

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

**PRINCEPS INTERFACE  
TECHNOLOGIES LLC,**

**Plaintiff,**

**v.**

**LENOVO GROUP LIMITED, LENOVO  
(UNITED STATES) INC., LENOVO  
GLOBAL TECHNOLOGY (UNITED  
STATES) INC. and LENOVO CONNECT  
(UNITED STATES) INC.,**

**Defendants.**

**Civ. No. \_\_\_\_\_**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Princeps Interface Technologies LLC (“Princeps” or “Plaintiff”), for its Complaint against Defendants Lenovo Group Limited (“LGL”); Lenovo (United States) Inc. (“LUS”); Lenovo Global Technology (United States) Inc. (“LGTUS”) and Lenovo Connect (United States) Inc. (“LCUS”), (collectively “Lenovo” or “Defendants”), alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Plaintiff Princeps is a limited liability company organized under the laws of the State of Delaware with a place of business at Princeps Interface Technologies LLC, c/o Kustal and Kustal, P.C., 261 West 35<sup>th</sup> Street, Suite No. 1003, New York, New York 10001.

3. Upon information and belief, Defendant Lenovo Group Limited (“LGL”) is a Chinese corporation having its principal place of business at No. 6 Chuang Ye Road, Haidian District, Shangdi Information Industry Base, 100085 Beijing, China. LGL produces and sells telecommunications, electronics and mobile phone technologies worldwide, including in the United States and in this District. More specifically, Defendant LGL works in the designing, manufacturing, importing, distributing and selling of the Accused Instrumentalities under the brand name “Motorola Mobility” as described in more detail below and in the attached claim chart.

4. Upon information and belief, Defendant Lenovo (United States) Inc. (“LUS”) is a Delaware corporation having its principal place of business at 8001 Development Drive, Morrisville, North Carolina 27560. Defendant LUS is a subsidiary of or otherwise controlled by LGL. Defendants LGL and LUS act in concert regarding the allegations set forth in this Complaint and, therefore, the conduct described herein is fairly attributable to either or both entities. More specifically, Defendants LUS and LGL work collectively in the designing, manufacturing, importing, distributing and selling of the Accused Instrumentalities under the brand name “Motorola Mobility” as described in more detail below and in the attached claim chart.

5. Upon information and belief, Defendant Lenovo Global Technology (United States) Inc. (“LGTUS”) is a Delaware corporation having its principal place of business at 8001 Development Drive, Morrisville, North Carolina 27560. Defendant LGTUS is a subsidiary of or otherwise controlled by LGL. Defendants LGL and LGTUS act in concert regarding the allegations set forth in this Complaint and, therefore, the conduct described herein is fairly attributable to either or both entities. More specifically, Defendants LGTUS and LGL work

collectively in the designing, manufacturing, importing, distributing and selling of the Accused Instrumentalities under the brand name “Motorola Mobility” as described in more detail below and in the attached claim chart.

6. Upon information and belief, Defendant Lenovo Connect (United States) Inc. (“LCUS”) is a Delaware corporation having its principal place of business at 8001 Development Drive, Morrisville, North Carolina 27560. Defendant LCUS is a subsidiary of or otherwise controlled by LGL. Defendants LGL and LCUS act in concert regarding the allegations set forth in this Complaint and, therefore, the conduct described herein is fairly attributable to either or both entities. More specifically, Defendants LCUS and LGL work collectively in the designing, manufacturing, importing, distributing and selling of the Accused Instrumentalities under the brand name “Motorola Mobility” as described in more detail below and in the attached claim chart.

7. Upon information and belief, the Defendants (LGL, LUS, LGTUS and LCUS) work collectively and interact extensively as a united entity in the designing, manufacturing, importing, distributing and selling of the Accused Instrumentalities under the brand name “Motorola Mobility” as described in more detail below and in the attached claim chart.

#### **JURISDICTION AND VENUE**

8. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

9. Venue with respect to Defendant LGL is proper in this District under 28 U.S.C. § 1391(c)(3) because, upon information and belief, Defendant LGL is not a resident of the United States, and also under 28 U.S.C. § 1391(b)(2) because LGL sells and offers to sell products and services throughout the United States, including in this District, and introduces products and services into the stream of commerce and effectuates these sales knowing that the products and services would be sold in this District and elsewhere in the United States.

