

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

<p>Solutran, Inc., Plaintiff, v. U.S. Bancorp and Elavon, Inc., Defendants.</p>	<p>Case No. 13-cv-02637 (SRN/BRT)</p>
<p>U.S. Bancorp and Elavon, Inc., Counter-Claimants, v. Solutran, Inc., Counter-Defendant.</p>	<p>MEMORANDUM OPINION AND ORDER</p> <p>FILED UNDER SEAL</p> <div data-bbox="899 890 1435 1010" style="border: 1px solid red; padding: 5px;"><p>This is a redacted version of Sealed Order at Doc. No. 447, filed by the Court on 1/18/2019</p></div>

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SUSAN RICHARD NELSON, United States District Judge

I. INTRODUCTION

Plaintiff Solutran, Inc. (“Solutran”) holds a U.S. patent, numbered 8,311,945 (the “’945 Patent”). The patent details an innovative method for electronically processing the paper checks that merchants receive from customers. In September of 2013, Solutran accused Defendants U.S. Bank and Elavon (collectively, “U.S. Bank”) of infringing this patent. After years of litigation, including a trip to the U.S. Patent and Trademark Office’s Patent Trial and Appeal Board (“PTAB”), the parties tried the issues of validity and damages before a jury in March. (This Court had already deemed U.S. Bank an infringer on summary judgment.) Following a nine-day trial, the jury determined that Solutran’s patent was not obvious, and therefore valid, and that U.S. Bank owed Solutran a little over \$3 million in lost profit and reasonable royalty damages.

The Court now considers both parties’ post-trial motions. U.S. Bank moves for judgment as a matter of law (“JMOL”) on damages. Specifically, U.S. Bank asks that the Court vacate both the reasonable royalty and lost profit components of the jury’s verdict, and instead enter a damages award based solely on the (lower) reasonable royalty rate supported by its damages expert.

For its part, Solutran moves for (1) a permanent injunction barring U.S. Bank from offering its infringing check processing service; (2) a damages award that fully accounts for the harm Solutran has suffered over the course of 2018; (3) prejudgment interest at Minnesota’s 10% statutory rate, starting on the date U.S. Bank began infringing (November 13, 2012), and post-judgment interest at the federal statutory rate; (4) its bill of costs, totaling \$32,750.23; (5) its attorney fees under 35 U.S.C. § 285 (allowing courts to award

fees to prevailing parties in “exceptional” patent infringement cases); and (6) enhanced damages under 35 U.S.C. § 284.¹ With limited exceptions, both parties oppose every aspect of each other’s motions.

After careful consideration, the Court rules as follows: (1) U.S. Bank’s motion for JMOL on damages is denied, (2) Solutran’s motions for a permanent injunction, post-2017 damages, and post-judgment interest are granted in full, as is its bill of costs, (3) Solutran’s motion for prejudgment interest is granted in part, and (4) Solutran’s motions for attorney’s fees and enhanced damages are denied.

II. BACKGROUND

The background of this case and the ’945 patent are well documented in this Court’s claim construction and summary judgment decisions. *See Solutran, Inc. v. U.S. Bancorp*, 2017 WL 2274959 (D. Minn. May 24, 2017) (claim construction); *Solutran Inc. v. U.S. Bancorp*, 291 F. Supp. 3d 877 (D. Minn. 2017) (granting Solutran summary judgment on infringement, and denying U.S. Bank summary judgment on validity under 35 U.S.C. § 101 (abstractness)). This background section will accordingly focus on only the facts necessary to explain this decision.

¹ Solutran also moved for judgment as a matter of law on its invalidity defense. (*See Solutran Br. in Support of Post-Trial Motions* [Doc. No. 388] (“Solutran Post-Trial Br.”) at 46-48.) However, it later retracted that motion as moot in light of the jury’s verdict. (*See Solutran Reply Br. in Support of Post-Trial Motions* [Doc. No. 423] (“Solutran Post-Trial Reply Br.”) at 17.) The Court agrees that that motion is moot, and will not discuss it further.

In order to provide context for these motions, the Court will first briefly review the basic timeline of this litigation. The Court will then detail certain pre-trial decisions pertinent to both parties' motions – the Court's decisions to exclude U.S. Bank's evidence related to the BankServ prior art, as well as Solutran's evidence of willful infringement. Finally, the Court will discuss, in broad strokes, the dueling evidence the parties presented to the jury on the questions of validity, lost profits, and a reasonable royalty rate.

