

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SRAM, LLC,
Petitioner,

v.

FOX FACTORY, INC.,
Patent Owner.

Case IPR2024-00216
Patent No. 8,550,223

PATENT OWNER'S PRELIMINARY RESPONSE

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I. Introduction

Patent Owner FOX Factory, Inc. and Petitioner SRAM, LLC are parties to a parallel litigation in the District of Colorado—*FOX Factory, Inc. v. SRAM, LLC*, No. 1:23-cv-00313-RM-KLM (“Colorado case”)—which involves two patents, U.S. Patent Nos. 9,739,331 and 8,550,223. The Board has already denied institution of parallel IPR petitions filed by Petitioner SRAM against the ’331 patent for lack of reasonable likelihood of success on the merits. *SRAM, LLC v. FOX Factory, Inc.*, IPR2023-01301, Paper 13 (P.T.A.B. Feb. 21, 2024); *SRAM, LLC v. FOX Factory, Inc.*, IPR2023-01302, Paper 14 (P.T.A.B. Feb. 21, 2024) (Exs. 2001, 2002). This Petition against the ’223 patent should be denied for the same reason: the prior-art grounds are ***technically deficient*** and do not disclose or suggest every limitation of independent claims 1, 11, and 19.

Additionally, or in the alternative, the Board should exercise its discretion to deny institution of this IPR under 35 U.S.C. § 314(a) in view of the parallel Colorado case, which involves the same claims and the same parties. All six *Fintiv* factors support denial of institution. Notably, the Colorado case is scheduled to go to trial on January 27, 2025—more than four months before the expected final written decision date for this IPR in June 2025—and Petitioner’s prior-art grounds presented in this IPR are largely duplicative of the prior-art based invalidity contentions in the Colorado case. ***Petitioner has neither submitted a Sotera stipulation*** (or a narrower stipulation)

to mitigate concerns of duplicative efforts between the PTAB and the district court, nor has Petitioner presented “compelling, meritorious challenges” to avoid denial of institution under *Fintiv*. See Director Vidal’s *Fintiv* Memorandum (issued June 21, 2022) at 3, 4, 7 (noting that either a *Sotera* stipulation or compelling merits, neither of which is presented here, may avoid discretionary denial in view of a parallel litigation). The Board should therefore exercise its discretion and deny institution.

II. The Asserted Prior-Art Grounds are Not Reasonably Likely to Succeed on the Merits

A. Relevant Technical Background

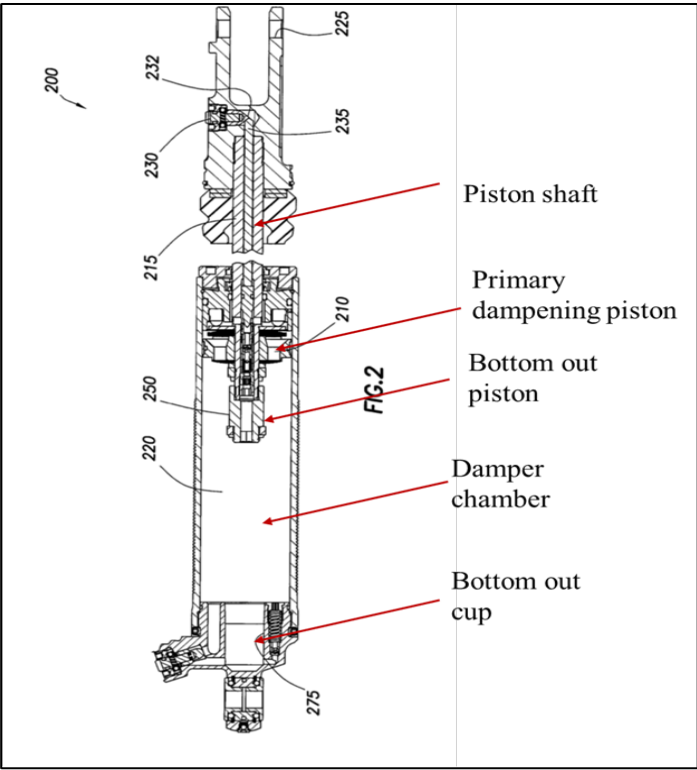
1. Overview of the ’223 Patent

The ’223 patent is directed to a user-adjustable dampening mechanism in a vehicle shock absorber. Ex. 1001, 1:13-17, 2:22-43, 7:11-15; Ex. 2008, 42:18-43:9 (inventor Everet Ericksen testifying that the ’223 patent is focused on “bottom out events associated with vehicles”); Ex. 2009, 41:4-13, 49:14-51:11 (inventor Wesley Allinger testifying that the ’223 patent is directed to a shock absorber for a vehicle, and in particular to an adjustable bottom out cup).

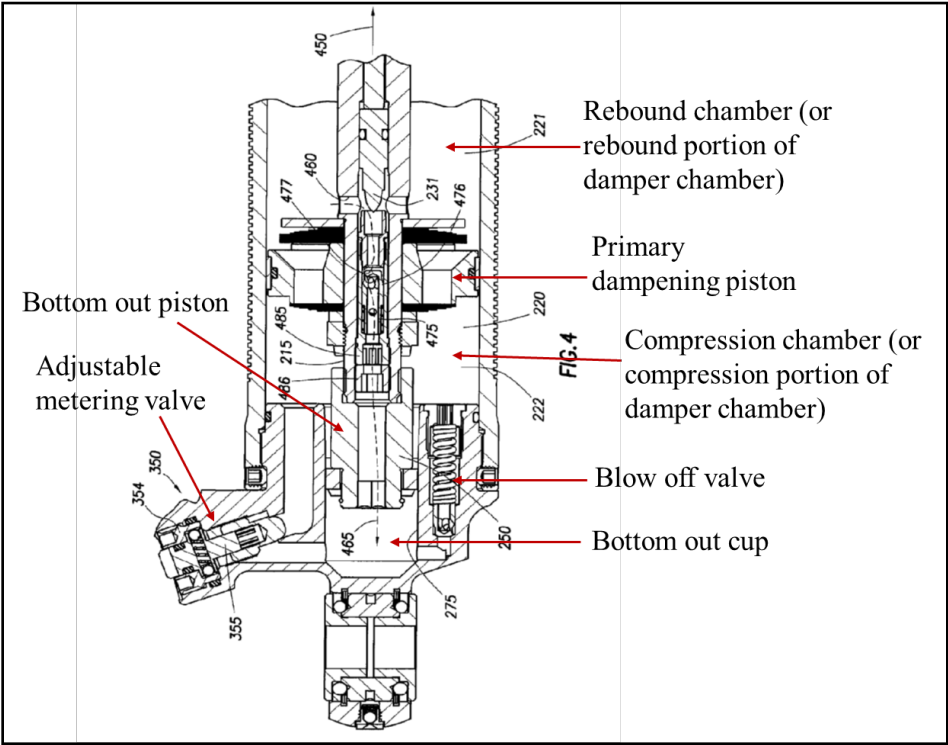
The disclosed dampening system is designed to minimize bottom out conditions where, as a result of the terrain and the rider’s weight, the dampening piston of the shock absorber reaches maximum compression and causes a sharp rebound. Ex. 1001, 1:51-2:1, 7:11-15; Ex. 2008, 39:14-23 (inventor Everet Ericksen discussing the meaning of bottom out). While it is acceptable for the damper to bottom out

