On the verge of expanding horizons in life

This is kind of an essay, or story if you will, about the path I chose a few years ago to become a developer. It is intended to encourage other people with my testimony and tell them to never yield towards success.

It's a pleasure for me to address to you these few words of excitement and personal reward because of the decision I made to succeed at life and learn everything I could in the field of engineering before going to college. After a couple of years of programming experience, as a sophomore in High School, I began to venture into the digital electronics world. Posterior an extensive research I made about microprocessors and embedded systems, I knew that due to my lack of experience on this subject, I'd have to buy a beginners' kit or something similar. I found the perfect learning kit in digital electronics on Amazon. I ended up buying the kit on January 20, 2009, and that decision not only made me choose my future career, but changed the course of my life in the following years.

Video games have always been part of my life, but it wasn't until I began to study game programming that I acquired a strong interest in the video game development. As a 16-year old junior in high school, I began to combine my game programming experience and digital electronics to build a video game system. It was a hard task, but I was not going to give up despite the scarcity of resources and the lack of support on this field in my country, Honduras.
The project began as a wireless infrared controller, which was able to send three different commands to a remote station by pressing buttons that eventually included an embedded accelerometer to add the feature of being sensitive to motion. I didn't possess any experience whatsoever of transmitting data electromagnetically, but my perseverance took me to invent the code, the circuit and the algorithms from scratch with just a breadboard and a handful of electronic components. The same thing happened with the rest of the video game system; I had to study how to send data to a NTSC TV from scratch, for both monochromatic composite video and monaural sound. By finishing the whole project, I had officially developed the first video game system in my country, consequently taking some attention from the media; therefore, being published in local newspapers, local TV shows, US periodicals such as "MAKE Magazine" and received invitations to address speeches about my accomplishment and invitations to tech events.

"Where am I heading now?" I asked myself, I didn't have the answer for that question. However, in pursuit of the American dream and better opportunities in my future career, I moved to Colorado Springs, CO, USA with my parents' support and financial sacrifice in order to finish my senior year of high school. While devoting part of my time to keep good grades, I also worked in many different electronic projects to enrich my knowledge on this field when I had free time. A stronger motivation was going to make me work on a new project when I met one of my classmates who was tetraplegic. Meeting him, and hearing about some testimonies of people with similar illnesses, made me realize that a lot of people with disabilities don't have access to technology that help them overcome communication problems just because those systems are way too expensive.

Combining some ideas I had for previous projects, and the motivation to help people with disabilities in my country and the whole world made me work hard enough to finish my first stable version of a Human-Computer Interface that would provide the user the ability to communicate with other people and interact with the computer using just their eyes. The monitoring system of bioelectrical signals I developed, could be built with as little as two hundred US dollars, while other similar biomedical systems available could cost a minimum of ten thousand dollars. I'm currently doing some other

improvements such as comfortable interfaces like glasses, instead of invasive skin electrodes.

The reliability, stability, and the practical use of my project is wonderful, considering that it is still the prototype version. That made my mind up to compete in the regional science fair in Colorado Springs, receiving the first place in the senior category from the Armed Forces of Communication and Electronics (AFCEA) and other awards, as well as qualifying to compete in the Colorado State Science Fair on April 7th 2011 where I received partial scholarships, certificates from the US Army, and other awards. That same month, I received an email from the vice president of the sales department of INTEROP inviting me to be an exhibitor in that prestigious annually technology expo in Las Vegas, Nevada on May 10-12, 2011, with a granted booth space of a value of $6,600. Attending that event made me the first high school student exhibitor in the history of that expo, the first Honduran exhibitor in that expo, and probably the youngest entrepreneur with my own company exhibiting my projects next to huge companies such as Microsoft, Dell, HP, Cisco etc.

I am now 18 years old, and I just graduated from High School. I'm currently looking for scholarships to study electronics engineering in the US, and looking forward to commercialize my "Eye-detection System" by looking for fundings and sponsors in order to help people with disabilities in my country and other parts of the world, specially developing countries. My project has again taken the attention of the media (specially because of my young age as a developer), even CNN in Spanish broadcasted something about me and my project in July 2011, and MAKE magazine is going to publish an article about this project on January 2012.

I know as a fact that this is only the beginning of my journey and endeavors, as I am always making new projects to improve my engineering skills, and thinking about new ideas that can change people's lives for good. But that wouldn't be possible if it wasn't for my perseverance and dedication; and so my fellow readers, I tell you that we shall not endorse defeat as our failure, but take that as an experience to succeed at our endeavors, as with enough effort and perseverance anyone can succeed at their goals, but wait not for success knock at your door, as it will probably not happen whatsoever.

Thanks for reading. I hope this serves as an example for other people of my age!

May God bless you with happiness and success!

Luis Cruz
www.intelsath.com