

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4625950

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
KT CORPORATION	09/27/2017
RECEIVING PARTY DATA	
Name:	GOOGLE INC.
Street Address:	1600 AMPHITHEATRE PARKWAY
City:	MOUNTAIN VIEW
State/Country:	CALIFORNIA
Postal Code:	94043
PROPERTY NUMBERS Total: 15	
Property Type	Number
Application Number:	13927373
Application Number:	14686690
Application Number:	14017458
Application Number:	13946141
Application Number:	13953180
Application Number:	14023754
Application Number:	14027639
Application Number:	14428234
Application Number:	14024979
Application Number:	14941850
Application Number:	14024855
Application Number:	14038863
Application Number:	15201696
Application Number:	14051514
Application Number:	14063220
CORRESPONDENCE DATA	
Fax Number:	(509)443-7129
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
Phone:	5094437129

Email: travis@colbynipper.com
Correspondent Name: COLBY NIPPER
Address Line 1: 291 E. SHORE DR.
Address Line 2: SUITE 200
Address Line 4: BOISE, IDAHO 83616

ATTORNEY DOCKET NUMBER:	KT CORPORATION TRANSFER
NAME OF SUBMITTER:	MICHAEL K. COLBY, REG# 45,816
SIGNATURE:	/Michael K. Colby/
DATE SIGNED:	10/04/2017

Total Attachments: 12

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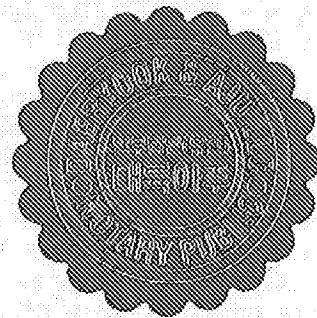
서울특별시 강남구 테헤란로 317 (역삼동)
 동훈타워 12층
 [별지 제41호서식]

(전화) 02-3016-9508
 (팩스) 02-564-0278

Registered No. 2017 - 1432

NOTARIAL CERTIFICATE

DAERYOOK&AJU LLC



12F., Donghoon Tower
 317, Teheran-ro, Gangnam-gu, Seoul

법무법인(유한) 대륙아주

210mm X 297mm
 보존용지(1종) 70g/m²

PATENT
REEL: 043778 FRAME: 0702



ATTACHMENT C

CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS

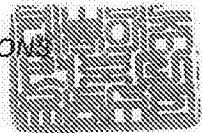
THIS CONFIRMATORY ASSIGNMENT OF PATENT RIGHTS ("Assignment") is entered into an executed between KT Corporation, a Korean company, with its principal place of business at 90 Buljeong-ro, Bundang-gu, Seongnam City, Gyeonggi-do, 13606, Korea ("Assignor"), and Google Inc., a Delaware corporation, with its principal place of business at 1600 Amphitheatre Parkway, Mountain View, California 94043 ("Assignee"), pursuant to the Patent Purchase Agreement having an Effective Date of Sept 21, 2017 ("Agreement") between Assignor and Assignee. Capitalized terms used herein and not expressly defined shall have the meaning ascribed to such terms in the Agreement.

"Assigned Patents" means any and all patents and patent applications (a) listed on Exhibit A ("Listed Patents"); (b) to which any of the Listed Patents is or reasonably should be terminally disclaimed or for which any of the foregoing forms a basis for a terminal disclaimer; or (c) to which any of the foregoing claims or is entitled to claim priority including any parent application, provisional or other priority document; or (d) that are national (of any country of origin), international or multinational counterparts to any of the foregoing; or (e) that claim priority to or have common priority with any of the foregoing, including all continuing, divisional and continuation-in-part applications of any of the foregoing; or (f) that arise out of any corrections, substitutions, reissues, extensions, renewals or re-examinations of any of the foregoing; or (g) that issue anywhere in the world from any of the Patent applications in any of the foregoing (a) through (f).

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Assignor hereby acknowledges and confirms that, under the Agreement, Assignor has irrevocably sold, assigned, transferred and conveyed (or to the extent deemed necessary under applicable law, does hereby irrevocably sell, assign, transfer and convey) unto said Assignee, effective as of the above-indicated Effective Date of the Agreement, and Assignee hereby confirms Assignee's acceptance of, all of Assignor's right, title, and interest (i) in and to the Assigned Patents, the same to be held and enjoyed by said Assignee for its own use, and for the use of its successors, assigns, or other legal representatives to the end of the term or terms for which said Assigned Patents may be granted as fully and entirely as the same would have been held and enjoyed by Assignor if the Assignment had not been made; (ii) in and to all causes of action (whether known or unknown, accrued or unaccrued, or whether currently pending, filed or otherwise), provisional rights and other enforcement rights under, or on account of, any of the Assigned Patents, including all rights to pursue damages, injunctive relief and other remedies of any kind (including based on provisional rights) for past, current and future infringement of the Assigned Patents; and (iii) to apply in any and all countries of the world for patents; certificates of invention or other governmental grants for the Assigned Patents, subject to the rights under the Assigned Patents granted to Assignor and retained by certain third parties to the extent set forth in the Agreement. Assignor also hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents or certificates of invention that may be granted upon any of the Assigned Patents in the name of Assignee, as the assignee to the entire interest therein.

