504132167 12/15/2016 PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4188453

SUBMISSION TYPE:			NEW ASSIGNMENT		
NATURE OF CONVEYANCE:			ASSIGNMENT		
ONVEYING PARTY DA	ATA				
			Name		Execution Date
KIM S. JEPSEN					12/07/2016
VENLU CHEN					12/09/2016
RAYMOND ZANONI					12/07/2016
MARK A. LALIBERTE					12/09/2016
DLIVER S. KING					12/09/2016
	ΤΑ				
Name:		WELL	COLLINS, INC.		
Street Address:			S ROAD NE		
Internal Address:	ATTN: INTELLECTUAL PROPERTY DEPT, M/S 124-323				
City:	CEDAR RAPIDS				
State/Country:	IOWA				
Postal Code:	52498				
PROPERTY NUMBERS	Total: 1				
Property Type			Number		
Application Number: 1538		1538	0953		
CORRESPONDENCE D	۸тл				
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	e sent to	• •	e-mail address first; if that is un	isu	iccessful, it will be sent
•	orovide		nat is unsuccessful, it will be sei	nt	via US Mail.
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TTORNEY DOCKET NU	MBER:		13CR677		
IAME OF SUBMITTER:			ERIC M. NEWHOUSE		
SIGNATURE:			/eric m newhouse/		
			10/15/0010		

12/15/2016

DATE SIGNED:

Total Attachments: 5

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WHEREAS, Kim S. Jepsen, of Ellicott City, County of $\frac{4000}{1000}$ and State of Maryland, hereinafter sometimes referred to as "said inventor", has invented certain new and useful improvements in

LINEARIZATION OF PHOTONIC ANALOG-DIGITAL CONVERTER (pADC) SYSTEM

BASED ON MULTI-DIMENSIONAL QUANTIZATION (MDQ)

which invention or inventions (hereinafter referred to as "inventions") have been disclosed to and filed, under Docket No. 13CR677, in the patent files of the inventor's employer, ROCKWELL COLLINS, INC., and which invention is covered by a patent application, executed and filed concurrently herewith.

It is now agreed that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said inventor has sold, assigned and transferred and by these presents does sell, assign and transfer unto ROCKWELL COLLINS, INC., the entire right, title and interest in and to said invention in and to said application, for the territory of the United States of America and for all foreign countries; said invention and application to be held and enjoyed by the said ROCKWELL COLLINS, INC., for its own use and for the use of its successors and assigns, to the full end of the term for which Letters Patent on same will be granted, as fully and entirely as the same would have been held by said inventor had this Assignment and sale not been made.

FURTHER, said inventor hereby agrees to sign all lawful papers necessary or helpful in obtaining patents, whether U.S. or foreign, on said invention or filing any divisional, continuation, substitution, or reissue application on said invention.

Executed at	<u>AM</u> , Coun	ty of <u>PKINCE</u>	COREand
State of <u>MACHAND</u> ,	this $\underline{\neq}^{A}$ day of $\underline{}$	EEM&R	. 20 <u>/6</u> .

Kim S. Jépsén

On this $\underline{14}$ day of $\underline{204}$, before me personally appeared Kim S. Jepsen to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

OARYL HANNAH A. RODRIGUEZ NOTARY PUBLIC - MARYLA(SEAL) PRINCE GEORGES COUNTY MY COMMISSION EXPIRES DECEMBER 09, 2019

State of County of

> Notary Public: <u>Apple 12 My Commission Expires:</u> <u>Apple 12 My 2010</u> Commission Number: <u>Apple 1</u>

WHEREAS, Wenlu Chen, of Clarksville, County of <u>Howard</u>, and State of Maryland, hereinafter sometimes referred to as "said inventor", has invented certain new and useful improvements in

LINEARIZATION OF PHOTONIC ANALOG-DIGITAL CONVERTER (pADC) SYSTEM BASED ON MULTI-DIMENSIONAL QUANTIZATION (MDQ)

which invention or inventions (hereinafter referred to as "inventions") have been disclosed to and filed, under Docket No. 13CR677, in the patent files of the inventor's employer, ROCKWELL COLLINS, INC., and which invention is covered by a patent application, executed and filed concurrently herewith.

It is now agreed that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said inventor has sold, assigned and transferred and by these presents does sell, assign and transfer unto ROCKWELL COLLINS, INC., the entire right, title and interest in and to said invention in and to said application, for the territory of the United States of America and for all foreign countries; said invention and application to be held and enjoyed by the said ROCKWELL COLLINS, INC., for its own use and for the use of its successors and assigns, to the full end of the term for which Letters Patent on same will be granted, as fully and entirely as the same would have been held by said inventor had this Assignment and sale not been made.

FURTHER, said inventor hereby agrees to sign all lawful papers necessary or helpful in obtaining patents, whether U.S. or foreign, on said invention or filing any divisional, continuation, substitution, or reissue application on said invention.

Exec	uted at	umbi'a	, County	y of	loward	•••••	and
State of	Mary land	, this $\underline{?^p}$					

Wenter chan

Wenlu Chen

State of County of

On this $\underline{\mathcal{A}}$ day of $\underline{\underline{December}}$, 20<u>16</u>, before me personally appeared Wenlu Chen to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.

Notary Public: (My Commission Expires: Commission Number:

(Seal)

WHEREAS, Raymond Zanoni, of Marion, County of $\angle \underline{/}\underline{/}\underline{/}\underline{/}\underline{/}\underline{/}$, and State of Iowa, hereinafter sometimes referred to as "said inventor", has invented certain new and useful improvements in

LINEARIZATION OF PHOTONIC ANALOG-DIGITAL CONVERTER (pADC) SYSTEM BASED ON MULTI-DIMENSIONAL QUANTIZATION (MDQ)

which invention or inventions (hereinafter referred to as "inventions") have been disclosed to and filed, under Docket No. 13CR677, in the patent files of the inventor's employer, ROCKWELL COLLINS, INC., and which invention is covered by a patent application, executed and filed concurrently herewith.

