

Students race to turn dreams into reality

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Students from around the world showcased their inventions at last month's Microsoft Imagine Cup World Finals. From left: Team Night's Watch member Mohamed Zied Cherif (above), who was born with a defect that prevented his hand from fully forming, wearing the Tunisian team's Smart Hand; a judge trying out Team Amanda's anti-bullying virtual reality headset; and a member of Japan's Team Biomachine Industrial modelling headgear that bestows "super sight".PHOTO: MICROSOFT

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Teams behind 35 inventions compete in Microsoft Imagine Cup World Finals

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More than 100 students from 34 countries marched into Microsoft's headquarters in the city of Redmond in the United States last month, carrying with them their dreams.

Among the objects in their bags were a robot, a headgear that bestows "super sight" on its user and a bionic hand that looked as if it came straight out of a Terminator movie.

These were just three of the 35 inventions by the students competing in the Microsoft Imagine Cup World Finals.

Since 2003, technology giant Microsoft has organised the Imagine Cup, which brings together aspiring innovators, entrepreneurs and technologists from all academic backgrounds. The contest spurs them to develop new technologies that showcase not only superior programming skills, but also the ability to think out of the box.

The battle for the top prize of US\$50,000 (S\$67,300) in three categories - Games, Innovation and World Citizenship - started on the morning of July 27.

Each team was given 10 minutes to set up, another 10 to present its idea and 20 minutes to demonstrate its invention and answer questions posed by a panel of judges.

Among the teams fielding questions were four students from the Aristotle University of Thessaloniki in Greece, who called themselves Team Amanda - after Amanda Todd, a 15-year-old Canadian teenager who committed suicide in 2012 after years of being bullied.

They competed against 12 other teams in the World Citizenship category, and eventually emerged winners for having the most "world-changing" software innovation.

"Every seven minutes, a child is bullied," said Team Amanda member Margarita Bintsi, 22, as she began the presentation.

"Bullying is a global phenomenon... and what is the cost? Over 2,200 suicides a year," she said.

Inspired by Amanda's plight, the students invented a virtual reality application aimed at raising awareness of bullying, and increasing the empathy felt by individuals.

Among other features, the program allows an individual to experience bullying from the perspective of a bully, a victim and a bystander, simply by putting on a virtual reality headset.

A Microsoft Band worn on the wrist tracks the user's heart rate and other biometrics at the same time, to determine if the person shows tendencies towards bullying or being a victim. The software then customises the experience for the user to boost self-confidence or improve empathy, for instance.

"By eventually sharing this with students around the world, we hope we can change how the world sees intervention in bullying," the team said.

Mr Kurt Steck, general manager for audience and platform evangelism at Microsoft, told The Straits Times that teams are increasingly trying to solve problems that are personal and local to them.

The students in Team Amanda were inspired after they watched a video created by Amanda before her suicide, about her experiences of being bullied.

"A lot of these ideas are also born out of specific issues that students are dealing with in their individual lives," said Mr Steck.

For instance, two students from Germany's Karlsruhe Institute of Technology behind Team VRMotion came up with a device to help stroke patients. One student's mother had suffered a stroke, which made the team realise there was a lack of rehabilitation therapy for such patients.

"Currently, stroke patients undergo just one hour of therapy a day, which is not enough for them to recover and get back to their normal lives," said Ms Alessa Dreixler, 23.

She and her teammate developed a device that can help stroke patients improve their motor skills, by monitoring their hand movements as they play computer games that require certain actions. These include wiping items off a table or picking up and placing objects into boxes.

"We thought, since there is so much spare time, our device could be used during that time to help patients recover faster," she said.

In recent years, there have been more innovations at Microsoft's Imagine Cup focused on improving health, said Mr Steck.

He said this year's crop of innovations also included a program to detect and improve stuttering and a wearable device that tracks inner ear balance and spinal posture.

The latter device helped Team ENTy from Romania win Microsoft's Imagine Cup 2016 World Championship round, edging out Team Amanda and Team PH21 from Thailand, which won in the Game category for a computer game centred on time manipulation.

Team ENTy won a one-on-one mentoring session with Microsoft chief executive Satya Nadella.

Its device, which is strapped to the back, tells users if they are having balance or posture issues. The team hopes it can aid in the early detection of Parkinson's disease, as its first symptom is imbalance.

While there are brilliant ideas behind these inventions, Mr Steck noted that the key to ensuring that these ideas make it to the market and benefit people is to arm students with soft skills.

"I think a lot of times, in the past, the focus was on the technology and what the solution was," he said.

More focus should be placed on skills training and mentorship, in areas such as good presentation skills and how to formulate a business plan, he said.

"It's now about how we help students build the soft skills that allow them to not just bring their idea to life through technology, but also communicate that idea and sell that idea."

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