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News and Communications Services
Kansas State University
128 Dole Hall
Manhattan, KS 66506

785-532-2535
785-532-7355 fax
media@k-state.edu

Kansas corporation expands technology development and manufacturing partnership at Kansas State University, Manhattan-based companies

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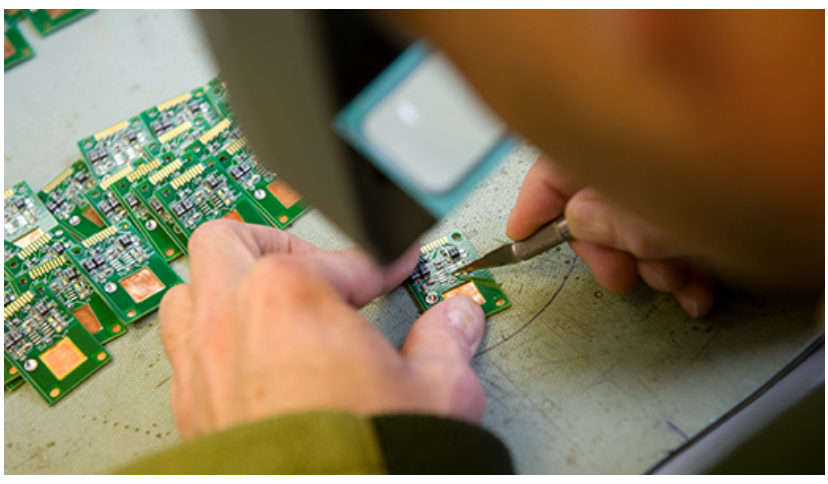

Avatekh Inc., a Lawrence-based technology company that develops algorithms and circuits used in wireless communication, power management, etc., is tapping the engineering and manufacturing abilities at Kansas State University and in Manhattan. The expansive partnership between industry and academia will turn AvaTekh's algorithms into new devices and technologies for the commercial marketplace and military use. | Download this photo.

MANHATTAN — A Lawrence-based technology company is positioning Manhattan, Kansas, as the Silicon Valley of the Midwest with an expansive partnership that's tapping the engineering and manufacturing abilities at Kansas State University and in Manhattan.

Starting this summer, Avatekh Inc., or AvaTekh, will begin working with Kansas State University's Electronics Design Laboratory, or EDL, and the Manhattan-based Ultra Electronics ICE, or Ultra-ICE, and its parent company Ultra Electronics Holdings to develop and manufacture a series of new devices and technologies for the commercial marketplace and military use.

AvaTekh develops algorithms and circuits that are used in wireless communication, power management, GPS, sensors, aerospace and defense, as well as signal and image processing.

"We thought we'd have to go to Silicon Valley or the East Coast to find development partners for that next step in the process," said Carrie Nikitin, CEO of AvaTekh. "We don't do manufacturing, which makes it challenging. But we found that Manhattan and Kansas State University have this entire technology development and manufacturing ecosystem that has the resources for everything we can't do. Plus, we'll be driving interests in the businesses in Kansas and creating economic opportunities for the state we live in."

The university's Electronics Design Laboratory will help AvaTekh develop and test prototype devices that use the company's proprietary algorithms. The lab specializes in the design of custom electronic circuitry, embedded software, instrumentation and data acquisition systems. The lab develops engineered prototype systems for the university and industry and can direct the transition to product manufacturing, which in turn helps Kansas businesses and the state's economy.

These efforts expand on a 13-year research partnership between Alexei Nikitin, chief science officer of AvaTekh, and Tim Sobering, Electronics Design Laboratory director. One of the current projects between AvaTekh and the lab involves developing technology and hardware algorithms to make smartphones run faster and with improved battery life.

"Dynamic collaborations are critical for intellectual property companies to move from ideas to commercialization," said Sobering, who has more than 31 years of experience designing specialized instrumentation for government and industry clients. "EDL operates as a catalyst to link stakeholders, serving as a bridge between ideas and research, moving through to products and manufacturing. AvaTekh, EDL and Ultra-ICE are all distinct but critical links in this technology and commercialization chain."

AvaTekh also is collaborating with the Manhattan-based Radiation Detection Technologies Inc. and Steven Bellinger, Kansas State University research associate and CEO of Radiation Detection Technologies Inc., or RDT, on development of industrial radiation detection instruments using AvaTekh's analog hardware algorithms.

"AvaTekh brings electronics development and algorithm development that can tie into radiation detection to make it a more sensitive and effective means of interrogation," Bellinger said. "That's really beneficial to RDT and its work on radiation detection."

With Ultra-ICE and Ultra Electronics Holdings, AvaTekh is currently in the prototype stage of implementing power conversion approaches for aerospace and defense applications. Once the prototyping phase is complete, Ultra-ICE and Ultra Electronics will manufacture and distribute AvaTekh's technology, as well as look at incorporating it into additional military and consumer applications. Ultra-ICE is an aerospace engineering company that designs, manufactures and tests aerospace products, including motor control electronics, electrothermal ice protection controllers and pneumatic valve controls. Ultra Electronics Holdings is a British company with headquarters in London that serves the defense, security, transport and energy industries.

"A lot of what we're working on with AvaTekh isn't the 'me too' technologies that everybody else has," said Arlie Stonestreet II, chief design engineer at Ultra-ICE. "We're advancing the state of the art in power management, as cliché as that sounds."

"AvaTekh has managed to bring some really innovative intellect to something we've been doing every single day," said Randy O'Boyle, president and CEO of Ultra-ICE. "When they first brought this to the table and I saw Arlie's eyes light up like a Christmas tree, I could tell that we had something. We had a match that was perfect for things that we want to do in the future."

AvaTekh and the Electronics Design Laboratory also work with Bala Natarajan, professor of electrical and computer engineering and members of his Wireless Communication and Information Processing, or WiCom, research group on research and development of nonlinear algorithms and circuits with applications to various communications technologies, such as power line communication systems.

"I strongly believe it's important to synergize academic research with industry needs to address the technological challenges of the future," Natarajan said. "Our collaboration with AvaTekh was built on this belief. Over the past year of joint work, we have made positive strides in both research and development. This is a win-win for Kansas State University and AvaTekh. Our students get an opportunity to work on industry-relevant research problems, while AvaTekh gets an opportunity to tap the knowledge base at the university to further enhance its intellectual capital."

While AvaTekh, Kansas State University and the other companies have worked together on previous projects, this will be the first large-scale partnership between all various collaborators and the first to move technologies from the concept phase to a final, marketable product.

"Together, we have the base for doing this," Alexei Nikitin said. "We also can find different needs and ways our technology can be plugged into engineering to provide solutions for those needs by industry and consumers."

The Kansas State University Institute for Commercialization and Manhattan's Knowledge Based Economic Development LLC facilitated the expanded partnership.

Source

Rebecca Robinson
785-532-3955
spexarth@k-state.edu

News tip

Lawrence and Manhattan

Written by

Greg Tammen
785-532-4486
gtammen@k-state.edu

At a glance

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Notable quote

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