occasionally in harsh conditions, bottoming out too fast and/or frequently can cause an unpleasant ride. Ex. 2007, ¶17. Moreover, a well-tuned damper that functions well initially may start to bottom out hard as the dampening fluid gets heated during use and correspondingly becomes less viscous. *Id.*; Ex. 1001, 1:51-64.

The '223 patent discloses a mechanism to minimize bottom out using a user-adjustable secondary dampening mechanism that increases dampening near the end of a compression stroke. Ex. 1001, 2:22-35. In exemplary embodiments, the dampening system of the vehicle shock absorber includes, among other features, 1) a damper chamber that is subdivided by a primary dampening piston into a primary compression chamber and a primary rebound chamber, 2) a cup-shaped secondary compression chamber (also known as a bottom out chamber or bottom out cup) that is provided at the lower end of the damper chamber and is in fluid communication with the compression portion of the damper chamber, and 3) a bottom out piston connected to the end of the piston shaft and spaced apart from the primary dampening piston. *Id.* at 1:43-55, 3:23-47; Ex. 2007, ¶18. Annotated Figures 2 and 4 of the '223 patent (shown below) shows these features of the claimed invention.



Ex. 1001, Fig. 2 (annotations added).



Id. at Fig. 4 (annotations added).

Towards the end of a compression stroke, the bottom out piston enters and seals the bottom out cup, such that most of the fluid cannot exit the cup except through either a fluid flow path that includes a user-adjustable metering valve, or a fluid flow path with a blow off valve. Ex. 1001, 3:40-4:2. When the bottom out piston engages the bottom out cup, dampening is increased because the piston shaft can only progress as dampening fluid (which is generally incompressible) is forced out from the bottom out cup through one of the two flow paths. *Id.* By regulating the flow of dampening fluid out of the bottom out cup using the metering valve, the effective dampening rate that the shock absorber experiences due to the bottom out piston entering the bottom out cup can be adjusted by the user depending on the terrain, temperature, and other use conditions. *Id.* at 3:31-40, 7:19-22; Ex. 2007, ¶19.

The blow off valve is a safety mechanism that is set to “blow off” when pressure in the bottom out cup reaches a preset threshold (typically due to rapid compression of the fluid caused by high velocity of the dampening piston in the bottom out cup). Ex. 1001, 4:3-30, 7:22-28. The opening of the blow off valve allows dampening fluid in the bottom out cup to exit when a threshold pressure is reached, and to enter the compression portion of the damper chamber, thereby lowering the excess pressure in the bottom out cup. *See id.*

During normal operation, however, dampening fluid from the bottom out cup exits through a metering valve and enters the compression portion of the damper

chamber. *Id.* at 5:6-21. The valve is provided with user-adjustable features to set the bottom out dampening rate, i.e., to set the rate at which dampening fluid exits the bottom out cup. *Id.* at 4:31-35, 5:6-21. For example, when the valve is opened very little, the bottom out dampening rate will be high as all the flow being pushed by the bottom out piston must flow through the restricted passage of the metering valve into the compression portion of the damper chamber. *See id.*; *see also* Ex. 2007, ¶21.

2. Claim Construction

Petitioner argues that the '223 patent claim terms do not require “any special definition different than their ordinary and customary meaning to a POSITA.” Pet. at 16. Petitioner nonetheless asserts that it has “applied the same interpretation to the prior art here as Fox has applied for infringement purposes,” but fails to specify those interpretations. *Id.* Patent Owner disagrees that no claim terms need construction. At least the claim terms “bottom out cup” and “bottom out cup at the end of the compression portion,” which are present in each of the independent claims 1, 11, and 19, should be construed by the Board to resolve the disputes between the parties. Patent Owner agrees that no other claim terms need to be construed to resolve the dispute between the parties at this time. *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need to be construed that are in controversy, and only to the extent necessary to resolve the controversy.”).

a. “a bottom out cup at the end of the compression portion”/“a bottom out cup”

Claim Term	FOX’s Proposed Construction	SRAM’s Proposed Construction in District Court
“a bottom out cup at the end of the compression portion” (claim 1) “a bottom out cup” (claim 11, claim 19)	“a secondary chamber at the lower end of the compression portion of the damper chamber and configured to receive a secondary piston at the end portion of a compression stroke” “a secondary chamber at the lower end of the [primary] compression chamber of the damper chamber and configured to receive a secondary piston at the end portion of a compression stroke”	Plain and ordinary meaning. To the extent any construction is required, the plain and ordinary meaning would be construed as: “a cup-shaped feature located at the end of the compression portion”/“a cup-shaped feature”

The term “bottom out cup” is a technical term that does not have a well-defined or well understood meaning. The appropriate meaning of the term should therefore be determined based on the intrinsic record. *See Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1305 (Fed. Cir. 2015) (finding that because the term “sealed” may have more than one plain and ordinary meaning, the appropriate definition needed

to be ascertained from the intrinsic evidence); *see also In re Glaug*, 283 F.3d 1335, 1340 (Fed. Cir. 2002).

Patent Owner's proposed constructions of "bottom out cup" and "bottom out cup at the end of the compression portion" are consistent with the '223 patent's description of the bottom out cup arrangement as a secondary dampening mechanism. *See* Ex. 1001 at Abstract, 2:22-35, 3:1-3, 3:40-44 (describing the bottom out cup arrangement as a secondary dampening mechanism). Indeed, the primary compression happens in the compression portion of the damper chamber. The bottom out cup is a secondary compression chamber at the lower end of the (primary) compression portion of the damper chamber and receives a secondary (i.e., a bottom out) piston. *Id.* As inventor Everet Ericksen described in his deposition in the Colorado case, the bottom out cup is a secondary compression chamber that is defined when the bottom out piston engages the bottom out cup:

Q. Could you explain to the jury what a bottom out cup is?

A. It's a **separate chamber** that engages when the shock absorber is near the end of the stroke and when the bottom out piston enters the bottom out cup, it now defines the **second compression chamber that adds compression damping force for the last portion of the travel of the shock absorber.**

Q. And when you say, “It’s a separate chamber that engages when the shock absorber is near the end of the stroke,” are you referring to the end of the compression stroke?

