

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HUM INDUSTRIAL TECHNOLOGY, INC.
Petitioner

v.

AMSTED RAIL COMPANY, INC.
Patent Owner

Case IPR2023-00540

Patent No. 10,137,915

PATENT OWNER'S MOTION TO EXCLUDE

I. INTRODUCTION

Pursuant to 37 C.F.R. §§ 41.155 and 42.64, and the Federal Rules of Evidence, Patent Owner Amsted Rail Company, Inc. (“PO”) hereby moves to exclude EX1026 (Texas Instruments microcontroller MSP430F1611 data sheet), EX1027 (Texas Instrument microcontroller MSP430FG4618 data sheet), the new arguments presented by Petitioner based on EX1026 and EX1027 in Paper 18, and the portions of EX1025 (Ricca Declaration) that rely on EX1026 and EX1027 (“Motion”). As explained herein, EX1026 and EX1027 are improper reply evidence and not relevant.

Petitioner submitted EX1026 and EX1027 for the first time in its January 26, 2024 Reply to Patent Owner Response (“Reply”). (Paper 18). Petitioner relies on EX1026 on pages 16-20 and EX1027 on pages 16-20 of its Reply. EX1025 is the expert declaration of Steven Ricca in Support of Petitioner’s Reply to Patent Owner Response. It relies on EX1026 and EX1027 in ¶¶ 20-27, 33-34, which Petitioner cites on pages 15-20 of its Reply. PO timely objected to these exhibits on sufficiently particularized grounds (*see* Paper 21, 1-3; Paper 24, 14-19).

Both EX1026 and EX1027 are data sheets for Texas Instrument microcontrollers which are mentioned in Barone (EX1007). Neither was submitted with the Petition and thus they, along with any belated reliance on them in Petitioner’s Reply and by Ricca, should be excluded as untimely. In addition,

EX1026 and EX1027 are not relevant because they were not incorporated by reference in Barone and do not teach that acceleration data should be filtered by the low-pass filter of the comparator.

II. ARGUMENT

A. EX1026 and EX1027, and the Arguments Relating Thereto, are Untimely

The Board's Trial Practice Guide provides that a "Petitioner may not submit new evidence or argument in reply that it could have presented earlier, e.g. to make out a prima face case of unpatentability." Patent Trial and Appeal Board Consolidated Trial Practice Guide 73 (Nov. 2019) (citing *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1077-78 (Fed. Cir. 2015)); *see also* 37 C.F.R. § 42.104(b)(5) (Petition "must identify...[t]he exhibit number of the supporting evidence relied upon to support the challenge and the relevance of the evidence to the challenge raised."). Petitioner violated the Board's rules and regulations by submitting EX1026 and EX1027 with new arguments relating thereto for the first time in its Reply (Paper 18, 15-20).

EX1026 and EX1027 are Texas Instrument data sheets for microcontrollers. These microcontrollers are mentioned in Barone (EX1007, [0116], [0118], [0221], Fig. 7), a reference relied on by Petitioner in its Petition for the alleged obviousness of the '915 Patent (*see generally* Paper 1). Barone does not, however, cite or

mention the specific data sheets in EX1026 and EX1027. Through its reliance on Barone, Petitioner was aware of the Texas Instrument microcontrollers at the time it filed its Petition. There is no justification for why Petitioner did not include EX1026 and EX1027, or the arguments relating thereto, in its Petition.

Instead, Petitioner improperly submits this new evidence and makes new arguments on reply to support its claims regarding the unpatentability of the '915 Patent. In particular, recognizing that Barone does not disclose a digital or software filter as Petitioner originally claimed, Petitioner argues in its Reply that EX1026 and EX1027 and the microcontrollers referenced therein are prior art disclosures of the filtering of digitized signals through digital and software filters that allegedly render the '915 Patent obvious. (*See* Paper 18, 14-20).

