16-year-old CEO Wins IEEE's Presidents' Scholarship

His project aims to make both hardware and software development easily accessible to all.
By: Lynn Bowlby

What do you get when you have a 16-yr-old high school student and the CEO of a tech startup? You get the recipient of the IEEE Presidents' Scholarship for 2014, of course.

George Morgan, a junior from Clovis North High School in Fresno, California was awarded the IEEE Presidents' Scholarship for his project "A Multi-architectural Approach to the Development of Embedded Software." He received his award during the 2014 Intel International Science and Engineering Fair (ISEF) in Los Angeles in May.

Administered by IEEE Educational Activities, the US $10,000 scholarship from the IEEE Foundation is awarded annually to a high school student who creates a project that demonstrates understanding of an IEEE area of interest. The amount is payable over four years of undergraduate study, and the scholarship includes complimentary IEEE student membership during the four years. The student also receives a framed certificate and an engraved plaque.

Morgan hand-built a basic computer chip smaller than a credit card and used an old toaster oven to help fuse the tiny metal components to the chip's base. His attention to detail on the chip design was flawless—leaving IEEE's volunteer judges in awe. The computer chip has helped Morgan to move toward accomplishing his goal of making both hardware and software development easily accessible to anyone. Not only does his project rely on the use of his hand-build computer chip but the platform uses an operating system which he also wrote. Traditionally, creating interactive objects and environments has been a time consuming process and requires a substantial knowledge of programming. With the use of Morgan's operating system, which incorporates object oriented design patterns at a low level, embedded hardware on that system can be controlled dynamically and in real time from a host device such as a PC without compiling a single line of code.

Simply by having a brief conversation with Morgan, you quickly learn that he has a passion for teaching and for making technology more accessible and user friendly for everyone, regardless of their skill-set. "I love to see the sparkle in someone's eye as they are learning."

Morgan's fascination with computer engineering began at a very young age—"as soon as my mom would let me use a soldering iron, I started working on electronics." By the age of 7, he had designed his own portable Game Boy charger. Then, at age 11, he coded a basic computer program and by 14, he was already designing IPhone apps. Now, at 16, he is President and CEO of a tech startup he founded in 2013. The goal of his company is to create user-friendly electronics prototyping platforms. You would think that starting his own company would be the highlight of his high school career; however, upon receiving the IEEE Presidents' Scholarship, Morgan said with a grin "this is the best thing that has ever happened to me. I am so excited to win this award!"