United States Court of Appeals for the Federal Circuit

BEARBOX LLC, AUSTIN STORMS,
Plaintiffs-Appellants

v.

LANCIUM LLC, MICHAEL T. MCNAMARA, RAYMOND E. CLINE, JR.,
Defendants-Appellees

2023-1922

Appeal from the United States District Court for the District of Delaware in No. 1:21-cv-00534-GBW-CJB, Judge Gregory Brian Williams.

Decided: January 13, 2025

BENJAMIN T. HORTON, Marshall, Gerstein & Borun LLP, Chicago, IL, argued for plaintiffs-appellants. Also represented by JOHN LABBE, CHELSEA MURRAY, RAYMOND R. RICORDATI, III.

MARK CHRISTOPHER NELSON, Barnes & Thornburg LLP, Dallas, TX, argued for defendants-appellees. Also represented by ADAM M. KAUFMANN, Chicago, IL; CHAD S.C. STOVER, Wilmington, DE.

Before CHEN, BRYSON, and STOLL, *Circuit Judges*.

STOLL, *Circuit Judge*.

Lancium allegedly stole Austin Storms' thunder and patented it. This case centers around a conversation over cocktails and dinner at a Bitcoin mining conference, a follow-up email with four attachments, and a subsequent patent. Based on the dinner conversation and email attachments, Mr. Storms asserts that Lancium's patent must be corrected to name him as an inventor.

BearBox LLC and Mr. Storms (collectively, "BearBox") appeal the United States District Court for the District of Delaware's grant of summary judgment to Lancium LLC, Michael T. McNamara, and Dr. Raymond E. Cline, Jr. (collectively, "Lancium") on BearBox's Louisiana state law conversion claim, which the district court held to be preempted, as pled, by federal patent law. J.A. 63–91. BearBox also appeals the district court's exclusion of BearBox's expert's supplemental report. *BearBox LLC v. Lancium LLC*, No. 21-534, 2022 WL 17403466 (D. Del. Nov. 23, 2022) ("*Supplemental Report Decision*"). Last, BearBox appeals the district court's denial of BearBox's claim that Mr. Storms was either a sole or joint inventor of U.S. Patent No. 10,608,433 (the "'433 patent"). *BearBox LLC v. Lancium LLC*, No. 21-534, 2023 WL 2367390 (D. Del. Mar. 6, 2023) ("*Inventorship Decision*"). We affirm the district court's judgment on each issue.

BACKGROUND

I

The following facts are taken primarily from the district court's undisputed findings of fact in the *Inventorship Decision*.

Mr. Storms is the founder and sole employee of BearBox LLC. He has significant experience with Bitcoin mining. For instance, in 2017, Mr. Storms designed and built

a half-megawatt datacenter for Bitcoin mining in his father's karate studio. At the time, Mr. Storms' implementation was unprofitable due to the price of electricity and the vast amount of power needed for Bitcoin mining. In 2018, Mr. Storms founded BearBox LLC to design and develop mobile cryptocurrency datacenters. BearBox LLC is a Louisiana entity with a principal place of business in Mandeville, Louisiana.

Mr. McNamara and Dr. Cline co-founded Lancium in November 2017 with the intention of co-locating flexible datacenters, such as Bitcoin miners, at windfarms to exploit the highly variable power output of windfarms. To exploit the power output, Lancium would "ramp down" its flexible datacenters to allow the windfarm to sell that power to the electrical grid when energy prices were high. Conversely, when power prices were low, Lancium would "ramp up" its flexible datacenters. In other words, Lancium would buy low, sell high. Because Lancium's co-location was "behind-the-meter,"[1] Lancium agreed to cut back its power usage based on real-time signals indicating the price of power so that the windfarm could capture power when the price of power was high. Lancium disclosed these concepts in International Publication No. WO 2019/139632 (the "'632 application") in February 2018, fifteen months before Mr. Storms met anyone at Lancium.

The '632 application, titled "Method and System for Dynamic Power Delivery to a Flexible Datacenter Using Unutilized Energy Sources," names both Mr. McNamara and Dr. Cline as inventors and has a priority date of January 2018. Figure 6 of the '632 application depicts the flexible datacenter (200) connected to the windfarm, as well as

---

[1] "Behind-the-meter" means "that the load is connected directly to a power generation entity, i.e., a wind farm, and transmits power to the load before transmitting power to the grid." J.A. 10 ¶ 31.

connections to the local power substation (690) and the grid (660).

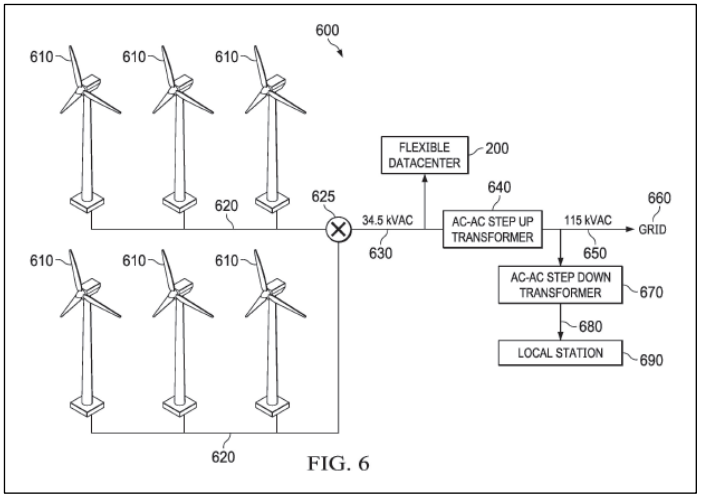

FIG. 6

'632 application, Fig. 6.

Figure 2 of the '632 application shows individual computing systems (100) of the flexible datacenter organized into racks and subsets (240), as well as a datacenter control system (220), which may be a computing system configured to "dynamically modulate power delivery to one or more computing systems 100." J.A. 8888–91 ¶¶ 30, 33, 38.

