

UNITED STATES DISTRICT COURT

for the

District of Connecticut

United States of America

v.

Long Yu

Case No.

Defendant(s)

CRIMINAL COMPLAINT

I, the complainant in this case, state that the following is true to the best of my knowledge and belief.

On or about the date(s) of May 3, 2014 - November 5, 2014 in the county of Hartford in the
District of Connecticut, the defendant(s) violated:

Code Section

18 U.S.C. § 2314

Offense Description

Interstate Transportation of Stolen Property

This criminal complaint is based on these facts:

See attached Affidavit

☒ Continued on the attached sheet.


Complainant's signature
TIMOTHY WAYNE CURTIN II, Special Agent
Printed name and title

Sworn to before me and signed in my presence.

Date:

11/7/14

Judge's signature

City and state:

Bridgeport, Connecticut

William I. Garfinkel, U.S. Magistrate Judge

Printed name and title

**UNITED STATES DISTRICT COURT
DISTRICT OF CONNECTICUT**

STATE OF CONNECTICUT

:
:
:
:

ss: BRIDGEPORT

FAIRFIELD COUNTY

NOVEMBER 7, 2014

AFFIDAVIT

I, Timothy Wayne Clifton II, being duly sworn, depose and say that:

1. I am a Special Agent of the Federal Bureau of Investigation ("FBI") and am assigned to the New Haven Field Office. I have been employed as an FBI Special Agent since July 2012. Prior to that, I served in the United States Navy as a pilot for nine years. As part of my duties and responsibilities as an FBI Special Agent, I am currently assigned to investigate matters including export and counter-proliferation offenses, theft of trade secrets and economic espionage. As a result of my training and experience, I am familiar with the tactics and methods used by individuals who engage in export and counter-proliferation violations, theft of trade secrets and economic espionage. I am also familiar with many investigative techniques employed to investigate these acts.

2. As a Special Agent with the FBI, I am an investigative or law enforcement officer of the United States and am empowered by law to conduct investigations and to make arrests for offenses enumerated in Title 18 of the United States Code.

THE TARGET

3. I make this affidavit in support of a criminal complaint charging Long Yu (hereinafter "Yu"), a/k/a Yu Long, Yin Yu, Ying Long Yu, date of birth 12/20/1977 with transporting, transmitting, and transferring in interstate or foreign commerce goods obtained by theft, conversion, or fraud in violation of Title 18, United States Code, Section 2314.



4. The facts set forth in this affidavit are based upon my personal observations, my training and experience, and information obtained from other agents and witnesses, including federal law enforcement agents employed by FBI, the United States Customs and Border Protection Service ("CBP") and defense contractor firms.

5. This affidavit is intended to show merely that there is sufficient probable cause for the requested complaint and arrest warrant and does not purport to set forth all facts relating to this investigation. Unless specifically indicated otherwise, all statements described in this affidavit are related in substance and in part only and all dates are approximate.

THE RELEVANT STATUTE AND ELEMENTS

6. It is my understanding that Title 18, United States Code, Section 2314 prohibits the interstate transportation of stolen property and provides, in pertinent part, that:

Whoever transports, transmits, or transfers in interstate or foreign commerce any goods, wares, merchandise, securities or money, of the value of \$5,000 or more, knowing the same to have been stolen, converted or taken by fraud . . . [shall be guilty of a crime].

See 18 U.S.C. § 2314.

7. Accordingly, it is my understanding that a violation of 18 U.S.C. § 2314 generally requires proof that (1) property – namely, goods, wares, merchandise, securities or money – was stolen, converted, or taken by fraud; (2) the defendant transported, transmitted or transferred the property in interstate or foreign commerce (or caused the property to be transported, transmitted or transferred in interstate or foreign commerce); (3) at the time of the transportation or transmission, the defendant knew the property was stolen, converted or taken by fraud; and (4) the value of the property was \$5,000 or more. It is also my understanding that, pursuant to Title 18, United States Code, Section 2311, "value" means "the face, par, or market value, whichever is the greatest, and the aggregate value of all goods, wares, and merchandise, securities, and

money referred to in a single indictment shall constitute the value thereof.” See 18 U.S.C. § 2311.

