508283895 12/14/2023

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT8331084

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALI CAGATAY CIRIK	02/16/2021
ESMAEL HEJAZI DINAN	02/10/2021
YUNJUNG YI	02/17/2021
HUA ZHOU	02/11/2021
ALIREZA BABAEI	02/17/2021
YOUNGWOO KWAK	02/10/2021
KYUNGMIN PARK	02/10/2021

RECEIVING PARTY DATA

Name:	COMCAST CABLE COMMUNICATIONS, LLC	
Street Address: 1701 JFK BOULEVARD		
City:	PHILADELPHIA	
State/Country:	PENNSYLVANIA	
Postal Code:	19103	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	18314535

CORRESPONDENCE DATA

Fax Number:

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.

Email: smehr@bannerwitcoff.com, bwptopat@bannerwitcoff.com

Correspondent Name: BANNER & WITCOFF, LTD

Address Line 1: 1100 13TH ST NW

Address Line 2: SUITE 1200

Address Line 4: WASHINGTON, D.C. 20005

ATTORNEY DOCKET NUMBER: 007412.06350	
NAME OF SUBMITTER: VENKATRAM PEPAKAYALA	
SIGNATURE: /Venkatram Pepakayala/	
DATE SIGNED:	12/14/2023

PATENT REEL: 065872 FRAME: 0531

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Total Attachments: 8

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PATENT REEL: 065872 FRAME: 0532

ASSIGNMENT

Attorney Docket No.: 007412.04968 (19-1112)

Serial Number: **16/919,287** Filing Date: 07/02/2020

Inventors: Ali Cirik, Esmael Dinan, Yunjung Yi, Hua Zhou, Alireza Babaei, Youngwoo Kwak,

Kyungmin Park

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby assign to:

COMCAST CABLE COMMUNICATIONS, LLC

having a place of business at 1701 JFK Boulevard, Philadelphia, PA 19103, its successors and assigns, the entire right, title and interest in the invention or improvements (including but not limited to all non-provisional, divisional, continuation, continuation-in-part, continuing prosecution applications, requests for continuing examinations, reissue, and substitute applications worldwide; all extensions of such applications; and all patent applications, patents, and/or other similar governmental grants or issuances worldwide that directly or indirectly claims or forms a basis for claiming priority thereto) of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

Wireless Resource Determination and Use

and identified as Attorney Docket No. 007412.04968 in the offices of Banner & Witcoff, Ltd. and in said application and any and all other applications, both United States and foreign, which the undersigned may file, either solely or jointly with others, on said invention or improvements (including but not limited to all non-provisional, divisional, continuation, continuation-in-part, continuing prosecution applications, requests for continuing examinations, reissue, and substitute applications worldwide; all extensions of such applications; and all patent applications, patents, and/or other similar governmental grants or issuances worldwide that directly or indirectly claims or forms a basis for claiming priority thereto), and in any and all Letters Patent of the United States and foreign countries, which may be obtained on any of said applications, and in any reissue or extension of such patents, and further assigns to said assignee the priority right provided by the International Convention.

The undersigned hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent to said assignee.

The undersigned hereby authorize and request the attorneys of record in said application to insert in this assignment the filing date and serial number of said application when officially known.

The undersigned warrant themselves to be the owners of the entire right, title and interest in said invention or improvements (including but not limited to all non-provisional, divisional, continuation, continuation-in-part, continuing prosecution applications, requests for continuing examinations, reissue, and substitute applications worldwide; all extensions of such applications; and all patent applications, patents, and/or other similar governmental grants or issuances worldwide that directly or indirectly claims or forms a basis for claiming priority thereto) and to have the right to make this assignment, and further warrant that there are no outstanding prior assignments, licenses, or other encumbrances on the interest herein assigned.

For said considerations and without additional charge the undersigned hereby agree, upon the request and at the expense of said assignee, its successors and assigns, to execute any and all non-provisional, divisional, continuation, continuation-in-part, continuing prosecution applications, requests for

PATENT REEL: 065872 FRAME: 0533

continuing examinations, reissue, and substitute applications worldwide, all extensions of such continuing examinations applications, patents, and/or other similar governmental grants or issuances applications, and all patent applications or forms a basis for claiming or including the desired of issuances. applications, and are presented of indirectly claims or forms a basis for claiming priority thereto, for said invention worldwide that directly or indirectly claims or forms a basis for claiming priority thereto, for said invention corliberate than unexposed and necessary outh, affidavit or declaration relating thereto, and any application for improvements, and any necessary outh, affidavit or declaration relating thereto, and any application for or improvements, and any Letters Patent that may be granted upon said application and any and all the reissue or extension of any Letters Patent in freeign countries on midthe resiste of extension and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, applications and over the successors or assigns may deem necessary or expedient, and for the said that said assigned, and without additional charge the undersigned authorize said assignee to apply for patents Considerations and approximents in its own name in such countries where such procedure is proper and the said investment of and without additional charge to said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date: Date: Date:	2-16-2021 2-16-2021	Silvy Cyrler Wirpess Harris
Dates		Esmael Dinan
Date:		Witness
Date:	<u> </u>	Witness
Date:		Yanjung Yi
Date:		Witness
Date:		Witness

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continuing examinations, reissue, and substitute applications worldwide, all extensions of such applications, and all patent applications, patents, and/or other similar governmental grants or issuances worldwide that directly or indirectly claims or forms a basis for claiming priority thereto, for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements. that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations and without additional charge the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of and without additional charge to said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignce, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignce, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date:	Ali Cirik
Date:	Witness
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Date: 2/10/20 21	Esmacl Dina (Esmacl Dina)
Date: 2/10/21	Witness
Date: 2/10/21	Witness
Date:	Yunjung Yi
Date:	Witness
Date:	Witness

continuing examinations, reissue, and substitute applications worldwide, all extensions of such applications, and all patent applications, patents, and/or other similar governmental grants or issuances worldwide that directly or indirectly claims or forms a basis for claiming priority thereto, for said invention or improvements, and any necessary oath, affidavit or declaration relating thereto, and any application for the reissue or extension of any Letters Patent that may be granted upon said application and any and all applications and other documents for Letters Patent in foreign countries on said invention or improvements, that said assignee, its successors or assigns may deem necessary or expedient, and for the said considerations and without additional charge the undersigned authorize said assignee to apply for patents for said invention or improvements in its own name in such countries where such procedure is proper and further agree, upon the request of and without additional charge to said assignee, its successors and assigns, to cooperate to the best of the ability of the undersigned with said assignee, its successors and assigns, in any proceedings or transactions involving such applications or patents, including the preparation and execution of preliminary statements, giving and producing evidence, and performing any and all other acts necessary to obtain, maintain and enforce said Letters Patent, both United States and foreign, and vest all rights therein hereby conveyed in the assignee, its successors and assigns, whereby said Letters Patent will be held and enjoyed by the said assignee, its successors and assigns, to the full end of the term for which said Letters Patent will be granted, as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

Date:		Ali Cirik
Date:		Witness
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Date:		Esmael Dinan
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Date:	2/11/201	Yuniung Yi
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Date:	2021-07-11	Haa Zhou
Date:	2-11-2021	Hallan
Date:	2/11/2021	Witness Witness
Date:		Alireza Babaei
Date:	-	Witness
Date:		Witness
Date:		Youngwoo Kwak
Date:		Witness
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Date:		Kyungmin Park
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Date:		Hua Zhou
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Date:	2/17/2021	Alirezu Babaei
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Date:		Alireza Babaei
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Date:	02/10/2021	Youngwoo Kwak
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Date:		Kyungmin Park
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Date:		Hua Zhou
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Date:	02/10/2021	Kyungmin Parky
Date:	2/10/2021	Witness
Date:	2/10/202/	HIM SUM

PATENT REEL: 065872 FRAME: 0540