PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT7425418

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
STMICROELECTRONICS SA	06/30/2022

RECEIVING PARTY DATA

Name:	STMICROELECTRONICS INTERNATIONAL N.V.
Street Address:	CHEMIN DU CHAMP-DES-FILLES 39
Internal Address:	1228 PLAN-LES-OUATES
City:	GENEVA
State/Country:	SWITZERLAND

PROPERTY NUMBERS Total: 49

Property Type	Number
Patent Number:	9991173
Patent Number:	9268743
Patent Number:	8819615
Patent Number:	9012957
Patent Number:	9640631
Patent Number:	9012955
Patent Number:	9018729
Patent Number:	9473097
Patent Number:	9147695
Patent Number:	9671473
Patent Number:	9461641
Patent Number:	9379455
Patent Number:	9362380
Patent Number:	9704967
Patent Number:	9257956
Patent Number:	9372354
Patent Number:	9638940
Patent Number:	10234703
Patent Number:	11215851
Patent Number:	9407204

Property Type	Number
Patent Number:	9104047
Patent Number:	9411176
Patent Number:	9530922
Patent Number:	9000964
Patent Number:	9432008
Patent Number:	9000963
Patent Number:	9588538
Patent Number:	9257526
Patent Number:	9354391
Patent Number:	9453977
Patent Number:	9953895
Patent Number:	10186474
Patent Number:	9176009
Patent Number:	9726548
Patent Number:	8907284
Patent Number:	9083324
Patent Number:	8890728
Patent Number:	10419432
Patent Number:	9165861
Patent Number:	9520334
Patent Number:	9638589
Patent Number:	10488587
Patent Number:	10877211
Patent Number:	9449896
Patent Number:	9418954
Patent Number:	9780015
Patent Number:	10613993
Patent Number:	9684631
Patent Number:	9916281

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ATTORNEY DOCKET NUMBER:	ST SA TO STI
NAME OF SUBMITTER:	PATRICK C. R. HOLMES
SIGNATURE:	/Patrick C. R. Holmes/
DATE SIGNED:	07/11/2022

Total Attachments: 13
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ASSIGNMENT

Assignor:	STMICROELECTRONICS SA
Assignor being a company, corporation, or juristic entity of:	France
Assignor's principal place of business:	29 boulevard Romain Rolland Montrouge, France 92120

Assignee:	STMICROELECTRONICS INTERNATIONAL N.V.
Assignee being a company, corporation, or juristic entity of:	Netherlands
Assignee's principal place of business:	Chemin du Champ-des-Filles 39 1228 Plan-les-Ouates Geneva, Switzerland

WHEREAS, Assignor was assigned certain rights in and to certain inventions, and applications for the Application(s)/Patent(s) listed in the attached Exhibit A; and

WHEREAS, Assignee is desirous of acquiring the entire right, title, and interest in and to the inventions and the application for Application(s)/Patent(s) listed in the attached Exhibit A, and in and to any patent to be obtained therefor and thereon worldwide.

NOW, THEREFORE, for and in consideration of good and valuable consideration, the receipt, sufficiency, and adequacy of which are hereby acknowledged, Assignor hereby transfers and assigns to Assignee, all of Assignor's rights, title, and interest in and to the following:

(a) the Application(s)/Patent(s) listed in the attached Exhibit A together with the inventions for which the Application(s)/Patent(s) listed in the attached Exhibit A is/was (are/were) made and describes (collectively "the Patent Rights");

(b) all provisional applications, patent applications, patents, or other similar governmental grants or issuances, in any jurisdiction in the world, (i) from which the Patent Rights directly or indirectly claims priority and/or (ii) for which the Patent Rights directly or indirectly forms a basis for priority;

(c) any continuations, continuations-in-part, continuing prosecution applications, requests for continuing examinations, divisionals, reissues, reexaminations, extensions, and registrations, in any jurisdiction in the world, of any provisional patent application, patent application, patent, or other governmental grant or issuance set forth in clauses (a) and/or (b) (clauses (a) through (c), collectively the "Assigned Patent Rights");

(d) any causes of action (whether currently pending, filed, or otherwise) and all other enforcement rights and rights to remedies under, on account of, or related to, any of the Assigned Patent Rights, including, without limitation, all causes of action and other

enforcement rights for (i) damages, (ii) injunctive relief, and (iii) other remedies of any kind for past, current, and future infringement or misappropriation in violation of rights, and all rights to sue for any of the foregoing; and

(e) any and all other rights and interests in any jurisdiction in the world arising out of the Assigned Patent Rights, including, but not limited to, any right to claim priority thereto and/or therefrom.