A. Abbreviated Factual and Procedural History

On November 13, 2012, Solutran secured the '945 patent, titled "System and Method for Processing Checks and Check Transactions." (*See* Compl. [[Doc. No. 1](#)] ¶¶ 9-10). The patent essentially details a three-step method for merchants to quickly and inexpensively credit paper checks received from customers. *First*, the merchant collects certain information from the check at the point of purchase, and electronically sends that information to a third party like Solutran. *Then*, the third party uses that information to expeditiously credit the customer's money to the merchant's bank account. *Finally*, the merchant sends the physical checks to the third party, where the third party scans the entire check and compares the scanned image to the data gathered from the point of purchase. Once the third party has ensured that all the information matches up, it records the check image in a database.

According to Solutran, this process "improve[d] on legacy check systems by eliminating the need for merchants to scan checks after they are received [*e.g.*, with expensive scanning equipment in the back office or at every check-out register], and by speeding the rate at which the merchant's account would be credited with a payment." *Solutran*, 291 F.

Supp. 3d at 880. Solutran markets this patent as “Solutran’s POS [Point of Sale] Imaging Network,” or “SPIN.” *Id.* Ten months after securing its patent, on September 25, 2013, Solutran sued U.S. Bank and its subsidiary, Elavon, for infringement. Solutran claimed that U.S. Bank’s competing check processing service, called “Electronic Check Service with Outsourced Imaging” (“ECS-OSI”), infringed the ’945 patent, and by extension, unfairly directed business away from Solutran’s SPIN service.

In the face of this litigation, U.S. Bank primarily responded that the ’945 patent was invalid, on both abstractness grounds, *see* [35 U.S.C. § 101](#), and obviousness grounds, *see* [35 U.S.C. § 103](#). As such, not long after Solutran filed suit, in February 2014, U.S. Bank petitioned the PTAB for a Covered Business Method (“CBM”) review of the ’945 patent under §§ 101 and 103.² The PTAB declined to take up U.S. Bank’s § 101 argument, as U.S. Bank had failed to demonstrate that the challenged claims were “more likely than not” unpatentable as abstract. *See U.S. Bancorp v. Solutran, Inc.*, No. CBM-2014-00076, [2014 WL 3943913](#) (PTAB Aug. 7, 2014). Moreover, upon further review, the PTAB also found that the challenged claims in the ’945 patent were not unpatentable as obvious. *See U.S. Bancorp v. Solutran, Inc.*, [2015 WL 4698463](#) (PTAB Aug. 5, 2015), *aff’d*, [668 Fed. App’x 363](#) (Fed. Cir. Aug. 8, 2016) (*per curiam*). As Solutran notes in its post-trial briefing (and U.S. Bank has not disputed this assertion), “U.S. Bank’s CBM challenge [was] the first one

² Magistrate Judge Rau stayed proceedings during the course of this review. *See Solutran, Inc. v. Elavon, Inc.*, [2014 WL 12605449](#) (Sept. 18, 2014).

in history [out of a pool of 55 decisions] to result in a complete victory for the patent-holder on all challenged claims.” (See Solutran’s Post-Trial Br. at 26.)

On January 12, 2016, Magistrate Judge Thorson lifted the litigation stay. (See Jan. 12, 2016 Text-Only Order [[Doc. No. 62](#)].) Discovery and claim construction briefing ensued. Following a *Markman* hearing, the Court entered a claim construction order. See *Solutran, Inc.*, [2017 WL 2274959](#). Later that year, on November 27, 2017, the Court decided the parties’ dueling summary judgment motions. In so ruling, the Court clarified one aspect of its claim construction order: that the “data” compared between the scanned paper check and the electronic data at step three of the patented process need not include the transaction amount. See *Solutran*, [291 F. Supp. 3d at 883-84](#). This clarification effectively decided the infringement suit in favor of Solutran. *Id.*³