Notwithstanding anything to the contrary herein, Assignor is executing and delivering this Assignment in accordance with and subject to all of the terms and provisions of the Agreement. In the event of any conflict between the terms of this Assignment and those of the Agreement, the terms of the Agreement will be controlling.



This Assignment will be binding upon and will inure to the benefit of the parties and their respective successors and assigns.

This Assignment will be governed by, and construed in accordance with, the laws of the United States in respect to patent issues and in all other respects by the laws of the, without reference to its choice of law principles to the contrary.

IN WITNESS WHEREOF, Assignor has caused this Assignment to be executed as of this 21st day of September, 2017.

ASSIGNOR:

KT Corporation

By: [Signature]

Name: Yeh, Bomsu

Title: Director of IPR department

NOTARIZATION MUST BE ON THIS PAGE

Subscribed and sworn to before me this 21st day of September, 2017.



Signature: [Signature]

Notary Public

SEUNG-SOO YOO

IN WITNESS WHEREOF, Assignee has caused this Assignment to be executed as of this 29 day of September, 2017.

ASSIGNEE:

Google, Inc.

By: [Signature]

Name: Jeremiah Chan

Title: Assistant Secretary

NOTARIZATION MUST BE ON THIS PAGE

Subscribed and sworn to before me this _____ day of _____, 20____.

(Notarial Seal)

Signature: _____

Notary Public



EXHIBIT A TO ATTACHMENT C
 LISTED PATENTS

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
	201380035425 X	2014.12.31	CN	Controlling Transmit Power of Uplink Sounding Reference Signal
	201380058356 4	2015.05.07	CN	Transmitting Configuration Information of Interference Measurement Resource, and Measuring Interference
	201380052379 4	2015.04.07	CN	Control Information Transmission and Uplink Control Channel Resource Mapping
	201380053688 3	2015.04.14	CN	Configuration and Mapping of Uplink Control Channel Resource
	201380059610 2	2015.05.14	CN	Transmission and Reception of Control Information
	201380059919 0	2015.04.15	CN	Transmission and Reception of Control Information
	201380059609 X	2015.05.14	CN	Method for Transmitting Control Information of Transceiving Point and Said Transceiving Point, Method for Receiving Control Information for Terminal and Said Terminal
	201380059386 7	2015.05.13	CN	Reception and Configuration of Downlink Control Channel
	201380059653 0	2015.05.14	CN	Transmitting and Receiving Uplink Control Channel
	201380050746 7	2015.03.27	CN	Method and Apparatus for Blind Decoding Adjustment in Downlink Control Channel
	201380053516 6	2015.04.13	CN	Controlling Uplink Power
	201510283761 0	2015.05.21	CN	Controlling Uplink Power
	13816987 5	2014.11.21	EP	Controlling Transmit Power of Uplink Sounding Reference Signal
	2015-521537	2015.01.09	JP	Controlling Transmit Power of Uplink Sounding Reference Signal
JP6039810	2015-531004	2015.03.04	JP	Transmitting Configuration Information of Interference Measurement Resource, and Measuring Interference
JP6027247	2015-531860	2015.03.17	JP	Transmission and Reception of Control Information

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
JP6007333	2015-531022	2015.03.10	JP	Reception and Configuration of Downlink Control Channel
	2015-531855	2015.03.15	JP	Transmitting and Receiving Uplink Control Channel
	2017-046243	2017.03.14	JP	Transmitting and Receiving Uplink Control Channel
	10-2012-0076264	2012.07.12	KR	Method, Terminal and Transmission/Reception Point for Controlling Transmit Power of Uplink Sounding Reference Signal
	10-2012-0093331	2012.08.24	KR	Method, Terminal and Transmission/Reception Point for Controlling Transmit Power of Uplink Sounding Reference Signal
	10-2012-0144490	2012.12.12	KR	Method, Terminal and Transmission/Reception Point for Controlling Transmit Power of Uplink Sounding Reference Signal
	10-2015-0085982	2015.06.17	KR	Method, Terminal and Transmission/Reception Point for Controlling Transmit Power of Uplink Sounding Reference Signal
	10-2012-0099237	2012.09.07	KR	Method for Transmitting and Receiving Configuration Information of Interference Measurement Resource, Method for Measuring Interference Measurement Resource, Terminal and Transmission Point Thereof
	10-2012-0116939	2012.10.19	KR	Method for Transmitting and Receiving Configuration Information of Interference Measurement Resource, Method for Measuring Interference Measurement Resource, Terminal and Transmission Point Thereof
KR101526103	10-2012-0144604	2012.12.12	KR	Method for Transmitting and Receiving Configuration Information of Interference Measurement Resource, Method for Measuring Interference Measurement Resource, Terminal and Transmission Point Thereof
KR101558749	10-2012-0146706	2012.12.14	KR	Method for Transmitting Control Information of Transmission/Reception Point, Transmission/Reception Point Thereof, Method for Mapping Uplink Control Channel Resource

