

ORIGINAL

FILED IN OPEN COURT
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By: *Kevin P. Weinger*, Clerk
Kevin P. Weinger, Deputy Clerk

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

UNITED STATES OF AMERICA

v.

SONG WU

Under Seal

Criminal Indictment

No. **1 24 - CR - 295**

THE GRAND JURY CHARGES THAT:

Background

1. At all times relevant to this Indictment:

- a. The Aviation Industry Corporation of China ("AVIC") was a Chinese state-owned aerospace and defense conglomerate headquartered in Beijing, China. AVIC manufactured civilian and military aircrafts and was one of the largest defense contractors in the world. AVIC oversaw approximately 33 scientific research institutes, 9 national key laboratories, 30 aviation technology key laboratories, 24 nationally recognized enterprise technology centers, and 32 provincial and ministerial enterprise technology centers.
- b. The defendant, SONG WU, a Chinese national, was an employee of AVIC, working as an engineer, in China.

- c. The National Aeronautics and Space Administration (“NASA”) was the United States’ civil space program.
- d. Research University 1 was a public research university located in Atlanta, Georgia.
- e. Computational fluid dynamics (“CFD”) was the analysis of systems involving fluid flow, heat transfer, and associated phenomena, by means of computer-based simulation. CFD has a variety of industrial and military applications, such as development of advanced tactical missiles and aerodynamic design and assessment of weapons.
- f. Numerical Aerodynamic Simulation via CARTesian Grid Techniques (“NASCART-GT”) software was a Cartesian-grid-based flow solver maintained by Research University 1. The software was not publicly available and needed to be obtained through seeking permission from Research University 1.
- g. NASA Design and Analysis of Rotorcraft (“NDARC”) software was an aircraft system analysis tool developed by NASA. The software was designated for “U.S. Release Only.”
- h. Comprehensive Hierarchical Aeromechanics Rotorcraft Model (“CHARM”) software modeled aerodynamics and dynamics of rotorcraft in general flight conditions. The software was maintained by Business 1, a New Jersey-based technical solutions company. The software was proprietary.

- i. FUN3D was a software suite of computational fluid dynamics tools developed by NASA. The software was designated for "U.S. Release Only."
- j. DSMC Analysis Code ("DAC") software, developed by NASA, modeled complex geometries and boundary conditions that can be used to, among other things, analyze rarefied flows. The software was approved for U.S. government use only.
- k. Configuration-Based Aerodynamics ("CBAERO") software predicted the conceptual aero-thermodynamic environments of aerospace configurations developed by NASA. The software was designated for "U.S. Release Only."
- l. Program to Optimize Simulated Trajectories II ("POST2") was a generalized point mass, discrete parameter targeting, and optimization program developed by NASA. This software was available for government use only by approved persons.
- m. NASA Aircraft Noise Prediction Program ("ANOPP/ANOPP2") software provided a capability to predict noise from aircraft in flight, including sources, propagation, and metrics developed by NASA. This software was releasable only to businesses, universities, and government entities.

2. "Spear phishing" is the act of sending emails or other messages to specific individuals while purporting to be a trusted sender. This technique can be used to trick an individual into, among other things, sending software, information, data, and other property.

Counts One through Fourteen
Wire Fraud
(18 U.S.C. § 1343)

3. The Grand Jury re-alleges and incorporates by reference the factual allegations contained in paragraphs 1 and 2 of this Indictment as if fully set forth herein.

The Scheme to Defraud

4. Starting at least by in or about January 19, 2017, and continuing until at least on or about December 8, 2021, in the Northern District of Georgia and elsewhere, the defendant, SONG WU, aided and abetted by others unknown to the Grand Jury, devised and intended to devise a scheme and artifice to defraud the United States government, research universities, private sector companies, professors, researchers, and engineers, and to obtain money and property by means of materially false and fraudulent pretenses, representations, and promises, and by omission of material facts, from those entities and individuals.

