IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

Civil Action No.: 1:22-cv-02142-NYW

CRUSOE ENERGY SYSTEMS LLC, a Delaware limited liability company,

Plaintiff,

v.

ALKANE MIDSTREAM LLC, a Delaware limited liability company,

Defendant.

ALKANE MIDSTREAM LLC'S REPLY TO [73] MOTION TO DISMISS

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Crusoe's Response to Alkane's Motion to Dismiss (ECF 75, filed Nov. 30, 2022) raises a number of separate, but equally unavailing, arguments. First, Crusoe claims that Alkane failed to adequately justify its identification of Claim 1 of the '307 Patent as being representative of all of the Asserted Claims, and therefore the Motion to Dismiss should be limited to just Claim 1 of the '307 Patent. True, a party challenging the validity of multiple claims needs to either challenge each claim separately or provide an adequate justification for treating the arguments directed to a representative claim as applying to all of the claims collectively. But in arguing that Alkane only provided a conclusory assertion that Claim 1 of the '307 Patent was a representative claim, Crusoe entirely whitewashes the substantial arguments that were raised within the Motion to Dismiss as though they were never presented. Critically, Crusoe has failed to demonstrate that any of the difference between Claim 1 of the '307 Patent and the rest of the Asserted Claims were material to the patent-eligibility inquiry.

Crusoe further addresses Steps 1 and 2 of the *Alice*/*Mayo* patent-eligibility analysis under 35 U.S.C. § 101. For the purposes of both of these steps, Crusoe attempts to frame the inventive concept being claimed as an "unconventional way[] of mitigating natural gas flaring by using stranded natural gas to generate electricity that is consumed by a distributed computing system at the well site." But none of the Asserted Claims are restricted to such applications. Accordingly, Crusoe's arguments are untethered to the Asserted Claims themselves, and thus are irrelevant to the patent-eligibility analysis.

With respect to the Step 1 of the *Alice*/*Mayo* patent-eligibility analysis, Crusoe further argues that the idea of "utilizing gas to power computers" does not fall within any of the subject-matter categories that have previously been recognized as abstract ideas. To the contrary, the idea

of "utilizing gas to power computers" is nothing more than the utilization of "low-cost power generation opportunities" within a known "energy-intensive" technological environment and thus fits into the "fundamental economic principle or practice" category of abstract ideas.

With respect to Step 2 of the *Alice*/*Mayo* patent-eligibility analysis, Crusoe argues the claims contain an alleged "inventive concept"—the purported use of otherwise conventional elements specifically in flare mitigation applications. But again, none of the Asserted Claims are restricted to such applications and therefore Crusoe's arguments are insufficient to transform the claimed abstract idea into a patent-eligible application.

ARGUMENT

I. Alkane Properly Identified Claim 1 of the '307 Patent as being Representative for the Purpose of a Patent-Eligibility Analysis Under 35 U.S.C. § 101

Contrary to Crusoe's argument that Alkane only provided a conclusory assertion that Claim 1 of the '307 Patent was representative of all of the Asserted Claims, Alkane's Motion to Dismiss included substantial argument demonstrating that each of the Asserted Claims were both "linked to the same abstract idea" and "substantially similar" in their content. ECF 73 at 6-8.

As argued in Alkane's Motion to Dismiss, each of the claims are directed to the abstract idea of "transform[ing] fuel gas into electricity and then using the electricity to power a plurality of generic computing units." *Id*. at 6 fn.3. Crusoe prefers to frame the inventive concept differently. But still, Crusoe does not dispute that each of the Asserted Claims is directed to the same supposedly inventive concept as Claim 1 of the '307 Patent.

Demonstrating that each of the Asserted Claims were substantially similar, Alkane's Motion to Dismiss further identifies that each of the claims merely "recite[s] a handful of generic, conventional steps" using the "same purely functional language." *Id*. at 8. Alkane further tethered

this argument to the claim language by providing a side-by-side comparison of Claim 1 of each of the Asserted Patents, highlighting their shared reliance on nearly identical generically claimed elements and functional language. ECF 73-1. While Alkane's side-by-side comparison only presented the independent claims, Alkane's arguments are indeed applicable to each of the Asserted Claims. Notably, Crusoe does not dispute that the same functional language is used to describe substantially similar claim elements across all of the Asserted Claims.

