

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT8391981

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
QUALCOMM INCORPORATED	02/01/2019
RECEIVING PARTY DATA	
Name:	WITRICITY CORPORATION
Street Address:	57 WATER STREET
City:	WATERTOWN
State/Country:	MASSACHUSETTS
Postal Code:	02472
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17390763
CORRESPONDENCE DATA	
Fax Number:	(949)760-9502
<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>	
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ATTORNEY DOCKET NUMBER:	WTCY.188A1C3
NAME OF SUBMITTER:	GREGORY MUNCHINSKY
SIGNATURE:	/Greg Munchinsky/
DATE SIGNED:	01/19/2024
Total Attachments: 95	
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Patent Assignment

THIS PATENT ASSIGNMENT (this "Assignment") is made effective as of 4 February, 2019 (the "Effective Date") between Qualcomm Incorporated, a Delaware corporation, having a place of business located at 5775 Morehouse Drive, San Diego, CA 92121 U.S.A. ("Qualcomm"), and WITricity Corporation, a Delaware corporation, having a place of business located at 57 Water Street, Watertown, MA 02472 ("Assignee").

WHEREAS, Qualcomm and Assignee and other Qualcomm affiliated entities have entered into an Asset Purchase Agreement dated 4 February, 2019 (the "APA"), in which, among other things, Qualcomm assigned to Assignee the Assigned Patents (as defined below); and

WHEREAS, the execution and delivery of this Assignment is a closing condition of the transaction contemplated by the APA.

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

1. **Assignment.** Subject to all existing encumbrances and rights granted prior to the Effective Date all as more particularly described in the APA, Qualcomm hereby irrevocably sells, assigns, transfers, and conveys to Assignee: (a) the issued patents and patent applications identified in the attached Attachment 1 hereto, together with any patent issuing on any such patent application identified in the attached Attachment 1 hereto, including any rights of priority in and to any of the foregoing patent applications and patents; (b) each patent and patent application throughout the world, directly or through one or more applications, that derives priority from any of the patent applications and patents described in clause (a) above, including all extensions, renewals, reissues, reexaminations, divisionals, substitutions, provisionals, continuations, continuations-in-part, conversions, prolongations, continued examinations, continued prosecution applications, and domestic and foreign counterparts that derive priority from any of the patent applications and patents described in clause (a) above, and each patent issuing on any of the foregoing items; and (c) each patent or patent application that is referenced by a terminal disclaimer filed in connection with any of the patent applications or patents identified in clause (a) or clause (b) above (the "Assigned Patents"). Notwithstanding anything to the contrary, the Assigned Patents do not include any patents or patent applications that were not assigned to Assignee pursuant to the APA, including without limitation those patents and patent applications described in the APA as being excluded from the Assigned Patents. In addition and for clarity, no action taken by Assignee or any other person or entity after the Effective Date shall result in any patent or patent application that exists as of the Effective Date and not included within clause (c) above as of the Effective Date being an Assigned Patent by reason of any such action.

2. **Patent Office Grants.** Qualcomm hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein.

3. **Prosecution and Enforcement.** Assignee will be solely responsible for the filing, prosecution, and maintenance of each of the Assigned Patents, including the payment of all fees and costs relating thereto. Assignee will be solely responsible for the defense of the Assigned Patents. For clarity, Assignee is not obligated to file, prosecute, maintain, enforce or defend any of the Assigned Patents.

4. **Disclaimer of Warranties.** Qualcomm makes no representations or warranties under this Assignment whether express or implied, with respect to the Assigned Patents. Nothing in this

Section 4 shall amend, limit or otherwise modify any express representations or warranties made under the APA.

5. **Governing Law.** This Assignment, the rights and obligations of the parties under this Assignment, and any claim or controversy directly or indirectly based upon, arising out of or related to, this Assignment or the transactions contemplated by this Assignment (whether based upon contract, tort or any other theory), including all matters of construction, validity and performance, shall be governed by and construed in accordance with the laws of the State of Delaware, determined without regard to any conflict of law provisions that would require the application of the law of any other jurisdiction.

6. **Successors and Assigns.** This Assignment shall be binding upon and inure to the benefit of the parties and their respective successors and assigns.

7. **Miscellaneous.** Qualcomm makes no representations or warranties in this Assignment. Any rule of construction to the effect that ambiguities are to be resolved against the drafting party will not be applied in the construction or interpretation of this Assignment. The words "include", "including" and variations thereof will be deemed to be followed by the words "without limitation". The use of "or" will not be deemed to be exclusive. This Assignment may be executed in counterparts, each of which when executed will be deemed to be an original but all of which taken together will constitute one and the same agreement. In the event of a conflict between the terms and conditions in this Assignment and the APA, the terms and conditions in the APA shall control.

[Signature page follows]

IN WITNESS WHEREOF, I hereunto set my hand this 2 day of February, 2019.

Qualcomm Incorporated

By: [Signature]

Printed Name: Raymond B. Hess

Title: VP, Patent Counsel

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

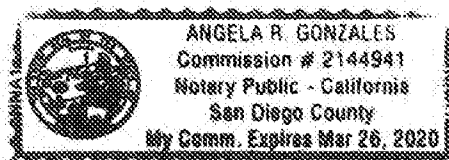
County of San Diego

On 4 February 2019 before me, Angela R. Gonzales, Notary Public personally appeared Raymond B. Hess, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature [Signature] (Seal)



IN WITNESS WHEREOF, acknowledged and accepted on this _____ day of _____, 2019.

Witricity Corporation

By: _____

Printed Name: Alex Gruzen

Title: Chief Executive Officer

SIGNATURE PAGE TO PATENT ASSIGNMENT

IN WITNESS WHEREOF, I hereunto set my hand this _____ day of _____, 2019.

Qualcomm Incorporated

By: _____

Printed Name: _____

Title: _____

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of _____)

On _____ before me,

(insert name and title of the officer)

personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (Seal)

IN WITNESS WHEREOF, acknowledged and accepted on this _____ day of _____, 2019.

WiTricity Corporation

By: _____

Printed Name: Alex Gruzen

Title: Chief Executive Officer

Attachment 1

List of Assigned Patents

See attached.

Attachment 1

Doclet #	Family #	Country	Application Title	App. No.	Patent Number	Issue/Grant Date	Patent Status	Patent Substatus
09239959	09239910F	United States	Wireless power apparatus and methods	12/618,369	9,774,036	9/26/2017	Granted	Granted
09239960	09239910F	China P.R.	Wireless power apparatus and methods	20090056863.2	200900006696	9/29/2014	Granted	Granted
09239961	09239910F	China P.R.	Wireless power apparatus and methods	201310070691.5	201310070591	11/21/2017	Granted	Granted
09239962	09239910F	China P.R.	Wireless power apparatus and methods	201310159476.1			Pled	Application instructed to issue via reaction
09239963	09239910F	European Patent Convention	Wireless power apparatus and methods	09231128.1			inactive	Abandoned
09239964	09239910F	India	Wireless power apparatus and methods	5067/CENF/2009	290,90	12/1/2017	Granted	Granted
09239965	09239910F	Japan	Wireless power apparatus and methods	2009 552815			inactive	Abandoned
09239966	09239910F	Japan	Wireless power apparatus and methods	2012-020845	55,28181	4/25/2014	Granted	Granted
09239967	09239910F	Japan	Wireless power apparatus and methods	2012-020946	6034552	11/4/2015	Granted	Granted
09239968	09239910F	Japan	Wireless power apparatus and methods	2012-020947			Filed	Application instructed to issue via reaction
09239969	09239910F	Japan	Wireless power apparatus and methods	2013-185799			inactive	Abandoned
09239970	09239910F	Japan	Wireless power apparatus and methods	2015-047090			Filed	Application instructed to issue via reaction
09239971	09239910F	Republic of Korea	Wireless power apparatus and methods	10-2009-7020661			inactive	Abandoned
09239972	09239910F	Republic of Korea	Wireless power apparatus and methods	10-2011-7071566	10-106619	7/19/2013	Granted	Granted
09239973	09239910F	Republic of Korea	Wireless power apparatus and methods	10-2011-7021567	10-124834	2/13/2013	Granted	Granted
09239974	09239910F	Republic of Korea	Wireless power apparatus and methods	10-2011-7021568	10-1199736	10/24/2012	Granted	Granted

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09239KD3D1	09239MD	Republic of Korea	Wireless power apparatus and methods	10-2012-7015407	10-1311193	9/17/2013	Granted	Granted
09239KD3D1E1	09239MD	Republic of Korea	Wireless power apparatus and methods	10-2013-7015665			Inactive	Abandoned
09239KD3D1D1D1	09239MD	Republic of Korea	Wireless power apparatus and methods	10-2014-7015715			Inactive	Abandoned
09239KD3D1D1D1D1	09239MD	Republic of Korea	Wireless power apparatus and methods	10-2013-7011791	10-1475882	3/17/2014	Granted	Granted
09239KD3D1D1D1D1D1	09239MD	United States	Wireless power apparatus and methods	60/904,628			Inactive	Expired
09239KD3D1D1D1D1D1D1	09239MD	United States	Wireless power apparatus and methods	PGPUB2009/055600			Inactive	Expired
092402	092402D	United States	MAGNETIC POWER TRANSFER BIOLOGICAL EFFECTS OF MAGNETIC POWER TRANSFER	12/233,441	9,634,526	12/24/2013	Granted	Granted
092402C1	092402D	United States	Inducting power yield from wireless power magnetic resonators	13/573,924			Inactive	Abandoned
092402CN	092402D	China P.R.	Maximizing power yield from wireless power magnetic resonators	200860107644.3			Inactive	Abandoned
092402CN1	092402D	China P.R.	Maximizing power yield from wireless power magnetic resonators	200720143785.1			Filed	Application
092402D	092402D	Germany	Maximizing power yield from wireless power magnetic resonators	602006051001.8	EP2156477	7/5/2017	Granted	Granted
092402EP	092402D	European Patent Convention	Maximizing power yield from wireless power magnetic resonators	09852139.4	EP2156477	7/5/2017	Granted	Granted
092402EPD1	092402D	European Patent Convention	Maximizing power yield from wireless power magnetic resonators	173178015.7			Filed	Application
092402FA	092402D	France	Maximizing power yield from wireless power magnetic resonators	08892122.4	EP2156477	7/5/2017	Granted	Granted
092402GB	092402D	Great Britain	Maximizing power yield from wireless power magnetic resonators	08892119.4	EP2156477	7/5/2017	Granted	Granted
092402IN	092402D	India	Maximizing power yield from wireless power magnetic resonators	1859/OELNP/2010	288188	10/9/2017	Granted	Granted

