UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF OHIO
WESTERN DIVISION

UNITED STATES OF AMERICA,	:	**CASE NO.** 1:19CR113
Plaintiff,	:	
	:	**JUDGE** JUDGE BLACK
v.	:	
	:	
ALEKSANDR KORSHUNOV, also known as ALEXANDER YURYEVICH KORSHUNOV,	:	**INDICTMENT**
	:	**18 U.S.C. § 1832**
and	:	
	:	
MAURIZIO BIANCHI,	:	
	:	
Defendants.	:	

THE GRAND JURY CHARGES:

For all times relevant to this Indictment:

INDIVIDUALS AND ENTITIES

1. Company A was an international aviation manufacturing company based in the United States with its headquarters located in the Southern District of Ohio. Company A was among the world's top aircraft engine suppliers for both commercial and military aircraft. Company A also owned and operated its business through various subsidiary companies in other countries, including Subsidiary A.

2. Subsidiary A was an aviation business owned by Company A that designed, manufactured, and maintained component equipment and related technical systems for civil and military aviation. The majority of Subsidiary A's employees were based in Italy. Company A began the process of purchasing Subsidiary A in 2012 and completed the acquisition in 2013.

3. Defendant **ALEKSANDR KORSHUNOV**, also known as **ALEXANDER YURYEVICH KORSHUNOV (KORSHUNOV),** was an employee of a Russian state-owned aviation company called United Engine Corporation ("UEC" or "JSC UEC"), described below. **KORSHUNOV** had represented that he has previously worked as a Russian public official whose service included the Ministry of Foreign Affairs.

4. Defendant **MAURIZIO BIANCHI (BIANCHI)** was a former director at Subsidiary A. Sometime in approximately 2013, after **BIANCHI** had left Subsidiary A, **BIANCHI** joined a company called Aernova, which was headquartered in Forli, Italy.

5. From at least 2013 through possibly ongoing to the present, **BIANCHI** and **KORSHUNOV,** with respect to trade secrets of Company A and Subsidiary A, knowingly conspired and attempted to: (1) steal, and without authorization appropriate, take, carry away, and conceal, and by fraud, artifice, and deception obtain such information; and (2) receive, buy, and possess such information, knowing the same to have been stolen or appropriated, obtained, and converted without authorization. **BIANCHI** and **KORSHUNOV** engaged in this conduct to benefit their own companies (Aernova and UEC, respectively) and to the detriment of Company A and Subsidiary A.

INTRODUCTION AND BACKGROUND

6. In 2007, the Russian Federation enacted a law creating a state owned and operated corporation known as the State Corporation for Assistance to Development, Production and Export of Advanced Technology Industrial Product ("Rostec"). Rostec was formed to support Russian manufacturers of high-tech industrial products in domestic and foreign markets, including those involved in aircraft engineering and the production of weapons

and military equipment. Rostec operated as a conglomerate consisting of over 700 enterprises, including United Engines Corporation.

7. UEC, a Russian state-owned company that was part of Rostec, was engaged in the development and production of engines for military and civil aviation and space programs.

8. UEC operated and controlled multiple sub-companies or subsidiaries, including Aviadvigatel, which was located in Perm, Russia. Aviadvigatel was a 100% state-owned entity and operated for the benefit of the Russian Federation, similar to its parent company, UEC. Aviadvigatel was a leading Russian design company for developing both civil and military aircraft gas-turbine engines.

9. Beginning in approximately 2010 and continuing to present, Aviadvigatel and UEC developed a jet engine called the PD-14. The PD-14 was a Russian jet engine designed primarily for use in the developing commercial airliner Irkut MC-21. The PD-14 engine could be used as either a large military engine or a small commercial engine. Starting in approximately 2016, Aviadvigatel and UEC began developing a larger engine known as the PD-35 for use on future wide-body aircraft such as the CRAIC CR929.

10. Aernova entered into at least one contract with Aviadvigatel relating to development of gearbox technology for the PD-14 and PD-35 engines.

11. Rostec and UEC (as well as other companies) were placed on the list of sanctioned entities pursuant to Section 231(d) in the U.S. 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. In September 2018, the U.S. Department of Commerce added Aviadvigatel to the "Entity List," which had the effect

of restricting business with the United States by subjecting it to specific license requirements for the export and re-export of specified items. The Department of Commerce added Aviadvigatel to the Entity List after making a determination that Aviadvigatel had acted contrary to the national security or foreign policy interests of the United States.

