506616209 04/19/2021

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6663016

| SUBMISSION TYPE: | NEW ASSIGNMENT | |
|-----------------------|---------------------|--|
| NATURE OF CONVEYANCE: | ASSIGNMENT | |
| | | |
| CONVEYING PARTY DATA | | |
| CONVEYING PARTY DATA | Name Execution Date | |

| RAPHAEL JOSEPH WELSH | 03/25/2021 |
|----------------------|------------|
| DOUGLAS A. THORNTON | 03/25/2021 |
| DANIEL A. PERKINS | 03/29/2021 |
| MICAH BLUE | 03/29/2021 |
| AMY M. HEINTZ | 04/01/2021 |
| DANIEL G. LOESCH | 03/25/2021 |

RECEIVING PARTY DATA

| Name: | BATTELLE MEMORIAL INSTITUTE |
|-----------------|-----------------------------|
| Street Address: | 505 KING AVENUE |
| City: | COLUMBUS |
| State/Country: | ОНЮ |
| Postal Code: | 43201 |

PROPERTY NUMBERS Total: 5

| Property Type | Number |
|---------------------|-----------|
| Application Number: | 17141796 |
| Application Number: | 16858125 |
| Application Number: | 16858169 |
| Application Number: | 16858206 |
| PCT Number: | US2029760 |

CORRESPONDENCE DATA

| Fax Number: | (216) | 363-9001 | |
|------------------------|-------------------------|---|--|
| | | e-mail address first; if that is unsuccessful, it will be sent pat is unsuccessful, it will be sent via US Mail. | |
| Phone: | 2163 | 539000 | |
| Email: | docketing@faysharpe.com | | |
| Correspondent Name: | FAY SHARPE LLP | | |
| Address Line 1: | 1228 | EUCLID AVE FL 5 | |
| Address Line 4: | CLE\ | /ELAND, UNITED STATES 44115-1834 | |
| | | | |
| ATTORNEY DOCKET NUMBER | : | BATZ 161US01,02,03,04,WO | |

| NAME OF SUBMITTER: | RICHARD M. KLEIN |
|--|--------------------|
| SIGNATURE: | /Richard M. Klein/ |
| DATE SIGNED: | 04/19/2021 |
| Total Attachments: 42 | |
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ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I/We, the undersigned, **Raphael Joseph Welsh** of Powell, OH, **Douglas A. Thornton** of Upper Arlington, OH, **Daniel A. Perkins** of Lewis Center, OH, **Micah Blue** of Columbus, OH, **Amy M. Heintz** of Dublin, OH, **Daniel G. Loesch** of Sunbury, OH

who has/have created a certain invention for which an application for United States Letters Patent has been

- executed concurrently herewith
- - filed as U.S. Serial No. 16/858,125, 16/858,169 and 16/858,206 on April 24, 2020

filed as International Application No. on

and is entitled

SYSTEMS AND METHODS FOR SIGNAL COMMUNICATION WITH SCALABLE, MODULAR NETWORK NODES

Do hereby sell, assign and transfer to Battelle Memorial Institute, having a place of business at 505 King Avenue, Columbus, OH 43201, (hereinafter Assignee) its successors, assigns, and legal representatives, the full and exclusive right, title, and interest in and to said invention and said application for the United States, its territorial possessions and all foreign countries, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States, its territorial possessions and all foreign countries; and in and to any and all continuations-in-part, continuations, divisions, substitutes, reissues, reexaminations, extensions thereof, and all other forms of protection relating thereto which have been or shall be filed in the United States, its territorial possessions and/or any foreign countries, and all rights, together with all priority rights, under any of the international conventions, unions, agreements, acts, and treaties, including all future conventions, unions agreements, acts, and treaties;

Agree that said Assignee may apply for and receive Letters Patent for said invention, in its own name, in the United States, its territorial possessions, and all foreign countries; and that, when requested to carry out in good faith the intent and purpose of this assignment, at the expense of said Assignee, its successors, assigns and legal representatives, the undersigned will execute all continuations-in-part, continuations, divisions, substitutes, reexaminations, reissues, and extensions thereof, execute all rightful oaths, assignments, powers of attorney and other papers, testify in any legal or quasi legal proceedings; communicate to said Assignee, its successors, assigns or legal representatives all facts known to the undersigned relating to said invention and the history thereof; and generally do everything possible which said Assignee, its successors, assigns, or legal representatives shall consider desirable for aiding in

securing, maintaining and enforcing proper patent protection for said invention and for vesting title to said invention and all applications for patents on said invention in said Assignee, its successors, assigns, or legal representatives; and

Consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Assignee to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

IN TESTIMONY WHEREOF I/WE have hereunto set MY/OUR signature(s) on the date(s) indicated below.

| | Columbus | Ohio |
|------------------------------|-----------|----------|
| Signed at the City of _ | Ma va ala | State of |
| on this ²⁵ day of | March | , 2021. |

/Raphael Joseph Welsh/

Raphael Joseph Welsh

Witnesses:

Roger kanke Roger Kanke Printed Name: _____

Micalı J. Meleski Micah J. Meleski

Printed Name: _____

PATENT REEL: 056013 FRAME: 0469

| Signed at the | City of _ | S | State of |
|---------------|-----------|-----|----------|
| on this | day of | , 2 | 2021. |

