PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

SUBMISSION TYPE:NEW ASSIGNMENTNATURE OF CONVEYANCE:ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HUAN-CHU HUANG	06/09/2021
RONGJIE MA	11/11/2021
XIANJING JIAN	11/11/2021
ZHIMIN ZHU	11/11/2021

RECEIVING PARTY DATA

Name:	VIVO MOBILE COMMUNICATION CO.,LTD.
Street Address:	#283, BBK ROAD, WUSHA, CHANG'AN, DONGGUAN
City:	GUANGDONG
State/Country:	CHINA
Postal Code:	523860

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	17531603

CORRESPONDENCE DATA

Fax Number: (571)327-5452

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: 5713275450

Email: ipntlaw@ipntlaw.com
Correspondent Name: IP&T GROUP LLP
Address Line 1: 102 MAPLE AVE. E

Address Line 4: VIENNA, VIRGINIA 22180

ATTORNEY DOCKET NUMBER:	219045PCTUS-VIVO-ICWCA
NAME OF SUBMITTER:	DRAGAN PLAVSIC
SIGNATURE:	/Dragan Plavsic/
DATE SIGNED:	11/19/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 8

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PATENT REEL: 058170 FRAME: 0475

EPAS ID: PAT7035357

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PATENT REEL: 058170 FRAME: 0476

Docket	No.	

COMBINED DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT

Title of Invention	ANTENNA ELEMENT AND ELECTRONIC DEVICE
As a below	named inventor, I hereby declare that:
This decla	ration
is directed	to: The attached application, or
The above-	United States application or PCT international application numberfiled on identified application was made or authorized to be made by me.
I believe that in the applic	at I am the original inventor or an original joint inventor of a claimed invention cation.
	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) th.
parentheses	by authorize and request my attorney or representative to insert here in (patent Application number, filed) the filing plication number of said US application when known.
FOR (GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to <u>VIVO MOBILE COMMUNICATION</u>
CO.,LTD., having a place of business at #283, BBK Road, Wusha, Chang'an Dongguan, Guangdong 523860, China, (hereinafter referred to as "ASSIGNEE") the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which has been executed by the undersigned concurrently herewith, which is a national phase filing of PCT/CN2020/090051 filed on May 13, 2020; which in turn claims priority to 201910430954.9 filed on May 22, 2019; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as berein expressed is possessed by the undersigned:

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions:

TO BE BINDING on the heits; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability us defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

	LEGAL NAME OF INVENTOR
	Inventor: HuanChu Huang Date: 2021 / 6 (4
	Signature Ulina Mar Ulina P
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Attorney Docket No.:

ASSIGNMENT OF AND DECLARATION (37 CFR 1.63) FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS	Rongjie MA	, hereinafter referred to	0
collectively as the assign	or and inventor, has invented a certain impro-	vement relating to	
ANT	ENNA ELEMENT AND ELECTRONIC	<u>DEVICE</u>	
[] said application being	g attached hereto; ng been filed in the United States Patent and	Trademark Office on	
[]	as Application Serial No.		was
amended on	(if	applicable);	
[X] the specification of w	which was filed under the Patent Cooperation	Treaty on May 13, 2020,	
Serial No. PCT/CN2020	/090051, the United States of America being	designated.	

AND WHEREAS <u>VIVO MOBILE COMMUNICATION CO.,LTD.</u>, of the P.R.China, having a place of business at <u>#283, BBK Road, Wusha, Chang'an, Dongguan, Guangdong 523860, China</u> hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof (i.e. divisional, continuation, and continuation-in-part applications), and in and to said invention and improvements ("invention") and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a

Page 1 of 2

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- 3	\$7:	10		20	- 3 3	. 1.	111	No	- 5
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claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

BOOKER	(INFENIOR):			
Signature:	Rongije Ma			
Date:	2×2į /11] (1	······································		
Printed or T	yped Name: Rongjie MA			

