

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TCT MOBILE (US), INC., TCT MOBILE (US) HOLDINGS, INC.,
HUIZHOU TCL MOBILE COMMUNICATION CO. LTD., and
TCL COMMUNICATION, INC.,
Petitioner,

v.

FUNDAMENTAL INNOVATION SYSTEMS INTERNATIONAL LLC,
Patent Owner.

IPR2021-00598
Patent 8,232,766 B2

Before MIRIAM L. QUINN, JON B. TORNQUIST, and
ARTHUR M. PESLAK *Administrative Patent Judges*.

QUINN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314, 37 C.F.R. § 42.4

I. INTRODUCTION

A. *Background and Summary*

The above-captioned Petitioner filed a Petition requesting *inter partes* review of claims 1–24 of U.S. Patent No. 8,232,766 B2 (Ex. 1001, “the ’766 patent”). Paper 1 (“Pet.”). Fundamental Innovation Systems International LLC (“Patent Owner”), timely filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

We have jurisdiction under 35 U.S.C. § 314. Upon considering the record developed thus far, for the reasons discussed below, we deny the Petition and do not institute *inter partes* review.

B. *Related Matters*

The parties indicate that the ’766 patent is involved in the following active litigation: *Fundamental Innovation Systems International LLC v. Coolpad Group Limited*, Case No. 2-20-cv-00117, (E.D. Tex.); *Fundamental Innovation Systems International LLC v. Lenovo (United States) Inc.*, Case No. 1-20-cv-00551 (D. Del.); and *Fundamental Innovation Systems International LLC v. TCT Mobile (US) Inc.*, 1-20-cv-00552 (D. Del.). Pet. X.1; Paper 5 (identifying additional litigation that has settled).

Although there have been various IPRs concerning patents related to the ’766 patent, neither party identifies an IPR that involves the ’766 patent. Pet. X.1–2; *see* Paper 5 (identifying other IPR proceedings involving patents related to the ’766 patent).

C. *Technology Background*

An overview of USB cables is helpful in understanding the technology involved in the ’766 Patent, which relates to charging a mobile device through a USB connector. *See* Ex. 1001, 2:15–17, 2:30–32. Cables

compliant with the USB 2.0 standard have four conductors: VBUS, D+, D-, and GND. Ex. 1010, 17–18.¹ 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.*; Ex. 1001, 7:7–15. Figure 4–2 of the USB 2.0 specification, reproduced below, depicts these four conductors within a USB cable: Ex. 1010, 45.

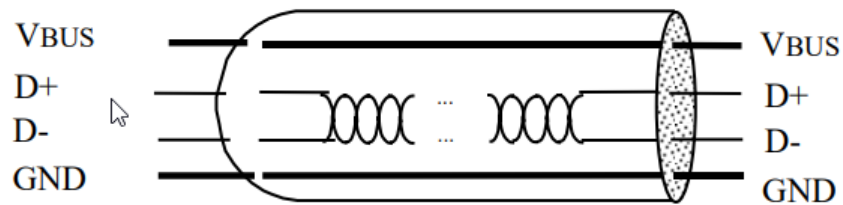


Figure 4-2. USB Cable

Figure 4–2 illustrates the arrangement of conductors in a USB cable.

D. The '766 Patent (Ex. 1001)

The '776 Patent is directed to a Multifunctional Charger System and Method. Ex. 1001, at [54]. The '766 Patent discloses “a USB adapter for providing a source of power to a mobile device through a USB port.” *Id.* at 2:45–46. The '766 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 1:64–66. 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 1:66–2:11. Further, when a

¹ Citations to certain pages in Exhibit 1010 refer to the pagination in the original document.

mobile device is coupled to a USB host, it draws power in accordance with USB specification limits on electrical current that can flow across the USB connection. *Id.* at 8:15–20. In order to provide power through a USB port, the '766 Patent discloses a USB adapter that is capable of providing power to a mobile device without first participating in USB enumeration. *Id.* at 9:43–51. Figure 2 of the '766 Patent, reproduced below, is a schematic diagram of the disclosed USB adapter coupled to an exemplary mobile device (*id.* at 3:33–34):

