IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

Malikie Innovations Ltd. and Key Patent Innovations Ltd.,	§	
	§	
Plaintiffs,	§	
	§	Case No. 2:25-CV-519-JRG-RSP
v.	§	
	§	JURY TRIAL DEMANDED
Core Scientific, Inc. and CoreWeave, Inc.	§	
	§	
Defendants.	§	
	§	
Core Scientific, Inc.,	§	
	§	
Defendant and Third-Party Plaintiff,	§	
	§	
v.	§	
	§	
CoreWeave, Inc.	§	
	§	
Third-Party Defendant.	§	

REPLY IN SUPPORT OF CORE SCIENTIFIC, INC.'S MOTION TO DISMISS PURSUANT TO FED. R. CIV. P. 12(b)(6) AND 35 U.S.C. § 101

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Malikie Innovations Ltd. and Key Patent Innovations Ltd.	Plaintiffs
Core Scientific, Inc.	Core Scientific
Core Scientific's Motion to Dismiss Pursuant to Fed. R. Civ. P. 12(b)(6) and 35 U.S.C. § 101 (Dkt. 114)	Mot.
Plaintiffs' Opposition to Core Scientific's Motion to Dismiss (Dkt. 119)	Opp.
U.S. Patent No. 7,372,960	960 patent
U.S. Patent No. 8,666,062	062 patent
U.S. Patent No. 8,788,827	827 patent
U.S. Patent No. 10,284,370	370 patent
U.S. Patent No. 8,532,286	286 patent
960, 062, 827, 370, and 286 patents	Challenged Patents

EMPHASIS

All emphasis added unless otherwise specified

Mathematical algorithms, no matter how novel or groundbreaking they may be, are not ineligible for patent protection because they are part of the "basic tools of scientific and technological work." *Parker v. Flook*, 437 U.S. 584, 591-92 (1978). At bottom, whatever novelty there may be in the claims of the Challenged Patents is found only in the algorithms. And a claim that is "directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, … is nonstatutory." *Id*. at 595.

Plaintiffs' arguments to the contrary, asserted in both the FAC and again in the Opposition, do not compel a different conclusion. Repeated references to the claims being directed at "technological solutions" to "technological problems" are unavailing because those alleged "technological solutions" are ***the algorithms themselves***. That is not enough to avoid invalidity under § 101. *Parker*, 437 U.S. at 595, n.18 ("Very simply, our holding today is that a claim for an improved method of calculation, ***even when tied to a very specific end use***, is unpatentable subject matter under § 101."); *SAP America, Inc. v. Investpic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) ("The claims here are ineligible because their innovation is an innovation in ineligible subject matter.").

Plaintiffs' attempts to avoid dismissal by reference to alleged factual and claim construction disputes also must fail. Even if the inventions described in the patents were groundbreaking and resulted in more efficient calculating, that does not change what is specified in the claims—improved mathematical algorithms. *PersonalWeb Tech. LLC v. Google LLC*, 8 F.4th 1310, 1319 (Fed. Cir. 2021) (rejecting argument that "improvements [described] in the specification" prevented dismissal because the claims lacked an "inventive concept in the non-abstract application realm"). As to claim construction, Plaintiffs have failed to show how construction of the few terms they identify would impact the understanding of the claims. *Trinity*

Info Media, LLC v. Covalent, Inc., 72 F.4th 1355, 1360-61 (Fed. Cir. 2023). Consequently, the Court should grant Core Scientific's Motion to Dismiss.

I. The 960 and 062 Patent Claims Fail Both *Alice* Steps Under Plaintiffs' Analysis

ACS concedes that the only claims from these patents that it is asserting are claims 3 and 6 of the 960 patent and claims 1-4, 6, and 7 of the 062 patent. Opp. at 14, n.7. Thus, independent claim of the 960 patent is indeed representative. Mot. at 14-16.[1] The only difference between claim 3 and independent claim 1 of the 062 patent is th at the latter is written in terms of a processor executing the instructions making up the algorithm.[2]

