



AeroVironment Awarded U.S. Patent for Electric Vehicle Energy Data Management and Control

Web-based System Solution for Industrial and Passenger Electric Vehicle Battery Optimization

MONROVIA, Calif.--(BUSINESS WIRE)--Aug. 10, 2009-- [AeroVironment, Inc.](#) (AV) (NASDAQ: AVAV) has been granted a patent by the United States Patent and Trademark Office for technology that facilitates the optimal charging, management, control and maintenance of battery packs, chargers and electric vehicles (EVs). Patent No. 7,444,192 builds on AV's intellectual property portfolio in its Efficient Energy Systems business segment. This segment's products include [PosiCharge™](#) systems, the leading fast charge systems for electric vehicles.

AV's technology is directly applicable to battery packs, chargers and battery-powered EVs that can be linked to the electric utility network and managed by a "smart grid" controller. The technology is designed to gather data from the EV or the charger, and uses the data to determine whether the rate of charge is optimized for the vehicle's performance, the battery's long-term health, and the utility's power availability. A device employing this technology could create and store a performance profile for the EV and charger. Based on this historical profile, the device could optimize the rate of charge or transmit an alert to the utility or end user.

The technology was developed for AV's PosiNET™ system, a Web-based motive power management solution which has been deployed in support of commercial EV fleets in the United States. PosiNET™ minimizes fleet downtime and optimizes vehicle utilization by providing real-time, predictive and historic reports as well as actionable alerts and equipment usage recommendations to fleet managers.

"We launched this technology in the commercial EV market, but there are also compelling potential applications for passenger electric vehicles," said Michael Bissonette, AV senior vice president and general manager of its Efficient Energy Systems segment. "For instance, utilities could employ PosiNET to capture and analyze energy usage data from EV battery packs that connect to the electric grid. With these data, the utility – or a third party – could remotely optimize the charge rate or energy load based on real-time vehicle needs and grid capabilities, resulting in a win-win for the utility and end users."

For passenger EV charging, the system would enable vehicle and grid optimization through grid-tied electric charging systems communicating with utilities via the internet. The system could send alerts and other actionable data to utilities which could then remotely control charge rates using the PosiNET system. The comprehensive information gathered by the system could also be used by the utilities for reporting and analysis. These same capabilities could also be applied by utilities to help enable real-time grid balancing on a local level.

The technology behind AV's electric vehicle charging solutions emerged after AV's substantial contributions to the development of the GM Impact, the concept car for General Motors' EV1, the first modern electric car. AV created a solution combining high-current charging algorithms with intelligent thermal management to safely increase the useful range of electric battery packs. Today, AV's electric vehicle charging solutions significantly reduce the amount of time required to safely charge electric vehicle battery packs while maximizing their range, performance and lifespan.

About AeroVironment, Inc. (AV)

Building on a history of technological innovation, AV designs, develops, produces, and supports an advanced portfolio of Unmanned Aircraft Systems (UAS) and efficient electric energy systems. Agencies of the U.S. Department of Defense and allied military services use the company's [hand-launched UAS](#) to provide situational awareness to tactical operating units through real-time, airborne reconnaissance, surveillance, and target acquisition. Commercial and government entities use AV's clean transportation solutions such as [electric vehicle test systems](#) and [electric vehicle fast charge systems](#), as well as its clean energy solutions. More information about AV is available at www.avinc.com.

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Certain statements in this press release may constitute "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995. These statements are made on the basis of current expectations, forecasts and

assumptions that involve risks and uncertainties, including, but not limited to, economic, competitive, governmental and technological factors outside of our control, that may cause our business, strategy or actual results to differ materially from those expressed or implied. Factors that could cause actual results to differ materially from the forward-looking statements include, but are not limited to, our ability to perform under existing contracts and obtain additional contracts; changes in the regulatory environment; the activities of competitors; failure of the markets in which we operate to grow; failure to expand into new markets; failure to develop new products or integrate new technology with current products; and general economic and business conditions in the United States and elsewhere in the world. For a further list and description of such risks and uncertainties, see the reports we file with the Securities and Exchange Commission. We do not intend, and undertake no obligation, to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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