In its summary judgment decision, the Court also denied U.S. Bank’s motion for summary judgment on § 101 abstractness. The Court ruled, in step with the PTAB, that the claims at issue were not “directed to a patent-ineligible concept,” and, to the extent any of the claims were, the claims “contain[ed] an inventive concept that sufficiently transform[ed] the abstract idea into a patent-eligible application.” See *id.* at 885-891 (citing *Alice Corp Pty. Ltd. v. CLS Bank Int’l*, [134 S. Ct. 2327](#) (2014)). After determining that U.S. Bank had received

³ U.S. Bank continues to dispute this aspect of the Court’s ruling, (see, e.g., U.S. Bank’s Br. in Support of Judgment as a Matter of Law [Doc. No. 380] (“U.S. Bank’s JMOL Br.”) at 2 n.1), and has indicated that it will take the issue up on appeal. However, because claim construction is not relevant to the motions presently before the Court, it will not be discussed further.

notice and the opportunity to respond to the possibility of the Court granting summary judgment to Solutran on this issue, the Court entered summary judgment for Solutran on U.S. Bank's § 101 abstractness defense. (*See* Feb. 23, 2018 Order Granting Summary Judgment for Plaintiff and Finding that the '945 Patent Is Patent Eligible Under 35 U.S.C. § 101 [Doc. No. 290].)

Following motions in limine, some of which are discussed below, the parties tried the issues of obviousness and damages before a jury from March 5, 2018 to March 16, 2018. Before closing arguments, U.S. Bank moved for judgment as a matter of law on essentially the same grounds raised in its current motion, *i.e.*, that Solutran's damages case was contrary to law and unsupported by any substantial evidence. (*See* U.S. Bank's Br. in Support of its Oral Fed. R. Civ. P. 50(a) Motion [Doc. No. 337].) Solutran also moved for JMOL on obviousness. The Court denied both motions on the record. (*See* Minute Entry for Mar. 15, 2018 [Doc. No. 342].)

The jury, in turn, rejected U.S. Bank's invalidity defense and returned a verdict in favor of Solutran for \$3,272,285.10, partly for lost profits and partly for a reasonable royalty at Solutran's proposed rate of \$0.02 (two cents) per infringing transaction. (*See* Redacted Verdict Form [Doc. No. 364].)

A few months later, on May 9, 2018, the parties submitted the motions at issue here. The Court heard oral argument on July 23, 2018. A week later, Solutran filed its bill of costs. (*See* Bill of Costs [Doc. No. 434].)

B. Relevant Pre-Trial Decisions

Before discussing the relevant evidence presented at trial, the Court pauses to review two pre-trial decisions central to aspects of both parties' motions: (1) the Court's decision to exclude evidence concerning BankServ, a piece of allegedly invalidating prior art that figures prominently in U.S. Bank's attack on Solutran's reasonable royalty case, and (2) the Court's decision to exclude evidence of U.S. Bank's allegedly willful infringement.

1. BankServ

U.S. Bank has repeated, throughout this litigation, that the '945 patent is invalid based on prior art. Indeed, U.S. Bank argued invalidity based on prior art before the PTAB throughout 2014 and 2015. *See, e.g., U.S. Bancorp*, [2015 WL 4698463](#), at *8 (arguing (unsuccessfully) that prior art, titled Randle '283, rendered the '945 patent obvious). However, at least four months after the Court's deadline for U.S. Bank to amend its invalidity chart following the PTAB proceedings had passed, and shortly before discovery was set to conclude, U.S. Bank's counsel "learned from a re-interview of a [former] employee [Ms. Amy Waldhauer] about another system, known as BankServ, that [] appeared to show that [the '945 patent] was anticipated and obvious." *Solutran, Inc. v. U.S. Bancorp*, [2016 WL 7377099](#), at *2 (D. Minn. Dec. 20, 2016).⁴

Magistrate Judge Thorson denied U.S. Bank's request to belatedly amend its invalidity chart to include BankServ as invalidating prior art, finding "no evidence in the record to

⁴ As Ms. Waldhauer explained at her proffer, the "BankServ prior art" is an electronic check conversion product containing many similarities to SPIN, and which BankServ Check Services (later called EnCircle) offered to merchants between 1999 and at least 2002. (*See* Trial Tr. at 427-450.)

support a showing that [U.S. Bank] had acted diligently in pursuit of the new prior art, and no communication with the Court to suggest that additional time for document review might be needed.” *Id.* at *3 (citing the Magistrate Judge’s comments from the transcript of the motion hearing). This Court affirmed Judge Thorson’s decision in a written opinion. *See generally id.*

