AO 91 (Rev. 08/09) Criminal Complaint

UNITED STATES DISTRICT COURT

for the

Southern District of Ohio

United States of America v. ALEXANDER YURYEVICH KORSHUNOV, *Defendant(s)*	))))))	Case No. 1:19MJ -582

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 2013 in the county of Hamilton in the Southern District of Ohio, the defendant(s) violated:

Code Section	*Offense Description*
18 U.S.C. 1832	Theft of Trade Secrets

This criminal complaint is based on these facts:

See Affidavit

☑ Continued on the attached sheet.

Complainant's signature

Michael Runnels, Special Agent, FBI
Printed name and title

Sworn to before me and signed in my presence.

Date: 8/21/19

Judge's signature

City and state: Cincinnati, Ohio

Hon. Karen L. Litkovitz, U.S. Magistrate Judge
Printed name and title

AFFIDAVIT IN SUPPORT OF CRIMINAL COMPLAINT

I, Michael Runnels, being duly sworn, depose and state the following:

I. INTRODUCTION

1. I am a Special Agent with the Federal Bureau of Investigation, and have held this position for approximately 2 years. Prior to joining the FBI, I was employed with a private security company gaining knowledge and experience in numerous internal investigations. I am currently assigned to one of Cincinnati Field Office's Counter-Intelligence squads. During my employment with the FBI, I have conducted and participated in several investigations involving violations of United States laws relating to espionage and the unlawful export from the United States of goods and technology restricted for national security and foreign policy reasons. I have participated in the execution of several federal search and arrest warrants in such investigations. I have had training in, and through experience I have observed, many methods used to smuggle goods and technology out of the United States and commit espionage contrary to United States law. In particular, I am responsible for investigating and enforcing violations of law related to economic espionage and the theft of trade secrets (18 U.S.C. §§ 1831-1832) and export controls (Arms Export Control Act, 22 U.S.C. §2778 ("AECA") and the International Emergency Economic Powers Act, 50 U.S.C. §§1701-1707 ("IEEPA")).

2. As further described below, your Affiant has probable cause to believe that **ALEXANDER YURYEVICH KORSHUNOV** ("**KORSHUNOV**"), and **MAURIZIO PAOLO BIANCHI** ("**BIANCHI**"), together with individuals who were employees or former employees of (i) Company A, and (ii) Subsidiary A, a Company A-owned business located in Italy ("Subsidiary A"), conspired and attempted to violate 18 U.S.C. §1832 to steal and convey the confidential and proprietary information constituting trade secrets of the Ohio-based Company A. The trade secrets included confidential, protected and unique Company A engineering patterns, plans, procedures, and programs for advanced engine drive assemblies and jet engine accessory gearboxes designs ("AGDs"), which are used in jet engine systems.

3. This Affidavit is submitted in support of a criminal complaint for these individuals. As part of this investigation, I have reviewed documentation and reports provided by and discussed information with other officers involved in the investigation. For purposes of this Affidavit, I have not distinguished between information of which I have direct knowledge and that of which I have second-hand knowledge.

4. This Affidavit does not contain every fact known to the investigation, but only those deemed necessary to demonstrate sufficient probable cause to support the charge(s) alleged in the complaint.

II. RELEVANT FEDERAL CRIMINAL STATUTES

A. Theft of Trade Secrets: 18 U.S.C. § 1832

5. The Economic Espionage Act of 1996 ("EEA") criminalizes two types of trade secret misappropriations: economic espionage, under Title 18, United States Code, Section 1831, and trade secret theft, under Title 18, United States Code, Section 1832.

6. Pursuant to Section 1832:

(a) Whoever, with intent to convert a trade secret, that is related to a product or service used in or intended for use in interstate or foreign commerce, to the economic benefit of anyone other than the owner thereof, and intending or knowing that the offense will, injure any owner of that trade secret, knowingly–

(1) steals, or without authorization appropriates, takes, carries away, or conceals, or by fraud, artifice, or deception obtains such information;

(2) without authorization copies, duplicates, sketches, draws, photographs, downloads, uploads, alters, destroys, photocopies, replicates, transmits, delivers, sends, mails, communicates, or conveys such information;

(3) receives, buys, or possesses such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization;

(4) attempts to commit any offense described in paragraphs (1) through (3); or

(5) conspires with one or more other persons to commit any offense described in paragraphs (1) through (3), and one or more such persons do any act to effect the object of the conspiracy . . . .

