

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Acacia Research Group LLC	09/18/2012

RECEIVING PARTY DATA

Name:	HVAC Modulation Technologies LLC
Street Address:	6136 Frisco Square Blvd.
Internal Address:	Suite 385
City:	Frisco
State/Country:	TEXAS
Postal Code:	75034

PROPERTY NUMBERS Total: 38

Property Type	Number
Patent Number:	5202951
Patent Number:	5932981
Patent Number:	6133699
Application Number:	08733533
Application Number:	60010274
Patent Number:	5796234
Patent Number:	5899686
Application Number:	60024170
Patent Number:	5997285
Patent Number:	6004129
Patent Number:	5485953
Patent Number:	5602758
Application Number:	08007203
Application Number:	08523033

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Application Number:	08587751
Application Number:	09573823
Patent Number:	5772501
Patent Number:	5801940
Patent Number:	5706190
Application Number:	08375481
Patent Number:	6329785
Patent Number:	6866202
Application Number:	60322133
Patent Number:	7293718
Patent Number:	5971745
Application Number:	60006543
Patent Number:	6299433
Patent Number:	5590642
Application Number:	08600376
Application Number:	90009407
Patent Number:	5648722
Patent Number:	6329783
Patent Number:	6504338
Patent Number:	6864659
Application Number:	60304954
Patent Number:	7075255
Application Number:	12343469
Application Number:	13317957

**CORRESPONDENCE DATA**

Fax Number:

*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*

Phone: 952-835-3800

Email: ipgroup@larkinhoffman.com

Correspondent Name: Craig J. Lervick

Address Line 1: 1500 Wells Fargo Plaza

Address Line 2: 7900 Xerxes Avenue South

Address Line 4: Minneapolis, MINNESOTA 55431

ATTORNEY DOCKET NUMBER:	35141.00000
NAME OF SUBMITTER:	Craig J. Lervick

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## ASSIGNMENT

**WHEREAS, ACACIA RESEARCH GROUP LLC**, a Texas limited liability company, having a place of business at 6136 Frisco Square Blvd., Suite 385, Frisco, TX 75034 (hereafter, together with any successors, legal representatives or assigns thereof, called "Assignor") is the owner of the entire right, title, and interest and assignee of the **U.S. Patents listed in the Exhibit attached hereto**;

**AND WHEREAS, HVAC MODULATION TECHNOLOGIES LLC**, a Texas limited liability company having a place of business at 6136 Frisco Square Blvd., Suite 385, Frisco, TX 75034 (hereafter, together with any successors, legal representatives or assigns thereof, called "ASSIGNEE") wants to acquire the entire right, title and interest in and to said **U.S. Patents listed in the Exhibit attached hereto**, and all the inventions therein, and Assignor is willing to enter into such assignment.

**NOW, THEREFORE**, effective on September 14, 2011 and in consideration of the sum of One Dollar (\$1.00) in hand paid and other good and valuable consideration the receipt of which from ASSIGNEE is hereby acknowledged, Assignor has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over to ASSIGNEE the entire right, title and interest in and to the **U.S. Patents listed in the Exhibit attached hereto**, and all patents, patent applications, foreign patents, foreign patent applications, continuations, continuations-in-part, divisionals, extensions, renewals, reissues and re-examinations related to all inventions thereof, including without limitation, all rights to claim priority on the basis thereof, all rights to sue for past, present and future infringement, including the right to collect and receive any damages, royalties, or settlements for such infringements, all rights to sue for injunctive or other equitable relief, and any and all causes of action relating to any of the inventions or discoveries thereof;

**Assignor** hereby covenants that it has full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreement in conflict with this Assignment;

**Assignor** hereby further covenants and agrees that it will communicate to ASSIGNEE any and all facts known to it respecting said patents, and testify in any legal proceeding, sign all lawful papers, execute and deliver all papers and take any actions that may be necessary or desirable to perfect the title to any aforementioned patents and inventions, execute all divisional, continuation, reexamination, reissue and substitute applications, and make all rightful oaths and generally do everything possible to aid ASSIGNEE to obtain and enforce proper patent protection for said inventions in all countries.

