PATENT ASSIGNMENT COVER SHEET

EPAS ID: PAT3502073

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
THOMAS MARCOUILLER	07/27/2015
OSCAR FERNANDO BRAN DE LEÓN	07/27/2015
THOMAS G. LEBLANC	07/27/2015
TODD LOEFFELHOLZ	08/13/2015

RECEIVING PARTY DATA

Name:	ADC TELECOMMUNICATIONS, INC.	
Street Address:	1050 WESTLAKES DRIVE	
City:	BERWYN,	
State/Country:	PENNSYLVANIA	
Postal Code:	19312	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14752142

CORRESPONDENCE DATA

Fax Number: (612)332-9081

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.

Phone: (612) 332-5300

Email: kwacek@merchantgould.com

Correspondent Name: DAVID G. SCHMALTZ

Address Line 1: MERCHANT & GOULD P.C.

Address Line 2: P.O. BOX 2903

Address Line 4: MINNEAPOLIS, MINNESOTA 55402-0903

ATTORNEY DOCKET NUMBER:	02316.4219USU1
NAME OF SUBMITTER:	DAVID G. SCHMALTZ
SIGNATURE:	/David G. Schmaltz/
DATE SIGNED:	08/27/2015

Total Attachments: 12

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PATENT 503455448 REEL: 036439 FRAME: 0385

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PATENT REEL: 036439 FRAME: 0386

ASSIGNMENT

WHEREAS, we, Thomas Marcouiller, Oscar Fernando Bran de León, Thomas G. LeBlanc and Todd Loeffelholz, made certain new and useful inventions and improvements for which we filed an application with the United States Patent and Trademark Office on June 26, 2015, application Serial No. 14/752,142 which is entitled INDEXING TERMINALS FOR SUPPORTING A BIDIRECTIONAL INDEXING ARCHITECTURE.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 1050 Westlakes Drive, Berwyn, Pennsylvania 19312 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and the right(s) to claim priority thereto, and in and to the application, all patent applications based upon said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments

in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF	, I have hereunto set my hand this day of
<u>July</u> , 2015.	
	Thomas Marcouiller
STATE OF Minnesta)) ss. COUNTY OF Scott)	

On this <u>17</u> day of <u>fully</u>, 20<u>15</u>, before me personally appeared Thomas Marcouiller to me known and known to me to be the person described in and who executed the foregoing instrument, and Thomas Marcouiller duly acknowledged to me that Thomas Marcouiller executed the same for the uses and purposes therein set forth.

[SEAL]

Lynn M Kastonell Notary Public



IN TESTIMONY WHEREOF, I have hereunto set my hand this 27 day of
TULY ,20/15.
OsfuBraide Con
STATE OF Minnesola)
STATE OF Minnesola) COUNTY OF Scott)
On this 27 day of July, 2015, before me personally appeared
Oscar Fernando Bran de León to me known and known to me to be the person described in and
who executed the foregoing instrument, and Oscar Fernando Bran de León duly acknowledged to
me that Oscar Fernando Bran de León executed the same for the uses and purposes therein set
forth.
[SEAL] LINN M KASTONEK AOTARY PUBLIC - MINNESOTA HY COMMISSION EXPIRES 01/31/18 Notary Public Notary Public
IN TESTIMONY WHEREOF, I have hereunto set my hand this day of, 20
Thomas G. LeBlanc
STATE OF) ss.
COUNTY OF)
On this day of, 20, before me personally appeared
Thomas G. LeBlanc to me known and known to me to be the person described in and who
executed the foregoing instrument, and Thomas G. LeBlanc duly acknowledged to me that
Thomas G. LeBlanc executed the same for the uses and purposes therein set forth.
[SEAL]

IN TESTI	MONY WHEREO	F, I have hereur	nto set my hand this	day of
	20			
		Todd Loeffelh	olz	
STATE OF)			
COUNTY OF) ss.)			
On this	day of	, 20	, before me personally	appeared
Todd Loeffelholz to me k	mown and known t	to me to be the p	person described in and v	who executed
the foregoing instrument,	and Todd Loeffell	nolz duly ackno	wledged to me that Todo	d Loeffelholz
executed the same for the	uses and purposes	therein set fort	h.	
[SEAL]		Notary Public		- · · ·

ASSIGNMENT

WHEREAS, we, Thomas Marcouiller, Oscar Fernando Bran de León, Thomas G. LeBlanc and Todd Loeffelholz, made certain new and useful inventions and improvements for which we filed an application with the United States Patent and Trademark Office on June 26, 2015, application Serial No. 14/752,142 which is entitled INDEXING TERMINALS FOR SUPPORTING A BIDIRECTIONAL INDEXING ARCHITECTURE.