Petitioner's introduction of EX1026 and EX1027 on reply were not in response to arguments raised by PO, but rather are new arguments about how a POSITA would interpret Barone to bolster the bare bones analysis in the Petition relating to Barone's disclosure of digital filtering, what would be well-known in the art to a POSITA, and why a POSITA would be motivated to combine Barone with Petitioner's other cited art. (Paper 1, 27-29). Thus, they are new arguments raised by Petitioner to attempt to fill the gaps in its obviousness analysis. (*E.g.* Paper 1, 27-29; EX1003, ¶¶80-81 (Petitioner advancing different arguments relating to Barone's digital filtering of accelerometer data in the Petition and expert declaration in support

thereof)). Such belated arguments are improper. *See Laboratoire Francais du Fractionnement et des Biotechnologies S.A. v. Novo Nordisk Healthcare AG*, IPR2017-00028, Paper 109, at 17 (PTAB Apr. 13, 2022) (declining to consider new arguments based on exhibits that were “inappropriately offered at the reply stage to bolster the bare bones analysis presented in the Petition as to how [the prior art] could be interpreted by a POSA to anticipate the challenged claims” and for a motivation to combine because they “should have been offered in the Petition as part of Petitioner’s *prima facie* case”); *Dexcom, Inc. v. AgaMatrix, Inc.*, IPR2016-01679, Paper 53, at 49-51 (PTAB Feb. 28, 2018) (excluding evidence submitted with petitioner’s reply that attempted to “fill a gap in its *prima facie* case in view of Patent Owner’s argument” that the cited art did not disclose a limitation); *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369-70 (Fed. Cir. 2016) (finding reply brief and declaration exceeded the scope of a reply under 37 C.F.R. § 42.23(b) where petition argued that the prior art taught “the desired property,” but reply argued a new rationale for why a POSITA would have been motivated to combine the prior art based on new non-patent literature references).

Accordingly, these untimely exhibits (EX1026; EX1027), and the new arguments relying on them (Paper 18, 15-20), should be excluded. *Laboratoire Francais*, IPR2017-00028, at 17; *Dexcom*, IPR2016-01679, at 49-51; *Intelligent Bio-Sys.*, 821 F.3d at 1369-70.

B. EX1026 and EX1027, and the Arguments Relating Thereto, are Irrelevant

EX1026, EX1027 and the new arguments relating thereto should be excluded under Fed. R. Evid. 401, 402, 403.

As an initial matter, Petitioner did not identify the relevance of the Texas Instrument microcontrollers in its Petition, as required by 37 C.F.R. 42.104(b)(5). *See* 37 C.F.R. 42.104(b)(5) (“The Board may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions of the evidence that support the challenge” in its Petition). Petitioner attempts to do so in its Reply, but erroneously mischaracterizes the Texas Instrument microcontrollers as being “incorporated by reference in Barone.” (Paper 18, 16). However, as explained in PO’s Sur-Reply (Paper 24, 14-16), the mere mention of a product or other reference is not sufficient to incorporate it by reference. *See Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1346 (Fed. Cir. 2009) (“mere reference to another application, or patent, or publication is not an incorporation of anything therein”); *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (“To incorporate material by reference, the host document must identify with detailed particularity what specific material it incorporates and clearly indicate where that material is found in the various documents.”). Barone only mentions the Texas Instrument microcontrollers in passing. (EX1007, [0116],

[0118], [0221], Fig. 7). There is no stated intention to incorporate these microcontrollers by reference. Nor is there any discussion in Barone of the *data sheets* in EX1026 and EX1027. Tellingly, Barone explicitly incorporates certain references and products in its “bibliography,” but the Texas Instrument microcontrollers are *not* one of the incorporated items. (EX1007, [0008-0020]).

Moreover, EX1026 and EX1027 are irrelevant because they do not disclose what Petitioner asserts. Petitioner bases its new reply arguments on the unsupported claim that high, low, and band pass filters can filter electronic/analog signals and digital signals. (Paper 18, 15-16 (citing EX1025, ¶ 20 (Ppetitioner’s expert making the verbatim assertion without citing any support therefore))). Relying on this unsupported premise, Petitioner proceeds to make multiple erroneous claims regarding the relevance of these exhibits and the microcontrollers.

Petitioner contends the microcontrollers are relevant to show that Barone passes a digital signal through a low pass filter. (Paper 18, 16-20). In support, Petitioner cites FIG. 8 and Paragraph 116 of Barone to argue that Barone discloses that accelerometer signals, which are conditioned in signal condition 178, can then be converted to a digital signal with ADC 183 before being received by the microcontroller 177. (*Id.*). Next, Petitioner claims that the output of the microcontroller in Barone is a filtered digital data stream based on EX1026 and EX1027. (*Id.*). In particular, Petitioner claims that microcontroller 177 is one of the

