

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6115901

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
WEI DAI	11/29/2017
SAMEER JADHAV	12/07/2017
SREEVANI KOMERISHEETY	11/29/2017
BRANDON CONLEY	12/01/2017
RECEIVING PARTY DATA	
Name:	ROVI GUIDES, INC.
Street Address:	2160 GOLD STREET
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95002
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16765584
CORRESPONDENCE DATA	
Fax Number:	(646)219-6229
<i>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.</i>	
Phone:	6469732500
Email:	sera.cho@hglaw.com
Correspondent Name:	HALEY GUILIANO LLP
Address Line 1:	75 BROAD STREET
Address Line 4:	NEW YORK, NEW YORK 10004
ATTORNEY DOCKET NUMBER:	003597-1790-301
NAME OF SUBMITTER:	SERA CHO
SIGNATURE:	/Sera Cho/
DATE SIGNED:	05/20/2020
Total Attachments: 8	
source=003599-1790-301-Assignment#page1.tif	
source=003599-1790-301-Assignment#page2.tif	
source=003599-1790-301-Assignment#page3.tif	

source=003599-1790-301-Assignment#page4.tif

source=003599-1790-301-Assignment#page5.tif

source=003599-1790-301-Assignment#page6.tif

source=003599-1790-301-Assignment#page7.tif

source=003599-1790-301-Assignment#page8.tif

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, We, the undersigned,

Wei Dai, Sameer Jadhav, Sreevani Komerisheety, and Brandon Conley

who have created a certain invention for which an International Patent Application is being filed under the Patent Cooperation Treaty in the United States Receiving Office concurrently herewith and is entitled:

**SYSTEMS AND METHODS FOR DYNAMICALLY ADJUSTING NOTIFICATION
FREQUENCY FOR AN EVENT**

Do hereby sell, assign and transfer to Rovi Guides, Inc., a corporation of Delaware, having a place of business at 2160 Gold Street, San Jose, CA 95002, its successors, assigns, and legal representatives, the full and exclusive right to said invention and any application directed to said invention in the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, and in any and all International Patent Applications directed to said invention filed, in any receiving office, under the Patent Cooperation Treaty, designating any or all Patent Cooperation Treaty member countries, including Albania (AL), Algeria (DZ), Angola (AO), Antigua & Barbuda (AG), Armenia (AM), Australia (AU), Austria (AT), Azerbaijan (AZ), Bahrain (BH), Barbados (BB), Belarus (BY), Belgium (BE), Belize (BZ), Benin (BJ), Bosnia and Herzegovina (BA), Botswana (BW), Brazil (BR), Bulgaria (BG), Brunei Darussalam (BN), Burkina Faso (BF), Cambodia (KH), Cameroon (CM), Canada (CA), Central African Republic (CF), Chad (TD), Chile (CL), China (CN), Colombia (CO), Comoros (KM), Congo (CG), Costa Rica (CR), Côte d'Ivoire (CI), Croatia (HR), Cuba (CU), Cyprus (CY), Czechia (CZ), Democratic People's Republic of Korea (KP), Denmark (DK), Djibouti (DJ), Dominica (DM), Dominican Republic (DO), Ecuador (EC), Egypt (EG), El Salvador (SV), Equatorial Guinea (GQ), Estonia (EE), Finland (FI), France (FR), Gabon (GA), Gambia (GM), Georgia (GE), Germany (DE), Ghana (GH), Greece (GR), Grenada (GD), Guatemala (GT), Guinea (GN), Guinea Bissau (GW), Honduras (HN), Hungary (HU), Iceland (IS), India (IN), Indonesia (ID), Ireland (IE), Islamic Republic of Iran (IR), Israel (IL), Italy (IT), Japan (JP), Jordan (JO), Kazakhstan (KZ), Kenya (KE), Kuwait (KW), Kyrgyzstan (KG), Lao People's Democratic Republic (LA), Latvia (LV), Lesotho (LS), Liberia (LR), Libya (LY), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Madagascar (MG), the former Yugoslav Republic of Macedonia (MK), Malawi (MW), Malaysia (MY), Mali (ML), Malta (MT), Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN), Montenegro (ME), Morocco (MA), Mozambique (MZ), Namibia (NA), Netherlands (NL), New Zealand (NZ), Nicaragua (NI), Niger (NE), Nigeria (NG), Norway (NO), Oman (OM), Panama (PA), Papua New Guinea (PG), Peru (PE), Philippines (PH), Poland (PL), Portugal (PT), Qatar (QA), Republic of Korea (KR), Republic of Moldova (MD), Romania (RO), Russian Federation (RU), Rwanda (RW), Saint Lucia (LC), Saint Kitts and Nevis (KN), Saint Vincent and the Grenadines (VC), San Marino (SM), São Tomé and Príncipe (ST), Saudi Arabia (SA), Senegal (SN), Serbia (RS), Seychelles (SC), Sierra Leone (SL), Singapore (SG), Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden (SE), Switzerland (CH), Syrian Arab Republic (SY), Tajikistan (TJ), United Republic of Tanzania (TZ), Togo (TG), Thailand (TH), Trinidad and Tobago (TT), Tunisia (TN), Turkey (TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA), United Arab Emirates (AE), United Kingdom (GB), United States of America (US), Uzbekistan (UZ), Viet Nam (VN), Zambia (ZM) and Zimbabwe (ZW) and all other PCT member countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefore;

