# PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
LENOVO (SINGAPORE) PTE LTD	10/01/2019

### **RECEIVING PARTY DATA**

Name:	LENOVO PC INTERNATIONAL LTD
Street Address:	23/F, LINCOLN HOUSE, 979 KING'S ROAD
City:	QUARRY BAY
State/Country:	HONG KONG

## **PROPERTY NUMBERS Total: 70**

Property Type	Number
Patent Number:	10416710
Patent Number:	10416716
Patent Number:	10368231
Patent Number:	10368233
Patent Number:	10349117
Patent Number:	10387570
Patent Number:	10389000
Patent Number:	10354573
Patent Number:	10359844
Patent Number:	10338636
Patent Number:	10425768
Patent Number:	10339777
Patent Number:	10372234
Patent Number:	10403236
Patent Number:	10339932
Patent Number:	10380460
Patent Number:	10349714
Patent Number:	10383498
Patent Number:	10338882
Patent Number:	10386931
Patent Number:	10425711

PATENT REEL: 052931 FRAME: 0633

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Property Type	Number
Patent Number:	10345866
Patent Number:	10365686
Patent Number:	10388125
Patent Number:	10402042
Patent Number:	10370877
Patent Number:	10365622
Patent Number:	10397358
Patent Number:	10346634
Patent Number:	10403238
Patent Number:	10372914
Patent Number:	10353047
Patent Number:	10424876
Patent Number:	10409328
Patent Number:	10353437
Patent Number:	10401959
Patent Number:	10345862
Patent Number:	10409334
Patent Number:	10347965
Patent Number:	10338645
Patent Number:	10338668
Patent Number:	10400809
Patent Number:	10420230
Patent Number:	10394381
Patent Number:	10401968
Patent Number:	10402148
Patent Number:	10394380
Patent Number:	10419522
Patent Number:	10401925
Patent Number:	10423329
Patent Number:	10416884
Patent Number:	10356947
Patent Number:	10401920
Patent Number:	10403961
Patent Number:	10394275
Patent Number:	10345954
Patent Number:	10409332
Patent Number:	10372396
Patent Number:	10345927

Property Type	Number
Patent Number:	10367950
Patent Number:	10416759
Patent Number:	10339342
Patent Number:	10387025
Patent Number:	10402407
Patent Number:	10362391
Patent Number:	10338938
Patent Number:	10387721
Patent Number:	10416856
Patent Number:	10387033
Patent Number:	10386886

### **CORRESPONDENCE DATA**

Fax Number:

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.

Email: jfriday@lenovo.com

Correspondent Name: JASON FRIDAY

Address Line 1: 8001 DEVELOPMENT DRIVE

Address Line 4: MORRISVILLE, NORTH CAROLINA 27560

NAME OF SUBMITTER:	JASON A FRIDAY
SIGNATURE:	/Jason A. Friday 62650/
DATE SIGNED:	06/12/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

#### **Total Attachments: 9**

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#### ASSIGNMENT OF PATENT RIGHTS

WHEREAS, Lenovo (Singapore) Pte Ltd. a limited liability company organized under the laws of the Republic of Singapore, with its principal place of business at 151 Lorong Chuan, #02-01 New Tech Park, Singapore, 55674 (ASSIGNOR) is the owner of certain rights, title and interest in and to the patents, patent applications and invention disclosures set forth in Exhibit A hereto;

WHEREAS, it is the intention of ASSIGNOR and Lenovo PC International Limited, a limited liability company organized under the laws of Hong Kong having its principal place of business at 23/F, Lincoln House, 979 King's Road, Quarry Bay, Hong Kong (hereinafter ASSIGNEE), that ASSIGNEE own all of ASSIGNOR'S right, title and interest in and to the patents, patent applications and invention disclosures; and

WHEREAS, ASSIGNOR and ASSIGNEE entered into an Intellectual Property Sale and Transfer Agreement effective April 1, 2013 and a Periodic Intellectual Property Sale and Transfer Agreement effective April 1, 2013 (collectively the "AGREEMENTS") in which ASSIGNOR assigned intellectual property rights to ASSIGNEE and agreed to periodically assign additional intellectual property rights to ASSIGNEE.