Yes.

Q. And when you say, “It’s a separate chamber that engages,” what does that separate chamber engage with?

A. **There’s a bottom out piston that’s attached to the shaft** and so the shaft is compressing into the shock absorber as -- on the compression stroke, and at a certain point that piston – the **bottom out piston engages the bottom out cup and then that defines the second chamber.**

Ex. 2008, 32:10-33:11 (emphases added).

Petitioner’s plain meaning interpretation of “bottom out cup” as simply “a cup-shaped feature” is neither helpful to the resolution of the prior-art disputes between the parties, nor is it technically correct because it eliminates the secondary dampening functionality of the bottom out cup and demotes it to any cup-shaped component regardless of any bottom-out function. Patent Owner’s proposed construction, which specifies that the secondary chamber is configured to receive a secondary piston at the

end portion of a compression stroke, maintains the secondary dampening functionality of the bottom out cup and clarifies that it is not just any cup-shaped feature or part.

B. Grounds I, II, III, and V Asserted Against Independent Claims 1, 11, and 19 are Technically Deficient

The '331 patent has three independent claims—claims 1, 11, and 19. Petitioner asserts that claims 1, 11, and 19 are anticipated by Nakaya (Ground I); anticipated by Chen or rendered obvious by Chen alone or in view of Deferme (Ground II); and rendered obvious by Fox'751 in view of Chen (Ground III). Additionally, Petitioner asserts that claims 1 and 19 are anticipated by Gartner (Ground V). As discussed below, claims 1, 11, and 19 are neither anticipated nor rendered obvious by the asserted prior art. Accordingly, claims 2-8 and 12-15, which depend from claims 1 and 11, respectively, are also not anticipated or rendered obvious by the asserted prior-art grounds. Thus, Petitioner has not shown that there is a reasonable likelihood of success with respect to at least one claim in the '223 patent. The Petition should therefore be denied.

1. Ground I: Independent claims 1, 11, and 19 are not anticipated by Nakaya

Each of the independent claims 1, 11, and 19 recites a “damper” having, among other things, a “bottom out cup” and an adjustable “fluid flow path”/“fluid flow” from the “bottom out cup” to the compression portion/chamber of the “damper” during a compression stroke. Indeed, a person skilled in the art would readily understand from

the specification and the drawings of the '223 patent that a fluid flow path (e.g., 302) leads from the bottom out cup to the compression portion of the damper chamber. Ex. 2007, ¶45; Ex. 1001, 3:64-4:2, 4:31-35, 5:6-21, Fig. 3B. Nakaya fails to disclose the “damper,” the “bottom out cup,” and fluid flow from the “bottom out cup” to the compression portion/chamber, as required by independent claims 1, 11, and 11.

a. Nakaya does not disclose a “damper” for a shock absorber

The '223 patent claims are directed to a dampening mechanism in a shock absorber for a vehicle suspension system. Ex. 1001, 1:13-17, 2:39-43. The preamble of each independent claim 1, 11, and 19 recites a “damper,” which is limiting because the preambles’ recitation of “damper” serves as an antecedent basis for the claim term “a compression stroke of the damper” appearing in the body of the claims. *Simo Holdings Inc. v Hong Kong Ucloudlink Network Technology Ltd.*, 983 F.3d 1367, 1375-76 (Fed. Cir. 2021); *Bio-Rad Labs., Inc. v. 10X Genomics Inc.*, 967 F.3d 1353, 1371 (Fed. Cir. 2020) (when the body of the claim relies on the preamble for antecedent basis, it “is a strong indication that the preamble acts as a necessary component of the claimed invention.”) (citation and quotation marks omitted).

Nowhere does Nakaya disclose a “damper” or a shock absorber. Nakaya instead discloses an air-cylinder apparatus 110 for use in a prosthetic limb. Ex. 1005, Title, Abstract. Nakaya’s air-cylinder apparatus 110 is designed to aid in the forward motion

of a prosthetic limb, i.e., to propel walking. Ex. 1005, 1:6-13. ***Nowhere does Nakaya disclose that air-cylinder body 112 (the alleged “damper”) can dampen or absorb shock impulses.*** Instead, Nakaya simply teaches an apparatus for adjusting pressure characteristics and generating appropriate resisting force in accordance with the bending and stretching motion of an amputee’s knee in order to attain a natural walking style over a wide range of walking speeds. *Id.* at 1:6-13, 2:23-37. Even if the pressure within a chamber 82 (the alleged “compression portion” or “compression chamber”) of air-cylinder body 112 increases due to bending motion of the knee, such increase in pressure is desired because it applies the necessary resistance to propel walking. ***Nakaya does not disclose damping of the resistive force (or pressure increase) because doing so would hamper the forward motion of the knee/prosthetic limb. See id.*** at 9:24-36, Fig. 10 (showing increase in torque because of generated pressure as the bending angle of the knee increases). Accordingly, Nakaya’s air-cylinder apparatus is not a “damper.”

b. Nakaya does not disclose a “bottom out cup”

The Petition maps the holes 1125, 1127 of Nakaya’s air-cylinder apparatus 110 to the claimed “bottom out cup.” Pet. at 31; Ex. 1005, 8:34-50, Fig. 7. But nowhere does Nakaya disclose holes 1125, 1127 as a “bottom out cup.”

Contrary to Petitioner’s assertions, holes 1125, 1127 do not form a “bottom out cup” under a proper construction of that term. It is clear from the disclosure of the ’223

patent that the “bottom out cup” is a secondary compression chamber that is configured to receive a secondary piston at the end portion of a compression stroke. Ex. 2007, ¶44; Ex. 1001, 2:22-35, 3:1-3, 3:40-44. When the “bottom out cup” receives a secondary piston (i.e., a bottom out piston) near the end of a compression stroke, secondary compression forces are generated within the “bottom out cup,” which effectively adds to the forces being generated in the compression chamber. Ex. 2007, ¶44; *see also id.* at ¶¶40, 42 (discussing that some compression forces are generated in the bottom out cup). There is no disclosure in Nakaya about the generation of secondary compression forces in holes 1125, 1127 by virtue of a piston entering the holes.

