

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5540783

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MATHIEU LOIC DUCOUSSO	05/22/2019
FREDERIC JENSON	05/22/2019
BASTIEN JACQUES CHAPUIS	02/26/2018
GUILLEMETTE DANIELLE JOELLE MARIE RIBAY	05/22/2019
LAURA TAUPIN	05/22/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SAFRAN
<b>Street Address:</b>	2 BOULEVARD DU GENERAL MARTIAL VALIN
<b>City:</b>	PARIS
<b>State/Country:</b>	FRANCE
<b>Postal Code:</b>	75015
<b>Name:</b>	COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES
<b>Street Address:</b>	25 RUE LEBLANC BAT LE PONANT
<b>City:</b>	PARIS
<b>State/Country:</b>	FRANCE
<b>Postal Code:</b>	75015
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16464192
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(703)413-2220
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	(703) 413-3000
<b>Email:</b>	yleggitt@oblon.com
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<b>Address Line 1:</b>	1940 DUKE STREET
<b>Address Line 4:</b>	ALEXANDRIA, VIRGINIA 22314
<b>ATTORNEY DOCKET NUMBER:</b>	522685US

PATENT

<b>NAME OF SUBMITTER:</b>	YUKIKO LEGGITT
<b>SIGNATURE:</b>	/Yukiko Leggitt/
<b>DATE SIGNED:</b>	05/24/2019
<b>Total Attachments: 5</b> source=522685US-Assignment5#page1.tif source=522685US-Assignment5#page2.tif source=522685US-Assignment5#page3.tif source=522685US-Assignment5#page4.tif source=522685US-Assignment5#page5.tif	

# Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
DUCOUSSO, Mathieu Loïc	c/o Safran Aircraft Engines PI (AII), Rond-Point René Ravaud -- Réau 77550 MOISSY-CRAMAYEL France

(Hereinafter referred to as the Assignor) have made an invention entitled:

Title of invention (in English)
Title of invention (in French)

for which an application for Letters Patent has been filed in the following country:

Country	Filing Date	Serial Number
France	11/25/2016	1661518

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

Corporation Name	Complete Address
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	25 Rue Leblanc Bat Le Ponant 75015 Paris France
SAFRAN	2 Boulevard Du Général Martini Valin, 75015 Paris, France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

This Assignment agreement is effective as of the earliest filing date mentioned above.

AND, I/WE HEREBY acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
22 May 2019	Chateaufort	DUCOUSSO, Mathieu Loïc	HERNANDEZ LONDOÑO Jorge

**PATENT**

**REEL: 049281 FRAME: 0232**

**Worldwide Assignment & US Declaration (37 CFR 1.63)  
for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

<i>Inventor Name</i>	<i>Complete Address</i>
JENSON, Frédéric	c/o Safran Aircraft Engines Pl (AII), Rond-Point René Ravaud - Réau 77550 MOISSY-CRAMAYEL France

(Hereinafter referred to as the Assignor) have made an invention entitled:

<i>Title of invention (in English)</i>
<i>Title of invention (in French)</i>

for which an application for Letters Patent has been filed in the following country:

<i>Country</i>	<i>Filing Date</i>	<i>Serial Number</i>
France	11/25/2016	1661512

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

<i>Corporation Name</i>	<i>Complete Address</i>
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	25 Rue Leblanc, Bat Le Ponant 75015 Paris France
SAFRAN	2 Boulevard Du Général Martial Valin, 75015 Paris, France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment.

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention; testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

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IN TESTIMONY WHEREOF, I HAVE SIGNED:

<i>Date</i>	<i>Place</i>	<i>Inventor Name &amp; Signature</i>	<i>Witness Name &amp; Signature</i>
22 May 2019	Châteaufort	JENSON, Frédéric 	GHIBAUDO, Olivier 

# Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
CHAPUIS, Bastien Jacques	c/o Safran Aircraft Engines Pl (Ail), Rond-Point René Ravaud - Réau 77556 MOISSY-CRAMAYEL France

(Hereinafter referred to as the Assignor) have made an invention entitled:

Title of Invention (in English)
Title of Invention (in French)

for which an application for Letters Patent has been filed in the following country:

Country	Filing Date	Serial Number
France	11/25/2016	1661518

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

Corporation Name	Complete Address
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	25 Rue Leblanc Bat Le Ponant 75015 Paris France
SAFRAN	2 Boulevard Du Général Martial Valin, 75015 Paris, France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof, and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

