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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7320508

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN R. B. WOODWORTH	04/20/2022
DEAN BALLEW	05/04/2022
STEWART BAMFORD	04/19/2022

RECEIVING PARTY DATA

Name:	LEVEL 3 COMMUNICATIONS, LLC
Street Address:	1025 ELDORADO BOULEVARD
City:	BROOMFIELD
State/Country:	COLORADO
Postal Code:	80021

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17739743

CORRESPONDENCE DATA

Fax Number: (626)577-8800

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.

Phone: 720-888-3381

Email: patent.docketing@lumen.com

Correspondent Name: LEVEL 3 COMMUNICATIONS, LLC ATTN: PATENT

Address Line 1: 1025 ELDORADO BLVD.

Address Line 4: BROOMFIELD, COLORADO 80021

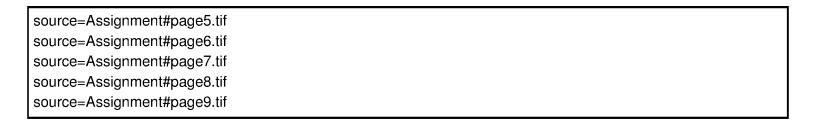
ATTORNEY DOCKET NUMBER:	1612-US-U1
NAME OF SUBMITTER:	GREGORY D. LEIBOLD
SIGNATURE:	/Gregory D. Leibold/
DATE SIGNED:	05/09/2022

Total Attachments: 9

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> PATENT REEL: 059872 FRAME: 0378

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ASSIGNMENT

PARTIES TO THE ASSIGNMENT:

Assignor(s)/Inventor(s):

Name of Assignor: John R. B. Woodworth City and State of Residence: Amissville, VA

Name of Assignor: Dean Ballew

City and State of Residence: Sterling, VA

Name of Assignor: Stewart Bamford

Residence: Cambridgeshire, United Kingdom

<u>Assignee:</u>

Level 3 Communications, LLC 1025 Eldorado Boulevard Broomfield, Colorado 80021

PATENT APPLICATION SUBJECT TO THE ASSIGNMENT (the "Application"):

U.S. Patent Application No.: 17/739,743

Filing Date: May 9, 2022

Title: TRAFFIC MONITORING AND ORCHESTRATION

Attorney Docket No.: 1612-US-U1

WHEREAS, the Assignor identified above has invented certain new and useful inventions for which the patent application for Letters Patent identified above has been prepared for filing with the United States Patent and Trademark Office.

NOW THEREFORE, for good and valuable consideration including at least US\$1, the receipt and sufficiency of which is acknowledged, Assignor(s) has(have) agreed to assign and transfer and does hereby assign and transfer unto the Assignee identified above, its successors and assigns, the entire right, title, and interest in and to said invention and the Application, including any additional provisional application with the same docketing prefix of 1612 any nonprovisional application that claims priority to the Application, and in and to any United States of America and foreign applications that claim priority to the Application, Patent Cooperation Treaty applications claiming priority to the Application and any national phase applications or patents claiming priority to such Patent Cooperation Treaty applications, convention applications, treaty applications, and regional applications, and to any divisional or continuation (in whole or in part) of any application related to the Application and in and to any and all improvements in said invention made by Assignor (provided any such improvement is made during, or within one year after the termination, of the employment by said Company of Assignor), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in the United States of America and all foreign countries in its own name and any priority rights for such United States of America

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and foreign applications to which such applications or the Assignor are entitled under international conventions, treaties, or otherwise which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me had this assignment and transfer not been made;

Assignor further agrees for Assignor and for Assignor's heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as Assignor lawfully may, that may be deemed necessary by said Assignee, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid to obtain to maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

Assignor hereby authorizes Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the title, application number and filing date of the Application once known;

Assignor hereby acknowledges that Assignee's internal and external counsel have represented only Assignee and will continue to represent only Assignee with respect to this invention;

Assignor hereby acknowledges an obligation of assignment and transfer of this invention and Application to Assignee at the time the invention was made; and

Assignor hereby authorizes and requests the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of said applications, to said Assignee, as the assignee of the entire right, title, and interest therein.

Assignor and Assignee hereby agree that this assignment is governed by the laws of the state of Colorado of the United States of America and subject to the non-exclusive jurisdiction of the courts of the state of Colorado of the United States of America.

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

Date:	20 April, 2022	Ву:	
			John R. B. Woodworth
Date:		Ву:	
			Dean Ballew
<u>Date</u> :		By:	0 10 10
			Stewart Bamford

ASSIGNMENT

PARTIES TO THE ASSIGNMENT:

Assignor(s)/Inventor(s):

Name of Assignor: John R. B. Woodworth City and State of Residence: Amissville, VA

Name of Assignor: Dean Ballew

City and State of Residence: Sterling, VA

Name of Assignor: Stewart Bamford

Residence: Cambridgeshire, United Kingdom

Assignee:

Level 3 Communications, LLC 1025 Eldorado Boulevard Broomfield, Colorado 80021

PATENT APPLICATION SUBJECT TO THE ASSIGNMENT (the "Application"):

U.S. Patent Application No.: 17/739,743

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and foreign applications to which such applications or the Assignor are entitled under international conventions, treaties, or otherwise which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me had this assignment and transfer not been made;

Assignor further agrees for Assignor and for Assignor's heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as Assignor lawfully may, that may be deemed necessary by said Assignee, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid to obtain to maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

Assignor hereby authorizes Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the title, application number and filing date of the Application once known;

Assignor hereby acknowledges that Assignee's internal and external counsel have represented only Assignee and will continue to represent only Assignee with respect to this invention;

Assignor hereby acknowledges an obligation of assignment and transfer of this invention and Application to Assignee at the time the invention was made; and

Assignor hereby authorizes and requests the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of said applications, to said Assignee, as the assignee of the entire right, title, and interest therein.

Assignor and Assignee hereby agree that this assignment is governed by the laws of the state of Colorado of the United States of America and subject to the non-exclusive jurisdiction of the courts of the state of Colorado of the United States of America.

IN WITNESS WHEREOF, the Assignor hereunto has executed this Assignment upon the date indicated below.

Date:		Ву:	John R. B. Woodworth
Date:	5/4/2022	By:	Deard Ballew
		,	Dean Ballew
<u>Date</u> :		Ву:	Stewart Bamford

ASSIGNMENT

PARTIES TO THE ASSIGNMENT:

Assignor(s)/Inventor(s):

Name of Assignor: John R. B. Woodworth City and State of Residence: Amissville, VA

Name of Assignor: Dean Ballew

City and State of Residence: Sterling, VA

Name of Assignor: Stewart Bamford

Residence: Cambridgeshire, United Kingdom

Assignee:

Level 3 Communications, LLC 1025 Eldorado Boulevard Broomfield, Colorado 80021

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U.S. Patent Application No.: 17/739,743

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and foreign applications to which such applications or the Assignor are entitled under international conventions, treaties, or otherwise which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me had this assignment and transfer not been made:

Assignor further agrees for Assignor and for Assignor's heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as Assignor lawfully may, that may be deemed necessary by said Assignee, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid to obtain to maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries;

Assignor hereby authorizes Assignee, its successors and assigns, or anyone it may properly designate, to insert in this instrument the title, application number and filing date of the Application once known;

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Assignor hereby authorizes and requests the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of said applications, to said Assignee, as the assignee of the entire right, title, and interest therein.

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Date: 197H APRIL 2022