

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5527383

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MICHAEL MCCARTY	12/05/2016
MIKHAIL AKSENFELD	12/05/2016
VAZRIK ISRAELIAN	12/06/2016
GLEN E. ROE	12/06/2016
COREY TULIS	12/05/2016
DAVID WITTKÉ	12/05/2016
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:	16461698
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:	linda.blake@hglaw.com
Correspondent Name:	HALEY GUILIANO LLP
Address Line 1:	75 BROAD STREET
Address Line 2:	SUITE 1000
Address Line 4:	NEW YORK, NEW YORK 10004
ATTORNEY DOCKET NUMBER:	003597-1592-301
NAME OF SUBMITTER:	LINDA BLAKE
SIGNATURE:	/Linda Blake/
DATE SIGNED:	05/16/2019

Total Attachments: 12

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ASSIGNMENT

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

Michael McCarty;
Mikhail Aksenfeld;
Vazrik Israelian;
Glen E. Roe;
Corey Tulis; and
David Wittke

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 LINKING SEGMENTS OF MEDIA GUIDANCE DATA FOR EFFICIENT OPERATION OF MEMORY CONSTRAINED DEVICES

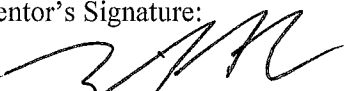
Do hereby sell, assign and transfer to Rovi Guides, Inc., a corporation of Delaware, having a place of business at Two Circle Star Way, San Carlos, CA 94070, its successors, assigns, and legal representatives, the full and exclusive right to said invention and any application directed to said invention 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), Burkina Faso (BF), Brunei Darussalam (BN), 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), Czech Republic (CZ), Democratic People's Republic of Korea (KP), Denmark (DK), 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), Islamic Republic of Iran (IR), Indonesia (ID), Ireland (IE), Israel (IL), Italy (IT), Japan (JP), Kazakhstan (KZ), Kenya (KE), Kyrgyzstan (KG), Lao People's Democratic Republic (LA), Latvia (LV), Lesotho (LS), Liberia (LR), Libya (LY), Liechtenstein (LI), Lithuania (LT), Luxembourg (LU), Madagascar (MG), 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), Saudi Arabia (SA), Saint Kitts and Nevis (KN), Saint Lucia (LC), Saint Vincent and the Grenadines (VC), San Marino (SM), Sao Tome and Principe (ST), 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), Thailand (TH), The former Yugoslav Republic of Macedonia (MK), Togo (TG), Trinidad and Tobago (TT), Tunisia (TN), Turkey (TR), Turkmenistan (TM), Uganda (UG), Ukraine (UA), United Arab Emirates (AE), United Kingdom (GB), United Republic of Tanzania (TZ), 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;

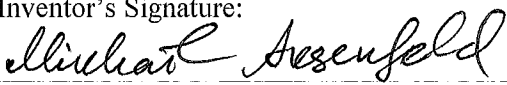
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when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, 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

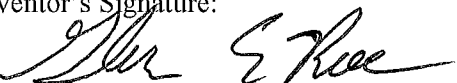
Covenant with said Assignee, its successors, assigns, or legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed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

IN TESTIMONY WHEREOF we have hereunto set our signatures on the date indicated below.

Full Name of First Inventor:	
Michael McCarty	
Inventor's Signature: 	Date: Month/Day/Year 12/5/2016

Full Name of Second Inventor:	
Mikhail Aksenfeld	
Inventor's Signature: 	Date: Month/Day/Year 12/5/2016

Full Name of Third Inventor:	
Vazrik Israelian	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor:	
Glen E. Roe	
Inventor's Signature: 	Date: Month/Day/Year 12/6/16

Full Name of Fifth Inventor:	
Corey Tulis	
Inventor's Signature:	Date: Month/Day/Year

Docket#: 003599-1592-WO1
003597-1592-301

PATENT

Full Name of Sixth Inventor: David Wittke	
Inventor's Signature:	Date: Month/Day/Year

ASSIGNMENT

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Mikhail Aksenfeld;
Vazrik Israelian;
Glen E. Roe;
Corey Tulis; and
David Wittke

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EFFICIENT OPERATION OF MEMORY CONSTRAINED DEVICES**

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Full Name of First Inventor: Michael McCarty	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Mikhail Aksenfeld	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Vazrik Israelian	
Inventor's Signature: <i>Vazrik Israelian</i>	Date: Month/Day/Year <i>12/6/16</i>

Full Name of Fourth Inventor: Glen E. Roe	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fifth Inventor: Corey Tulis	
Inventor's Signature:	Date: Month/Day/Year

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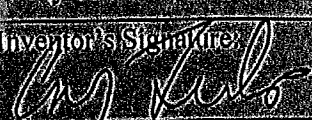
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Inventor's Signature:	Date: Month/Day/Year

Full Name of Second Inventor: Mikhail Arsenfeld	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Third Inventor: Vazrik Israelian	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Glen E. Roe	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fifth Inventor: Cory Mills	
Inventor's Signature: 	Date: Month/Day/Year 12/5/16

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Full Name of Second Inventor: Mikhail Aksenfeld	
Inventor's Signature:	Date: Month/Day/Year

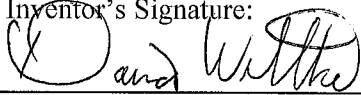
Full Name of Third Inventor: Vazrik Israelian	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fourth Inventor: Glen E. Roe	
Inventor's Signature:	Date: Month/Day/Year

Full Name of Fifth Inventor: Corey Tulis	
Inventor's Signature:	Date: Month/Day/Year

Docket#: 003599-1592-WO1
003597-1592-301

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Full Name of Sixth Inventor: David Wittke	
Inventor's Signature: 	Date: Month/Day/Year 12/05/16