AUTOMATION ACCELERATION

Interview with Robert Schena, CEO and Co-founder, Rajant Corporation

Founded in October 2001, wireless network provider Rajant Corporation became involved in the ports industry as an offshoot of its involvement in the military and mining industries.

Since then, it is now part of an automation project for DP World at one of the biggest container terminals in the world at Jebel Ali Port. There Rajant is working with Artificial intelligence (AI) specialist DGWorld and Velodyne Lidar, a market leader in LIDAR technology, to supply a fleet of DGWorld's Autonomous Internal Terminal Vehicles (AITV). Rajant will be providing its fully mobile M2M Kinetic Mesh® BreadCrumb® wireless nodes and connectivity expertise to the project.

In a recent interview with Port Technology International, Robert Schena, CEO and Co-founder of the company, explains how more automation is now taking place within the ports industry and how the industry has changed since Rajant first became involved with the maritime sector.

Schena shared that because the company's equipment was designed for environments such as mining, which are tough to operate in from a communications perspective, they would also work exceptionally well in a port environment.

"The trend has been towards automation in the port industry. My expectation for the next 25 years is an acceleration," he said.

"It's because of the improvement of technology and more powerful computers, more powerful sensors, and a lower cost of sensors that enable automation to occur. Even right now, when you go into a port it's kind of shocking. As an outsider, it's eye-openings to witness what's automated already, and what's possible. This is only going to accelerate."

At Jebel Ali Port, the goal for DGWorld, the lead on the AITV project, is to increase the operational efficiency of the terminal and to reduce the overall size of the current fleet using automation. There is of course, a direct link between automation and wireless connectivity, and Rajant's ability to provide this type of connectivity in a physically demanding environment is what led DGWorld to select the company to be a part of the team.

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"As the maritime industry moves towards autonomy, it is necessary to exploit both communications and sensors to make autonomy possible," he said.

"The industrial IOT and 5G really capture the trend that's going on, the need for communications, and the need for low-cost sensor technology. So, it is reflective of the drive for autonomy and robotics in the industry. A necessary underpinning for that drive wireless connectivity is critical to the progress of automation in the maritime industry."

"Literally everything is going to need to be connected to each other."

Schena said that wires and cables had been tried in the past in the form of fibre optics on spools, but ultimately, there is a high demand for wireless connectivity. This is because in the port environment there is so much motion taking place endlessly between ships, cranes, trucks carts, etc.

"It's an interesting industrial ballet that takes place at a port. And it takes place in such a way that if you want those devices to work that ballet in a beautiful, they can't crash into each other and need to avoid disruption, and avoid collision. It's necessary that all devices and all people be in communication with each other and out of necessity, that'll be wireless," he said.

Some see the maritime and port industry as slow to adopt to new technologies, and in some ways even resistant to change. However, Schena explained that actually this is a rather fascinating proposition.

"It's only within the last four or five years that Rajant has become involved in the industry, and frankly we've found the opposite. The industry is working very diligently to add new capability all the time. So the reputation, if it's deserved, maybe historically the case, but in our experience, it's not the case."

For ports and terminals considering investment in automation and wireless connectivity, Schena provided some advice on what should be considered.

"It's reliability, it's ruggedness, and it's security. There's a significant need to make sure as all the equipment and ports become connected and reliant on communications technology, that the information across those networks be trusted."

"Think about all the sensors that are being added to help drive robotics and autonomous activity. At the core of that is a system that depends on the trustworthiness of the data being expressed by those sensors. If that sensor data is not reliable, then autonomy will fail. You need to emphasize security. You need to emphasize reliability. If focused on these and the co-dependence and utility of a communications network, autonomy will be a success."

Interview in full
Hear all of Robert Schena's comments in this exclusive PTI video interview.
https://youtu.be/xYknNnVKAkw

ABOUT THE ORGANIZATION

Rajant Corporation is the exclusive provider of private wireless networks powered by the patented Kinetic Mesh® network, BreadCrumb® wireless nodes, and InstaMesh® networking software. With Rajant, customers can rapidly deploy a highly adaptable and scalable network that leverages the power of real-time data to deliver on-demand, mission-critical business intelligence.