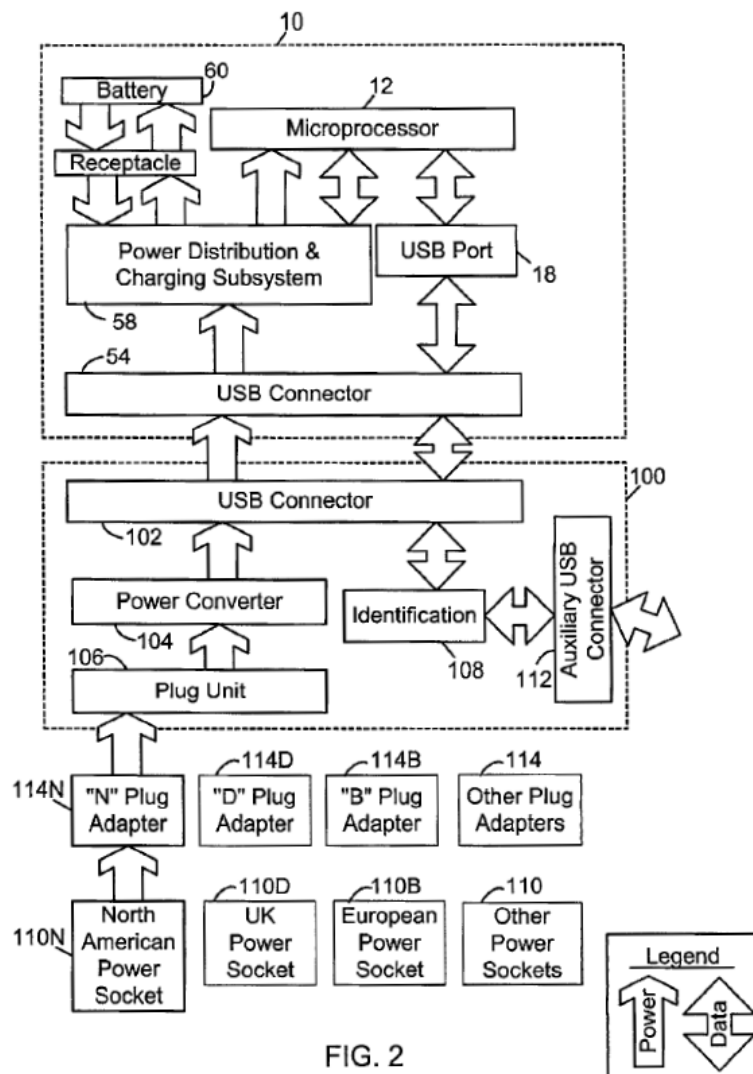


FIG. 2

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 6:59–7:6. The ’766 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 8:27–29. 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 8:29–33. “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 9:29–33.

E. Illustrative Claim

Of the challenged claims, claims 1, 9, 17, and 24 are independent.

Claim 1 is illustrative:

1. A mobile device, comprising:
a USB communication path; and
a charging subsystem enabled to draw current unrestricted by at least one predetermined USB Specification limit, said enablement being responsive to an abnormal USB data condition detected at said USB communication path.

Ex. 1001, 12:15–22. Independent claims 1 and 9 recite detecting “an abnormal USB data condition.” *See id.* at 12:20–22 (claim 1), 12:46–48 (claim 9). Claim 17 recites detecting an “identification signal” in order to draw current in excess of a USB limit. *Id.* at 13:3–5. And claim 24 recites

enabling drawing a current in excess of 500 mA in response to “signals in excess of 2V detected at each of said D+ and D- lines and said enablement occurring without USB enumeration.” *Id.* at 14:11–15.

F. Asserted Prior Art and Ground of Unpatentability

Petitioner asserts one ground of unpatentability, based on Morita² and the knowledge of a person of ordinary skill in the art (Pet. 3):

Claims Challenged	35 U.S.C. §	References
1–24	103(a)	Morita and knowledge of a person of ordinary skill in the art

Petitioner also relies on a Declaration of R. Jacob Baker, Ph.D., P.E., filed as Exhibit 1003 (“Baker Decl.”).

II. DISCUSSION

A. Claim Construction

There are no claim terms in dispute or that need construction for purposes of this Decision. *See* Pet. 32–33.