Texas Instrument microcontrollers in EX1026 and EX1027 and relies on “Block Diagram of Comparator_A Module” from the datasheets for those controllers, (*id.*, 17 (FIGS. 1-2); EX1026, FIG. 8; EX1027, FIG. 8), to claim that the comparator of these controllers include a low-pass filter. (Paper 18, 17-19 (acknowledging that depending on certain conditions—including the path the stream takes and the software used—the data stream passed through the comparator may or may not be filtered)). However, the block diagrams from EX1026 and EX1027 disclose analog circuits with passive components (capacitor, resistor), logic gates, and S/W-controlled switches. While the sensor signals interface with the comparator, the output of which represents a logic state. These are all *analog signals* and nothing in this circuit is related in any way to data stored in computer memory or registers. That is, the circuits in EX1026 and EX1027 do not operate in any way on digital data. Thus, they are not probative of obviousness, including whether Barone discloses digital filtering, what a POSITA would understand about digital filtering, and why a POSITA would be motivated to use the filtering in Barone.

Moreover, even if the comparator in the microcontrollers in EX1026 and EX1027 include a digital filter controlled by software, as Petitioner claims, this disclosure still is not relevant because Barone teaches that acceleration data goes straight to the ADC and would not be filtered by the low-pass filter of the comparator. (*See, e.g.*, EX1003, ¶81 (Petitioner’s expert notating in red Barone’s

disclosure of accelerometer data going to the ADC)). Thus, the disclosures in EX1026 and EX1027 are not relevant to the obviousness inquiry and Petitioner's mischaracterization of their disclosures is more prejudicial than probative.

C. EX1025 Relies on Untimely and Irrelevant Evidence

Petitioner's expert, Ricca, improperly relies on EX1026, EX1027 and the new arguments relating to the Texas Instrument microcontrollers for the same reasons discussed above. Indeed, Paragraphs 20-27 of EX1025 are nearly verbatim to the arguments presented by Petitioner in its Reply, Paper 18, 16-20.

Nearly the entirety of Ricca's reply arguments for Claims 25 and 28 relate to EX1026, EX1027 and the Texas Instrument microcontrollers. (EX1025, ¶¶20-27). These arguments were not in Ricca's Declaration in Support of Petition for *Inter Parties Review*. (EX1003). As explained above, these new arguments are improperly presented on reply to bolster Petitioner's bare bones arguments. *See supra*, Section II(A). These new arguments also conflict with Ricca's Declaration in Support of Petition for *Inter Parties Review*, wherein he previously opined that Barone taught that the filtering of accelerometer data occurred in the signal conditioner 178 and the A/D converter 183, not in the microcontroller 177. (EX1003, ¶¶80-81; *see also Intelligent Bio-Sys.*, 821 F.3d at 1369-70 (Petitioner "chose which grounds of invalidity to assert in its petition and it chose not to assert this new one. Unlike district court litigation—where parties have greater freedom to revise and

develop their arguments over time and in response to newly discovered material—the expedited nature of IPRs bring with it an obligation for petitioners to make their case in their petition to institute.”)).

Furthermore, Ricca’s new arguments are irrelevant because they misconstrue the disclosure in Barone about the microcontrollers. *See supra*, Section II(B). Accordingly, Paragraphs 20-27 and 33-34 of EX1025 should be excluded. The portions of Petitioner’s reply discussing EX1026-27 and the improper portions of EX1025 should also not be considered. *See* Paper 18, 15-20. Doing so would prejudice Patent Owner and infringe on its due process rights guaranteed by binding statutory law. *See Dexcom*, IPR2016-01679, at 51 (“[I]t would violate the Administrative Procedures Act (“APA”)’s requirement for notice and opportunity to respond, if we were to rely upon ... evidence to show that [a claim limitation] was taught or suggested by the prior art, when that evidence was first submitted and relied upon in Petitioner’s Reply.”).

III. CONCLUSION

For the reasons described above PO respectfully requests that the Board exclude: (1) EX1026; (2) EX1027; (3) EX1025, ¶¶20-27, 33-34 relating to EX1026, EX1027 and the Texas Instrument microcontrollers; and (4) Petitioner’s arguments in its Reply relating to EX1026, EX1027, the Texas Instrument microcontrollers, and its expert’s discussion thereof, Paper 18, 15-20.

Respectfully submitted,

Dated: May 17, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), I certify that on this 17th day of May, 2024, a copy of Patent Owner's Motion To Exclude was served by electronic mail on Petitioner's counsel, lead and back-up, as follows:

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Counsel for Petitioner has consented to service of all documents via electronic email. *See* Petition, Paper 1 at 2.

Dated: May 17, 2024

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