Specifically, when the bending degree of the knee increases and section 1140 of piston rod 114 (which is not a secondary piston) enters holes 1125, 1127 such that chamber 82 is divided into two chambers 821, 822, then secondary compression forces are not generated by piston rod 114 in chamber 822 (defined by hole 1127). Ex. 1005, 9:1-36. Rather, pressure in chamber 822 is increased by constant throttle valve 140. *Id. Nowhere does Nakaya disclose receiving a secondary piston near the end of the compression stroke to generate secondary compression forces in holes 1125, 1127.* Thus, holes 1125, 1127 do not form a “bottom out cup” under a proper construction of that term. Rather, holes 1125, 1127 form a volume/space where throttle valve 140 can

create appropriate pressure characteristics (resistive force) to assist in forward motion of the knee and prosthetic limb. *See id.*

c. Nakaya does not disclose a fluid flow path from the “bottom out cup” to a compression portion/chamber of the air cylinder during a compression stroke

Even assuming that holes 1125, 1127 form a “bottom out cup” (they do not), there is *no fluid flow path from chamber 822 (defined by hole 1127) to chamber 821* during a compression stroke, as required by claims 1, 11, and 19. That is, there is no fluid flow from the alleged “bottom out cup” to the alleged compression portion/chamber of Nakaya’s air-cylinder apparatus.

The Petition identifies a passage 823 and a needle-type throttle valve 824 positioned therein as an adjustable fluid flow path from holes 1125, 1127 (the alleged “bottom out cup”) to chamber 82. Pet. at 32-33. But contrary to the Petition, fluid flows *from* chamber 82 *to* holes 1125, 127 (not the other way around). *See* Ex. 1005, 7:19-34 (discussing flow of air *from* cushion chamber 811 *to* chamber 82 via throttle passage 813 (having throttle needle valve 814) and first passage 101 within piston rod 114); *see also id.* at 8:27-33 (discussing flow of air *from* chamber 82 *to* chamber 81 via second passage 102 and throttle valve 140); *see also id.* at 9:1-36 (discussing increasing pressure in chamber 821 by restricting flow of air *from* chamber 821 *to* chamber 822 via throttle valve 824).

At least based on the air-flow directions through throttle passage 813 (having throttle needle valve 814) and second passage 102 (having throttle valve 140), a person skilled in the art would have readily understood that air flows from chamber 82 to holes 1125, 1127 (or *from* chamber 821 *to* chamber 822 when chamber 82 is divided by the piston rod entering holes 1125, 1127), and not the other way around as required by the claims. *See also id.* at Figs. 7 and 8.

Accordingly, Nakaya does not disclose an adjustable fluid flow path from the “bottom out cup” to the compression portion/chamber during a compression stroke.

At least for the reasons explained in Section II.B.1.a-c, Petitioner is unlikely to prevail with respect to any challenged claim under Ground I.

2. Ground II: Independent claims 1, 11, and 19 are not anticipated by Chen or rendered obvious by Chen alone or in view of Deferme

Each of the independent claims 1, 11, and 19 requires a “bottom out cup” and a “fluid flow path”/“fluid flow” from the bottom out cup to the compression chamber/portion of the damper during a compression stroke. *See* Ex. 1001 at 7:44-48, 8:20-23, 8:66-9:5. Moreover, the claimed fluid flow path is adjustable. *See id.* But Chen does not disclose a “bottom out cup” under the proper construction of that term. Nor does Chen disclose an adjustable fluid flow path from the alleged “bottom out cup” to the alleged compression chamber during a compression stroke. Deferme,

which the Petition cites as disclosing a piston that allows fluid to flow therethrough, does not overcome these fundamental deficiencies of Chen.

a. Neither Chen nor Deferme discloses a “bottom out cup” under the proper construction of that term

Chen discloses a “buffer structure for the rear end” of a hydraulic cylinder. Ex. 1007, 1:2-4. Referring to prior-art Figures 4 and 5, Chen describes the front end of a hydraulic cylinder 8, which includes a piston 81 connected to a rod/shaft 82. *Id.* at 1:5-9, 1:18-20. Piston 81 has a projecting post 821 extending towards the front end of hydraulic cylinder 8. *Id.* at 1:5-8. A cap 83 at the front end of the hydraulic cylinder includes an accommodating cavity 84 (alleged “bottom out cup”), which is configured to cooperate with projecting post 821. *Id.* at 1:7-9; Pet. at 53, 60. When piston 81 moves towards cap 83, oil in hydraulic cylinder 8 flows out through accommodating chamber 84 via an oil outlet 85. *Id.* at 1:18-26. But when projecting post 821 fits into accommodating cavity 84, flow of oil from hydraulic cylinder 8 through oil outlet 85 is blocked. *Id.* “At this time, the oil in the hydraulic cylinder 8 can only flow through the small diameter flow way 86 into the accommodating cavity 84 and then flow out from the oil outlet 85. The flow way 86 has a small cross-sectional area so that little oil flow is drained out from the hydraulic cylinder 8 and the back pressure is increased to buffer the moving speed of the piston 81.” *Id.*

Contrary to Petitioner's assertions, accommodating cavity 84 is not a "bottom out cup" under a proper construction of that term. It is clear from the disclosure of the '223 patent that the "bottom out cup" is a secondary compression chamber that is configured to receive a secondary piston at the end portion of a compression stroke. Ex. 2007, ¶44; Ex. 1001, 2:22-35, 3:1-3, 3:40-44. When the "bottom out cup" receives a secondary piston (i.e., a bottom out piston) near the end of a compression stroke, secondary compression forces are generated within the "bottom out cup," which effectively adds to the forces being generated in the compression chamber. Ex. 2007, ¶44; *see also id.* at ¶¶40, 42 (discussing that some compression forces are generated in the bottom out cup). In Chen, however, no secondary compression forces are generated by projecting post 821 in accommodating cavity 84. Rather, projecting post 821, which is not a piston, is configured to "fit[] into the accommodating cavity 84 to block" the flow of oil from hydraulic chamber 8 through accommodating cavity 84 via oil outlet 85. *See* Ex. 1007, 1:18-22. This allows back pressure to increase in hydraulic chamber 8 to buffer the moving speed of piston 81. *Id.* at 1:22-26. That is, the purpose of projecting post 821 is to block flow of fluid from hydraulic chamber 8 through accommodating cavity 84. *See id.* Nowhere does Chen disclose, teach, or suggest accommodating cavity 84 as receiving a secondary piston near the end of the compression stroke to generate secondary compression forces. Thus, accommodating cavity 84 is not a "bottom out cup" under a proper construction of that term. Rather,

accommodating cavity 84 is simply an opening or a space through which oil can flow from hydraulic chamber 8 when the piston moves towards the front end of hydraulic cylinder 8. *See id.* at 1:18-26.