NOW, THEREFORE, in consideration of the mutual promises contained in the AGREEMENTS and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, pursuant to this Assignment of Patent Rights, and subject to the AGREEMENTS, ASSIGNOR hereby sells, assigns, transfers, and conveys to ASSIGNEE, its permitted successors and assigns, all of ASSIGNOR'S right, title, and interest in and to the patents, patent applications, and invention disclosures being made for Letters Patent set forth on Exhibit A. and (a) all foreign and U.S. counterpart patents and patent applications claiming priority from the patents and the applications Letters Patents listed in Exhibit A, and (b) all continuations, continuations-in-part, divisionals, reissues, renewals, reexaminations, substitutions, and extensions thereof (including equivalents to any of the foregoing in non-U.S. jurisdictions) that may be granted or issue from and claim priority to the foregoing (hereinafter collectively referred to as the "Sold Patents"), and including the right to own and prosecute in ASSIGNEE's own name any reexaminations, reissues, interferences, and all claims and causes of action now in existence or arising in the future resulting from past, present, and future infringement of any of the Sold Patents, including, without limitation, the right to sue and recover for past, present, and future infringement of any of the Sold Patents. ASSIGNOR authorizes and requests the Director of Patents and Trademarks of the United States of America and the empowered officials of all other governments to issue or transfer all said Letters Patents to ASSIGNEE, as ASSIGNEE of the entire right, title, and interest therein or otherwise as ASSIGNEE may direct.

IN TESTIMONY WHEREOF, ASSIGNOR and ASSIGNEE have hereunto executed this Assignment effective Oct 1, 2019, by their duly authorized representatives.

Lenovo (Singapore) Pte Ltd.

Name: Hugh Wu

Title: Director Place: Beijing Lenovo PC International Ltd.

Name: Wong Wai Ming

Title: Director Place: Raleigh

EXHIBIT A	EXHIBIT A				
Case Reference	Country	Grant	Grant Number	Internal Title	
JP920160108-					
US-CIP2	United States	9/17/2019	10,416,710	Structure for Foldable Screen(B1)	
JP920170024-		<u> </u>		<u> </u>	
US-NP	United States	9/17/2019	10,416,716	Docking Station	
RPS920180030-					
US-NP	United States	7/30/2019	10,368,231	SIM Card Selection	
RPS920071013U		<b>†</b>		METHOD AND ARRANGEMENTS FOR	
S1	United States	7/30/2019	10,368,233	TRACKING AND LOCATING LAPTOPS.	
RPS920150077-		<b>}</b>		Smart DVR program delete == Media	
US-NP	United States	7/9/2019	10,349,117	Removal After Consumption.	
RPS920150081-					
US-NP	United States	8/20/2019	10,387,570	Enhanced E-Reader experience	
				Optimum current distribution for battery pack	
RPS920150047-				heat management — Current Distribution for	
US-CIP	United States	8/20/2019	10,389,000	Battery Pack Management	
RPS920170090-		<u></u>			
US-NP	United States	7/16/2019	10,354,573	SCREEN COLOR CALIBRATION	
RPS920170005-	-			Eye gaze application pane resizing — Resizing	
US-NP	United States	7/23/2019	10,359,844	Interfaces based on eye gaze.	
RPS920170064-				Fifth mode for Yoga system == Computing	
US-NP	United States	7/2/2019	10,338,636	Device with Keyboard Mode.	
				System and Method for Context-based Volume	
RPS920150028-				Control among a Plurality of Devices ==	
US-NP	United States	9/24/2019	10,425,768	Adapting Audio Output based on Context.	
	***************************************			Method to locate potential intruder using	
RPS920160059-				wireless fingerprint - Identifying an	
US-NP	United States	7/2/2019	10,339,777	Individual Based on an electronic signature.	
				A novel method of determining proximity and	
DBERGGIZARGZ				social zone using presence detection to adapt	
RPS920170027- US-NP	United States	8/6/2019	10.272.224	virtual assistant behavior — Calculating a social zone distance.	
CONTRE	Onneu States	0/0/2019	10,372,234	SOCIAL ZONG UISIANCE.	