**FOR USPTO RECORDING**

**PATENT**

**REEL: 029013 FRAME: 0583**

IN TESTIMONY WHEREOF, I hereunto set my hand this 18<sup>th</sup> day of September,  
2012

ACACIA RESEARCH GROUP LLC  
(Assignor)

By 

Name Dooyong Lee

Title Chief Executive Officer

PATENT

REEL: 029013 FRAME: 0584

**EXHIBIT****U.S. PATENTS & APPLICATIONS**

<b>US Patent No.</b>	<b>US Appl. No.</b>	<b>Filing Date</b>	<b>Issue Date</b>	<b>Title</b>
5202951	7/710709	6/5/1991	4/13/1993	Mass flow rate control system and method
5932981	8/784144	1/17/1997	8/3/1999	Apparatus and method for reduced voltage controller
6133699	8/733532	10/18/1996	10/17/2000	Method and apparatus for operating a plurality of motors with a single controller
-	*08/733533	10/16/1996	-	Apparatus and method for reduced cost controller with partial speed control range
-	*60/010274	1/19/1996	-	Variable speed ac induction motor and controller therefore
5796234	8/784143	1/17/1997	8/18/1998	Variable speed motor apparatus and method for forming same from a split capacitor motor
5899686	8/912767	8/18/1997	5/4/1999	Gas burner apparatus having a flame holder structure with a contoured surface
-	*60/024170	8/19/1996	-	Closed loop combustion control
5997285	8/912483	8/18/1997	12/7/1999	Burner housing and plenum configuration for gas-fired burners
6004129	9/243272	2/2/1999	12/21/1999	Burner housing and plenum configuration for gas-fired burners
5485953	8/378517	1/26/1995	1/23/1996	Method and apparatus for controlling the circulation of heat transfer fluid for thermal conditioning systems for spaces
5602758	8/378514	1/26/1995	2/11/1997	Installation link-up procedure
-	*08/007203	1/22/1993	-	System and method for providing a user-responsive hvac system
-	*08/523033	9/1/1995	-	System and method for providing a user-responsive hvac system
-	*08/587751	1/17/1996	-	N/a
-	*09/573823	5/18/2000	-	N/a
5772501	8/542310	10/12/1995	6/30/1998	Indoor environmental conditioning system and method for controlling the circulation of non-conditioned air
5801940	8/598561	2/12/1996	9/1/1998	Fault-tolerant hvac system
5706190	8/623047	3/28/1996	1/6/1998	Fault-tolerant hvac system
-	*08/375481	1/19/1995	-	Appliance interface apparatus and automated residence management system
6329785	9/515943	2/29/2000	12/11/2001	Pulse width modulated controlled induction motor
6866202	10/236678	9/6/2002	3/15/2005	Variable output heating and cooling control
-	*60/322133	9/10/2001	-	Variable output combustion controller

US Patent No.	US Appl. No.	Filing Date	Issue Date	Title
7293718	11/080773	3/15/2005	11/13/2007	Variable output heating and cooling control
5971745	8/747777	11/13/1996	10/26/1999	Flame ionization control apparatus and method
-	*60/006543	11/13/1995	-	Flame ionization controlled burner apparatus and method
6299433	9/435288	11/5/1999	10/9/2001	Burner control
5590642	8/378516	1/26/1995	1/7/1997	Control methods and apparatus for gas-fired combustors
	*08/600376	2/12/1996	-	N/a
Reexam Cert Issued	90/009407	2/18/2009	3/30/2010	Control methods and apparatus for gas-fired combustors
5648722	8/508599	7/28/1995	7/15/1997	Apparatus and method for determining the state of an electrical switch within an hvac system
6329783	9/475687	12/30/1999	12/11/2001	Apparatus for continuously variable speed electric motor applications
6504338	9/904428	7/12/2001	1/7/2003	Constant cfm control algorithm for an air moving system utilizing a centrifugal blower driven by an induction motor
6864659	10/191975	7/9/2002	3/8/2005	Variable speed controller for air moving applications using an ac induction motor
-	*60/304954	7/12/2001	-	Multi-speed controller for air moving applications using an ac induction motor
7075255	11/189333	7/26/2005	7/11/2006	Variable speed controller for a family of multi-tap motors
-	12/343,469	5/1/2009	-	Apparatus and method for modulating cooling
-	13/317,957	11/1/2011		Rooftop High-Efficiency Gas Furnance Control With Condensate Management

\*Denotes Abandoned or Expired patents and applications