



In-Motion Measuring

With in-motion measurement of goods, logistics companies can now easily assess the volume of every pallet, instead of making spot checks. New technology looks set to improve operations on the warehouse floor.

Despite great strides in automation in recent years, measurement of goods is still mainly done by hand. Some contact-free technologies exist but they have failed to make much impact in the market, largely because goods had to be slowed down or even stationary in order to be measured. Productivity suffered. It's one reason why the industry still largely depends on good old-fashioned measuring tape.

This may now be about to change. New technology is entering the market which, unlike earlier methods, is designed to measure goods in motion.

Stereovision is a technology used to compile 3D images from digital cameras. Historically, this has been difficult to implement in practical applications, due to the substantial computing power needed to process the images. But computer technology has come a long way in recent years and processing power is now both widely available and affordable.

"Our system, Cargospect, represents a substantial technology leap," says Marcus Schelin, MD of Cind, which is behind the technology.

Powerful processing

The company is a spin-off from Swedish defence and aerospace giant Saab and the system software has been developed by the same team that works on missile calculation software at Saab.

"We use military-grade signal processing for instant calculations. The solution was originally developed for the forestry industry, which has similar issues with outdated methods for measuring shipments. But now, we have started to turn our attention to the logistics sector. With this technology, every pallet can be measured – not just random samples," Schelin explains.

Two 3D cameras, horizontally displaced to each other, view the object from slightly different angles over a portal. As the forklift drives through the portal, the two images are compared and the depth of the object calculated. This way, its volume can be worked out. All objects can be measured, even irregular shapes and black plastic.

Other data can be collected at the same time. With a barcode reader in the portal, labels can be scanned. The

weight can be measured by sensors in the forklift. The information gives a complete digital signature of the shipment.

Trials at DHL

DHL Freight has had a test installation running at its Cologne terminal since late 2019.

"Cargospect is one of the most advanced systems available in the market today," says Holger Schneebeck, Head of Innovation at DHL Freight. "The system has worked exactly as intended. Measuring pallets while on the move and automatic scanning of labels can cut out several steps in the chain."

He outlines further benefits. "In addition, automatic scanning eliminates the scope for human error and ensures the quality of the data. Traditionally, staff have keyed the information into their notebooks and then transferred it to the TMS system. Now, the information can be entered into the system without manual handling."

Sustainability is a key consideration.

"In the future, measurement data could also be useful to optimise truck loading, reducing the number of vehicles on the road as well as CO₂ emissions," Schneebeck concludes.

It looks like digitalisation is finally arriving on the terminal floor. It may soon be time to roll up the measuring tape for good.

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