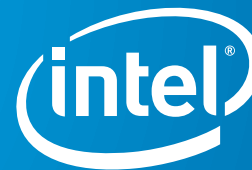


From Science Project To VC Funded Invention:

An Intel International Science and Engineering Fair (Intel ISEF) Alumni case study



Introduction

Each year, more than 1,500 talented young high school students from over 50 countries around the globe come together to compete in the world's largest pre-college science competition - Intel International Science and Engineering Fair (Intel ISEF), a program of Society for Science & the Public. The students' independent research projects encompass a wide range of disciplines, and many participants go on to receive further recognition for their innovations. A perfect example is Ben Gulak, a former Intel ISEF finalist, now a freshman at the Massachusetts Institute of Technology (MIT).

As a high school senior at Intel ISEF 2007, Gulak (along with fellow members of Team Canada) won the Second Place Grand Award for Team Projects for the Uno, an environmentally-friendly electric street vehicle that rides like a motorcycle and produces no emissions. Since then, the 20 year old has continued to earn rave reviews and numerous awards for his cutting-edge invention.



From concept to Implementation

Gulak's inspiration for the Uno came during a 2006 family trip to Beijing where he was troubled by the smog and pollution emanating most noticeably from the thousands of motor scooters filling the traffic-clogged city streets. He set his sights on building an eco-friendly and stylish alternative that would retain the agility and maneuverability of a motorbike. This would prove to be no easy task, even for an extraordinary teenager. Luckily, Gulak's upbringing in Ontario, Canada, was beyond extraordinary. "I've realized that it is impossible to achieve some things without a team and support group. Without my family's support, The Uno would never have progressed beyond the concept stage."

As a young boy, Gulak enjoyed working on science projects with his grandfather, Werner Poss, an accomplished design engineer. They often spent many hours brainstorming complex problems together. Gulak created the first Uno in his grandfather's workshop (which he inherited upon Poss's death in 2004) using metal salvaged from Poss's last engineering project. In this sense, the Uno is a significant tribute to his grandfather's legacy.

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Ben Gulak, Inventor of the Uno

One of the Uno's most striking features is its unique design—the body consists of a modified Yamaha motorcycle frame which shelters two wheels positioned side-by-side, giving it the look of a unicycle and of course, its name. The rider is balanced directly over the wheels and maneuvers the machine by leaning forward, backward or sideways. A built-in gyroscope and computerized control system keep the rider balanced and manage the machine's suspension. The Uno uses the same type of battery-powered motor found in electric wheelchairs and can reach speeds of up to 40 miles per hour.

The Future is Bright

Popular Science magazine selected the Uno as one of the top 10 inventions of the year and featured the bike on its June 2008 cover. The invention also has appeared on the *Discovery Channel* and has been the subject of numerous articles in major newspapers such as *The Chicago Tribune* and *The New York Times*.

Most recently, Gulak has been a guest on *The Tonight Show* with Jay Leno as well as a contestant on *Dragon's Den*, a Canadian reality television show where entrepreneurs pitch their ideas to a panel of venture capitalists (the "dragons") in order to secure investment financing. Not surprisingly, Gulak successfully convinced the show's dragons to invest \$1.25 million in his start-up company, BPG Technologies— and he's not stopping there. He continues to be contacted by potential investors and has filed for patents in dozens of countries around the world. Gulak estimates that the Uno will sell for approximately \$6,000 upon its release to the market.

The former ISEF finalist has not let the success of his business ventures interfere with his educational goals, however. Gulak still plans to complete his studies at MIT. His intended major? Business and Mechanical Engineering, of course.

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