B. Level of Ordinary Skill in the Art

In determining whether an invention would have been obvious at the time it was made, we consider the level of ordinary skill in the pertinent art at the time of the invention. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “The importance of resolving the level of ordinary skill in the art lies in the necessity of maintaining objectivity in the obviousness inquiry.” *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991). The “person having ordinary skill in the art” is a hypothetical construct, from

² Morita is a Japanese patent application publication No. 2000-165513 titled “Charger” and having a publication date of June 16, 2000. Ex. 1008.

whose vantage point obviousness is assessed. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). “This legal construct is akin to the ‘reasonable person’ used as a reference in negligence determinations” and “also presumes that all prior art references in the field of the invention are available to this hypothetical skilled artisan.” *Id.* (citing *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1993)).

Petitioner proffers that a person having ordinary skill in the art “would have either a bachelor’s degree in electrical engineering, computer science, or a related field, plus 3-5 years of experience in design of systems with Universal Serial Bus (‘USB’) or equivalent buses that follow the USB 2.0 and earlier specifications, or a master’s degree in electrical engineering, computer science, or a related field, plus 1-2 years of experience in design of systems with USB or equivalent buses that follow the USB 2.0 and earlier specifications at the time of the ’766 patent’s priority date.” Pet. 14–15 (citing Becker Decl. ¶ 68). Patent Owner states that “[f]or purposes of this preliminary response only, Patent Owner applies the skill level proposed by Petitioner.” Prelim. Resp. 20. At this juncture, we do not find it necessary to define the level of skill, especially when neither party raises a dispute on the issue.

C. Obviousness over Morita

Our analysis of Petitioner’s challenge focuses on Petitioner’s assertion that Morita, in combination with the knowledge of a person of ordinary skill in the art, teaches various independent claim limitations concerning USB enumeration, exceeding limits of current or power draw in the USB Specification, and detecting “abnormal USB data condition,” an

“identification signal,” and “signals in excess of 2V detected at each of said D+ and D- lines.” An overview of Morita is in order.

1. Overview of Morita (Ex. 1008)

Morita explains that a mobile videophone device typically can connect to a personal computer using a USB cable and, therefore, the USB format. Morita ¶ 5. But that when desiring to connect additional devices to either the personal computer or the mobile device, more USB ports will be needed, especially at the mobile device, which typically has only one USB port. Morita ¶¶ 5–6. Morita also explains that, when connected to the personal computer via USB connection, the mobile videophone device can be used continuously, but this is not the case when the mobile videophone device is the host end. *Id.* ¶ 8. In this mode of operation, the battery will be depleted. *Id.* Thus, Morita provides a charger for the mobile device, where the charger also allows for the mobile device to be connected to external devices or peripherals. *Id.* ¶ 10. The charger has a power supply and a charging control unit for providing a charge to the mobile device. *Id.* ¶ 12. The charger also has three USB ports and USB hub control unit 27 for “branching and transmitting signals, attaching and removing external devices, determining low speed [] and high speed devices, and supplying and managing power.” *Id.* One of the USB ports (port 21) is for connecting the charger to the mobile device. *Id.* Another USB port (port 20) is for connecting the charger to a host-controllable external device or personal computer. *Id.* The third USB port (port 24) is for connecting devices such as a mouse, keyboard, and monitor. *Id.*

Morita explains that the charger also includes switch 25 for switching the charger operation between two modes. *Id.* ¶¶ 12, 15. In the first mode,

the charger is connected to a personal computer through port 20, to the mobile device through port 21, and external peripherals such as a mouse and keyboard through port 24. *Id.* ¶ 14. In this first mode, USB hub control unit 27 sets the personal computer as a USB host and the mobile device as a device, enabling access to the hard disk inside the mobile device via the keyboard that is connected to USB port 24 as an external device. *Id.* ¶¶ 15, 17.

In the second mode, the connection switching unit of the charger changes which port is connected to USB hub control unit 27, so that the mobile device as set as the USB host and port 20, connected to the personal computer, “becomes vacant” (i.e, is disabled). *Id.* ¶ 13, 15. In this second mode, the external peripherals, such as the keyboard and monitor, remain connected to port 24 as peripherals to the mobile device. *Id.* ¶¶ 15, 18. According to Morita, “the mobile phone always accesses the external device while receiving the supply of power from the charger, and thus the mobile phone can be used without worrying about battery consumption due to long-term and continuous use.” *Id.* ¶ 22.