FACTS AND CIRCUMSTANCES

8. Yu holds Chinese citizenship and is a lawful permanent resident (“LPR”) of the United States. From in or about August 2008 until in or about May 2014, Yu worked as a Senior Engineer / Scientist at a research and development center for a major defense contractor in Connecticut (“Company A”). Until recently, Yu maintained a residence in New Haven, Connecticut, which he has since vacated, relocating to Ithaca, New York to reside with his girlfriend.

9. Both at the beginning of his employment with Company A, and at or around the time that his employment terminated with Company A, Yu signed documents with Company A regarding intellectual property and proprietary information acquired during the course of his employment.

10. For example, in an “Intellectual Property Agreement” that Yu signed as a new hire on May 27, 2008, he agreed not to disclose proprietary information. Specifically, that “Intellectual Property Agreement” read, in pertinent part:

I will not, either during or after my employment, use, publish or otherwise disclose, except for [Company A’s] benefit in the course of such employment, any technical or business information developed by, for or at the expense of [Company A], or assigned or entrusted to [Company A] by me or anyone else, unless such information is generally known outside of [Company A], and I will deliver to or leave with [Company A] all written and other materials containing such information upon termination of my employment.

11. In addition, in a Company A “Exit Process Checklist” executed by Yu on May 30, 2014, he signed and acknowledged, in pertinent part that: “[a]ll company property has been returned to the appropriate individual(s). I acknowledge that I am not retaining or taking away

with me any material of a Controlled or Proprietary nature”

12. Both during and after his employment at Company A, Yu traveled to the People’s Republic of China. Most recently, on or about August 19, 2014, Yu returned to the United States from China through John F. Kennedy International Airport in New York.

13. Upon his return, and during a secondary inspection screening by United States Customs and Border Protection, Yu was found in the possession of \$10,000.00 in undeclared U.S. cash. On his CBP landing card, Yu had declared only \$100.00 worth of merchandise to include “decorations” such as a “wall clock.” Yu was required to fill out a United States Department of Treasury “Report of International Transportation of Currency or Monetary Instruments” Form, declaring that he had imported from China into the United States \$10,000 in United States cash. At the top of the form, in all capital letters, Yu wrote that he had been “FORCED” to complete the form.

14. During the inspection, CBP officers also copied a number of documents in Yu’s possession. Among the documents was a multiple-page document in Chinese, with information about Yu set forth in English. A subsequent translation indicated that the document appeared to be an application for work with a third party in China, with Yu setting forth some of his work history and experiences he obtained while employed at Company A. Among other things, the document stated that Yu had worked at Company A facilities and had “led [Company A] sponsored projects.” Among other things, the document stated that Yu had experience in “Digital manufacturing” and “Physics based Multi-axis machining” involving “superalloy complex geometry part high efficient and high quality machining.” The document also set forth Yu’s participation in and/or presentations at the following trainings and workshops:

Long Yu, “Modeling of Composite Progressive Damage” [Company A] OMC and High Temperature Material Workshop, Dec. 2013

Long Yu, "FE Modeling of Composite Progressive Damage using Ansys and LsDyna," [Company A] Impact Dynamics Workshop, Nov. 2013

Long Yu, "Machining on Multi-phase Inconel 718," [Company A] Impact Dynamics Workshop, Nov. 2009

Long Yu, "Modeling of the Effect of Tool Wear on Cutting Forces and Dynamics in Turning," [Company A] Research Center, 2008.

The document also highlighted Yu's apparent work on such things as "new material development such as high temperature Al," "surface integrity protection," "multiphase superalloy machining" "composite modeling and simulation" and "micromechanics based progressive damage model[s]." Among other things, the document also stated (and appears to claim that Yu had): "[o]ptimize[d] the manufacturing of the F119 and F135 air flow path in LPC and HPC, reduc[ing] machining mark and surface roughness"; and "[f]irst propose[ed] and implement[ed] High Pressure Die Casting for Nickel Superalloy, which significantly reduce[d] the manufacturing cost and time for superalloy."

15. The packet of documents copied by CBP during the August 2014 secondary inspection also included a Company A Verification of Employment letter for Dr. Yu Long dated May 20, 2014 that stated, in pertinent part: "This letter confirms the employment status for Dr. Yu Long with [Company A] Research Center Dr. Yu Long was hired on May 27, 2008 and is a Senior Research Engineer [Company A] Research Center currently intends to employ Dr. Yu Long on a full-time permanent basis. However, his employment will be subject to termination at will by either party and this letter does not constitute a contract of employment for any specified period of time."