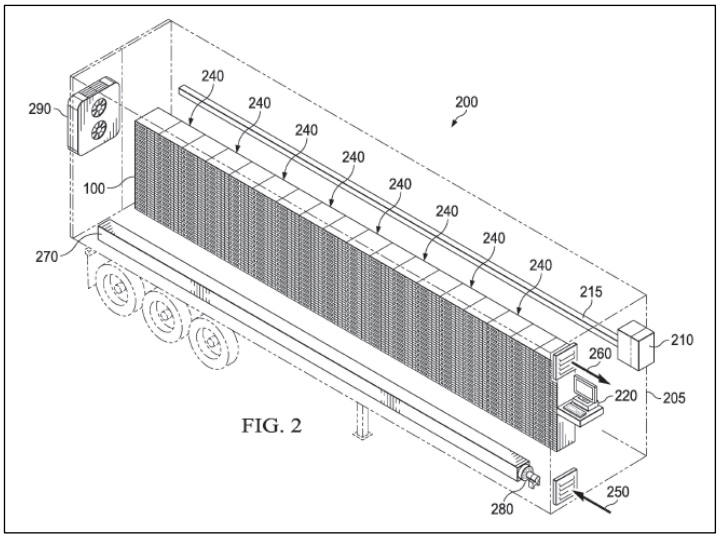

FIG. 2

'632 application, Fig. 2.

The '632 application also explains that the flexible datacenter—based on an operational directive or monitored conditions, including economic conditions—would control its computing systems on a granular level, i.e., on the individual computing system or collections of computing system level, to ensure that its systems consumed less power than the windfarm would generate. Thus, the flexible datacenter would monitor information from the windfarm indicating how much power the flexible datacenter could consume.

At the time of the '632 application's filing, Lancium monitored various conditions, including the real-time price of power; the price of Bitcoin; and other information enabling Lancium to determine whether it was profitable to mine Bitcoin at any given time.

By October 2018, before Mr. Storms met anyone at Lancium, Lancium was operating 120 cryptocurrency miners at its facility in Texas with modified off-the-shelf software to control its cryptocurrency miners. Lancium's system monitored some of the information disclosed in the

'632 application, including power and Bitcoin price, to determine a performance strategy based on whether it was profitable to mine Bitcoin. For example, Lancium calculated the breakeven price for different types of cryptocurrency miners and used this calculation to determine when to turn the miners on or off.

Beginning in 2019, Lancium began to internally develop its own software to control its cryptocurrency miners. And by May 1, 2019, Lancium's proprietary software monitored signals from a windfarm, the Electric Reliability Council of Texas, Bitcoin pricing, real-time power pricing, hash rate, block height, and the miners' actual power usage. With that information, Lancium's proprietary software could determine a target power level at which the miners should operate and then send instructions to some or all Bitcoin miners to suspend or restart Bitcoin mining. This proprietary software eventually became known as Lancium Smart Response. While Lancium developed the software that became Lancium Smart Response, Lancium also worked with various companies to design and manufacture portable mining containers for Lancium's use.

Around the same time, from late-2018 into early 2019, Mr. Storms began to design, build, and test the BearBox system—a system of relays, power-distribution units, and a computer-user interface that allowed a remote user to control individual relays so that Bitcoin miners could be turned on and off. In November 2018, Mr. Storms met someone through Twitter and learned the basics of the energy market. With this knowledge in hand, Mr. Storms started exploring the idea of a system that mined cryptocurrency when electricity prices were low but sold wind energy to the grid when prices were favorable, i.e., buy low, sell high. In April 2019, Mr. Storms' Twitter contact wrote to him that it would be "super cool to write a little Python script" that controlled the mining site based on various economic conditions, such as the cost of electricity. *Inventorship Decision,* at *5, ¶ 32 (citation omitted). Mr. Storms

got to work and began to write source code for his BearBox system. He completed the source code by May 7, 2019, but he never provided the source code to Lancium.

Mr. Storms was first introduced to Lancium in May 2019. On May 3, 2019, Mr. Storms attended the "FCAT Mining Summit" in Boston, Massachusetts, to learn more about the cryptocurrency industry and to meet potential customers for his BearBox containers. *Id.* at *10, ¶ 63. At the FCAT Mining Summit, Mr. Storms met Mr. McNamara for the first time at a cocktail reception. Following the cocktail reception, a small group of people, including Mr. Storms, Mr. McNamara, and Lancium's CFO, went to dinner.

The dinner lasted approximately two hours. Mr. Storms sat across the table from Mr. McNamara. Over dinner the two discussed the BearBox system, and Mr. McNamara showed interest in its specifications and price. Mr. Storms never showed Mr. McNamara any BearBox documents or source code. Following dinner, Mr. Storms and Mr. McNamara exchanged phone numbers but never met again. Mr. Storms also never met or spoke to Dr. Cline or any other Lancium employee.

Shortly after the FCAT Mining Summit dinner, Mr. Storms and Mr. McNamara exchanged a few text messages about Mr. Storms' BearBox system. Mr. McNamara expressed interest in Mr. Storms' BearBox system as a potential alternative to another system that Lancium was exploring. On May 8, 2019, Mr. McNamara sent a text message to Mr. Storms asking for his BearBox design specifications. The next day, Mr. Storms sent a single email to Mr. McNamara with the subject line "BearBox 20' product details and supporting documents." *Id.* at *11, ¶ 73 (citation omitted). The body of Mr. Storms' email reads:

> Hey Michael,
>
> See attached for the 20' BearBox product details and some supporting docs. I've also attached some recent modeling data from one of the Exelon wind sites (based on publicly available marketplace data) – I can model for any pricing node you guys might be interested in reviewing.
>
> Let me know if you have any questions!
>
> Talk soon,
>
> A

Id. at *11–12, ¶ 73 (citation omitted). Attached to Mr. Storms' email were the following documents: (1) a one-page BearBox Product Specification Sheet; (2) an annotated diagram of BearBox's Automatic Miner Management System; (3) specification sheets on fans and other hardware components; and (4) a data file modeling a simulation of the BearBox system.