Claim 3 of the 960 patent is unquestionably directed to an algorithm. The claimed steps take an input (step a), perform mathematical operations on the input to obtain a first result (steps b and c), perform further mathematical operations on that result to obtain a second result (step d), and use the second result in a cryptographic operation (step e). 960 patent, claim 3. There is no material difference between claim 3 and the claim invalidated in *Parker*, which similarly performed mathematical operations on an input to obtain a result (an "updated alarm limit") for use in a particular field (a "process involving the catalytic chemical conversion of hydrocarbons"). 437 U.S. at 596-97 (listing claim). Nor is there a material difference between claim 3 and the claim invalidated in *Stanford I*. That claim also performed mathematical operations on an input ("allele information regarding genotypes") to obtain a result ("a haplotype

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[1] Core Scientific reserves the right to challenge any non-asserted claims as part of an invalidity counterclaim if its motion to dismiss is not granted.

[2] Plaintiffs' dependent claims argument is not persuasive. Reviewing claims 6 of the 960 patent and claims 2-4, 6 and 7 of the 062 patent shows that they merely add further details regarding the algorithm, such as the inputs to the algorithm (062, claims 2, 3), the makeup and role of the finite field in the algorithm (960 claim 6, 062 claim 4), and the field of use (062, claims 6, 7). These claims do not add "significantly more" to the abstract idea. *In re Board of Trs. of Leland Stanford Junior Univ.*, 989 F.3d 1367, 1372 (Fed. Cir. 2021) ("*Stanford I*").

phase for at least member of the family"), storing it in computer memory, and providing the haplotype phase upon request. 989 F.3d at 1370.

Claim 3 and those in *Parker* and *Stanford I* are directed to "mathematical algorithms for performing calculations," which "without more, are patent ineligible." *Id*. at 1372; *see RecogniCorp, LLC v. Nintendo Co*., 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("A process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea."). That holds true here. There is nothing "more" in claim 3. That the claim requires that the result be "used" in a "cryptographic operation" is of no moment because specifying that the result is "for a specific purpose" cannot save the claim if the claim is "directed essentially to a method of calculating, using a mathematical formula." *Parker*, 437 U.S. at 595.

Plaintiffs argue that the claim is a technological solution to a technical problem. Even taken as true for argument's sake, that does not save the claims because the "technological solution" is ***the algorithm itself***. It matters not whether the algorithm is novel or groundbreaking. In *Stanford I*, Stanford asserted that the claimed invention was "novel" and enabled scientists to "ascertain more haplotype information than was previously possible." 989 F.3d at 1373. But even "accepting the argument that the claimed process results in improved data, we are not persuaded that claim 1 is not directed to an abstract mathematical calculation." *Id*., citing *Synopsys, Inc. v. Mentor Graphics Corp*., 839 F.3d 1138, 1151 (Fed. Cir. 2016) ("[A] claim for a new abstract idea is still an abstract idea"); *SAP*, 898 F.3d at 1170 ("[P]atent law does not protect such claims, without more, no matter how groundbreaking the advance."). Here, claim 3 covers at most a "new abstract idea."

Nor does claim 3 improve the functioning of computers, as Plaintiffs allege. There is nothing in the claims or the patents that improves computer functioning *per se*. The 960 patent

confirms that it uses generic processors and memory. 960 patent, 6:46-48. Instead, the alleged improvement is the "specialized reduction algorithms." *Id*. at 7:43-45. But even if an algorithm results in a faster or more efficient way to obtain the claimed reduced result of a finite field, faster or better algorithms are still abstract ideas. At most, the claims merely "enhance[] an ineligible concept;" they are not "improvement[s] on a technological process." *Stanford I*, 989 F.3d at 1373; *PersonalWeb*, 8 F.4th at 1316 ("The claims do this in a computer environment, but that doesn't transfigure an idea out of the realm of abstraction").[3] As in *PersonalWeb*, whether the algorithm results in a more efficient process on a computer does not "render an abstract idea less abstract." *Id*. at 1319. The focus of the claims here is "not on … an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools," and that "fails [*Alice*[4]] step one." *Id*.

