Boosting transportation efficiency

A leading tire manufacturer extends visibility and dramatically reduces the cost of shipping high-value assets with a connected logistics solution from Capgemini and Intel

Safeguarding industrial secrets

When an entire business revolves around tire design and manufacturing, nothing is more crucial to maintaining a competitive edge than a brand-new prototype tire. When the prototype is within the boundaries of a secure manufacturing plant, a company can be fairly assured its specs are reliable and safe. However, it becomes riskier when the prototype must be transported between sites. A prototype on the road is open to damage, loss, delay, and even theft. Any of these events could result in catastrophic losses in R&D, productivity, and sales stretching into millions of dollars.

Success Story Overview

Customer: Major tire manufacturer

Industry: Manufacturing

Location: Europe

Client challenge/Business Need:

The manufacturer worked with Capgemini and Intel to implement a connected logistics solution that enables the real-time tracking of protoype tires

Results:

- Near real-time tracking and monitoring of prototypes on the road

- Proactive SMS or email alerts regarding unexpected behavior or events

- Cost savings as additional car, labor and gas are no longer needed

Up until now, one of the world's leading tire manufacturers had a fairly rudimentary yet effective solution to this problem. When transporting prototypes between plants, it assigned a car with two people to follow the transporter on the road. Their job was to report any unexpected behavior, extreme changes in environmental conditions, or intrusion into the truck and, if appropriate, inform the police. The major drawback to this approach was that the manufacturer relied on the people in the car for updates, meaning there was a delay in the information reported. Additionally, this information was open to human interpretation, which added the possibility that inaccurate information could adversely influence important decisions. The tire manufacturer needed a real-time freight tracking and monitoring solution to improve the efficiency of transporting its prototype tires.

Intel® Connected Logistics Platform

Together with Capgemini, the tire manufacturer rolled out an integrated, end-to-end shipping solution based on the Intel® Connected Logistics Platform (ICLP). Built on the latest Intel® technologies for the Internet of Things (IoT) and hosted on Microsoft Azure cloud, the solution provides near real-time tracking and monitoring of shipment locations, and, if desired, temperature, humidity, shock, ambient light, barometric pressure, and tilt.

Before each prototype shipment, the tire manufacturer decides which data it wishes to track and sets parameters for automatic reporting. For example, using GPS data and geofencing, the company is able to define specific transport routes that include guidelines such as no unscheduled stops of longer than 15 minutes to account for refueling and queues for toll roads. If this threshold is exceeded or if the truck deviates from the defined route, the solution triggers an alert via email or SMS. The tire manufacturer is then able to decide what level of action it should take based on the exact nature of the situation. Since all of the activity is recorded and time-stamped, the tire manufacturer knows the exact date, time, location, and duration of any unforeseen events.

Greater transportation efficiency

The Capgemini and Intel solution has enabled the tire manufacturer to improve the efficiency of its prototype tire transportation. Through near real-time, end-to-end visibility, the solution is able to track and monitor the location and environment of prototypes between sites according to pre-defined operating parameters. Should any unusual activity take place, proactive alerts enable the tire manufacturer to quickly take appropriate action.

The tire manufacturer has also been able to reduce costs since it no longer requires a car to follow each transporter. By saving on labor and gas, the costs associated with each transport have fallen from hundreds of dollars to approximately twenty dollars per hour, allowing the business to realize a return on its investment in less than three months.

An XIoT solution with multiple applications

As well as tracking high-value assets at risk of damage, loss, delay, or theft, the Capgemini end-to-end logistics solution can also be used to monitor excessive tilt or shock for sensitive goods such as laboratory equipment, machinery, and engines, as well as environmental conditions for perishables like pharmaceuticals, produce, and chemicals. In fact, it can be used to track almost any B2B use case for transportation: logistics companies that want to monitor the supply chain between warehouses, goods owners who desire visibility into the performance of their logistics suppliers, and distributors looking to monitor the amount of time it takes for goods to travel over different operators' rail networks so that they can set payment plans in line with tariffs.

Capgemini is looking to extend its end-to-end shipping solution beyond tracking and monitoring road and rail to include both air and sea transportation. This introduces new considerations with regards to communications certification and battery life. For example, if an aircraft is travelling through multiple countries' airspace, sensors and devices must be certified to operate in each jurisdiction. To extend the benefits of this XIoT logistics solution to even more organizations, Capgemini is working closely with Intel® on additional use cases as part of its smart logistics roadmap.

About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of 200,000 team members in over 40 countries. The Group reported 2018 global revenues of EUR 13.2 billion.

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For more information about the Capgemini connected logistics solution please visit: https://www.capgemini.com/resources/capgemini-comprehensive-asset-tracking-and-monitoring-for-logistics-on-azure-cloud/

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