Neocortex Learns from Experience to Enable Robot Flexibility

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Nashville, TN (PRWEB) June 26, 2014 -- Universal Robotics is now shipping version 4.1 of their flagship sensor-based automated learning software called Neocortex®. The software provides industrial and logistics customers automated material handling solutions for what has historically required manual labor.

Unlimited Robotic Depalletization
Neocortex Unlimited Depalletization allows for handling an unlimited number of cartons, automatically adjusting for the nearly infinite number of variables that naturally occur in supply chains. Other applications include robotic random bin picking, robotic random bag picking, and automated 3D inspection.

The breakthrough will expand robot use in the logistics industry, where according to U.S. Bureau of Labor Statistics, on-the-job back injuries are higher than any other business segment.

Neocortex - The Software with an IQ
In a revolutionary approach, Universal has created a software solution, Neocortex, which can work with any actuated machine. According to Chief Executive, David Peters, “Learning in nature is common to all creatures regardless of body type. Universal’s patented technology mimics that approach. Our software functions as sensor-based interactive intelligence, which is independent of specific machines. This allows us to integrate with a broad base of equipment.”

Neocortex works with all popular robots, such as ABB, Kawasaki, KUKA, Mitsubishi, and Motoman, and can easily be retrofitted into existing robotic work cells.

Ongoing Automation Flexibility
This unprecedented flexibility in automation is based on Neocortex learning from a real-time feedback loop. It is not limited by the rigid, programmatic approach of current 2D and 3D vision systems.

Hob Wubbena, Vice President, states, “The loop of sensory-motor behavior self-organizes. This means Neocortex learns as we do. It captures attributes of the experience, giving it a high degree of flexibility without computational explosion. For instance, we are currently installing the Neocortex Unlimited Depalletization on an application that has 400,000 SKUs, each with a unique box type that changes over time. No existing 3D vision system can do this in real-time.”

Flexibility Not Possible with Traditional Programming
Current 3D vision guidance systems require up-front engineering to configure and test the objects to be handled. When introducing new objects, a traditional 3D guidance system must be reconfigured manually by an engineer. Over the life of the robot, hundreds of thousands of dollars are invested in engineering alone to accommodate changes.

In contrast, Neocortex Unlimited Depalletization is competitively priced, starting at $40,000 plus a subscription license. There is no additional engineering when new objects are added. In other words, it is a solution that

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automatically grows with the customer.

Neocortex – Intelligence at the Speed of Robots
Neocortex is fast. It typically assimilates sensor information, learns, and reacts in under 700 milliseconds. This ensures the application is always faster than the physical movement of the robot. Most large robots can repeat a full cycle 15 times a minute. If they are strong enough, up to two 100-lb boxes can be picked at once, yielding an average carton throughput rate of up to 1,400 boxes an hour.

Continuing Volumetric Metrics for Logistics Efficiency Improvements
Neocortex can report operational metrics. For example, it can provide packing density of a pallet load by SKU.

Universal Robotics works with Integrators, Automation Companies
Universal is actively seeking integrators who wish to complement their capabilities with Neocortex. More information is available at http://www.universalrobotics.com/worldwide-distribution, or contact sales below.

About Universal Robotics
Universal Robotics is a software engineering company that creates state-of-the-art machine intelligence with multi-dimensional sensing and motion control to expand the reach of automation for a host of applications, making machines more flexible and providing learning from big data.

For more information, go to www.universalrobotics.com or contact Manda Patrick, Sr. National Accounts Manager, at (615) 366-7281 or sales(at)universalrobotics(dot)com.

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