2. *Reasonable Likelihood Determination*

After considering Petitioner’s contentions and Patent Owner’s arguments in opposition, we are not persuaded that Petitioner has demonstrated a reasonable likelihood of prevailing on showing that claims 1, 9, 17, and 24 would have been obvious as asserted.

Petitioner challenges the independent claims as obvious over Morita’s videophone (or mobile device) configured to draw more than 500 mA of current in response to an SE1 signal. Pet. 49 (for claim 1); *see also* Pet. 67, 70, 75 (for claims 9, 17, and 24 also relying on the SE1 signal). Petitioner

shows that the SE1 signal is represented in the USB data lines as a “high” state in both the D+ and the D- USB data lines. Pet. 24. Petitioner also points out the USB 2.0 Specification disclosure that the SE1 signal should not be used for devices seeking to utilize data communications over the USB connection. *Id.* at 30 (citing Ex. 1010, 123—“USB drivers must never ‘intentionally’ generate an SE1 on the bus.”). Nevertheless, Petitioner asserts that persons of ordinary skill in the art “understood that the signal could be used for various purposes, including to disable communication for purposes of charging.” *Id.* (citing Baker Decl. ¶¶ 80–90).

As we explain below, we are not persuaded that Petitioner has shown sufficiently its contention that it would have been obvious to use Morita with an SE1 signal. We also are not persuaded by Petitioner’s assertions that a person of ordinary skill in the art would have used Morita’s adapter without USB enumeration.

a) Claims 1 and 9

For claims 1 and 9, Petitioner argues that in some cases the Morita adapter will charge the mobile videophone without also being connected to a USB host (i.e., personal computer). Pet. 49, 66 (arguing that Morita’s adapter is “optionally connected to a USB host . . . while charging the videophone.”). According to Petitioner, in this “charge-only” mode, “the charger must charge the phone using power from the wall socket and typical USB communication is not possible.” *Id.* at 67. Petitioner also argues that in this “charge-only” mode “the videophone cannot engage in typical USB communication or enumeration and, accordingly, the charger must identify the charging state in some other way.” *Id.* at 50. Because Morita then has no need for USB communications in this “charge-only” mode, Petitioner

posits that there must be some other way for the charger to identify itself to the videophone. *Id.*

Petitioner's arguments are unpersuasive because Morita does not support the premise that the adapter would need a signal to indicate the so-called "charge-only" mode. Rather, Patent Owner persuasively shows that Morita has no need for such a signal. For instance, Morita's USB port 21 (connected to the videophone) derives its power from power supply connection 22 and charges that mobile device whether there is a PC host or not. *See* Prelim. Resp. 38–39 (citing Morita ¶¶ 14, 16; Ex. 2009 ¶¶ 89–91, 119). And Morita's adapter is configured as a self-powered hub and USB port 21 would be a high-powered hub port. *Id.* at 39–41 (citing Ex. 1009, 134, 136, Fig. 7-33, 171; Ex. 2009 ¶¶ 90–91, 119). Thus, Morita already provides high-rate charging of the videophone, without having to signal how much power or current the videophone may draw in any of Morita's modes of operation. As Dr. Kenneth Fernald (Patent Owner's declarant) opines, and we agree, because the ports of Morita's adapter operate as high-power hub ports in the first and second modes of operation, there is no situation in Morita "where USB port 21 would not be able to meet the current demanded by a high-power function, and need a signal to indicate to the mobile device that it is connected to a high-power hub port or not connected to a lower-power hub port." Ex. 2009 ¶ 119 ("Fernald Decl."). We credit this testimony. It is consistent with Morita's disclosure and the USB Specification as noted by Dr. Fernald. *Id.*

Thus, we are not persuaded by Petitioner's arguments that Morita would need a signal for the charger to identify itself to the videophone.

