

asam standards enable new state-of-the-art gm powertrain laboratory

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Brian J. Bowers
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i Recently, General Motors Powertrain (GMPT) began consolidating several of its Southeast Michigan powertrain test laboratories into one state-of-the-art facility. GM has chosen multiple ASAM standards to help streamline, organize and guide tool and data integration in the new lab. Key benefits in the implementation of ASAM standards include a substantial cost savings, due to the standardization of the interfaces between GM and its system suppliers, as well as allowing GM to focus more on the processes and methods of engineering test instead of tool development and data integration. The use of ASAM standards gives GM the ability to share data between tools and facilities worldwide.



The integration of complex powertrain development tools for GM has been a costly and time consuming process. The reliance on proprietary interfaces and non-standard protocols has complicated the powertrain test environment and created challenges for the management of the test bed tool chain. To combat this, General Motors joined ASAM in 1999, to help with the development and direction of ASAM standards. The collaboration resulted in a defined a set of standards in the field of test and application

systems. They also developed processes independent of manufacturer, operating system and selected technology. Instead of developing products with separate interfaces for each manufacturer, suppliers can now build products to ASAM standards that can be used by the many manufacturers that support ASAM. The use of ASAM standards has enabled a “plug and play” capability, or “device-to-device” interoperability. This allows General Motors to spend more time in value-added engineering vs. tool and data integration. A growing co-operation with ISO (International Standardization Organization) provides for long-term stability of ASAM basic standards and secures the investments of General Motors, the system suppliers and the application manufacturers.

General Motors will be using several of these standards in the new Powertrain Lab, including: ASAM ACI, ASAM MCD, ASAM GDI, ASAM ODS, and ASAM CEA. Additionally, General Motors has selected AVL, a long time member and user of ASAM standards, as the Systems Integration supplier for the new laboratory.

GM broke ground on the first phase, 125,000 square feet, of the project, which is scheduled for completion this year. The second phase, which consists of three wings covering a total of 275,000 square-feet, is scheduled for completion in two years. This \$385 million engineering expansion promises to make its Pontiac headquarters one of the world’s largest concentrations of powertrain expertise.