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Paper No. 10
Entered: August 9, 2018

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.

Case IPR2018-00495
Patent 7,239,111 B2

Before LYNNE E. PETTIGREW, JON B. TORNQUIST, and CHRISTOPHER L. OGDEN, *Administrative Patent Judges.*

OGDEN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 U.S.C. § 314

A. INTRODUCTION

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")[1] filed a Petition for *inter partes* review (Paper 1, "Pet.") of claims 1–3, 6–8, 12, 14, and 16–18 of U.S. Patent No. 7,239,111 B2 (Ex. 1001, "the '111 patent"). Fundamental Innovation Systems International LLC ("Patent Owner")[2], filed a Preliminary Response ("Prelim. Resp.") to the Petition. Paper 6.

We have discretion to institute an *inter partes* review when "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). Applying that standard, we decline to institute an *inter partes* review based on the information presented.[3]

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[1] Petitioner identifies 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 as the real parties in interest. Pet. 1.

[2] Patent Owner states that it is the owner of the '111 patent, that Fundamental Innovation Systems International Holdings LLC is its parent entity, and that it has contracted with TnT IP, LLC to manage its patent portfolio. Paper 4, 1.

[3] Patent Owner argues that we may not consider the Petition because Petitioner did not name all the real parties in interest pursuant to 35 U.S.C. § 312(a)(2), and that we should exercise our discretion to dismiss the petition under 35 U.S.C. § 325(d). *See* Prelim. Resp. 19–26. We need not resolve these issues because we deny the Petition under 35 U.S.C. § 314(a).

B. BACKGROUND

1. RELATED PROCEEDINGS

The parties identify the following related matters pursuant to 37 § C.F.R. 42.8(b)(2):[4]

District court cases: *Fundamental Innovation Systems International LLC v. Samsung Elecs. Co. et al.*, No. 2:17-cv-00145 (E.D. Tex.); *Fundamental Innovation Systems International LLC v. Huawei Investment & Holding Co. et al.*, No. 2:16-cv-01424-JRG-RSP (E.D. Tex.); *Fundamental Innovation Systems International LLC v. LG Electronics, Inc. et al.*, No. 2:16-cv-01425-JRG-RSP (E.D. Tex.); *Fundamental Innovation Systems International LLC v. ZTE Corp. et al.*, No. 3:17-cv-01827-N (N.D. Tex.).

Inter partes reviews: IPR Nos. 2018-00460, 2018-00461, 2018-00487, 2018-00493, and 2018-00508.

2. USB 2.0 SPECIFICATION AND THE SE1 STATE

By way of background, the '111 patent relates to the USB 2.0 specification,[5] an industry-wide serial bus standard, which "describes the bus attributes, the protocol definition, types of transactions, bus management, and the programming interface required to design and build systems and peripherals that are compliant with this standard." Ex. 1010, 1.

Figure 4-2 of the USB 2.0 specification, reproduced below, shows a USB-compliant cable:

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[4] *See* Pet. 1–2; Paper 4, 1–3.

[5] COMPAQ COMPUT. CORP. ET AL., UNIVERSAL SERIAL BUS SPECIFICATION, REV. 2.0 (2000) [hereinafter USB 2.0]. Ex. 1010.

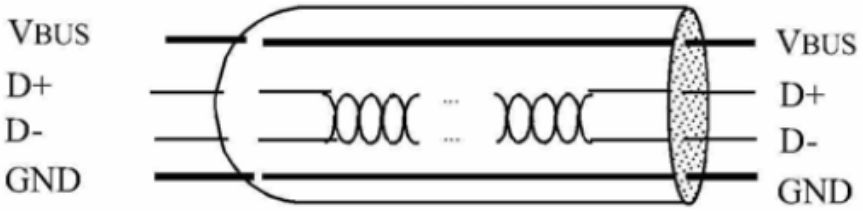

Figure 4-2. USB Cable

Figure 4-2 depicts four conductors: VBUS and GND deliver power to devices, and D+ and D− are a twisted pair of signal conductors. *See* Ex. 1010, 18, 86, 94, 102.

The USB 2.0 specification designates "SE1" as a state in which D+ and D− conductors are both high (i.e., at a voltage greater than 0.8 V). *See id.* at 123, 145. The specification states that "[l]ow-speed and full-speed USB drivers must never 'intentionally' generate an SE1 on the bus." *Id.* at 123; *see also id.* at 148 n.4 ("A high-speed driver must never 'intentionally' generate a signal in which both D+ and D− are driven to a level above 200 mV. The current-steering design of a high-speed driver should naturally preclude this possibility.").

Nevertheless, the specification contemplates that an SE1 state may sometimes occur on the bus; for example, when a device is attached to a port on a USB hub, "a noise event on the bus can cause the attached device to detect a reset condition on the bus after 2.5 μs of . . . SE1 on the bus." *Id.* at 316. For this reason, the specification requires constant monitoring of "the port's single-ended receivers to detect a disconnect event," noting that "[i]f the hub does not place the port in the disconnect state before the device resets, . . . [t]his can cause systems errors that are very difficult to isolate and correct." *Id.*

3. THE '111 PATENT (EX. 1001)

The '111 patent discloses "a USB adapter for providing a source of power to a mobile device through a USB port." Ex. 1001, 2:35–36. According to the patent, those in the industry understood that one could use a USB interface for both data and power; however, mobile devices typically did not use the USB interface for that purpose. *Id.* at 1:52–54. This is because USB devices, according to the USB specification, must "participate in a host-initiated process called enumeration in order to be [USB] compliant" in drawing power from the USB interface, but "alternate power sources such as conventional AC outlets and DC car sockets" were "not capable of participating in enumeration." *Id.* at 1:54–67.

To allow mobile devices to be recharged using a broader range of power sources, the '111 patent describes a USB adapter for providing power to a mobile device without first participating in enumeration. *Id.* at 9:1–14. Figure 2 of the patent, reproduced below with Petitioner's color annotations (Pet. 7), is a schematic diagram of such a USB adapter coupled to an exemplary mobile device:

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