Mr. Storms and Mr. McNamara did not communicate following Mr. Storms' email. The district court found that Mr. McNamara credibly testified that, upon receipt of Mr. Storms' email, he spent no more than three minutes reviewing the attachments and that he considered the price of the BearBox system to be too high compared to other container manufacturers Lancium solicited. *Id.* at *13, ¶ 84.

On October 28, 2019, Lancium filed United States Provisional Patent Application No. 62/927,119 (the "'119 application"), which ultimately issued as the '433 patent. The '433 patent is titled "Methods and Systems for Adjusting Power Consumption Based on a Fixed-Duration Power Option Agreement," and lists Mr. McNamara and Dr. Cline as the inventors. '433 patent cover.

The '433 patent relates to a set of computing systems that are configured to perform computational operations

using power from a power grid. *See* '433 patent col. 5 ll. 48–50. The '433 patent also relates to a control system that monitors a set of conditions and receives power option data that is based, at least in part, on a power option agreement, which specifies minimum power thresholds associated with time intervals. *See id.* at col. 5 ll. 50–55. The set of computing systems may also determine a performance strategy for a load based on a combination of the power option data and one or more monitored conditions. *See id.* at col. 5 ll. 55–60. The performance strategy may specify a power consumption target for the load for each time interval such that each power consumption target is equal to or greater than the minimum power threshold associated with each time interval. *Id.* at col. 5 l. 60–col. 6 l. 13. The computing systems may provide instructions to perform one or more computational operations based on the performance strategy. *See id.* at col. 6 ll. 14–65. Representative claim 1 reads:

> 1. A system comprising:
>
> [a] a set of computing systems, wherein the set of computing systems is configured to perform computational operations using power from a power grid;
>
> [b] a control system configured to:
>
> [b1] monitor a set of conditions;
>
> [b2] receive power option data based, at least in part, on a power option agreement, wherein the power option data specify: (i) a set of minimum power thresholds, and (ii) a set of time intervals, wherein each minimum power threshold in the set of minimum power thresholds is associated with a time interval in the set of time intervals;
>
> [b3] responsive to receiving the power option data, determine a performance strategy for the set of computing systems based on a combination of at

> least a portion of the power option data and at least one condition in the set of conditions, wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval in the set of time intervals, wherein each power consumption target is equal to or greater than the minimum power threshold associated with each time interval; and
>
> [b4] provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy.

Id. at col. 59 ll. 2–28.

II

At some point, BearBox caught wind of the '433 patent and filed this lawsuit against Lancium asserting, *inter alia*, claims of sole or joint inventorship of the '433 patent and conversion under Louisiana state law.

Lancium moved for summary judgment arguing that BearBox's Louisiana state law conversion claim fails as a matter of law because federal patent law preempts it as pled. The district court agreed and dismissed the conversion claim as preempted by federal patent law. In reaching its decision, the district court determined that "it is clear that BearBox's conversion claim is 'patent-like' in nature and also turns on a determination of inventorship regarding the subject matter of the '433 patent." J.A. 86.

Lancium also moved for summary judgment as to BearBox's sole or joint inventorship claims. The district court denied summary judgment as to BearBox's sole inventorship claim because the district court could not "say that no reasonable fact finder could find that there is clear and convincing evidence establishing Storms' right to be named" as an inventor on the '433 patent. J.A. 73. And "[b]ecause there are genuine issues of material fact surrounding the extent of [Messrs.] Storms, McNamara, and [Dr.] Cline's

collaboration related to the subject matter claimed in the '433 patent," the district court denied Lancium's motion as to BearBox's joint inventorship claim. J.A. 79. As such, the inventorship claims proceeded to a bench trial.

In the interim, the district court struck Dr. Stanley McClellan's entire supplemental technical expert report. *Supplemental Report Decision*, at *1. The district court determined that BearBox had acted in bad faith when it served Dr. McClellan's supplemental report on November 11, 2022, nearly three weeks before the start of a three-day bench trial and approximately five months after the close of expert discovery, without seeking leave of court or Lancium's consent, as required by the scheduling order.

Following the three-day bench trial, the district court issued its findings of fact and conclusions of law. *Inventorship Decision*. The district court determined that Lancium's witnesses had credibly testified about Lancium's software, its research and development activities prior to the FCAT Mining Summit, the conversation with Mr. Storms at the FCAT Mining Summit dinner, and their handling of Mr. Storms' email. With respect to each claim of the '433 patent, the district court determined that BearBox failed to prove by clear and convincing evidence that Mr. Storms either conceived of, or communicated prior to Lancium's independent conception, the subject matter of any claim of the '433 patent. Therefore, the district court concluded that BearBox had not met its burden by clear and convincing evidence to establish Mr. Storms' sole or joint inventorship claims. The district court then entered final judgment.

BearBox appeals. We have jurisdiction under 28 U.S.C § 1295(a)(1).

DISCUSSION

I

We begin our analysis with whether federal patent law preempts BearBox's Louisiana state law conversion claim, as pled. The district court granted summary judgment dismissing BearBox's conversion claim based on conflict preemption. We review a district court's grant of summary judgment under the law of the regional circuit, here the Third Circuit. *Acceleration Bay LLC v. 2K Sports, Inc.*, 15 F.4th 1069, 1075 (Fed. Cir. 2021). The Third Circuit reviews the grant of summary judgment de novo. *Id.* (citing *Azur v. Chase Bank, USA, Nat'l Ass'n*, 601 F.3d 212, 216 (3d Cir. 2010)). Federal Circuit law governs whether federal patent law preempts a state law claim, a question we review de novo. *Ultra-Precision Mfg., Ltd. v. Ford Motor Co.*, 411 F.3d 1369, 1376 (Fed. Cir. 2005).