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092402IND1	092402IDE	India	AN APPARATUS AND A METHOD OF TRANSMITTING POWER VIA A WIRELESS FIELD	2015/1836720			Filed	Application
092402JP	092402IDE	Japan	Maximizing power yield from wireless power magnetic resonators	2010-123979			Inactive	Abandoned
092402JP01	092402IDE	Japan	Maximizing power yield from wireless power magnetic resonators	2011-121729	3849835	2/25/2016	Granted	Granted
092402KR	092402IDE	Republic of Korea	Maximizing power yield from wireless power magnetic resonators	10-2010-7008437			Inactive	Abandoned
092402KR01	092402IDE	Republic of Korea	Maximizing power yield from wireless power magnetic resonators	10-2013-7002392	10-1502248	30/6/2015	Granted	Granted
092402KR02	092402IDE	Republic of Korea	Maximizing power yield from wireless power magnetic resonators	10-2013-7002393	10-1515727	4/21/2015	Granted	Granted
092402P1	092402IDE	United States	Constraints imposed by field strength limits	50/979,711			Inactive	Expired
092402WO	092402IDE	Patent Cooperation Treaty	Maximizing power yield from wireless power magnetic resonators	PCT/US2008/076899			Inactive	Expired
092405	092402IDE	United States	Antennas and their coupling characteristics for wireless power transfer via magnetic coupling	13/394,023	8344,552	6/4/2013	Granted	Granted
092409C1	092402IDE	United States	Antennas and their coupling characteristics for wireless power transfer via magnetic coupling	13/737,943	8,710,701	4/23/2014	Granted	Granted
092409T1	092402IDE	United States	Antennas and their coupling characteristics for wireless power transfer via magnetic coupling	13/032,063			Inactive	Expired
092412	092412IDE	United States	System and method for efficient wireless power transfer to devices located on and outside a charging base	12/427,318			Inactive	Abandoned

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092412C1	092412DF	United States	SYSTEM AND METHOD FOR EFFICIENT WIRELESS POWER TRANSFER TO DEVICES LOCATED ON AND OUTSIDE A CHARGING BASE	13/013,036	9,450,455	9/29/2016	Granted	Granted
092412C2	092412DF	United States	SHORT RANGE EFFICIENT WIRELESS POWER TRANSFER INCLUDING A CHARGING BASE TRANSMITTER BUILT INTO A DESKTOP COMPONENT AND A POWER RELAY INTEGRATED INTO A DESKTOP	14/169,704	9,979,230	5/22/2018	Granted	Granted
092412CN	092412DF	China P.R.	Short range efficient wireless power transfer	200850113946.6	2100990113946	3/24/2016	Granted	Granted
092412CND1	092412DF	China P.R.	Short range efficient wireless power transfer	201610034916.9			Filed	Application
092412EP	092412DF	European Patent Convention	Short range efficient wireless power transfer	09735388.1			Filed	Application
092412IN	092412DF	India	Short range efficient wireless power transfer	7039/DELNP/2010			Filed	Application
092412JP	092412DF	Japan	Short range efficient wireless power transfer	2011-506391			Inactive	Abandoned
092412JP01	092412DF	Japan	Short range efficient wireless power transfer	2014-205087	5882431	2/12/2016	Granted	Granted
092412JP0101	092412DF	Japan	Short range efficient wireless power transfer	2016-019021			Inactive	Withdrawn
092412KR	092412DF	Republic of Korea	Short range efficient wireless power transfer	10-2010-7026014	10-1247394	3/19/2013	Granted	Granted
092412KR01	092412DF	Republic of Korea	Short range efficient wireless power transfer	10-2012-7092797			Inactive	Abandoned
092412KR0101	092412DF	Republic of Korea	Short range efficient wireless power transfer	10-2013-7024411	10-1572749	11/23/2015	Granted	Granted
092412KR0102	092412DF	Republic of Korea	Short range efficient wireless power transfer	10-2014-7008895	10-1589816	1/22/2016	Granted	Granted
092412P1	092412DF	United States Patent Cooperation Treaty	Short range efficient wireless power transfer	61/046,757			Inactive	Expired
092412WC	092412DF	Treaty	Short range efficient wireless power transfer	PCT/US2009/041234			Inactive	Expired

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101328A	101328A	United States	Wireless power transmission in electric vehicles	13/092,711	9,561,730	2/7/2017	Granted	Granted
101328B	101328B	United States	Wireless power transmission in electric vehicles	15/424,840			Filed	Application
101328C	101328C	China P.R.	Wireless power transmission in electric vehicles	201410677953.1	2L01410677953	5/3/2017	Granted	Granted
101328D	101328D	European Patent	Wireless power transmission in electric vehicles	1377,558.2			Inactive	Abandoned
101328E	101328E	European Patent	Wireless power transmission in electric vehicles	1515022.6			Filed	Application
101328F	101328F	India	Wireless power transmission in electric vehicles	8823/CHEN/2012			Filed	Application
101328G	101328G	India	Wireless power transmission in electric vehicles	20144504355			Filed	Application
101328H	101328H	Japan	Wireless power transmission in electric vehicles	2013-138860	8140220	5/12/2017	Granted	Granted
101328I	101328I	Republic of Korea	Wireless power transmission in electric vehicles	10-2012-7028938	10-1923741	11/23/2018	Granted	Granted
101328J	101328J	United States	Wireless power transmission in electric vehicles	51/322,196			Inactive	Expired
101328K	101328K	Taiwan	Wireless power transmission in electric vehicles	100112358			Inactive	Abandoned
101328L	101328L	Cooperation Treaty	Wireless power transmission in electric vehicles	97/US2014/031850			Inactive	Expired
101328M	101328M	United States	Wireless power transmission in electric vehicles	13/092,711			Filed	Application
101328N	101328N	United States	Wireless power transmission in electric vehicles	13/092,711			Filed	Application

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1115540E	1115540DF	Germany	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	502013048158.2	EP2697910	3/21/2018	Granted	Granted
1115540F	1115540DF	European Patent Convention	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	12716164.4	EP2697910	3/21/2018	Granted	Granted
1115540G	1115540DF	France	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	12716164.4	EP2697910	3/21/2018	Granted	Granted
1115540H	1115540DF	Great Britain	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	12716164.4	EP2697910	3/21/2018	Granted	Granted
1115540I	1115540DF	India	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	79622/CHENP/2019			Filed	Application
1115540J	1115540DF	Japan	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	2014-005318	6019108	10/7/2016	Granted	Granted
1115540K	1115540DF	Republic of Korea	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	10-2013-7029272	10-1017901	11/6/2018	Granted	Granted
1115540L	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/474,922			Inactive	Expired
1115540M	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	PGP/52012/032926			Inactive	Expired
1115540N	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540O	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540P	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/611,290			Inactive	Expired
1115540Q	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540R	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540S	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540T	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540U	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540V	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540W	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540X	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540Y	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired
1115540Z	1115540DF	United States	Antenna alignment and vehicle guidance for wireless charging of electric vehicles	51/603,870			Inactive	Expired

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1222706P	1222706DF	European Patent Convention	Tuning circuit and method for wireless power transfer systems	13/3/2009.5	EP2873132	9/28/2016	Granted	Granted
1222706R	1222706DF	France	Tuning circuit and method for wireless power transfer systems	13/3/2009.5	EP2873132	9/28/2016	Granted	Granted
1222706S	1222706DF	Great Britain	Tuning circuit and method for wireless power transfer systems	13/3/2009.5	EP2873132	9/28/2016	Granted	Granted
1222706N	1222706DF	India	Tuning circuit and method for wireless power transfer systems	345/CHENP/2015			Filed	Application
1222706F1	1222706DF	United States Patent Cooperation Treaty	Tuning circuit and method for wireless power transfer systems	31/5/2.249			inactive	Expired
1222706D	1222706DF	Tunisia	Tuning circuit and method for wireless power transfer systems	PCT/US2013/047840			inactive	Expired
1222706M	1222706DF	United States	Power supply control in wireless power transfer systems	13/3/2009.5	9,280,906	9/28/2016	Granted	Granted
1222706N	1222706DF	China P.R.	Power supply control in wireless power transfer systems	20130042017.4	2.20.14004417	9/27/2016	Granted	Granted
1222706P	1222706DF	European Patent Cooperation Treaty	Power supply control in wireless power transfer systems	13/3/2009.5			Filed	Application
1222706M	1222706DF	India	Power supply control in wireless power transfer systems	45/2009P/2015			Filed	Application
1222706P	1222706DF	Tunisia	Power supply control in wireless power transfer systems	3015/2009.5	5125111	10/10/2016	Granted	Granted
1222706R	1222706DF	France	Power supply control in wireless power transfer systems	10/10/9.7306935			Filed	Application
1222706F1	1222706DF	United States Patent Cooperation Treaty	Power supply control in wireless power transfer systems	31/5/2.249			inactive	Expired
1222706D	1222706DF	Tunisia	Power supply control in wireless power transfer systems	PCT/US2013/047840			inactive	Expired

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122296	122296.IDF	United States	System and method for power output control in wireless power transfer systems	13/740,679	9,839,955	3/2/2018	Granted	Granted
12229678	122296.IDF	China P.R.	System and method for power output control in wireless power transfer systems	201390043725.2		Filed	Application	
12229679	122296.IDF	European Patent Convention	System and method for power output control in wireless power transfer systems	13756243.5		Filed	Application	
122296IN	122296.IDF	India	System and method for power output control in wireless power transfer systems	687/CHENP/2015		Filed	Application	
122296JP	122296.IDF	Japan	System and method for power output control in wireless power transfer systems	2015-528628	6317349	4/8/2018	Granted	Granted
122296KR	122296.IDF	Republic of Korea	System and method for power output control in wireless power transfer systems	10-2015-7007067		Filed	Application	
122296P1	122296.IDF	United States	System and method for power transfer systems	61/692,938		Inactive	Expired	
122296WD	122296.IDF	Patent Cooperation Treaty	System and method for power output control in wireless power transfer systems	PCT/US2013/036032		Inactive	Expired	
122297	122297.IDF	United States	System and method for power output control in wireless power transfer systems	12/799,803	9,531,238	5/18/2018	Granted	Granted
12229724	122297.IDF	China P.R.	System and method for power output control in wireless power transfer systems	10132046974.1	1220138024972	12/15/2017	Granted	Granted
122297SN	122297.IDF	India	System and method for power output control in wireless power transfer systems	2013IN0007045		Filed	Application	
12229791	122297.IDF	United States	System and method for power output control in wireless power transfer systems	12/793,385		Inactive	Expired	
122298WDC	122298.IDF	Patent Cooperation Treaty	System and method for power output control in wireless power transfer systems	PCT/US2013/036032		Inactive	Expired	
1222985	122298.IDF	United States	System and method for power output control in wireless power transfer systems	13/792,424	9,672,975	5/6/2017	Granted	Granted