(1) *SE1 Signal Contention*

To the extent Petitioner contends that the SE1 signal is needed in a charging mode that draws current or power *higher* than allowed by the USB Specification, such a contention is also unpersuasive. Although acknowledging that Morita’s USB port 21 is a “high-power” port, Dr. Baker opines that “if the mobile device was close to drained and needed a significant amount of charge, a POSITA would expect the charger to exceed” the minimum of 500 mA. Baker Decl. ¶¶ 118–119. Dr. Baker relies on a disclosure in the chain of priority of the ’766 patent for the proposition that the inventors experimented with the amounts of current drawn from several USB ports at a “high rate,” and that certain high-power USB ports appear to implement an over-current protection. *Id.* ¶ 119 (citing Ex. 1006, 23—a provisional application from which the ’766 patent claims priority). From this disclosure, Dr. Baker concludes that Morita’s adapter “*could* supply even more current and the mobile videophone *could* draw more current.” *Id.* (emphases added). To the extent the testimony relies on a disclosure pertaining to the inventive steps leading to the claimed invention, such testimony relies on hindsight—having the benefit of the inventor’s disclosure of facts not shown to be known elsewhere. And, in any event, as Patent Owner points out, the disclosure Dr. Baker relies on (Ex. 1006, 22) informs that the battery would draw current at a rate of around 490 mA—nothing like what is alleged in the testimony, i.e., between 700 to 800 mA. Prelim. Resp. 38 (citing Ex. 1006, 22). Moreover, to the extent the testimony relies on what Morita *could* do in light of such a disclosure and the claim language, it also relies on hindsight—attributing to Morita a configuration not taught or suggested by Morita’s disclosure and motivated solely by the claimed subject matter. *See* Prelim. Resp. 41

(arguing that hindsight is evident in the proposition that Morita would violate the 500 mA current limit in the “charge-only” mode).

Further, Petitioner argues a benefit to Morita—that it could supply to the videophone more than 500 mA of current for even faster charging. Pet. 46 (citing Baker Decl. ¶ 120). Petitioner proffers two state-of-the-art references that purportedly disclose mobile devices that draw currents between 600 mA and 1000 mA. *Id.* (citing Exs. 1016 (“Martensson”), 1017 (“Theobald”). Petitioner argues that these references show it was “well known at the time that drawing more than 500 mA of current (when such current is available, as it is here) results in faster charging.” *Id.* Patent Owner persuasively rebuts these arguments showing that neither Martensson nor Theobald involves charging via a USB connector. Prelim. Resp. 35. And that neither of these references suggests exceeding the current-draw limit for the connectors or standards involved in Morita. *Id.* at 35–36. In short, recognizing that a cell phone *could* be charged faster by supplying 600 mA of current does not show that *Morita would* supply such a current, or more, given its *intended use* of operating as a *USB* adapter for a *USB*-charged videophone.

Nevertheless, even assuming that Morita would be enabled to draw a current that exceeds the USB limits, Petitioner’s assertion that it would be obvious for the videophone to detect an SE1 signal provided by Morita’s adapter is unpersuasive. Rather, we are persuaded by Patent Owner’s arguments that the proposed combination of Morita and the implementation of an SE1 signal as the “abnormal condition” would render Morita inoperable for its intended purpose. Prelim. Resp. 51–61. Morita is configured to maintain USB communication between the mobile device and the hub, and with the external peripherals. Morita ¶¶ 18, 19, 22. According

to Petitioner, however, the SE1 signal renders normal USB communication impossible. Pet. 24; Baker Decl. ¶¶ 81–82. Thus, it is unreasonable to alter Morita’s configuration to include a signal that would render inoperable the very USB communications Morita is designed to maintain. Patent Owner correctly argues that a redesign of Morita that changes the principles under which Morita was designed to operate is evidence of non-obviousness. Prelim. Resp. 52–53 (citing *In re Ratti*, 270 F.2d 810, 813 (CCPA 1959)).

In particular, we note that, consistent with the evidence of record, Morita uses USB communication between the mobile device, the USB hub or charger, and the external devices connected to the hub even when the external host PC is absent. *See id.* at 53–54 (citing Morita ¶ 18). In the second mode of operation, Morita’s mobile device continues to charge and to be in USB communication with the external peripheral devices connected through USB ports 24. *Id.* (citing Morita ¶¶ 18, 19, 22, Fig. 4). Thus, if Morita’s intended design is for the mobile device to be in communication with the external peripherals while charging—even when there is no PC present—we fail to see how Petitioner’s evidence properly accounts for the change in operation. Using the SE1 signal, as Petitioner proposes, would render Morita’s charger incapable of sending and receiving USB data to and from the external peripheral devices that Morita purposely seeks to keep in communication with the videophone, even when no PC is connected. Indeed, Morita expressly states that the mobile device “*always* accesses the external device while receiving the supply of power from the charger.” Morita ¶ 22 (emphasis added). Petitioner has not shown how Morita would be configured to always access the external devices and also be configured

to use an SE1 signal that disables USB communications. *See* Prelim. Resp. 55.