Individuals violating this provision may incur a fine pursuant to Title 18 and imprisonment of not more than 10 years, or both. 18 U.S.C. § 1832.

B. Definition of Trade Secret

7. The statute defines "trade secret" as: all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes,

procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing, if–

(A) the owner thereof has taken reasonable measures to keep such information secret; and

(B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, another person who can obtain economic value from the disclosure or use of the information[.]

III. BACKGROUND OF INVESTIGATION

A. Victim Aviation Company

8. Company A is headquartered in the Southern District of Ohio. Company A is among the world's top aircraft engine suppliers for both commercial and military aircraft. Company A has devoted substantial resources to research and development in the field of using unique materials to manufacture jet engines. Company A has spent several decades developing its unique jet engines, engaging in costly trial and error testing in order to advance the use of its products. This testing, research, and development have led to a deep knowledge base that affords Company A a competitive advantage. Release of some or all of this information to a competitor or any other entity attempting to conduct its own research and development in this field would provide a tremendous economic value, because it would enable the other entity to reduce its research and development efforts and expend significantly fewer resources.

9. Subsidiary A is a business owned by Company A that designs, manufactures and maintains components and systems for civil and military aviation. Most of Subsidiary A's employees are based in Italy. Company A announced its purchase of Subsidiary A in 2012 and completed the acquisition in 2013.

B. Company Trade Secrets and Reasonable Measures to Protect

10. In the course of developing its unique jet engines, Company A (and its subsidiaries and associated businesses) developed specific and detailed engineering patterns, plans, procedures, and programs with regard to specialized technology known, among other terms, as engine drive assemblies. Engine drive assemblies are specialized mechanical components integrated into a jet engine system that serve to transfer energy to power other aircraft systems (e.g., navigation or internal electricity). Such unique engineering

patterns, plans, procedures, and programs for engine drive assemblies are often identified or referred to within Company A as "design protocols," "design procedures," or "design practices," which reflect Company A developed technical data and information, and were also adopted and used at Company A controlled subsidiaries, including Subsidiary A. Specific to this Complaint, from 2013 onward, Company A, and Subsidiary A, had adopted and maintained a defined set of plans, procedures, and practices with regard to the construction, design, maintenance, and operation of a unique jet engine drive assembly that was contained and documented in Company A computer files that are identified internally as the "Design Practices."

11. Company A has an established system of security procedures and measures that employs several layers of security to preserve and maintain confidentiality and to prevent unauthorized use or disclosure of its proprietary technology and trade secrets, including those of its subsidiaries. These measures were enforced to maintain its competitive advantage and to maintain the integrity of years of research and development pertaining to Company A's proprietary technology. Such security practices and protocols were applied and used to protect the Design Practices from unlawful access or distribution.

12. Company A has purchased companies, such as Subsidiary A, to incorporate the acquired technical information and trade secrets into its processes for engine development. After it acquired Subsidiary A, Company A owned the intellectual property of Subsidiary A and the ability to define appropriate use of its trade secrets.

C. Description of Involved Individuals

13. Employee 1 is a U.S. citizen who was interviewed by the FBI on or about April 16, 2019. At the time of the interview, Employee 1 was employed at Company A as a Systems Engineer/System Integrator. Employee 1 previously worked at Subsidiary A in Italy as a Performance Engineer. Employee 1 worked on an engine component called the accessory gear drives.

14. Following the interview, on or about April 18-20, 2019, Employee 1 voluntarily provided documents that he possessed to the FBI. The documents included a personal statement, emails, contracts, and other relative documents pertaining to events described below.

15. In the interview, Employee 1 identified two coworkers at Subsidiary A (along with Employee 1) who provided Subsidiary A technical information to non-Company A or Subsidiary A persons. These coworkers are referred to as Employees 2 and 3, who worked with Employee 1 at Subsidiary A before and after the purchase by Company A.

