

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC., LG
ELECTRONICS MOBILECOMM U.S.A. INC., LG ELECTRONICS
MOBILE RESEARCH U.S.A. LLC, AND LG ELECTRONICS
ALABAMA, INC.,

Petitioner

v.

FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC,
Patent Owner.

IPR2018-00493
Patent 7,834,586 B2

Before BRYAN F. MOORE, JON B. TORNQUIST, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

PESLAK, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

LG Electronics, Inc. et al. (“Petitioner”), filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 8–13 of U.S. Patent 7,834,586 B2 (Ex. 1001, “the ’586 Patent”). Petitioner supports its Petition with the Declaration of Jonathan R. Wood, Ph.D. (Ex. 1003). Fundamental Innovation Systems International LLC (“Patent Owner”), timely filed a Preliminary Response (Paper 6, “Prelim. Resp.”). Patent Owner supports its Preliminary Response with the Declaration of Dr. Kenneth Fernald (Ex. 2001).

Petitioner’s asserted grounds of unpatentability numbered 2 and 4–6 are directed to claims 10 and 13 of the ’586 Patent. Pet. 12. Subsequent to the filing of the Petition, on June 8, 2018, Patent Owner filed a Statutory Disclaimer, in compliance with 35 U.S.C. § 253(a) and 37 C.F.R. § 1.321(a), of claims 3, 7, 10, and 13. Ex. 2018, 3. 37 C.F.R. § 42.107(e) provides that “[n]o *inter partes* review will be instituted based on disclaimed claims.” Consequently, we do not consider Petitioner’s grounds numbered 2 and 4–6 herein.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” Taking into account the evidence and arguments presented in the Petition and the Preliminary Response, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any

challenged claim of the '586 Patent. Therefore, we do not institute an *inter partes* review.

A. Related Matters

The parties identify Civil Actions No. 2:17-cv-00145, No. 2:16-cv-01424, and No. 2:16-cv-01425, in the Eastern District of Texas and Civil Action No. 3:17-cv-01827 in the Northern District of Texas as involving the '586 Patent. Pet. 1–2, Paper 4, 1. The parties also identify IPR2018-00485 as having been filed against the '586 Patent. Pet. 2, Paper 4, 3.

B. Technology Background: USB 2.0 Compliant Cables

An overview of Universal Serial Bus (“USB”) cables is helpful in understanding the technology involved in the '586 Patent which relates to charging a mobile device through a USB connector. *See* Ex. 1001, Fig. 3. Cables compliant with the USB 2.0 standard have four conductors: VBUS, D+, D-, and GND. Ex. 1010, 17–18, 86. The VBUS and GND conductors of the USB cable are used to deliver power to devices and the D+ and D- conductors carry communication signals between a USB host and a connected device. Ex. 1010, 17–18; Ex. 1001, 6:65–7:3; Ex. 1005, 4:62–66. Figure 4–2 of the USB 2.0 specification, reproduced below, depicts these four conductors within a USB cable:

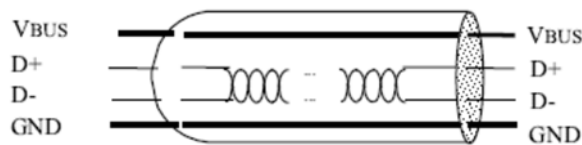


Figure 4-2. USB Cable

Ex. 1008, 17.

Figure 4–2 depicts conductors within a USB cable.

C. The '586 Patent

The '586 Patent is titled “Multifunctional Charger System and Method.” Ex. 1001, Title. The '586 Patent discloses “a USB adapter for providing a source of power to a mobile device through a USB port.” *Id.* at 2:21–22. The '586 Patent explains that although it was understood in the art that a USB interface could be used as a power interface, it was typically not used for that purpose by mobile devices. *Id.* at 1:55–56. This is because USB hubs and hosts require USB devices “to participate in a host-initiated process called enumeration in order to be compliant” with the USB specification in drawing power from the USB interface, and “alternate power sources such as conventional AC outlets and DC car sockets” were “not capable of participating in enumeration.” *Id.* at 1:58–2:3. Additionally, “the power limits imposed by the USB Specification” limit the amount of power available to charge a battery. *Id.* at 2:64–65.

In order to, *inter alia*, avoid the power limits imposed by the USB Specification, the '586 Patent discloses a USB adapter and a method for charging that is capable of providing power to a mobile device without first participating in USB enumeration. *Id.* at 9:18–34. Figure 2 of the '586 Patent, reproduced below, is a schematic diagram of the disclosed USB adapter coupled to an exemplary mobile device (*id.* at 3:25–26):

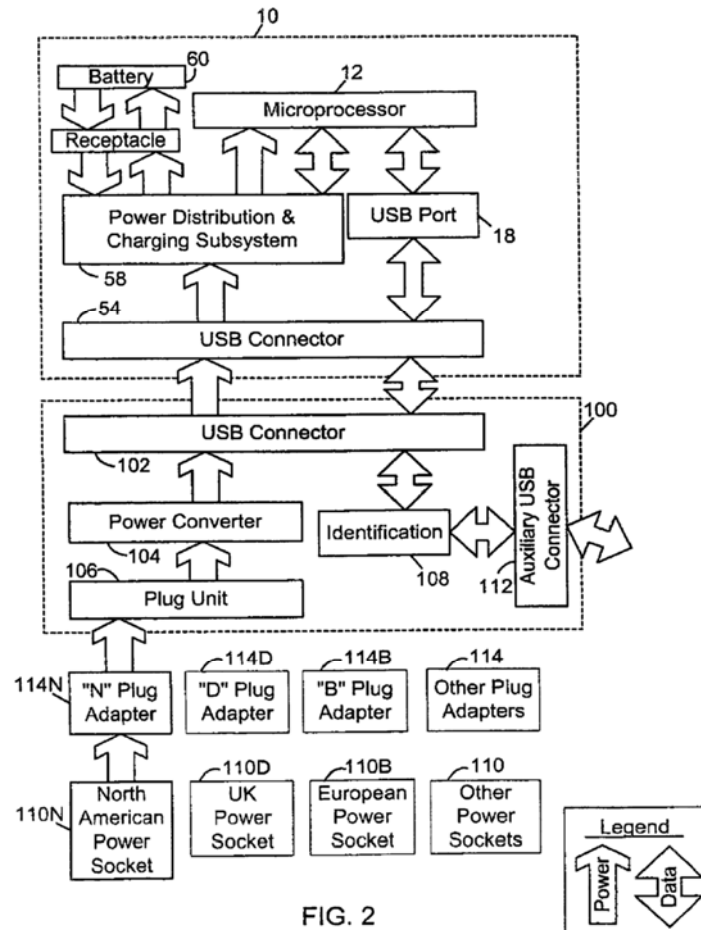


FIG. 2

As shown in Figure 2, USB adapter 100 comprises primary USB connector 102, power converter 104, plug unit 106, identification subsystem 108, and auxiliary USB connector 112. *Id.* at 6:49–60. The '586 Patent discloses that when USB adapter 100 is connected to mobile device 10 via USB connector 54 of mobile device 10 and USB connector 102 of USB adapter 100, identification subsystem 108 provides an identification signal to mobile device 10 indicating that the power source is not a USB limited source. *Id.* at 6:63–65, 8:15–17. This identification signal “could be the communication of a single voltage on one or more of the USB data lines, different voltages on the two data lines, a series of pulses or voltage level changes, or other

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