

Driving machine vision data management forward – MVTec and DataVision deepen partnership

- **DataVision expands MVTec's machine vision ecosystem**
- **Machine vision software HALCON and cloud-based data management platform BeeYard linked together**
- **Additional image data processing as a building block of Industry 4.0**

Munich/Prague, August 17, 2023 - The two companies MVTec Software GmbH (www.mvtec.com) from Munich/Germany and DataVision from Prague/Czech Republic (<https://www.datavision.software/>) will work together more closely in the future. The goal of the cooperation is to offer users of the machine vision software MVTec HALCON additional possibilities to further collect, organize, analyze, and process their image data in the context of Industry 4.0. To this end, an interface between MVTec HALCON and DataVision's BeeYard data management platform has been developed as part of the partnership. "The value of well-organized and managed datasets is playing an increasingly important role in the machine vision industry. Therefore, we extend the ecosystem of our machine vision software HALCON by the component of data management. Together with DataVision, we can offer our customers further added value," explains Christian Eckstein, Product Manager & Business Developer at MVTec. "Generating as much information as possible from image data, processing it further, and then deriving conclusions for production processes is a significant building block of Industry 4.0. The interaction of BeeYard and HALCON enables users to achieve efficiency gains based on data," says Martina Chmelíčková, Business Development Manager at DataVision.

Especially deep learning applications benefit from data management systems

Powerful platforms for data management offer advantages for almost every machine vision method. These are particularly significant for deep learning applications. Here, BeeYard supports users in two ways:

On the one hand, the data management platform facilitates the handling of very large data volumes, which are generated during deep learning. This data is collected from various sources, can be associated with user access rights, and organized with tags and labels.

On the other hand, improvements can be made both for the machine vision application and for the production process. By analyzing and labeling additional images, conclusions can be drawn as to whether and at what point re-training of the deep learning network is necessary. Training or re-training can be done in the platform using HALCON. Additionally, if the defects are always the same, conclusions can be drawn for the production process.

"The possibilities offered by the combination of HALCON and BeeYard strengthen the strategic, competitive capabilities of companies. We were able to verify its effectiveness with tests in several pilot projects" explains Christian Eckstein.

Combination of MVTec HALCON and BeeYard as a complete solution

As part of the partnership, the library of the machine vision software HALCON has been expanded to include data management functions. With the extension package for HALCON it is possible to build up an image database and to enrich the images with additional information such as time stamp, lot number, product number, temperature, or vibration data. The BeeYard data management platform from DataVision is then used to evaluate and analyze the image data. The cloud- or server-based platform enables customization to meet storage requirements, location-independent accessibility, cost efficiency – especially for large data volumes –, integration of a variety of other cloud-based tools and services, and high processing speed.

Commenting on the benefits of BeeYard, DataVision's Martina Chmelíčková adds, "BeeYard's architecture is highly flexible and can be customized to meet the specific needs of individual customers. The platform is designed to support multiple deployment options, including edge computing, on-premises infrastructure, and cloud-based systems."

About MVTec Software GmbH

MVTec is a leading manufacturer of standard software for machine vision. MVTec products are used in all demanding areas of imaging: semiconductor industry, surface inspection, automatic optical inspection systems, quality control, metrology, as well as medicine and surveillance. By providing modern technologies such as 3D vision, deep learning, and embedded vision, software by MVTec also enables new automation solutions for the Industrial Internet of Things aka Industry 4.0. With locations in Germany, the USA, France and China, as well as an established network of international distributors, MVTec is represented in more than 35 countries worldwide.

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