507170979 03/10/2022

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7217825

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
FRANCISCO JAVIER VAQUERO-CABALLERO	03/09/2022
MICHAEL ANDREW REIMER	03/09/2022
SEB SAVORY	03/10/2022
MAURICE O'SULLIVAN	03/07/2022
MOHAMMAD EBRAHIM MOUSA PASANDI	03/08/2022
DAVID IVES	03/10/2022
MICHAEL HUBBARD	03/07/2022
ANDREW D. SHINER	03/08/2022

RECEIVING PARTY DATA

Name:	CIENA CORPORATION
Street Address:	7035 RIDGE ROAD
City:	HANOVER
State/Country:	MARYLAND
Postal Code:	21076

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	17458915
Application Number:	63071478

CORRESPONDENCE DATA

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER: C10.2763

NAME OF SUBMITTER: AMY SCOUTEN

PATENT 507170979 REEL: 059224 FRAME: 0858

SIGNATURE:	/Amy Scouten, Reg. #73,057/
DATE SIGNED:	03/10/2022
Total Attachments: 5	
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PATENT REEL: 059224 FRAME: 0859

ASSIGNMENT

WHEREAS, Francisco Javier VAQUERO-CABALLERO and Michael Andrew REIMER and Seb SAVORY and Maurice O'SULLIVAN and Mohammad Ebrahim MOUSA PASANDI and David IVES and Michael HUBBARD and Andrew D. SHINER (hereinafter referred to as "ASSIGNORS") have invented certain new and useful improvements in an invention entitled:

ESTIMATION OF COMMUNICATION SYSTEM IMPAIRMENTS USING SPECTRALLY SELECTIVE SIGNAL PERTURBATIONS

for which United States Patent Application No. 17/458,915 was filed on Aug 27, 2021, and for which United States Provisional Patent Application No. 63/071,478 entitled SPECTRAL SHAPING FOR NOISE SEGREGATION was filed on Aug. 28, 2020; and

WHEREAS, Ciena Corporation, 7035 Ridge Road, Hanover, MD 21076 USA (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire right, title, and interest in and to said invention, and in and to said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, in accordance with obligations entered into pursuant to an Employment Agreement or other agreement and/or for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNORS hereby sell, transfer and assign to said ASSIGNEE, and to ASSIGNEE'S successors and assigns, ASSIGNORS' entire right, title, and interest in and to said invention and improvements invented and originated by ASSIGNORS in the United States and its territorial possessions and in any and all foreign countries and to all Letters Patent or similar legal protections in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any application claiming priority to/from the application, or any continuation, division, continuation-in-part, reexamination, renewal, substitute, extension, or reissue thereof or any legal equivalent thereof in a foreign country for the full term(s) for which the same may be granted; and authorize and request the Commissioner for Patents of the United States and any official of any foreign country whose duty it is to issue patents or legal equivalents thereof, to issue same for this invention to ASSIGNEE, its lawful successors and assigns.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any administrative proceeding or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments, or affidavits required to apply for, obtain, maintain, issue, and/or enforce said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, we have hereumo set hand and signed on the date indicated below:

	1-1)	Date:	09 - March - 2022
Francisco Javier VAQUERO-CABALLERO	Second Second			
Michael Andrew REIMER			Date:	

PATENT REEL: 059224 FRAME: 0860

ASSIGNMENT.

WHEREAS, Francisco Javier VAQUERO-CABALLERO and Michael Andrew REIMER and Seb SAVORY and Maurice O'SULLIVAN and Mohammad Ebrahim MOUSA PASANDI and David IVES and Michael HUBBARD and Andrew D. SHINER (hereinafter referred to as "ASSIGNORS") have invented certain new and useful improvements in an invention emitted:

ESTIMATION OF COMMUNICATION SYSTEM IMPAIRMENTS USING SPECTRALLY SELECTIVE SIGNAL PERTURBATIONS

for which United States Patent Application No. 17/458,915 was filed on Aug 27, 2021, and for which United States Provisional Patent Application No. 63/071,478 entitled SPECTRAL SHAPING FOR NOISE SEGREGATION was filed on Aug. 28, 2020; and

WHEREAS, Ciena Corporation, 7035 Ridge Road, Hanover, MD 21076 USA (hereinafter referred to as "ASSIGNEE") is desirous of acquiring the entire right, title, and interest in and to said invention, and in and to said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, in accordance with obligations entered into pursuant to an Employment Agreement or other agreement and/or for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, ASSIGNORS hereby sell, transfer and assign to said ASSIGNEE, and to ASSIGNEE'S successors and assigns, ASSIGNORS' entire right, title, and interest in and to said invention and improvements invented and originated by ASSIGNORS in the United States and its territorial possessions and in any and all foreign countries and to all Letters Patent or similar legal protections in the United States and its territorial possessions and in any and all foreign countries to be obtained for said invention by said application or any application claiming priority to/from the application, or any continuation, division, continuation-in-part, reexamination, renewal, substitute, extension, or reissue thereof or any legal equivalent thereof in a foreign country for the full term(s) for which the same may be granted; and authorize and request the Commissioner for Patents of the United States and any official of any foreign country whose duty it is to issue patents or legal equivalents thereof, to issue same for this invention to ASSIGNEE, its lawful successors and assigns.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries as may be known and accessible to ASSIGNORS and will testify as to the same in any administrative proceeding or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments, or affidavits required to apply for, obtain, maintain, issue, and/or enforce said invention, said application, and said Letters Patent and legal equivalents thereof in foreign countries which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, we have hereunto set hand and signed on the date indicated below:

Francisco Javier VAQUERO-CABALLERO	Date:	
- <u>A</u>		
Michael Andrew REIMER	Date:	Mo= 9, 2022

PATENT REEL: 059224 FRAME: 0861 Michael HUBBARD

Andrew D. SHINER

PATENT

Date:

Date:

REEL: 059224 FRAME: 0862

PATENT

Attorney Docket No.: C10.2763

	Date:
Seb SAVORY	
250/2	Date: MARCH 7 ZOZZ
Maurice O'SULLIVAN	
Mohanimad Ebrahim MOUSA PASANDI	Date: March 08,2022
David IVES	Date:
	Date:
Michael HUBBARD	
Andrew D. SHINER	Date: 08 MAR 2027

PATENT

REEL: 059224 FRAME: 0863

	Date:
Seb SAVORY	
	Date:
Maurice O'SULLIVAN	
NATIONAL CONTRACTOR	Date:
Mohammad Ebrahim MOUSA PASANDI	
David IVES	Date:
11/21/11/1	Ma-17 2023
Michael HUBBARD	Date: March 7, 2022
	Date:
Andrew D. SHINER	