TECHTALK DESIGN ADVICE SERIES

HUMANOID ROBOTS

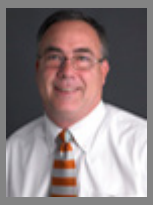
Whether it's human nature, paranoia (the action movie, 'I, Robot', where some famous movie star tries to thwart millions of robots from taking over the world, comes to mind) or something else entirely, our fascination with humanoid robots can be traced back to 1st century AD and earlier.

And why wouldn't we find them fascinating? By definition, humanoid robots have an overall appearance based on that of the human body with the sole purpose of interacting with made-for-human tools or environments; essentially, they are a version of ourselves. Humanoid robots also have the potential to help our society in so many different ways.

Unfortunately, robot developers are often forced to create complex custom solutions from numerous individual components. For this reason, igus® worked with a high-tech company in the field of bionics and humanoid robots to develop Robolink. Robolink is an innovative robot joint module system where the joints are controlled by cable tension, in a similar way to the human mechanics of bones and tendons.

All data cables are routed safely through the jointed arms, which are effectively the robot's skeleton. These cables convey images, acoustics and forces, which are the artificial senses of humanoid robots.

YOUR CONTACT



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Features

Robolink was primarily designed for robot developers and labs that work with humanoid systems, as well as with lightweight engineering solutions for handling and automation. Thanks to this innovative, modular system, lengthy development times are lessened, which makes it possible for artificial programmers to step into the process much earlier.

The Robolink system features links molded of lightweight tribo-plastics that are both configurable and expandable. The link arms have integrated magnetic sensors for measuring the angle position of the joints and are available in several lengths, styles and dimensions with space for additional control cables. Depending on the application, they are offered in carbon fiber, aluminum or glass.

The Robolink system also features:

- Wire ropes made of artificial fibers
- Black-box connection to drive and control units
- Additional tools, including grippers, shovels, hooks, vacuum caps, paddles, and legs

Currently, igus® has provided more than 35 customers with the Robolink system for their prototypes. So far, the results have been extremely positive. When asked about the Robolink system, three different beta testers said:

“I like the innovative principle and the prospect of designing applications with very little effort.”

“The turning and oscillating movement is extremely innovative.”

“There is nothing comparable.”

If you have questions, comments or are interested in becoming a beta tester for the Robolink system, please e-mail techupdates@igus.com or call 1-800-521-2747.

Watch this space for more information!

Useful Links and Tools

Robolink overview