

# DSA's telematics units (VCG) transform the Microsoft Puget Sound Campus fleet into a Connected Fleet

*DSA finished the initial delivery of telemetry units 'Vehicle Connectivity Gateway (VCG)' for the Microsoft fleet in Puget Sound.*

TROY, MI, USA, March 9, 2022  
/EINPresswire.com/ -- After six months of collaboration with Microsoft and other partners, [DSA](#) completes the initial delivery of telemetry units 'Vehicle Connectivity Gateway ([VCG](#))' for the Microsoft [fleet](#) in Puget Sound.



In the project between DSA and Microsoft, the fleet is currently being retrofitted with on-board Edge capable VCGs. On the one hand the devices are tightly integrated with the vehicles' communication buses while on the other hand they are interfacing to an IoT cloud infrastructure. This type of integration expands the capabilities of the connected fleet. Two thirds of the vehicles in Puget Sound have already been equipped with this modern technology.

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There are several different applications running on the VCG, of course the VCG collects typical telemetry data necessary for fleet operations, but also data specific to emissions and driver behavior.”

*Michael Wells*

DSA developed several applications to reduce data transmission and processing costs whilst simultaneously extracting the necessary data from the vehicle to enable backend processes to calculate the carbon footprint of the fleet.

“There are several different applications running on the VCG,” explains Michael Wells, CEO of DSA Systems, Inc., adding that “of course the VCG collects typical telemetry

data necessary for fleet operations, but also data specific to emissions. Other apps are monitoring the environment using sensors on the VCG and data from the vehicle to send a variety of events to Microsoft Azure. Such events include theft events, harsh braking or

acceleration, unapproved trips and the vehicle health and system state in general. Architecting a solution like this is an excellent example of utilizing both cloud and edge processing to meet complex business requirements."

"What is particularly interesting for us is that the enhanced data sent by the Vehicle Connectivity Gateway allows us to easily analyze our fleet operations," said Esther Christoffersen, Senior Services Manager of Microsoft's Global Workplace Services. "Specifically, health and usage are now all in one place. This helps us improve efficiency as we move towards a 100% Electric Vehicle fleet by 2030."

The integration of the VCG to the cloud uses Microsoft Connected Vehicle Platform (MCVP).

Microsoft's headquarters in Puget Sound is home to widely dispersed office buildings, event locations and recreational sites. To ensure connection to all locations, Microsoft manages various fleets of vans, buses and other vehicles of different makes and model variants. The vehicles are split across several different fleets with unique functions, including Commute, Food & Beverage, Lobby & Logistics, Facilities and Security. All these fleets are essential to maintaining smooth operations at the Puget Sound campus.

To support a fleet with heterogeneous vehicles, a unified set of common and vehicle specific status attributes had to be defined. The source of the required attributes might be different for each vehicle type. To balance efforts and effectiveness, a combined approach of using existing vehicle communication standards, e.g., On-board diagnostics (OBD) and Fleet Management System (FMS), as well as vehicle type and brand specific implementation had to be applied.

The retrofit solution can be moved to factory-installed solutions, given that the standardized cloud integration will be used. DSA has developed a software development kit (SDK) for the VCG. With this SDK, we enable our customers to develop their own custom apps for the VCG to further process the data to satisfy their business requirements and processes. Additionally, it is possible to integrate other software modules from DSA, such as Over-the-Air full vehicle flashing, edge AI applications and more. DSA sees that in a fast-changing environment it is necessary to deliver tools and solutions that are flexible enough to adapt to existing business processes.

For 40+ years DSA has been developing innovative diagnostic solutions for vehicle electronics. As a long-standing automotive expert and market leader, DSA supplies modular software and hardware solutions for the entire life cycle of vehicles. The portfolio includes systems for communication and testing of electrical and electronics, for flashing and configuring of control units and for the evaluation of statistical data. DSA's core competence lies in the development of innovative solutions that enable vehicle manufacturers and service providers to meet the demanding quality standards of the industry, optimize process times and make production processes leaner and more flexible.

DSA is present at most automotive locations worldwide with offices in Germany, USA, China,

Italy, Brazil, India, and Mexico. DSA currently employs more than 500 people. The headquarters of the company is in Aachen, Germany.

Michael Wells

DSA Systems

+1 248-376-4477

michael.wells@dsasystems.com

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