"Under the Supremacy Clause, state law that conflicts with federal law is without effect." *Id.* at 1377 (citing U.S. Const. art. VI, cl. 2; *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 168 (1989); *Hunter Douglas, Inc. v. Harmonic Design, Inc.*, 153 F.3d 1318, 1331 (Fed. Cir. 1998), *overruled in part*, *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356, 1361 (Fed. Cir. 1999)). There are three types of preemption: explicit, field, or conflict preemption. *Hunter Douglas*, 153 F.3d at 1332. This case concerns only conflict preemption. "Conflict preemption occurs when state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Ultra-Precision*, 411 F.3d at 1377 (internal quotation marks and citation omitted).

While there are several congressional objectives, "public disclosure and use . . . is the centerpiece of federal patent policy." *Bonito Boats*, 489 U.S. at 157. Indeed, "the efficient operation of the federal patent system depends upon substantially free trade in publicly known, unpatented design and utilitarian conceptions." *Id.* at 156. For

this reason, "[s]tates may not offer patent-like protection to intellectual creations which would otherwise remain unprotected as a matter of federal law." *Id.*; *Ultra-Precision*, 411 F.3d at 1377–78 ("Federal law preempts state law that offers 'patent-like protection' to discoveries unprotected under federal patent law." (citation omitted)). "[A] state law that substantially interferes with the enjoyment of an unpatented utilitarian or design conception which has been freely disclosed by its author to the public" is preempted by federal patent law because it "contravenes the ultimate goal of public disclosure and use." *Bonito Boats*, 489 U.S. at 156–57.

Under Louisiana law, "[a] conversion is an act in derogation of the plaintiff's possessory rights and any wrongful exercise or assumption of authority over another's goods, depriving him of the possession, permanently or for an indefinite time." *Bihm v. Deca Sys., Inc.*, 226 So. 3d 466, 478 (La. App. 1 Cir. 2017). Of course, the Louisiana conversion cause of action is not *ipso facto* preempted by the federal patent laws. It covers a broad range of conduct that does not necessarily implicate federal patent law. Indeed, BearBox contends that its state-law claim is not based on acts of patent infringement or on a determination of patent inventorship but is instead based on acts of converting documents and information, for which it seeks compensation. Appellants' Br. 34–35. This contention, however, does not square with how BearBox pled the conversion claim, as explained below. And when determining whether federal patent law preempts a state law cause of action, we do not mechanically compare the required elements of the state law claim to the objectives embodied by federal patent law. Rather, we determine whether federal patent law preempts the state law claim because the state law claim *as pled* "stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Ultra-Precision*, 411 F.3d at 1378 (evaluating whether an unjust enrichment claim was preempted as pled); *Univ. of*

Colo. Found., Inc. v. Am. Cyanamid Co., 196 F.3d 1366, 1371 (Fed. Cir. 1999) (same for unjust enrichment and fraudulent nondisclosure claims). Therefore, the narrow question this case presents is whether the specific conversion claim pled by BearBox—seeking damages for Lancium's "improper and unauthorized use" of BearBox's unpatented technology, including system designs, documents, data, and know-how, J.A. 1650 ¶¶ 87, 90—aims to frustrate federal patent law policies and "offer patent-like protection to intellectual creations which would otherwise remain unprotected as a matter of federal law." *Bonito Boats*, 489 U.S. at 156. If so, BearBox's claim would be preempted.

Here, we agree with the district court that BearBox's conversion claim is preempted because the conversion claim, as pled, is essentially an inventorship cause of action and patent infringement cause of action, and thus seeks "patent-like protection" for ideas that are unprotected under federal law. *Bonito Boats*, 489 U.S. at 156. A review of BearBox's complaint is instructive.

As pled, BearBox's conversion claim explicitly seeks to recoup monetary damages from Lancium for its use, sale, and monetization of technology that BearBox purports to have invented and thus now owns. In Count V (conversion by Lancium, Mr. McNamara, and Dr. Cline), BearBox alleges "Austin Storms, in his capacity as founder and President of BearBox, *conceived, developed, and reduced to practice* BearBox's technology. Plaintiffs *own* BearBox's technology, including system designs, documents, data, and know-how." J.A. 1649 ¶ 85 (emphases added). The rest of the conversion claim reads like a patent infringement cause of action as follows:

> Without [BearBox's] consent, [Lancium] intentionally and willfully assumed dominion and control over BearBox's technology, including system designs, documents, data, and know-how, and

> improperly used it to modify their Smart Response™ software, and corresponding system designs, to function as reflected in BearBox's system designs, documents, data, and know-how, and subsequently *used*, *sold*, *licensed*, and procured investments related to, and *otherwise monetized*, that software for substantial profit.

J.A. 1650 ¶ 87 (emphases added). BearBox also alleges "[Lancium's] actions constitute an improper and *unauthorized use* of [BearBox's] property." J.A. 1650 ¶ 89 (emphasis added). And BearBox asserts, "[a]s such, [BearBox LLC and Mr. Storms] are entitled to damages resulting from [Lancium's] improper and unauthorized use." J.A. 1650 ¶ 90; *see also* J.A. 1653 ¶ G.

Here, the conversion claim is replete with "patent-like" language typically invoked when a party asserts inventorship or infringement of a patent, including that Mr. Storms "conceived, developed, and reduced to practice" certain technology and that "Lancium improperly used" that technology. J.A. 1649 ¶ 85; J.A. 1650 ¶ 87; *see Blue Gentian, LLC v. Tristar Prod., Inc.*, 70 F.4th 1351, 1358 (Fed. Cir. 2023) ("An alleged joint inventor must show that he contributed significantly to the *conception*—the definite and permanent idea of the invention—or *reduction to practice* of at least one claim") (emphases added) (citation omitted); 35 U.S.C. § 271(a) ("[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . during the term of the patent therefor, infringes the patent."). The damages that BearBox seeks to recoup—"including damages, consequential damages, disgorgement of [Lancium's] ill-gotten profits . . . and/or all other appropriate financial relief," J.A. 1653 ¶ G—are also "patent-like" in that they seek monetary damages adequate to compensate for "[Lancium's] improper and unauthorized use." J.A. 1650 ¶ 90. The district court expressly found that BearBox's damages expert further supported that BearBox seeks patent-like damages