Judge Thorson’s exclusion of the alleged BankServ prior art precluded its admission at trial on the question of obviousness, or any other issue related to validity. However, as the case approached trial, the Court agreed to entertain a proffer from U.S. Bank as to whether BankServ evidence could assist the jury in determining whether (a) BankServ was an “available non-infringing alternative” in 2012, to counter Solutran’s lost profits argument, or (b) BankServ was an “old mode or device” “that had been used for working out similar results” to SPIN, to counter Solutran’s reasonable royalty argument. *See Solutran Inc.*, [2018 WL 1094287](#), at *2-3 (deferring ruling on Solutran’s motion in limine to exclude evidence, exhibits, and argument related to BankServ). On March 7, the morning of the third day of trial, U.S. Bank proffered testimony from Ms. Waldhauer purportedly providing foundation for U.S. Bank’s damages expert, Richard Bero, to opine on how BankServ’s existence substantially weakened Solutran’s lost profit and reasonable royalty claims. (*See Trial Tr.* at 427-50.)

However, as the Court noted after the proffer, U.S. Bank’s proposed testimony consisted mainly of “walk[ing] [Ms. Waldhauer] through [the BankServ process] to clearly demonstrate the similarities of the two products, the two prior arts,” which the Court’s earlier

decisions barred it from doing. (*Id.* at 462.) U.S. Bank “didn’t for one moment ask about the different types of old modes [of electronic check processing] and what the utility was and the advantages and the disadvantages was.” (*Id.*) As such, because the BankServ testimony had only a “tiny bit of probative value” with respect to a reasonable royalty analysis under *Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC*, [879 F.3d 1332, 1348](#) (Fed. Cir. 2018), when compared to the “prejudic[ial value] given [the Court’s] rulings for its use for invalidity,” the Court declined to allow U.S. Bank’s proposed evidence on BankServ. (Trial Tr. at 466.)⁵ In U.S. Bank’s briefing on these motions, it repeatedly cites the jury’s inability to consider this omitted BankServ prior art as “alone compel[ling] vacation of the jury’s reasonable royalty award,” and accordingly asks the Court to rely on such evidence in deciding the present JMOL motion. (U.S. Bank’s JMOL Br. at 6, 8.)

2. Willful Infringement

On the other side of the equation, a lack of diligence during the pre-trial period also caused Solutran to lose the opportunity to present potentially favorable evidence to its case. Solutran’s original complaint did not assert a claim for willful infringement, and the accordant possibility of enhanced damages, under [35 U.S.C. § 284](#). However, after gleaning near the end of discovery that U.S. Bank had “been aware of [Solutran’s] patent application since at least 2007, [] had hired legal counsel to assess the patent application, and [] may have

⁵ A few days later, the Court again emphasized that the jury could not hear BankServ evidence because Ms. Waldhauer’s proposed foundation testimony “never called [BankServ] an old mode,” and “never talked about it as a non-infringing alternative.” (*See* Trial Tr. at 1296-98.)

continued to track the progress of the application,” Solutran requested leave to amend its complaint to assert a willful infringement claim. *Solutran, Inc. v. U.S. Bancorp*, [2017 WL 89558](#), at *2 (D. Minn. Jan. 10, 2017); *see also* Solutran’s Post-Trial Br. at 31-44 (detailing this evidence). The problem was, just as with U.S. Bank and BankServ, Solutran made this request “seven months after the deadline to amend pleadings had passed.” *Solutran*, [2017 WL 89558](#), at *2. Judge Thorson accordingly denied Solutran’s motion. *Id.* (citing Nov. 29, 2016 Minute Entry [[Doc. No. 144](#)].) And, again, the Court affirmed Judge Thorson’s decision in a written opinion, stating that, as far back as February 2016, “Solutran had the information necessary to – if not move to amend – at least move to modify the scheduling order.” *Id.* at *4. “Having failed to act diligently to comply with the scheduling order set forth by the Court, Solutran has not shown the good faith required under [Fed. R. Civ. P.] 16(b)(4), and may not now amend its complaint.” *Id.*

