



Case Study: Nuclear Traffickers Conspired to Procure High Speed Cameras for Iran from Agent who Supplied North Korea

By David Albright and Andrea Stricker

May 19, 2016

Sihai “Alex” Cheng of China worked closely with Tehran middleman, Seyed Abolfazl Shahab Jamili, to [illicitly procure](#) over a thousand pressure transducers for Iran’s gas centrifuge enrichment program between 2009 and 2012. Pressure transducers are export controlled goods in part because they measure the gas pressure inside a centrifuge cascade. Two e-mails obtained by our Institute from December 2009 and January 2010 show that Cheng and Jamili also cooperated on another effort to procure a Photron brand video camera, model Fastcam SA5, on behalf of Iran, apparently from a crooked agent who claimed to work at the Photron subsidiary in China – an agent who claimed to have also supplied North Korea.¹ It should be noted that the agent may have been posing as a Photron sales agent.² In any case, it would behoove Japanese investigators, where Photron is headquartered, to look into this alleged procurement by North Korea via an alleged Chinese agent of Photron and to determine whether this person made sales that would violate Japanese export controls. No evidence has emerged that Cheng and Jamili successfully procured a camera for Iran, but authorities should also investigate this possibility.

The Photron SA5 high speed camera is controlled under the U.S. Commerce Control List and Wassenaar Arrangement dual-use control list.³ Japan is a member of the Wassenaar agreement and thus controls sales of the SA5 model camera.⁴ Two criteria control such fast cameras for dual-use applications: the overall frame rate and the exposure time. This camera could be used in gas centrifuge testing although it is not on the Nuclear Supplier Group (NSG) dual-use control list. Photron sells faster video cameras that are controlled by the NSG list

¹ The emails are from evidence presented in U.S. federal court by the Federal Prosecutor of the District of Massachusetts. Institute President David Albright served as an expert witness during Cheng’s sentencing hearing in January 2016.

² The Japan headquarters of Photron is currently conducting an investigation. To include the possibility that the Chinese agent was posing as an employee of Photron we use the phrase “alleged” or “apparent” Photron agent.

³ Photron Fastcam SA5 Ultra High-Speed Video System Data Sheet:

http://www.photron.com/datasheet/FASTCAM_SA5.pdf ; Wassenaar Arrangement Dual Use Good and Technologies and Munitions Control List, Updated March 12, 2015, <http://www.wassenaar.org/wp-content/uploads/2015/08/WA-LIST-15-1-2015-List-of-DU-Goods-and-Technologies-and-Munitions-List.pdf>

⁴ Center for Information on Security Trade Control (CISTEC) of Japan, *Overview of Japanese Export Control Legal Framework*, updated November 2010, slide 10, http://www.cistec.or.jp/english/export/Overview_legal.pdf

because they could be used in the development of high explosives lenses and in the initiation of high explosives used in nuclear weapons.

The Cheng/Jamili e-mails are revealing about how nuclear traffickers devise schemes best suited to both obtain sensitive goods and conceal the true end user. They show how nuclear traffickers actively seek to recruit agents in China who supply Western goods and are willing to break export laws for profit. They also show that China needs to prioritize and take action against those who violate export laws.

Background: Cheng and Jamili

Sihai Cheng was recently tried in a Massachusetts court and sentenced to nine years in prison, while Seyed Abolfazl Shahab Jamili's indictment was dropped as part of a U.S./Iran prisoner release deal in January 2016. Jamili ordered from Cheng a large number of goods for Iran's gas centrifuge and military programs. They sought to obtain the high speed camera for Iran in the same manner that they obtained the pressure transducers, in particular using themselves as middlemen to try to obtain a good from a crooked Chinese supplier, and employing a circuitous shipping route and phony end destination. This trafficking method effectively puts several layers between the Western good's supplier and Iran's nuclear program:

Order route for pressure transducers:

Iran's gas centrifuge plants

->Eyvaz Manufacturing Co. of Tehran

->Jamili's company Nicaro Engineering Co in Iran

->Cheng's company Sohi Technology as middleman/buyer

->Crooked agent at Western distributor in China

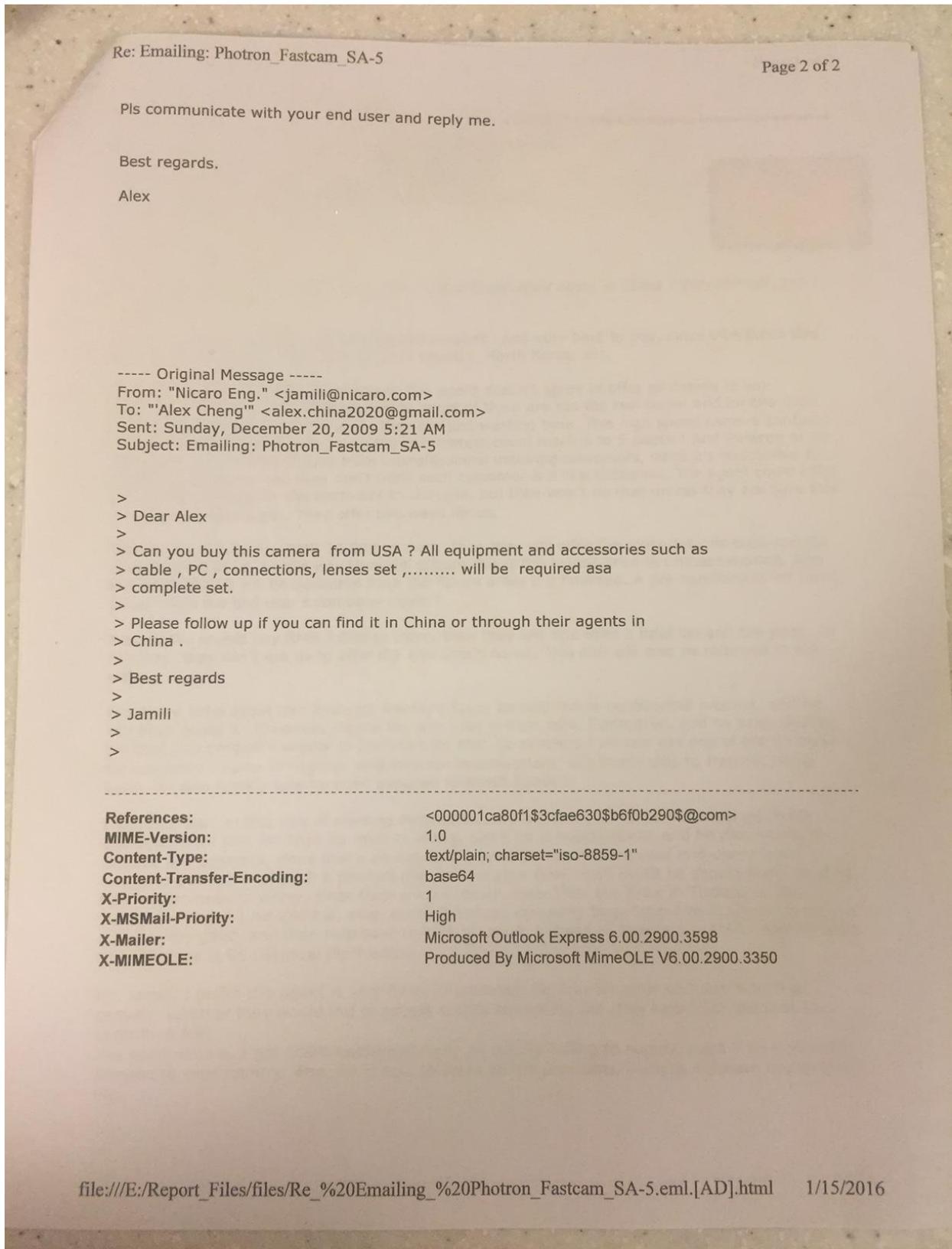
->Western supplier

In the pressure transducer case, Cheng obtained goods directly from the Shanghai subsidiary of MKS Instruments, a U.S. company based in Andover, Massachusetts. The Chinese subsidiary had two corrupt agents who secretly sold MKS goods to sanctioned countries at that time. Cheng used his trading companies Sohi Technology Co. Ltd. in Shanghai to buy the pressure transducers which were sent to Sohi's other location in Hong Kong and then on to Iran. Cheng's associate Jamili owned Nicaro Engineering Co. in Iran, was the originator of the order. He sought for Eyvaz Manufacturing Company of Tehran, which in turn was buying for Iran's gas centrifuge program, the vast quantities of pressure transducers which were destined for Iran's centrifuge program.

It is unclear if Eyvaz Manufacturing Company was the same client that Jamili was working for in the case of the Photron camera, since the two emails do not identify the end user(s). There is no evidence that they succeeded in obtaining the camera for Iran. The Japanese Ministry of Economy, Trade, and Industry (METI) lists Eyvaz as a banned end user for Japanese exports.⁵ The e-mails and analysis of notable excerpts follow on the next three pages.

⁵ Ministry of Economy, Trade, and Industry, *The Foreign End User List*, updated March 29, 2016, p. 4, http://www.meti.go.jp/policy/anpo/law_document/tutatu/kaisei/20160329_3.pdf

Email 1: December 2009



Re: Emailing: Photron_Fastcam_SA-5

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Pls communicate with your end user and reply me.

Best regards.

Alex

----- Original Message -----

From: "Nicaro Eng." <jamili@nicaro.com>
To: "'Alex Cheng'" <alex.china2020@gmail.com>
Sent: Sunday, December 20, 2009 5:21 AM
Subject: Emailing: Photron_Fastcam_SA-5

>
> Dear Alex
>
> Can you buy this camera from USA ? All equipment and accessories such as