The claims here, contrary to Plaintiffs' arguments, are not like those in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), and *Infernal Tech., LLC v. Sony Interactive Ent. LLC*, No. 2:19-CV-00248-JRG, 2021 WL 5804262 (E.D. Tex. Dec. 7, 2021). In *Enfish*, the claims required "a data storage and retrieval system for a computer memory" with "a self-referential table for a computer database." 822 F.3d at 1336–37. Therefore, the claimed table "is a ***specific type of data structure*** designed to improve the way a computer stores and retrieves data in memory." *Id*. at 1339. Similarly, in *Infernal Tech*., the claimed process "actually

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[3] Plaintiffs' claim construction argument also fails. Plaintiffs assert that the terms "machine words" and "wordsized operation" show that the claims are intended to be performed on a computer. Opp. at 9-11. Even if true, an algorithm performed on a generic computer is still patent ineligible. *Stanford I*, 989 F.3d at 1374 ("[C]laim 1 neither requires, nor results in, a ***specialized*** computer with a ***specialized memory or processor***."). That applies here.

[4] *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208 (2014).

improves graphics rendering in computers" and thus is "an improvement to the functionality of computers in rendering realistic graphics." 2021 WL 5804262, at *4. Thus, the claimed technology in *Enfish* and *Infernal Tech.* are "improvement[s] to computer functionality itself," *Enfish*, 822 F.3d at 1336. Claim 3, in contrast, is an alleged improved algorithm for finite field calculations; it does not improve a computer's ability to perform any other tasks. "[O]ur precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea." *Intell. Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015).

Turning to *Alice* step two, the Federal Circuit's analysis in *PersonalWeb* is apt here: "[w]hat else is there in the claims before us? … As to the subject-matter question, not much." 8 F.4th at 1319. There is "nothing 'inventive' about any claim details, individually or in combination, that are ***not themselves abstract ideas***." *Id*. Again, whether the claimed algorithm is novel is not relevant because the claimed "innovation is an innovation in ineligible subject matter." *SAP*, 898 F.3d at 1163. And "[t]hat fails step two." *PersonalWeb*, 8 F.4th at 1319.[5]

Accordingly, the asserted claims of the 960 and 062 patents fail both steps of the *Alice* inquiry because they recite abstract, mathematical operations that are patent-ineligible.

II. The 827 and 370 Patent Claims Fail Both *Alice* Steps Under Plaintiffs' Analysis

Plaintiffs' arguments for the 827 and 370 patents also fail, as, at most, the claims are

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[5] Whether in step one or two, Plaintiffs' arguments regarding the specification cannot save the claims. The specification "cannot be used to import details from the specification if those details are not claimed." *ChargePoint, Inc. v. SemaConnect, Inc*., 920 F.3d 759, 769 (Fed. Cir. 2019). The alleged improvements of eliminating the need for "duplicating the bulk of the engine instructions (program)" and "finite field elements [that can] be consistently stored in registers of the same word length," Opp. at 5–6, are not claimed. Alleging improvements that are stated in the specification and not claimed cannot defeat a motion to dismiss. *PersonalWeb*, 8 F.4th at 1319 (rejecting the same argument Plaintiffs make here).

directed to an improved digital signature verification algorithm and nothing "more."[6] Claim 1 of the 827 patent recites 3 steps: (1) "receiving" a signature without a public key from a message; (2) "obtaining" an elliptic curve point from the signature; and (3) "generating" a public key of the signer from the elliptic curve point and a hash value of the message. These types of process steps have repeatedly been found abstract. *Univ. of Fla. Research Found., Inc. v. GE Co.*, 916 F.3d 1363, 1367 (Fed. Cir. 2019) (collecting cases finding steps such as collecting, analyzing, manipulating, and displaying data abstract).

As Plaintiffs acknowledge, the alleged improvement instead lies in recovering the public key Q from the signature itself using the formula $Q = r^{-1}(sR - eG)$. Opp. at 18-19. Once again, the mathematical formula—the algorithm—is the focus of the claim. That is not enough. *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) ("[A] process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible"); *Parker*, 437 U.S. at 595.