Instead of rebutting Alkane's reasoning for identifying Claim 1 of the '307 Patent as being representative, Crusoe attempts to highlight claim elements from the other Asserted Claims that were not individually addressed by the Motion to Dismiss. However, a review of Crusoe's Exhibit 1—purportedly identifying the additional limitations—reveals that the so-called additional claim limitations either add only additional generic components (*e.g.*, claim 1 of the '309 Patent's recitation of a "monitoring and control system") or merely narrow the generic limitations along such routine and conventional lines that there is still no legitimate difference in the Asserted Claims' scope for the purposes of a patent eligibility analysis (*e.g.*, identifying that the "fuel gas stream is received from a natural gas processing," "the distributed computing units are adapted to mine a cryptocurrency," or "the power-generation modules comprises an engine-type generator").

Courts routinely treat a single claim as being representative of all the Asserted Claims for purposes of the § 101 analysis, even where the parties disagree as to the providence of doing so. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1349 (Fed. Cir. 2014).[1] Crusoe has identified a handful of instances in which courts—including this Court—

[1] *See also Dropbox, Inc. v. Synchronoss Techs., Inc.*, 371 F. Supp. 3d 668, 684 (N.D. Cal. 2019) ("in the absence of agreed-upon representative claims, the Court need not analyze each and every claim of the patent [and] may conduct its own analysis and determine which claims are

have rejected assertions that an identified claim was representative of all of the asserted claims, but these cases just stand for the proposition that Alkane was required to justify its identification Claim 1 of the '307 patent as a representative claim. Alkane met this requirement and Crusoe's false insistence that Alkane offered merely conclusory assertions renders Crusoe's entire argument disingenuous and meritless.

Crusoe's brief only addresses a single additional claim element—Claim 1 of the '309 and '059 Patents' recitation of a "monitoring and control [system/equipment]"—as purportedly providing a pertinent distinction from the Representative Claim for the purposes of the patent-eligibility inquiry. Tellingly though, Crusoe fails to even allege that the addition of the "monitoring and control system/equipment" limitation introduced a patent eligible "inventive concept" for the purposes of the present § 101 challenge.[2] And, as expressly addressed within the Motion to Dismiss

representative"); *Front Row Techs., LLC v. NBA Media Ventures, LLC*, 204 F. Supp. 3d 1190, 1250-51 (D.N.M. 2016) (holding that the court may find representative claims despite the patentee's disagreement and the number of claims involved); *Orcinus Holdings, LLC v. Synchross Techs., Inc.*, 379 F. Supp. 3d 857, 872-71 (N.D. Cal. 2019) (same); *Quantum Stream Inc. v. Charter Commc'ns, Inc.*, 309 F. Supp. 3d 171, 179 (S.D.N.Y. 2018) (finding claim 1 representative despite plaintiff's argument); *Summit 6 LLC v. HTC Corp.*, No. 7:14-cv-00014-O, 2015 WL 11117867, at *4 (N.D. Tex. May 28, 2015) ("Plaintiff . . . argue[s] that the claims are all presumed to be valid and must each be challenged in the absence of agreed representative claims. However, the Federal Circuit specifically dismissed this argument in *Content Extraction*, 776 F. 3d at 1348."

[2] Notably, the monitoring and control system/equipment's recited function of "monitor[ing] the gas profile of the fuel gas" and, "upon determining a change" therein, "automatically modulat[ing] an electrical load of the distributed computing system" is itself unpatentable under §101. *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77-78 (2012) (holding that a process in which the level of the relevant metabolites in the blood are determined through whatever process a doctor wishes so that they could be taken into account in increasing or decreasing the dosages of a medication was not patentable under §101); *Parker v. Flook*, 437 U.S. 584, 586 (1978)) (holding that the automated monitoring of process variables to compute and adjust alarm limits was not patentable under §101).

(ECF 73 at 8 fn.8), the recitation of "a monitoring and control [system/equipment]" merely added further generic components described using purely functional language.

While claims are presumed valid independently of other claims, Alkane has more than adequately articulated its justifications for treating Claim 1 of the '307 Patent as a representative claim within its Motion to Dismiss. And Crusoe has failed to rebut this showing by demonstrating that any of the other Asserted Claims differ from Claim 1 of the '307 Patent in any manner that is material to the patent-eligibility inquiry.