Douglas A. Thornton

Witnesses:

Printed Name: _____

| Signed at the (| City of | State of | _ |
|-----------------|---------|----------|---|
| on this | day of | , 2021. | _ |

Daniel A. Perkins

Witnesses:

Printed Name: _____

| Signed at the | City of | <u> </u> | State of | |
|---------------|---------|----------|----------|---|
| · · · | day of | | , 2021. | _ |

Micah Blue

Witnesses:

Printed Name: _____

| Signed at the | City of | State of |
|---------------|---------|----------|
| on this | day of | , 2021. |

Amy M. Heintz

Witnesses:

Printed Name: _____

| Signed at the | City of | State of |
|---------------|---------|----------|
| on this | day of | , 2021. |

Daniel G. Loesch

Witnesses:

Printed Name: _____

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| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Raphael Joseph Welsh

Witnesses:

Printed Name: _____

Ohio

| Signed at the City of on Upper Arlington | Ohio State of |
|---|------------------|
| Douglas A. Thornton/ | |
| Douglas A. Thornton | |
| Witnesses: | |
| Stephanie Human / | |
| Stephanie Thornton Printed Name: | |
| (Cherryl-Lynn May) | |

Cheryl-Lynn May

| Signed at the City of | State of | |
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| on | | |

Daniel A. Perkins

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
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| on | | |

Micah Blue

Witnesses:

Printed Name: _____

| Signed at the City of _ | State of | |
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Amy M. Heintz

Witnesses:

Printed Name: _____

| Signed at the City of _ | | State of | |
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| on | · | | |

Daniel G. Loesch

Witnesses:

Printed Name: _____

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| Signed at the City of | State of | |
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| on | | |

Raphael Joseph Welsh

Witnesses:

Printed Name: _____

| Signed at the City of _ | _ State of | |
|-------------------------|------------|--|
| on | | |

Douglas A. Thornton

Witnesses:

Printed Name: _____

| | Lewis Center | Ohio |
|-------------------------------|--------------|----------|
| Signed at the City of _ | | State of |
| Signed at the City of _ on | | |

Daniel a. Perkins/

Daniel A. Perkins

Witnesses:

Cheryl-Lynn May Cheryl-Lynn May Printed Name:

Ray Welsh Printed Name:

PATENT REEL: 056013 FRAME: 0485

| Signed at the City of | State of | |
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| on | | |

Micah Blue

Witnesses:

Printed Name: _____

| Signed at the City of _ | | State of | |
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| on | · | | |

Amy M. Heintz

Witnesses:

Printed Name: _____

| Signed at the City of _ | _ State of | |
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| on | | |

Daniel G. Loesch

Witnesses:

Printed Name: _____

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| Signed at the City of | State of | |
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| on | | |

Raphael Joseph Welsh

Witnesses:

Printed Name: _____

| Signed at the City of _ | _ State of | |
|-------------------------|------------|--|
| on | | |

Douglas A. Thornton

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
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| on | | |

Daniel A. Perkins

Witnesses:

Printed Name: _____

| coTumbus Signed at the City of on | Ohio State of |
|---|------------------|
| Micali P Blue/ | |
| Micah Blue | |
| Witnesses: | |
| katrina Miceli | |
| Katrina Miceli Printod Namo: | _ |
| Printed Name: | _ |
| Micale & Meleski | |
| Micah J Meleski Printed Name: | _ |

| Signed at the City of | State of | |
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| on | | |

Amy M. Heintz

Witnesses:

Printed Name: _____

| Signed at the City of _ | _ State of | |
|-------------------------|------------|--|
| on | | |

Daniel G. Loesch

Witnesses:

Printed Name: _____

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| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Raphael Joseph Welsh

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Douglas A. Thornton

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Daniel A. Perkins

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Micah Blue

Witnesses:

Printed Name: _____

| | city | State | |
|-----------------------|------|----------|--|
| Signed at the City of | erey | State of | |
| on April 1, 2021 - | | | |

Mmy M. Heints/

Amy M. Heintz

Witnesses:

Jessica Mickey

Jessica Mickey
Printed Name:

PATENT REEL: 056013 FRAME: 0501

| Signed at the City of _ | _ State of | |
|-------------------------|------------|--|
| on | | |

Daniel G. Loesch

Witnesses:

Printed Name: _____

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| on | | |

Raphael Joseph Welsh

Witnesses:

Printed Name: _____

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| on | | |

Douglas A. Thornton

Witnesses:

Printed Name: _____

| Signed at the City of | State of _ | |
|-----------------------|------------|--|
| on | | |

Daniel A. Perkins

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Micah Blue

Witnesses:

Printed Name: _____

| Signed at the City of | State of | |
|-----------------------|----------|--|
| on | | |

Amy M. Heintz

Witnesses:

Printed Name: _____

| Sunbury Signed at the City of on ^{March 25, 2021} | Ohio State of |
|--|------------------|
| Mariel <i>G. Lousell</i> Daniel G. Loesch | |
| Witnesses: | |
| Micale J. Meleski | |
| Micah J. Meleski Printed Name: | |
| Koger kanke | |
| Roger Kanke Printed Name: | |