16. **MAURIZIO BIANCHI (BIANCHI)** was a former director at Subsidiary A. **BIANCHI** was responsible for China, Russia, and Asian business at Subsidiary A. Sometime in approximately 2013, after **BIANCHI** had left Subsidiary A, **BIANCHI** contacted Employees 1-3 to do consulting work. **BIANCHI** had formed a company called Aernova with others. Aernova is headquartered in Forli, Italy.

17. **ALEXANDER KORSHUNOV (KORSHUNOV)** was an employee of a Russian state-owned company called United Engine Company (UEC), and had previously been a Russian public official whose service included the Ministry of Foreign Affairs.

18. As further explained below, from in at least early 2013 through 2018 and possibly ongoing, with respect to the trade secrets of Company A and Subsidiary A, **BIANCHI** and **KORSHUNOV** knowingly conspired and attempted to: (1) steal, or without authorization appropriate, take, carry away, or conceal, or by fraud, artifice, or deception obtain such information; and (2) receive, buy, or possess such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization.

D. <u>UEC and Russian Aviation Companies</u>

19. Russia's aviation industry is consolidated under the Rostec state corporation, which consists of over 700 enterprises, including UEC. In 2015, Rostec created an aviation industry organization that includes many different holding companies and their subsidiaries. In 2018, this organization was comprised of about 192,000 people and generated billions in revenue (534.7 billion rubles in 2016, which is approximately $8 billion US dollars). According to Rostec's website, they are organized into three clusters: Aviation, Radioelectronics, and Armaments. The aviation cluster within Rostec lists five companies including UEC.

20. UEC is a Russian state-owned company responsible for production of engines for military and civil aviation and space exploration programs. According to UEC's website, they were established in December 2007 and they consolidated over 85% of the research and technical potential of Russia's engine manufacturing sector. They are listed as a 100% subsidiary of Rostec.

21. UEC has multiple sub-companies or subsidiaries within its structure, including Aviadvigatel. Aviadvigatel is located in Perm, Russia.

22. Aviadvigatel is the leading Russian design bureau for developing aviation and industrial purpose gas-turbine engines. Aviadvigatel is an open joint stock company, meaning that it is a state entity run for the benefit of the Russian Federation, developing civil and military aircraft engines. Aviadvigatel also develops and produces industrial gas turbines

and electric power stations. In July 2009, 45% of the state's shares were transferred to OAO Defense Industry Complex (ODK). ODK's strategic goal is to re-establish and support Russian development of modern gas turbine engines for both domestic and foreign markets. In September 2018, the US Department of Commerce "entity listed" Aviadvigatel, determining that it acts contrary to the national security or foreign policy interests of the United States, specifically because Aviadvigatel supported Russian military aerospace production activities.

23. Aviadvigital and UEC are developing a jet engine called the PD-14. The PD-14 is a Russian jet engine that can be used as either a large military engine or a small commercial engine. The PD-14 engine is being designed primarily for use in the Irkut MC-21 jet airliner. Starting in 2016, Aviadvigital and UEC began developing an engine called the PD-35 that will be used for future wide-body aircraft such as the CRAIC CR929.

24. As part of section 231(d) in the US Department of State's Countering America's Adversaries through Sanctions Act of 2017 regarding Defense and Intelligence Sectors of the Government of the Russian Federation, Rostec and UEC (as well as other companies) were placed on the list of sanctioned entities.

IV. COMPANY A TECHNOLOGY AND TRADE SECRETS

A. The Accessory Gearbox Design Project

25. In or about 2013, UEC was in the process of evaluating the effectiveness of its own existing EDA technology for the PD-14 engines known as an "accessory gearbox." An accessory gearbox was a component mechanism used to transfer the power from the jet engine to other airplane power systems. **BIANCHI** (on behalf of **KORSHUNOV**) hired Employees 1-3 to assess the design of UEC's existing gearbox for the PD-14 engine and write a report that would suggest possible improvements to develop a more effective accessory gearbox design (the AGD Project"). This consulting work occurred while the three individuals (Employees 1-3) were employed by Subsidiary A/Company A.

26. Throughout the AGD Project, and other projects referenced in this Affidavit, documents known as a Statement of Work (SOW) were produced. The SOWs typically include the following information: Name of the project, basis for development, development objectives, product purpose, and requirements of work and designed product. These SOWs typically stated that "the holders of patent and intellectual property obtained as a result of the work are JSC UEC and the Ministry of Industry and Trade of the Russian Federation."