Furthermore, Petitioner’s contention that Morita would operate as a charger only, without USB data communication with the peripherals, is unsupported by Morita. As Patent Owner explains, and we agree, “Morita does not provide a charger for the sake of charging alone.” Prelim. Resp. 55. Morita addresses the problem of limited battery life when a mobile device serves as a host to operate other peripherals. *Id.* (citing Morita ¶ 8). Thus, we agree with Patent Owner that Morita explains the need for the charging function to work in conjunction with the mobile device operating as a host. *Id.* at 55–56 (citing Morita ¶¶ 19, 22). Indeed, Morita’s adapter informs the mobile device of the connection state of connection switching unit 26 in order for the charger to set up either the mobile device or the personal computer as the host. *Id.* at 57–58 (citing Morita ¶ 15; Fernald Decl. ¶ 104). Such an operation informs us that Morita uses USB signaling and data to convey connection states, functionality which would not be possible if using SE1 signaling. Petitioner has not explained credibly how or why a person of ordinary skill in the art would disregard Morita’s connection states that allow switching of USB hosts (PC versus mobile device) in favor of using an SE1 signal that disables functionality that Morita expressly seeks to provide.

Petitioner’s other reasons for the combinability of Morita with the SE1 signal focus on the contention that other prior art may have utilized SE1 signals, such as to indicate a wake-up signal. Pet. 51–53. Petitioner’s arguments are not persuasive because the contention does not overcome the undesirability of the combination or explains why a person of ordinary skill

in the art would have modified Morita in a way that it would not work for its intended purpose. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1326 (Fed. Cir. 2009) (holding that, under *KSR*, the “predictable results” refer also to the expectation that the alleged combination would have worked for its intended purpose).

(2) Without Enumeration Contention

Petitioner further contends that a person of ordinary skill in the art would have found it obvious to configure Morita’s videophone to draw more than 100 mA of current without performing enumeration. Pet. 48 (citing Baker ¶ 122). This contention is presented as an additional reason Morita’s videophone would draw current or power unrestricted by USB limits as recited in claims 1 and 9. We do not agree with Petitioner’s contention.

According to Petitioner, “enumeration” is “the communication engaged in by USB devices when connected in order to configure them, but the charger and videophone of Morita cannot engage in that process because there is no USB communication in the charging state.” Pet. 48 (citing Baker Decl. ¶¶ 74, 110). This position again presumes that Morita would be enabled as a charging device that has “no reason or ability to communicate over the data lines (D+ and D-) and thus enumeration is not possible.” *Id.* As stated above with regard to the SE1 signal contention, we are not persuaded that Morita’s adapter would disregard USB data communication with the videophone merely because the adapter could be used solely to charge the videophone. Furthermore, we see no reason to disregard “enumeration” in its entirety merely for the videophone to draw more than 100 mA. As discussed above, Morita is as a self-powered hub that is rated to provide a minimum of 500 mA through USB port 21. *See, e.g.*, Pet. 46

(Petitioner arguing that “the high-power port of the Morita charger supplies a minimum of 500 mA”). Because Morita is configured to provide more than 100 mA with enumeration, we see no credible reason to modify Morita to avoid “enumeration” as Petitioner asserts. Indeed, Patent Owner persuasively argues that Morita’s functionality requires enumeration for it to configure the external peripherals. Prelim. Resp. 44 (citing Ex. 1009, 180). Such a contention aligns with Morita’s disclosure because Morita would always have access to the peripherals, while in Petitioner’s proposed configuration (“without enumeration”) Morita would not have such access.

Accordingly, we are not persuaded by Petitioner’s argument that it would have been obvious to configure Morita’s videophone to draw more than 100 mA of current without performing enumeration.