II. The Asserted Claims Are Directed to an Abstract Idea Under Step 1 of *Alice*/*Mayo* Analysis

A. Crusoe's reliance on unclaimed features to demonstrate that the Asserted Claims are directed to "mitigating natural gas flaring" should be rejected

Crusoe argues that instead of being directed to the abstract idea of "utilizing gas to power computers," the claims are instead directed to "unconventional ways of mitigating natural gas flaring by using stranded natural gas to generate electricity that is consumed by a distributed computing system at the well site." ECF 5 at 8. While Crusoe accuses Alkane of over-generalizing and mischaracterizing the Asserted Claims, it is actually Crusoe that is doing so. Crusoe's characterization of the Asserted Claims relies wholly on unclaimed features in an attempt to represent a patent eligible subject matter for the claims to be directed to. Crusoe's arguments are untethered to the Asserted Claims themselves, and thus are irrelevant to the patent-eligibility-analysis. *ChargePoint, Inc. v. SemaConnect, Inc*., 920 F.3d 759, 766, 769 (Fed. Cir. 2019) (finding that unclaimed features are irrelevant to the *Alice* analysis); *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1295 (Fed. Cir. 2020) (same).

Of the Asserted Claims, not a single claim is constricted to consuming stranded natural gas. Each of the independent claims merely recites that a generic "fuel gas" is being to be used as the fuel source from which electricity is generated. S*ee* ECF 69-1 ('307 Patent) at Claim 1; ECF 69-2 ('309 Patent) at Claim 1; ECF 69-10 ('821 Patent) at Claim 1; ECF 69-12 ('059 Patent) at Claim 1. Of the Asserted Claims, only claim 15 of the '307 Patent and claims 6 and 22 of the '059 Patent narrow the "fuel gas" to being received from a "natural gas processing system," but these additions do not go nearly so far as limiting the "fuel gas" to "stranded natural gas."

Nor do any of the Asserted Claims limit their scope to generating or consuming the electricity at a well site. Again, the closest that the Asserted Claims get to this limitation is claim 15 of the '307 Patent and claims 6 and 22 of the '059 Patent reciting that the "fuel gas" is received from a "natural gas processing system," but there is still no requirement as to the location of the "natural gas processing system" or the physical proximity of the electrical/power generation module/system to the "natural gas processing system."

The closest that the actual language of the claims comes to supporting Crusoe's characterization of the purported inventive concept is that the preambles of Claim 1 of each of the '307, '309, and '821 Patents purport that they are claiming a "flare mitigation system." But it is well recognized that patent claim preambles are rarely limiting. *See, Artic Cat Inc. v. GEP Power Prods., Inc.*, 919 F. 3d 1320, 1327-29 (Fed. Cir. 2019) (finding a preamble was not limiting because it only stated a purpose or intended use for the invention); *Uniloc USA, Inc. v. Amazon. com, Inc.*, 243 F. Supp. 3d 797, 806 (E.D. Tex. 2017) (finding the preamble of the asserted claim was a statement of purpose and therefore did not limit the abstract idea). Here the identification of the claimed invention as a "flare mitigation system" within the preamble merely states an intended

purpose or use for the purported invention, but does not actually limit the scope of the claims to only that intended purpose or use. *Artic Cat*, 919 F.3d at 1328. Instead, it is the body of the claims that define the claimed invention. *Id.* Notably, none of the claims of the '059 Patent include the words "flare" or "mitigation" within its preamble or otherwise.

So while Crusoe argues that the supposed invention was directed exclusively to flare gas mitigation applications, the Asserted Claims are not limited to such applications. None of the Asserted Claims include a single claim limitation distinguishing between electricity generated at a well site and electricity generated by Xcel Energy at any of its natural gas powered generation stations. Nor do the claims require the "distributed computing system" be anything more than in "electrical communication" with the "electrical/power generation module/system" or components thereof. Critically, the requirement that the components of the systems be in "electrical communication" is so broad that it encompasses a "distributed computing system" separated from a "electrical/power generation module/system" by power transmission lines. *See*, *e.g., Motiva Patents, LLC v. Sony Corporation*, No. 9:18-CV-180-JRG-KFG, 2019 WL 3933670, at *9 (E.D. Tex. Aug. 20, 2019) ("defining 'in electrical communication' as 'in communication using the flow of electrical current or charge through a wire or contact connection'"); *Nonin Med., Inc. v. Konica Minolta Photo Imaging U.S.A., Inc.*, 381 F. Supp. 2d 1069, 1077 (D. Minn. 2005) (defining in "electrical communication with each other" as "the separate parts must be electronically configured in a fashion which permits a current or electronic data stream from the first to the second part"); *Computer Docking Station Corp. v. Dell, Inc.*, No. 06-C-32-C, 2006 WL 5999613, at *23 (W.D. Wis. Aug. 16, 2006) ("The term 'electrical communication' means 'the flow of information occurs via an electric signal.'").

