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Press release

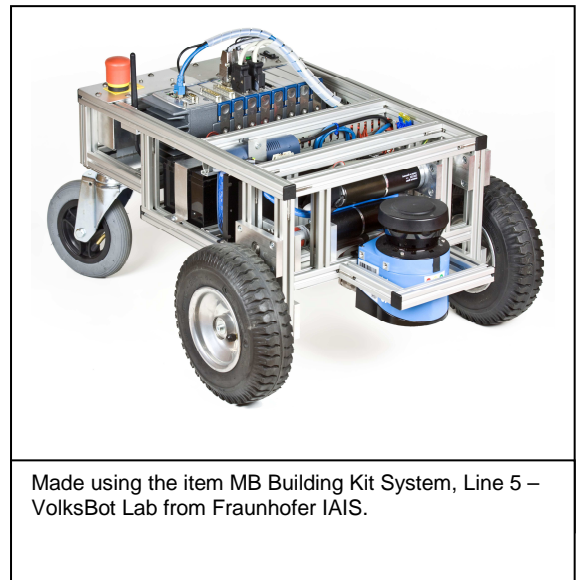
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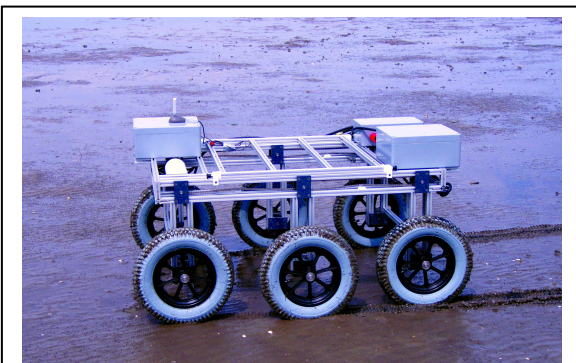
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A mobile robot – negotiating tough terrain with VolksBot and item

A cross between a moon buggy and a radio-controlled cross-country car. Or at least that's how it looked to most visitors to the item Industrietechnik GmbH stand at the Motek trade fair. In actual fact, the device on show was the VolksBot Lab robot of the Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS). The potential applications for this modular building kit system for mobile robots stretch from research and teaching in universities to industrial use as a basic platform for prototype autonomous transport and exploration vehicles. One such robot based on the VolksBot system is MarBot, developed with the Alfred Wegener Institute for Polar and Marine Research. MarBot is a six-wheeled robot designed to take sea bed samples in shallow water. The 2009 RoboCup World Champion in the RoboCup@Home league, Johnny the Robot from Bonn-Rhine-Sieg University in Germany, is also a VolksBot variant.



Numerous VolksBot variants have been developed to meet the differing demands of indoor and outdoor applications. Thanks to the VolksBot building kit system, a broad spectrum of robots can be constructed for specific applications at low cost. The lightweight aluminium supports of the robot chassis deliver the high rigidity that is essential for robust robots. And it is precisely because of these special requirements that the entire chassis is made using aluminium profiles from Line 5 of the item MB Building Kit System, which offers exceptional flexibility.



The MarBot built with item profiles. Line 5 of the item MB Building Kit System is also the basis for this robot.

The VolksBot Lab is a new variant in the VolksBot series. It has been designed as a basic platform that can be adapted, extended and developed to meet a wide range of needs. The package is a quick-start introduction to the world of mobile robotics. An integral component of VolksBot Lab is a high-quality laser scanner that enables the robot to perform accurate surveys of its environment

to identify its location and draw up maps. The central control unit is a CompactRIO real-time system. Unused analogue and digital real-time interfaces ensure that the system can be extended to incorporate customer-specific sensors. A flexible power supply with numerous widely-used supply voltages also makes it easier for developers to connect external sensor systems and additional components. For example, mobile information terminals can be created, where the flexibility of the item MB Building Kit System ensures simple, secure and effective mechanical extendibility. Further information is available at:

www.item24.com

www.volksbot-lab.de

www.iais.fraunhofer.de

item Industrietechnik GmbH from Solingen, Germany, develops and supplies the MB Building Kit System, a system which enables customized solutions for all aspects of industrial factory equipment engineering. The Building Kit System is based on aluminium profiles, carefully coordinated fasteners, and versatile functional elements.