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PATENT ASSIGNMENT COVER SHEET

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-------------------|----------------|
| ERIK DANIELSSON | 01/16/2019 |
| LARS LANGEMYR | 01/16/2019 |
| NILS MALM | 01/16/2019 |
| ARNE NORDMARK | 01/16/2019 |
| HANS RULLGÄRD | 01/23/2019 |
| ELIN SVENSSON | 01/16/2019 |
| HENRIK SÖNNERLIND | 01/16/2019 |
| JOHAN THANING | 01/16/2019 |
| JOHAN ÖJEMALM | 01/16/2019 |

RECEIVING PARTY DATA

| Name: | COMSOL AB |
|-----------------|----------------|
| Street Address: | TEGNÉRGATAN 23 |
| City: | STOCKHOLM |
| State/Country: | SWEDEN |
| Postal Code: | SE 111 40 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15591290 |

CORRESPONDENCE DATA

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| ATTORNEY DOCKET NUMBER: | 801939-000131USPT |
|-------------------------|-------------------|
| NAME OF SUBMITTER: | AMY L STEDMAN |

PAIENI

REEL: 048219 FRAME: 0347 505309067

| SIGNATURE: | /Amy L Stedman/ |
|-----------------------------------|-----------------|
| DATE SIGNED: | 02/01/2019 |
| Total Attachments: 10 | |
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PATENT REEL: 048219 FRAME: 0348

ASSIGNMENT

WHEREAS, We, Erik Danielsson, Lars Langemyr, Nils Malm, Arne Nordmark, Hans Rullgård, Elin Svensson, Henrik Sönnerlind, Johan Thaning and Johan Öjemalm have invented certain new and useful improvements in the following:

SYSTEMS AND METHODS FOR DETERMINING FINITE ELEMENTS IN PHYSICS SIMULATION SYSTEMS FOR MODELING PHYSICAL SYSTEMS USING COMMON GEOMETRY SHAPE FUNCTION SPACES

for which we have made a non-provisional utility patent application for United States Patent, the application having been filed on May 10, 2017, as Application No. 15/591,290 (also identifiable by Docket No. 801939-000131USPT);

WHEREAS, COMSOL AB, a Swedish corporation with a registered address at Tegnérgatan 23, SE 111 40, Stockholm, Sweden (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the inventions, and in and to said applications and any Letters Patents that may issue therefrom;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we do hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives our entire right, title and interest in and to said inventions and in and to said applications and all patents which may be granted therefrom, including all provisionals, non-provisionals, divisions, reissues, substitutions, continuations, continuations-in-part and extensions thereof; and we hereby authorize and request the Commissioner of Patents to issue all patents for said inventions, or patents resulting therefrom, insofar as our interest is concerned, to the said ASSIGNEE of our entire right, title and interest.

We also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the inventions disclosed in said applications throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world, including all rights of priority, all rights to publish cautionary notices reserving ownership of said inventions and all rights to register said inventions in appropriate registries; and

We further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

We hereby further agree that we will communicate to said ASSIGNEE, or its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all non-provisional, divisional, continuation, continuation-in-part, reissue and substitute applications, make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns and legal representatives to obtain and enforce proper protection for said inventions in all countries.

PATENT^{00131USPT} REEL: 048219 FRAME: 0349

| INV | VITNESS WHEREOF, I have her | eunto set my hand and seal this | day of |
|---------|-----------------------------|---------------------------------|--------|
| lenharh | in the year 2019. | | • |

Name: Residence: Erik Danielsson

dence: Njurundagatan 22 162 53 Vaellingby

SWEDEN

Witness: __

Witness:

| | IN WITNESS WHEREOF, I have well in the year 2019. | ve hereunto set n | ny hand and seal thisd | lay of |
|--------|---|-------------------|----------------------------|-----------|
| | | | -AL | |
| | | Name: | Lars Langemyr | ********* |
| | š | Residence: | Luntmakargatan 86B, 3tr | |
| | - 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | 113 51 Stockholm SWEDEN | |
| Witnes | s: 1/0/01/AVI | | 2 WEDEN | |
| Witnes | s dudlant | | | |

| IN WITNESS WHEREOF, I ha | ve hereunto set r | ny hand and seal this | 16 | day of |
|-----------------------------|---------------------|---|--|--------|
| | M | MA AL | | |
| ^ 1 o ~ | Name: Residence: | Nils Malm Farkostvägen 1 181 35 Lidingö SWEDEN | . The state of the | |
| Witness: Vanil Che, 4 Mayer | | | | |
| Witness: Cerson Awassero | | | | |

| IN WITNESS WHEREOF, I have just a property of the year 2019. | e hereunto set n La | ny hand and seal this | day of |
|--|------------------------|---|--------|
| Witness: | Name; Residence: | Arne Nordmark Backvägen 15 18275 Stocksund SWEDEN | |

| in the year 2019. | hereunto set | my hand and seal this _ | <u>23</u> day of |
|-------------------|---------------------|--|------------------|
| A. L. M. J. C. | Name: Residence: | Hans Rúllgård Naturvägen 2, 1003 44556 Surte SWEDEN | |
| Witness: | | | |

| IN WITNESS WHEREOF, I have Jana arg in the year 2019. | hereunto set n El | | 1614 day of |
|---|----------------------|--|-------------|
| Witness: | Name: Residence: | Elin Svensson Lagerbielkes väg 1, 12530 Älvsjö SWEDEN | |

| S. C. orrection a | WITNESS WHEREOF, I have hereunto set my hand and seal this <u>ル 山</u> da in the year 2019. | | | | | |
|-------------------|---|---------------------|---|--|--|--|
| | , L. (7/1/) | Name: Residence: | Henrik Sönnerlind Höstrågvägen 4 178 35 Ekerö SWEDEN | | | |
| Witness: | | | | | | |

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 16 to day of in the year 2019.

Name:

Johan Thaning

Residence:

Gustav III:s Boulevard 1,04

16974 Solna SWEDEN

Witness:

Witness:

| IN WITNESS WHEREOF, I hav | e hereunto set r | ny hand and seal this | <u> 16 </u> | day of |
|---------------------------|------------------|-----------------------|--|--------|
| * | A. A. Marine | | | |
| | Name: | Johan Öjemalm | ************************************** | |
| | Residence: | Rönnvägen 2 | | |
| | | 18670 Brottby | | |
| Witness: 17/67 / | | SWEDEN | | |
| Witness: Andrews 1 | | | | |

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