27. At the time of the consulting work described below, **BIANCHI**'s company, Aernova, had a contract with UEC's subsidiary, Aviadvigital. With respect to the AGD Project, Aernova entered into a contract with Aviadvigatel to provide this expertise and technical knowledge. The initial contract cost 150,000 Euro plus VAT (Tax) of 27,000 Euro (equivalent to approximately $166,416, plus $29,955 in tax). The VAT was to be paid to the Russian Federation by Aviadvigatel.

28. The assessment provided by Aernova under the contract was actually performed by the three Company A/Subsidiary A engineers – Employees 1-3 – using proprietary Company A/Subsidiary A designs, methods, techniques, processes and procedures, including some protected Design Practices. This technical assessment by these three Company A/Subsidiary A engineers took the form of a technical report styled the "Technical Project Review for Advanced Engine Drive Assembly" (the "Technical Report"). Employee 1 stated the intent of the consulting work, and the Technical Report, was to test the capability and expertise of Employees 1-3 with the intent to be hired as full time consultants for a bigger project with **KORSHUNOV** and UEC.

29. Employee 1 admitted that all work done on this AGD Project, and the Technical Report, was from knowledge and information that he had gained while working at Company A/Subsidiary A.

30. Company A subject matter experts and engineers have reviewed information of the Technical Report and have concluded that it contained a significant amount of technical information derived from confidential and protected Company A Design Practices.

B. Coconspirator Communications

31. Your Affiant believes that the emails described below demonstrate a pattern of tradecraft that was intended to hide the identities of Employees 1-3, as well as their affiliation with Company A and Subsidiary A. **BIANCHI, KORSHUNOV,** and others consistently refer to Employees 1-3 as "the Guys" in emails without making specific reference to names. **KORSHUNOV** stated in one email that he "can't disclose the name of the guys at this preliminary stage," and made a point to remove names from certain emails.

32. Emails provided voluntarily by Employee 1 showed correspondence between the multiple individuals related to the consulting work. In addition, federal search warrants were obtained for email accounts associated with **KORSHUNOV, BIANCHI** and others. Those emails and documents show the following events:

a. Beginning on April 26, 2013, **BIANCHI** emailed **KORSHUNOV** with questions that "The Guys" asked for clarification. He mentioned that the money issue will be very important. A different person from UEC responded on **KORSHUNOV**'s behalf and sent more suggestions from people at Aviadvigital. The emails and an attachment called "Cooperation with Italian experts Aviadvigital" was forwarded to another Aernova employee and then to Employee 1. The attachment described four stages to the AGD Project regarding the redesign of the jet engine accessory gearbox.

b. On May 31, 2013, **BIANCHI** emailed **KORSHUNOV** that the "guys" are available for a meeting in June at the Paris air show. He asked **KORSHUNOV** to arrange the plane tickets for them. **KORSHUNOV** and **BIANCHI** then discussed payment for the tickets. **BIANCHI** sent the emails to another Aernova employee, who forwarded the emails to Employee 1.

c. On June 13, 2013, **BIANCHI** emailed Employee 1 to provide the phone contact information for **KORSHUNOV**. On that same day, **BIANCHI** sent Employee 1 confirmation of a flight for Employees 1 and 2 to the Paris Air Show in June 2013.

d. According to Employee 1, on or about June 20, 2013, Employees 1 and 2 met with **KORSHUNOV** and two UEC engineers at the Paris Air Show in Le-Bourget, France, to discuss commercial turbofan gearbox design, UEC's needs, and their (Employees 1-3) skills and expertise in the field of jet engine accessory gearbox design.

e. On September 27, 2013, another Aernova employee emailed Employee 1 with a document entitled "Annex 1 Preliminary Engineering Activities Study Report." The document described a scope of work as a Technical Review of Advanced Engine Accessory Drive Train Project, including analysis of the drive train assembly, assessment of system functionality and performance, identification of potential defects and defaults, and recommendations.

f. On November 25, 2013, **BIANCHI** told Employees 1-3 that the contract was signed.