In advance of trial, Solutran sought to admit evidence of *post-filing* willful infringement, which it argued was “adequately pleaded and not foreclosed by the prior order.” *Solutran, Inc. v. U.S. Bancorp*, [2018 WL 1050403](#), at *1 (D. Minn. Feb. 26, 2018). In particular, Solutran sought to introduce evidence of U.S. Bank’s alleged “discovery misconduct,” including a “document retention policy” that purportedly “permitted the destruction of discoverable documents related to the infringement of the [‘945 patent].” *Id.* at *2. The Court granted U.S. Bank’s motion in limine to exclude this evidence. *Id.* In so ruling, the Court reasoned that, because this post-filing willful infringement argument “was available to [Solutran] when it sought leave to amend its complaint” in October 2016, the Court’s prior

order foreclosed the inclusion of the argument at trial. *Id.* In any event, the Court continued, Solutran did not point to any evidence showing that the allegedly nefarious “document retention policy” “was intentionally employed to cover up the infringement of the [‘945 patent].” *Id.* “The Court fails to see anything but the most tenuous connection between U.S. Bank’s document-retention policy and the kind of concealment conduct that could support a claim of willful infringement.” *Id.* However, the Court briefly noted at the end of its decision that the Court’s ruling on this motion in limine did not “preclude [Solutran] from presenting that evidence to the Court, after a jury determination of damages, to support a claim for enhanced damages under 35 U.S.C. § 284.” *Id.* at *3 (citing *Briggs & Stratton Corp. v. Kohler Co.*, No. 05–cv–25, 2005 WL 3447979, at *6 (W.D. Wis. Dec. 15, 2005)).⁶ As such, Solutran’s motions for attorney fees and enhanced damages rely heavily on the evidence described above. (*See* Solutran’s Post-Tr. Br. at 19-22, 31-44.)

C. Evidence Presented at Trial

Over the course of the nine-day trial, Solutran put three fact witnesses on the stand: Barry Nordstrand (Solutran’s CEO); Carmen Nordstrand (Solutran’s COO); and Kari Hawkins (Solutran sales manager and co-inventor of the ’945 patent). Solutran also adduced testimony from its damages expert, Philip Green, and its technical expert, Bill Saffici.

⁶ Admittedly, at the time it made this statement, the Court was not aware of the current legal uncertainty over whether a jury finding of willful infringement constitutes a *prerequisite* to enhanced damages. The Court explores this issue at some length near the end of its decision. *See infra* at 84-86.

For its part, U.S. Bank presented factual testimony from six witnesses: Edward Searcy (Elavon's CFO); Geraldine Calabrese (member of the Elavon product and innovation group); Scott Reid (former Solutran employee and co-inventor of the '945 patent); Amy Waldhauer (former VP of Strategic Products and Software at Elavon); Michelle Kocur (former product manager at Solutran); and Joseph Schoder (sales manager at U.S. Bank). U.S. Bank also adduced testimony from its damages expert, Richard Bero, and its technical expert, Elliott McEntee.

The Court will detail some of the evidence presented at trial below, insofar as that evidence is relevant to the present motions.

1. Solutran Outlines the Unique Benefits of the '945 Patent and its Correspondent SPIN Service

In its affirmative case, Solutran's fact witnesses provided testimony about the genesis of the '945 patent and SPIN, the nature of the electronic check processing market, the distinct advantages of the patented method over other electronic check processing products, and the financial success and clientele of SPIN. Mr. Nordstrand's testimony primarily focused on SPIN's place within the broader electronic check processing market, and what SPIN (and U.S. Bank's infringing product, "Electronic Check Services – Outsourced Imaging, ("ECS-OSI")) offered that other common check processing methods did not offer.

Mr. Nordstrand first detailed the following two methods a merchant could use to process customer checks in October 2005, when Solutran invented SPIN: **(a)** the "old fashioned" "paper check" method, which involved each cashier collecting paper checks and then sending them in a bag to a bank at the end of the day for processing (Trial Tr. at 177-79),

and **(b)** the “Point of Purchase” (“POP”) method, which was popularized by Walmart and which allowed retailers to scan the MICR information of the approximately 75% of customer checks that worked with this system and then hand those checks back to the customer after the check had been approved (without taking a full image of the check). (*Id.* at 179-81.)⁷

Retailers liked the “paper check” method because it was simple and didn’t require any employee training, but disliked it because “[i]t took time to get your money” and because “moving [paper checks] around is inherently more expensive than electronic [processing].” (*Id.* at 178-79.) Whereas, with POP, retailers liked the “next day access to funds” and “cheaper” “electronic processing,” but disliked that POP could only process 75% of checks and that cashiers had to hand the check back to the customer, which led to confusion and slower lines. (*Id.* at 182-85; *see also id.* at 260 (“[I]f you were going to talk to [REDACTED] [REDACTED] POP was dead on arrival.”).)