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AND, I/WE HEREBY acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
February 26, 2017	Safran, France	CHAPUIS, Bastien Jacques <i>B. Chapuis</i>	MESNILL, Olivier Jean <i>[Signature]</i>

# **Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)**

As a below named inventor, I hereby declare that, I

<i>Inventor Name</i>	<i>Complete Address</i>
RIBAY, Guillemette Danielle Joelle Marie	7 avenue Galois 92340 BOURG LA REINE France

(Hereinafter referred to as the Assignor) have made an invention entitled:

<i>Title of Invention (in English)</i>
<i>Title of Invention (in French)</i>

for which an application for Letters Patent has been filed in the following country:

<i>Country</i>	<i>Filing Date</i>	<i>Serial Number</i>
France	11/25/2016	1661518

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

<i>Corporation Name</i>	<i>Complete Address</i>
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	25 Rue Leblanc Bat Le Ponant 75015 Paris France
SAFRAN	2 Boulevard Du Général Martial Valin, 75015 Paris, France

(Hereinafter referred to as the Assignee[s]) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee[s] is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee[s], its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee[s], its/their successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee[s], its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee[s], its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee[s], its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee[s] or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee[s], its/their successors, and assigns.

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IN TESTIMONY WHEREOF, I HAVE SIGNED:

<i>Date</i>	<i>Place</i>	<i>Inventor Name &amp; Signature</i>	<i>Witness Name &amp; Signature</i>
22 May 2019	Saïlay	RIBAY, Guillemette Danielle Joelle Marie	LEPASTEUR HENRI

# Worldwide Assignment & US Declaration (37 CFR 1.63) for utility or design application using an application data sheet (37 CFR 1.76)

As a below named inventor, I hereby declare that, I

Inventor Name	Complete Address
TAUPIN, Laura	Bat 12B, 60 rue Alfred de Musset 91400 ORSAY France

(Hereinafter referred to as the Assignor) have made an invention entitled:

Title of Invention (in English)
Title of Invention (in French)

for which an application for Letters Patent has been filed in the following country:

Country	Filing Date	Serial Number
France	11/25/2016	1661518

The above-identified application(s) was/were made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

AND, WHEREAS,

Corporation Name	Complete Address
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	25 Rue Leblanc Bat Le Ponant 75015 Paris France
SAFRAN	2 Boulevard Du Général Martial Valin, 75015 Paris, France

(Hereinafter referred to as the Assignee(s)) is/are desirous of securing the entire right, title, and interest in and to this invention in all countries throughout the world, and in and to the aforementioned applications for Letters Patent on this invention and the Letters Patent to be issued upon these applications;

NOW THEREFORE, be it known that for and in consideration of One EURO (€1.00) and other good and valuable consideration, the receipt and sufficiency of which from the Assignee(s) is hereby acknowledged, by these presents, I, the Assignor, have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer and set over unto the Assignee(s), its/their lawful successors and assigns, my entire right, title, and interest in and to this invention and these applications, and all divisions, and continuations thereof, and all Letters Patent that may be granted thereon, and all reissues thereof, and all rights to claim priority on these of such applications, and all applications for Letters Patent that may hereafter be filed for this invention in any country and all Letters Patent that may be granted on this invention in any country, and all extensions, renewals, and reissues thereof; and I hereby authorize and request the Commissioners of Patents (or other appropriate official whose duty is to issue patents) of the United States, Canada, and any other country, to issue Letters Patent for this invention to the Assignee(s), its/their successors and assigns, in accordance with the terms of this Assignment;

AND, I HEREBY covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I HEREBY further covenant and agree that I will communicate with the Assignee(s), its/their successors and assigns, any facts known to me respecting this invention, testify in any legal proceedings, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee(s), its/their successors or assigns, execute all divisional, continuation, reissue, and re-examination applications, make all rightful oaths and generally do everything possible to aid the Assignee(s), its/their successors and assigns, to obtain and enforce proper patent protection for this invention in any country, it being understood that, irrespective of whether I am in the employ of the Assignee(s) or its/their affiliates, any expense incident to the performance of the obligations of the present paragraph shall be borne by the Assignee(s), its/their successors, and assigns.

This Assignment agreement is effective as of the earliest filing date mentioned above.

AND, I/WE HEREBY acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

IN TESTIMONY WHEREOF, I HAVE SIGNED:

Date	Place	Inventor Name & Signature	Witness Name & Signature
22 May 2019	Seoul	TAUPIN, Laura	GARDIAHAUT Audrey Patricia

PATENT

RECORDED: 05/24/2019

REEL: 049281 FRAME: 0236