NTU Students Build Singapore's First Urban Solar Electric Car Out Of 3D Printed Parts

Discussion in 'Mechanical | Automobile | Aeronautics' started by Satya Swaroop Dash, Monday at 10:49 PM.

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Satya Swaroop Dash, Feb 2, 2015 at 10:49 PM

Students at the Nanyang Technological University (NTU) in Singapore have built the country's first solar electric car that has a 3D-printed body. Sixteen students from various engineering departments of the university divided themselves into two groups and began building not one but two cars at the Innovation Lab housed at the School of Mechanical and Aerospace engineering. For designing and fabricating the car panels the teams collaborated with folks from

other NTU research centres and sought sponsorship from institutions like Stratasys, Creatz3D and The Singapore-MIT Alliance for Research and Technology (SMART). The cars were built by the students from scratch within a year. The team says that it was a challenge to assemble the body panels because they were printed at various locations in the country and the team had to spend three months to accomplish the task.

The first car built by the team is called the NTU Venture (NV) 8. The car is mounted on a carbon fibre single shell chassis and is claimed to have a top speed of 60 kilometres per hour. The team wanted to use 3D-printed plastic parts because they wanted to keep the weight of the car to a minimum. The car will participate in the Shell Eco-marathon Asia in the Urban Concept category. The second car titled NTU Venture (NV) 9 is a three-wheeled racing car with a slick design. The car has been equipped with hand-made silicon solar cells that have been contoured to follow the car's shape. The car has a special tilting mechanism that has been inspired by motorcycles to help it maintain speeds even at sharp corners. The NV 9 shall take part in the Shell Eco-marathon Asia in the Prototype category.