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
				of Terminal and Terminal Thereof
KR101656242	10-2015-0071638	2015.05.22	KR	Method for Transmitting Control Information of Transmission/Reception Point, Transmission/Reception Point Thereof, Method for Mapping Uplink Control Channel Resource of Terminal and Terminal Thereof
KR101684751	10-2012-0145418	2012.12.13	KR	Method for Uplink Control Channel Resource Configuration, Transmission/Reception Point Thereof, Method for Mapping Uplink Control Channel Resource and Terminal Thereof
KR101616781	10-2015-0077139	2015.06.01	KR	Method for Uplink Control Channel Resource Configuration, Transmission/Reception Point Thereof, Method for Mapping Uplink Control Channel Resource and Terminal Thereof
	10-2012-0102452	2012.09.14	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
	10-2012-0111501	2012.10.08	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
KR101574713	10-2012-0144531	2012.12.12	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
	10-2012-0103584	2012.09.18	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
KR101562694	10-2012-0145359	2012.12.13	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
KR101617680	10-2015-0087098	2015.06.19	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
KR101562702	10-2013-0088961	2013.07.30	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
KR101617588	10-2015-0088874	2015.06.24	KR	Method for Transmitting Control Information, Transmission/Reception Point Thereof, Method for Receiving Control Information and Terminal Thereof
	10-2012-0101747	2012.09.13	KR	Method for Receiving Downlink Control Channel, Terminal Thereof, Method for Configuring Downlink Control Channel and Transmission/Reception Point Thereof
KR101562698	10-2013-0027868	2013.03.15	KR	Method for Receiving Downlink Control Channel, Terminal Thereof, Method for Configuring Downlink Control Channel and Transmission/Reception Point Thereof
KR101627070	10-2015-0079269	2015.06.04	KR	Method for Receiving Downlink Control Channel, Terminal Thereof, Method for Configuring Downlink Control Channel and Transmission/Reception Point Thereof
	10-2012-0102352	2012.09.14	KR	Methods for Transmitting and Receiving Uplink Control Channel, Terminal and Transmission Reception Point Thereof
KR101475123	10-2012-0146600	2012.12.14	KR	Methods for Transmitting and Receiving Uplink Control Channel, Terminal and Transmission Reception Point Thereof

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
	10-2012-0109011	2012.03.20	KR	Methods of Adjusting Blind Decoding of Downlink Control Channel and Apparatuses Thereof
KR101563704	10-2013-0104930	2013.09.02	KR	Methods of Adjusting Blind Decoding of Downlink Control Channel and Apparatuses Thereof
KR101615855	10-2015-0086334	2015.06.18	KR	Methods of Adjusting Blind Decoding of Downlink Control Channel and Apparatuses Thereof
	10-2012-0113844	2012.10.12	KR	Method for Controlling Uplink Power With Terminal and Terminal Thereof
KR101587908	10-2013-0021542	2013.02.27	KR	Method for Controlling Uplink Power With Terminal and Terminal Thereof
	10-2013-0070558	2013.06.19	KR	Method for Controlling Uplink Power With Terminal and Terminal Thereof
9,094,924	13/927,373	2013.06.26	US	Controlling Transmit Power of Uplink Sounding Reference Signal
9,392,552	14/686,690	2015.04.14	US	Controlling Transmit Power of Uplink Sounding Reference Signal
9,137,810	14/017,458	2013.09.04	US	Transmitting Configuration Information of Interference Measurement Resource, and Measuring Interference
9,167,575	13/946,141	2013.07.10	US	Control Information Transmission and Uplink Control Channel Resource Mapping
9,655,087	13/963,180	2013.07.29	US	Configuration and Mapping of Uplink Control Channel Resource
9,173,215	14/023,754	2013.09.11	US	Transmission and Reception of Control Information
9,398,577	14/027,639	2013.09.16	US	Transmission and Reception of Control Information
9,385,850	14/426,234	2015.03.13	US	Method for Transmitting Control Information of Transceiving Point and Said Transceiving Point, Method for Receiving Control Information for Terminal and Said Terminal
9,191,943	14/024,979	2013.09.12	US	Reception and Configuration of Downlink Control Channel
	14/941,850	2015.11.16	US	Reception and Configuration of Downlink Control Channel
9,265,037	14/024,855	2013.09.12	US	Transmitting and Receiving Uplink Control Channel