12. Company A incorporated a range of technical information and trade secrets developed through its subsidiaries, including Subsidiary A, into its processes for engine development. Following acquisition of Subsidiary A, Company A owned the intellectual property of Subsidiary A, its trade secrets, and the ability to develop these trade secrets.

13. Company A devoted substantial resources to research and development with regard to using certain unique materials to manufacture jet engines. Company A had spent several decades developing its unique jet engines, engaging in costly trial and error testing in order to advance the use of its products. Company A's testing, research, and development led to a deep knowledge base that provided Company A with a competitive advantage over other aviation-related businesses. The release of some or all of Company A's proprietary information to a competitor or any other entity attempting to conduct its own research and development in this field would have provided a tremendous economic value to a competitor entity, because it would enable that other entity to reduce its research and development efforts and expend significantly fewer resources.

14. 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 were 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. From 2013 onward, Company A and Subsidiary A 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 identified internally as the "Design Practices."

15. Company A established a system of security procedures and measures that employed 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 security practices and protocols were applied and used to protect the Design Practices from unlawful access or distribution. This included limiting access to the relevant computer files to only a select number of employees who were assigned to work on a given project on a "need to know" basis through use of additional passwords; login, copying or downloading restrictions; and user identification protocols. These specialized security measures were imposed in addition to standard internal records and data security measures in order to maintain and protect Company A's competitive advantage and the integrity of years of research and development pertaining to Company A's proprietary technology.

16. Company A implemented internal security measures to protect its trade secrets, including:

a. Recurrent training and instruction for employees regarding the processes in place to safeguard restricted and confidential business information;

b. Notifying all employees that publication and/or disclosure of restricted or confidential company information is prohibited without express company authorization;

c. Use of various data security policies;

d. Compartmentalizing and/or limiting access to company proprietary information and Design Practices to employees or contractors on a need-to-know basis; and

e. Creating an electronic log of individuals who have accessed Design Practice documents and creating watermarks to document such access.

THE GEARBOX PROJECTS

17. In or about 2013, UEC began to evaluate the effectiveness of its own existing technology for a part of the PD-14 engine 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.

18. **BIANCHI** (on behalf of **KORSHUNOV**) recruited three employees of Subsidiary A (hereafter referred to as "Employees 1-3") to assess the design of UEC's existing gearbox for the PD-14 engine. The assessment was designed to provide suggestions for possible improvements to develop a more effective accessory gearbox design for the PD-14 (the "AGD Project"). This work occurred while Employees 1-3 were still actively employed by Subsidiary A/Company A.

19. During this time, **BIANCHI's** company, Aernova, entered into a contract with UEC's subsidiary, Aviadvigatel, to provide technical expertise and knowledge in support of the AGD Project. The initial contract provided that Aviadvigatel would pay Aernova 150,000 Euro (equivalent to approximately $166,416). Under the contract, Aviadvigatel also committed to pay the VAT (Tax) of 27,000 Euro (equivalent to $29,955) to the Russian Federation.

20. As part of the AGD Project, Employees 1-3 conducted a technical review of the PD-14 engine and submitted a written assessment to **BIANCHI** and **KORSHUNOV** that used proprietary Company A/Subsidiary A designs, methods, techniques, processes and procedures, including protected Design Practices. This written assessment took the form of a technical report styled the "Technical Project Review for Advanced Engine Drive Assembly" (the "Technical Report").

21. The Technical Report created by Employees 1-3 provided specific recommendations for improvement to the UEC PD-14 gearbox design that was intended to help Aviadvigatel produce "a competitive product in today's global market." The Technical Report included a set of narrative tables that provided specific recommendations regarding the current design, along with an analysis of the issue of the product's ability to meet reliability, availability, maintainability, and safety ("RAMS") standards.

22. The Technical Report's recommended design changes, that to a large extent, incorporated information that was part of the codified and protected Design Practices at Company A and Subsidiary A. These Design Practices were the intellectual property of Company A, and had been subject to rigorous protective measures, such as computer file access restrictions for identified employees, additional layers of passwords, and measures to

restrict copying and transferring any relevant data. Company A implemented these security measures to protect its confidential business information and, as such, constituted trade secrets of Company A and Subsidiary A. The designs, methods, techniques, processes, and procedures revealed in the Technical Report derived independent economic value from not being generally known to and not being readily ascertainable through proper means by another person (such as UEC) who could obtain economic value from the use of the information.