Agree that Rovi Guides, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, any receiving office under the Patent Cooperation Treaty, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the

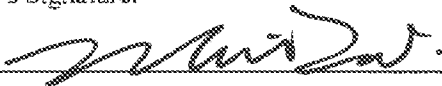
Docket#: 003599-1790-WO1
003597-1790-301

PATENT

history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF We have hereunto set our signatures on the dates indicated below.

Full Name of First Inventor: Wei Dai	
Inventor's Signature: 	Date: Month/Day/Year Nov/29/2017

Full Name of Second Inventor: Sameer Jadhav	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Sreevani Komerisheety	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Brandon Conley	
Inventor's Signature:	Date: Month/Day/Year

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, We, the undersigned,

Wei Dai, Sameer Jadhav, Sreevani Komerisheety, and Brandon Conley

who have created a certain invention for which an International Patent Application is being filed under the Patent Cooperation Treaty in the United States Receiving Office concurrently herewith and is entitled:

**SYSTEMS AND METHODS FOR DYNAMICALLY ADJUSTING NOTIFICATION
FREQUENCY FOR AN EVENT**

Do hereby sell, assign and transfer to Rovi Guides, Inc., a corporation of Delaware, having a place of business at 2160 Gold Street, San Jose, CA 95002, its successors, assigns, and legal representatives, the full and exclusive right to said invention and any application directed to said invention in the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, and in any and all International Patent Applications directed to said invention filed, in any receiving office, under the Patent Cooperation Treaty, designating any or all Patent Cooperation Treaty member countries, including Albania (AL), Algeria (DZ), Angola (AO), Antigua & Barbuda (AG), Armenia (AM), Australia (AU), Austria (AT), Azerbaijan (AZ), Bahrain (BH), Barbados (BB), Belarus (BY), Belgium (BE), Belize (BZ), Benin (BJ), Bosnia and Herzegovina (BA), Botswana (BW), Brazil (BR), Bulgaria (BG), Brunei Darussalam (BN), Burkina Faso (BF), Cambodia (KH), Cameroon (CM), Canada (CA), Central African Republic (CF), Chad (TD), Chile (CL), China (CN), Colombia (CO), Comoros (KM), Congo (CG), Costa Rica (CR), Côte d'Ivoire (CI), Croatia (HR), Cuba (CU), Cyprus (CY), Czechia (CZ), Democratic People's Republic of Korea (KP), Denmark (DK), Djibouti (DJ), Dominica (DM), Dominican Republic (DO), Ecuador (EC), Egypt (EG), El Salvador (SV), Equatorial Guinea (GO), Estonia (EE), Finland (FI), France (FR), Gabon (GA), Gambia (GM), Georgia (GE), Germany (DE), Ghana (GH), Greece (GR), Grenada (GD), Guatemala (GT), Guinea (GN), Guinea Bissau (GW), Honduras (HN), Hungary (HU), Iceland (IS), India (IN), Indonesia (ID), Ireland (IE), Islamic Republic of Iran (IR), Israel (IL), Italy (IT), Japan (JP), Jordan (JO), Kazakhstan (KZ), Kenya (KE), Kuwait (KW), Kyrgyzstan (KG), Lao People's Democratic Republic (LA), Latvia (LV), Lesotho (LS), Liberia (LR), Libya (LY), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Madagascar (MG), the former Yugoslav Republic of Macedonia (MK), Malawi (MW), Malaysia (MY), Mali (ML), Malta (MT), Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN), Montenegro (ME), Morocco (MA), Mozambique (MZ), Namibia (NA), Netherlands (NL), New Zealand (NZ), Nicaragua (NI), Niger (NE), Nigeria (NG), Norway (NO), Oman (OM), Panama (PA), Papua New Guinea (PG), Peru (PE), Philippines (PH), Poland (PL), Portugal (PT), Qatar (QA), Republic of Korea (KR), Republic of Moldova (MD), Romania (RO), Russian Federation (RU), Rwanda (RW), Saint Lucia (LC), Saint Kitts and Nevis (KN), Saint Vincent and the Grenadines (VC), San Marino (SM), São Tomé and Príncipe (ST), Saudi Arabia (SA), Senegal (SN), Serbia (RS), Seychelles (SC), Sierra Leone (SL), Singapore (SG), Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden (SE), Switzerland (CH), Syrian Arab Republic (SY), Tajikistan (TJ), United Republic of Tanzania (TZ), Togo (TG), Thailand (TH), Trinidad and Tobago (TT), Tunisia (TN), Turkey (TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA), United Arab Emirates (AE), United Kingdom (GB), United States of America (US), Uzbekistan (UZ), Viet Nam (VN), Zambia (ZM) and Zimbabwe (ZW) and all other PCT member countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefore;

Agree that Rovi Guides, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, any receiving office under the Patent Cooperation Treaty, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the

Docket#: 003599-1790-WO1
003597-1790-301

PATENT

history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF We have hereunto set our signatures on the dates indicated below.

Full Name of First Inventor: Wei Dai	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Sameer Jadhav	
Inventor's Signature: 	Date: Month/Day/Year 07/12/2017

Full Name of Third Inventor: Sreevani Komerisheety	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Brandon Conley	
Inventor's Signature:	Date: Month/Day/Year

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, We, the undersigned,

Wei Dai, Sameer Jadhav, Sreevani Komerisheety, and Brandon Conley

who have created a certain invention for which an International Patent Application is being filed under the Patent Cooperation Treaty in the United States Receiving Office concurrently herewith and is entitled:

**SYSTEMS AND METHODS FOR DYNAMICALLY ADJUSTING NOTIFICATION
FREQUENCY FOR AN EVENT**

Do hereby sell, assign and transfer to Rovi Guides, Inc., a corporation of Delaware, having a place of business at 2160 Gold Street, San Jose, CA 95002, its successors, assigns, and legal representatives, the full and exclusive right to said invention and any application directed to said invention in the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, and in any and all International Patent Applications directed to said invention filed, in any receiving office, under the Patent Cooperation Treaty, designating any or all Patent Cooperation Treaty member countries, including Albania (AL), Algeria (DZ), Angola (AO), Antigua & Barbuda (AG), Armenia (AM), Australia (AU), Austria (AT), Azerbaijan (AZ), Bahrain (BH), Barbados (BB), Belarus (BY), Belgium (BE), Belize (BZ), Benin (BJ), Bosnia and Herzegovina (BA), Botswana (BW), Brazil (BR), Bulgaria (BG), Brunei Darussalam (BN), Burkina Faso (BF), Cambodia (KH), Cameroon (CM), Canada (CA), Central African Republic (CF), Chad (TD), Chile (CL), China (CN), Colombia (CO), Comoros (KM), Congo (CG), Costa Rica (CR), Côte d'Ivoire (CI), Croatia (HR), Cuba (CU), Cyprus (CY), Czechia (CZ), Democratic People's Republic of Korea (KP), Denmark (DK), Djibouti (DJ), Dominica (DM), Dominican Republic (DO), Ecuador (EC), Egypt (EG), El Salvador (SV), Equatorial Guinea (GO), Estonia (EE), Finland (FI), France (FR), Gabon (GA), Gambia (GM), Georgia (GE), Germany (DE), Ghana (GH), Greece (GR), Grenada (GD), Guatemala (GT), Guinea (GN), Guinea Bissau (GW), Honduras (HN), Hungary (HU), Iceland (IS), India (IN), Indonesia (ID), Ireland (IE), Islamic Republic of Iran (IR), Israel (IL), Italy (IT), Japan (JP), Jordan (JO), Kazakhstan (KZ), Kenya (KE), Kuwait (KW), Kyrgyzstan (KG), Lao People's Democratic Republic (LA), Latvia (LV), Lesotho (LS), Liberia (LR), Libya (LY), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Madagascar (MG), the former Yugoslav Republic of Macedonia (MK), Malawi (MW), Malaysia (MY), Mali (ML), Malta (MT), Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN), Montenegro (ME), Morocco (MA), Mozambique (MZ), Namibia (NA), Netherlands (NL), New Zealand (NZ), Nicaragua (NI), Niger (NE), Nigeria (NG), Norway (NO), Oman (OM), Panama (PA), Papua New Guinea (PG), Peru (PE), Philippines (PH), Poland (PL), Portugal (PT), Qatar (QA), Republic of Korea (KR), Republic of Moldova (MD), Romania (RO), Russian Federation (RU), Rwanda (RW), Saint Lucia (LC), Saint Kitts and Nevis (KN), Saint Vincent and the Grenadines (VC), San Marino (SM), São Tomé and Príncipe (ST), Saudi Arabia (SA), Senegal (SN), Serbia (RS), Seychelles (SC), Sierra Leone (SL), Singapore (SG), Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden (SE), Switzerland (CH), Syrian Arab Republic (SY), Tajikistan (TJ), United Republic of Tanzania (TZ), Togo (TG), Thailand (TH), Trinidad and Tobago (TT), Tunisia (TN), Turkey (TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA), United Arab Emirates (AE), United Kingdom (GB), United States of America (US), Uzbekistan (UZ), Viet Nam (VN), Zambia (ZM) and Zimbabwe (ZW) and all other PCT member countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefore;

Agree that Rovi Guides, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, any receiving office under the Patent Cooperation Treaty, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the

history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF We have hereunto set our signatures on the dates indicated below.

Full Name of First Inventor: Wei Dai	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Sameer Jadhav	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Sreevani Komerisheety	
Inventor's Signature: <i>Sreevani</i>	Date: Month/Day/Year <i>11/29/2017</i>

Full Name of Fourth Inventor: Brandon Conley	
Inventor's Signature:	Date: Month/Day/Year

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, We, the undersigned,

Wei Dai, Sameer Jadhav, Sreevani Komerisheety, and Brandon Conley

who have created a certain invention for which an International Patent Application is being filed under the Patent Cooperation Treaty in the United States Receiving Office concurrently herewith and is entitled:

**SYSTEMS AND METHODS FOR DYNAMICALLY ADJUSTING NOTIFICATION
FREQUENCY FOR AN EVENT**

Do hereby sell, assign and transfer to Rovi Guides, Inc., a corporation of Delaware, having a place of business at 2160 Gold Street, San Jose, CA 95002, its successors, assigns, and legal representatives, the full and exclusive right to said invention and any application directed to said invention in the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, and all other applications for Letters Patent relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions, agreements, acts, and treaties, and in any and all International Patent Applications directed to said invention filed, in any receiving office, under the Patent Cooperation Treaty, designating any or all Patent Cooperation Treaty member countries, including Albania (AL), Algeria (DZ), Angola (AO), Antigua & Barbuda (AG), Armenia (AM), Australia (AU), Austria (AT), Azerbaijan (AZ), Bahrain (BH), Barbados (BB), Belarus (BY), Belgium (BE), Belize (BZ), Benin (BJ), Bosnia and Herzegovina (BA), Botswana (BW), Brazil (BR), Bulgaria (BG), Brunei Darussalam (BN), Burkina Faso (BF), Cambodia (KH), Cameroon (CM), Canada (CA), Central African Republic (CF), Chad (TD), Chile (CL), China (CN), Colombia (CO), Comoros (KM), Congo (CG), Costa Rica (CR), Côte d'Ivoire (CI), Croatia (HR), Cuba (CU), Cyprus (CY), Czechia (CZ), Democratic People's Republic of Korea (KP), Denmark (DK), Djibouti (DJ), Dominica (DM), Dominican Republic (DO), Ecuador (EC), Egypt (EG), El Salvador (SV), Equatorial Guinea (GQ), Estonia (EE), Finland (FI), France (FR), Gabon (GA), Gambia (GM), Georgia (GE), Germany (DE), Ghana (GH), Greece (GR), Grenada (GD), Guatemala (GT), Guinea (GN), Guinea Bissau (GW), Honduras (HN), Hungary (HU), Iceland (IS), India (IN), Indonesia (ID), Ireland (IE), Islamic Republic of Iran (IR), Israel (IL), Italy (IT), Japan (JP), Jordan (JO), Kazakhstan (KZ), Kenya (KE), Kuwait (KW), Kyrgyzstan (KG), Lao People's Democratic Republic (LA), Latvia (LV), Lesotho (LS), Liberia (LR), Libya (LY), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Madagascar (MG), the former Yugoslav Republic of Macedonia (MK), Malawi (MW), Malaysia (MY), Mali (ML), Malta (MT), Mauritania (MR), Mexico (MX), Monaco (MC), Mongolia (MN), Montenegro (ME), Morocco (MA), Mozambique (MZ), Namibia (NA), Netherlands (NL), New Zealand (NZ), Nicaragua (NI), Niger (NE), Nigeria (NG), Norway (NO), Oman (OM), Panama (PA), Papua New Guinea (PG), Peru (PE), Philippines (PH), Poland (PL), Portugal (PT), Qatar (QA), Republic of Korea (KR), Republic of Moldova (MD), Romania (RO), Russian Federation (RU), Rwanda (RW), Saint Lucia (LC), Saint Kitts and Nevis (KN), Saint Vincent and the Grenadines (VC), San Marino (SM), São Tomé and Príncipe (ST), Saudi Arabia (SA), Senegal (SN), Serbia (RS), Seychelles (SC), Sierra Leone (SL), Singapore (SG), Slovakia (SK), Slovenia (SI), South Africa (ZA), Spain (ES), Sri Lanka (LK), Sudan (SD), Swaziland (SZ), Sweden (SE), Switzerland (CH), Syrian Arab Republic (SY), Tajikistan (TJ), United Republic of Tanzania (TZ), Togo (TG), Thailand (TH), Trinidad and Tobago (TT), Tunisia (TN), Turkey (TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA), United Arab Emirates (AE), United Kingdom (GB), United States of America (US), Uzbekistan (UZ), Viet Nam (VN), Zambia (ZM) and Zimbabwe (ZW) and all other PCT member countries, including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof, and any substitute applications therefore;

Agree that Rovi Guides, Inc., hereinafter referred to as Assignee, may apply for and receive Letters Patent for said invention and said inventions, hereinafter referred to as said invention, in its own name, in the United States, its territorial possessions, any receiving office under the Patent Cooperation Treaty, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reissues, extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the

Docket#: 003599-1790-WO1
003597-1790-301

PATENT

history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

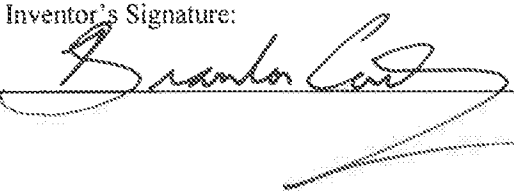
Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

IN TESTIMONY WHEREOF We have hereunto set our signatures on the dates indicated below.

Full Name of First Inventor: Wei Dai	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Sameer Jadhav	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Sreevani Komerisheety	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Brandon Conley	
Inventor's Signature: 	Date: Month/Day/Year 12/01/2017