

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5530668

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TELL GATES	05/20/2019
RONALD HIRSCH	05/20/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	EDGE2020 LLC
<b>Street Address:</b>	12470 MANDERLEY WAY
<b>City:</b>	HERNDON
<b>State/Country:</b>	VIRGINIA
<b>Postal Code:</b>	20171
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16416500
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	
<b>Phone:</b>	7032018465
<b>Email:</b>	dfiul@watson-ip.com
<b>Correspondent Name:</b>	DAN FIUL WATSON IP GROUP
<b>Address Line 1:</b>	3133 HIGHLAND DR.
<b>Address Line 4:</b>	HUDSONVILLE, MICHIGAN 49426
<b>ATTORNEY DOCKET NUMBER:</b>	EDG191507
<b>NAME OF SUBMITTER:</b>	DAN FIUL
<b>SIGNATURE:</b>	/Dan Fiul/
<b>DATE SIGNED:</b>	05/20/2019
<b>Total Attachments: 2</b>	
source=EDG191507-Assignment-Ron#page1.tif	
source=EDG191507-Assignment-Tell#page1.tif	

**FOR VALUE RECEIVED**, the receipt of which is hereby acknowledged, the following original, joint inventor (hereinafter called 'ASSIGNOR'): **Ronald Hirsch** hereby assigns, transfers and sets over to the following entity (hereinafter called 'ASSIGNEE'):

**Edge2020 LLC**  
12470 Manderley Way  
Herndon, Virginia 20171

all worldwide right, title and interest in and to the invention and improvements known as:

**HYBRID VIDEO TIME-BANDWIDTH PRODUCT IMPROVEMENT (HVTBPI) TRANSMISSION**

including any and all patent applications related thereto including, but not limited to all provisional, non-provisional, divisional, continuation, continuation-in-part, substitute, reexamination, reissue and other applications which have been or shall be filed with the United States or elsewhere in the world, any patent rights which may be granted based thereon, including all rights of priority created by the above patent application under any treaty, convention or law relating thereto.

(1) The ASSIGNOR agrees without charge to said ASSIGNEE but at ASSIGNEE's expense (a) to execute (i) all necessary papers to be used in connection with this application and any additional, continuing, or divisional applications, as the ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any interference or other legal or quasilegal proceedings relating to this application or any additional, continuing, or divisional application thereof, (iii) all papers and documents which may be necessary in connection with the preparation and filing of any foreign applications or with making claims to priority rights granted under the provisions of the International Convention for Protection of Industrial Property or similar agreements; (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 for said invention in any country throughout the world.


(2) ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and the appropriate officials in any other country, to issue any and all Letters Patent that may be granted upon any patent application or any additional, continuing or divisional applications thereof to the ASSIGNEE, its successors and assigns.

(3) ASSIGNOR hereby covenants and warrants that they have 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.

(4) ASSIGNOR hereby grants to the law firm of THE WATSON IP GROUP, PLC, authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent Office or the Patent Office of any foreign country.

ASSIGNOR:

Date: 20 May 2019

Signature of Inventor: 

Name of Inventor: Ronald Hirsch

**PATENT ASSIGNMENT**

WIPG DOCKET NO.: EDG191507

**FOR VALUE RECEIVED**, the receipt of which is hereby acknowledged, the following original, joint inventor (hereinafter called 'ASSIGNOR'): **Tell Gates** hereby assigns, transfers and sets over to the following entity (hereinafter called 'ASSIGNEE'):

**Edge2020 LLC**  
12470 Manderley Way  
Herndon, Virginia 20171

all worldwide right, title and interest in and to the invention and improvements known as:

**HYBRID VIDEO TIME-BANDWIDTH PRODUCT IMPROVEMENT (HVTBPI) TRANSMISSION**

including any and all patent applications related thereto including, but not limited to all provisional, non-provisional, divisional, continuation, continuation-in-part, substitute, reexamination, reissue and other applications which have been or shall be filed with the United States or elsewhere in the world, any patent rights which may be granted based thereon, including all rights of priority created by the above patent application under any treaty, convention or law relating thereto.

(1) The ASSIGNOR agrees without charge to said ASSIGNEE but at ASSIGNEE's expense (a) to execute (i) all necessary papers to be used in connection with this application and any additional, continuing, or divisional applications, as the ASSIGNEE may deem necessary or expedient, (ii) all papers in connection with any interference or other legal or quasilegal proceedings relating to this application or any additional, continuing, or divisional application thereof, (iii) all papers and documents which may be necessary in connection with the preparation and filing of any foreign applications or with making claims to priority rights granted under the provisions of the International Convention for Protection of Industrial Property or similar agreements; (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 for said invention in any country throughout the world.

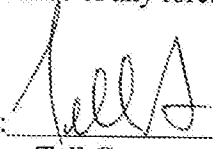
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(3) ASSIGNOR hereby covenants and warrants that they have full right to convey the entire right, title and interest by this instrument, free of any encumbrances and that no other agreement has been or will be executed in conflict herewith.

(4) ASSIGNOR hereby grants to the law firm of THE WATSON IP GROUP, PLC, authority and power to insert on this instrument any further identification which may be necessary or desirable for purposes of recordation in the United States Patent Office or the Patent Office of any foreign country.

Date: 5/20/19

ASSIGNOR:

Signature of Inventor: 

Name of Inventor: **Tell Gates**