SFU Press Releases Collection

These archival copies have been generated from web press releases maintained and originally written by SFU Communications and Marketing. Where possible, an effort has been made to preserve the public comments left on the website as well as any included photos or other images. All textual content should be faithful to the original press releases; contact numbers have been removed but they have not otherwise been altered in any way. However, this collection of documents spans multiple generations of web authoring software and not all formatting will be exact.

Passion for innovation, flight leads students to create Avian

Security drone is 3-D printed, controlled by laptop and will be featured at Surrey Open House March 4

February 26, 2015

Tweet | Facebook | Pinterest | Email | Print

Contact:
Mark Anthony Wijaya, mark.anthony.wijaya@gmail.com
Marianne Meadahl, University Communications, 778.782.9017; Marianne_Meadahl@sfu.ca

Photos: http://at.sfu.ca/yIzIeM

Four Simon Fraser University students, all from different countries, have used their common passion for innovation and flight to create a small, web-enabled drone that could enhance security systems—and has attracted the interest of SFU's own security team.

Calling their team Avian Robotics, the students say their product, known as Avian, is designed to improve response time to emergencies, effectively reduce blind spots, and create more robust security systems—all while being connected to and controlled via a laptop rather than a radio controller. It's also 3-D printed, meaning the team can customize the size and shape while the product's "brain" and inner electronics remain the same.

The students, who attend both Surrey and Burnaby campuses, will showcase Avian during the Surrey campus Global Community Open House on March 4.

"The big difference with our drone is that it is connected directly to the Internet via an existing WiFi infrastructure, so we are essentially turning a toy into a tool," says Mark Anthony Wijaya, an undergraduate student focusing on international studies and entrepreneurship at SFU.

The drone is fully autonomous and capable of capturing high-quality images, and its parts can be upgraded using the team's 3-D printed manufacturing process.

"We've created a complete cloud-connected surveillance system, and our auto pilot drones fly autonomously via pre-programmed and randomized routes," says Wijaya. "Through testing and design improvements we have invested many hours. It turns out that each of us has a great passion for this work."

SFU's own director of security Steve MacLean shares the team's enthusiasm for aviation and has offered his support. He has met with the students to discuss the project and the students' aim of developing their unmanned aerial vehicle (UAV) into a security platform. "This is pretty cutting edge technology for the security industry, and it's an idea we've been contemplating for some time," says MacLean, now an advisor for the group. "These students are active and enthusiastic across their disciplines, and a good fit."

Wijaya, who is from Singapore, has worked on a multitude of technology and socially innovative projects and is active in the university's student entrepreneur community. He created IdEA (Interdisciplinary Entrepreneurship Association) to connect and support like-minded students from across disciplines. His co-creators at Avian include:

- George Xu, a Canadian student originally from Shanghai, and a graduate student in the School of Engineering Science and

its Experimental Robotics Lab. Xu is a co-founder of Cloudy Robotics, which he helped found while working towards a degree in electrical engineering at the University of Waterloo;

- Shakir Ali, from India, an electronics enthusiast and Mechatronics Systems Engineering (MSE) student with an attraction to how the Internet of Things can empower hardware, who spends his spare time tinkering with microcontrollers and embedded systems;
- Akshay Budhiraja, from Qatar, and also an MSE student, who started programming at the age of 10 and has won the SFU Engineering Competition for three years in a row (and will represent SFU at the Western Engineering Competition this spring). Budhiraja recently designed an android app to detect and help in the diagnosis of sleep apnea and other sleep disorders.

As Canada's engaged university, SFU is defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. SFU was founded almost 50 years ago with a mission to be a different kind of university—to bring an interdisciplinary approach to learning, embrace bold initiatives, and engage with communities near and far. Today, SFU is a leader amongst Canada's comprehensive research universities and is ranked one of the top universities in the world under 50 years of age. With campuses in British Columbia's three largest cities—Vancouver, Surrey and Burnaby—SFU has eight faculties, delivers almost 150 programs to over 30,000 students, and boasts more than 130,000 alumni in 130 countries around the world.

-30-

Simon Fraser University: Engaging Students. Engaging Research. Engaging Communities.

Comment Guidelines

- For the Media
- For Faculty and Staff
- About SFU
- SFU News

Admission

Programs

Learning

Research

Community

About

Maps + directions

Library

Academic Calendar

Road Report

Give to SFU

Emergency Information