AND WHEREAS, ADC Telecommunications, Inc., a corporation organized and existing under and by virtue of the laws of the State of Minnesota, and having an office and place of business at 1050 Westlakes Drive, Berwyn, Pennsylvania 19312 (hereinafter "Assignee") is desirous of acquiring the entire right, title and interest in and to said inventions, improvements and application and in and to the Letters Patent to be obtained therefor;

NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and the right(s) to claim priority thereto, and in and to the application, all patent applications based upon said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and legal representatives will make, execute and deliver any and all other instruments

PATENT REEL: 036439 FRAME: 0391 in writing including any and all further application papers, affidavits, assignments and other documents, and will communicate to said Assignee, its successors and representatives all facts known to us relating to said improvements and the history thereof and will testify in all legal proceedings and generally do all things which may be necessary or desirable more effectually to secure to and vest in said Assignee, its successors or assigns the entire right, title and interest in and to the improvements, inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby sold, assigned and conveyed, or intended so to be.

AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

	IN TESTIM	ONY WHEREOF	, I have hereun	to set my hand this	day of
	, 20)			
		,	Thomas Marco	uiller	
STATE OF)			
COUNTY O)F) ss.)			
	On this	day of	, 20	_, before me personally	y appeared
Thomas Mar	rcouiller to me	known and known	n to me to be th	e person described in a	nd who
executed the	foregoing inst	rument, and Thom	nas Marcouiller	duly acknowledged to	me that
Thomas Mar	rcouiller execu	ted the same for th	ne uses and pur	poses therein set forth.	
[SEAL]					
			Notary Public		

	, 21	0	
			Oscar Fernando Bran de León
STATE OF _			
COUNTY OF	7) ss.)	
			, 20, before me personally appeared
)scar Fernan	do Bran de L	eón to me knov	wn and known to me to be the person described in and
/ho executed	the foregoin	ig instrument, a	nd Oscar Fernando Bran de León duly acknowledged
ne that Oscar	· Fernando Bi	- ran de León exc	ecuted the same for the uses and purposes therein set
orth.			
XX 111 ,			
CTATI			
SEAL]	IN TESTIM	IONY WHERE	Notary Public EOF, I have hereunto set my hand this <u>27</u> day of
	IN TESTIM		Notary Public EOF, I have hereunto set my hand this <u>27</u> day of
Jak			EOF, I have hereunto set my hand this <u>27</u> day of
Jhh STATE OF _	<i>g</i> , ²	0 <u>/5</u>))	EOF, I have hereunto set my hand this <u>27</u> day of
Jhh STATE OF _		0 <u>/5</u>))	EOF, I have hereunto set my hand this <u>27</u> day of
Jhh STATE OF _	<i>j</i> , 2 ¹	0 <u>/5.</u>))	EOF, I have hereunto set my hand this <u>2</u> ⁶ 7 day of
JAL STATE OF _	7	0/5.)) ss.)	EOF, I have hereunto set my hand this 27 day of Thomas G. LeBlanc
The County Of Chomas G. L	?, 2 ¹ On this eBlanc to me	0 / 5 .) ss. day of known and kn	EOF, I have hereunto set my hand this 257 day of Thomas G. LeBlanc
TALE STATE OF _ COUNTY OF Chomas G. L executed the	On thiseBlanc to me foregoing ins	0/5.) ss. day of known and kn	EOF, I have hereunto set my hand this 27 day of Thomas G. LeBlanc
The LEGISTRATE OF _COUNTY OF Thomas G. Legistrated the	On thiseBlanc to me foregoing ins	0/5.) ss. day of known and kn	EOF, I have hereunto set my hand this 257 day of Thomas G. LeBlanc , before me personally appeared own to me to be the person described in and who homas G. LeBlanc duly acknowledged to me that
STATE OF _ COUNTY OF Thomas G. L executed the	On thiseBlanc to me foregoing ins	0/5.) ss. day of known and kn	EOF, I have hereunto set my hand this 27 day of Thomas G. LeBlanc 20, before me personally appeared own to me to be the person described in and who homas G. LeBlanc duly acknowledged to me that