> cable , PC , connections, lenses set ,..... will be required asa
> complete set.
>
> Please follow up if you can find it in China or through their agents in
> China .
>
> Best regards
>
> Jamili
>
>

References: <000001ca80f1\$3cfae630\$b6f0b290\$@com>
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Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: base64
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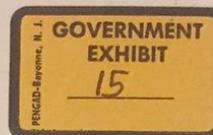
file:///E:/Report_Files/files/Re_%20Emailing_%20Photron_Fastcam_SA-5.eml.[AD].html 1/15/2016

Email 2: January 2010

Re: Emailing: Photron_Fastcam_SA-5

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From: "Alex Cheng" <alex.china2020@gmail.com>
Sent: Mon, 18 Jan 2010 18:44:47 +0800
To: Nicaro Eng. <jamili@nicaro.com>
Subject: Re: Emailing: Photron_Fastcam_SA-5



Dear Mr. Jamili,

About the Photron camera Fastcam SA5, I have found their agent in China ! Very difficult, but I finally I have found it.

It proves this is again a high confidential product ! And very hard to buy, since USA block this product to many countries, such as your country, North Korae, etc.

And this market is a little complicated. The agent doesn't agree to offer all details to any inquiring customer, the reason is simple, most of them are not the real buyer and for the most time if the agent does all the work, they are just wasting time. This high speed camera contains too much technology details, even the parameters could reach 3 to 5 pages ! And Photron or its agent will not care the inquiry from unprofessional inquiring customers, since it's impossible to reach the business, and they don't think such customer is a real customer. The agent could offer all technical details for the customer to choose, but they won't do that unless they are sure this is a real possible buyer. They offer two ways for us.

Way A: We should pay RMB 30,000 to them, then they will offer the most detailed technical list and price list to us. In this way they will ensure this is the lowest price in Chinese market. And this RMB 30,000 will be deducted from the future order if it finalized. A pre-condition is we have to tell them the end user's company name !