ASSIGNMENT OF AND DECLARATION (37 CFR 1.63) FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS	Xianjing JIAN	, hereinafter
referred to collectively as	s the assignor and inventor, has invented a certain	improvement relating to
ANTE	NNA ELEMENT AND ELECTRONIC DEVIC	<u>E</u>
[] said application bein [] said application havi	g attached hereto; ng been filed in the United States Patent and Trade , as Application Serial No.	
amended on	(if appli	cable);
	which was filed under the Patent Cooperation Treat	•
Serial No. PCT/CN2020	0/090051 the United States of America being design	onated

AND WHEREAS <u>VIVO MOBILE COMMUNICATION CO.,LTD.</u>, of the P.R.China, having a place of business at <u>#283, BBK Road, Wusha, Chang'an, Dongguan, Guangdong 523860, China</u> hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof (i.e. divisional, continuation, and continuation-in-part applications), and in and to said invention and improvements ("invention") and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a

Page 1 of 2

Attorney				

claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNOR (INVENTOR):

Signature:	X/anj =1	Tian	
Date: کیرا	10/10	······································	

Printed or Typed Name: Xianjing JIAN

Attorney Docket No.:

ASSIGNMENT OF AND DECLARATION (37 CFR 1.63) FOR APPLICATION FOR UNITED STATES LETTERS PATENT

WHEREAS	Zhimin ZHU	, hereinafter referred	to
collectively as the assign	nor and inventor, has invented a certain improve	ement relating to	
AN	TENNA ELEMENT AND ELECTRONIC D	EVICE	
[] said application bein			
[] said application hav	ring been filed in the United States Patent and Trans	rademark Office on	
	, as Application Serial No.		was
amended on	(if ap	pplicable);	
[X] the specification of	which was filed under the Patent Cooperation T	reaty on May 13, 2020,	
Serial No. PCT/CN202	0/090051, the United States of America being d	esignated.	

AND WHEREAS <u>VIVO MOBILE COMMUNICATION CO.,LTD.</u>, of the P.R.China, having a place of business at <u>#283, BBK Road, Wusha, Chang'an, Dongguan, Guangdong 523860, China</u> hereinafter referred to as the assignee or applicant, is desirous of acquiring the entire right, title and interest in and to said application, including any and all divisions and continuations thereof (i.e. divisional, continuation, and continuation-in-part applications), and in and to said invention and improvements ("invention") and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof;

NOW THIS WITNESSETH, that for and in consideration of One Dollar (\$1.00), and other good and valuable consideration paid by said assignee to said assignor, the receipt of which is hereby acknowledged, said assignor hereby assigns, sells and transfers to said assignee, and said assignee's successors and assigns, the full and exclusive right, title and interest in and to said application, including any and all divisions and continuations thereof, and in and to said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof; said assignee, and said assignee's successors and assigns, to have, hold, exercise and enjoy the said application, including any and all divisions and continuations thereof, and the said invention and any and all patents which may be granted therefor, including any and all renewals, reissues and prolongations thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such patents when granted, including any and all renewals, reissues and prolongations thereof, for the use and benefit of said assignee, and said assignee's successors and assigns, in as ample and beneficial a manner as the said assignor might or could have held and enjoyed the same, if this assignment had not been made.

AND said assignor hereby agrees to perform, upon the request of said assignee, or said assignee's successors or assigns, any and all acts relating to the obtaining or to the asserting of said patents, including any and all renewals, reissues and prolongations thereof.

AND said assignor authorizes and requests the Commissioner of Patents and Trademarks to issue Letters Patent on said application, and on any and all divisions and continuations thereof, to said assignee, and said assignee's successors and assigns, in accordance herewith.

As an above-named inventor, I hereby declare that the above-identified application was made or authorized to be made by me, and that I am the original inventor or an original joint inventor of a

Page 1 of 2

Attorney		

claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNOI	R (INVENTOR):	
Signature:	Zhimin ZHU	
Date:	2021/11/11	
Debuted or 3	Tymad Nama: Thirnin 7HII	

Page 2 of 2

RECORDED: 11/19/2021