Plaintiffs again argue about the claim being a technological solution to a technological problem. Opp. at 17–19. But like the analysis for the 960 and 062 patents, even accepting that as true for purposes of this motion, the alleged improvement here is to the pre-existing Elliptic Curve Digital Signature Algorithm (ECDSA) itself: recovering the public key for faster verification. 827 patent, 4:16-27 (stating that "improvement of ECDSA verification time is important"); 5:63-65 ("The present invention is exemplified by reference to verification of digital

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[6] Here too, Plaintiffs concede that only claims 1-5 of each patent are asserted. Opp. at 18, n.11, 24, n. 16. Claim 1 of the 827 patent is thus representative of the claims. Claim 1 of the 370 patent contains the same algorithmic steps and merely adds generic "processor," "computing device," and "network" hardware, which the Federal Circuit has repeatedly found cannot render a claim non-abstract. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1345 (Fed. Cir. 2018). Dependent claims 2-5 in each patent are identical and only add additional details concerning the algorithm itself or its field of use. Mot. at 21-22.

signatures, in particular those signatures generated using ECDSA"). And a "claim for a ***new*** abstract idea is still an abstract idea." *Synopsys*, 839 F.3d at 1151. Unlike in *Enfish*, the claims here do not improve the functionality of the computer itself. *Stanford I*, 989 F.3d at 1374 ("[C]laim 1 neither requires, nor results in, a specialized computer with a specialized memory or processor."); *Intell. Ventures*, 792 F.3d at 1370 (holding that increasing the "speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea").[7]

Plaintiffs' argument that ECDSA is computer-centric technology does not change the outcome. *PersonalWeb*, 8 F.4th at 1316 ("The claims do this in a computer environment, but that doesn't transfigure an idea out of the realm of abstraction"); *Optis Cellular Tech. LLC v. Apple Inc.*, 139 F.4th 1363, 1380 (Fed Cir. 2025) ("[T]he claims are directed to reciting an equation that outputs a value to be used as the specific start position for decoding information in a cellular network. This is an ineligible mathematical formula."); *Digitech*, 758 F.3d at 1351 (holding that "a process that employs mathematical algorithms to manipulate existing information to generate additional information is not patent eligible."). There is nothing "more" in the claims here other than applying the allegedly improved algorithm to input data to obtain output data (a public key). The claims are thus directed at a patent-ineligible mathematical algorithm. *Parker*, 437 U.S. at 595; *see RecogniCorp*, 855 F.3d at 1327 (finding that a process that, like here, "started with data, added an algorithm, and ended with a new form of data" is an abstract idea).

Plaintiffs' reliance on *Diamond v. Diehr*, 450 U.S. 175 (1981) is off-base. Those claims were directed to transforming "raw, uncured synthetic rubber, into a different state" and the applicants sought "patent protection for a process of curing synthetic rubber." *Id*. at 184–87.

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[7] The claimed invention uses only "general purpose computers connected to a network or specialized devices such as cell phones, pagers, PDA's, or the like." 827 patent, 6:16-20.

Thus, the claims were directed to an "industrial process." *Id*. at 191–93. The claims here are not remotely similar. Instead, "[t]he sole practical application of the algorithm [(i.e., the claimed improved version of the ECDSA] was in connection with the programming of a general purpose digital computer… which cannot be the subject of a patent." *Id*. at 185–86.

TQP Dev., LLC v. Intuit Inc., No. 2:12–CV–180–WCB, 2014 WL 651935 (E.D. Tex. Feb. 19, 2014) does not hold otherwise. The claims in *TQP* were patent eligible, not because the claims are in the field of data encryption, but because they "involve[] a way of making computer communication ***itself*** more effective by making that communication more secure." 2014 WL 651935, at *7. The claimed improvement here is not to the computer itself but is an alleged improvement to an algorithm (ECDSA) that merely invokes computers as a tool.

As for *Alice* step two, Plaintiffs merely reiterate the background and the claimed advantage of the invention and conclude that the claim "covers a patent-eligible inventive concept." Opp. at 22-23. But reviewing claim 1 reveals that other than the allegedly improved ECDSA for recovering the public key, there are no "additional features" to "transform the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221. Indeed, the entirety of the claim is the algorithm, and as such it fails step two as a matter of law. "[T]he relevant inquiry is not whether the claimed invention as a whole is unconventional or non-routine," but "whether the claim limitations ***other than*** the invention's use of the ineligible concept to which it was directed were well-understood, routine and conventional." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). Here, there are simply no claim limitations beyond the algorithm's application to the input data to produce the public key.[8]

[8] Plaintiffs make no arguments that claim construction is required and thus have waived any such argument.