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1229060N	1229060DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	2013/06046975.1	ZL201300046975	10/04/2017	Granted	Granted
1229061N	1229061DF	India	Wireless power transfer system coil arrangements and method of operation	1187/CHENP/2015			Filed	Application
1229066N	1229066DF	United States	Device, system and method for control of wireless power transfer	61/699,700			Inactive	Expired
1229069N	1229069DF	United States	Wireless power transfer system coil arrangements and method of operation	PCT/US2013/054291			Revoked	Expired
1229070N	1229070DF	United States	WIRELESS POWER TRANSFER SYSTEM COIL ARRANGEMENTS AND METHOD OF OPERATION	13/791,939	9,660,397	05/11/2017	Granted	Granted
1229071N	1229071DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	2013/06046975.1	ZL201300046975	10/04/2017	Granted	Granted
1229072N	1229072DF	Germany	Wireless power transfer system coil arrangements and method of operation	9600/0027344.9	970804402	03/05/2017	Granted	Granted
1229073N	1229073DF	Germany	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229074N	1229074DF	Germany	Wireless power transfer system coil arrangements and method of operation	13/056,480.2	972080412	03/05/2017	Granted	Granted
1229075N	1229075DF	Germany	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229076N	1229076DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229077N	1229077DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229078N	1229078DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229079N	1229079DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229080N	1229080DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229081N	1229081DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229082N	1229082DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229083N	1229083DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229084N	1229084DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229085N	1229085DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229086N	1229086DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229087N	1229087DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229088N	1229088DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229089N	1229089DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229090N	1229090DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229091N	1229091DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229092N	1229092DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229093N	1229093DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229094N	1229094DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229095N	1229095DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229096N	1229096DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229097N	1229097DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229098N	1229098DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229099N	1229099DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted
1229100N	1229100DF	China P.R.	Wireless power transfer system coil arrangements and method of operation	13/75,489.2	972080412	03/05/2017	Granted	Granted

123039P1	123039D3	United States	Systems, methods, and apparatus related to electric vehicle wireless charging	61/665,205			inactive	Expired
123039W0	123039D2	Patent Cooperation Treaty	Electric vehicle wireless charging with monitoring of duration of charging operational mode	PC/US2015/047676			inactive	Expired
123041	123041D5	United States	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	13/932,882	9/27/2018	9/12/2019	Granted	Granted
123041C0	123041D5	China P.R.	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	20138004172.9	12/01/2013	7/20/2017	Granted	Granted
123041C01	123041D5	China P.R.	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	2017 10374643.8			Filed	Application - not under examination
123041C02	123041D5	European Patent Convention	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	13/720,811			Filed	Application
123041C03	123041D5	China P.R.	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	9444/012347/2014			Filed	Application
123041C04	123041D5	China P.R.	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	10/2014 7036672			Filed	Application
123041C05	123041D5	United States	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	91/667,874			Inactive	Granted
123041C06	123041D5	United States	Systems, methods, and apparatus related to electric vehicle parking and wireless charging	PC/US2013/048144			Inactive	Expired

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123430	123430US	United States	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	13/948,875	9,867,594	4/5/2016	Granted	Granted
123430CN	123430US	China P. R.	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	201380039834.7	ZL201380039834	10/13/2017	Granted	Granted
123430EP	123430US	European Patent Convention	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	13/477,351.1			Filed	Application
123430IN	123430US	India	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	621/CWENP/2015			Filed	Application
123430JP	123430US	Japan	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	2015-128452	6382913	8/16/2018	Granted	Granted
123430P1	123430US	United States	Systems, methods, and apparatus related to electric vehicle wireless charging and parking	61/677,967			Inactive	Expired
123430WO	123430US	Patent Cooperation Treaty	Selective communication based on distance from a plurality of electric vehicle wireless charging stations in a facility	PCT/US2013/051509			Inactive	Expired
123430P1	123430US	United States	Systems, methods, and apparatus related to electric vehicle wireless charging	61/698,012			Inactive	Expired
123478P1	123478US	United States	Systems, methods, and apparatus for detection of metal objects in a predetermined space	61/671,498			Inactive	Expired

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123478U1	123478UDF	United States	Systems, methods, and apparatus for detection of metal objects in a predetermined space	13/791,585	9,726,518	8/8/2017	Granted	Granted
123478U2A	123478UDF	Argentina	Systems, methods, and apparatus for detection of metal objects in a predetermined space	P130163498	ARG04020	11/29/2017	Granted	Granted
123478U1C1	123478UDF	United States	SYSTEMS, METHODS, AND APPARATUS FOR DETECTION OF METAL OBJECTS IN A PREDETERMINED SPACE	15/663,466		Filed	Application	
123478U1CN	123478UDF	China P.R.	Systems, methods, and apparatus for detection of metal objects in a predetermined space	201380038623.7	ZL20138038623	6/29/2017	Granted	Granted
123478U1EP	123478UDF	European Patent Convention	Systems, methods, and apparatus for detection of metal objects in a predetermined space	13742084.0		Filed	Application	
123478U1JP	123478UDF	Japan	Systems, methods, and apparatus for detection of metal objects in a predetermined space	2015-321778	6266616	4/5/2018	Granted	Granted
123478U1JP01	123478UDF	Japan	Systems, methods, and apparatus for detection of metal objects in a predetermined space	2017-240455		Filed	Application	
123478U1TW	123478UDF	Taiwan	Systems, methods, and apparatus for detection of metal objects in a predetermined space	102128283	1536035	6/1/2016	Granted	Granted
123478U1WO	123478UDF	Patent Cooperation Treaty	Systems, methods, and apparatus for detection of metal objects in a predetermined space	PCT/JP2012/049935		Inactive	Expired	
123478U2	123478UDF	United States	Systems, methods, and apparatus for detection of metal objects in a predetermined space	13/791,365	9,410,823	9/9/2016	Granted	Granted

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123478UJAB	123478UDF	Argentina	Systems, methods, and apparatus for detection of metal objects in a predetermined space	P130102497	AR052856	11/29/2017	Granted	Granted
123478UJCN	123478UDF	China P.R.	Systems, methods, and apparatus for detection of metal objects in a predetermined space using the magnetic field generated by an inductive power transmitter	10180036327	2120138036621	12/26/2017	Granted	Granted
123478UJEP	123478UDF	European Patent Convention	Systems, methods, and apparatus for detection of metal objects in a predetermined space using the magnetic field generated by an inductive power transmitter	137428873			Filed	Allowed
123478UJIN	123478UDF	India	Systems, methods, and apparatus for detection of metal objects in a predetermined space using the magnetic field generated by an inductive power transmitter	9131/CHENP/2014			Filed	Application
123478UJTW	123478UDF	Taiwan	Systems, methods, and apparatus for detection of metal objects in a predetermined space	107125282	1698986	9/1/2015	Granted	Granted
123478UJWDI	123478UDF	Taiwan	Systems, methods, and apparatus for detection of metal objects in a predetermined space	104123934	1570426	3/11/2017	Granted	Granted
123478UJWU	123478UDF	Taiwan	Systems, methods, and apparatus for detection of metal objects in a predetermined space using the magnetic field generated by an inductive power transmitter	PCT/092013/049348			Inactive	Expired
123478UJX	123478UDF	Taiwan	Systems, methods, and apparatus for detection of metal objects in a predetermined space using the magnetic field generated by an inductive power transmitter	11773474	16201135	1/21/2018	Granted	Granted

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130717D	130717D	Wireless	Power alignment in inductive power transfer systems	P-40201507790		Filed	Application
130717A	130717B	Wire	Power transfer systems	2016-11-03-508		Filed	Application
130717T	130717D	Wire	Power alignment in inductive power transfer systems	902017000000000	2017-03-06	2017-03-06	Granted
130717P	130717D	Wire	Power alignment in inductive power transfer systems	2016-11-03-508	2017-03-06	2017-03-06	Granted
130717B	130717D	Wireless	Power alignment in inductive power transfer systems	10-2016-200000000		Filed	Application
130717E	130717D	Wireless	Power alignment in inductive power transfer systems	10711000-7	2017-03-06	2017-03-06	Granted
130717R	130717D	Wire	Power alignment in inductive power transfer systems	2017-03-06	2017-03-06	2017-03-06	Granted
130717C	130717D	Wireless	Power alignment in inductive power transfer systems	10711000-7	2017-03-06	2017-03-06	Granted
130717A	130717D	Wireless	Power alignment in inductive power transfer systems	10711000-7	2017-03-06	2017-03-06	Granted
130816	130816D	United States	Systems and methods for bi-state impedance conversion in wireless power transfer	14/027,097	9,302,591	4/9/2016	Granted
130816R	130816D	Brazil	Systems and methods for bi-state impedance conversion in wireless power transfer	BR1120160055314		Filed	Application
130816C1	130816D	United States	Systems and methods for bi-state impedance conversion in wireless power transfer	15/084,982	9,994,114	6/12/2018	Granted
130816CA	130816D	Canada	Systems and methods for bi-state impedance conversion in wireless power transfer	2937760	2920780	12/5/2017	Granted
130816CN	130816D	China P.R.	Systems and methods for bi-state impedance conversion in wireless power transfer	201600000004.7	201600000000000	8/18/2018	Granted
130816DE	130816D	Germany	Systems and methods for bi-state impedance conversion in wireless power transfer	902019000000000	EP3036820	5/24/2017	Granted
130816EP	130816D	European Patent Convention	Systems and methods for bi-state impedance conversion in wireless power transfer	14766380.1	EP3036820	5/24/2017	Granted
130816ES	130816D	Spain	Systems and methods for bi-state impedance conversion in wireless power transfer	14766380.1	EP3036820	5/24/2017	Granted