because he "reaffirm[ed] that BearBox seeks monetary damages in, effectively, a repackaged form of a royalty payment, and reassert[ed] BearBox's theme that monetary damages are necessary to compensate or recognize BearBox for use of BearBox's converted technology." J.A. 88–89. BearBox does not challenge that finding on appeal. Tellingly, the patent statute provides that the patentee is entitled to recover "damages adequate to compensate for the infringement, but in no event less than a reasonable royalty for the use made of the invention by the infringer." 35 U.S.C. § 284. In contrast, under Louisiana law, "[t]he measure of damages for wrongful conversion is the return of the property, or if it cannot be returned, the value of the property at the time of conversion." *Capers v. NorthPro Prop. Mgmt., LLC*, 321 So. 3d 502, 514 (La. App. 2 Cir. 2021). But BearBox does not just demand the return of its allegedly converted property or its value at the time of the alleged conversion, BearBox persistently pursues more—monetary damages akin to those awarded under federal patent law.

Moreover, "federal patent law generally precludes a plaintiff from recovering a [damages] award premised on defendant's making, using, offering to sell, or selling an unpatented discovery after plaintiff makes the discovery available to the public." *Ultra-Precision*, 411 F.3d at 1380; *cf. Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 492 (1974) (concluding "patent law does not pre-empt trade secret law"). Here, BearBox's technology is not patented, was freely shared with others,[2] and is otherwise in the public domain. Were we to allow the conversion claim to move

---

[2] Cocktail hour, dinner conversation, and Mr. Storms' email aside, the district court also found that Mr. Storms separately shared portions of his source code with another third-party individual. *See Inventorship Decision*, at *13 ¶ 83.

forward as pled, then BearBox, like a patentee, would potentially recover lost profits or a reasonable royalty from its competitor, Lancium, for Lancium's alleged use of BearBox's technical information that "otherwise remain[s] unprotected as a matter of federal law." *Bonito Boats*, 489 U.S. at 156. Such a cause of action, as pled here, is clearly preempted.

For all these reasons, we affirm the district court's determination that federal patent law preempts BearBox's state law conversion claim.

II

Now we address the district court's decision to strike Dr. McClellan's supplemental report *in toto*. We review evidentiary rulings not unique to patent law under the law of the regional circuit. *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1285 (Fed. Cir. 2020). Here, the Third Circuit reviews a district court's evidentiary rulings for an abuse of discretion. *Wi-LAN Inc. v. Sharp Elecs. Corp.*, 992 F.3d 1366, 1370 (Fed. Cir. 2021) (citing *Acumed LLC v. Advanced Surgical Servs., Inc.*, 561 F.3d 199, 211 (3d Cir. 2009)); *ZF Meritor, LLC v. Eaton Corp.*, 696 F.3d 254, 268 (3d Cir. 2012).

BearBox contends that the district court abused its discretion because (1) Dr. McClellan's untimely supplemental report was justified; (2) Dr. McClellan's supplemental report did not offer new opinions; and (3) the district court incorrectly weighed the *Pennypack* factors in favor of excluding the supplemental report. None of BearBox's contentions persuades us that the district court abused its discretion.

A

BearBox first argues that its filing of Dr. McClellan's untimely supplemental report was justified because Lancium raised a new claim construction dispute (triggering the need for a supplemental report) for the first time after

the close of discovery. Appellants' Br. 38–40. Therefore, in BearBox's view, the district court's "extreme sanction"—striking an expert's supplemental report—was "contrary to Federal Circuit and Third Circuit law." Appellants' Br. 38. BearBox's argument, however, rests on a mistaken view of the record.

Lancium did not raise the claim construction dispute for the first time after the close of discovery. To be sure, the district court held a *Markman* hearing and adopted Lancium's proposed constructions of the disputed terms after the close of discovery. *See* J.A. 6005–20. Critically, however, these adopted constructions were not new to BearBox or Dr. McClellan. The district court determined that "both BearBox and Dr. McClellan were equipped with Lancium's proposed constructions [of the disputed terms] six months prior to supplementing Dr. McClellan's reports." *Supplemental Report Decision*, at *2. And where, as here, "claim construction remains an open issue at the time the parties serve expert reports," BearBox had "an obligation" under the district court's own precedent "to prepare for the fact that the court may adopt [the other party's claim] construction." *Id.* (quoting *St. Clair Intell. Prop. Consultants, Inc. v. Matshushita Elec. Indus. Co., Ltd.*, No. 04-1436, 2012 WL 1015993, at *5 (D. Del. Mar. 26, 2012)). In other words, under this precedent, BearBox should have addressed Lancium's proposed constructions in its expert reports. *Id.* (citing *St. Clair*, 2012 WL 1015993, at *5; *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 270 F. Supp. 2d 519, 524 (D. Del. 2003)). BearBox failed to do so. In truth, BearBox's position is even worse because, in his reply report, Dr. McClellan acknowledged and generally disagreed with Lancium's proposed constructions yet failed to go one step further and apply and analyze Lancium's proposed constructions until his untimely supplemental report. *Id.* On this record, the district court's rejection of BearBox's proffered justification for its delay does not constitute an abuse of discretion.

B

Next, BearBox argues that the district court erred in concluding that Dr. McClellan's supplemental report offered new opinions. *See* Appellants' Br. 40–44. In our view, however, the district court carefully compared Dr. McClellan's opening and reply reports with the supplemental report. We agree with the district court that the "opinions in [Dr. McClellan's] Supplemental Report are beyond mere 'elaboration' or 'clarification'" for at least the reasons the district court identifies. *Supplemental Report Decision,* at *2. For example, the district court correctly determined that Dr. McClellan's supplemental report "offer[ed] analysis of how Austin Storms allegedly conceived of a system where the power entity held the option," whereas Dr. McClellan previously opined "that the load, not the power entity, held the option in a power option agreement." *Id.* at *1 (citing J.A. 6105–06 ¶¶ 25–26; J.A. 6149 (157:1–18)).