Importantly, however, in 2005 the electronic payments industry was in the process of creating the infrastructure and rules for a third method, **(c)**, “Back Office Conversion”

⁷ Because of certain industry rules, POP could not accept 25% of customer checks for electronic processing, *e.g.*, rebate checks, WIC checks, and business payroll checks. Instead, cashiers would hold onto these checks and send them to the bank for traditional “paper check” processing. (*Id.*)

However, Nordstrand also testified that some POP methods avoided this “25% problem” by placing a large image scanner at each cash register. (*Id.* at 180-81.) For instance, some retailers used a product called “Visa-POS,” which employed this method. U.S. Bank presented testimony about this product as an example of allegedly invalidating prior art. (*See, e.g., id.* at 1211-12 (Schoder).)

(“BOC”), set to debut in March 2007. The BOC rules allowed a merchant to process *any* kind of check through the Automated Clearinghouse Association (“ACH”). Specifically, BOC involved cashiers collecting customer checks over the course of the day, and then, at the end of the day, rather than sending the checks to the bank for processing, the retailer would essentially perform that process in its “back office.” (*Id.* at 187-89.) That is, one of the retailer’s employees would run the checks through a special scanner that both read the MICR information for crediting *and* took an image of the check for use in the ACH network. (*Id.*)

However, as with the prior two check processing methods, BOC had drawbacks. Although retailers liked the fast “availability of funds” and the “cheaper” “ACH processing” for 100% of checks, Nordstrand testified, they disliked the “cost of the [back office] scanners,” the cost of teaching employees how to use the software on the BOC scanner, and the process of handling and securing customer checks through destruction. (*Id.* at 191-93.) Mr. Nordstrand particularly noted that Solutran had trouble selling BOC (in anticipation of the BOC rules) because “[s]canners were dead on arrival.” (*Id.* at 197; *see also id.* at 479 (Hawkins) (stating that prospective clients “didn’t like” BOC in 2005); 1198 (Waldhauer) (admitting that, based on a May 2007 RFP regarding check processing services, Target “”).) ”).)

According to Mr. Nordstrand, though, in October 2005 Solutran (and, more particularly, Kari Hawkins and Scott Reid) discovered a way to “use the BOC rules, but do it in a way that no one else [was] thinking about.” (*Id.* at 198.) Solutran called this method

“SPIN,” and it eventually became the ’945 patent. As explained above, the method entailed the merchant scanning the check’s MICR information at the cash register for immediate crediting, like POP, but *then*, rather than processing the checks in-house (as envisioned by the original BOC rules), the merchant would send the checks across the country to a *third party* like Solutran for full image scanning and matching/reconciliation/destruction. (*See id.* at 220-39 (walking through the patent).) According to Mr. Nordstrand, “the banking industry and some of the industry analysts” thought Solutran was “crazy” to pursue something like SPIN in the digital age. (*Id.* at 204.) The industry purportedly considered it “dumb” to “scan the same check in two different places,” particularly given the risk of moving physical checks around. Moreover, industry experts doubted that Solutran “could find an efficient way to match [the MICR information and check images] up on the back end.” (*Id.*; *see also id.* at 1771-73 (B. Nordstrand) (noting that, because “the entire industry was going this way of no transportation,” “it was not logical to anyone that we were going to be shipping checks”).)