Deferme, which the Petition cites only with regard to a piston with a flow path therethrough (Pet. at 55-56, 61, 71, 75-76), does not overcome Chen’s deficiency of a “bottom out cup.”

b. Neither Chen nor Deferme discloses an adjustable fluid flow path from the bottom out cup to the compression chamber

Each of the independent claims 1, 11, and 19 discloses an adjustable fluid flow path from the bottom out cup to the compression chamber. Ex. 1001, 7:44-48, 8:20-23, 8:66-9:5, Fig. 3B. A person skilled in the art would readily understand from the specification and the drawings of the ’223 patent that a fluid flow path (e.g., 302) leads from the bottom out cup to the compression portion of the damper chamber. Ex. 2007, ¶45; Ex. 1001, 3:64-4:2, 4:31-35, 5:6-21, Fig. 3B (the ’223 patent specification describing a fluid flow path (e.g., 302) from the bottom out cup to the compression chamber through an adjustable metering valve 350).

The Petition incorrectly identifies Chen’s flow way 86 as an adjustable fluid flow path from the “bottom out cup” to the compression chamber. Pet. at 61-63, 70-71, 74-75. Contrary to the arguments in the Petition, Chen explicitly teaches that flow way 86 directs flow of oil from the compression portion of hydraulic chamber 8 to

accommodating cavity 84 (not the other way as required by claims 1, 11, and 19). Ex. 1007 at 1:18-26 (“[T]he oil in the hydraulic cylinder 8 can only flow through the small diameter flow way 86 *into* the accommodating cavity 84 and then flow out from the oil outlet 85.”) (emphasis added). Nowhere does Chen disclose or suggest flow of oil from accommodating cavity 84 to hydraulic chamber 8 through flow way 86. Nor does Chen disclose any other adjustable fluid flow path from accommodating cavity 84 to hydraulic chamber 8.

The combination of Deferme with Chen does not cure this deficiency of Chen. First, Deferme does not disclose a “bottom out cup,” and therefore, nowhere does it disclose flow of fluid from a “bottom out cup” to a compression portion/chamber; rather, Deferme simply teaches flow of fluid between the compression and rebound chambers. Ex. 1008, ¶¶[0030]-[0033]. Second, even if Chen’s piston 81 was replaced by or modified in view of Deferme’s piston, the Petition does not explain how and why oil from Chen’s accommodating cavity 84 would flow through Chen’s projecting post 821 and into (and through) Deferme’s piston. And third, the flow path through Deferme’s piston is not adjustable. Deferme simply teaches that by varying the *design* of tuning disc 134 in piston body 62, the compression and rebound damping characteristics may be tuned individually. *See* Ex. 1008, Abstract, ¶¶[0002], [0007], [0024], [0033]. But selection of the design of the tuning disc, which is a component of the piston, is a manufacturing/production floor step or a maintenance step; the damping

characteristics of the piston cannot be adjusted by a user on-the-fly. *See id.* at ¶[0033]. Nowhere does Deferme disclose or suggest tuning or adjustments of tuning disc 134 by a user, or during a ride to adjust to different terrains, temperatures, or other ride conditions, as required by the '223 patent. Ex. 1001 at 2:22-35, 4:31-59. That is, Deferme does not disclose or suggest an adjustable fluid flow path through its piston. Accordingly, Chen alone or in view of Deferme does not disclose, teach, or suggest an adjustable fluid flow path from the bottom out cup to the compression chamber.

At least for the reasons explained in Section II.B.2.a-b, Petitioner is unlikely to prevail with respect to any challenged claim under Ground II.

3. Ground III: Independent claims 1, 11, and 19 are not rendered obvious by Fox'751 in view of Chen

The Petition acknowledges that Fox'751 teaches a “typical damper for a shock absorber” that does not include a “bottom out cup.” Pet. at 76-78. The Petition, however, argues that a person skilled in the art would have motivated to modify Fox'751 with Chen to have a “bottom out cup” in order to improve the damper of Fox'751. *Id.* at 79-81.

As discussed in Section II.B.2, above, Chen does not disclose, teach, or suggest a “bottom out cup,” or an adjustable fluid flow path from Chen's adjustment cavity 84 (the alleged “bottom out cup”) to Chen's hydraulic chamber 8. Fox'751 also does not disclose or suggest these features that are missing in Chen. Therefore, Fox'751 in view

of Chen does not disclose, teach, or suggest every limitation of independent claims 1, 11, and 19. Accordingly, claims 1, 11, and 19 are not rendered obvious by Fox'751 in view of Chen.

