the digital revolution overcome the challenges of ever rising complexity and unleash the potential of connecting systems for the society.

More information:

- Project number: 18039 (ITEA3); 2019-2.1.1-EUREKA-2019-00001 (NRDI Office)
- Project data sheet: https://itea3.org/project/embrace.html
- BME contact: Zoltán Micskei, PhD, http://mit.bme.hu/~micskeiz/