

“There’s tons and tons of stuff going to China”

Radiation- hardened, programmable semiconductors are used in satellites to withstand the high doses of solar radiation that would quickly burn out ordinary chips. They’re made in the United States, but you can’t buy them at RadioShack or Best Buy. These chips cost thousands of dollars apiece, and they appear on something called the United States Munitions List, together with a lot of advanced weaponry, precision radars, state-of-the-art cryptography, and other items whose uncontrolled export would be dangerous to our national security. Items on this list are controlled by International Traffic in Arms Regulations, known as ITAR, and it is a crime to export them without a license. Which doesn’t stop some people from trying.

In early 2010, an engineer in the Seattle area, a Chinese national named Lian Yang who did contract work for Microsoft, began making inquiries about programmable semiconductors. ⁴⁴ An acquaintance put him in touch with a “confidential source,” as the FBI calls him, who might be able to help out. They met on March 9, 2010, and Yang explained to this source that he wasn’t a spy, and he certainly didn’t want to deal in restricted goods, but he was interested in acquiring part number XQR2V3000- 4CG717V from a company called Xilinx. How many? Three hundred. So Mr. Yang’s source began checking around, only to learn that the buyer would be required to produce an “end- user certificate,” which states precisely what the goods will be used for, by whom, and in what country. So on March 19 he reported back to Mr. Yang, who advised him that the parts were intended for China Space Technology’s next generation “spaceship program.” This was apparently a reference to a state- owned enterprise, Xian Space Star Technology (Group) Corporation, which specializes in the research and development of satellite load systems. ⁴⁵ On March 31, however, Mr. Yang’s source explained to him that the parts were radiation- hardened, programmable semiconductors, and they were on the munitions list. No problem, said Mr. Yang, and on the same day he e-mailed his source an end- user certificate that listed a Hong Kong firm as the end user and said the parts were for “China’s new generation of passenger jet.”

The two men met on April 1 at a restaurant in Bellevue, a Seattle suburb, to discuss splitting the profits, but on April 13 the confidential source gave Mr. Yang the bad news: Since these parts were on the munitions list, the company could not sell them for an end user in China. Weeks passed. Mr. Yang’s Chinese contacts grew impatient and began to push. On August 15, Mr. Yang’s confidential source sent him an e-mail. He was getting nowhere, he wrote, because the parts are restricted by ITAR. However, he happened to have a promising new contact. “I am certain he will be able to arrange for us to obtain and buy the parts in large quantities,” the confidential source said, “and on a regular basis, and have the items delivered for us here. What we do with them is up to us.”

Ten days later Mr. Yang and his contact had a heart-to-heart in a Seattle restaurant.

“You know,” the source said, “what we’re doing is illegal, for all intents and purposes. So, we have to be really careful.”

“Yeah,” said Mr. Yang.

The source’s contacts in the industry were careful too. They wanted to meet Mr. Yang in person.

So the four men met in a restaurant on September 14— Mr. Yang, his confidential buddy, and two men who seemed to know the business very well. These semiconductors, one of the men explained, basically come in two flavors. One’s hardened and controlled by law, one’s commercial and not controlled. If Mr. Yang’s partners in China could use the commercial grade, well, “everybody is safe and there’s no issue.” Yang rejected the commercial grade. His partners were “very firm” on that. They want the radiation-

hardened version, he said, and “they want it badly.” Mr. Yang said he didn’t know how the parts would be used, but said they’d be going to China. They mulled it over. It would be dangerous. Did Mr. Yang understand what would happen if they got caught? The industry man answered his own question: “We’re going to jail.”