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

24. Throughout the AGD Project, documents known as a Statement of Work (SOW) were produced. The SOWs typically included information such as the name of the project, basis for development, development objectives, product purpose, and requirements of work and designed product.

25. From approximately 2016 through 2018, defendants **KORSHUNOV**, **BIANCHI**, and others known and unknown to the Grand Jury, discussed continuing the AGD Project in order to evaluate the operation of a larger Russian engine known as the PD-35 by using current or former employees of Company A/Subsidiary A. In October 2016, **KORSHUNOV** and **BIANCHI** discussed whether the same set of employees could work on additional projects regarding the accessory gearbox design for larger jet engines. During 2017, **BIANCHI** reached out to other former employees of Company A to determine if the same technical design information could be applied to the design and manufacture of the PD-35 engine. By January 2018, **BIANCHI** had assembled a new

technical engineering team of former Company A employees with experience and knowledge on accessory gearbox designs, all unbeknownst to Company A. In March of 2018 and thereafter, the new team communicated with the defendants regarding the project for the continued development of accessory gearbox technology.

COUNT 1
(Conspiracy to Commit Theft of Trade Secrets)
18 U.S.C. § 1832(a)(5)

26. The allegations set forth in paragraphs 1 through 25 of this Indictment are incorporated herein as if set forth in full.

27. From in or about 2013 and continuing to at least 2018, in the Southern District of Ohio and elsewhere, the defendants, **ALEKSANDR KORSHUNOV (also known as ALEXANDER YURYEVITCH KORSHUNOV)** and **MAURIZIO BIANCHI**, with others known and unknown to the Grand Jury, did knowingly combine, conspire, confederate and agree, with intent to convert a trade secret to the economic benefit of anyone other than the owner of the trade secret, and intending and knowing that the offense will injure any owner of that trade secret, to:

a. steal, and without authorization appropriate, take, carry away, and conceal, and by fraud, artifice, and deception obtain such information, that is related to a product and service used in and intended for use in interstate and foreign commerce, in violation of Title 18, United States Code, Section 1832(a)(1); and

b. receive, buy, and possess such information, that is related to a product and service used in and intended for use in interstate and foreign commerce, knowing the same to have been stolen and appropriated, obtained, and converted without authorization, in violation of Title 18, United States Code, Section 1832(a)(3).

Manner and Means

28. The manner and means by which the defendant and his co-conspirators sought to accomplish the objects of the conspiracy included, among others, the following:

a. It was part of the conspiracy that defendants **KORSHUNOV, BIANCHI**, and others worked together to identify certain aviation technology that was desired by UEC and its associated Russian aviation entities.

b. It was part of the conspiracy that defendants **KORSHUNOV, BIANCHI** and others selected and targeted companies that are leaders in the field of aviation technology in the United States and Italy, including Company A and Subsidiary A.

c. It was further part of the conspiracy that defendants **KORSHUNOV, BIANCHI** and others identified engineers and experts who were employed by Company A and Subsidiary A and who possessed technical expertise in the desired aviation fields.

d. It was further part of the conspiracy that defendants **KORSHUNOV, BIANCHI** and others tried to hide and obscure the identities of the employees engaging in these activities, including the following actions: referring to Employees 1-3 as "the guys" and not placing the contract in the name of those individuals; intentionally concealing the identities of Employees 1-3 from the second group of engineers engaged in these activities (Employees 4-5); and asserting they could not "disclose the name of the guys at this preliminary stage."

e. It was further part of the conspiracy that defendants **KORSHUNOV, BIANCHI** and others would communicate and exchange messages regarding the types of information that they wanted to obtain, and the payment for obtaining the desired information.

f. It was further part of the conspiracy that defendants **KORSHUNOV, BIANCHI** and others would arrange travel for and pay expenses associated with the projects.

Overt Acts

29. In furtherance of the conspiracy and to achieve the objects and purposes thereof, defendants **KORSHUNOV, BIANCHI**, and others committed and caused to be committed the following overt acts, among others, in the Southern District of Ohio and elsewhere:

a. Beginning on April 26, 2013, **BIANCHI** emailed **KORSHUNOV** with questions that "The Guys" asked for clarification, including the "money issue." A UEC representative responded on **KORSHUNOV**'s behalf by sending suggestions from people at Aviadvigatel. The emails and an attachment called "Cooperation with Italian experts Aviadvigatel" 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" could meet in June at the Paris air show and asked **KORSHUNOV** to arrange plane ticket. After **KORSHUNOV** and **BIANCHI** 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**. 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. On September 27, 2013, an 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.