Patent Number	Application Number	Application Date or National Phase Date	Country	Title
9,414,263	14/038,863	2013.09.27	US	Adjusting Blind Decoding of Downlink Control Channel
9,712,278	15/201,696	2016.07.05	US	Adjusting Blind Decoding of Downlink Control Channel
	14/051,514	2013.10.11	US	Controlling Uplink Power
9,379,874	14/063,220	2013.10.25	US	Controlling Uplink Power
	PCT/KR2013/005567	2013.05.24	WO	Controlling Transmit Power of Uplink Sounding Reference Signal
	PCT/KR2013/007899	2013.09.05	WO	Transmitting Configuration Information of Interference Measurement Resource, and Measuring Interference
	PCT/KR2013/005959	2013.07.04	WO	Control Information Transmission and Uplink Control Channel Resource Mapping
	PCT/KR2013/008757	2013.07.29	WO	Configuration and Mapping of Uplink Control Channel Resource
	PCT/KR2013/008191	2013.09.11	WO	Transmission and Reception of Control Information
	PCT/KR2013/008329	2013.09.16	WO	Transmission and Reception of Control Information
	PCT/KR2013/006816	2013.07.30	WO	Method for Transmitting Control Information of Transceiving Point and Said Transceiving Point, Method for Receiving Control Information for Terminal and Said Terminal
	PCT/KR2013/008282	2013.09.13	WO	Reception and Configuration of Downlink Control Channel
	PCT/KR2013/008283	2013.09.13	WO	Transmitting and Receiving Uplink Control Channel
	PCT/KR2013/008488	2013.08.23	WO	Method and Apparatus for Blind Decoding Adjustment in Downlink Control Channel
	PCT/KR2013/009078	2013.10.11	WO	Controlling Uplink Power

등부 2017년 제 1432호

Registered No. 2017-1432

인 증

NOTARIAL CERTIFICATE

위 별첨C-----에
기재된 주식회사 케이티 수석연구원 -
예범수-----

Min, Chan Ho-----

attorney-in-fact of
Yeh, Bomsu / Director of IPR department,
KT Corporation-----

의 대리인 민찬호-----는
본 공증인의 면전에서 위 본인이 ---
서명 - 한 것임을 확인하였다.

appeared before me and admitted
said principal's subscription to
the attached ATTACHMENT C.-----

2017년 09월 28일
이 사무소에서 위 인증한다.


This is hereby attested on this
28th day of Sep. 2017 at this office.

공증사무소 명칭
법무법인(유한) 대륙아주

Name of the office
DAERYOOK&AJU LLC

소 속 서울중앙지방검찰청
소재지표시
서울특별시 강남구 테헤란로 317 (역삼동)
동훈타워 12층

Belong to Seoul Central
District Prosecutor's Office
Address of the office
12F., Donghoon Tower
317, Teheran-ro, Gangnam-gu, Seoul


공증인 공증담당 변호사


Signature of the Notary Public
SEUNG-SOO YOO

본 사무소는 인가번호 제16호에 의거하여
2015년 02월 07일 법무부 장관으로부터
공증인 업무를 행할 것을 인가 받았다.

This office has been authorized by the
Minister of Justice, the Republic of
Korea, to act as Notary Public Since
7, Feb. 2015 Under Law No.16.

법무법인(유한) 대륙아주

210mm X 297mm
보존용지(1종) 70g/m²

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

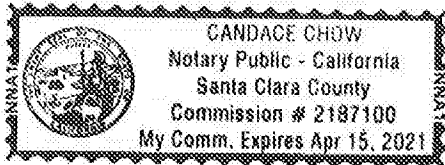
CIVIL CODE § 1189

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 Santa Clara }

On September 29, 2017 before me, Candace Chow, Notary Public
Date Here Insert Name and Title of the Officer
personally appeared Jeremiah Chan
Name(s) of Signer(s)

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.

Place Notary Seal and/or Stamp Above

Signature [Handwritten Signature]
Signature of Notary Public

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document:

Document Date: Number of Pages:

Signer(s) Other Than Named Above:

Capacity(ies) Claimed by Signer(s)

Signer's Name: Signer's Name:

Corporate Officer - Title(s): Corporate Officer - Title(s):

Partner - Limited General Partner - Limited General

Individual Attorney in Fact Individual Attorney in Fact

Trustee Guardian of Conservator Trustee Guardian of Conservator

Other: Other:

Signer Is Representing: Signer Is Representing:

