505170302 11/01/2018

PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| BRIAN K. SMITH | 05/10/2013 |
| GARY N. PRIOR | 05/13/2013 |
| JAMES D. SAMPICA | 05/10/2013 |
| DEREK R. OWEN | 05/10/2013 |
| JEFFREY D. KULPER | 05/10/2013 |

RECEIVING PARTY DATA

| Name: | ROCKWELL COLLINS, INC. |
|-------------------|------------------------|
| Street Address: | 400 COLLINS ROAD NE |
| Internal Address: | M/S 124-323 |
| City: | CEDAR RAPIDS |
| State/Country: | IOWA |
| Postal Code: | 52498 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16176759 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 047141-1440 |
|-------------------------|------------------------|
| NAME OF SUBMITTER: | MARGARET J. PECHULIS |
| SIGNATURE: | /Margaret J. Pechulis/ |
| DATE SIGNED: | 11/01/2018 |

PATENT 505170302 REEL: 047381 FRAME: 0068

Total Attachments: 7 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif source=Assignment#page4.tif source=Assignment#page5.tif source=Assignment#page6.tif source=Assignment#page7.tif

PATENT REEL: 047381 FRAME: 0069

ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Rockwell Collins, Inc. 400 Collins Road NE M/S 124-323 Cedar Rapids, Iowa 52498

as set forth in this United States Patent Application

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territorics and possessions, and all foreign countries in and to this invention relating to

SYSTEMS AND METHODS FOR ROLL TO ROLL LAMINATIONS

| check one | [] executed co | ncurrently herewith, | | | |
|-----------|-----------------|----------------------|---------|--------------|--|
| | [X] Serial No | | Filed _ | May 13, 2013 | |

as well as in and to (a) all improvements and modifications of the above-identified invention or inventions, (b) the above-identified application and all other applications for Letters Patent of the United States and countries foreign thereto for above-identified invention or inventions and all improvements and modifications thercof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

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ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of Foley & Lardner LLP the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of Foley & Lardner LLP do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

| Executed this 10th day of May, 2013. Essan & Swith |
|--|
| State of Nouve |
| State of gwa County of $ginn$ |
| On this 10 day of May, 2013, before me, Maylen, A. Le Mont (a notary public in and for said county), personally appeared BRIANK. SMITH, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal. |
| Signature Marley a. Le Mont |
| Marlene A. LeMont Notary Public, State of lowa Commission No. 113661 My Commission Expires 3-1/6 Executed this day of, 20 |
| GARY N. PRIOR |
| State of) |
| County of) |
| On thisday of, 20, before me,(a notary public in and for said county), personally appeared GARY N. PRIOR, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal. |
| Signature |
| My Commission Expires: |
| Executed this 10^{44} day of 10^{44} , 10^{44} day of 10^{44} , 10^{44} . |

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| Executed this | day of | , 20 |
|--|--|---|
| State of |) | BRIAN K. SMITH |
| County of | , | |
| On this day of for said county), personally appeared Bl | , 20, bef RIAN K. SMITH, who proved to acknowledged to me that he/she e | fore me,(a notary public in and me on the basis of satisfactory evidence to be the person whose name is executed the same in his/her authorized capacity, and that by his/her signature acted, executed the instrument. |
| WITNESS my hand and official seal. | | |
| Signature | | |
| My Commission Expires: | | |
| Executed this 6 | day of May | , 2013 ₂ . |
| State of 15 15 15 15 15 15 15 15 15 15 15 15 15 | <u>-)</u> | GARY N. PRIOR |
| On this G day of More said county), personally appeared GA subscribed to the within instrument and a on the instrument the person, or the entity | ARY N. PRIOR, who proved to make the help of the example of the help of the he | ne on the basis of satisfactory evidence to be the person whose name is executed the same in his/her authorized capacity, and that by his/her signatu |
| WITNESS my hand and official teal. Signature Lucion My Commission Expires: | 12014 | SHEILA KAE MATHEWS Commission Number 155044 MY COMMISSION EXPIRES |
| Executed this | _ day of | , 20 |

Page 3 of 5

| The state of the s |
|--|
| State of James D. Sampida |
| County of Jinn) |
| On this 10 day of 2013, before me, Mayline A Le Ment (a notary public in and for said county), personally appeared JAMEO D. SAMPICA, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal. |
| Signature Maslene a. Le Ment |
| My Commission Expires: 3-1-16 |
| Marlene A. LeMont Notary Public, State of Iowa Commission No. 113661 My Commission Expires 3-1-16 |
| Executed this day of, 20 |
| |
| State of) |
| County of) |
| • |
| On thisday of, 20, before me,(a notary public in and for said county), personally appeared DEREK R. OWEN, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal. |
| Signature |
| My Commission Expires: |

| JAMES D. SAMPICA | |
|---|---------|
| State of) | |
| County of) | |
| On thisday of, 20, before me, | nd / |
| WITNESS my hand and official seal. | |
| Signature | |
| My Commission Expires: | |
| | |
| Executed this 10 day of May, 2013. | |
| DEREK R. OWEN | |
| State of IWA | |
| County of Delaware | |
| On this 10 day of MAY, 2013, before me, Derek & Dwen (a notary public in a for said county), personally appeared DEREK R. OWEN, who proved to me on the basis of satisfactory evidence to be the person whose name subscribed to the within instrument and acknowledged to me that he she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. | e is |
| WITNESS my hand and official seal. Signature WITNESS my hand and official seal. | |
| My Commission Expires: Iowa Notariai Seal SAMANTHA FANGMAN Clerk of District Court-Designee | |

| Executed this 10 day of May, 2013. |
|--|
| State of OWA SEFEREY DIKULPER |
| County of Delaware) |
| On this 0 day of May . 2013, before me, TEHYELD. KULPER (a notary public in and for said county), personally appeared JEFF D. KULPER, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| WITNESS my hand and official seal. |
| WITNESS my hand and official seal. Signature |
| My Commission Expires: Iowa Notarial Seal SAMANTHA FANGMAN Clerk of District Court-Designee |

RECORDED: 11/01/2018