RPS920160038-		0.000		[IOD] Futuristic Notebooks #10 - Display wraps around edge of laptop to be used for notifications {orig. submitted by Ent, Ali Kathryn (604859)} == Electronic Device with folded display and Method for presenting
US-NP	United States	9/3/2019	10,403,236	content.
RPS920170025- US-NP	United States	7/2/2019	10,339,932	Method to improve idle power of always-on systems such as voice — Audio Input Activation based on Thermal Data Detection.
RPS920170023- US-NP	United States	8/13/2019	10,380,460	Method to describe an image or video in words when using output device without a screen or interaction method that is voice/audio centered — Description of Content Image.
RPS920160022- US-NP	United States	7/16/2019	10,349,714	Method to make cellular phones and small computers easy to hold onto with the hand and easy to get out of pocket — Handheld electronic device with gripping elements.
RPS920160019- US-NP	United States	8/20/2019	10,383,498	Method for assisting robotic vacuum cleaner with secondary cameras — Systems and Methods to Command a Robotic Cleaning Device to move to a Dirty Region of an area.
RPS920160017- US-NP	United States	7/2/2019	10,338,882	Method to cast content to contextually relevant device — Contextual based selection among Multiple devices for Content Playback.
RPS920150143- US-NP	United States	8/20/2019	10,386,931	Methods to collect & visualize active & passive contributions in a virtual collaboration environment — Toggling Between Presentation and Non-Presentation of Representations of Input.
RPS920160008- US-NP	United States	9/24/2019	10,425,711	[PtMng] Cartier Notebook #9 - Speaker located in a mobile device hinge [orig. submitted by Ent, Ali Kathryn (604859)] == Rotating Speaker.
RPS920160007- US-NP	United States	7/9/2019	10,345,866	[PtMng] Cartier Notebook #6 - Magnetic attachment for laptop hinge [orig. submitted by Tucker, Matthew Ian (751914)] == Computing Device with Magnetic Hinge.

RPS920160006- US-NP	United States	7/30/2019	10,365,686	[PtMng] Cartier Notebook #5 - Hinge for notebook computer with gears integrated into external covers [orig. submitted by Tucker, Matthew Ian (751914)] == Geared Housing Assembly.
RPS920150112-				Intelligent home Emergency Lighting ==
US-NP	United States	8/20/2019	10,388,125	Communicating a localized building Alert.
RPS920150110- US-NP	United States	9/3/2019	10,402,042	Methods for using force flat surface to emulate trackpoint and manipulate objects in a digital space — Force Vector Cursor Control.
RPS920150116-				DESTINATION CRITERIA FOR
US-NP	United States	8/6/2019	10,370,877	UNLOCKING A VEHICLE DOOR
RPS920150103- US-NP	United States	7/30/2019	10,365,622	[IoD] UE in IoT #3 - Method to optimize smart home devices based on user location — Controlling Appliance setting based on User position.
RPS920150097- US-NP	United States	8/27/2019	10,397,358	Method to precache content — Apparatus, Method, and Program Product for Pre-caching Streaming Content.
RPS920140087- US-NP	United States	7/9/2019	10,346,634	Method to clean personal data from email ==  Obscuring and Deleting Information from a  Messaging Account.
RPS920140071- US-NP	United States	9/3/2019	10,403,238	Adjust stroke width based on handwriting size — Presentation of Representations of Input with contours having a width based on the size of the Input.
RPS920140151- US-NP	United States	8/6/2019	10,372,914	A Method and Process for Validating BIOS or Other Firmware on a Computing System — Validating Firmware on a Computing Device.
RPS920150010- US-NP	United States	7/16/2019	10,353,047	[PtMng] Broaden Think Big ¿ Method to identify previous locations from radio beacons [orig. submitted by Luna, Joaquin F. (605610)] — Device Location Determined by Wireless Signals.
JP920180041- US-NP	United States	9/24/2019	10,424,876	Shield structure for HDMI Connector