e. On November 29, 2013, after the contract between Aernova and Aviadvigatel was signed, an Aernova employee emailed Employee 1 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.

f. In February 2014, Employees 1-3 wrote and delivered the Technical Report **BIANCHI** and **KORSHUNOV** setting forth their recommendations for the design of the PD-14 gearbox, and provided recommendations about design weaknesses and potential improvements. The Technical Report contained trade secrets of Company A and Subsidiary A.

g. 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" and suggested a meeting in Italy.

h. On March 29, 2014, Employee 1 met with **KORSHUNOV** and two UEC engineers in Milan, Italy to answer questions on the Technical Report.

i. In April 2014, following the March 29 meeting in Milan, Employees 1-3 revised the Technical Report and provided the revised Technical Report to **BIANCHI** and **KORSHUNOV**. The revised Technical Report contained trade secrets of Company A and Subsidiary A.

j. In May 2014, Employee 1, **BIANCHI,** and an Aernova employee exchanged emails regarding a proposed Scope of Work, Commercial Proposal, and Payment Terms for completing Phases 2-4 for **KORSHUNOV**.

k. In May 2014, Employee 1, **KORSHUNOV**, and an 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]

l. In July 2014, **BIANCHI** and **KORSHUNOV** discussed a plan to meet in Italy at the end of July to discuss the testing of engine with the improved AGD.

m. With respect to the AGD project for a larger aircraft engine, on October 20, 2016, **KORSHUNOV** told **BIANCHI** that a redesigned AGD would be needed for the PD-35 (wide body 35 tons thrust engine).

n. 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."

o. On October 27, 2016, **KORSHUNOV** emailed **BIANCHI** to ask if the "guys have understanding for AGD for the big engines" and referred specifically to two of Company A's engines.

p. On or about November 2016, **KORSHUNOV** emailed **BIANCHI** in reference to a new form or construction of an AGD, stating that "I received statement of work from

[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 revision.

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."

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

r. In or around December 14-23, 2016, **KORSHUNOV** and Employee 1 (who was in the United States) exchanged several emails 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 may also be available to review a Statement of Work on this project.

s. 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.

t. 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 and advised that UEC and Aernova had relied on "the guys capabilities" before.

u. On December 7, 2017, former Employee 4 emailed **BIANCHI** with an attached Statement of Work with his comments. Former Employee 4 commented that the object was an AGD for a turbofan of the class of Company A's engines.

v. 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 a 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."

w. 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.

x. On or about December 13, 2017, **BIANCHI** emailed **KORSHUNOV**, stating the "top team" (referring to former Employees 4-5) was ready to discuss and begin work after reaching an agreement.

y. On January 22, 2018, **KORSHUNOV** emailed 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.

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

aa. 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 also to include UEC's Head of Accessory Drive Gearbox Design. Another former employee of Company A was also copied on this email with the Statement of Work.

bb. 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. **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."

All in violation of Title 18, United States Code, Section 1832(a)(5).

COUNT 2
(Attempted Theft of Trade Secrets)
18 U.S.C. § 1832(a)(4)

30. The allegations set forth in paragraphs 1 through 25 and 28-29 of this Indictment are incorporated herein as if set forth in full.

31. From in or about 2013 and continuing to at least 2018, in the Southern District of Ohio and elsewhere, the defendants, **ALEKSANDR KORSHUNOV (also known as ALEXANDER YURYEVITCH KORSHUNOV)** and **MAURIZIO BIANCHI**, with others known to the Grand Jury, did knowingly attempt, with intent to convert a trade secret to the economic benefit of anyone other than the owner of the trade secret, and intending and knowing that the offense will injure an owner of that trade secret, to:

a. steal, and without authorization appropriate, take, carry away, and conceal, and by fraud, artifice, and deception obtain such information, that is related to a product and service used in and intended for use in interstate and foreign commerce, in violation of Title 18, United States Code, Section 1832(a)(1); and

b. receive, buy, and possess such information, that is related to a product and service used in and intended for use in interstate and foreign commerce, knowing the same to have been stolen and appropriated, obtained, and converted without authorization, in violation of Title 18, United States Code, Section 1832(a)(3).

All in violation of Title 18, United States Code, Sections 1832(a)(4).

A TRUE BILL

/s/

GRAND JURY FOREPERSON

BENJAMIN C. GLASSMAN
UNITED STATES ATTORNEY

TIMOTHY S. MANGAN
ASSISTANT UNITED STATES ATTORNEY

EG