

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	Confirmatory Assignment
CONVEYING PARTY DATA	
Name	Execution Date
QNX Software Systems (Wavemakers), Inc.	05/27/2010
RECEIVING PARTY DATA	
Name:	QNX Software Systems Co.
Street Address:	175 Terence Crescent
City:	Ottawa, Ontario
State/Country:	CANADA
Postal Code:	K2M 1W8
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13648845
CORRESPONDENCE DATA	
Fax Number:	3123214299
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Phone:	312-321-4200
Email:	rbrown@brinkshofer.com, usassignments@brinkshofer.com
Correspondent Name:	James A. Collins by Rebecca Brown
Address Line 1:	Brinks Hofer Gilson & Lione
Address Line 2:	PO Box 10395
Address Line 4:	Chicago, ILLINOIS 60610
ATTORNEY DOCKET NUMBER:	14295-752 (38851-US-CNT)
NAME OF SUBMITTER:	James A. Collins, Reg. No. 43,557
Signature:	/James A. Collins/
Date:	08/13/2013
Total Attachments: 70	

CH \$40.00 13648845

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CONFIRMATORY ASSIGNMENT AGREEMENT

This Confirmatory Assignment Agreement (this "Agreement") is entered into as of the 27th day of May, 2010 (the "Effective Date"), by and between QNX SOFTWARE SYSTEMS (WAVEMAKERS), Inc., a corporation continued under the laws of the Province of Nova Scotia ("Assignor"), and QNX SOFTWARE SYSTEMS CO., a corporation amalgamated under the laws of the Province of Nova Scotia ("Assignee").

RECITALS

WHEREAS, Assignor and Assignee are parties to an Asset Transfer Agreement, dated June 29, 2009 (the "Transfer Agreement"); and

WHEREAS, pursuant to the Transfer Agreement, Assignor has agreed to transfer and assign to Assignee all of its right, title and interest, on a worldwide basis, in, to and under certain inventions, patents and patent applications as set forth herein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

AGREEMENT

This Agreement is to confirm that pursuant to the terms and conditions of the Transfer Agreement, the Assignor has sold, assigned and transferred to the Assignee, the entire right, title and interest throughout the world in and to the inventions, the patent applications and the patents identified in attached Schedule 1, and any patents that may issue for said inventions in throughout the world, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, continuations-in-part, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to hold for the sole and exclusive use and

benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

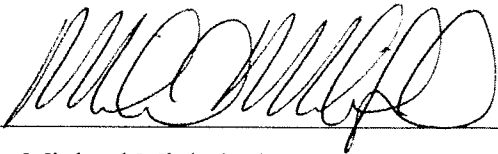
Further, Assignor agrees that, upon request and without further compensation, but at no expense to Assignor, it and its legal representative(s) and assigns will do all lawful acts, including the execution of papers and the giving of testimony, that may be necessary or desirable for obtaining, sustaining, reissuing or enforcing Letters Patent throughout the world for said inventions, and for perfecting, recording or maintaining the title of Assignee, its successors and assigns, to said inventions, said applications and any Letters Patent granted for said inventions throughout the world.

Assignor authorizes the requests the Commissioner of Patents of all countries to issue any Letters Patent for said inventions, whether on said applications or on any subsequently filed division, continuation, continuation-in-part or reissue application, to Assignee, its successors and assigns, as the assignee of the entire interest in said inventions.

IN WITNESS WHEREOF, the Assignor and Assignee have executed this Agreement on the date written herein below.

FOR ASSIGNOR:

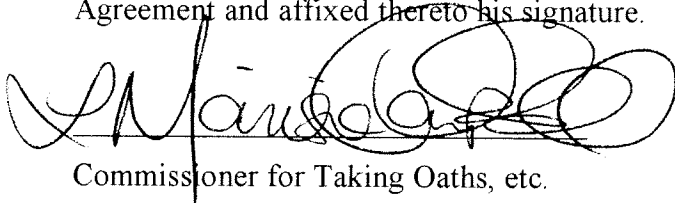
Date: 27th day of May, 2010

By: 

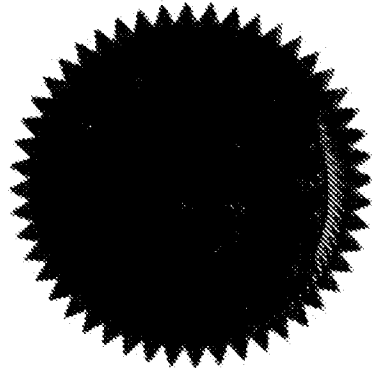
Name: Michael Michalyshyn

Title: Assistant Secretary

Today, this 27th day of May, 2010 in the Province of Ontario Canada,
MICHAEL MICHALYSHYN appeared before me and executed to the above
Agreement and affixed thereto his signature.



