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Automatic mode for 2-wheelers

This gadget can change gears in motorcycles automatically. Bisko Labs, a Kochi-based startup, have developed the Intelligent Gear Transmission (IGT) technology, a small device that can be fitted into any geared bike, enabling automatic gear shifting, without altering the performance of the vehicle.

Explaining the idea behind the technology, Vivek Mohan, CEO and co-founder of Bisko Labs, said, "Riders often get confused with multiple gears in different motorcycles. The automation system of the gears, also known as IGT, wipes out this confusion. The device will also be helpful for differently abled people who face difficulty in changing gears."

After graduating from Cochin University of Science and Technology a year ago, Mohan and his partner Alfred John, both 22, preferred to become entrepreneurs. Their invention, IGT, is a small device which will calculate the uphill and downhill angles of the motorcycle, detect speed at which the motorcycle is moving, the gear position, estimate the power needed by the vehicle and so on.

"A computing unit puts these data from the sensor together and gives command accordingly to electronic motors, shifting the gears up and down" said Mohan. The duo has already tested over 20,000 km with the IGT and has filed for patenting of IGT. Meanwhile, Bisko is in talks with leading motorcycle makers to market the device which costs between Rs3,000-5,000.

Innovations galore

4D website designs

Students of IITGn students presented 4Dea, a 3D website with added smartness thus giving it the fourth dimension. The team clicks high resolution panoramic pictures and creates a walkthrough website for the viewers with pop-up information, embedded into the picture.

Dhyey Shah, one of the creators of 4Dea, said, "When we feed information into the 3D walkthrough as pop ups, it makes it easy for a viewer to understand the information better. We have created the algorithm of the technology and the software to seamlessly stitch different panorama pictures together."

4Dea has been applauded for their work in the past too, when they took up a project for heritage tourism in Ahmedabad in 2013 but there were a few constraints which hampered progress. "As of now we are in talks with a few parties for real-estate and wedding websites among others," said Eepsit Tiwari. The members of this group are all 22 years old.

Holographic Weapons Sight

Light Logics, a Kerala-based company, displayed modern warfare weapon sight at the expo. Two-time gold medal winner of Lockheed Martin - DST India Innovation Programme, the company is the only Indian one and the second in the world to develop a holographic weapon sight. Conventional laser sights have been used for long-range shooting for precision in aiming.

However, that technology often alerts the target as laser pointers are visible when pointed at the target. "Our technology minuses the physical presence of the conventional laser beam pointer by creating a holographic image of the target at least 300 metres away," said Abhayjith, creator of Holographic Weapon

Sight (HWS).

Another added advantage is that HWS provides a spectacle vision which allows the user to view multiple moving targets and point accordingly.



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When Amalthea's two-day Design & Innovation Expo opened on Saturday at the Indian Institute of Technology, Gandhinagar, there was a lot on display. Over 14,000 people visited the expo where students and firms from across the country presented their latest gadgets and products. From mechanical gadgets that could automatically change motorcycle gears to innovative software programme that yield 3D holograms and informative panoramic photographs, the exhibition attracted the attention of the young and

old alike.



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