505848669 01/06/2020

EPAS ID: PAT5895605

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DAN E. HOLDEN	02/20/2013
MICHAEL J. COOK	02/22/2013

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:	16519631

CORRESPONDENCE DATA

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Correspondent Name: BANNER & WITCOFF, LTD.

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ATTORNEY DOCKET NUMBER:	EY DOCKET NUMBER: 007412.04614	
NAME OF SUBMITTER: CRAIG W. KRONENTHAL		
SIGNATURE: /Craig W. Kronenthal/		
DATE SIGNED:	01/06/2020	

Total Attachments: 2

source=Signed Assignment Both Inventors (007412.01763)#page1.tif source=Signed Assignment Both Inventors (007412.01763)#page2.tif

PATENT 505848669 REEL: 051425 FRAME: 0698

ASSIGNMENT

Attorney Docket No.: 907412.01763

Serial Number: Filing Date:

Inventors: Dan E. Holden and Michael J. Cook

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 of the undersigned disclosed in an application for Letters Patent of the United States, entitled:

ENVIRONMENT OBJECT RECOGNITION

and identified as Attorney Docket No. 007412.01763 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, 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 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 divisional, continuation and substitute applications 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 assignce, 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 Patem will be

> PATENT REEL: 051425 FRAME: 0699

granted, as fu assignment ha	lly and entirely as the same would d not been made.	have been held and enjoyed by the undersigned if this
Date:	2-12012012	Dan E. Holdest
Date:	2.20.13	OUST ULS
Date:	<u> </u>	Witness PLULLS
Date:	2/2/2013	Michael J. Objak
Date:	2/24/2015	Witness
Date;	1/22/2003	Witness

PATENT REEL: 051425 FRAME: 0700

RECORDED: 01/06/2020