

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT4771505

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
JOON-KEE CHANG	01/02/2018
SUNGHO KIM	01/02/2018
SUNGTAK CHO	01/02/2018
IN CHEOL KANG	01/02/2018
JIHOON AH	01/02/2018
JEONG MYEONG KIM	01/02/2018
YOUNG SOO LEE	01/02/2018
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Postal Code:	13561
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15856902
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ATTORNEY DOCKET NUMBER:	5540.130338
NAME OF SUBMITTER:	B. JOE KIM
SIGNATURE:	/B. JOE KIM/
DATE SIGNED:	01/11/2018

PATENT

Total Attachments: 4

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GREER, BURNS & CRAIN, LTD.
300 SOUTH WACKER DRIVE
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CHICAGO, ILLINOIS 60606

**Declaration and Assignment for Utility or
Design Patent Application**

The title of this invention is:

**BANDWIDTH ESTIMATION BASED ON BUFFER AND
ADAPTIVE BITRATE PUBLISH IN REAL-TIME LIVE ENVIRONMENT**

I. Declaration

As a below named inventor, I/we hereby declare that this declaration is directed to:

() the attached application,

OR

(X) United States application or PCT international application
number 15/856,902 filed on 12/28/2017
and was amended on (MM/DD/YYYY) _____
(if applicable).

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.

II. Assignment

(X) Check this box to assign this invention.

FOR VALUE RECEIVED, the receipt of which is hereby acknowledged, the below named inventor or inventors (hereinafter called "ASSIGNOR") hereby assigns, transfers, and sets over to:

**NAVER Corporation
Greenfactory, 6, Buljeong-ro, Bundang-gu,
Seongnam-si, Gyeonggi-do
13561, Republic of Korea**

(hereinafter called "ASSIGNEE"), the full and exclusive right, title, and interest in and to the above-named invention and all rights privileges under any Letters Patent that may be granted thereon, including all rights, if any, to sue for past infringement.

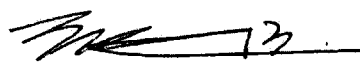
ASSIGNOR also assigns all rights, titles, and interests in and to said invention in all foreign countries, and all applications for Patent which may evolve therefrom, including the right to claim International Convention priority.

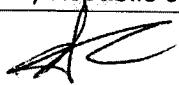
The ASSIGNOR agrees without charge to said ASSIGNEE but at its expense (a) to execute (i) all necessary papers to be used in connection with the above-identified application and any additional, continuing, or divisional applications, as the ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any other legal or quasi-legal proceedings relating to the above-identified application or any additional, continuing, or divisional application thereof; (b) to cooperate with ASSIGNEE in every way possible in obtaining evidence and going forward in any such proceedings; and (c) to perform all other affirmative acts which may be necessary or desirable to obtain a grant of a valid patent.

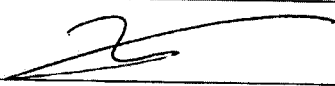
ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States to issue any and all Letters Patent that may be granted upon the above-identified application or any additional, continuing or divisional applications thereof to the ASSIGNEE, its successors and assigns.

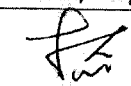
ASSIGNOR hereby covenants and warrants that he or she has full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

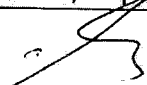
III. Inventor Signatures

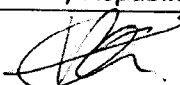
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Date:	2018/01/02

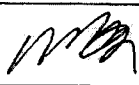
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Date:	02/01/2018