On appeal, BearBox asserts:

> [T]he district court erred in concluding that [Dr.] McClellan "previously opined that load was not required to use the 'minimum power threshold,'" [J.A. 6131](84:18–85:1) and that "neither [his] Opening Report nor his Reply report . . . explain how BearBox's system operated by maintaining 'a minimum amount of power a load must use during an associated time interval.'"

Appellants' Br. 40 (fourth alteration in original). This assertion fails.

BearBox essentially argues that Dr. McClellan previously opined that the load was required to use the minimum power threshold. In support, it identifies portions of Dr. McClellan's original report, including specific source code modules, such as the arb_main_AEC.py module, as evidence of Dr. McClellan's understanding that

Mr. Storms' source code simulation included a function that maintained the energy used by the load. Appellants' Br. 41 (citing J.A. 2741–42 ¶¶ 66–67). While BearBox describes this energy used by the load in its appeal brief as "required kw_load usage," nothing in Dr. McClellan's underlying reports specifies that the load is required to use this minimum amount of power. As such, we see no error in the district court's conclusion that "neither Dr. McClellan's Opening Report nor his Reply Report explain how BearBox's system operated by maintaining 'a minimum amount of power a load *must use* during an associated time interval' (i.e., 'minimum power threshold')." *Supplemental Report Decision*, at *2 (emphasis added). Further, as the district court also noted, Dr. McClellan testified that a load was not required to use the minimum power threshold. *Id.* (citing J.A. 6131 (84:18–85:1)). The cited portions of Dr. McClellan's expert reports that BearBox now relies on do not overcome or otherwise rectify Dr. McClellan's clearly contradictory testimony. As such, we see no error in the district court's conclusion that the supplemental report offered new opinions.

C

Finally, we turn to BearBox's contention that even if it offered new opinions, the supplemental report should not have been stricken because striking a supplemental report is an "'extreme sanction,' not normally warranted absent a showing of willful deception or flagrant disregard of court orders." Appellants' Br. 44–45 (citing *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 792 (3d Cir. 1994)). In considering whether the district court abused its discretion in excluding evidence, the Third Circuit considers the *Pennypack* factors:

> (1) "the prejudice or surprise in fact of the party against whom the excluded witnesses would have testified" or the excluded evidence would have been offered; (2) "the ability of that party to cure the

> prejudice"; (3) the extent to which allowing such witnesses or evidence would "disrupt the orderly and efficient trial of the case or of other cases in the court"; (4) any "bad faith or willfulness in failing to comply with the court's order"; and (5) the importance of the excluded evidence.

ZF Meritor, 696 F.3d at 298 (quoting *Meyers v. Pennypack Woods Home Ownership Assn.*, 559 F.2d 894, 904–05 (3d Cir. 1977)). Here, the district court made a finding of bad faith under factor (4) and found that the weight of factors (1), (2), (3), and (5) favor excluding Dr. McClellan's supplemental report. *Supplemental Report Decision*, at *1–3. We see no error in the court's analysis.

First, with respect to factors (1) and (2), as discussed above, the supplemental report "offer[ed] new legal theories and opinions related to BearBox's alleged conception and communication of the subject matter of the '433 patent." *Id.* at *1. Lancium did not receive notice of these new legal theories and opinions until three weeks before trial, nearly five months after the close of expert discovery. The district court correctly concluded the untimely new theories "would ultimately prejudice Lancium, especially at th[e] late juncture of the case." *Id.* at *2. Still, the district court considered whether Lancium could be cured of the prejudice caused by a late supplemental report. But the court correctly found, because of "the strained schedule and quickly approaching trial," that "Lancium ha[d] no meaningful opportunity to conduct rebuttal discovery, prepare a supplemental rebuttal report, or prepare for an additional deposition." *Id.* at *3. BearBox also offered to have Lancium's expert, Dr. Mark Ehsani, provide a supplemental report to address Dr. McClellan's supplemental report. We agree with the district court that while this approach "may cure some prejudice," it "would undoubtedly disrupt the trial process." *Id.* With the strained schedule, there would still be no meaningful opportunity to

"to conduct rebuttal discovery . . . or prepare for an additional deposition." *Id.*

As for factor (3), the district court concluded that "[t]he risk of prejudice suffered by Lancium is uncurable in light of the strained schedule and quickly approaching trial." *Id.* Here, BearBox presents no contrary persuasive evidence and does not demonstrate that the district court's determination was erroneous.

With respect to factor (4), the district court concluded that "BearBox's disregard of the express terms of the Court's Scheduling Order indicate[d] bad faith which weighs in favor of exclusion." *Id.* at *2. The scheduling order indicated that after the close of discovery, "[n]o other expert reports will be permitted without either the consent of all parties or leave of the Court." *Id.* Thus, BearBox was required either to seek leave of the court or to obtain consent from Lancium to serve the supplemental report. But BearBox sought "neither." *Id.* As such, we cannot say the district court's determination of bad faith was erroneous. Where a party fails to comply with the court's scheduling order, the district court has the authority to sanction a party by "prohibiting the disobedient party from . . . introducing designated matters in evidence," i.e., otherwise admissible testimony. Fed. R. Civ. P. 37(b). On this record, the district court did not err in concluding that this factor weighs in favor of exclusion.

Finally, as for factor (5), the district court assessed the importance of the supplemental report in two different ways. First, the district court's careful comparison of Dr. McClellan's opening report and reply report with the supplemental report demonstrates to us that it appreciated the importance of the supplemental report. As noted above, the district court assessed whether the opinions in the supplemental report went beyond mere "elaboration or clarification" and concluded that they did. *Supplemental Report Decision*, at *2 (internal quotation marks omitted).