10. This Court has personal jurisdiction over LGL. LGL is amenable to service of summons for this action. Defendant LGL has sought protection and benefit from the laws of the State of Delaware by forming one of its United States affiliates in this District and/or by placing infringing products into the stream of commerce through an established distribution channel with the awareness and/or intent that they will be purchased by consumers in this District.

11. LGL – directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents – ships, distributes, offers for sale, and/or sells its products in the United States and this District. LGL has purposefully and voluntarily placed one or more of its infringing products into the stream of commerce with the awareness and/or intent that they will be purchased by consumers in this District. LGL knowingly and purposefully ships infringing products into and within this District through an established distribution channel. These infringing products have been and continue to be purchased by consumers in this District. Upon information and belief, through those activities, LGL has committed the tort of patent infringement in this District.

12. On information and belief, Defendant LGL is subject to this Court’s general and specific personal jurisdiction because LGL has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Del. Code. Ann. Tit. 3, § 3104, because Defendant LGL purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant LGL regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff’s causes of action arise directly from Defendant LGL’s business contacts and other activities in the State of Delaware and this District. Having purposefully availed itself of the privilege of

conducting business within this District, Defendant LGL should reasonably and fairly anticipate being brought into court here.

13. Venue with respect to Defendant LUS is proper in this District under 28 U.S.C. § 1400(b) because LUS is a Delaware corporation and therefore resides in this District.

14. This Court has personal jurisdiction over LUS. LUS is amenable to service of summons for this action. Furthermore, personal jurisdiction over LUS in this action comports with due process. LUS has conducted and regularly conducts business within the United States and this District. LUS has purposefully availed itself of the privileges of conducting business in the United States, and more specifically in the State of Delaware and this District. LUS has sought protection and benefit from the laws of the State of Delaware by forming one of its United States affiliates in this District and/or by placing infringing products into the stream of commerce through an established distribution channel with the awareness and/or intent that they will be purchased by consumers in this District.

15. LUS – directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents – ships, distributes, offers for sale, and/or sells its products in the United States and this District. LUS has purposefully and voluntarily placed one or more of its infringing products into the stream of commerce with the awareness and/or intent that they will be purchased by consumers in this District. LUS knowingly and purposefully ships infringing products into and within this District through an established distribution channel. These infringing products have been and continue to be purchased by consumers in this District. Upon information and belief, through those activities, LUS has committed the tort of patent infringement in this District.

16. On information and belief, Defendant LUS is subject to this Court's general and specific personal jurisdiction because LUS has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Del. Code. Ann. Tit. 3, § 3104, because Defendant LUS purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant LUS regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff's causes of action arise directly from Defendant's business contacts and other activities in the State of Delaware and this District. Having purposefully availed itself of the privilege of conducting business within this District, Defendant LUS should reasonably and fairly anticipate being brought into court here.

17. Venue with respect to Defendant LGTUS is proper in this District under 28 U.S.C. § 1400(b) because LGTUS is a Delaware corporation and therefore resides in this District.

18. This Court has personal jurisdiction over LGTUS. LGTUS is amenable to service of summons for this action. Furthermore, personal jurisdiction over LGTUS in this action comports with due process. LGTUS has conducted and regularly conducts business within the United States and this District. LGTUS has purposefully availed itself of the privileges of conducting business in the United States, and more specifically in the State of Delaware and this District. LGTUS has sought protection and benefit from the laws of the State of Delaware by forming one of its United States affiliates in this District and/or by placing infringing products into the stream of commerce through an established distribution channel with the awareness and/or intent that they will be purchased by consumers in this District.

19. LGTUS – directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents – ships, distributes, offers for sale, and/or sells its products in the United States and this District. LGTUS has purposefully and voluntarily placed one or more of its infringing products into the stream of commerce with the awareness and/or intent that they will be purchased by consumers in this District. LGTUS knowingly and purposefully ships infringing products into and within this District through an established distribution channel. These infringing products have been and continue to be purchased by consumers in this District. Upon information and belief, through those activities, LGTUS has committed the tort of patent infringement in this District.

20. On information and belief, Defendant LGTUS is subject to this Court’s general and specific personal jurisdiction because LGTUS has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Del. Code. Ann. Tit. 3, § 3104, because Defendant LGTUS purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant LGTUS regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff’s causes of action arise directly from Defendant’s business contacts and other activities in the State of Delaware and this District. Having purposefully availed itself of the privilege of conducting business within this District, Defendant LGTUS should reasonably and fairly anticipate being brought into court here.