JP920170022-				
US-NP	United States	9/10/2019	10,409,328	Docketing Device
JP920180011- US-NP	United States	7/16/2019	10,353,437	Non-breakable hook on C-cover for shock test
JP920180027- US-NP	United States	9/3/2019	10,401,959	Full Active Display on PC
JP920180017- US-NP	United States	7/9/2019	10,345,862	Rubber foot includes Rocking solution
JP920180009- US-NP	United States	9/10/2019	10/409334	New Water Proof Structure for CM KBD
JP920170033- US-NP	United States	7/9/2019	10,347,965	Integrated noise shield wall on antenna
JP920170011- US-NP	United States	7/2/2019	10338645	Projector power switch using the G sensor for mobile product with built-in Projector
JP920160044- US-NP	United States	7/2/2019	10,338,668	Smartwatch Entering into Self-Charge Mode by Human&s Sleep
JP920160074- US-NP	United States	9/3/2019	10,400,809	Washer less Capture Screw
JP920160073- US-NP	United States	9/17/2019	10,420,230	Anti Peel Off Rubber Foot
JP920160060- US-NP	United States	8/27/2019	10,394,381	A method to switch touch sensing area to enhance OSK typing performance — False Input Reduction Systems, Apparatus, and Methods for an Information processing device.
JP920150045- US-NP	United States	9/3/2019	10,401,968	Determining Digit Movement from Frequency Data
JP920160051- US-NP	United States	9/3/2019	10,402,148	Auto switching function for video connection — Multi-Display Control Apparatus, Systems and Methods.
JP920160042- US-NP	United States	8/27/2019	10/394380	Control Method of Touchpad Sensing During NFC Magnetic Field Radiation Activity == Method and Apparatus for Preventing Malfunctions of a touch panel disposed near a antenna.

JP920170010- US-NP	United States	9/17/2019	10419522	Method to Enable Device Selection Using Synchronized Motion Events
JP920150061- US-NP	United States	9/3/2019	10,401,925	air recycling in water cooling docking station = Portable Information Apparatus.
JP920150088- US-NP	United States	9/24/2019	10,423,329	A method to retain typing postures and fingers on home row for On-Screen Keyboard productivity enhancement == Apparatus,  Method and Computer Program Product for Information Processing and Keyboard Display.
JP920150086- US-NP	United States	9/17/2019	10,416,884	Adaptive Flat / On-screen keyboard by typing style — Electronic Device, Method and Program Product for Software Keyboard Adaptation.
JP920160055- US-NP	United States	7/16/2019	10,356,947	dual side heat-absorbing graphite sheet
JP920150038- US-NP	United States	9/3/2019	10,401,920	Seesaw button near TouchPad == Portable Electronic Apparatus.
JP920170004- US-NP	United States	9/3/2019	10,403,961	High efficiency implementation of WiGig antenna
JP920150048- US-NP	United States	8/27/2019	10,394,275	Insert-nut with CFRP == Electronic Device having a Member for Chassis.
JP920150112- US-NP	United States	7/9/2019	10,345,954	Flexible Info Device Page Flip Feature ==  Device, Method and Computer Program  Product for display of Electronic Information.
JP920160107- US-CIP	United States	9/10/2019	10/409332	Structure for Foldable Screen(A4)
RPS920130005- US-NP	United States	8/6/2019	10,372,396	automatic discovery and connection to wireless displays — Discovery & Connection to Wireless Displays.
RPS920140012- US-NP	United States	7/9/2019	10,345,927	Method to Correct Pen Offset // Pen/Stylus Offset Modification.
RPS920140011- US-NP	United States	7/30/2019	10,367,950	Phone Ringtone Adjustment Dependent on User Proximity — Device Notification Adjustment Dependent on User Proximity.