(3) Conclusion

Accordingly, we are not persuaded that Petitioner has shown a reasonable likelihood of prevailing on its contention that a person of ordinary skill in the art would have combined Morita with an SE1 signal or would have avoided enumeration to render obvious claims 1 and 9 of the ’766 patent.

b) Claim 17

We address claim 17 separately because claim 17 recites different language than claims 1 and 9. Claim 17 requires detecting “an identification signal” on the USB communication path. Ex. 1001, 13:3–5. And based on that detection, the mobile device draws “current in excess of at least one USB Specification defined limit.” *Id.* at 13:6–7. Petitioner asserts that it would have been obvious to identify the “charging” configuration of Morita (when charging only the videophone) and that a person of ordinary skill in

the art would have done so with an SE1 signal. Pet. 70. According to Petitioner, “[a] person of ordinary skill in the art would have understood the SE1 signal to constitute an ‘identification signal.’” *Id.* (citing Baker Decl. ¶ 156). Petitioner also argues that claims 19 and 20, which depend directly or indirectly from claim 17, specifically identify an SE1 signal as an example of an “identification signal.” *Id.*

Petitioner’s arguments here parallel the arguments presented with respect to claims 1 and 9 – that it would have been obvious to implement an SE1 signal in Morita to signal a “charging” mode. We are not persuaded by Petitioner’s arguments for the same reasons identified above. *See* Section II.C.2.a(1). Furthermore, showing that dependent claims recite features of an SE1 signal does not show that it would have been obvious to implement in Morita an SE1 signal. Consequently, we are not persuaded the Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claim 17 would have been obvious over Morita and the knowledge of a person of ordinary skill as asserted in the Petition.

c) Claim 24

Claim 24 recites language different from claims 1, 9, and 17, but nevertheless requires enabling the detection of a signal that Petitioner equates to the SE1 signal. For instance, claim 24 recites “being responsive to signal in excess of 2V detected at each of said D+ and D- lines and said enablement occurring without enumeration.” Ex. 1001, 14:11–15. Petitioner argues that Morita “discloses or renders obvious that said enablement is responsive to an SE1 signal.” Pet. 75 (referencing Petitioner’s arguments presented for claim 1). Petitioner further argues that “Morita discloses or renders obvious that ‘said enablement occurring without

enumeration” by referring back to its arguments presented for claims 1 and 3. *Id.* at 76.

We have addressed above the arguments presented for claim 24, namely the implementation of the SE1 signal in Morita’s adapter, and drawing more than 100 mA without enumeration. *See* Sections II.C.2.a(1)–(2). Consequently, we are not persuaded the Petitioner has demonstrated a reasonable likelihood of prevailing on its assertion that claim 24 would have been obvious over Morita and the knowledge of a person of ordinary skill as asserted in the Petition.

d) Conclusion

Because Petitioner has failed to demonstrate a reasonable likelihood of prevailing on its contention that claims 1, 9, 17, and 24 would have been obvious over Morita and the knowledge of a person of ordinary skill in the art, we also determine that Petitioner has failed to meet the reasonable likelihood threshold with regard to the challenged dependent claims.

D. Discretion to Deny Under 35 U.S.C. § 325(d)

Patent Owner contends the Board should exercise its discretion under 35 U.S.C. § 325(d) and deny institution in light of previous *inter partes* review proceedings in which prior art allegedly cumulative of Morita and arguments substantially similar to those presented here had been previously presented. Prelim. Resp. 20–28. Because we deny the Petition on the merits, we need not determine whether it would be appropriate to deny the Petition under 35 U.S.C. § 325(d).

III. CONCLUSION

As explained above, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its challenge of claims 1–24 as unpatentable under 35 U.S.C. § 103(a). Accordingly, we deny the Petition and do not institute *inter partes* review.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a) the Petition is denied.

IPR2021-00598
Patent 8,232,766 B2

For PETITIONER:

Jeffrey Johnson
Jeremy Lang
ORRICK, HERRINGTON & SUTCLIFFE, LLP
3J6PTABDocket@orrick.com
ptabdocketjjl2@orrick.com

For PATENT OWNER:

H. Annita Zhong
IRELL & MANELLA, LLP
HZhong@irell.com