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130816PI	130816PIR	Finland	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816FR	130816IDF	France	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816GB	130816DS	Great Britain	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816HU	130816DP	Hungary	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816ID	130816SR	Indonesia	Systems and methods for bi-state impedance conversion in wireless power transfer	P-20201502225			Filed	Application
130816IN	130816IDF	India	Systems and methods for bi-state impedance conversion in wireless power transfer	201647004004			Filed	Application
130816IT	130816DS	Italy	Systems and methods for bi-state impedance conversion in wireless power transfer	EP201700090138	EP3036820	5/24/2017	Granted	Granted
130816JP	130816DS	Japan	Systems and methods for bi-state impedance conversion in wireless power transfer	2016-542043	6043995	11/28/2016	Granted	Granted
130816KR	130816IDF	Republic of Korea	Systems and methods for bi-state impedance conversion in wireless power transfer	10-2016-7008040	10-1992813	10/19/2016	Granted	Granted
130816NR	130816IDF	Republic of Korea	Systems and methods for bi-state impedance conversion in wireless power transfer	10-2017-7014519			Filed	Application
130816NL	130816DS	Netherlands	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816WD	130816IDF	Treaty	Systems and methods for bi-state impedance conversion in wireless power transfer	PCT/US2014/054787			Inactive	Expired
130816US	130816DS	United States	Systems and methods for bi-state impedance conversion in wireless power transfer	14765380.1	EP3036820	5/24/2017	Granted	Granted
130816VN	130816DS	Vietnam	Systems and methods for bi-state impedance conversion in wireless power transfer	10-2016-7008040			Filed	Application

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1332958N	1332958DF	USA	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958P	1332958DF	China	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015	6440000	09/19/2015-0000004	Granted	Granted
1332958F	1332958DF	Republic of Korea	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958I	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958J	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958K	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958L	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958M	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958N	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958O	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958P	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958Q	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958R	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958S	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958T	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958U	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958V	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958W	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958X	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958Y	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application
1332958Z	1332958DF	United States	Systems, methods, and apparatuses related to electric vehicle wired and wireless charging	2015-01-26-0015			Filed	Application

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133295JP	133295JP	Japan	Electric vehicle induction coil housing with interengagement structure for ferrite tile assemblies	2016-555835			Filed	Application
133295KR	133295KR	Republic of Korea	Electric vehicle induction coil housing with interengagement structure for ferrite tile assemblies	10-2016-7026366			Filed	Application
133295WO	133295WO	Patent Cooperation Treaty	Electric vehicle induction coil housing with interengagement structure for ferrite tile assemblies	PCT/US2015/017121			Inactive	Expired
133295JP	133295JP	United States	System, methods, and apparatuses related to mutual detection and identification of electric vehicle and charging station	14/154,394	1446,074	9/23/2015	Granted	Granted
133295JP	133295JP	Japan	SYSTEMS, METHODS, AND APPARATUS RELATED TO MUTUAL DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2014-0303440			Filed	Application
133295JP	133295JP	United States	System, methods, and apparatuses related to mutual detection and identification of electric vehicle and charging station	13/681,052	9,446,395	3/11/2015	Granted	Granted
133295JP	133295JP	United States	SYSTEMS, METHODS, AND APPARATUS RELATED TO MUTUAL DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	15/034,391			Filed	Application
133295JP	133295JP	Canada	SYSTEMS, METHODS, AND APPARATUS RELATED TO MUTUAL DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2014/001,402			Filed	Application

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00000001	00000001	00000001	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLES AND CHARGING STATION	2015-007724				Filed	Application
00000002	00000002	00000002	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000003	00000003	00000003	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000004	00000004	00000004	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000005	00000005	00000005	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000006	00000006	00000006	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000007	00000007	00000007	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000008	00000008	00000008	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000009	00000009	00000009	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application
00000010	00000010	00000010	SYSTEMS, METHODS, AND APPARATUS RELATED TO VEHICLE DETECTION AND IDENTIFICATION OF ELECTRIC VEHICLE AND CHARGING STATION	2015-007724				Filed	Application

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133985	133985US	United States	Integration of electronic components in inductive power transfer systems	14/252,518	9,539,599	1/3/2017	Granted	Granted
133986CN	133986CN	China P.R.	Integration of electronic components in inductive power transfer systems	201480039898.1	ZL201480039898	10/30/2018	Granted	Granted
133987EP	133987EP	European Patent Convention	Integration of electronic components in inductive power transfer systems	1473934.5			Filed	Application
133988IN	133988IN	India	Integration of electronic components in inductive power transfer systems	7618/CHEMP/2015			Filed	Application
133989WO	133989WO	Patent Cooperation Treaty	INTEGRATION OF ELECTRONIC COMPONENTS IN INDUCTIVE POWER TRANSFER SYSTEMS	PCT/US2014/041107			Inactive	Expired
134000	134000EP	United States	Systems, methods, and apparatuses related to detecting and locating electric vehicle and charging station	14159,703	9,599,214	10/20/2018	Granted	Granted
134001	134001EP	United States	Systems, methods, and apparatuses related to detecting and locating electric vehicle and charging station	14159,703			Inactive	Abandoned
134002	134002EP	China P.R.	Systems, methods, and apparatuses related to detecting and locating electric vehicle and charging station	1014814083.4	ZL20148014833.4	7/2/2017	Granted	Granted

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1342310P	1342310P	Israel	System and method for alignment and compatibility detection for a wireless power transfer system	BR1120160042158			Filed	Application
1342310A	1342310P	Canada	System and method for alignment and compatibility detection for a wireless power transfer system	2919719			Filed	Application
1342310N	1342310P	China P.R.	System and method for alignment and compatibility detection for a wireless power transfer system	70148304/7010 9	210314924/7010	4/24/2018	Granted	Granted
1342310F	1342310P	Germany	System and method for alignment and compatibility detection for a wireless power transfer system	602014011033 3	EP3031117	6/21/2017	Granted	Granted
1342310P	1342310P	European Patent Convention	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted
13423105	1342310P	Spain	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted
1342310I	1342310P	Iceland	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted
1342310R	1342310P	France	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted
1342310B	1342310P	Great Britain	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted
1342310U	1342310P	Hungary	System and method for alignment and compatibility detection for a wireless power transfer system	14756395.5	EP3031117	6/21/2017	Granted	Granted

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134231ID	134231IDF	Indonesia	System and method for alignment and compatibility detection for a wireless power transfer system	P.03/01601867		Filed	Application
134231IN	134231IDF	India	System and method for alignment and compatibility detection for a wireless power transfer system	103637092535		Filed	Application
134231IT	134231IDF	Italy	System and method for alignment and compatibility detection for a wireless power transfer system	502017000066961	EP3031117	6/21/2017 Granted	Granted
134231JP	134231IDF	Japan	System and method for alignment and compatibility detection for a wireless power transfer system	2016-058959	6427578	11/2/2016 Granted	Granted
134231KR	134231IDF	Republic of Korea	System and method for alignment and compatibility detection for a wireless power transfer system	11-2016-7008240		Filed	Application
134231NL	134231IDF	Netherlands	System and method for alignment and compatibility detection for a wireless power transfer system	14756195.5	EP3031117	6/21/2017 Granted	Granted
134231US	134231IDF	United States	System and method for alignment and compatibility detection for a wireless power transfer system	61/0873,271		Inactive	Expired
134231TW	134231IDF	Taiwan	System and method for alignment and compatibility detection for a wireless power transfer system	103123750		Filed	Allowed
134231WO	134231IDF	Patent Cooperation Treaty	System and method for alignment and compatibility detection for a wireless power transfer system	PCT/US2014/061141		Inactive	Expired
134231	134231IDF	United States	System, system, and method for dynamic electric vehicle charging with position detection	14/351,872		Filed	Application

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1349021P	1349021DP	Japan	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	2016-04-07	6431075	11/9/2018	Granted	Granted
1349021P	1349021DP	United States	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	51/875,702			inactive	Expired
134902WQ	1349021DP	Patent Cooperation Treaty	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	PCT/JP2014/054999			inactive	Expired
1349021P	1349021DP	United States	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14,414,316	6,511,045	8/20/2018	Granted	Granted
1349021P	1349021DP	China P.R.	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	201430196267.7	2,201,480,683.2	6/15/2018	Granted	Granted
1349021P	1349021DP	Germany	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	10201400414.0	62,404,895	1/11/2017	Granted	Granted
1349021P	1349021DP	European Patent Convention	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14795500.8	62,404,895	5/20/2017	Granted	Granted
1349021P	1349021DP	France	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14795500.8	62,404,895	10/3/2017	Granted	Granted
1349021P	1349021DP	China P.R.	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14795500.8	62,404,895	5/20/2017	Granted	Granted
1349021P	1349021DP	China P.R.	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14795500.8	62,404,895	5/20/2017	Granted	Granted
1349021P	1349021DP	China P.R.	Systems, methods, and apparatus related to guidance and alignment for an electric vehicle and charging station	14795500.8	62,404,895	5/20/2017	Granted	Granted

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14072500	14072500	China P.R.	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	201501111.0			Filed	Application
14072500	14072500	European Patent Cooperation Treaty	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	1538877 A			Filed	Application
14072500	14072500	India	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	20160114201			Filed	Application
14072500	14072500	Japan	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	2016-053428			Filed	Application
14072500	14072500	Republic of Korea	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	10-2016-005408			Filed	Application
14072500	14072500	United States	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	15/0947319			Provisional	Filed
14072500	14072500	United States	SYSTEM AND METHOD FOR REDUCING EMISSIONS FOR POLARIZED COIL SYSTEMS FOR WIRELESS INDUCTIVE POWER TRANSFER	15/0947319			Provisional	Filed
14072500	14072500	United States	Methods and systems for object detection and sensing for wireless charging systems	14/367285	9/735,605	8/15/2017	Granted	Granted
14072500	14072500	China P.R.	Methods and systems for object detection and sensing for wireless charging systems	201580031659.5			Filed	Application