All of the rights, title, and interest assigned above shall be held and enjoyed by the Assignee for its own use and enjoyment and for the use and enjoyment of its successors and assigns to the full end of the applicable term for which the aforementioned rights may be granted in any jurisdiction in the world.

Assignor hereby further agrees to assist in, sign, and execute all documents needed or desired, now or in the future, to perfect, obtain, and secure the aforementioned rights to Assignee and its successors for any jurisdiction in the world. At the expense of Assignee or its successors, Assignor agree to assist in any legal proceedings, sign all lawful papers, make all lawful oaths, and generally do everything possible to aid Assignee and its affiliates or their successors, as well as their legal representatives, to enforce the aforementioned rights in any jurisdiction in the world.

Assignor hereby grant Assignee, along with the following Assignee representatives, the power to insert in this Assignment any further identification that may be necessary or desirable in order to comply with the rules for recordation of this document in any jurisdiction in the world: All practitioners at USPTO Customer Number 28899.

If part or all of Assignor's rights, title, and interest arising out of the Assigned Patent Rights are already owned by Assignee, or its successor(s)/predecessor(s), because (i) Assignor is or was already subject to an obligation to assign such rights, title, and interest to Assignee, or its successor(s)/predecessor(s), by an agreement, company policy, applicable law, or otherwise, and/or (ii) such rights, title, and interest have already been assigned by operation of law to Assignee, or its successor(s)/predecessor(s), in accordance with applicable law, and/or (iii) such rights, title, and interest were, from their inception, automatically owned by Assignee, or its successor(s)/predecessor(s), under applicable law, then this document further memorializes, documents, and confirms such prior ownership by Assignee, or its successor(s)/predecessor(s), of such rights, title, and interest for all purposes, including for recording purposes in any jurisdiction in the world.

Assignor and Assignee confirm and agree that a notarized and/or legalized translation copy of this document in any other language shall have the same force and effect in any jurisdiction in the world as if such translation copy were an original thereof.

The signatures of all the signers need not appear on the same page, and each signer may sign this Assignment in multiple counterparts, such that collectively all the necessary signatures of each separately signed counterpart of this Assignment constitutes an original Assignment. A paper or electronic copy of a signature page shall have the same force and effect as if such copy were an original thereof.

Assignor
STMICROELECTRONICS SA

Signature: _____

Print Name: Frederique LE GREVES

Title: President & CEO STMicroelectonics France SA

Date: 06.30.2022

Acknowledged and accepted by:
Assignee
STMICROELECTRONICS INTERNATIONAL N.V.

Signature: _____

Print Name: Patrick C. R. Holmes

Title: Attorney-in-Fact

Date: 7.7.2022

EXHIBIT A

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
France	1350323		BIDIRECTIONAL SEMICONDUCTOR ESD PROTECTION DEVICE, USABLE WITHOUT TRIGGER CIRCUIT
United States of America	14155891	9991173	BIDIRECTIONAL SEMICONDUCTOR DEVICE FOR PROTECTION AGAINST ELECTROSTATIC DISCHARGES
France	1257344		METHOD FOR DETERMINING A MATHEMATICAL MODEL OF PN JUNCTION DIODE BEHAVIOUR AND CORRESPONDING DEVICE
United States of America	13949884	9268743	METHOD FOR DETERMINING A MATHEMATICAL MODEL OF THE ELECTRIC BEHAVIOR OF A PN JUNCTION DIODE, AND CORRESPONDING DEVICE
France	1258909		PROCESS OF DESIGNING AN ELECTRONIC CIRCUIT
United States of America	14028188	8819615	ELECTRONIC CIRCUIT DESIGN METHOD
France	1258240		MOS TRANSISTOR
United States of America	14017024	9012957	MOS TRANSISTOR
France	1253333		METHOD FOR MANUFACTURING A BIPOLAR TRANSISTOR

