

TECH SAVVY IN THE 'BURGH

BY VINCENT MOK AND SARA YOCKEY

Tech startups aren't just found in Silicon Valley... they can be found right in your own backyard. Pittsburgh is emerging as one of the biggest tech-savvy cities and shows no signs of slowing down. These four companies are based right here in the Burgh and are making a difference in the world of technology. Pittsburgh is becoming the Silicon Valley of the east.



SPIRALGEN

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You might not even know it, but you may be using some of SpiralGen's technology at this very moment. SpiralGen started in 2009 when four faculty members and a graduate from Carnegie Mellon decided to create a business that focused on software technology. In order to tackle the problem of a sudden halt in the rapid growth of computer performance, these five joined together to create technology that would allow the functionality rate to once again rise. SpiralGen's coding creation makes it so that software can often be written with technologic and immediate precision, replaces potentially slow and erroneous work done by hand. In addition to higher accuracy and speed, it also is a cost-effective product. In other words, SpiralGen's system allows image and video processing technology to run more affordably and efficiently, benefitting anyone from a specialist trying to obtain video off of imaging hardware to an artist manipulating images on Photoshop. Its technology has been picked up the Defense Sector, developers of high-performance applications for science computing, and even chip manufacturers like Intel, a multinational company that is known mostly for its widely used processor technology. You might not know when you're using technology made by SpiralGen, but you can be sure that it's one of our unsung heroes. If nothing else, we can definitely appreciate the idea of faster and more reliable technology in a world that so depends on



OPTIMUS TECHNOLOGIES

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Smell the scent of fried food coming from that giant fuel truck in front of you? Don't be alarmed — it's probably just one of the trucks that was designed in part by Optimus Technologies. The business, which currently works in conjunction with local groups, creates fuel systems that can operate on energy sources other than petroleum diesel. This allows them to tap into alternatives — things like recycled vegetable oils, algae fuel, jatropha oil, and biodiesel — that leave low-energy footprints, are more environmentally friendly, and cost less than fuel at the pumps. Many enterprises like the Western Pennsylvania Operating Engineers, the Public Works Department, and Global Links have joined in the project and are currently participating in more socially and environmentally responsible practices with the help of Optimus Technologies. Now, Giant Eagle stores can even recycle the frying oil in their own cafés to power some of their trucks. We dig the way that Optimus Technologies thinks outside of the box, and we appreciate its steps towards a clean, efficient, and cost-effective lifestyle. Though its members are keeping mum about their current project, we look forward to finding out what kind of exciting surprises they have in store. We're sure that you'll be excited, too.

DIGITAL DREAMS LAB

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If you have children, you've undoubtedly found yourself at that challenging crossroad in what your child wants to learn versus what they need to learn and sometimes the two don't exactly meet in perfect harmony. Digital Dream Labs has managed to successfully bridge that gap and shift the learning process from work, to play. The locally owned and operated company was launched in July of 2012, and emerged as an Entertainment Technology Center project in conjunction with The Children's Museum of Pittsburgh. The company was formed by Justin Sabo, Matt Stewart, and Peter Kinney, who saw that informal learning centers had a lot of opportunity for innovation and they knew their dreamTableTop, really met that need. "It was great to see kids learning, laughing, and having fun together. We then wanted to take that concept to the home market and began working on a product that connects to tables and computers," Sabo said. The genius behind this concept is simply putting gameplay first. "We strive to make unique experiences that tackle interesting topics, like teaching children 4 and up: logic, sequencing, timing, and fine-motor skills." So what brought this groundbreaking new company to our very own steel city, you ask? The co-founders simply "fell in love with Pittsburgh." With the company's innovative and nearly-instantaneous growth, don't be surprised if Digital Dream Labs and their DreamTableTop quickly become a common household product name.



LIQUID X

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Liquid X is a manufacturer of functional metallic inks located in Pittsburgh that started in 2010. Their proprietary chemical compositions yield a particle free solution that can be deposited via numerous methods—such as inkjet, or spin coating onto a variety of substrates. "The company was a CMU spinout from the lab of Dr. Richard McCullough, who was the Vice President of Research at CMU. A member of his group, Dr. John Belot, Co-founder and Chief Scientist of Liquid X, discovered the technology behind our printed metals and the business cultivated from there," says Operations Manager, Beth Vasy. "We're making it easier and more affordable for our clients to print with metals like silver and gold, without having to sacrifice the integrity and quality of the metal." Well-established printing methods such as inkjet and screen-printing are widely used in the printed electronics industry; however, the thought put of these processes can be limiting. There definitely is space for alternative printing methods to accommodate the challenges of printing electronics. One of the biggest impacts that Liquid X has made in modern technology is making it more affordable for their clients to print with metals like silver and gold, without having to sacrifice the integrity and quality of the metal. Innovation on their end helps create the opportunity for innovation in the industries their clients are situated in. That is what keeps them ahead of the game and evolving with the printed electronics industry.