140725EP	140725IDP	European Patent Convention	Methods and systems for object detection and sensing for wireless charging systems	15731489.8			Filed	Application
140725IN	140725IDP	India	Methods and systems for object detection and sensing for wireless charging systems	2016470379.2			Filed	Application
140725JP	140725IDP	Japan	Methods and systems for object detection and sensing for wireless charging systems	2016-573098			Filed	Application
140725KR	140725IDP	Republic of Korea	Methods and systems for object detection and sensing for wireless charging systems	10-2016-7034933			Filed	Application
140725WO	140725IDP	Treaty	Methods and systems for object detection and sensing for wireless charging systems	PCT/US2015/053115			Inactive	Expired
14072601	14072601P	United States	COIL TECHNOLOGIES FOR INDUCTIVE POWER TRANSFER	14/461,245	9/26/2014	10/6/2017	Granted	Granted
14072603	14072601P	United States	COIL TECHNOLOGIES FOR INDUCTIVE POWER TRANSFER	14/461,246			Filed	Application
14072607	14072601P	China P.R.	Coil technologies for inductive power transfer	201481000007.2			Filed	Application
14072608	14072601P	Germany	Coil technologies for inductive power transfer	102014014920.2	10/23/2014	7/6/2018	Granted	Granted
14072609	14072601P	European Patent Convention	Coil technologies for inductive power transfer	14231009.1	10/24/2014	7/6/2018	Granted	Granted
14072610	14072601P	European Patent Convention	Coil technologies for inductive power transfer	14231009.8			Filed	Application
14072614	14072601P	France	Coil technologies for inductive power transfer	14821599.1	10/24/2014	7/6/2018	Granted	Granted
14072620	14072601P	Great Britain	Coil technologies for inductive power transfer	14821599.1	10/24/2014	7/6/2018	Granted	Granted
14072621	14072601P	India	Coil technologies for inductive power transfer	2016071114894			Filed	Application
14072622	14072601P	Japan	Coil technologies for inductive power transfer	2016-554072			Filed	Application
14072623	14072601P	Republic of Korea	Coil technologies for inductive power transfer	10-2016-7034933			Filed	Application
14072624	14072601P	United States	Coil technologies for inductive power transfer	14/461,243			Inactive	Expired

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14075640	14075640	System for cooperation with	not recognized for reactive power transfer	PGTUS000001001				Issued	Granted
141067	141067/01	United States	Wireless charging based on selective activation of transmit antennas	14/450,933	9,905,315	11/29/2016	Granted	Granted	
141071	141071/01	United States	SYSTEM, METHOD AND APPARATUS FOR REDUCING THE AMOUNT OF WIRELESS TRANSMISSIONS AND/OR RECEIVERS IN ELECTRIC VEHICLE COMMUNICATION	14/272,534	10,081,792	9/25/2018	Granted	Granted	
14107321	14107321	China P.R.	System, method and apparatus for reducing the height of signal transmitters and/or receivers in electric vehicle charging	20158004697A			Filed	Application	
14107322	14107322	China P.R.	System, method and apparatus for reducing the height of signal transmitters and/or receivers in electric vehicle charging	20171000010			Filed	Application	
14107323	14107323	China P.R.	System, method and apparatus for reducing the height of signal transmitters and/or receivers in electric vehicle charging	201640000601			Filed	Application	
14107324	14107324	China P.R.	System, method and apparatus for reducing the height of signal transmitters and/or receivers in electric vehicle charging	201640000607			Filed	Application	
14107325	14107325	China P.R.	System, method and apparatus for reducing the height of signal transmitters and/or receivers in electric vehicle charging	201640000608			Filed	Application	

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1410986ND	1410986N	United States	System and method for reducing the magnetic field of a ferromagnetic material	14/468,883	9,742,400	8/22/2017	Granted	Granted
1410988	1410988D	United States	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	14/468,883	9,742,400	8/22/2017	Granted	Granted
1410986CN	1410986D	China P.R.	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	201480064577.7	21201480064577	4/20/2018	Granted	Granted
1410986P	1410986D	European Patent Convention	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	14816344.3			Filed	Application
1410986IN	1410986D	India	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	201647014474			Filed	Application
1410986P	1410986D	Japan	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	2016-536537			Filed	Application
1410986K	1410986D	Republic of Korea	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	10-2016-2017630			Filed	Application
1410986PI	1410986D	United States	System and method to avoid magnetic power loss while providing alternating current through a ferromagnetic material	61/913,275			Inactive	Expired

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14137300	14137300	Patent Cooperation Treaty	Design system and method for power control of wireless electric vehicle charging system	PCT/US2014/010953			Granted	Granted
141373	14137300	United States	COMPLIANCE ASSESSMENT OF HUMAN EXPOSURE FROM WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM USING AT LEAST ONE PHANTOM NODE	14/574,095	5,575,108	2/21/2017	Granted	Granted
14137300	14137300	China P.R.	Compliance assessment of human exposure from wireless electric vehicle charging system	20148006388.8	7120348005198	10/16/2018	Granted	Granted
14137300	14137300	European Patent Convention	Compliance assessment of human exposure from wireless electric vehicle charging system	14824725.7		Filed	Application	
14137300	14137300	India	Compliance assessment of human exposure from wireless electric vehicle charging system	201447016132		Filed	Application	
14137300	14137300	Japan	Compliance assessment of human exposure from wireless electric vehicle charging system	2016-539911		Filed	Application	
14137300	14137300	Republic of Korea	Compliance assessment of human exposure from wireless electric vehicle charging system	10-2016-7019096		Filed	Application	
14137300	14137300	United States	Compliance assessment of human exposure from wireless electric vehicle charging system	61/518,188		Issued	Expired	
14137300	14137300	Patent Cooperation Treaty	Compliance assessment of human exposure from wireless electric vehicle charging system	PCT/US2014/071349		Inactive	Expired	
14137300	14137300	United States	Compliance assessment of human exposure from wireless electric vehicle charging system	14/574,095	5,575,108	2/21/2017	Granted	Granted

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1416379R	14163710F	Small	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	381120160242270			Filed	Application
1416371N	14163710F	China P.R.	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	201586820342.2			Filed	Application
1416379P	14163710F	European Patent Cooperation	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	157166745			Filed	allowed
1416371N	14163710F	India	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	201647030326			Filed	Application
1416371F	14163710F	Japan	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	2016-562528			Filed	Application
1416371N	14163710F	Republic of Korea	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	10-2016-2034018			Filed	Application
14163791	14163710F	United States	Base magnetic and sequence design for dynamic systems	61/981443			Inactive	Expired
1416371N	14163710F	Taiwan	Base magnetic and sequence design for dynamic systems	104111985			Filed	Application
1416371N	14163710F	Patent Cooperation Treaty	Inductive power supply for vehicles comprising a plurality of charging coils which can be operated in different sequences	107/863015/023815			Inactive	Expired

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1434180A	1434180B	United States	System and method for reactive power control in dynamic inductive power transfer systems	14/082,703	9,580,112	6/03/2017	Granted	Granted
1434180A	1434180F	China P.R.	System and method for reactive power control in dynamic inductive power transfer systems	20158008077.5			Filed	Application
1434180F	1434180F	European Patent	System and method for reactive power control in dynamic inductive power transfer systems	EP311238		5/26/2018	Granted	Granted
1434180B	1434180F	Great Britain	System and method for reactive power control in dynamic inductive power transfer systems	1516304.8	9,511,118	5/26/2018	Granted	Granted
1434180B	1434180F	Spain	System and method for reactive power control in dynamic inductive power transfer systems	2015151021			Filed	Application
1434180F	1434180F	Republic of Korea	System and method for reactive power control in dynamic inductive power transfer systems	10-2017-0096558			Filed	Application
1434180B	1434180F	Great Britain	System and method for reactive power control in dynamic inductive power transfer systems	2015080012630.3			Filed	Application
1434180B	1434180F	United States	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	14/735,256	9,772,401	5/26/2017	Granted	Granted
1434180B	1434180F	Spain	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	BR1120160214870			Filed	Application
1434180CN	1434180F	China P.R.	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	201580012630.3			Filed	Application

143418DE	143418DP	Germany	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	101033007454.8	EP3120453	1/10/2018	Granted	Granted
		European Patent Convention	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	15707852.8	EP3120453	1/10/2018	Granted	Granted
143418EP	143418DP	European Patent Convention	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	17702185.9		Filed	Application	
143418EPD1	143418DP	France	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	15707852.8	EP3120453	1/10/2018	Granted	Granted
143418FR	143418DP	Great Britain	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	15707852.8	EP3120453	1/10/2018	Granted	Granted
143418GB	143418DP	India	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	201647025358		Filed	Application	
143418IN	143418DP	Japan	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	2016-054650		Filed	Allowed	
143418JP	143418DP	Republic of Korea	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	10-2016-7027741		Filed	Application	
143418KR	143418DP	United States	SYSTEMS, METHODS, AND APPARATUS FOR RADAR-BASED DETECTION OF OBJECTS IN A PREDETERMINED SPACE	61/054,427		Inactive	Expired	
143418PT	143418DP	Patent Cooperation Treaty	Systems, methods, and apparatus for radar-based detection of objects in a predetermined space	PCT/US2015/016871		Inactive	Expired	

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143116	043116	United States	METHODS AND SYSTEMS FOR COMPATIBLE OPERATION BETWEEN A WIRELESS POWER TRANSFER SYSTEM AND VEHICLE REMOVAL SYSTEMS	14/08/2016	9,280,973	5/23/2017	Granted	Granted
143160N	143160	China P.A.	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	2015091206.8			Filed	Application
143160P	143160P	European Cooperation	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	15/1088.5			Filed	Application
143160N	143160P	USA	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	20170384200			Filed	Application
143160P	143160P	Japan	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	2017-053627			Filed	Allowed
143160N	143160P	United States	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	14/755,380	9,680,331	5/13/2017	Granted	Granted
143160N	143160P	Japan	Methods and systems for compatible operation between a wireless power transfer system and vehicle removal and/or system	2015091206.8			Filed	Application
143160N	143160P	China P.R.	System and method for frequency protection in wireless charging	201509015220.3			Filed	Application