It is now agreed that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said inventor has sold, assigned and transferred and by these presents does sell, assign and transfer unto ROCKWELL COLLINS, INC., the entire right, title and interest in and to said invention in and to said application, for the territory of the United States of America and for all foreign countries; said invention and application to be held and enjoyed by the said ROCKWELL COLLINS, INC., for its own use and for the use of its successors and assigns, to the full end of the term for which Letters Patent on same will be granted, as fully and entirely as the same would have been held by said inventor had this Assignment and sale not been made.

FURTHER, said inventor hereby agrees to sign all lawful papers necessary or helpful in obtaining patents, whether U.S. or foreign, on said invention or filing any divisional, continuation, substitution, or reissue application on said invention.

Executed at <u>Ceder Repids</u>, County of <u>Linn</u> State of <u>Jown</u>, this <u>F</u> day of <u>December</u>, 20<u>16</u>.

Raymond Zanoni

State of County of

ынынын кылы

On this <u>day of <u>cerwber</u></u>, 20 <u>k</u>, before me personally appeared Raymond Zanoni to me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.



Susan E. Ca(Seal)
Commission Number 739156
My Commission Expires
February, 15, 2018

Notary Public:	and Camp
My Commission Expires: Commission Number:	2-15-2018
	PATENT

REEL: 040638 FRAME: 0390

WHEREAS, Mark A. Laliberte, of Annapolis, County of <u>Anna Arva</u> (and State of Maryland, hereinafter sometimes referred to as "said inventor", has invented certain new and useful improvements in

LINEARIZATION OF PHOTONIC ANALOG-DIGITAL CONVERTER (pADC) SYSTEM

BASED ON MULTI-DIMENSIONAL QUANTIZATION (MDQ)

which invention or inventions (hereinafter referred to as "inventions") have been disclosed to and filed, under Docket No. 13CR677, in the patent files of the inventor's employer, ROCKWELL COLLINS, INC., and which invention is covered by a patent application, executed and filed concurrently herewith.

It is now agreed that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said inventor has sold, assigned and transferred and by these presents does sell, assign and transfer unto ROCKWELL COLLINS, INC., the entire right, title and interest in and to said invention in and to said application, for the territory of the United States of America and for all foreign countries; said invention and application to be held and enjoyed by the said ROCKWELL COLLINS, INC., for its own use and for the use of its successors and assigns, to the full end of the term for which Letters Patent on same will be granted, as fully and entirely as the same would have been held by said inventor had this Assignment and sale not been made.

FURTHER, said inventor hereby agrees to sign all lawful papers necessary or helpful in obtaining patents, whether U.S. or foreign, on said invention or filing any divisional, continuation, substitution, or reissue application on said invention.

Executed at <u>Columbia</u>, County of <u>Anna Arunda and</u> and State of <u>Manyland</u>, this <u>244</u> day of <u>December</u>, 2014

DUNCE CULOR

Mark A. Laliberte

State of County of

On this $\underline{\mathcal{M}}$ day of $\underline{\underline{Decentral}}$, 20, before me personally appeared Mark A. Laliberte to me known to be the person whose name is subscribed to the foregoing instruments and second ledged to me that he executed the same.



Maryland Bank Arundel

> Notary Public: <u>Kynow</u> My Commission Expires: <u>OG /23 /2020</u> Commission Number: <u>Void</u>

WHEREAS, Oliver S. King, of Frederick, County of $\underline{r}_{\mathcal{O}}$ and State of Maryland, hereinafter sometimes referred to as "said inventor", has invented certain new and useful improvements in

LINEARIZATION OF PHOTONIC ANALOG-DIGITAL CONVERTER (pADC) SYSTEM BASED ON MULTI-DIMENSIONAL QUANTIZATION (MDQ)

which invention or inventions (hereinafter referred to as "inventions") have been disclosed to and filed, under Docket No. 13CR677, in the patent files of the inventor's employer, ROCKWELL COLLINS, INC., and which invention is covered by a patent application, executed and filed concurrently herewith.

It is now agreed that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said inventor has sold, assigned and transferred and by these presents does sell, assign and transfer unto ROCKWELL COLLINS, INC., the entire right, title and interest in and to said invention in and to said application, for the territory of the United States of America and for all foreign countries; said invention and application to be held and enjoyed by the said ROCKWELL COLLINS, INC., for its own use and for the use of its successors and assigns, to the full end of the term for which Letters Patent on same will be granted, as fully and entirely as the same would have been held by said inventor had this Assignment and sale not been made.

FURTHER, said inventor hereby agrees to sign all lawful papers necessary or helpful in obtaining patents, whether U.S. or foreign, on said invention or filing any divisional, continuation, substitution, or reissue application on said invention.

Executed at $\leq \square \perp V_{AA}$ (31A, County of $A(v) \land v \in A \land V \land v \in C$ and State of $\underline{M}(A \land v \in A \land v \circ v)$, this $\underline{q}^{H_{A}}$ day of $\underline{D} \in \underline{c} \in A \land B \in \mathcal{R}$, 2016.

Oliver S. King

State of County of

On this <u>4</u> day of <u>December</u>, 20<u>6</u> before me personally appeared Oliver S. Kingeto me known to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same.



RECORDED: 12/15/2016

Notary Public:	9no-
My Commission Expires:	06 /23 / 2020
Commission Number:	void -