

Kinematics – an intuitive robotics construction kit for children and teenagers

Award winner at the CeBIT Innovation Award 2014

The construction game Kinematics enables children and teenagers from different age groups without any prior knowledge or computer skills to construct interactive robots that move around autonomously. The plug connections with integrated power and data transmission and the construction kit with its mobile modules are particularly innovative features. When designing the user interface, the researchers took particular care to provide users with barrier-free access to the world of robotics and consequently to the steering and control of complex systems.

Thanks to its universal user-interface design, Kinematics motivates its users to develop a playfully creative way of handling modern robot technology. Children aged between six and twelve embraced the construction kit with enthusiasm in usability tests, irrespective of their age and gender.

In contrast to construction kit systems that have already been launched successfully on the market, Kinematics is conceived for children of pre-school and primary-school age. Despite this, the construction kit also has the potential to introduce teenagers, as well as adults with an interest in technology, to the thematic field of robotics. In several interaction modi of varying complexity, Kinematics can both be used as a toy and developed into a programmable robotics set. The Kinematics vision is that of an intuitive technological toy for children and their families – and one that has great potential for further applications, for example in industrial and service robotics.

Kinematics was invented by the graduate designer Leonhard Oschütz. The Kinematics team also includes Christian Guder (graduate designer, industrial mechanic) and Dr. Matthias Bürger (German business administration graduate [Dipl.-Kfm.], doctor of economics). For more information, please go to www.kinematicblocks.com

The German Federal Ministry of Education and Research (BMBF) and Deutsche Messe AG (DMAG) are going to bestow the CeBIT Innovation Award for the second time in 2014. The competition's aggregate prize money is 100,000 euros. The initiators are looking for outstanding innovations that provide the greatest possible degree of user-friendliness and intuitive interaction with IT systems.

The prize winners' exhibits will be put on display at the CeBIT 2014 exhibition at the German Federal Ministry of Education and Research's stand (Hall 9, Stand D40). The ranking order of the three prize winners will also be announced at the CeBIT. For more information, please go to www.cebitaward.de



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