Robotic VISION Technologies Granted 4 Patents to Advance Next Generation Machine Vision

Silver Spring, Md. – Jan. 24, 2018 — Robotic VISION Technologies Inc. (RVT) and its partners have been awarded four new patents for its vision guided robotic automation software by the U.S. Patent & Trademark Office.

"We believe that vision is the main enabler for global machine automation," said RVT Founder and Chief Executive Officer Rick Weidinger. "Vision guided robotics is advancing at an extraordinary pace, and these patents recognize the innovation in machine vision robotics technology that we are bringing to the marketplace."

The new patents cover several aspects of machine vision, including:

- **Detection and tracking of item features**: Automatic feature detection and tracking of moving parts so that the program can learn the shape and features of an object. This allows a machine to handle an object, even when it is moving, adjusting for changes in location and orientation the way people automatically do.

- **Sensor-based safety features for robotic machines**: Safety features using light-based sensors for places identified where humans might enter or exit. A model of an industrial robot's location is created using the low cost sensors and then monitored so that the robot will note when something could be in its way. The safety system instructs the robot to slow or stop depending on the extent of the safety space breach to avoid endangering what could potentially be a person. This vision safety system eliminates the need for costly and traditional safety cages or laser screens.

- **Distance determination between RFID tags**: Using two or more RFID tags allows for additional position information to be provided to vision guidance systems. A relative distance between the tags is calculated and distance determination may be implemented for robotic sensing, assembly systems and wearable technology to track motion and/or positions of objects.

- **Foreground motion detection in compressed video data**: Software that can tell the difference between background and foreground features in compressed video streams. Compressed video is often used in high-speed vision systems, but traditional systems need to totally decompress and process the video to tell what is in the foreground and what is in the background. This technology allows for extraction of foreground content of a compressed video stream directly from the compressed video allowing the background to be ignored as desired.

These new patents bring RVT's total granted patent portfolio to ten, with another ten pending. RVT's patents include the first single-camera 3D patent, two random bin picking patents and its trademarked eVisionFactory™ (eVF™) vision guidance software platform. RVT also owns the trademarks for RBP, Random Bin Picking, SC3D and VGR.

"These patents are a testament to the extraordinary work that has been accomplished, and the growing recognition of vision guided robotics as an integral part of cutting-edge machines," Weidinger said. "They underscore how, as active participants in vision guided robotics technology, we work hard to see what's coming next, understand the demand and build it."

SEE, THINK, DO.

About Robotic VISION Technologies Inc.

Robotic VISION Technologies Inc., a privately held machine vision software company, is a recognized leader in the field of Vision Guided Robotics (VGR™). RVT's 2D, 2.5D, and 3D vision guidance software platform allows robots to **"See, Think, Do**." RVT's software and technologies enable image recognition, machine vision, machine learning, and robot guidance processes in industrial and non-industrial markets. RVT has recently developed a 3D vision guidance system for the collaborative robot market and has been designated as a Certified System Integrator by Universal Robots. The company's main 3D vision solution features the Henry Ford Technology Award as well as the BAE Chairman's Award for outstanding service. Major manufacturers using RVT's products include Ford, General Motors, Chrysler, Honda, Toyota, Nissan, Harley-Davidson, Boeing, and Johnson & Johnson. RVT's eVF™ software platform is installed in hundreds of systems worldwide and operates every day controlling over one-half billion dollars of capital equipment. RVT holds 10 patents for its award-winning technology.

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