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143918DE	143918IDF	Germany	System and method for frequency protection in wireless charging	302015012731.5	EP3132518	6/27/2018	Granted	Granted
		European Patent Convention	System and method for frequency protection in wireless charging	15712027.0	EP3132518	6/27/2018	Granted	Granted
143918EP	143918IDF	France	System and method for frequency protection in wireless charging	15712027.0	EP3132518	6/27/2018	Granted	Granted
143918FR	143918IDF	Great Britain	System and method for frequency protection in wireless charging	15712027.0	EP3132518	6/27/2018	Granted	Granted
143918GB	143918IDF	India	System and method for frequency protection in wireless charging	20165702595.7			Filed	Application
143918IN	143918IDF	Japan	System and method for frequency protection in wireless charging	2016-555577	6457548	12/19/2018	Granted	Granted
143918JP	143918IDF	Republic of Korea	System and method for frequency protection in wireless charging	10-2016-7026780			Filed	Application
143918KR	143918IDF	United States Patent Cooperation Treaty	System and method for frequency protection in wireless charging	PT/US2015/027029			Inactive	Expired
143918PT	143918IDF	United States	System and method for frequency protection in wireless charging	14/657547	6457548	6/19/2018	Granted	Granted
143918WO	143918IDF	Spain	System and method for frequency protection in wireless charging	14/11110022.753			Filed	Application
143918US	143918IDF	United States	System and method for frequency protection in wireless charging	15/089,450	15/089,447	10/4/2018	Granted	Granted
143918US	143918IDF	United States	System and method for frequency protection in wireless charging	15/089,450	15/089,447	10/4/2018	Granted	Granted
143918US	143918IDF	United States	System and method for frequency protection in wireless charging	15/089,450	15/089,447	10/4/2018	Granted	Granted

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14451000	1445100F	Patent Cooperation Treaty	System and method for reducing energy flow in wireless network	PCT/US2015/030148				Filed	Expired
14451001	1445100F	United States	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	14/278,112				Filed	Allowed
14451002	1445100F	China P.R.	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	201580024599.5				Filed	Application
14451003	1445100F	European Patent Convention	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	15/27114.9				Filed	Application
14451004	1445100F	India	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	20164734031				Filed	Application
14451005	1445100F	Japan	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	2016.587409				Filed	Application
14451006	1445100F	Republic of Korea	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	10-2016-7035096				Filed	Application
14451007	1445100F	Patent Cooperation Treaty	System, method, and apparatus for foreign object detection loop based on inductive thermal sensing	PCT/US2015/030148				Filed	Expired
14451008	1445100F	China P.R.	Method and apparatus for sensing and controlling power supply in wireless network	14451000				Filed	Application
14451009	1445100F	China P.R.	Method and apparatus for sensing and controlling power supply in wireless network	2015100000000.0				Filed	Application

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14527802	14527802	European Patent Convention	Method and apparatus for tuning and controlling double coupled power transfer systems	11700504.9			Filed	Allowed
14527803	14527803	None	Method and apparatus for tuning and controlling double coupled power transfer systems	201700000254			Filed	Application
14527804	14527804	None	Methods and apparatus for tuning and controlling double coupled power transfer systems	2017010000			Filed	Application
14527805	14527805	None	Methods and apparatus for tuning and controlling double coupled power transfer systems	2017010000			Filed	Application
14527806	14527806	None	Methods and apparatus for tuning and controlling double coupled power transfer systems	2017010000			Filed	Application
14527807	14527807	United States	Systems, methods and apparatus for reducing intra-base array network coupling	14/586,472	9,560,507	5/1/2018	Granted	Granted
14527808	14527808	China P.R.	SYSTEMS, METHODS AND APPARATUS FOR REDUCING INTRA-BASE ARRAY NETWORK COUPLING	201500071206.5			Filed	Application
14527809	14527809	European Patent Convention	SYSTEMS, METHODS AND APPARATUS FOR REDUCING INTRA-BASE ARRAY NETWORK COUPLING	10817001.9			Filed	Application
14527810	14527810	India	SYSTEMS, METHODS AND APPARATUS FOR REDUCING INTRA-BASE ARRAY NETWORK COUPLING	20147012120			Filed	Application
14527811	14527811	Japan	SYSTEMS, METHODS AND APPARATUS FOR REDUCING INTRA-BASE ARRAY NETWORK COUPLING	2017-531577			Filed	Application
14527812	14527812	Patent Cooperation Treaty	SYSTEMS, METHODS AND APPARATUS FOR REDUCING INTRA-BASE ARRAY NETWORK COUPLING	PCT/US2015/063729			Inactive	Expired

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1453000	1453000F	United States	Guidance and alignment system and method for electric vehicle wireless charging systems	14/515,361	159,146	6/24/2017	Granted	Issued
1453000	1453000F	China P.R.	Guidance and alignment system and method for electric vehicle wireless charging systems	10/1580221/2014			Filed	Application
1453000	1453000B	European Convention	Guidance and alignment system and method for electric vehicle wireless charging systems	15/472,817.9			Filed	Application
1453000	1453000C	China P.R.	Guidance and alignment system and method for electric vehicle wireless charging systems	20/1467,144/2014			Filed	Application
1453000	1453000F	Spain	Guidance and alignment system and method for electric vehicle wireless charging systems	20/146,290.5			Filed	Application
1453000	1453000F	Republic of Korea	Guidance and alignment system and method for electric vehicle wireless charging systems	10/2017-0100739			Filed	Application
1453000	1453000F	United States	Guidance and alignment system and method for electric vehicle wireless charging systems	14/098,590.1			Filed	Issued
1453000	1453000F	United States	Guidance and alignment system and method for electric vehicle wireless charging systems	14/098,590.1/201404917			Filed	Issued
1453143	1453143F	United States	System and method for multi-coil dual backbone dynamic inductive power transfer	14/584,667	9,698,608	7/9/2017	Granted	Granted
1453143	1453143F	China P.R.	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	2015100711504.X			Filed	Application

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146143DE	1461430F	Germany	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	15813213.4	EP3212456	5/9/2018	Granted	Granted
146143EP	1461430F	European Patent Convention	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	15813213.4	EP3212456	5/9/2018	Granted	Granted
146143FR	1461430F	France	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	15813213.4	EP3212456	5/9/2018	Granted	Granted
146143GB	1461430F	Great Britain	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	15813213.4	EP3212456	5/9/2018	Granted	Granted
146143IN	1461430F	India	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	20174701713Q			Filed	Application
146143JP	1461430F	Japan	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	2017-531846	5325752	4/29/2018	Granted	Granted
146143WO	1461430F	Patent Cooperation Treaty	SYSTEM AND METHOD FOR MULTI-COIL DUAL BACKBONE DYNAMIC INDUCTIVE POWER TRANSFER	PCT/US2015/063767			Inactive	Expired
146143US	1461430F	United States	System, methods, and apparatus for controlling the amount of energy provided to a charge-receiving element in a wireless-powered system	14/028,406			Filed	Application
146143US	1461430F	United States	System, methods, and apparatus for controlling the amount of energy provided to a charge-receiving element in a wireless-powered system	14/028,406			Filed	Application

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150059CN	15005910F	China P.R.	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	Z0158005986A.2		Filed	Application
150059DE	15005910F	Germany	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	602015006893.9	EP3192141	11/20/2017	Granted
150059EP	15005910F	European Patent Convention	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059ES	15005910F	Spain	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059FI	15005910F	Finland	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059FR	15005910F	France	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059GB	15005910F	Great Britain	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059HU	15005910F	Hungary	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3192141	12/20/2017	Granted
150059ID	15005910F	Indonesia	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	P-00201702791		Filed	Application
150059IN	15005910F	India	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	201747010926		Filed	Application

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150053917	150053916	Italy	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.6	EP3182141	12/20/2017	Granted	Granted
150053916	150053915	Japan	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	2017-523590			Filed	Application
150053915	150053914	Republic of Korea	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	10-2017-7011827			Filed	Application
150053914	150053913	Netherlands	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	15794727.5	EP3192141	12/20/2017	Granted	Granted
150053913	150053912	United States	SYSTEMS, METHODS, AND APPARATUS RELATED TO WIRELESS ELECTRIC VEHICLE CHARGING INCLUDING INTEGRATED TUNING CAPACITORS IN CHARGING COIL STRUCTURE	62/975,900			Inactive	Expired
150053912	150053911	System Cooperation Treaty	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	PCT/US2015/058175			Inactive	Expired
150053911	150053910	Switzerland	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	49/601,599	4/30/2015	5/29/2016	Granted	Granted
150053910	150053909	Switzerland	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	2015/000000-801.3			Filed	Application
150053909	150053908	Switzerland	Systems, methods, and apparatus for integrated tuning capacitors in charging coil structure	40703501/0515.2	EP311402	4/25/2016	Granted	Granted

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15038705	15038705	European Patent Convention	System, method, and apparatus for direct object protection in wireless power transfer method	15768703.8	23/07/2012	4/05/2018	Granted	Granted
15038706	15038706	France	System, method, and apparatus for direct object protection in wireless power transfer method	15768703.8	23/07/2012	4/05/2018	Granted	Granted
15038707	15038707	Green Britain	System, method, and apparatus for direct object protection in wireless power transfer method	15768703.8	23/07/2012	4/05/2018	Granted	Granted
15038708	15038708	India	System, method, and apparatus for direct object protection in wireless power transfer method	2011/47099A1			Filed	Application
15038709	15038709	Japan	System, method, and apparatus for direct object protection in wireless power transfer method	2012-219102			Filed	Application
15038710	15038710	United States	System, method, and apparatus for direct object protection in wireless power transfer method	62/965,528			Reactive	Granted
15038711	15038711	United States	System, method, and apparatus for direct object protection in wireless power transfer method	62/965,528			Reactive	Granted
15038712	15038712	China	System, method, and apparatus for direct object protection in wireless power transfer method	821030215.0A1158			Granted	Granted
15038713	15038713	United States	System, method, and apparatus for direct object protection in wireless power transfer method					
15038714	15038714	United States	System, method, and apparatus for direct object protection in wireless power transfer method					
15038715	15038715	China P.R.	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	201680036617.1			Filed	Application
15038716	15038716	European Patent Convention	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	16703410.7			Filed	Allowed

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1503877N	1503877D	India	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	2017/4701996/7			Filed	Application
1503877P	1503877D	Japan	Method and apparatus for a modular coil holder for an extended wireless charging roadway assembly	2017/553863			Filed	Application
1503877P1	1503877D	United States	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	62/107,002			Inactive	Expired
150387W/C	1503877D	Patent Cooperation Treaty	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	PCT/US2016/014315			Inactive	Expired
150387A	1503877D	United States	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	15/811,813	18/011,721	17/710,810	Granted	Granted
150387N	1503877D	China, P.R.	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	2015/800805/7			Filed	Application
150387P	1503877D	European Patent Convention	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	15/811,813			Filed	Application
150387N	1503877D	India	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	2017/4701996/7			Filed	Application
150387P	1503877D	Japan	Methods and apparatus for a modular coil holder for an extended wireless charging roadway assembly	2017/553863			Filed	Application

