**Standard machine vision software with new functions: MVTec presents HALCON 19.11**

* **New release of HALCON Progress Edition with numerous new features**
* **Deep learning recognizes anomalies**
* **To be released on November 15, 2019**

**Munich, September 26, 2019** – MVTec Software GmbH ([www.mvtec.com](http://www.mvtec.com/)), the leading provider of modern machine vision software, will release HALCON 19.11, the latest version of its standard software HALCON, on November 15. The release will include many new and improved functions that advance the level of machine vision technology available to OEMs, integrators, and end-users worldwide.

For example, HALCON’s anomaly detection allows deep-learning-based inspection tasks to be implemented more efficiently, since only a few images of defect-free objects are required to train the deep learning network. The technology is then able to unerringly and independently localize deviations, i.e., defects of any type, on subsequent images. This means, defects of varying appearance can be detected without any previous knowledge or any labeling efforts in advance.

In addition, HALCON’s new generic box finder is able to determine the exact position and size of arbitrary boxes within 3D point clouds. Thus, it is no longer necessary to train a model for every box size. This greatly simplifies the development and support of applications commonly used by the logistics and pharmaceutical industries.

**Reading data codes up to three times faster**

Another innovation is that reading of ECC-200 data codes has been significantly accelerated for multi-core systems. The biggest improvement was achieved for codes that are particularly hard to detect and read. Reading is up to three times faster, which also increases viability on embedded systems.

Another new development in HALCON 19.11 is the ability to import deep learning models in ONNX (Open Neural Network Exchange) format. This allows developers to use an even broader range of deep learning networks within HALCON. In addition, the MVTec experts have added a new model for line scan cameras with telecentric lenses to HALCON.

**New machine vision features available within a short period of time**

"With HALCON 19.11, the latest release of the HALCON Progress Edition, we will offer many new and improved machine vision features within a period of only six months. We have emphasized the further integration of groundbreaking deep learning functions. In addition, we have greatly improved our tried-and-tested core technologies, for example for reading data codes or for 3D machine vision," explains Johannes Hiltner, product manager HALCON at MVTec.

As of late, MVTec provides its own Deep Learning Tool to ideally prepare image data for training neural networks with HALCON (www.mvtec.com/products/deep-learning-tool).

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**About MVTec**

MVTec is a leading manufacturer of standard software for machine vision. MVTec products are used in all demanding areas of imaging: Semi-conductor industry, web inspection, quality control and inspection applications in general, medicine, 3D vision, and surveillance. MVTec, with its head office in Munich (Germany), has more than 30 established distributors worldwide and in addition, MVTec, LLC works out of Boston, MA (USA). www.mvtec.com

**About MVTec HALCON**

MVTec HALCON is the comprehensive standard software for machine vision with an integrated development environment (HDevelop) that is used worldwide. It enables cost savings and improved time to market. HALCON’s flexible architecture facilitates rapid development of any kind of machine vision application. MVTec HALCON provides outstanding performance and a comprehensive support of multi-core platforms, special instruction sets like AVX2 and NEON, as well as GPU acceleration. It serves all industries, with a library used in hundreds of thousands of installations in all areas of imaging like blob analysis, morphology, matching, measuring, and identification. The software provides the latest state-of-the-art machine vision technologies, such as comprehensive 3D vision and deep learning algorithms.

The software secures your investment by supporting a wide range of operating systems and providing interfaces to hundreds of industrial cameras and frame grabbers, in particular by supporting standards like GenICam, GigE Vision, and USB3 Vision. By default, MVTec HALCON runs on Arm®-based smart cameras and other embedded vision platforms. It can also be ported to various microprocessors/DSPs, operating systems, and compilers. Thus, the software is ideally suited for the use within embedded systems.

www.halcon.com, www.embedded-vision-software.com

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