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Northwest UAV Propulsion Systems to Demonstrate MEMS Fuel Injection System for use in Heavy Fuel Engines at AUVSI Industry Day.

McMinnville, Ore., July 21, 2009 – Northwest UAV Propulsion Systems in collaboration with the Oregon Nanoscience and Microtechnologies Institute (ONAMI) has begun the commercial development of microchannel devices used to dispense fuel into internal combustion engines. Northwest UAV will demonstrate this innovative technology August 10th during industry day at the AUVSI Unmanned Exhibition.

Northwest UAV has purchased five patents related to MEMS Fuel Injection. This technology uses Hewlett Packard Ink-jet technology to atomize a variety of fuels including JP5, JP8 and logistical fuels utilized in internal combustion engines. Northwest UAV is developing an injector array that can be employed on a variety of engine types. This MEMS Fuel Injection system promises to enhance the capabilities of UAVs by increasing fuel efficiencies and provide the flexibility to use multiple fuels on the same engine platform. The injection system will provide longer duration flight times and reduced (green house gas) emissions as a result of the ability to digitally control the fuel delivery and droplet size to a level much smaller than is conventionally possible utilizing carburetors and COTS (Commercial Off The Shelf) fuel injectors.

According to Chris Harris, NW UAV President “Efficiencies and performance of small engines running on heavy fuel is directly related to the fuel droplet size generated and the ability to vaporize each individual droplet to a gaseous state in the short time it has between the injector/carburetor and combustion chamber.”

MEMS Fuel Atomizing is significant not only because of the potential improvement in efficiency but in that it has such a broad application. It can significantly advance diesel and gasoline fuel technologies in both compression and spark ignition configurations. This Fuel injection System could be used in applications such as transportation, aircraft and utility engines.

Northwest UAV Propulsion Systems Inc. Northwest UAV Propulsion Systems builds UAV engines and support systems for any UAV propulsion need. We pride ourselves on our turn-key solutions.. If it can be designed, NW UAV can build it. Our systems include solutions for unmanned vehicles of all types - in the air on land and in the water. At NWUAV we offer more than just engines, we build UAV control systems. Ink-jet Fuel Injection; cutting edge fuel efficiency using patented HP technology exclusive to NW UAV. Laser-sinter systems: manufacturing of lightweight products of any complexity from polyamide or polystyrene materials directly from CAD data. www.nwuav.com

ONAMI is dedicated to the growth of nanoscience and microtechnology research and commercialization to foster the creation of new products, companies and jobs in the Pacific Northwest. It unites regional universities OSU, OHSU, PSU and U of O, with Pacific Northwest National Labs, the State of Oregon, and private industry in Oregon’s world-renowned “Silicon Forest”.

The Microproducts Breakthrough Institute (MBI) is one of ONAMI's signature facilities. A research and educational collaboration between Oregon State University and Pacific Northwest National Laboratory, MBI seeks to advance microscale systems and create new microfabrication techniques for energy, environmental, medical, and defense applications.

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