21. Venue with respect to Defendant LCUS is proper in this District under 28 U.S.C. § 1400(b) because LCUS is a Delaware corporation and therefore resides in this District.

22. This Court has personal jurisdiction over LCUS. LCUS is amenable to service of summons for this action. Furthermore, personal jurisdiction over LCUS in this action comports

with due process. LCUS has conducted and regularly conducts business within the United States and this District. LCUS has purposefully availed itself of the privileges of conducting business in the United States, and more specifically in the State of Delaware and this District. LCUS has sought protection and benefit from the laws of the State of Delaware by forming one of its United States affiliates in this District and/or by placing infringing products into the stream of commerce through an established distribution channel with the awareness and/or intent that they will be purchased by consumers in this District.

23. LCUS – directly or through intermediaries (including distributors, retailers, and others), subsidiaries, alter egos, and/or agents – ships, distributes, offers for sale, and/or sells its products in the United States and this District. LCUS has purposefully and voluntarily placed one or more of its infringing products into the stream of commerce with the awareness and/or intent that they will be purchased by consumers in this District. LCUS knowingly and purposefully ships infringing products into and within this District through an established distribution channel. These infringing products have been and continue to be purchased by consumers in this District. Upon information and belief, through those activities, LCUS has committed the tort of patent infringement in this District.

24. On information and belief, Defendant LCUS is subject to this Court's general and specific personal jurisdiction because LCUS has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Del. Code. Ann. Tit. 3, § 3104, because Defendant LCUS purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant LCUS regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff's causes of action arise directly from Defendant's business contacts and other activities in the State

of Delaware and this District. Having purposefully availed itself of the privilege of conducting business within this District, Defendant LCUS should reasonably and fairly anticipate being brought into court here.

## **BACKGROUND**

### **The Inventions**

25. Timothy B. Higginson is the sole inventor (hereinafter “the Inventor”) of U.S. Patent No. 6,703,963 (“the ’963 patent” or “the patent in suit”). A true and correct copy of the ’963 patent is attached hereto as Exhibit A.

26. The ’963 patent resulted from the pioneering efforts of the Inventor in the area of small-profile multifunctional input devices. These efforts resulted in the development of novel input devices, and methods for operating them. The input devices utilize one or more functional modes and one or more domain levels associated with entering input values into the devices. A provisional patent application directed to the inventions was filed in the United States in September 2001.

27. At the time of the Inventor’s pioneering efforts, the most widely implemented technology used to address keying input data still involved implementing variants of the traditional two-handed QWERTY keyboard. In that type of system, as explained in the ’963 patent:

The QWERTY keyboard has been used as an input means since the development of the very first electronic devices. However, with the development of smaller, portable electronic devices, use of the QWERTY keyboard with these devices has certain drawbacks. As electronic devices have become smaller through advances in integrated circuitry, the traditional QWERTY keyboard is simply too large for many of the smaller electronic devices as the keyboard must be large enough to accommodate both hands of the user. Moreover, due the large size of the traditional keyboard, it is not sufficiently portable for use in conjunction with many of these electronic devices.

Previous attempts to overcome this short coming of the keyboard have included the use of foldable keyboards as shown in U.S. Pat. No. 6,174,097 and the use of keyboards that allow for the direct connection of the electronic device to a full-size portable QWERTY keyboard as shown in U.S. Pat. No. 6,108,200. However, neither of these approaches reduces the area required for the use of the keyboard.

...An additional drawback to the QWERTY keyboard is that it was designed to accommodate the mechanical components of the first typewriters, as such, the layout of its keys does not facilitate the rapid input of data from the keyboard.

...Another drawback to the traditional QWERTY keyboard is that it has typically only had a single functionality, namely alphanumeric input. However, with the decrease in size of many of electronic devices, additional functions are required from a smaller keyboard that current keyboards cannot accommodate.

(See Exhibit A, '963 patent at 1:37 to 2:23.)<sup>1</sup>

28. The Inventor conceived of the inventions claimed in the '963 patent as a way to address the aforementioned drawbacks of the prior art. As explained in the '963 patent:

The miniaturization of many electronic devices has allowed them to be designed such that they can be operated with only a single hand of the user or has made their use incompatible with a full-sized QWERTY keyboard. Because the QWERTY keyboard was developed for two-handed use with the original typewriter, it cannot be readily adapted for efficient use by only a single hand, or one or both thumbs when used in conjunction with many electronic devices.