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
United States of America	13859341		BIPOLAR TRANSISTOR MANUFACTURING METHOD
United States of America	14970341	9640631	BIPOLAR TRANSISTOR MANUFACTURING METHOD
France	1256762		SOI MOS TRANSISTOR PROTECTED FROM OVERVOLTAGES
United States of America	13921436	9012955	MOS TRANSISTOR ON SOI PROTECTED AGAINST OVERVOLTAGES
France	1255433		AN AJUSTABLE AVALANCHE DIODE IN AN INTEGRATED CIRCUIT
United States of America	13895715	9018729	ADJUSTABLE AVALANCHE DIODE IN AN INTEGRATED CIRCUIT
France	1360285		RESISTIVE LADDER
United States of America	14515342	9473097	RESISTIVE LADDER
France	1262032		CMOS CELL IN FD SOI TECHNOLOGY
United States of America	14096509	9147695	DEVICE WITH FD-SOI CELL AND INSULATED SEMICONDUCTOR CONTACT REGION AND RELATED METHODS
France	1354922		INTEGRATED HALL EFFECT SENSOR
United States of America	14286431	9671473	INTEGRATED HALL EFFECT SENSOR WITH A BIASED BURIED ELECTRODE
France	1262039		METHOD AND DEVICE FOR MANAGING THE POWERING-UP OF AN INTEGRATED CIRCUIT POWER DOMAIN

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
United States of America	14062455	9461641	METHOD AND DEVICE FOR MANAGEMENT OF AN ELECTRICAL POWER-UP OF A SECTOR OF AN ELECTRONIC CIRCUIT
China	201310600749.5	ZL201310600749.5	ANTENNA CIRCUIT USING MULTIPLE INDEPENDENT ANTENNAS SIMULTANEOUSLY THROUGH A SINGLE FEED
China	201320749367.4	ZL201320749367.4	ANTENNA CIRCUIT
France	1261159		ANTENNA CIRCUIT USING MULTIPLE INDEPENDENT ANTENNAS SIMULTANEOUSLY THROUGH A SINGLE FEED
United States of America	14058515	9379455	ANTENNA CIRCUIT USING MULTIPLE INDEPENDENT ANTENNAS SIMULTANEOUSLY THROUGH A SINGLE FEED
France	1262321		HETEROJUNCTION BIPOLAR TRANSISTOR
United States of America	14104993	9362380	HETEROJUNCTION BIPOLAR TRANSISTOR
United States of America	14853719	9704967	HETEROJUNCTION BIPOLAR TRANSISTOR
France	1259145		PASSIVE FILTER
United States of America	14030357	9257956	PASSIVE FILTER
France	1351675		OPTICAL MODULATOR WITH AUTOMATIC BIAS CORRECTION

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
United States of America	14182033	9372354	OPTICAL MODULATOR WITH AUTOMATIC BIAS CORRECTION
United States of America	15163178	9638940	OPTICAL MODULATOR WITH AUTOMATIC BIAS CORRECTION
United States of America	15468831	10234703	OPTICAL MODULATOR WITH AUTOMATIC BIAS CORRECTION
United States of America	16356915	11215851	OPTICAL MODULATOR WITH AUTOMATIC BIAS CORRECTION
France	1352653		METHOD FOR PROCESSING A FREQUENCY MODULATED ANALOG SIGNAL AND CORRESPONDING APPARATUS
United States of America	14219716	9407204	METHOD FOR PROCESSING A FREQUENCY-MODULATED ANALOG SIGNAL AND CORRESPONDING DEVICE
France	1354206		ELECRO-OPTIC PHASE SHIFTER HAVING A LOW ABSORPTION COEFFICIENT
United States of America	14263068	9104047	ELECTRO-OPTICAL PHASE SHIFTER HAVING A LOW ABSORPTION COEFFICIENT
France	1359558		OXIDE CAPACITOR ELECTRO-OPTICAL PHASE SHIFTER
United States of America	14492435	9411176	OXIDE CAPACITOR ELECTRO-OPTICAL PHASE SHIFTER
United States of America	14981139		OXIDE CAPACITOR ELECTRO-OPTICAL PHASE SHIFTER