g. On November 29, 2013, An Aernova employee emailed Employee 1 a copy of two documents: (1) Annex 1 – Work Specification on Technical Project Review for Civil Aviation Engine Drive Assembly; and (2) a seven-page technical document from UEC.

h. In February 2014, Employees 1-3 wrote and delivered the Technical Report setting forth their recommendations for the design of the PD-14 gearbox, and provided recommendations about design weaknesses and potential improvements.

i. On March 12, 2014, **KORSHUNOV** emailed **BIANCHI** regarding "positive feedback on the docs" but stated the need to clarify some technical issues. **KORSHUNOV** wrote that "they want to proceed with the contract on 4 more topics." He suggested a meeting in Italy.

j. On March 29, 2014, Employee 1 met with **KORSHUNOV** and two UEC engineers in Milan, Italy to answer questions on the Technical Report. In April 2014, Employees 1-3 revised the Technical Report after the meeting in Milan.

k. In May 2014, Employee 1, **BIANCHI,** and another Aernova employee exchanged emails regarding a proposed Scope of Work, Commercial Proposal, and Payment Terms for completing Phases 2-4 of the Statement of Work. The proposal sought over 22 million Euro (approximately $24 million) for the project over several years. Employee 1 stated that the latter phases of the project ultimately were not finalized or performed by his group.

l. In May 2014, Employee 1, **KORSHUNOV**, and another Aernova employee exchanged communications in which Employee 1 stated that services of Employees 1-3 do not include just engineering work but also the "key know how required to design and industrialize aerospace transmission systems, which is by far more valuable than the engineering services that any other aerospace company could provide."[1]

m. In July 2014, **BIANCHI** and **KORSHUNOV** discussed by email a plan to meet at the end of July because Aviadvigatel will test the engine with the improved "AGD." They planned to meet in Milan or Torino.

33. The Technical Report created by Employees 1-3 provided specific recommendations for improvement to the Russian (UEC) PD-14 gearbox design, which recommendations were intended to make "the ADT under review a competitive product in today's global market." The Technical Report concluded with tables that provided specific recommendations for specific issues with the current design, along with an analysis of the issue of the product's ability to meet reliability, availability, maintainability, and safety ("RAMS") standards.

[1] The communications discussed herein were written at times in English, Italian, or Russian. To the extent the communications were written in Italian or Russian, the allegations set forth above are based upon translations of the communications into English, which may be subject to modification.

34. The FBI has met with security personnel and management from Company A. According to those officers, the recommendation design changes reflected in the Technical Report to a large extent constituted information that is part of the codified and protected design practices at Company A and Subsidiary A, including the protected Design Practices. These officials consider these Design Practices to be intellectual property of Company A, which have been subject to rigorous protective measures to keep such information secret and, as such, constitute trade secrets of Company A and Subsidiary A. Moreover, the designs, methods, techniques, processes, and procedures revealed in the Technical Report derive independent economic value from not being generally known to and not being readily ascertainable through proper means by, another person (such as UEC) who can obtain economic value from the use of the information. The Company A officials are in the process of estimating the economic loss valuation.

35. Employees 1-3 did not have permission from Company A to provide this information to **BIANCHI**, **KORSHUNOV,** Aernova, or UEC, and subsequently caused a large financial loss that has yet to be determined by Company A.

C. Communications Representing Overt Acts

36. The emails and documents obtained also showed the following events regarding the ongoing conspiracy and attempts to obtain gearbox design technology from Company A/Subsidiary A, as well as to conceal the ongoing efforts:

a. In March 2015, **KORSHUNOV** received an email from a Chinese Aviation company (AECC) that specifically requested that UEC and AECC collaborate on a jet engine gearbox project. In the proposed statement of work, the AECC requested the same requirement for an accessory gearbox design (AGD) as had been created using Company A and Subsidiary A proprietary knowledge.

b. In October 2016, **KORSHUNOV** asked **BIANCHI** if the "guys" had an understanding of how to design an AGD for larger engines like GE 90, GE9x with AGD. **KORSHUNOV** noted that "[t]he approach would be different from the AGD they had designed before." Your Affiant believes based on a review of the evidence that the phrase "the guys" refers to Employees 1-3.