Second, the district court's alternative assessment of the *Pennypack* factors—which assumes that the supplemental report did not contain new opinions—supports the court's weighing of factor (5). The district court explained that "[e]ven assuming that BearBox was correct that Dr. McClellan's Supplemental Report does not offer new opinions, the Court cannot reasonably conclude that exclusion of that report—which would necessarily reiterate the same opinions proffered in Dr. McClellan's Opening Report and Reply Report—would harm BearBox." *Id.* n.1. Although the district court addressed this counterfactual situation for the sake of argument, we understand it to be another example of the district court assessing the importance of the evidence.

Thus, viewed in the best light for BearBox, we understand the district court to doubt the importance of the supplemental report.

At bottom, "the District Court has considerable discretion in matters regarding expert discovery and case management." *ZF Meritor*, 696 F.3d at 297. The district court here did not abuse its discretion in finding BearBox's supplemental report untimely, nor did the district court abuse its discretion in concluding that the *Pennypack* factors supported its decision.

III

Last, we address the district court's conclusion that BearBox had not met its burden to establish that Mr. Storms was either a sole or joint inventor of the '433 patent. At the outset, we note that BearBox does not challenge any of the district court's underlying factfindings or credibility determinations as clearly erroneous. Instead, BearBox contends that the district court erred in three other respects: (1) in excluding portions of Mr. Storms' testimony as hearsay; (2) in analyzing individual claim elements (rather than a combination of elements) by comparing them, element-by-element, to Mr. Storms'

corroborating documents; and (3) in applying the rule of reason by evaluating corroborating documents in isolation. First, we address the district court's factfindings and legal conclusions; then we turn to, and ultimately reject, BearBox's arguments.

"Under 35 U.S.C. § 256, a district court may order correction of inventorship when it determines that an inventor has been erroneously omitted from a patent." *Blue Gentian*, 70 F.4th at 1357. "All inventors, even those who contribute to only one claim or one aspect of one claim of a patent, must be listed on that patent." *Vapor Point LLC v. Moorhead*, 832 F.3d 1343, 1348–49 (Fed. Cir. 2016). "Patent issuance creates a presumption that the named inventors are the true and only inventors." *Caterpillar Inc. v. Sturman Indus., Inc.*, 387 F.3d 1358, 1377 (Fed. Cir. 2004). For this reason, the party seeking correction of inventorship must show by clear and convincing evidence that a joint inventor should have been listed. *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1358 (Fed. Cir. 2004).

An alleged joint inventor's testimony alone is insufficient to establish inventorship by clear and convincing evidence. *Ethicon, Inc. v. U.S. Surgical Corp.*, 135 F.3d 1456, 1461 (Fed. Cir. 1998). "Thus, an alleged co-inventor must supply evidence to corroborate his testimony." *Id.* "Corroborating evidence may take many forms," including "contemporaneous documents" or physical evidence, "[c]ircumstantial evidence about the inventive process," and "oral testimony of someone other than the alleged inventor." *Id.*; *see also Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350–51 (Fed. Cir. 2001). "To determine whether testimony has been sufficiently corroborated, a 'rule of reason' test is applied where 'all pertinent evidence is examined in order to determine whether the inventor's story is credible.'" *Blue Gentian*, 70 F.4th at 1357 (quoting *Sandt Tech.*, 264 F.3d at 1350). "A court's conclusion about corroboration under this 'rule of reason' analysis is a factfinding, which we review for clear error."

Id. (citing *Fleming v. Escort Inc.*, 774 F.3d 1371, 1377 (Fed. Cir. 2014)).

"An alleged joint inventor must show that he contributed significantly to the conception—the definite and permanent idea of the invention—or reduction to practice of at least one claim." *Id.* at 1358 (citing *Dana-Farber Cancer Inst., Inc. v. Ono Pharm. Co.*, 964 F.3d 1365, 1371 (Fed. Cir. 2020)). These contributions must also arise from "some element of joint behavior, such as collaboration or working under common direction" with the other inventor(s). *Kimberly-Clark Corp. v. Procter & Gamble Distrib. Co., Inc.*, 973 F.2d 911, 917 (Fed. Cir. 1992). This "conception inquiry is fact-intensive." *In re Jolley*, 308 F.3d 1317, 1323 (Fed. Cir. 2002). But "[c]onception is a legal conclusion premised on various underlying facts." *Invitrogen Corp. v. Clontech Lab'ys, Inc.*, 429 F.3d 1052, 1063 (Fed. Cir. 2005).

Similarly, inventorship is ultimately a question of law based on underlying facts. *In re VerHoef*, 888 F.3d 1362, 1365 (Fed. Cir. 2018). As such, we review the district court's overall inventorship determination de novo, and the court's underlying factfindings for clear error. *Dana-Farber*, 964 F.3d at 1370.

Here, following a three-day bench trial on the issue of correction of inventorship, the district court thoughtfully and carefully made findings of fact and conclusions of law and ultimately concluded that the '433 patent does not need to be corrected to list Mr. Storms as either a sole inventor or joint inventor. *Inventorship Decision* at *28. With respect to each claim of the '433 patent, the district court determined that BearBox failed to prove by clear and convincing evidence that Mr. Storms either conceived of, or communicated prior to Lancium's independent conception, the subject matter of any claim of the '433 patent. The only information that Mr. Storms shared with Lancium is a single May 2019 email with four attachments. *Id.* at *11–12.

The four attachments are: (1) a one-page BearBox Product Specification Sheet ("BearBox Spec Sheet"); (2) an annotated diagram of BearBox's Automatic Miner Management System ("Storms' Diagram"); (3) specification sheets on fans and other hardware components; and (4) a data file modeling a simulation of the BearBox system ("Storms' Data File"). *Id.* at *12. Mr. Storms and Mr. McNamara did not communicate following Storms' email.