Commissioner for Taking Oaths, etc.
and Notary Public



FOR ASSIGNEE:

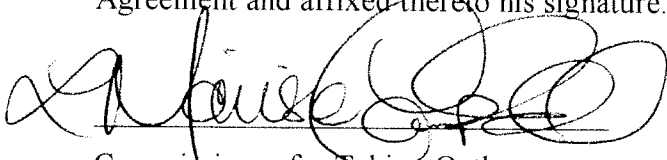
Date: 27th day of May, 2010

By: 

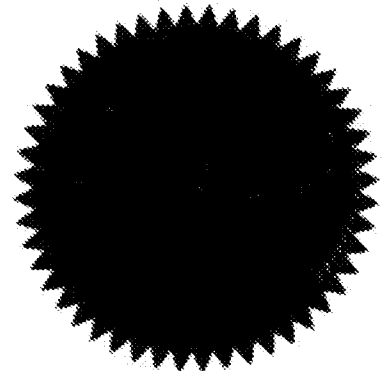
Name: Michael Michalyshyn

Title: VP + General Counsel

Today, this 27th day of May, 2010 in the Province of Ontario Canada,
MICHAEL MICHALYSHYN appeared before me and executed to the above
Agreement and affixed thereto his signature.



Commissioner for Taking Oaths, etc.
and Notary Public



SCHEDULE 1

TRANSFERRED INVENTIONS, PATENT APPLICATIONS, AND PATENTS

Docket Number: P00099

Disclosure Status: Filed

Disclosure Date: 06-Aug-2003

Invention Title: Shielding A Microphone From Environmental Effects

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	ORD	Granted	09/579,119	25-May-2000	6,771,788	03-Aug-2004	25-May-2020
<u>Application Title:</u> Shielded Microphone								
<u>Owner:</u>								
<u>Inventors:</u> Soutar, Ian; Watkins, Dennis; Copeland, William								
United States of America	P	CIP	Granted	10/902,961	30-Jul-2004	7,415,122	19-Aug-2008	15-Jul-2021
<u>Application Title:</u> Microphone Shield System								
<u>Owner:</u>								
<u>Inventors:</u> Soutar, Ian; Watkins, Dennis; Copeland, William								
United States of America	PD	DIV	Published	12/124,773	21-May-2008			
<u>Application Title:</u> Microphone Shield System								
<u>Owner:</u>								
<u>Inventors:</u> Soutar, Ian; Watkins, Dennis; Copeland, William								

Docket Number: P03131

Disclosure Status: Filed

Disclosure Date: 21-Feb-2003

Invention Title: Method For Suppressing Wind Noise

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL LEE

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada	P	ORD	Published	2458428	18-Feb-2004			21-Feb-2004
Application Title: System For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
China (People's Republic)	ORD	Granted		200410004563.4	23-Feb-2004	ZL200410004563.4	11-Jun-2008	23-Feb-2024
Application Title: System For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
China (People's Republic)	P	ORD	Granted	200410004564.9	23-Feb-2004	ZL200410004564.9	16-Apr-2008	23-Feb-2024
Application Title: System and Method For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
France	EP	ORD	Granted	04003811.9	19-Feb-2004	1450354	21-Jun-2006	19-Feb-2024
Application Title: System For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
France	P	EPC	Granted	04003675.8	18-Feb-2004	1450353	02-Aug-2006	18-Feb-2024
Application Title: System For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Germany	EP	ORD	Granted	04003811.9	19-Feb-2004	1450354	21-Jun-2006	19-Feb-2024
Application Title: System For Suppressing Wind Noise								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								

PATENT

Patent Master List (by Docket Number)

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Germany	P	EPC	Granted	04003675.8	18-Feb-2004	1450353	02-Aug-2006	18-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Italy	EP	ORD	Granted	04003811.9	19-Feb-2004	1450354	21-Jun-2006	19-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Italy	P	EPC	Granted	04003675.8	18-Feb-2004	1450353	02-Aug-2006	18-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Japan	ORD	ORD	Granted	2004-45524	11-Feb-2004	4256280	06-Feb-2009	11-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Japan	P	ORD	Pending	2004-43727	11-Feb-2004			21-Feb-2004
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Korea, Republic of	ORD	ORD	Pending	10-2004-0011353	20-Feb-2004			21-Feb-2004
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
Korea, Republic of	P	ORD	Pending	10-2004-0011708	21-Feb-2004			21-Feb-2004
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
United Kingdom	EP	ORD	Granted	04003811.9	19-Feb-2004	1450354	21-Jun-2006	19-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								

PATENT

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United Kingdom	P	EPC	Granted	04003675.8	18-Feb-2004	1450353	02-Aug-2006	18-Feb-2024
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
United States of America	ORD	Published		10/410,736	10-Apr-2003			21-Feb-2004
<u>Application Title:</u> Wind Noise Suppression System								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
United States of America	P	CIP	Published	10/688,802	16-Oct-2003			21-Feb-2004
<u>Application Title:</u> System For Suppressing Wind Noise								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								
United States of America	P1	CIP	Pending	11/607,340	30-Nov-2006			
<u>Application Title:</u> Signature Noise Removal								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Zakarauskas, Pierre								

Docket Number: P04051

Disclosure Status: Filed

Disclosure Date: 01-Jan-2004

Invention Title: Technique To Isolate Voice Signals Utilizing Neural Networks

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JHC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada	ORD	Pending	Pending	2,501,989	22-Mar-2005			23-Mar-2005
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				
China (People's Republic)	ORD	Published	Published	200510067777.0	22-Mar-2005			23-Mar-2005
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				
France	EPC	Granted	Granted	05006440.1	23-Mar-2005	1580730	03-Sep-2008	23-Mar-2025
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				
Germany	EPC	Granted	Granted	05006440.1	23-Mar-2005	1580730	03-Sep-2008	23-Mar-2025
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				
Italy	EPC	Granted	Granted	05006440.1	23-Mar-2005	1580730	03-Sep-2008	23-Mar-2025
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				
Japan	ORD	Pending	Pending	2005-85040	23-Mar-2005			23-Mar-2005
				Application Title: Isolating Speech Signals Utilizing Neural Networks				
				Owner:				
				Inventors: Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla				