5. It was part of the scheme that:
- a. Defendant SONG, aided and abetted by others unknown, engaged in a “spear phishing” campaign targeting dozens of United States-based professors, researchers, and engineers, seeking to fraudulently obtain source code and software used for aerospace engineering and computational fluid dynamics.
 - b. Defendant SONG, aided and abetted by others unknown, targeted individuals employed in positions with the United States government, including NASA, the Air Force, the Navy, the Army, and the Federal Aviation Administration; major research universities in Georgia, Michigan, Massachusetts, Pennsylvania, Indiana, and Ohio; and private sector companies that work in the aerospace field.
 - c. The source code and software sought were created and maintained by a variety of entities, including NASA, research universities, and private sector companies. The source code and software were not freely available to the public. The source code and software were proprietary; designated for “U.S. Release Only”; subject to licensing requirements; for government use only; limited to businesses, universities, and government entities; or available for use only by federal employees and contractors to the federal government working on projects where the tools would be applicable.

- d. Defendant SONG, aided and abetted by others unknown, created and caused to be created email accounts that, through their naming convention, appeared to be email accounts used by colleagues, associates, or friends of the targeted victims (collectively, the “Impostor Email Accounts” and individually, “Impostor Email Account”).
- e. Defendant SONG, aided and abetted by others unknown, emailed and caused to be emailed targeted victims using the Impostor Email Accounts, masquerading as a colleague, associate, friend, or other person in the research or engineering community, and requesting that the targeted victim send or make available source code or software that defendant SONG believed the targeted victim had access to. The source code and software that were sought were not freely available to the public. For example:
 - i. On or about April 28, 2020, defendant SONG, aided and abetted by others unknown, sent and caused to be sent an email from Impostor Email Account [M.S.B.]@gmail.com to Victim 2 Email Address requesting NASCART-GT. The email stated, in part: “Hi [Victim 2], I sent Stephen an email for a copy of NASCART-GT code, but got no response right now. He must be too busy. Will you help and sent (sic) it to me?”

- ii. On or about July 30, 2021, defendant SONG, aided and abetted by others unknown, sent and caused to be sent an email from Impostor Email Account [B.D.B.]@gmail.com to Victim 5 Email Address requesting DAC. The email stated, in part: “Hi [Victim 5] - Sorry to bug you early in the morning. Please send me a copy of the DAC software when you are available to help. FYI, it is urgently needed and please let me know.”
- iii. On or about August 4, 2021, defendant SONG, aided and abetted by others unknown, sent and caused to be sent an email from Impostor Email Account [D.N.M.]@gmail.com to Victim 8 Email Address requesting CBAERO. The email stated, in part: “Morning [Victim 8], I sent an email to Alicia for a copy of CBAERO software, but got no response yet. Are you available to help? Please let me know[.]”
- iv. On or about October 20, 2021, defendant SONG, aided and abetted by others unknown, sent and caused to be sent an email from Impostor Email Account [S.M.R.]@gmail.com to Victim 12 Email Address requesting NASCART-GT. The email stated, in part: “Hi

[Victim 12] – Could you send me a copy of the NASCAR-GT code with your last modifications?”

- f. In some instances, the targeted victim, believing that defendant SONG, aided and abetted by others unknown, was a colleague, associate, or friend requesting the source code or software, electronically transmitted the requested source code or software to defendant SONG.

Execution of the Scheme to Defraud

6. On or about the dates set forth in the following table, in the Northern District of Georgia and elsewhere, the defendant, SONG WU, aided and abetted by others unknown to the Grand Jury, for the purpose of executing and attempting to execute the aforementioned scheme and artifice to defraud, and to obtain money and property by means of materially false and fraudulent pretenses, representations, promises, and omissions, with intent to defraud, caused to be transmitted by means of a wire communication in interstate and foreign commerce certain writings, signs, signals, and sounds, namely, the wires identified in the table below:

Count	Date	Wire
1	12/19/2019	Email from Impostor Email Account [M.J.S.]@outlook.com to Victim 1 Email Address requesting CHARM.