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151190WO	151190WF	Recent Cooperation Treaty	systems, methods, and apparatus implementing hybrid symmetric and asymmetric control for soft switching in wireless power transfer applications	PG1/092016/092051			Inactive	Expired
151190	151190CF	United States	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	14/841,904			Filed	Application; Inactivated to lapse via reaction
151190CN	151190CF	China	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	2016/0104174			Filed	Application
151190EP	151190WF	Switzerland	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	14/059,903			Filed	Application
151190IN	151190CF	India	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	2017/0000000			Filed	Application
151190JP	151190CF	Japan	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	2017-042105			Filed	Application
151190KR	151190CF	United States	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	15/112,361			Inactive	Expired
151190NO	151190CF	Sweden	Power and soft switching topologies for fast wireless coupling between inductive power transfer systems in wireless power transfer applications	PCT/NO2016/000000			Inactive	Expired
151190	151190WF	United States	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	14/858,273	14/47,678	12/19/2017	Granted	Granted

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US189008	US189008P	Israel	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	BR1120180054283			Filed	Application
US189009	US189009P	China P.R.	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	201880052813.4			Filed	Application
US189010P	US189010P	European Patent Convention	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	18786758.2			Filed	Application
US189011	US189011P	India	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	201847013503			Filed	Application
US189012P	US189012P	Japan	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	2018-513658			Filed	Application
US189013	US189013P	Republic of Korea	Methods and systems for compatible operation between a wireless power transfer system and wirelessly communicating vehicle systems	10-2018-7010501			Filed	Application

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15209769	15209769P	European Patent	Conversion	Methods and apparatus utilizing multi-filter alignment assistance in wireless power transfer applications	16760891.8			Filed	Application
1520977N	1520977NCF	India		Methods and apparatus utilizing multi-filter alignment assistance in wireless power transfer applications	201847012452			Filed	Application
1520977P	1520977P	Japan		Methods and apparatus utilizing multi-filter alignment assistance in wireless power transfer applications	2018-512620			Filed	Application
1520977R	1520977R	Republic of Korea		Methods and apparatus utilizing multi-filter alignment assistance in wireless power transfer applications	10-2018-7010751			Filed	Application
152097WQ	152097WQ	Patent Cooperation Treaty		Methods and apparatus utilizing multi-filter alignment assistance in wireless power transfer applications	PCV/US2016/049719			Inactive	Expired
152117	152117CF	United States		Systems, methods, and apparatuses for multi-electronic interference in wireless power transfer applications	14/961,905	1,911,351	11/24/2017	Granted	Granted
1521172R	1521172R	Israel		Systems, methods, and apparatuses for multi-electronic interference in wireless power transfer applications	EP13112001A2			Filed	Application
152117CA	152117CA	Canada		Systems, methods, and apparatuses for multi-electronic interference in wireless power transfer applications	2746114			Filed	Application
152117CN	152117CN	China P.R.		Systems, methods, and apparatuses for multi-electronic interference in wireless power transfer applications	201610012381.7			Filed	Application

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152756CN	152756DP	China P.R.	INTEGRATION OF POSITIONING ANTENNAS IN WIRELESS INDUCTIVE CHARGING POWER APPLICATIONS	2016R0026749.0		Filed	Application
152756EP	152756DP	European Patent Convention	ANTENNAS IN WIRELESS INDUCTIVE CHARGING POWER APPLICATIONS	16791051.7		Filed	Allowed
152756IN	152756DP	India	INTEGRATION OF POSITIONING ANTENNAS IN WIRELESS INDUCTIVE CHARGING POWER APPLICATIONS	201747033123		Filed	Application
152756JP	152756DP	Japan	INTEGRATION OF POSITIONING ANTENNAS IN WIRELESS INDUCTIVE CHARGING POWER APPLICATIONS	2017-558419		Filed	Application
152756P1	152756DP	United States	Integration of coherent positioning antennas in wireless inductive charging power applications	62/159,875		Inactive	Expired
152756WG	152756DP	Patent Cooperation Treaty	INTEGRATION OF POSITIONING ANTENNAS IN WIRELESS INDUCTIVE CHARGING POWER APPLICATIONS	PCT/AU2016/020444		Inactive	Expired
152756XX	152756DP	China P.R.	Devices, systems, and methods using reactive power injection for active wiring electric vehicle charging systems	59424497	59424499	59424497	Granted
152756XX	152756DP	China P.R.	Devices, systems, and methods using reactive power injection for active wiring electric vehicle charging systems	20160135024		Filed	Application
152756XX	152756DP	China P.R.	Devices, systems, and methods using reactive power injection for active wiring electric vehicle charging systems	107455714		Filed	Application
152756XX	152756DP	China P.R.	Devices, systems, and methods using reactive power injection for active wiring electric vehicle charging systems	20162038879		Filed	Application

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153133CN	15313310F	United States	Systems, systems, and methods for active power transfer for active using magnetic field coupling systems	62/000,001		Inactive	Expired
153133CN	15313310F	United States	Systems, systems, and methods for active power transfer for active using magnetic field coupling systems	62/000,001		Inactive	Expired
153133CN	15313310F	United States	Methods and apparatus utilizing a bipolar double D vehicle coupler in wireless power transfer applications	14/965,428	9,876,366	8/23/2018	Granted
153133CN	15313310F	China P. R.	Methods and apparatus utilizing a bipolar double D vehicle coupler in wireless power transfer applications	201600055205.6		Filed	Application
153133CN	15313310F	Patent Cooperation Treaty	Methods and apparatus utilizing a bipolar double D vehicle coupler in wireless power transfer applications	PCT/US2016/040213		Inactive	Expired
153133CN	15313310F	United States	Methods and apparatus for wireless power transfer in vehicle power transfer applications	14/734,423		Filed	Application
153133CN	15313310F	Patent Cooperation Treaty	Methods and apparatus for wireless power transfer in vehicle power transfer applications	PCT/US2016/055354		Inactive	Expired
153133CN	15313310F	United States	Integration of solenoid positioning antennas in wireless inductive charging power applications	15/003,521		Filed	Application
153133CN	15313310F	China P. R.	Integration of solenoid positioning antennas in wireless inductive charging power applications	20160005205.4		Filed	Application

153537EP	153537IDF	European Patent Convention	Integration of solenoid positioning antennas in wireless inductive charging power applications	16723548.6			Filed	Application
153537IN	153537IDF	India	Integration of solenoid positioning antennas in wireless inductive charging power applications	201787635206			Filed	Application
153537JP	153537IDF	Japan	Integration of solenoid positioning antennas in wireless inductive charging power applications	2017-157184			Filed	Application
153537PA	153537IDF	United States	Integration of solenoid positioning antennas in wireless inductive charging power applications	62/163,096			Inactive	Expired
153537WO	153537IDF	Patent Cooperation Treaty	Integration of solenoid positioning antennas in wireless inductive charging power applications	PCT/US2016/035015			Inactive	Expired
153537	153537IDF	United States	Methods and apparatuses using a division access of multiple order modules in finding object detector for wireless power transfer applications	14/813,798			Filed	Application
153771CN	153771IDF	China P.R.	Methods and apparatuses using a division access of multiple order modules in finding object detector for wireless power transfer applications	201620128109			Filed	Application
153771EP	153771IDF	European Patent Convention	Methods and apparatuses using a division access of multiple order modules in finding object detector for wireless power transfer applications	16723548.6			Filed	Application

15A37217A	15A37217A	China & B	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	2016/0031971.3				Filed	Application
15A37218P	15A37218P	European Patent	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	15/271601.2				Filed	Application
15A37219A	15A37219A	India	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	2016/0032190				Filed	Application
15A37219P	15A37219P	Spain	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	2017/0000027				Filed	Application
15A37217P	15A37217P	Republic of Korea	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	10-2017-0057871				Filed	Application
15A37219D	15A37219D	European Patent	Systems, methods and apparatus for guidance and alignment in electric vehicle wireless inductive charging systems	2016/0032044.3				Filed	Current
15A372172	15A372172	United States	Systems, methods and apparatus for guidance and alignment between electric vehicles and wireless charging systems	15/059 718				Filed	Application
15A3721P1	15A3721D1F	United States	Systems, methods and apparatus for guidance and alignment between electric vehicles and wireless charging systems	15/185 851				Inactive	Expired

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154372WQ	154372BF	Patent Cooperation Treaty	systems, methods and apparatus for guidance and alignment between electric vehicles and wireless charging systems	PCT/US2016/034412				inactive	Expired
154372WQ	154372BF	United States	Method and apparatus for computer aided parking, using and matching of wireless power transfer systems	15/019,704				Filed	Allowed
154372WQ	154372BF	United States	METHOD AND APPARATUS FOR COMPUTER AIDED PARKING, USING AND MATCHING OF WIRELESS POWER TRANSFER SYSTEMS	15/011,586				Active	Expired
154372WQ	154372BF	United States	Method and apparatus for computer aided parking, using and matching of wireless power transfer systems	PCT/US2016/040621				inactive	Expired
157047WQ	157047BF	United States Patent Cooperation Treaty	METHODS AND APPARATUS FOR WIRELESSLY TRANSFERRING POWER	15/182,395				Filed	Application
157047WQ	157047BF	Patent Cooperation Treaty	METHODS AND APPARATUS FOR WIRELESSLY TRANSFERRING POWER	PCT/US2017/024427				inactive	Expired
157113WQ	157113BF	United States	SYSTEM, METHODS, AND APPARATUS FOR DETECTING METALLIC OBJECTS IN A PREDEFINED SPACE VIA INDUCTIVE KINEMATIC SENSING	15/290,731				Filed	Application
157113WQ	157113BF	United States	DETECTING METHOD, AND APPARATUS FOR DETECTING METALLIC OBJECTS IN A PREDEFINED SPACE VIA INDUCTIVE KINEMATIC SENSING	15/292,328				inactive	Expired