c. On October 22, 2016, **BIANCHI** responded to **KORSHUNOV** that "[t]he guys" are still there and that if they are awarded the contract that they would conduct the work, "[b]ut all the team is the same than before."

d. On October 20, 2016, **KORSHUNOV** told **BIANCHI** that a redesigned AGD would be used for the PD-35 (wide body 35 tons thrust engine). On that day, **BIANCHI** then emailed the query to the CEO of Aernova.

e. Later in October 2016, as part of the same email chain noted above, **KORSHUNOV** told **BIANCHI** that as a first step "we could sign some kind of feasibility study to contract to understand the current world leaders' trends and GE-RR vision of AGD for the large engines like GE90/GEnx, RR Trend 900 and others."

f. On October 27, 2016, **KORSHUNOV** emailed **BIANCHI** to ask if the "guys have understanding for AGD for the big engines" and referred specifically to 2 of Company A's engines. **KORSHUNOV** further stated that the approach would be different from the AGD they had designed before with regard to the PD-14 jet engine.

g. On or about November 2016, **KORSHUNOV** emailed **BIANCHI** in reference to a new form or construction of an AGD. In the email, **KORSHUNOV** stated that, "I received statement of work from Avid for you. 20 pages. I could arrange a translation to Italian or English provided for you are ready to accept the offer. There are some phases. The first one an analisys (sic) of current AGD for big engines 35-45 tonns (sic) thrust. Including materials, technology applied, configuration. . . Rely on your team."

h. On December 14, 2016, **KORSHUNOV** emailed Employee 1 with holiday greetings, then mentioned that he "forwarded some new ideas to our biggest and tallest friend and would like to be sure that you are aware of that. If you find interesting I could come to see you in January."

i. In or around December 14-23, 2016, **KORSHUNOV** and Employee 1 had several communications via email with Aernovo in which **KORSHUNOV** asked if the "boys" knew how to design an AGD for larger engines. **KORSHUNOV** thereafter began to communicate directly with Employee 1, who stated that he was available for work and had spoken with Employees 2 and 3, and they were available to review a Statement of Work on this project.

j. On June 24, 2017, **BIANCHI** discussed via email with another Aernova employee how to measure the appropriate monetary value of the relationship between their Russian customers and their AGD worker pool. They discussed how payments were to be made by Aviadvigatel in reference to the "know how" that was to be acquired by **BIANCHI** and Aernova.

k. On November 23, 2017, **BIANCHI** emailed an engineer who previously worked for Company A/Subsidiary A in Italy, former Employee 4. **BIANCHI** sent the person a "Statement of Work for an Accessory Gearbox" for a high power engine.

l. On November 30, 2017, **BIANCHI** forwarded a letter to **KORSHUNOV** indicating that UEC-Aviadvigatel had started developing a high thrust engine, using the AGD, and were encountering problems. In response, **BIANCHI** stated that he was going to work to determine solutions.

m. On December 7, 2017, **BIANCHI** communicated with **KORSHUNOV** that the problem outlined in the letter was fixable; however some measure of re-tooling would be needed, and therefore a new contract needed to be addressed. **KORSHUNOV** responded by asking for clarification, advised that UEC and Aernova had relied on "the guys capabilities" before, and questioned whether the AGD design history can be relied on anymore. **BIANCHI** replied by noting that the issue raised was complex.

n. On December 7, 2017, former Employee 4 emailed **BIANCHI** with an attached Statement of work with his comments. The statement of work comments were in Italian and have been translated using a computer translation program. The first paragraph of former Employee 4's comments stated that the object of this activity was an AGD with the relative transfer gearbox of the core-mounted type for a turbofan of the class of Company A's engines.

o. On December 7, 2017, **BIANCHI** emailed **KORSHUNOV** stating that he had received comments from "my friends about SOW." In the email, **BIANCHI** stated that this was possible to do, but that they needed some tooling that they currently did not have. **BIANCHI** observed that research and design center may have to be set up and located in Italy, unless **KORSHUNOV** could provide the tooling needed. **BIANCHI** also stated that they needed to talk about "Price and contract." **BIANCHI** told **KORSHUNOV** that "we have the capability and know how in the team" and asserted that the "new team will be important with senior person at the moment."

