

Connecting Cows with Vortex DDS

ADLINK's Vortex DDS provides high-performance real-time data connectivity for Lely's robotic milking system

Robotics Use Case

Use Case

The Lely Astronaut is a robotic system that milks and feeds dairy cattle while monitoring their health. The system also examines the quantity and quality of milk received from the cows, and if necessary, separates milk identified as contaminated or not meeting the correct standard. A transmitter enables the system to identify each cow via a unique number, and a management system maintains specific records for each. The Lely robotic system uses these records to manage the milking and feeding of a cow when it enters the milking robot.

The Solution

New technologies such as cow-monitoring systems have been introduced to optimize milk production and calving processes to ensure healthier cows. Vortex™ DDS provides these benefits and more, within a high-performance, real-time data connectivity solution for Lely's Astronaut.

ADLINK provided Lely with a variety of capabilities for its control & monitoring systems, such as automatic discovery, shared memory architecture and configurable QoS framework. Vortex DDS provides platform portability, providing Lely with the flexibility to plug in any type of device with all commonly used OS and programming languages operating system and programming language, making their solution flexible and widely applicable. Vortex DDS ensured Lely had system-wide scalability, meaning the solution is deployable in a stand alone milking-robot, but also in systems where multiple robots are collaborating. In addition to the technology benefits derived from using DDS, Lely were able to save valuable developer time and decrease their time-to-market.



"Because of our constant drive to innovate we have been able to introduce a range of ground-breaking products to the market which really changed the lives of farmers," said Nico Berkhoudt, Product Development Manager, Lely. "After an extensive evaluation, ADLINK was our clear partner of choice. Vortex DDS will provide our systems with efficient, secure and interoperable real-time data sharing."

Why ADLINK Vortex DDS

Lely chose ADLINK's Vortex DDS after evaluation from among a field of other middleware technologies. Vortex DDS provided easy integration through its data-centric architecture that hides topology and enables automatic discovery and true plug-and-play. Another key feature when implementing DDS as the middleware technology of choice is open standards-based wire-level interoperability that ensures all future-developed robots can fully interact with current ones, a key concern in many robotics use cases.

The Value

- *Reduced cost and time of developers*
- *Decreased time-to-market*
- *Scalable architecture*
- *Reduced cost of platform maintenance*
- *Improved capabilities of control & monitoring systems*
- *Real time monitoring to enhance informed decision making*



About the Company

Lely was founded in 1948 and has grown to a company generating over €500m revenue in 2017 with customers in over 40 countries working daily with their solutions. Lely employs over 1000 employees and operates 3 production facilities.

For More Information

To discover how your robotics use case can benefit from Vortex DDS, please visit ADLINK's website at <https://www.adlinktech.com/en/data-distribution-service.aspx> or contact us at ist_info@adlinktech.com