4. Ground V: Independent claims 1 and 19 are not anticipated by Gartner

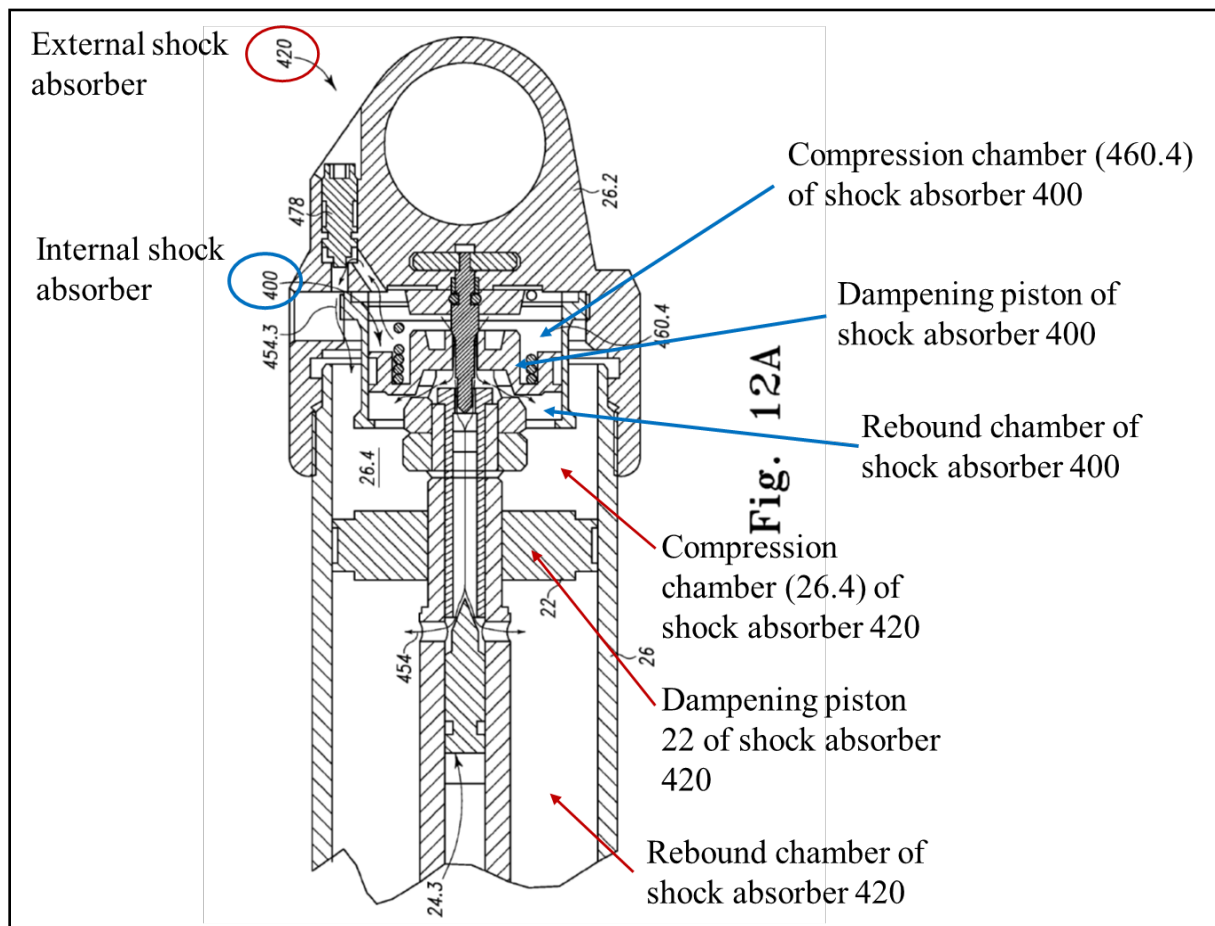
The Petition alleges that independent claims 1 and 19 are anticipated by Gartner. This is incorrect. Contrary to the allegations in the Petition, Gartner's shock absorber does not include a "bottom out cup," as required by independent claims 1 and 19, under a proper construction of that term.

The Petition relies on the embodiment of Gartner shown in Figures 12a, 12b, and 12c to argue that Gartner's shock absorber 420 includes a "bottom out cup" defined by the compression volume 460.4. Pet. at 105-106 (describing volume 460.4 as the claimed "bottom out cup"). Not so. As discussed in Section II.A.2, above, a "bottom out cup" is a "secondary chamber" at the lower end of the compression chamber/portion of the damper and "configured to receive a secondary piston at the end portion of a compression stroke." Nowhere does Gartner disclose such a secondary chamber that is configured to receive a secondary piston at the end of the compression stroke.

Contrary to the arguments in the Petition, Gartner in fact discloses a *second internal shock absorber 400 placed within shock absorber 420*. Ex. 1010, Abstract,

9:25-27, Fig. 12a. Internal shock absorber 400 includes a damper chamber divided by a piston into a compression chamber (460.4) and a rebound chamber, as shown below.

Compression chamber 460.4 of shock absorber 400 is not a “bottom out cup.”



Ex. 1010, Fig. 12A (annotations added).

More specifically, external (main) shock absorber 420 includes a damper chamber 26 that is divided by piston 22 into a compression chamber 26.4 and rebound chamber (unlabeled). Pet. at 107-108; Ex. 1010, Fig. 12a. Shock absorber 420 further includes an internal shock absorber 400. Ex. 1010, 9:25-27, Fig. 12a. Internal shock

absorber 400 includes a damper chamber that is divided by a piston into a compression chamber (volume 460.4) and a rebound chamber. *See id.* at Fig. 12a. Contrary to the Petition, volume 460.4 is ***not a secondary chamber*** at the lower end of the compression portion/chamber 26.4 of damper chamber 26 of external shock absorber 420. *See id.* Rather, volume 460.4 is the primary compression chamber of the internal shock absorber 400 and is configured to receive a primary piston (not a secondary piston) of shock absorber 400. Moreover, nowhere does Gartner disclose that internal shock absorber 400 (or a portion thereof) is activated ***at the end portion of a compression stroke***, as required by the correct construction of a “bottom out cup” (i.e., “a secondary chamber at the lower end of the compression portion [or chamber] of the damper chamber and configured to receive a secondary piston at the end portion of a compression stroke”).

Thus, volume 460.4 of internal shock absorber 400 is not a “bottom out cup” as required by independent claims 1 and 19. Accordingly, Gartner does not anticipate claims 1 and 19.

In summary, the prior-art grounds presented in the Petition fail to disclose, teach, or suggest key limitations of independent claims 1, 11, and 19. Accordingly, claims 1, 11, and 19 are not anticipated by Nakaya (Ground I), anticipated by Chen or rendered obvious by Chen alone or in view of Deferme (Ground II), and rendered obvious by Fox’751 in view of Chen (Ground III). Additionally, claims 1 and 19 are

not anticipated by Gartner (Ground V). Accordingly, dependent claims 2-8 and 12-15 are also not anticipated or rendered obvious by the asserted prior-art grounds. Thus, Petitioner has not shown that there is a reasonable likelihood of success with respect to at least one challenged claim in the '223 patent. The Petition should therefore be denied.

III. The Board Should Exercise Its Discretion Under 35 U.S.C. § 314(a) to Deny Institution

The weakness of Petitioner's case and the risk that the Board will duplicate efforts in the district court litigation favor denial of institution under § 314(a). Petitioner's challenge to the '223 patent raises prior art that lacks disclosure of key claim limitations, thus evidencing the weakness of the arguments' merits. *See* Section II.B, above. Furthermore, trial is scheduled to start on January 27, 2025 (i.e., more than four months before the expected final written decision in June 2025 if trial is instituted); the district court is unlikely to grant a stay; and Petitioner's invalidity contentions show that it will raise substantially the same art and arguments in the district court. Therefore, proceeding in parallel with the district court would result in inefficient and unnecessary duplication of efforts. *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6 (P.T.A.B. Mar. 20, 2020) (precedential) ("*Fintiv*") (enumerating six non-dispositive factors for consideration with respect to discretionary denial under

§ 314(a) in view of a parallel proceeding); *see also NHK Spring Co. v. Intri-Plex Tech., Inc.*, IPR2018-00752, Paper 8 at 11 (P.T.A.B. Sept. 12, 2018) (precedential).