RPS920140004- US-NP	United States	9/17/2019	10,416,759	Eye tracking laser pointer — Eye Tracking  Laser Pointer.
RPS920130250- US-NP	United States	7/2/2019	10,339,342	Transfer of data from-to devices with computer pen action — Data Transfer based on input Device Identifying Information.
RPS920090035- US-DIV	United States	8/20/2019	10,387,025	[PtMng] Apollo feature #16 - Apollo User Interface (6 3 1) [Valeria - lead inventor is Jim Hunt, but please include Karen Kluttz's contact info to act as a backup contact for OC to call]  — Multi-Mode User Interface.
RPS920130034- US-NP	United States	9/3/2019	10,402,407	Aggregate tagging across similar objects = Contextual Smart Tags for Content Retrieval.
RPS920140023- US-NP	United States	7/23/2019	10,362,391	System to continuously deliver audience appropriate media content as the audience changes. — Adjusting Audio Content Based on Audience.
RPS920130221- US-NP	United States	7/2/2019	10338938	Method to customize device content based on physical mode — Presenting Elements based on configuration.
RPS920130048- US-NP	United States	8/20/2019	10,387,721	Clean up handwriting — Information Handling Device Handwriting Clean-up.
RPS920130196- US-NP	United States	9/17/2019	10,416,856	Method to determine dominant hand for hand held devices — Handedness for hand-held devices.
JP920130021- US-NP	United States	8/20/2019	10,387,033	Inline Software Keyboard with Small Footprint for One Hand — Size Reduction and Utilization of Software Keyboards.
JP920160108- US-CNT	United States	8/20/2019	10,386,886	Structure for Foldable Screen(B1)
RPS920150038- BE-BEA	Belgium	7/24/2019	3179474	Eye tracking wakeup word
RPS920120041- DE-NP	Germany	9/5/2019	1020131126 72	Recreation of Client Image in the Cloud ==  Datenspeicher für eine Remote-Umgebung
JP920150024- DE-NP	Germany	8/22/2019	10 2016 112 272	Tablet Kick Stand for both landscpae and portrait

RPS920150038-				1
DE-DEA	Germany	7/24/2019	3179474	Eye tracking wakeup word
RPS920140125- DE-DEA	Germany	8/14/2019	3,073,368	Method to improve HID input with voice
RPS920150035- GB-NP	Great Britain	7/17/2019	2544875	Hand-oriented dual depth sensors for one handed gesture detection
RPS920150020- GB-NP	Great Britain	9/25/2019	2541297	Insertion of Characters in Speech Recognition
RPS920160001- GB-NP	Great Britain	9/4/2019	2553428	Electronic Device with Structural Layer
RPS920150070- GB-NP	Great Britain	9/18/2019	2551635	Optimizing mic arrays and embedded speakers in convertible devices
RPS920150038- GB-GBA	Great Britain	7/24/2019	3179474	Eye tracking wakeup word
RPS920140038- GB-NP	Great Britain	8/7/2019	2534023	Enhanced cover design for antenna signal transmission
RPS920140028- GB-NP	Great Britain	7/17/2019	2534274	Gaze-triggered Voice Recognition
RPS920140125- GB-GBA	Great Britain	8/14/2019	3,073,368	Method to improve HID input with voice
JP920180064-JP- NP	Japan	7/5/2019	6550516	warpage preventive method for a cavity thin and narrow PCBA
JP920180047-JP- NP	Japan	9/6/2019	6578616	planar thermal spreader
JP920180034-JP- NP	Japan	8/30/2019	6578414	Force Pad floating structure for haptics
JP920180032-JP- NP	Japan	8/23/2019	6574024	RF Noise shielding using shielding rib on PCBA & Thermal spreader module
JP920180024-JP- NP	Japan	8/16/2019	6569185	App behavior based thermal Control method
JP920180014-JP- NP	Japan	9/20/2019	6587711	Keycap shape for keycap come off issue

JP920170037-JP- NP2	Japan	7/12/2019	6554190	Privacy Filter for Thin Laptop PC
JP920170025-JP- NP	Japan	8/30/2019	6578326	User Authentication with Wake on Voice capable Mobile Device
JP920160070-JP- NP	Japan	7/5/2019	6550409	Thunderbolt Technology daisy chain upper limit viewer
JP920170002-JP- NP	Japan	7/26/2019	6560709	Easy camera privacy
RPS920150038- NL-NLA	Netherlands	7/24/2019	3179474	Eye tracking wakeup word
RPS920150036- TW-NP	Taiwan	8/11/2019	1668629	Contextual Field Entry using Natural Language Processing
JP920170019- TW-NP	Taiwan	8/11/2019	I668721	Narrow gap structure between Keycap and Cosmetic Frame

**RECORDED: 06/12/2020**