



Rapid prototyping pointing the way for automotive innovation

Locally delivered 3D printing technology is helping drive Australia's designs for global automotive leadership.

State-of-the-art rapid prototyping technology has helped power Australian automotive designers to global prominence with GM Australia's Design Studio scoring major honours at the recent North American International Auto Show in Detroit.

Hailed as a celebration of Holden's local design capabilities, the Buick Avenir concept car (pictured) was designed and built by GM Australia's team in Port Melbourne. In keeping with the local manufacturing theme, the prototype grill which features on the large luxury vehicle was produced at the Melbourne headquarters of 3D Systems' Quickparts, playing a small but significant role in the team's award wins as Best Concept Vehicle and Best Innovative Use of Colour, Graphics and Materials at the prestigious EyesOn Design Awards 2015. 3D Systems' Quickparts, whose world-leading, integrated rapid prototyping and 3D printing system produces functioning prototype models and components directly from digital input, worked closely with Holden's Fisherman's Bend design studio.

3D Systems' Quickparts says its involvement in the awardwinning Avenir – French for "the future" – underlines Australia's ability to deliver rapid-turnaround, ground-breaking manufacturing innovation. With the local automotive industry undergoing dramatic change, Avenir is an example of design know-how marrying with sophisticated manufacturing capability to deliver a customised, cost-effective solution for the major car players.

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Citing the complex nature of the grill design, 3D Systems' Quickparts deployed its latest generation sPro 60 HD Selective Layer Sintering (SLS) technology to deliver the finished prototype considerably faster than traditional methods. In the case of the Avenir, the grill component was produced in three days instead of the more typical two weeks required for conventional CNC projects of its kind, delivering significant cost savings while improving quality control.

3D Systems' Quickparts expertise locally assisted turning Australian design creativity into functional componentry for conceptual testing and review. Through its beta user status, GM Australia's design team was able to take the running in the global application of SLS technology.

3D Systems' Quickparts says Australia's major automotive players are turning increasingly to 3D printing and additive manufacturing solutions as they strive to innovate and gain a competitive edge. In particular, the company has seen rapid advances among the local automotive sector in the production of under-the-bonnet prototype components as part of vehicle manufacturers' concept design work.

The company believes demand among the automotive industry for leading-edge 3D printing will continue to grow as the major players embrace the benefits of rapid prototyping to the design and manufacturing process.



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Quickparts Solutions 301 Perimeter Center North, Suite 400 Atlanta, GA 30346 USA Tel: +1 770.901.3200 Fax: +1 770.901.3240 quickparts.quote@3dsystems.com