Recognizing the need to address discretionary denials in its Petition, Petitioner provided a cursory argument that discretionary denial under §314(a) is inappropriate because of the purported merits of the Petition and the current stage of the district court litigation. Pet. at 18. Neither argument is correct. As detailed below, all six *Fintiv* factors favor denial of institution.

A. Factor 1 Favors Denial: The Court is Unlikely to Grant a Stay Because of the Denial of IPR Petitions Against Another Asserted Patent, Petitioner's Delay, and the Advanced Stage of the Case

Petitioner requested a stay of the Colorado case after the filing of the Petition, but the district court has not ruled on Petitioner's stay motion. The district court is unlikely to grant a stay because of: 1) the Board's denial of IPR petitions against the other asserted patent in the case (*see* IPR2023-01301, -01302); 2) Petitioner's delay in filing the Petition, and 3) the advanced stage of the case.

As discussed above, there is another patent (US 9,739,331) asserted in the Colorado case. Petitioner filed two parallel IPR petitions against the '331 patent, but the Board denied institution of both petitions. *See* Exs. 2001, 2002. Because there is no pending IPR on one of the two patents asserted in the Colorado case and given the

advanced stage of the case, the district court is unlikely to stay the case. Rather, it is highly likely that the case will go to trial on January 27, 2025.

Moreover, district courts have found that “[f]ilings for IPR made well after the initiation of litigation [] may suggest an unfair tactical advantage or dilatory motive’ even when they are filed before the statutory deadline.” *TruePosition, Inc., v. Polaris Wireless, Inc.*, No. 12-646-RGA-MPT, 2013 WL 5701529, at *6 (D. Del. Oct. 21, 2013), report and recommendation adopted, No. 12-646-RGA, 2013 WL 6020798 (D. Del. Nov. 12, 2013). Here, the amended complaint asserting the ’223 patent was filed on November 30, 2022 and Petitioner filed the Petition on November 30, 2023 — i.e., on the last day an IPR petition could have been filed before the statutory one-year bar applied. Pet. at 118, 119. Furthermore, the Petition challenges on 15 claims, which makes it unreasonable for Petitioner to have waited over a year to file its Petition, while allowing the work and efforts in the parallel Colorado case to continue. Before the expected institution decision in June 2024, fact and expert discovery will have been completed and dispositive motions will have been filed (due on June 6, 2024). Ex. 2003 at 7, 8. Should IPR trial be instituted, Patent Owner will have to duplicate efforts and expend additional resources to prepare its patent owner response and expert declaration(s). The parties’ resources and judicial economy would be best served if the Board denies institution. *Fintiv*, IPR2020-00019, Paper 11 at 6.

Accordingly, factor 1 strongly favors denial of institution.

B. Factor 2 Favors Denial: Trial in the Colorado Case Will Occur More Than Four Months Before the Board’s Projected Statutory Deadline for a Final Written Decision

The Court in the Colorado case has set a trial date of January 27, 2025. Ex. 2004. The scheduled trial date is fairly consistent with the District of Colorado’s time-to-trial statistics, which shows that the median time from filing to trial in civil cases is 28.9 months. Ex. 2005 at PDF p. 79 (as of December 2023). That is, the scheduled trial date of January 27, 2025—which is approximately 30 months from the filing date of the complaint on July 13, 2022—is reasonable and in line with the District’s trial statistics. Accordingly, it is highly likely that the scheduled trial date of January 27, 2025 will be maintained.

Because the trial in the Colorado case will predate the Board’s projected statutory deadline for a final written decision by more than 4 months, factor 2 favors denial of institution to avoid the inefficient and costly duplication of efforts that would result from institution.

C. Factor 3 Favors Denial: The Parties and the Court Have Made Significant Investments in the Colorado Case

Factor 3 “consider[s] the amount and type of work already completed in the parallel litigation by the court and the parties at the time of the institution decision.” *Fintiv*, IPR2020-00019, Paper 11 at 9. At the time of the expected institution decision in June 2024, claim construction and all fact and expert discovery will have been

completed and dispositive motions (due on June 6, 2024) will likely have been filed, which weighs strongly against institution.

More specifically, at the filing of this Preliminary Response, the parties have exchanged infringement, invalidity, and non-infringement contentions; completed claim construction briefing and hearing; and completed fact discovery. *See* Ex. 2003 at 4-6. According to the Scheduling Order of the Colorado case, expert discovery will close by May 9, 2024 and the deadline for dispositive motions is June 6, 2024. *Id.* at 7-8. That is, at the time of the expected institution decision, most of the key case milestones will have been completed, and only pretrial procedures and trial will remain.

The Board's precedential *NHK Spring* decision makes clear that such advanced stages of litigation strongly favor denying institution. *NHK Spring*, IPR2018-00752, Paper 8 at 20. Under *NHK Spring* and the subsequent *Fintiv* framework, the Board has consistently (and unsurprisingly) denied institution where the parallel proceeding has proceeded past claim construction and discovery has closed or will close soon after the institution decision. *See Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00123, Paper 14 at 8-9 (P.T.A.B. May 15, 2020) ("Considering the current investment in the invalidity and construction contentions . . . this factor weighs somewhat in favor of discretionary denial."); *see also Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 15 at 13-14 (P.T.A.B. May 13, 2020) (informative) (finding factor 3 to favors denial

where the parties had briefed claim construction, had a claim construction hearing, and exchanged infringement and invalidity contentions).

Moreover, Petitioner has not been diligent in filing its Petitions, having *waited a year from the filing of the amended complaint on November 30, 2022* to file the Petition on November 30, 2023. Petitioner offers no explanation for its delay, and its failure to do so negates any assertion that it acted diligently. Regardless, under similar facts, the Board has commonly held that even if a petitioner acts quickly (here, Petitioner did not), this factor still favors denying institution based on the substantial investment by the district court and parties in the parallel proceeding. *See, e.g., Supercell Oy v. Gree, Inc.*, IPR2020-00215, Paper 10 at 12-14 (P.T.A.B. June 10, 2020) (denying institution where discovery had closed and the trial date was nearing, and finding petitioner's diligence in filing petition did not outweigh this investment where resources already expended were "significant and in line [with] the level of investment by the district court in *NHK Spring*.").

Factor 3 therefore strongly favors denying institution.

D. Factor 4 Favors Denial: The Issues Raised in the Petition and the District Court Overlap and Petitioner Has Not Presented *Any* Stipulation to Minimize Duplicative Efforts

The fourth *Fintiv* factor favors denial of institution where "the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding." *Fintiv*, IPR2020-00019, Paper 11 at 12; *see also*

SK Innovation Co., Ltd. v. LG Chem, Ltd., IPR2020-01036, Paper 13 at 12-15 (P.T.A.B. Nov. 30, 2020) (finding this factor to weigh against institution where there was extensive overlap between the claims, art, and arguments at issue in the petition and in the parallel proceeding).