IN TESTIMONY WHERI	EOF, I have hereunto set my hand this day of
, 20	
	Todd Loeffelholz
STATE OF)	
STATE OF) ss. COUNTY OF)	
On this day of	, 20, before me personally appeared
Todd Loeffelholz to me known and know	on to me to be the person described in and who executed
the foregoing instrument, and Todd Loeff	felholz duly acknowledged to me that Todd Loeffelholz
executed the same for the uses and purpo	ses therein set forth.
[SEAL]	
	Notary Public

ASSIGNMENT

WHEREAS, we, Thomas Marcouiller, Oscar Fernando Bran de León, Thomas G. LeBlanc and Todd Loeffelholz, made certain new and useful inventions and improvements for which we filed an application with the United States Patent and Trademark Office on June 26, 2015, application Serial No. 14/752,142 which is entitled INDEXING TERMINALS FOR SUPPORTING A BIDIRECTIONAL INDEXING ARCHITECTURE.

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NOW THEREFORE, to all whom it may concern, be it known that for and in consideration of the sum of One Dollar and other good and valuable considerations, the receipt and sufficiency whereof is hereby acknowledged, we have sold, assigned, and transferred, and by these presents do sell, assign and transfer unto said Assignee, its successors or assigns, the entire right, title and interest for all countries in and to all inventions and improvements disclosed in the aforesaid application, and the right(s) to claim priority thereto, and in and to the application, all patent applications based upon said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and in and to any and all applications which have been or shall be filed in any foreign countries for Letters Patent on the inventions and improvements, including an assignment of all rights under the provisions of the International Convention, and all Letters Patent of foreign countries which may be granted therefrom; and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue any and all United States Letters Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

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AND, furthermore we covenant and agree with said Assignee, its successors and assigns, that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by us and that full right to convey the same as herein expressed is possessed by us.

IN TESTIMONY WHEREOF,	I have hereunto set my hand this day of
, 20	
Ī	Thomas Marcouiller
STATE OF)	
COUNTY OF) ss.	
On this day of	, 20, before me personally appeared
Thomas Marcouiller to me known and known	to me to be the person described in and who
executed the foregoing instrument, and Thom	as Marcouiller duly acknowledged to me that
Thomas Marcouiller executed the same for the	e uses and purposes therein set forth.
[SEAL]	
ja.	Votary Public

Attorney Docket No. 02316.4219USU1	
IN TESTIMONY WHERE	OF, I have hereunto set my hand thisday of
, 20	
	Oscar Fernando Bran de León
STATE OF) ss.	
COUNTY OF) ss.	
On this day of	, 20, before me personally appeared
Oscar Fernando Bran de León to me know	n and known to me to be the person described in and
who executed the foregoing instrument, ar	nd Oscar Fernando Bran de León duly acknowledged to
me that Oscar Fernando Bran de Leôn exe	cuted the same for the uses and purposes therein set
forth.	
[SEAL]	
[ora 65]	Notary Public
IN TESTIMONY WHERE	OF, I have hereunto set my hand this June day of
, 20	
	A STATE OF THE STA
	Thomas G. LeBlanc
	momas O, Deplane
STATE OF) ss. COUNTY OF)	
COUNTY OF)	
On this day of	, 20 before me personally appeared
Thomas G. LeBlanc to me known and known	own to me to be the person described in and who
executed the foregoing instrument, and Th	iomas G. LeBlanc duly acknowledged to me that
Thomas G. LeBlanc executed the same for	r the uses and purposes therein set forth.
EGIT A T I	
[SEAL]	Notary Public

Todd Coeffelland Todd Loeffelland

STATE OF WA) SS.

On this 13th day of August , 2015, before me personally appeared Todd Loeffelholz to me known and known to me to be the person described in and who executed the foregoing instrument, and Todd Loeffelholz duly acknowledged to me that Todd Loeffelholz executed the same for the uses and purposes therein set forth.

[SEAL]

Notary Public