Way B: We should pay RMB 7,000 to them, then they will also offer a brief list and the price. In this way, they don't ask us to offer the end user's name. This cost will also be returned in the order.

Finally we talke about this business frankly ! Since he said this is confidential product, and he can even guess it ! He guess maybe the end user is from Iran. I admitted. And he said, USA is blocking this product's supply to Iran. But for him, no problem ! He can use one of the Chinese old customer's name to register with Photron headquarters, but finally ship to Iran via Hong Kong. He also frankly said he even supplied to North Korae !

I told him that, in this way of starting negotiation, we will worry whether we could get a fair quotation from him. He says no need to worry, since he is businessman and he also wants to achieve this business, since this is an expensive product. He told me your end user knows everything about what such a product means ! He says how much profit he should keep. And he told me, no need to worry, since their price is much lower than the price in Turkey, or the European market ! He told me, even some American company buys from him in China, since the price is very good, and then ship back to USA to use it, instead of buying it in USA ! And he says this company is GE (General Electronics).

Mr. Jamili, I belive this agent is very frank in business. So now it's your end user's turn to consider whether they would like to accept such a consulting fee (this agent call the cost as consulting fee).

The good news is, I get 100% confirmed reply he is fully willing to supply, even if he knows it's shipped to your country. Also, he is sure to solve all the problems, such as software registration, etc.

file:///E:/Report_Files/files/Re_%20Emailing_%20Photron_Fastcam_SA-5.eml.[AD].html 1/15/2016

Analysis of E-mails

Several points are immediately notable from the Cheng/Jamili e-mails relating to how nuclear traffickers carry out their illegal business.

Origination of order in Iran: The first e-mail indicates that Jamili, working from Iran, was the originator of the order for the high speed camera which he asked Cheng to obtain from another Chinese middleman.

Knowledge of good's status as a controlled item: Cheng notes in the second e-mail that "this is a high confidential product!" "Very hard to buy, since USA block this product to many countries, such as your country, North Korae, etc. (sic)." Therefore, both men were aware of the controlled status of the good.

Crooked agent apparently of supplier Photron willing to sell controlled good to Iranian end user via Hong Kong shipment route: Cheng suggests that he is speaking with the Photron agent in China when he says "I have found their agent in China." He talks about the agent noting that the product is controlled and would require an end user statement, but finally getting to a frank conversation about how to obtain the good in any case. The agent even guessed that the end user was Iran, which Cheng admitted was true. The agent stated that he could "use one of the Chinese old customer's name to register with the Photron headquarters, but finally ship to Iran via Hong Kong."

Agent admitted to supplying North Korea: Cheng notes that the apparent Photron agent stated he "even supplied to North Korae (sic)!"

Profit split discussion between agent, Cheng, and Jamili: The apparent Photron agent stated that "this is an expensive product" and "your end user knows everything about what such a product means." The agent called his share of the profit a "consulting fee."

Cheng requests Jamili ask Iranian client for authorization to move forward: Cheng asks Jamili to seek his Iranian client's authorization to move forward with the procurement: "So now it's your end user's turn to consider whether they would like to accept such a consulting fee..."

Alleged Photron agent knew Iran would obtain the good: Cheng wrote, "The good news is, I get 100% confirmed reply he is fully willing to supply, even if he knows it's shipped to your country."

Conclusion

Japanese enforcement officials should investigate the possibility that Photron high speed cameras may have gone to North Korea (or Iran) via an illicit Chinese supplier via a crooked agent at the Chinese location of Photron or someone posing as an agent of Photron. The

United States should demand that China take action against this person. North Korea relies on illicit procurements of nuclear dual-use goods via China to outfit its military and nuclear programs. Constraining this supply is key to slowing the likely, future precipitous growth in North Korea's nuclear arsenal and its fissile material production capabilities.