...Previous attempts to increase the speed and efficiency of data input into an electronic device have included the development and use of voice-recognition software. However, the error rate typically associated with this type of software has thus far prevented its large-scale use as an effective input device.

...Previous attempts to overcome shortcomings of the QWERTY keyboard have included the use of alternative keyboards, such as the standard 12-key arrangement found on most telephone and cellular phones. A drawback of using the standard telephone as a data-input device is the slow rate of input due to use of only a single finger or thumb to activate the keys.

---

<sup>1</sup> Citations to patents in this Complaint refer to columns and lines within columns of any cited patent. For example, the citation referenced by this footnote refers to column 1, at line 37 through column 2, at line 23 in the '963 patent.

(See Exhibit A, '963 patent at 1:56 to 2:30.)

The present invention provides a multifunctional input device. The input device includes a functional mode which defines the mode of operation of the input device. Each functional mode includes one or more domain levels with each domain level containing one or more domain-level values. Each domain level-value within each functional mode is assigned to one of a plurality of programmable input keys. The domain-level value assigned to each input key controls the function of that input key within a given functionality and domain level. The present invention also includes a display to indicate the domain-level value associated with each of the programmable input keys within a given functionality.

(See Exhibit A, '963 patent at 2:33-45.)

### **Technological Innovation**

29. The patented inventions disclosed in the '963 patent resolve technical problems related to data input devices, and particularly, to problems related to the utilization of small-profile data input devices. As the patent explains, there are several limitations of the prior art as regards full-sized QWERTY keyboards in that:

[T]he keyboard must be large enough to accommodate both hands of the user. Moreover, due the large size of the traditional keyboard, it is not sufficiently portable for use in conjunction with many of these electronic devices.

('963 patent at 1:40-48.)

The miniaturization of many electronic devices has allowed them to be designed such that they can be operated with only a single hand of the user or has made their use incompatible with a full-sized QWERTY keyboard.

('963 patent at 1:56-59.)

Moreover, the size of the standard QWERTY keyboard, which can have in excess of 100 keys, often limits its versatility and utility as an input device.

('963 patent at 1:64-66.)

30. The claims of the '963 patent do not merely recite the performance of some well-known business practice from the pre-Internet world along with the requirement to perform it on

the Internet. Instead, the claims of the patent in suit recite inventive concepts that are deeply rooted in computerized data input and data processing. They offer technology that overcomes problems specifically arising out of how to maximize efficiency and versatility associated with entering data into a small profile data input device.

31. In addition, the claims of the patent in suit recite inventive concepts that improve the functioning of electronic data input devices catalogs, particularly as they recite a combination of controls by which a user can dynamically generate user-specific data input interfaces for the devices.

32. Moreover, the claims of the '963 patent recite inventive concepts that are not merely routine or a conventional use of computer technology or transaction processing. Instead, the patented inventions disclosed in the patent in suit provide a new and novel solution to specific problems related to automating and customizing the process of entering data into small profile input devices by dynamically utilizing user specified control combinations. The claims of the patent in suit thus specify how interfaces for entering user data are manipulated to yield a desired result.

33. And finally, the patented inventions disclosed in the patent in suit do not preempt all the ways that user-specific interface selections may be used to improve entering data into small profile input devices, nor does the patent in suit preempt a well-known or prior art technology, such as a standard QWERTY keyboard.

34. Accordingly, the claims in the '963 patent recite a combination of elements sufficient to ensure that the claims, in substance and in practice, amount to significantly more than a patent-ineligible abstract idea.

**COUNT I - INFRINGEMENT OF U.S. PATENT NO. 6,703,963**

35. The allegations set forth in the foregoing paragraphs are incorporated herein by reference.

36. On March 9, 2004, the '963 patent was duly and legally issued by the United States Patent and Trademark Office under the title "Universal Keyboard."

37. Princeps is the assignee and owner of the right, title and interest in and to the '963 patent, including the right to assert all causes of action arising under said patent and the right to any remedies for infringement of it.