16. In short, the packet of documents copied by CBP appeared to include application materials for employment with a third party located in the People's Republic of China.

17. The packet of documents copied by CBP during the August 2014 secondary inspection also included an “Application for Entry for Investment (to establish / join in business)” in China. This application, dated July 20, 2014, was completed in the name of Yu’s girlfriend, to set up a limited liability company in her name in China. Yu’s girlfriend is currently a graduate student at Cornell University in Ithaca, New York. On information and belief, investigators believe that Yu set up the LLC on behalf of his girlfriend during Yu’s trip to China in July-August 2014.

18. On November 5, 2014, Yu boarded a flight from Ithaca, New York to Newark Liberty International Airport, with a final destination of China. During Yu’s layover in Newark, CBP officers inspected Yu’s checked baggage – which had traveled from Ithaca, New York to Newark, New Jersey – and discovered that it contained, among other things, documents from a second major defense contractor [Company B]. As a result of this development and subsequent interaction with law enforcement authorities, Yu did not take his intended flight on to China, and subsequently returned to Ithaca, New York to reside with his girlfriend. The documents, bearing dates from March 2010 through October 2011, each contained warnings indicating that they were export-controlled, proprietary and/or subject to “consortium restrictions.”

19. Further investigation determined that during all times relevant to this complaint, the United States Air Force had convened a consortium of major defense contractors to work together to see whether they could collectively lower the costs of certain metals used. The project was known as the “U.S. Air Force Metals Affordability Initiative (MAI).” Company A and Company B, among others, were part of that MAI consortium. As part of those efforts, members of the MAI consortium shared technical data to promote full and open dialogue during the project. The sharing of information, data and material was subject to stringent restrictions set

forth in a MAI Collaboration Agreement that among other things, prohibited the duplication, use or disclosure in whole or in part of any information, data or material learned or acquired as part of the consortium for any purpose other than the MAI program. Documents possessed by Yu prior to departing the United States for China bore such a "consortium restriction," which read, in pertinent part:

CONSORTIUM RESTRICTION

The data contained herein shall not be disclosed outside the Government and shall not be duplicated, used or disclosed in whole or in part for any purpose other than the Metals Affordability Initiative (MAI) program(s). The Government shall have the right to duplicate and use the data generated from these programs to the extent set forth in the controlling Technology Investment Agreement Any Consortium Member rights to said data shall be as set forth in the MAI Collaboration Agreement dated 6/25/99, and subsequently amended from time to time and executed among the Consortium Members

20. Company B reviewed the Company B documents found in Yu's possession at Newark Liberty Airport and confirmed that it provided the documents to Company A (where Yu worked) as part of the consortium. Company B further confirmed that Yu was never an employee of Company B.

21. The documents contained warnings that they contained proprietary information, stating, for example:

The information in this document is the property of [Company B] and may not be copied or communicated to a third party, or used for any purpose other than that for which it is supplied without the express written consent of [Company B].

The documents also contained warnings that they were subject to United States export controls, stating, for example:

WARNING – This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C. SEC 2751, et seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App. 2401, et seq. Violations of these export laws are subject to severe criminal penalties.

22. One document dated March 26, 2010 was a twenty-page white paper setting forth a detailed proposal for the MAI project regarding "Advanced Titanium Alloy Microstructure and Mechanical Property Modeling." The proposal listed engineers and representatives from various consortium members, including Company A and Company B. Each page of the document stated that it was "EXPORT CONTROLLED" and that "use or disclosure of proposal data is subject to the restriction on the Title page of this proposal"

23. A second thirteen page document dated October 13, 2010 and entitled "Advanced Titanium Alloy Microstructure and Mechanical Property Modeling" was a hard copy print out of a presentation at an "MAI Kick-off Meeting" at Company B's Training Center in October 2010. The first substantive slide listed the names and logos of the consortium members, including Company A and Company B. Each substantive slide contained the words "Export Controlled."

24. According to Company B, this "kick-off document" set forth, with some detail, a roadmap as to how the consortium members intended to achieve their goal of lowering the costs of metals used, while maintaining technologically advanced components that would withstand, e.g., extreme temperatures and high velocity.