With respect to the third attachment, Mr. Storms admitted that nothing from the specification sheets on fans and other hardware components related to the subject matter of the '433 patent. *Id.* at *12, ¶ 74. As to the other attachments—the BearBox Product Spec Sheet, Storms' diagram, and Storms' Data File—the district court determined either that these documents did not establish that Mr. Storms conceived of the claimed invention or that Mr. Storms could not establish that he communicated any information prior to Lancium's independent conception of the claimed subject matter. *Id.* at *14–28. "As disclosed in the '632 [a]pplication filed in January 2018, [Lancium] had conceived of a system where a set of computer systems issued instructions to perform computational operations based on a performance strategy derived from monitored conditions . . . and reduced the system to practice by October 2018." *Id.* at *18. We see no error in the district court's analysis. And again, as noted above, BearBox presents no challenge to the district court's factfindings and credibility determinations. Nor does BearBox persuade us that the district court's ultimate inventorship determination was erroneous.

BearBox first contends that the district court improperly excluded as hearsay Mr. Storms' testimony about what he told Mr. McNamara at a cocktail hour and dinner because it "was not offered for the truth of the matter asserted, but only for the sake of proving notice and what information Storms communicated to Lancium." Appellants' Br. 51. There is merit to BearBox's argument that

Mr. Storms' testimony was offered for a non-hearsay purpose. As Lancium points out, however, review of the trial transcript reveals a larger problem for BearBox's challenge on appeal.

It is a fundamental principle of trial practice that, "to preserve for appellate review a claim of error premised on the exclusion of evidence, the aggrieved party must ensure that the record sufficiently reflects the content of the proposed evidence." *Williams v. Drake*, 146 F.3d 44, 49 (1st Cir. 1998); *United States v. DeMuro*, 677 F.3d 550, 567 (3d Cir. 2012); *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1358 (Fed. Cir. 2001); Fed. R. Evid. 103(a)(2). Here, following the district court's ruling from the bench that the testimony was hearsay, counsel for BearBox made no offer of proof as to what Mr. Storms' response would have been if he had been permitted to answer the questions. *See* J.A. 8025–26 (Trial Tr. 79:3–82:12). That failure is fatal. Only on appeal after extensive questioning at argument did BearBox's counsel first start to identify what Mr. Storms' testimony would have included about what he told Mr. McNamara at dinner. *See* Oral Arg. at 8:43–10:30, https://oralarguments.cafc.uscourts.gov/default.aspx?fl=23-1922_11072024.mp3. BearBox's counsel raised none of these points before the district court and thus we are left to wonder how or why the inclusion of Mr. Storms' testimony would alter the district court's conclusion on inventorship. Accordingly, we cannot determine that there was prejudicial error in the trial court's exclusion of Mr. Storms' testimony as hearsay.

Next, BearBox contends that "the district court failed to consider claim elements in combination, instead focusing on individual elements when evaluating whether Storms conceived of the claimed inventions." Appellants' Br. 54. Although BearBox cites many cases to support its position, none is on point because they concern other invalidity doctrines, such as inequitable conduct and public use. The only case that addresses inventorship, *Blue Gentian*,

criticizes a party's argument for its myopic approach (parsing claim elements into sub-elements) to prove that certain claim limitations existed in the prior art with respect to the case at hand; it did not adopt a general criticism of limitation-by-limitation analysis. *See* 70 F.4th at 1362. Here, the district court analyzed the entirety of the claims. *Inventorship Decision*, at *14–25. And in fact, the court's analysis mirrors the analysis BearBox presented in its post-trial brief. *See* J.A. 7107–20. Further, given that BearBox must demonstrate that Mr. Storms contributed significantly to the conception or reduction to practice of at least one claim, *Blue Gentian*, 70 F.4th at 1358 (citing *Dana-Farber*, 964 F.3d at 1371), we see no error with the district court's limitation-by-limitation approach in this case.

Last, BearBox contends that the district court erred because it "referenced the Rule of Reason" but "did not address whether, under the Rule of Reason, the totality of the evidence, 'including circumstantial evidence support[s] the credibility of the inventors' story.'" Appellants' Br. 59 (quoting *E.I. DuPont De Nemours & Co. v. Unifrax I LLC*, 921 F.3d 1060, 1077 (Fed. Cir. 2019)). Specifically, BearBox takes issue with two district court fact findings that it understands to be inconsistent and thus improperly evaluated. First, the district court found that "[t]hrough late-2018 into early 2019, Storms began to design, build, and test a system of relays, power distribution units ('PDUs'), and a computer user interface that allowed a remote user to *control individual relays* so that miners could be turned on and off." *Inventorship Decision*, at *4 ¶ 29 (emphasis added) (citing testimony J.A. 8017–18 (Trial Tr. 46:02–52:13) and photos J.A. 9412–25). In BearBox's view, this first finding conflicts with the district court's later finding that "[BearBox] did not otherwise proffer evidence establishing that the BearBox System could individually control the system of 272 miners." *Id.* at *18 ¶ 113.

But BearBox takes the court's later language out of context. The district court found, based on a credibility determination regarding competing expert testimony, that Mr. Storms' "Source Code 'only ever instructs . . . all the relays of the PDUs to turn on or off.'" *Id.* (citation omitted). The court also found, which BearBox does not mention, that "even if Storms' Email did meet element [b4][3] of claim 1 of the '433 patent, the Court finds as a matter of fact that Storms did not communicate element [b4] prior to Defendants' independent conception." *Id.* Because BearBox cannot provide proof that Storms communicated the claimed subject matter prior to Lancium's independent conception, its challenge fails.

CONCLUSION

We have considered Appellants' remaining arguments and find them unpersuasive. For the reasons stated above, we affirm the district court's dismissal of BearBox's conversion claim because federal patent law preempts it; we affirm the district court's exclusion of BearBox's supplemental expert report; and we affirm the district court's denial of BearBox's claim that Mr. Storms was either a sole or joint inventor of '433 patent.

AFFIRMED

---

[3] Claim 1, element [b4] recites, "provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy." '433 patent col. 59 ll. 26–28.