p. On December 13-15, 2017, **BIANCHI** and **KORSHUNOV** exchanged emails regarding response, timing, technical aspects, and cost of work with respect to the issue in question from the November 30, 2017 correspondence. **BIANCHI** advised that a meeting between the parties was necessary to go over the details.

q. On or about December 13, 2017, **BIANCHI** emailed **KORSHUNOV**, stating the "top team" now is ready to discuss and begin work after reaching an agreement,

stating, "I believe that will be possible to do good job." **BIANCHI** further asserted, "I got formation also from the guys where the [sic] will be in this month."

r. On January 22, 2018, **KORSHUNOV** and **BIANCHI** exchanged emails in which **KORSHUNOV** posed certain questions to **BIANCHI** about the background of the new team, to which **BIANCHI** responded as follows:
   i. Do your team people stay in Torino? Yes
   ii. What is their background? R&D and manufactory engineering
   iii. Subsidiary A? Yes
   iv. Do they have experience in AGD for big thrust engine? Yes
   v. Are there some of your old team? No, this people are in pension and have big experience

s. On January 22, 2018, **BIANCHI** emailed Former Employee 4 that **KORSHUNOV** would meet with him and then return approximately one month later with technicians.

t. On February 1, 2018, former Employee 4 emailed **BIANCHI** a competed SOW, including one written in English to be provided to the Russians, in regards to the AGD to be sent to **KORSHUNOV**. The email discussed their upcoming meeting with **KORSHUNOV**. **BIANCHI** then forwarded this SOW to **KORSHUNOV**. On February 19, 2018, **BIANCHI** received an email from UEC-Aviadvigatel to schedule the meeting, which was later scheduled for March 13-15 in Turin, Italy. UEC's Head of Accessory Drive Gearbox Design was scheduled to attend. Also cc'd on the email with the Statement of Work was another former employee of Company A.

u. On March 5, 2018, **KORSHUNOV** emailed others within his organization regarding the plan to begin development of the gearbox with the help of his "new team" comprised of former Employees 4 and 5.

v. Company A informed the FBI that former Employees 4 and 5 both retired from Company A/Subsidiary A. Former Employee 5 returned to Company A after retirement and is currently a contractor with Company A/Subsidiary A.

w. In the email, **KORSHUNOV** wrote: "Both have impressive backgrounds. Both are retired. Ready to work at full throttle. They don't have their own software for the calculations, but they know which one is needed and they know how to create KPA project for high thrust engines. I also met with (**BIANCHI**), whom you know. Through him we finalized KPA for PD-14. He is supervising that team and the contract will be signed through Aernova . . . (**BIANCHI**) has one condition. Do not mention previous PD-14 project during the meeting. Because new group must not know about the previous team. Those people are working for (Company A) and they

cannot be exposed." I believe that the reference to the "previous team" refers to Employees 1-3 and the "new group" refers to Employees 4 and 5.

37. In /around March 2019, **KORSHUNOV** sent an email to his UEC email address in which he stated that the preliminary design of the heavy-duty engine (PD-35) from 2018 was completed. The completion of the technical project was "planned for 2019 for the drive unit." "All works on this project with co-executors, including foreign ones" are defined and cannot be changed. "As for the work with Mr. **[BIANCHI]**: Based on the results of the completed technical project, we are ready to consider proposals for the examination of the Central drive units, angular conical drive and drive unit boxes."

V. CONCLUSION

38. I submit that there is probable cause to believe that, with respect to the trade secrets of Company A and Subsidiary A, **BIANCHI** and **KORSHUNOV** knowingly conspired and attempted to: (1) steal, or without authorization appropriate, take, carry away, or conceal, or by fraud, artifice, or deception obtain such information; and (2) receive, buy, or possess such information, knowing the same to have been stolen or appropriated, obtained, or converted without authorization in violation of 18 U.S.C. § 1832(a)(4) and (5) (Theft of Trade Secrets).

39. I therefore respectfully request that a criminal complaint be granted upon this affidavit.

Special Agent Michael Runnels
Federal Bureau of Investigation

SUBSCRIBED and SWORN
before me this 21 day of August, 2019

Karen L. Litkovitz

HONORABLE KAREN L. LITKOVITZ
UNITED STATES MAGISTRATE JUDGE