1571590D	1571190P	Patent Cooperation Treaty	Methods and apparatus for conducting magnetic objects in a magnetic field for induction of electric currents	PCT/US2010/019100A			Active	Granted
157146	157146DP	United States	METHODS AND APPARATUS FOR REDUCING FLUX CANCELLATION IN PERMIT OF DOUBLE COUPLE INDUCTIVE POWER TRANSFER SYSTEMS	US/15A 286			Filed	Application
157146NO	157146DP	Patent Cooperation Treaty	METHODS AND APPARATUS FOR REDUCING FLUX CANCELLATION IN PERMIT OF DOUBLE COUPLE INDUCTIVE POWER TRANSFER SYSTEMS	PCT/US2012/023676			Inactive	Expired
157120	157120DP	United States	SYSTEMS AND METHODS FOR INTERNAL MAGNETIZATION WIRELESS POWER TRANSFER	US/2011 540	9,900,282	5/15/2018	Granted	Granted
157120NO	157120DP	Patent Cooperation Treaty	SYSTEMS AND METHODS FOR INTERNAL MAGNETIZATION WIRELESS POWER TRANSFER	PCT/US2011/012151			Inactive	Granted
160507	160507DP	United States	SYSTEMS AND METHODS FOR IDENTIFYING AN IDEAL OPERATION FREQUENCY FOR WIRELESS POWER TRANSFER	US/13A 136	10,000,133	6/19/2013	Granted	Granted
160507NO	160507DP	Patent Cooperation Treaty	SYSTEMS AND METHODS FOR IDENTIFYING AN IDEAL OPERATION FREQUENCY FOR WIRELESS POWER TRANSFER	PCT/US2011/021626			Inactive	Expired
160507	160507DP	United States	SYSTEMS AND METHODS FOR IDENTIFYING AN IDEAL OPERATION FREQUENCY FOR WIRELESS POWER TRANSFER	US/13A 136			Filed	Allowed
160507NO	160507DP	Patent Cooperation Treaty	SYSTEMS AND METHODS FOR IDENTIFYING AN IDEAL OPERATION FREQUENCY FOR WIRELESS POWER TRANSFER	PCT/US2011/021626			Filed	Application

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160661	160661DP	United States	BASE SIDE VEHICLE IDENTIFICATION USING VEHICLE CONTROLLER SWITCHING FREQUENCY	15/491,016		Filed	Allowed
160661CN	160661DP	China P.R.	BASE SIDE VEHICLE IDENTIFICATION USING VEHICLE CONTROLLER SWITCHING FREQUENCY	201780038473.2		Filed	Application
160661J1	160661DP	United States	BASE SIDE VEHICLE IDENTIFICATION USING VEHICLE CONTROLLER SWITCHING FREQUENCY	62/354,344		Inactive	Expired
160661WO	160661DP	Patent Cooperation Treaty	BASE SIDE VEHICLE IDENTIFICATION USING VEHICLE CONTROLLER SWITCHING FREQUENCY	PCT/JP2017/034962		Filed	Application
160676	160676DP	United States	DYNAMIC MUTUAL SENSING OF OPEN CIRCUIT DETECTION	15/264,733	61/464,716	4/15/2018 Issued	Issued
160676WO	160676DP	Patent Cooperation Treaty	DYNAMIC MUTUAL SENSING OF OPEN CIRCUIT DETECTION	PCT/JP2017/034963		Filed	Application
160676	160676DP	United States	APPARATUS AND METHODS FOR REDUCING MAGNETIC FIELD EMISSIONS BETWEEN WIRELESS POWER TRANSMITTERS	15/179,894		Filed	Application
160676WO	160676DP	Patent Cooperation Treaty	APPARATUS AND METHODS FOR REDUCING MAGNETIC FIELD EMISSIONS BETWEEN WIRELESS POWER TRANSMITTERS	PCT/JP2017/034965		Filed	Application
160676	160676DP	United States	BOARD DETECTION FOR 100G ARRAY	15/114,908	61/194,637	11/13/2018 Granted	Granted
160676WO	160676DP	Patent Cooperation Treaty	BOARD DETECTION FOR 100G ARRAY	PCT/JP2017/034966		Filed	Application
162039	162039DP	United States	TWISTED WIRE FOR POWER CHARGING	15/275,094	10,144,302	12/4/2018 Granted	Granted

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162039WQ	162039DP	Patent Cooperation Treaty	TWISTED WIRE FOR POWER CHARGING	PCT/US2017/047931			Filed	Application
162039WQ	162039DP	Patent Cooperation Treaty	METHODS AND APPARATUS FOR POSITIONING A VEHICLE USING FOR POSITIONING DETECTION	15/089,248			Filed	Application
162039WQ	162039DP	Patent Cooperation Treaty	METHODS AND APPARATUS FOR POSITIONING A VEHICLE USING FOR POSITIONING DETECTION	PCT/US2017/047758			Filed	Application
162039WQ	162039DP	United States	METHOD AND APPARATUS FOR POSITIONING A VEHICLE	15/449,718			Filed	Application
162039WQ	162039DP	China P.R.	METHOD AND APPARATUS FOR POSITIONING A VEHICLE	201780016060.4			Filed	Application
162039WQ	162039DP	European Patent Convention	METHOD AND APPARATUS FOR POSITIONING A VEHICLE	17714935.8			Filed	Application
162039WQ	162039DP	United States	METHODS AND APPARATUS FOR POSITIONING A VEHICLE	62/343,736			Filed	Application
162039WQ	162039DP	United States	SYSTEM AND METHOD FOR POSITIONING A VEHICLE	62/305,411			Filed	Application
162039WQ	162039DP	Patent Cooperation Treaty	METHOD AND APPARATUS FOR POSITIONING A VEHICLE	PCT/US2017/020890			Filed	Application
162039WQ	162039DP	United States	METHODS AND APPARATUS FOR POSITIONING A VEHICLE	15/596,104			Filed	Application
162039WQ	162039DP	China P.R.	METHODS AND APPARATUS FOR POSITIONING A VEHICLE	107803724.4			Filed	Application
162039WQ	162039DP	United States	METHODS AND APPARATUS FOR POSITIONING A VEHICLE	15/390,593			Filed	Application
162039WQ	162039DP	Patent Cooperation Treaty	METHODS AND APPARATUS FOR POSITIONING A VEHICLE	PCT/US2017/041390			Filed	Application
162039WQ	162039DP	United States	DETERMINING POWER ELECTRONICS FEASIBILITY WITH SINGLE TURN MAGNETIC SIMULATION DATA	15/073,678			Filed	Application

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1735896	1735896D	United States	FOREIGN OBJECT DETECTION USING SENSITIVE INTERNAL AND INDUCTIVE SENSING	62/538,679			Filed	Application
1735895	1735895D	United States	ADAPTIVE ADC CONTROL FOR LIVING OBJECT PROTECTION	15/834,679			Filed	Application
1735892	1735892D	United States	ADAPTIVE ADC CONTROL FOR LIVING OBJECT PROTECTION	62/479,288			inactive	Expired
1746389	1746389D	United States	SAFETY CONTROL FOR WIRELESS CHARGING	15/646,486			Filed	Application
1746387	1746387D	United States	MAGNETIC COIL FOR WIRELESS POWER TRANSFER	62/538,270			inactive	Expired
1746388	1746388D	United States	METHODS AND APPARATUS FOR SHIELDING IN WIRELESS TRANSFER POWER SYSTEMS	15/008,063			Filed	Application
1746389	1746389D	United States	METHODS AND APPARATUS FOR SHIELDING IN WIRELESS TRANSFER POWER SYSTEMS	62/520,461			inactive	Expired
1746389	1746389D	United States	METHODS FOR WARNING OF ELECTROMAGNETIC RFI IS PRODUCED BY WIRELESS ELECTRIC CHARGING SYSTEMS	15/946,743			Filed	Application
1750113	1750113D	United States	PASSIVE FLUX BRIDGE FOR CHARGING ELECTRIC VEHICLES	15/971,577			Filed	Application
1750908	1750908D	United States	EMERGENCY CONTROL FOR INDUCTIVE WIRELESS CHARGING SYSTEMS	62/560,672			Filed	Application
1750909	1750909D	United States	INDUCTIVE WIRELESS CHARGING SYSTEMS	62/560,672			Filed	Application
1758972	1758972D	United States	FOREIGN OBJECT DETECTION CIRCUIT USING CURRENT MEASUREMENT	15/226,156			Filed	Application
1758929	1758929D	United States	CIRCUIT USING CURRENT MEASUREMENT	62/520,672			Filed	Application
1758930	1758930D	United States	INDUCTIVE WIRELESS POWER RECEIVERS	62/560,461			Filed	Application

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183905	183905IDF	United States	EXT-450 AND SYSTEM FOR REDUCING MAGNETIC FIELD EMISSIONS FROM CONSOLE COUPLES	16/09/2005				Filed	Application
183922	183922IDF	United States	CON. TURN STAIRS ARRANGEMENT FOR INDUCTIVE WIRELESS CHARGING SYSTEM AND DETECTION AND MONITORING MET-035 FOR SAFE OPERATION OF A WTC ELEVATOR	02/02/2006				Filed	Application - Instructed to lapse via inaction (no conversion planned)
183923	183923IDF	United States	WIRELESS ELECTRIC VEHICLE CHARGING SYSTEM	16/09/2005				Filed	Application
183924	183924IDF	United States	EXTENDED FOREIGN OBJECT DETECTION SIGNAL PROCESSING	02/02/2006				Filed	Application
183927	183927IDF	United States	EXTENDED FOREIGN OBJECT DETECTION SIGNAL PROCESSING	02/02/2006				To be Filed	To be Filed
18392791	18392791IDF	United States	EXTENDED FOREIGN OBJECT DETECTION SIGNAL PROCESSING	02/02/2006				Filed	Application
183928	183928IDF	United States	EXTENDED FOREIGN OBJECT DETECTION SIGNAL PROCESSING	02/02/2006				To be Filed	To be Filed
183934	183934IDF	United States	Extended Range Positioning System Based on Foreign Object Detector					To be Filed	To be Filed
183954P1	183954P1IDF	United States	Extended Range Positioning System Based on Foreign Object Detector	02/02/2006				Filed	Application
183957P1	183957P1IDF	United States	Extended Range Positioning System Based on Foreign Object Detector	02/02/2006				Filed	Application
183957	183957IDF	United States	Extended Range Positioning System Based on Foreign Object Detector	02/02/2006				To be Filed	To be Filed
183925	183925IDF	United States	METHOD AND SYSTEM FOR MOVING A MAGNETIC FIELD HOT SPOT OF A WIRELESS POWER TRANSFER DEVICE	16/09/2005				Filed	Application
183926	183926IDF	United States	METHOD AND SYSTEM FOR MOVING A MAGNETIC FIELD HOT SPOT OF A WIRELESS POWER TRANSFER DEVICE	16/09/2005				To be Filed	To be Filed

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RECORDED: 01/19/2024