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
France	1359287		OVERVOLTAGE PROTECTION COMPONENTS IN AN OPTOELECTRONIC CIRCUIT ON SOI
United States of America	14496192	9530922	OVERVOLTAGE PROTECTION COMPONENTS IN AN OPTOELECTRONIC CIRCUIT ON SOI
France	1355251		CIRCUIT AND METHOD FOR SIGNAL CONVERSION
United States of America	14294300	9000964	CIRCUIT AND METHOD FOR SIGNAL CONVERSION
France	1357284		VARIABLE DELAY ELEMENT
United States of America	14337896	9432008	VARIABLE DELAY ELEMENT
France	1355253		CIRCUIT AND METHOD FOR SKEW CORRECTION
United States of America	14293119	9000963	CIRCUIT AND METHOD FOR SKEW CORRECTION
Germany	15160418.8	2930583	REFERENCE VOLTAGE GENERATION CIRCUIT
European Patent	15160418.8	2930583	REFERENCE VOLTAGE GENERATION CIRCUIT
France	1453014		REFERENCE VOLTAGE GENERATION CIRCUIT
France	15160418.8	2930583	REFERENCE VOLTAGE GENERATION CIRCUIT
United States of America	14675309	9588538	REFERENCE VOLTAGE GENERATION CIRCUIT
France	1356023		METHOD FOR MANUFACTURING A VERTICAL BIPOLAR TRANSISTOR COMPATIBLE WITH CMOS

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
			MANUFACTURING METHODS
United States of America	14313836	9257526	METHOD FOR MANUFACTURING A VERTICAL BIPOLAR TRANSISTOR COMPATIBLE WITH CMOS MANUFACTURING METHODS
France	1359286		ASSEMBLY OF INTEGRATED CIRCUIT CHIPS INCLUDING A COMPONENT FOR PROTECTING AGAINST OVER VOLTAGES
United States of America	14494647	9354391	OVERVOLTAGE PROTECTION COMPONENT AND AN ASSEMBLY OF INTEGRATED CIRCUIT CHIPS HAVING SAID OVERVOLTAGE PROTECTION COMPONENT
United States of America	15140701	9453977	ASSEMBLY OF INTEGRATED CIRCUIT CHIPS HAVING AN OVERVOLTAGE PROTECTION COMPONENT
France	1452010	3018631	HEAT PIPE AND METHOD OF FABRICATION
United States of America	14643837	9953895	HEAT PIPE AND METHOD OF MANUFACTURING THE SAME
United States of America	15816990	10186474	HEAT PIPE AND METHOD OF MANUFACTURING THE SAME
France	1258573		TERAHERTZ IMAGER

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
United States of America	14024481	9176009	TERAHERTZ IMAGER
United States of America	14925753	9726548	TERAHERTZ IMAGER
United States of America	13692691	8907284	TERAHERTZ IMAGER WITH GLOBAL RESET
France	1258572		HIGH FREQUENCY OSCILLATOR
United States of America	14024508	9083324	HIGH FREQUENCY OSCILLATOR
France	1351448		METHOD AND DEVICE FOR ESPECIALLY COMPENSATING THE TIMING SKEW MISMATCH OF SEVERAL TIME INTERLEAVED ANALOG TO DIGITAL CONVERTERS
United States of America	14179993	8890728	METHOD AND DEVICE FOR USE WITH ANALOG TO DIGITAL CONVERTER
China	201480053861.4	ZL201480053861.4	METHOD AND APPARATUS FOR USE WITH DIFFERENT MEMORY MAPS
United Kingdom	1318478.3		A METHOD AND APPARATUS FOR USE WITH DIFFERENT MEMORY MAPS
United States of America	15026588	10419432	METHOD AND APPARATUS FOR USE WITH DIFFERENT MEMORY MAPS
Patent Cooperation Treaty	PCT/EP2014/072341		METHOD AND APPARATUS FOR USE WITH DIFFERENT MEMORY MAPS

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
France	1355220		METHOD FOR MANUFACTURING AT LEAST ONE THROUGH SILICON VIA WITH IMPROVED THERMAL DISSIPATION, AND CORRESPONDING THREE-DIMENSIONAL STRUCTURE
United States of America	14287343	9165861	PROCESS FOR PRODUCING AT LEAST ONE THROUGH-SILICON VIA WITH IMPROVED HEAT DISSIPATION, AND CORRESPONDING THREE-DIMENSIONAL INTEGRATED STRUCTURE
France	1350770		INTEGRATED STRUCTURE WITH IMPROVED HEAT DISSIPATION
United States of America	14155007	9520334	INTEGRATED STRUCTURE WITH IMPROVED HEAT DISSIPATION
France	1356085		METHOD FOR DETERMINING A THREE-DIMENSIONAL STRESS FIELD IN AN OBJECT, IN PARTICULAR FOR AN INTEGRATED STRUCTURE, AND CORRESPONDING SYSTEM
United States of America	14311497	9638589	METHOD FOR DETERMINING A THREE-DIMENSIONAL STRESS FIELD OF AN OBJECT, AN INTEGRATED STRUCTURE IN PARTICULAR, AND

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
			CORRESPONDING SYSTEM
France	1355991	3007589	INTEGRATED PHOTONIC CIRCUIT AND FABRICATION METHOD
United States of America	14311496		PHOTONIC INTEGRATED CIRCUIT AND FABRICATION PROCESS
United States of America	15699707	10488587	METHODS OF FABRICATING INTEGRATED CIRCUIT DEVICES WITH COMPONENTS ON BOTH SIDES OF A SEMICONDUCTOR LAYER
United States of America	16696086	10877211	METHODS OF FABRICATING INTEGRATED CIRCUIT DEVICES WITH COMPONENTS ON BOTH SIDES OF A SEMICONDUCTOR LAYER
France	1450230		DEVICE COMPRISING A THREE-DIMENSIONAL INTEGRATED STRUCTURE HAVING SIMPLIFIED HEAT DISSIPATION AND CORRESPONDING FABRICATION PROCESS
United States of America	14590404	9449896	DEVICE COMPRISING A THREE-DIMENSIONAL INTEGRATED STRUCTURE WITH SIMPLIFIED THERMAL DISSIPATION, AND CORRESPONDING FABRICATION METHOD
France	1452280	3018953	IC CHIP ON AN INTERPOSER

Country	Application No.	Patent No.	Title (may not match current Title at Patent Office)
United States of America	14659680	9418954	INTEGRATED CIRCUIT CHIP ASSEMBLED ON AN INTERPOSER
United States of America	15204488	9780015	INTEGRATED CIRCUIT CHIP ASSEMBLED ON AN INTERPOSER
France	1400289	3017226	PROGRAM CODE SECURISATION METHOD, CORRESPONDING SYSTEM AND PROCESSOR
United States of America	14610924	10613993	METHOD FOR PROTECTING A PROGRAM CODE, CORRESPONDING SYSTEM AND PROCESSOR
France	1360126	3012235	METHOD FOR SECURING A SET OF EXECUTABLE INSTRUCTIONS AND/OR AN ADDRESSING SCHEME OF A COMPLETE SYSTEM AND CORRESPONDING SYSTEM
United States of America	14511843	9684631	PROCESSING SYSTEM WITH A SECURE SET OF EXECUTABLE INSTRUCTIONS AND/OR ADDRESSING SCHEME
United States of America	15600006	9916281	PROCESSING SYSTEM WITH A SECURE SET OF EXECUTABLE INSTRUCTIONS AND/OR ADDRESSING SCHEME