Here, each of the challenged claims—claims 1-9, 11-15, and 19 of the '223 patent—are asserted by Patent Owner against Petitioner/defendant in the Colorado case. Ex. 1006 at 1, 4. Thus, the claims at issue before the Board *overlap completely* with the claims at issue in the parallel district court proceeding.

Petitioner's invalidity contentions also indicate that the art and arguments in both proceedings will overlap significantly. Specifically, Petitioner's invalidity contentions in the Colorado case include prior-art grounds based on five primary references: **Chen** (GB2377254A); Hewitt (U.S. 2,853,974); **Fox** (U.S. 6,604,751); **Nakaya** (U.S. 6,558,430); and **Gartner** (U.S. 8,162,112). Ex. 2006 at 16-17. In this Petition, Petitioner raised five different grounds based on four of the same five primary references **Chen, Fox, Nakaya, and Gartner**. Pet. at 3-4. The secondary references relied on in the Petition—Kodama (U.S. 5,405,407) and Deferme (U.S. Patent 7,703,586, U.S. Patent Publication No. 2006/0283676)¹—are also the same as in the

¹ The Petition uses U.S. Patent Publication No. 2006/0283676 to Deferme as a secondary reference, while Petitioner/defendant identified U.S. Patent No.

invalidity contentions. *Id.*; Pet. 3-4. Thus, Petitioner is raising ***substantially the same art and arguments*** from the Colorado case in the IPR Petition.

Moreover, Petitioner’s experts (Dr. Eric Wang and Mr. Kevin Wesling), who have provided declarations in support of the Petition, are the same experts that Petitioner/defendant relied on in the Colorado case to support claim construction arguments. Accordingly, expert testimony on the asserted prior art and arguments will also largely be the same between the IPRs and the Colorado case.

The extensive overlap in claims, art, arguments, and evidence between the Petition and the Colorado case raises “concerns of inefficiency and the possibility of conflicting decisions.” *Fintiv*, IPR2020-00019, Paper 11 at 12. Therefore, this factor also favors denial. *Fintiv* Memorandum at 7.

Significantly, Petitioner has not stipulated that it will not pursue in the Colorado case “the same grounds as in the petition or any grounds that could have reasonably been raised in the petition” (i.e., a *Sotera* stipulation) to defeat factor 4. *See id.* (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 18–19 (P.T.A.B. Dec. 1, 2020) (precedential as to § II.A)). Nor has Petitioner presented a different (narrower) stipulation, such as the one offered in *Sand Revolution II, LLC v.*

7,703,586 to Deferme (which issued from the ’676 publication) as a secondary prior-art reference in its invalidity contentions in the Colorado case.

Continental Intermodal Group, to minimize concerns of duplicative efforts and inconsistent decisions. IPR2019-01393, Paper 24 at 11-12 (P.T.A.B. June 16, 2020) (informative).

Given the total overlap in claims and the extensive overlap in art and arguments between the Petition and the Colorado case, and *the lack of a stipulation by Petitioner* to mitigate concerns of inefficiency and inconsistent decisions, the fourth *Fintiv* factor strongly weighs in favor of denial of institution.

E. Factor 5 Favors Denial: Petitioner and the Defendant in the Parallel Proceeding are the Same Party

In *Sand Revolution*, the Board instructed that “this [fifth] factor weighs in favor of discretionary denial” of institution where “a petitioner in *inter partes* review and defendant in a parallel district court proceeding are the same.” IPR2019-01393, Paper 24 at 12-13. Here, Petitioner and the defendant in the parallel district court litigation are the same party. *See, e.g.*, Ex. 2004 at 1. The fifth *Fintiv* factor therefore strongly weighs in favor of denial of institution.

F. Factor 6 Does Not Outweigh the Denial of Institution Counseled by Factors 1-5

Petitioner argued that because it has presented “compelling, clear evidence of unpatentability,” the Board should not exercise its discretion to deny institution. Pet. at 18 (citing *Fintiv* Memorandum). But in *Commscope Technologies, LLC v. Dali Wireless, Inc.*, the Director clarified that compelling merits is not a substitute for *Fintiv*

analysis; rather, the “compelling evidence of unpatentability” standard set forth in the Memorandum only comes into play if *Fintiv* factors 1-5 favor denial of institution (as here). IPR2022-01242, Paper 23 at 4-5 (P.T.A.B. Feb. 27, 2023) (precedential). More importantly, factor 6 must compellingly outweigh the denial favored by factors 1-5, and the Board must provide “reasoning sufficient” to support a finding of compelling merits. *See id.* Here, *Fintiv* factors 1-5 favor denial of institution, and the Petition does not present “compelling, meritorious challenges” to avoid denial of institution under factor 6. *See Fintiv* Memorandum at 4. More specifically, the challenges presented in the Petition are technically deficient, as discussed in Section II.B, such that the Petition does not “plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” *Id.*; *see also OpenSky Indus., LLC v. VLSI Tech. LLC*, IPR2021-01064, Paper 102 at 49-50 (P.T.A.B. Oct. 4, 2022) (precedential) (the Director explaining that “plainly lead[s]” means “it is highly likely that the petitioner would prevail with respect to at least one challenged claim.”).

In conclusion, the Board should deny institution under §314(a) because *Fintiv* factors 1-5 favor denial and the Petition does not present “compelling unpatentability challenges” to overcome denial under factor 6. *Fintiv* Memorandum at 4-5.

IV. Conclusion

Petitioner has failed to meet its burden of showing why *inter partes* review should be instituted. The asserted grounds in this Petition are mostly duplicates of

those in the related district court litigation, and more importantly, are technically deficient, such that they cannot avoid denial of institution under § 314(a). The Board should therefore deny institution of *inter partes* review.

Respectfully submitted,

Dated: March 11, 2024

By: /Arpita Bhattacharyya/
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CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), I, Arpita Bhattacharyya, certify that **Patent Owner's Preliminary Response** contains 7,691 words, excluding those portions identified in 37 C.F.R. § 42.24(a), as measured by the word-processing system used to prepare this paper.

Dated: March 11, 2024

/Arpita Bhattacharyya/

Arpita Bhattacharyya

Reg. No. 63,681

CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing **Patent Owner's Preliminary Response** was served electronically via email on March 11, 2024, in its entirety on the following:

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Petitioner has consented to service by electronic mail.

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