PATENT

Patent Master List (by Docket Number)

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Korea, Republic of	ORD	ORD	Pending	10-2005-0024110	23-Mar-2005			23-Mar-2005
<u>Application Title:</u> Isolating Speech Signals Utilizing Neural Networks								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla								
United Kingdom	EPC	Granted	Granted	05006440.1	23-Mar-2005	1580730	03-Sep-2008	23-Mar-2025
<u>Application Title:</u> Isolating Speech Signals Utilizing Neural Networks								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla								
United States of America	ORD	Published	Published	11/085,825	21-Mar-2005			
<u>Application Title:</u> Isolating Speech Signals Using Neural Networks								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Zakarauskas, Pierre; Parveen, Shahla								

Docket Number: P04110

Disclosure Status: Filed

Disclosure Date: 20-Apr-2004

Invention Title: Minimization Of Transient Noises In A Speech Recognition System

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		CIP	Published	11/252160	17-Oct-2005			

Application Title: Minimization Of Transient Noises In A Voice Signal

Owner:

Inventors: Hetherington, Phillip Alan; Paranjpe, Shreyas A

Docket Number: P04111

Disclosure Status: Filed

Disclosure Date: 20-Apr-2004

Invention Title: Minimization Of Transient Noises In A Speech Recognition System

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Pending	11/006,935	08-Dec-2004			

Application Title: System For Suppressing Rain Noise

Owner:

Inventors: Hetherington, Phillip Alan; Groves, Adrian R.

Docket Number: P04119

Disclosure Status: Filed

Disclosure Date: 07-Jun-2004

Invention Title: Repetitive Transient Noise Removal

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Published	11/331,806	13-Jan-2006			

Application Title: Repetitive Transient Noise Removal

Owner:

Inventors: Hetherington, Phillip Alan; Paranjpe, Shreyas A

Docket Number: P04120

Disclosure Status: Filed

Disclosure Date: 07-Jun-2004

Invention Title: Network Dependent Speech Processing

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/218,742	02-Sep-2005			28-Jul-2006

Application Title: Network Dependent Signal Processing

Owner:

Inventors: McFarland, Sheila Joy; Hetherington, Phillip Alan; Escott, Alex

Docket Number: P04125

Disclosure Status: Filed

Disclosure Date: 24-Jun-2004

Invention Title: Period Signal Enhancement

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Published	10/973,575	26-Oct-2004			

Application Title: Period Signal Enhancement

Owner:

Inventors: Hetherington, Phillip Alan; Giesbrecht, David

Docket Number: P05002

Disclosure Status: Filed

Disclosure Date: 13-Jul-2004

Invention Title: Reverberation Estimation And Suppression

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/002,328	01-Dec-2004			

Application Title: Reverberation Estimation And Suppression System

Owner:

Inventors: Giesbrecht, David; Hetherington, Phillip Alan

Docket Number: P05003

Disclosure Status: Filed

Disclosure Date: 22-Jul-2004

Invention Title: Passing Tire Hiss Removal

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/125,052	09-May-2005			

Application Title: System For Suppressing Passing Tire Hiss

Owner:

Inventors: Hetherington, Phillip Alan; Paranjpe, Shreyas A

Docket Number: P05005

Disclosure Status: Filed

Disclosure Date: 26-Jul-2004

Invention Title: System For Adaptive Enhancement Of Speech Signal

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada	ORD	Pending		2549744	09-Jun-2006			
<u>Application Title:</u> System For Adaptive Enhancement Of Speech Signal								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								
China (People's Republic)	ORD	Published		200610093086.2	20-Jun-2006			
<u>Application Title:</u> System For Adaptive Enhancement Of Speech Signal								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								
European Patent Convention	ORD	Published		06012166.2	13-Jun-2006			
<u>Application Title:</u> System For Adaptive Enhancement Of Speech Signal								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								
Japan	ORD	Published		2006-164641	14-Jun-2006			
<u>Application Title:</u> System For Adaptive Enhancement Of Speech Signal								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								
Korea, Republic of	ORD	Pending		10-2006-0055210	20-Jun-2006			
<u>Application Title:</u> System For Adaptive Enhancement Of Speech Signal								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								
United States of America	ORD	Published		11/167,955	28-Jun-2005			
<u>Application Title:</u> System And Method For Adaptive Enhancement Of Speech Signals								
<u>Owner:</u>								
<u>Inventors:</u> Giesbrecht, David; Hetherington, Phillip Alan								

PATENT

Docket Number: P05009

Disclosure Status: Filed

Disclosure Date: 16-Aug-2004

Invention Title: System For Adjustment Of Parameters Depending On Vehicle State

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/031,373	06-Jan-2005			

Application Title: Vehicle State Based Parameter Adjustment System

Owner:

Inventors: Escott, Alex

Docket Number: P05024

Disclosure Status: Filed

Disclosure Date: 13-Oct-2004

Invention Title: System For Improving Search Quality And Intelligibility

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada		PCT	Pending	2604859	23-Mar-2006			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								
China (People's Republic)		PCT	Published	200680013216.5	23-Mar-2006			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								
European Patent Convention		PCT	Published	06721706.7	23-Mar-2006			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								
Japan		PCT	Published	2008-506891	23-Mar-2006			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								
Korea, Republic of		PCT	Pending	10-2007-7023430	23-Mar-2006			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								
United States of America		ORD	Pending	11/110,556	20-Apr-2005			
<u>Application Title:</u> System For Improving Speech Quality And Intelligibility								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman								

PATENT

Docket Number: E05028

Disclosure Status: Filed

Disclosure Date: 22-Oct-2004

Invention Title: Dynamic Real-Time Cross-Fading Of Voice Prompts

Business Unit: QNX Software Systems (Wavemakers), 1 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Pending	11/139,028	26-May-2005			

Application Title: Dynamic Real-Time Cross-Fading Of Voice Prompts

Owner:

Inventors: Escott, Alex; Taylor, Norrie K

Docket Number: P05045

Disclosure Status: Filed

Disclosure Date: 09-Dec-2004

Invention Title: Frequency Extension Of Harmonic Signals

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Pending	11/168,654	28-Jun-2005			

Application Title: Frequency Extension Of Harmonic Signals

Owner:

Inventors: Giesbrecht, David; Hetherington, Phillip Alan; Li, Xueman

Docket Number: P05055

Disclosure Status: Filed

Disclosure Date: 04-Jan-2005

Invention Title: Short Term Periodic Signal Enhancement

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Published	11/102,251	08-Apr-2005			

Application Title: Periodic Signal Enhancement System

Owner:

Inventors: Nongpiur, Rajeev; Giesbrecht, David; Hetherington, Phillip Alan

Docket Number: P05058

Disclosure Status: Filed

Disclosure Date: 10-Jan-2005

Invention Title: Periodic Signal Enhancement Algorithm

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Published	11/101,796	08-Apr-2005			

Application Title: Periodic Signal Enhancement System

Owner:

Inventors: Nongpiur, Rajeev; Giesbrecht, David; Hetherington, Phillip Alan

Docket Number: P05066

Disclosure Status: Filed

Disclosure Date: 16-Feb-2005

Invention Title: System For Adaptive Control Of Gain

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Published	11/130,080	16-May-2005			

Application Title: Adaptive Control Gain

Owner:

Inventors: Escott, Alex; Hetherington, Phillip Alan

Docket Number: P05092

Disclosure Status: Filed

Disclosure Date: 09-Mar-2005

Invention Title: In-Situ Speech Reinforcement System

Business Unit: QNX Software Systems (Wavemakers), | 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD	Published		11/287,089	22-Nov-2005			

Application Title: In-Situ Speech Reinforcement System

Owner:

Inventors: Hetherington, Phillip Alan; Escott, Alex

Docket Number: P05093

Disclosure Status: Filed

Disclosure Date: 18-Mar-2005

Invention Title: System For Synchronous Data Communication Over Voice Band Robust To Noise

Business Unit: QNX Software Systems (Wavemakers), 425.336
(1055) Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Published	11/301,675	13-Dec-2005			

Application Title: System For Data Communication Over Voice Band Robust To Noise

Owner:

Inventors: Hetherington, Phillip Alan

Patent Master List (by Docket Number)

Docket Number: P05096

Disclosure Status: Filed

Disclosure Date: 30-Mar-2005

Invention Title: Tonal Noise Robust Pitch Estimation

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD	Published		11/131,150	17-May-2005			

Application Title: Signal Processing System For Tonal Noise Robustness

Owner:

Inventors: Heitherington, Phillip Alan; Escott, Alex

Docket Number: P05098

Disclosure Status: Filed **Disclosure Date:** 01-Apr-2005

Invention Title: Speech End pointing Based on Voice

Business Unit: QNX Software Systems (Wavemakers), 1425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Patent Number	Issue Date	Expiration Date
China (People's Republic)		PCT	Published	20068000746.6			
Application Title: Speech End Pointer							
Owner:							
Inventors: Hetherington, Phillip Alan; Escott, Alex; Fallat, Mark							
European Patent Convention		PCT	Published	06721766.1			
Application Title: Speech End Pointer							
Owner:							
Inventors: Hetherington, Phillip Alan; Escott, Alex; Fallat, Mark							
Japan		PCT	Published	2007-524151			
Application Title: Speech End Pointer							
Owner:							
Inventors: Hetherington, Phillip Alan; Escott, Alex; Fallat, Mark							
United States of America		ORD	Published	11/152,922			
Application Title: Speech End-Pointer							
Owner:							
Inventors: Hetherington, Phillip Alan; Escott, Alex; Fallat, Mark							
United States of America	P	CIP	Published	11/804,633			
Application Title: Speech End-Pointer							
Owner:							
Inventors: Hetherington, Phillip Alan; Escott, Alex; Fallat, Mark							

PATENT

Docket Number: P06011

Disclosure Status: Filed

Disclosure Date: 12-Aug-2005

Invention Title: Periodic Signal Enhancement (PSE) Algorithm In High Low-Frequency And High Tonal-Noise Environments

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Published	11/317,762	23-Dec-2005			

Application Title: Advanced Periodic Signal Enhancement

Owner:

Inventors: Nongpiur, Rajeev; Hetherington, Phillip Alan

Docket Number: P06012

Disclosure Status: Filed

Disclosure Date: 12-Aug-2005

Invention Title: High Frequency Compression for Improving Speech Intelligibility

Business Unit: QNX Software Systems (Wavemakers), 1 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada	ORD	Pending		2569221	29-Nov-2006			
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								
China (People's Republic)	ORD	Published		200610064755.3	29-Nov-2006			
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								
European Patent Convention	ORD	Pending		06024650.1	28-Nov-2006			
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								
Japan	ORD	Published		2006-321499	29-Nov-2006			
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								
Korea, Republic of	ORD	Granted		10-2006-0119849	30-Nov-2006	0843926	27-Jun-2008	30-Nov-2026
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								
United States of America	P	CIP	Published	11/298,053	09-Dec-2005			
Application Title: System For Improving Speech Intelligibility Through High Frequency Compression								
Owner:								
Inventors: Hetherington, Phillip Alan; Li, Xueman								

PATENT

Docket Number: P06013

Disclosure Status: Filed

Disclosure Date: 16-Aug-2005

Invention Title: Adaptive Filter For Pitch Extraction

Business Unit: QNX Software Systems (Wavemakers), 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Published	11/298,052	09-Dec-2005			

Application Title: Adaptive Filter For Pitch Extraction

Owner:

Inventors: Nongpiur, Rajeev; Heitherington, Phillip Alan

Docket Number: P06015

Disclosure Status: Filed

Disclosure Date: 18-Aug-2005

Invention Title: Bandwidth Extension Of Narrowband Speech

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
China (People's Republic)	ORD	Published		200610169950.2	25-Dec-2006			
<u>Application Title:</u> Bandwidth Extension Of Narrowband Speech								
<u>Owner:</u>								
<u>Inventors:</u> Nongpiur, Rajeev; Li, Xueman; Hetherington, Phillip Alan								
European Patent Convention	ORD	Published		06025876.1	13-Dec-2006			
<u>Application Title:</u> Bandwidth Extension Of Narrowband Speech								
<u>Owner:</u>								
<u>Inventors:</u> Nongpiur, Rajeev; Li, Xueman; Hetherington, Phillip Alan								
Japan	ORD	Published		2006-337366	14-Dec-2006			
<u>Application Title:</u> Bandwidth Extension Of Narrowband Speech								
<u>Owner:</u>								
<u>Inventors:</u> Nongpiur, Rajeev; Li, Xueman; Hetherington, Phillip Alan								
United States of America	ORD	Published		1/317,761	23-Dec-2005			
<u>Application Title:</u> Bandwidth Extension Of Narrowband Speech								
<u>Owner:</u>								
<u>Inventors:</u> Nongpiur, Rajeev; Li, Xueman; Hetherington, Phillip Alan								

PATENT

REEL: 031012 FRAME: 0359

Patent Master List (by Docket Number)

Docket Number: P06017

Disclosure Status: Filed

Disclosure Date: 21-Sep-2005

Invention Title: Clock Drift Synchronization Method

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD	Published		11/504,948	16-Aug-2006			

Application Title: Clock Synchronization Of Data Streams

Owner:

Inventors: Escott, Alex

Docket Number: P06047

Disclosure Status: Filed

Disclosure Date: 08-Nov-2005

Invention Title: Speech Synthesis With Artificial Excitation Signal

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/041,302	03-Mar-2008			

Application Title: Speech Synthesis System Having Artificial Excitation Signal

Owner:

Inventors: Parveen, Shahla; Li, Xueman; Hetherington, Phillip Alan; Chun Chiu, Tommy Tsz

Docket Number: P06076

Disclosure Status: Filed

Disclosure Date: 02-Feb-2006

Invention Title: Removal Of Rain Transients From Speech Using Wavelets

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/699,709	30-Jan-2007			

Application Title: Transient Noise Removal System Using Wavelets

Owner:

Inventors: Nongpiur, Rajeev; Heitherington, Phillip Alan; Pararijpe, Shreyas A

Docket Number: P06106

Disclosure Status: Filed

Disclosure Date: 28-Apr-2006

Invention Title: Sub-Band Periodic Signal Enhancement

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD	Published		11/757,768	04-Jun-2007			

Application Title: Sub-Band Periodic Signal Enhancement

Owner:

Inventors: Nongpiur, Rajeer; Hetherington, Phillip Alan

Docket Number: P06108

Disclosure Status: Filed

Disclosure Date: 28-Apr-2006

Invention Title: Robust Noise Estimation

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Canada	ORD	Pending		2585325	18-Apr-2007			12-May-2007
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								
China (People's Republic)	ORD	Published		200710102993.3	08-May-2007			12-May-2007
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								
European Patent Convention	ORD	Published		07008791.1	30-Apr-2007			12-May-2007
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								
Japan	ORD	Published		2007-113541	23-Apr-2007			12-May-2007
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								
Korea, Republic of	ORD	Pending		10-2007-0045180	09-May-2007			12-May-2007
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								
United States of America	ORD	Pending		11/644,414	22-Dec-2006			
Application Title: Robust Noise Estimation								
Owner:								
Inventors: Hetherington, Phillip Alan								

PATENT

Docket Number: P07008

Disclosure Status: Filed

Disclosure Date: 29-Aug-2006

Invention Title: Distributed Listening Intelligibility Testing Environment

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Pending	11/854,728	13-Sep-2007			

Application Title: Distributed Intelligibility Testing System

Owner:

Inventors: Cornell, John; McFarland, Sheila Joy

Docket Number: P07009

Disclosure Status: Filed

Disclosure Date: 19-Sep-2006

Invention Title: Methods For High Frequency Compression Integration

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Pending	11/645,079	22-Dec-2003			

Application Title: High Frequency Compression Integration

Owner:

Inventors: Hetherington, Phillip Alan; Li, Xueman; Escott, Alex

Docket Number: P07010

Disclosure Status: Filed

Disclosure Date: 20-Sep-2006

Invention Title: Multichannel Periodic Signal Enhancement (PSE)

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	P	CIP	Pending	11/849,009	31-Aug-2007			

Application Title: Multichannel Periodic Signal Enhancement (PSE) System

Owner:

Inventors: Nongpiur, Rajeev; Heitherington, Phillip Alan

Docket Number: E07062

Disclosure Status: Filed

Disclosure Date: 22-Dec-2006

Invention Title: Simplified System For Karaoke

Business Unit: QNX Software Systems (Wavemakers), 1 425.336
(1055)

Bus. Unit Ref.:

Attorneys: DLA JD

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Pending	12/264,190	03-Nov-2008			

Application Title: Simplified System For Karaoke

Owner:

Inventors: Hetherington, Phillip Alan; Paranjpe, Shreyas A

Docket Number: P07063

Disclosure Status: Filed

Disclosure Date: 22-Dec-2006

Invention Title: Noise Reduction with Integrated Tonal Noise Reduction

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: DLA JD

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Published	11/961,715	20-Dec-2007			25-Jul-2008

Application Title: Noise Reduction with Integrated Tonal Noise Reduction

Owner:

Inventors: Hetherington, Phillip Alan; Li, Xueman

Docket Number: P07064

Disclosure Status: Filed

Disclosure Date: 22-Dec-2006

Invention Title: A Time-Frequency Varying Approach For Speech Enhancement

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: DLA JD

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/961,681	20-Dec-2007			04-Jan-2008

Application Title: A Specto-Temporal Varying Approach for Speech Enhancement

Owner:

Inventors: Hetherington, Phillip Alan; Li, Xueman

Docket Number: P07074

Disclosure Status: Filed

Disclosure Date: 23-Jan-2007

Invention Title: Fast Acoustic Echo Cancellation

Business Unit: ONX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/771,258	29-Jun-2007			

Application Title: Fast Acoustic Cancellation

Owner:

Inventors: Hetherington, Phillip Alan; Paranjpe, Shreyas A

Docket Number: F07076

Disclosure Status: Filed

Disclosure Date: 26-Jan-2007

Invention Title: Adaptive Linear Predictive Coding In The Enhancement Of Speech Signals

Business Unit: QNX Software Systems (Wavemakers),I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/804,577	17-May-2007			

Application Title: Adaptive Linear Predictive Coding Noise Reduction System

Owner:

Inventors: Nongpiur, Rajeev; Hetherington, Phillip Alan

Patent Master List (by Docket Number)

Docket Number: P07082

Disclosure Status: Filed

Disclosure Date: 09-Feb-2007

Invention Title: Adaptive Noise Model Activation Based On Noise Identification And Tracking

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: RPH

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/023,381	31-Jan-2008			

Application Title: Adaptive Noise Recognition System

Owner:

Inventors: Rempel, Rod

Docket Number: P07088

Disclosure Status: Filed

Disclosure Date: 14-Feb-2007

Invention Title: High Frequency Bandwidth Extension In The Time Domain

Business Unit: QNX Software Systems (Wavemakers), J 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	11/809,952	04-Jun-2007			

Application Title: High-Frequency Bandwidth Extension in the Time Domain

Owner:

Inventors: Nongpiur, Rajeev; Hetherington, Phillip Alan

Docket Number: P07096

Disclosure Status: Filed

Disclosure Date: 23-Mar-2007

Invention Title: Siren Detection

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Pending	12/014,686	15-Jan-2008			

Application Title: Dynamic Siren Detection And Notification System

Owner:

Inventors: Hetherington, Phillip Alan; Mohan, Glenn Andrew; Gryc, Andy

Docket Number: P07135

Disclosure Status: Filed

Disclosure Date: 11-Jun-2007

Invention Title: Time Domain Receive Side Dynamic Control

Business Unit: QNX Software Systems (Wavemakers), 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	11/940,920	15-Nov-2007			

Application Title: Time Domain Receive-Side Dynamic Control

Owner:

Inventors: Nongpiur, Rajeev

Docket Number: P07138

Disclosure Status: Filed

Disclosure Date: 13-Jun-2007

Invention Title: Targeted Speech

Business Unit: QNX Software Systems (Wavemakers), 1 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Published	12/079,376	26-Mar-2008			

Application Title: Targeted Speech

Owner:

Inventors: Hetherington, Phillip Alan; Fallat, Mark

Docket Number: P07139

Disclosure Status: Filed

Disclosure Date: 13-Jun-2007

Invention Title: Global Systems for Mobile Communications (Cellular Phone Technology) Buzz Detector

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/070,798	21-Feb-2008			

Application Title: Interference Detector

Owner:

Inventors: Fallat, Mark; Sahota, Derek

Docket Number: P07141

Disclosure Status: Filed

Disclosure Date: 22-Jun-2007

Invention Title: Dynamic Noise Reduction

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
European Patent Convention	ORD	Published		08018600.0	23-Oct-2008			
<u>Application Title:</u> Dynamic Noise Reduction								
<u>Owner:</u>								
<u>Inventors:</u> Li, Xueman; Hetherington, Phillip Alan; Nongpiur, Rajeey; Linseisen, Frank								
Japan	ORD	Published		2008-273648	23-Oct-2008			
<u>Application Title:</u> Dynamic Noise Reduction								
<u>Owner:</u>								
<u>Inventors:</u> Li, Xueman; Hetherington, Phillip Alan; Nongpiur, Rajeey; Linseisen, Frank								
United States of America	ORD	Pending		11/923,358	24-Oct-2007			
<u>Application Title:</u> Dynamic Noise Reduction								
<u>Owner:</u>								
<u>Inventors:</u> Li, Xueman; Hetherington, Phillip Alan; Nongpiur, Rajeey; Linseisen, Frank								
United States of America	P	CIP	Published	12/126,682	23-May-2008			
<u>Application Title:</u> Speech Enhancement via Partial Spectral Reconstruction								
<u>Owner:</u>								
<u>Inventors:</u> Li, Xueman; Hetherington, Phillip Alan; Nongpiur, Rajeey; Linseisen, Frank								

Docket Number: P08003

Disclosure Status: Filed

Disclosure Date: 26-Jul-2007

Invention Title: Video Phone System

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Published	12/186,264	05-Aug-2008			

Application Title: Video Phone System

Owner:

Inventors: Hetherington, Phillip Alan; Vaira, Mario; Escott, Alex

Docket Number: P08024

Disclosure Status: Filed

Disclosure Date: 14-Sep-2007

Invention Title: Remote Control Server Protocol (RCSP)

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/056,618	27-Mar-2008			

Application Title: Remote Control Server Protocol System

Owner:

Inventors: Taylor, Norrie K

Docket Number: P08025

Disclosure Status: Filed

Disclosure Date: 25-Sep-2007

Invention Title: Robust Voice Detector For Receive-Side Automatic Gain Control (AGC)

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	11/953,629	10-Dec-2007			

Application Title: Robust Noise Detector For Receive-Side Automatic Gain Control (AGC)

Owner:

Inventors: Nongpiur, Rajeev; MacDonald, Kyle

Docket Number: P08028

Disclosure Status: Filed

Disclosure Date: 28-Sep-2007

Invention Title: Real-Time System for Frequency Domain Noise Injection

Business Unit: QNX Software Systems (Wavemakers), | 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	11/930,968	31-Oct-2007			

Application Title: System For Comfort Noise Injection

Owner:

Inventors: Li, Xueman; Linseisen, Frank; MacDonald, Kyle

Docket Number: P08050

Disclosure Status: Filed

Disclosure Date: 30-Oct-2007

Invention Title: Microphone Mixer With Adaptive Post Filtering

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/264,791	04-Nov-2008			05-Nov-2008

Application Title: Mixer With Adaptive Post Filtering

Owner:

Inventors: Hetherington, Phillip Alan

Docket Number: P08084

Disclosure Status: Filed

Disclosure Date: 04-Jan-2008

Invention Title: Subband Processing Complexity Reduction

Business Unit: QNX Software Systems (Wavemakers), 1 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	V	PRO	Pending	61/148,661	30-Jan-2009			30-Jan-2010

Application Title: Subband Processing Complexity Reduction

Owner:

Inventors: Paranjpe, Shreyas A

Docket Number: P08108

Disclosure Status: Filed

Disclosure Date: 01-Apr-2008

Invention Title: Robust Downlink Speech and Noise Detector

Business Unit: QNX Software Systems (Wavemakers), | 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
European Patent Convention	ORD	ORD	Pending		28-Apr-2009			30-Apr-2009
<u>Application Title:</u> Robust Downlink Speech and Noise Detector								
<u>Owner:</u>								
Inventors: Hetherington, Phillip Alan								
United States of America	ORD	ORD	Pending	12/428,811	23-Apr-2009			30-Apr-2009
<u>Application Title:</u> Robust Downlink Speech and Noise Detector								
<u>Owner:</u>								
Inventors: Hetherington, Phillip Alan								
United States of America	V	PRO	Pending	61/125,949	30-Apr-2008			30-Apr-2009
<u>Application Title:</u> Robust Downlink Speech and Noise Detector								
<u>Owner:</u>								
Inventors: Hetherington, Phillip Alan								

Docket Number: R08115

Disclosure Status: Filed

Disclosure Date: 28-Apr-2008

Invention Title: System For Measuring Double Talk

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/432,337	29-Apr-2009			30-Apr-2009
<u>Application Title:</u> Measuring Double Talk Performance								
<u>Owner:</u>								
<u>Inventors:</u> Paranjpe, Shreyas A								
United States of America	V	PRO	Pending	61/049,270	30-Apr-2008			30-Apr-2009
<u>Application Title:</u> Measuring Double Talk Performance								
<u>Owner:</u>								
<u>Inventors:</u> Paranjpe, Shreyas A								

Docket Number: P08133

Disclosure Status: Filed

Disclosure Date: 20-May-2008

Invention Title: Model Based Speech Enhancement

Business Unit: QNX Software Systems (Wavemakers), 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	V	PRO	Pending	61/055,651	23-May-2008			23-May-2009

Application Title: Model Based Speech Enhancement

Owner:

Inventors: Paranjpe, Shreyas A; Hetherington, Phillip Alan; Li, Xue-man

Docket Number: P08134

Disclosure Status: Filed

Disclosure Date: 22-May-2008

Invention Title: Speech Enhancement System

Business Unit: QNX Software Systems (Wavemakers), 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/471,072	22-May-2009			
Application Title: Speech Enhancement								
Owner:								
Inventors: Paranjpe, Shreyas A; Hetherington, Phillip Alan; Li, Xueman								
United States of America	V	PRO	Pending	61/055,859	23-May-2008			23-May-2009

Application Title: Speech Enhancement System

Owner:

Inventors: Paranjpe, Shreyas A; Hetherington, Phillip Alan; Li, Xueman

Docket Number: P08135

Disclosure Status: Filed

Disclosure Date: 22-May-2008

Invention Title: Robust Ambient Noise Compensation

Business Unit: QNX Software Systems (Wavemakers), 1425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending	12/471,093	22-May-2009			
<u>Application Title:</u> Robust Ambient Noise Compensation System Robust to High Excitation Noise								
<u>Owner:</u>								
Inventors: Hetherington, Phillip Alan								
United States of America	V	PRO	Pending	61/055,913	23-May-2008			23-May-2009

Application Title: Ambient Noise Compensation System Robust to High Excitation Noise

Owner:

Inventors: Hetherington, Phillip Alan

Docket Number: P08136

Disclosure Status: Filed

Disclosure Date: 23-May-2008

Invention Title: Minimization of Speech Codec Noise Gating

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Pending		22-May-2008			
<u>Application Title:</u> Speech Enhancement with Minimum Gating								
<u>Owner:</u>								
<u>Inventors:</u> Hetherington, Phillip Alan; Li, Xueman; Paranjpe, Shreyas A								
United States of America	V	PRO	Pending	61/055,949	23-May-2008			23-May-2009

Application Title: Minimization of Speech Code Noise Gating

Owner:

Inventors: Hetherington, Phillip Alan; Li, Xueman; Paranjpe, Shreyas A

Docket Number: P93037

Disclosure Status: Filed

Disclosure Date:

Invention Title: Tracking Platform System

Business Unit: QNX Software Systems (Wavemakers), 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JAC

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	C	CON	Granted	08/440,425	12-May-1995	5,526,433	11-Jun-1996	11-Jun-2013

Application Title: Tracking Platform System

Owner:

Inventors: Zakarauskas, Pierre; Cynader, Max S.

Docket Number: P99083

Disclosure Status: Filed

Disclosure Date:

Invention Title: System And Method For Classification Of Sound Sources

Business Unit: CNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America	ORD		Granted	09/385975	30-Aug-1999	7,117,149	03-Oct-2006	30-Aug-2019

Application Title: Sound Source Classification

Owner:

Inventors: Zakarauskas, Pierre

United States of America

11/540,153

29-Sep-2006

Application Title: Sound Source Classification

Owner:

Inventors: Zakarauskas, Pierre

Docket Number: P99084

Disclosure Status: Filed

Disclosure Date:

Invention Title: Method For Enhancement Of Acoustic Signal In Noise

Business Unit: QNX Software Systems (Wavemakers), I 425.336
(1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
Germany	EPC	Granted		00955497.3	11-Aug-2000	1208563	19-Apr-2006	11-Aug-2020
Application Title: Noisy Acoustic Signal Enhancement								
Owner:								
Inventors: Zakarauskas, Pierre								
Japan	PCI	Pending		2001-517379	11-Aug-2000			
Application Title: Enhancement Of Acoustic Signal In Noise								
Owner:								
Inventors: Zakarauskas, Pierre								
United States of America	ORD	Granted		09/375309	16-Aug-1999	6,910,011	21-Jun-2005	16-Aug-2019
Application Title: Noisy Acoustic Signal Enhancement								
Owner:								
Inventors: Zakarauskas, Pierre								
United States of America	C	CON	Granted	11/136829	24-May-2005	7,231,347	12-Jun-2007	16-Aug-2019
Application Title: Acoustic Signal Enhancement System								
Owner:								
Inventors: Zakarauskas, Pierre								

PATENT

REEL: 031012 FRAME: 0394

Docket Number: P99085

Disclosure Status: Filed

Disclosure Date:

Invention Title: Method For Monitoring The Quality Of An Acoustic Signal

Business Unit: QNX Software Systems (Wavemakers), | 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Granted	09/576,656	22-May-2000	7,058,190	06-Jun-2006	22-May-2020

Application Title: Method For Improving The Quality Of Acoustic Signal

Owner:

Inventors: Zakarauskas, Pierre; Sones, Richard; Rempel, Rod; Linseisen, Frank

Docket Number: F99086

Disclosure Status: Filed

Disclosure Date:

Invention Title: Method For Estimating The Distance Of An Acoustic Signal

Business Unit: QNX Software Systems (Wavemakers), I 425.336 (1055)

Bus. Unit Ref.:

Attorneys: BHGL JFN GKSS

Country	Sub Case	Case Type	Status	Application Number	Filing Date	Patent Number	Issue Date	Expiration Date
United States of America		ORD	Granted	09/434,781	05-Nov-1999	6,243,322	05-Jun-2001	05-Nov-2019

Application Title: Estimating The Distance Of An Acoustic Signal

Owner:

Inventors: Zakarauskas, Pierre