B. The idea of utilizing fuel gas to power computers is merely an exercise of matching a source of low-cost energy to an energy-intensive application and thus qualifies as a "fundamental economic principle or practice"

Crusoe also argues that the idea of "utilizing gas to power computers" does not fall neatly within any of the subject-matter categories that have previously been recognized as abstract ideas. ECF 75 at 7. As expounded upon in Crusoe's own brief, "[s]tranded natural gas . . . represent[ed] a very low-cost power generation opportunity" and "'distributed computing'—cryptocurrency mining in particular— . . . 'requires enormous amounts of power'." *Id*. at 9. As such, the idea of utilizing gas to power computers, was nothing more than an exercise of limiting the field of use of electricity generated from "low-cost power generation opportunities" to an existing "energy-intensive" technological environment. *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F. 3d 1253, 1259 (Fed. Cir. 2016) ("The Supreme Court and this court have repeatedly made clear that merely limiting the field of use of the abstract idea to a particular existing technological environment does not render the claims any less abstract."). Crusoe fails to explain how matching "low-cost power generation opportunities" with an "energy-intensive" applications fails to qualify as "fundamental economic principle or practice."

C. The recitation of generically defined tangible structures does not rescue the Asserted Claims from being directed to an abstract idea

"[N]ot every claim that recites concrete, tangible components escapes the reach of the abstract-idea inquiry." *In re TLI Commc'ns LLC Patent Litig*, 823 F. 3d 607, 611 (Fed. Cir. 2016) (finding a claim to be directed to an abstract idea despite reciting "tangible components such as 'a telephone unit' and a 'server,' [because] the specification ma[de] clear that the recited physical components merely provide[d] a generic environment in which to carry out the abstract idea");

Content Extraction, 776 F. 3d at 1347 (finding that claims reciting a scanner were nevertheless directed to an abstract idea).

Alkane does not dispute that Crusoe was permitted to use functional language within its claims to describe tangible components. 35 U.S.C § 112(6) ("An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof . . ."). But Crusoe's reliance on functionally claiming the tangible components of the "system" only highlights that none of those components offers a meaningful limitation beyond the abstract idea of utilizing gas to power computers using conventional means of generation electricity. *In re TLI Commc'ns*, 823 F.3d at 611-12 ("Such vague, functional descriptions of server components are insufficient to transform the abstract idea into a patent-eligible invention."). Nor does the specification of the Asserted Patents provide any technical details for these tangible components.

III. Crusoe's Rebuttal Under Step 2 of *Alice*/*Mayo* fails to identify any inventive concept within the Asserted Claims that are sufficient to transform the claimed abstract idea into a patent-eligible application

Not only were ***some*** of the individual elements recited in the Asserted Claims well known, ***all*** of the individual elements were well known. The Asserted Patents expressly identify certain of the elements as being conventional, and nowhere in the Asserted Patents are any of the individual elements described as being unique or unconventional. Nor has Crusoe pled that any of the individual elements are unique or unconventional.

Nor is anything about the arrangement of the elements particularly inventive either. It has been common knowledge for decades that: 1) high voltage electricity is routinely generated from natural gas, 2) electricity is routinely used to power computers, 3) computers are typically not

designed to receive high-voltage electricity, without the electricity being stepped down first, 4) high voltage electricity is routinely stepped down using transformers, and 5) computers can be integrated into a distributed computing system. Thus the Asserted Claims are merely "a combination of conventional components in a conventional way to achieve an expected result." *Universal Secure Registry LLC v. Apple, Inc.*, 10 F4th 1342, 1346 (Fed. Cir. 2021).

Crusoe argues that an inventive concept can be found in the purportedly unconventional use of these otherwise conventional elements specifically within flare mitigation applications. But as addressed above, the claims are not confined to flare-mitigation applications. *Artic Cat*, 919 F.3d at 1328. As such, Crusoe's entire argument under *Alice*/*Mayo* Step 2 is directed to "unclaimed features"—particularly the use of the system/method in flare mitigation applications. Accordingly, the supposed—and strongly disputed—novelty of using the otherwise conventional components and steps of the claimed systems/methods to mitigate the need to flare stranded natural gas fails to "remove [the Asserted Claims] from the realm of ineligible subject matter." *Am. Axle*, 967 F.3d at 1295.

CONCLUSION

For the foregoing reasons, Alkane respectfully requests the Court grant its Motion to Dismiss Counts One, Two, Three, and Four of Plaintiff's Second Amended Complaint pursuant to Federal Rule of Civil Procedure 12(b)(6) because Asserted Claims are ineligible for patenting under 35 U.S.C. § 101.

Respectfully submitted this 14th day of December, 2022.

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