Accordingly, the asserted claims of the 827 and 370 patents fail both steps of the *Alice* inquiry because they recite abstract, mathematical operations not eligible for patent protection.

III. The 286 Patent Claims Fail Both *Alice* Steps Under Plaintiffs' Analysis

Claim 1 of the 286 patent is not materially different from all the claims analyzed above: it claims an improved way of performing a Montgomery-style reduction mathematical algorithm. Claim 1[9] contains 3 steps: (1) obtaining an operand; (2) computing a modified operand using a reduction value; and (3) outputting the modified operand. The computing step involves the alleged improvement to the standard Montgomery reduction algorithm. This is another example of a non-eligible improvement to an abstract idea, as admitted in the patent itself. 286 patent, 3:21-22 (the objective of the invention is "[t]o improve the reduction efficiency of a Montgomery machine"). Such an improvement "does not qualify as an improvement to a technological process" but rather is "an enhancement to the abstract mathematical calculation [] itself." *In re Board of Trs. of Leland Stanford Junior Univ.*, 991 F.3d 1245, 1251 (Fed. Cir. 2021). Even assuming the claimed improved algorithm "yields different or better results," it is still a mathematical algorithm and "does not render [the claim] patent eligible." *Id*.

Plaintiffs cite the specification in arguing that the claim describes "how a computer performs a new kind of Montgomery-style reduction," which is an alleged technological improvement. Opp. at 26–28. Plaintiffs assert that the improvement "can reduce the number of computations and registers needed" and the improved method makes it convenient to perform modified reduction in some known computer architectures. *Id*. Even accepting that is true, first, an "improved mathematical analysis" (i.e., reduced number of computations) is not patentable

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[9] Plaintiffs concede that only claim 1 and dependent claims 5, 6, and 9 are asserted. Opp. at 30. Claim 1 is therefore plainly representative, as the dependent claims add only features directed to the field of use (claims 5, 6) or the type of calculation used (claim 9). Mot. at 27-28.

subject matter. *SAP*, 898 F.3d at 1168. Second, "[t]he § 101 inquiry must focus on the language of the Asserted Claims themselves." *Synopsys*, 839 F.3d at 1149, and details from the specification cannot be imported into the claims. *ChargePoint*, 920 F.3d at 769. Here, claim 1 has none of the alleged technological improvements. Plaintiffs' analogy to *Enfish* is again unpersuasive because while the claims there "improve the way a computer stores and retrieves data in memory," 822 F.3d at 1339, the claims here, as Plaintiffs tacitly admit, only recite an improved mathematical algorithm implemented on a generic computer. Opp. at 27-28; *see Trinity*, 72 F.4th at 1362-63. Once again, a new and improved algorithm executed on a generic computer is still non-eligible. *Synopsys*, 839 F.3d at 1151 ("[A] claim for a new abstract idea is still an abstract idea"). Claim 1 covers at most a "new abstract idea," and thus fails step one.[10]

For step two, Plaintiffs again make conclusory statements that the claim recites an inventive concept. But they fail to identify any "additional features" to "transform the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221. There is "not much" else in the claim other than the abstract idea, which fails step two. *PersonalWeb*, 8 F.4th at 1319; *see Stanford I*, 989 F.3d at 1373-74 (holding that "simply storing information and providing it upon request" does not transform the abstract idea into eligible subject matter).

Accordingly, the asserted claims of the 286 patent fail both steps of the *Alice* inquiry because they recite abstract, mathematical operations not eligible for patent protection.

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[10] Plaintiffs identify "least significant word" and "word" as terms that *may* require construction, but fail to propose any constructions, and fail to explain how constructions would change the analysis. Opp. at 27-28. The 286 patent concedes that the invention may be "implemented as an apparatus in hardware or in software (computer readable instructions embodied in/on a computer readable medium)." 286 patent, 4:2-5. At bottom, claim construction will not matter because, even assuming the claim is directed at computer-based technology, "an abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment." *Recentive Analytics, Inc. v. Fox Corp.*, 134 F.4th 1205, 1213 (Fed. Cir. 2025).

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that a true and correct copy of the foregoing document has been served on counsel of record, who are deemed to have consented to electronic service, on July 15, 2026, via electronic filing using the Court's CM/ECF system.

/s/ Brian E. Ferguson

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