Count	Date	Wire
2	12/19/2019	Email from Impostor Email Account [M.J.S.]@outlook.com to Victim 1 Email Address requesting FUN3D.
3	4/28/2020	Email from Impostor Email Account [M.S.B.]@gmail.com to Victim 2 Email Address requesting NASCART-GT.
4	6/16/2020	Email from Impostor Email Account [M.J.S.]@outlook.com to Victim 3 Email Address requesting FUN3D.
5	1/4/2021	Email from Impostor Email Account [M.J.S.]@outlook.com to Victim 4 Email Address requesting NDARC.
6	7/30/2021	Email from Impostor Email Account [B.D.B.]@gmail.com to Victim 5 Email Address requesting DAC.
7	8/3/2021	Email from Impostor Email Account [B.D.B.]@gmail.com to Victim 6 Email Address requesting FUN3D.
8	8/4/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 7 Email Address requesting CBAERO.
9	8/4/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 4 Email Address requesting FUN3D.

Count	Date	Wire
10	8/4/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 8 Email Address requesting CBAERO.
11	8/4/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 9 Email Address requesting ANOPP/ANOPP2.
12	8/5/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 10 Email Address requesting CART3D.
13	8/10/2021	Email from Impostor Email Account [D.N.M.]@gmail.com to Victim 11 Email Address requesting POST2.
14	10/20/2021	Email from Impostor Email Account [S.M.R.]@gmail.com to Victim 12 Email Address requesting NASCART-GT.

All in violation of Title 18, United States Code, Section 1343 and Section 2.

**Counts Fifteen through Twenty-Eight
Aggravated Identity Theft
(18 U.S.C. § 1028A)**

7. The Grand Jury re-alleges and incorporates by reference the factual allegations contained in paragraphs 1, 2, and 5 of this Indictment as if fully set forth herein.

8. On or about the dates set forth in the following table, in the Northern District of Georgia and elsewhere, the defendant, SONG WU, aided and abetted by others unknown to the Grand Jury, did knowingly possess, transfer, and use a means of identification of another person, that is, the name of the individual identified, without lawful authority, during and in relation to the wire fraud offense listed in the table below:

Count	Date	Victim Identity	Wire Fraud Offense
15	12/19/2019	M.J.S.	Wire fraud offense listed in Count 1.
16	12/19/2019	M.J.S.	Wire fraud offense listed in Count 2.
17	4/28/2020	M.S.B.	Wire fraud offense listed in Count 3.
18	6/16/2020	M.J.S.	Wire fraud offense listed in Count 4.
19	1/4/2021	M.J.S.	Wire fraud offense listed in Count 5.
20	7/30/2021	B.D.B.	Wire fraud offense listed in Count 6.
21	8/3/2021	B.D.B.	Wire fraud offense listed in Count 7.
22	8/4/2021	D.N.M.	Wire fraud offense listed in Count 8.
23	8/4/2021	D.N.M.	Wire fraud offense listed in Count 9.
24	8/4/2021	D.N.M.	Wire fraud offense listed in Count 10.

Count	Date	Victim Identity	Wire Fraud Offense
25	8/4/2021	D.N.M.	Wire fraud offense listed in Count 11.
26	8/5/2021	D.N.M.	Wire fraud offense listed in Count 12.
27	8/10/2021	D.N.M.	Wire fraud offense listed in Count 13.
28	10/20/2021	S.M.R.	Wire fraud offense listed in Count 14.

All in violation of Title 18, United States Code, Section 1028A and Section 2.

Forfeiture

9. Upon conviction of one or more of the offenses alleged in Counts One through Fourteen of this Indictment, the defendant, SONG WU, shall forfeit to the United States of America, pursuant to Title 18, United States Code, Section 981(a)(1)(C) and Title 28, United States Code, Section 2461(c), any property, real or personal, which constitutes, or is derived from, proceeds traceable to the offenses, including, but not limited to, the following:

MONEY JUDGMENT: A sum of money in United States currency, representing the amount of proceeds obtained as a result of each offense alleged in Counts One through Fourteen of this Indictment.

10. If, as a result of any act or omission of the defendant, any property subject to forfeiture:


- (a) cannot be located upon the exercise of due diligence;
- (b) has been transferred or sold to, or deposited with, a third party;
- (c) has been placed beyond the jurisdiction of the Court;
- (d) has been substantially diminished in value; or
- (e) has been commingled with other property which cannot be divided without difficulty;

the United States intends, pursuant to Title 21, United States Code, Section 853(p), as incorporated by Title 28, United States Code, Section 2461(c), to seek forfeiture of any other property of said defendant up to the value of the forfeitable property.

A TRUE BILL

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