38. Upon information and belief, the Defendants have directly infringed and continue to directly infringe at least claims 1, 2, 3, 9, 12 and 60 of the '963 patent under 35 U.S.C. § 271(a) by making, using, selling, offering to sell and/or importing information input devices such as Lenovo "Moto" brand phones with proprietary Lenovo Apps and/or third-party Apps with keyboard functionalities and an operating system such as the Android operating system (the "Accused Instrumentalities"), as set forth in detail in the attached preliminary and exemplary claim charts provided in Exhibit A-1. (*See* Princeps' Claim Chart for claims 1, 2, 3, 9, 12 and 60 of the '963 patent, Ex. A-1.)

39. The Accused Instrumentalities infringed and continue to infringe claims 1, 2, 3, 9, 12 and 60 of the '963 patent during the pendency of the '963 patent.

40. Lenovo was made aware of the '963 patent and its infringement thereof at least as early as the filing of this Complaint.

41. Users in Delaware and elsewhere in the United States have used and interacted with each Defendant's systems as recited in claims 1, 2, 3, 9, 12 and 60 of the '963 patent.

42. Upon information and belief, since at least the time of receiving this Complaint, Lenovo has induced and continues to induce others to infringe at least claims 1, 2, 3, 9, 12 and 60 of the '963 patent under 35 U.S.C. § 271(b) by, among other things, and with specific intent or willful blindness, actively aiding and abetting others to infringe, including but not limited to Lenovo's partners and customers, whose use of the Accused Instrumentalities constitutes direct infringement of at least claims 1, 2, 3, 9, 12 and 60 of the '963 patent.

43. In particular, Lenovo's actions that aid and abet others such as their partners and customers to infringe include distributing the Accused Instrumentalities and providing instructional materials and/or services related to the Accused Instrumentalities. On information and belief, Lenovo has engaged in such actions with specific intent to cause infringement and with willful blindness to the resulting infringement because Lenovo has had actual knowledge of the '963 patent and that its acts were inducing infringement of the '963 patent since at least the time of receiving this Complaint.

44. Upon information and belief, Lenovo is liable as a contributory infringer to at least claims 1, 2, 3, 9, 12 and 60 of the '963 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States input device technology, such as the Lenovo Galaxy S series devices, and proprietary Lenovo apps utilizing keyboard input interfaces which are especially made or adapted for use in an infringement of the '963 patent. The Accused Instrumentalities are material components for use in practicing the '963 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

45. On information and belief, Defendants, collectively Lenovo, is a for-profit organization with revenues of approximately 45 billion U.S.D. per year. Moreover, Defendants,

their employees and/or agents make, use, sell, offer to sell, import, provide and cause to be used the Accused Instrumentalities for Defendant's customers, leading to direct and indirect revenues and profit. As one example of indirect profit, entities such as the Defendants, will frequently offer the Accused Instrumentalities at reduced pricing as an inducement to attract select categories of customers, such as students, who then purchase additional products or services. On information and belief, without the availability of infringing tools such as the Accused Instrumentalities, Defendants would be at a disadvantage in the marketplace and would generate less revenue overall.

46. On information and belief, since at least the time it received notice by this Complaint, Lenovo's infringement has been and continues to be willful.

47. Princeps has been harmed by Lenovo's infringing activities.

48. Princeps reserves the right to modify its infringement theories as discovery progresses in this case. It shall not be estopped for purposes of its infringement contentions or its claim constructions by the claim charts it provides with this Complaint. Princeps intends the claim chart (Exhibit A-1) for the '963 patent to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rule of Civil Procedure. The claim chart is not Princeps's preliminary or final infringement contentions or preliminary or final claim construction positions.

#### **JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Princeps demands judgment for itself and against the Lenovo Defendants as follows:

A. An adjudication that the Defendants have infringed the '963 patent;

B. An award of damages to be paid by Defendants adequate to compensate Plaintiff for the Defendants' past infringement of the '963 patent, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: July 30, 2019

DEVLIN LAW FIRM LLC

/s/ Timothy Devlin

Timothy Devlin (#4241)

tdevlin@devlinlawfirm.com

Patrick R. Delaney (*pro hac vice* to be filed)

pdelaney@devlinlawfirm.com

1526 Gilpin Ave.

Wilmington, Delaware 19806

Telephone: (302) 449-9010

Facsimile: (302) 353-4251

*Attorneys for Plaintiff,*

*Princeps Interface Technologies LLC*