

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZTE (USA) INC.,
Petitioner,

v.

FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC,
Patent Owner.

Case IPR2018-00276
Patent 7,239,111 B2

Before LYNNE E. PETTIGREW, 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

ZTE (USA) Inc. (“Petitioner”), filed a Petition (Paper 1, “Pet.”) requesting an *inter partes* review of claims 1–3, 6–8, 12, and 14–18 of U.S. Patent 7,239,111 B2 (Ex. 1001, “the ’111 Patent”).¹ Petitioner supports its Petition with the Declaration of Mr. James Geier. Ex. 1009. Fundamental Innovation Systems International LLC (“Patent Owner”) timely filed a Preliminary Response (Paper 8, “Prelim. Resp.”). Patent Owner supports its Preliminary Response with the Declaration of Robert Baranowski and the Declaration of Dr. Kenneth Fernald. Exs. 2001, 2002.

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 ’111 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

¹ Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. were dismissed from this proceeding by Order entered July 18, 2018. Paper 12.

'111 Patent. Pet. 1, Paper 6, 1. The parties also identify IPR2018-00487 and IPR2018-00495 as having been filed against the '111 Patent. Pet. 1, Paper 6, 3.

B. Technology Background

An overview of USB cables is helpful in understanding the technology involved in the '111 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. 1008, 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. *Id.* at 17–18; Ex. 1001, 7:4–11. Figure 4–2 of the USB 2.0 specification, reproduced below, depicts these four conductors within a USB cable:

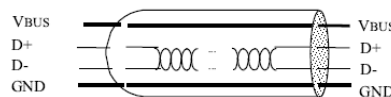


Figure 4-2. USB Cable

Ex. 1008, 17. Figure 4–2 illustrates the arrangement of conductors in a USB cable.

C. The '111 Patent

The '111 Patent is directed to a Universal Serial Bus Adapter for a Mobile Device. Ex. 1001, at [54]. The '111 Patent discloses “a USB adapter for providing a source of power to a mobile device through a USB port.” *Id.* at 2:19–21. The '111 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 1:52–54. 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 1:56–66. Additionally, “the power limits imposed by the USB specification” limit the amount of power available to charge a battery. *Id.* at 2:63–64.

In order to, *inter alia*, avoid the power limits imposed by the USB Specification, the '111 Patent discloses a USB adapter that is capable of providing power to a mobile device without first participating in USB enumeration. *Id.* at 9:15–41. Figure 2 of the '111 Patent, reproduced below, is a schematic diagram of the disclosed USB adapter coupled to an exemplary mobile device (*id.* at 3:23–24):

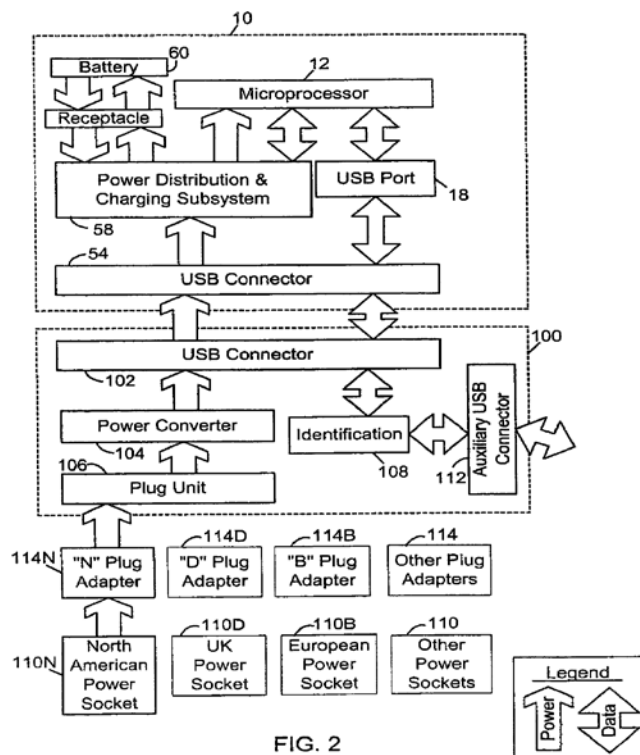


FIG. 2

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 6:57–7:1. The '111 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 6:57–7:1, 8:23–25. The 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 types of electrical signals.” *Id.* at 8:25–29. “The preferred identification signal,” however, “results from the application of voltage signals greater than 2 volts to both the D+ and D- lines in the USB connector.” *Id.* at 9:21–23.

D. Illustrative Claim

Independent claim 1 is illustrative of the challenged claims and is reproduced below:

1. A Universal Serial Bus (“USB”) adapter for providing power to a mobile device through a USB port comprising:
 - a plug unit configured to receive energy from a power socket;
 - a power converter coupled to the plug unit, the power converter being configured to regulate the received energy from the power socket to generate a power output;
 - an identification subsystem configured to generate an identification signal, wherein the identification signal is configured to indicate to the mobile device that the power socket is not a USB host or hub; and
 - a USB connector coupled to the power converter and the identification subsystem, the USB connector being configured to

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