25. A third, forty-eight page document dated October 27, 2011 and entitled "Advanced Titanium Alloy Microstructure and Mechanical Property Modeling (sub-gate review presentation)" was a hard copy print out of a presentation, which contained on the first page both the "consortium restriction" set forth above, and an additional warning that read:

ITAR REGULATIONS

WARNING. This document contains technical data whose export is restricted by the Arms Export Control Act . . . or the Export Administration Act . . . Violations of these export laws are subject to severe criminal penalties.

The first / title page listed the names and logos of the consortium members, including Company

A and Company B. Each subsequent page of the document stated: "Use or disclosure . . . is subject to the restrictions set forth on the title page of this document."

26. According to Company B, this "sub-gate review presentation" would provide clear direction to any entity or country attempting to duplicate that work. According to Company B, one of the more difficult things to get right in the manufacture of titanium and other metals used in highly sophisticated and advanced aircraft are the chemical components that assist such aircraft in operating effectively in extreme temperatures and at high velocities. According to Company B, the "sub-gate" document included, among other things, microstructure processes and the results of tests performed at different temperatures and viscosities which, in turn, would be critical in the development of technologically advanced titanium for use in advanced aircraft.

27. Subject matter experts at Company B indicated that the material and chemical processes set forth in the documents, and particularly in the sub-gate presentation document, were sensitive proprietary information that has never been publicly disclosed, that Yu never worked for Company B, and that he was never authorized to retain, disseminate, disclose or export the material. Company B further indicated their belief that the material is export controlled.

28. Company A confirmed that a copy of the sub-gate presentation was located at a Company A location. The investigation has further confirmed that Yu was detailed to, and worked at that Company A location for a six month period in 2012, where he is believed to have worked with an individual listed on the whitepaper and the sub-gate document referenced above.

29. During an interview at Newark Liberty International Airport on November 5, 2014, Yu claimed that he had downloaded the materials from a publicly available website. On November 6, 2014, Yu initiated contact with the FBI and provided them with a list of website

links, claiming that he obtained the documents from those, or similar links. The documents referenced herein could not be located on the websites provided by Yu, some of which were inactive.

30. Based on the foregoing and other investigation to date, there is probable cause to believe, and I do believe that Yu intentionally obtained the materials through his employment at Company A in Connecticut, and that he thereafter intentionally caused the materials to be transported from Connecticut to Ithaca, New York and then to Newark, New Jersey, with the intent of taking them with him to China.

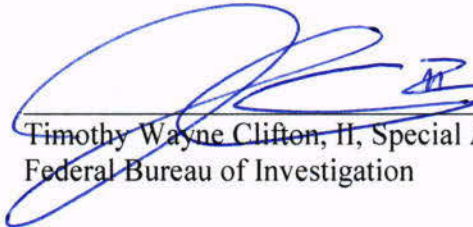
31. Company B preliminarily estimated that work hours performed on the consortium had a value of approximately \$3.6 million, with Company B's share being approximately \$250,000.00. Company B preliminarily estimated that work hours performed on the proposals and presentations referenced herein had a value of approximately \$80,000.00, with Company B's contribution being approximately \$15,000.00. Company B indicated that the value of the underlying technology, data and information, however, would be of significant value to third party entities or countries seeking such technological advancements.

32. The United States Air Force has further confirmed the highly sensitive, technologically advanced and valuable nature of the information, insofar as the documents set forth detailed equations that would provide direct insight on how to process titanium to achieve desired performance characteristics. The United States Air Force has also confirmed their belief that the documents referenced herein would be subject to export controls. According to the Air Force, the combined package of documents also represents not only years of collaborative effort, but also touches upon significant prior development work, and is therefore preliminarily estimated to have a value approaching \$50 million.

CONCLUSION

33. Based on the foregoing facts, I respectfully submit there is probable cause to believe that YU has transported, transmitted, and transferred in interstate or foreign commerce goods obtained by theft, conversion, or fraud in violation of Title 18, United States Code, Section 2314, and therefore request that the request criminal complaint and arrest warrant be issued.

34. Your affiant further requests that the criminal complaint and affidavit be sealed until the execution of the arrest warrant and the arrest of Yu, and specifically, requests that the Court permit the criminal complaint and affidavit to be provided to any defense counsel and unsealed once Yu is in custody and appears for his initial appearance.



Timothy Wayne Clifton, II, Special Agent
Federal Bureau of Investigation

Subscribed to and sworn before me
This 7th day of November, 2014.

THE HONORABLE WILLIAM I. GARFINKEL
UNITED STATES MAGISTRATE JUDGE