However, despite this skepticism, Solutran experienced substantial market success with SPIN when it launched the product in May 2007. Specifically, Mr. Nordstrand testified that Solutran quickly formed relationships with “bank partners” like Wells Fargo and J.P. Morgan Chase (*id.* at 204-06), and sold SPIN to large clients like [REDACTED] (*Id.* at 213; *see also id.* at 486-87, 532 (Hawkins) (describing how Solutran’s sale efforts led [REDACTED] [REDACTED] to become SPIN clients).) Mr. Nordstrand testified that SPIN’s [REDACTED] clients (all of which are large retailers) like

“direct competitors” for “large, national merchants” who only had “two [other] options” to process their customer checks (*i.e.*, paper checks and POP). However, he contended that, for the reasons explained above, neither POP nor paper checks “were good options” for a particular set of large, national merchants. (*Id.* at 297-98; *see also id.* at 986-87 (Calabrese) (admitting that U.S. Bank and Solutran were “direct competitors in the ECS-OSI space” and went “after the same customers”).) Indeed, Mr. Nordstrand testified that, since 2007, Solutran had only lost two of its 31 SPIN customers to either paper checks or POP. (*Id.* at 299, 301.) Moreover, Mr. Nordstrand stated that clients were particularly “sticky” because SPIN saved them 50 percent as compared to alternative check processing methods, and because the declining check market made investment in a different processing service less desirable. (*Id.* at 273, 276.)

Given all of this, Mr. Nordstrand concluded that, had “large, national merchants” not been able to purchase ECS-OSI in November 2012, SPIN would have been the most cost-effective option available for U.S. Bank’s ECS-OSI clients. (*See id.* at 296-309.) This would have been feasible, Mr. Nordstrand added, because Solutran had the economic capacity to take on far more transactions, because Solutran had a large share of the market in 2012, and because Solutran had the capacity to develop relationships with U.S. Bank’s largest ECS-OSI client, Target, as evidenced by the fact that Solutran began processing EBT payments for Target in 2015. (*See id.* at 302-309.) Mr. Nordstrand also noted that a pre-existing relationship with U.S. Bank was not dispositive of whom a merchant would hire to process their checks.

According to Mr. Nordstrand, over half of SPIN's clients also maintained banking relationships with U.S. Bank. (*See id.* at 268.)

2. U.S. Bank Presents Evidence Questioning the '945 Patent's Ingenuity and Market Success

In its rebuttal case, U.S. Bank presented evidence that SPIN did not constitute a significant advancement over standard POP or BOC services, that various POP and BOC services (including non-infringing U.S. Bank services) were also competitors to SPIN and ECS-OSI, and that ECS-OSI clients (particularly Target) chose U.S. Bank's service for reasons other than the patented process.

In its cross examination of Mr. Nordstrand, U.S. Bank elicited testimony that the hardware SPIN relied on, such as the MICR readers (used in POP) and the scanners that compared a check image to the MICR information (used in BOC), were "readily available from third-party sources." (*Id.* at 322.) U.S. Bank also elicited testimony that Solutran hired a different company, eGistics, to "do the image archiving" portion of SPIN (*id.* at 326), and that every aspect of SPIN aligned with the 2007 BOC rules (*id.* at 318). Moreover, the software specialist who helped invent SPIN, Scott Reid, admitted that the coding he did on behalf of SPIN was not "part of [the] invention." (*Id.* at 1033.)

With respect to Mr. Nordstrand's suggestion that SPIN and ECS-OSI existed in a "two player market" apart from POP providers, U.S. Bank elicited testimony from Mr. Nordstrand and Ms. Hawkins on cross-examination that (a) Walmart, "the biggest retailer in America," uses POP (*id.* at 316-17; *see also id.* at 202 (stating on direct examination that Walmart considered purchasing SPIN, but ultimately stuck with its pre-existing POP

system)); (b) Macy's and Federated ultimately chose POP after Solutran attempted to sell SPIN to them (*id.* at 516); (c) one of Solutran's supermarket clients, Marsh, switched to First Data's POP product (albeit after First Data "bundled a bunch of products in terms of credit and data processing with a bunch of other products") (*id.* at 301); and (d) an ECS-OSI client, ██████ recently announced that it will switch to First Data's POP product, too. (*Id.* at 983 (Calabrese).)

Moreover, U.S. Bank's witnesses testified that U.S. Bank's non-infringing products, the more standard BOC options ECS-Cash Office Imaging ("ECS-COI") (in-store scanners) and ECS-Centralized Image ("ECS-CI") (one in-house scanner for all stores), attract some customers, too. (*See id.* at 960 (Calabrese) (stating that U.S. Bank has one ECS-COI customer, ██████); 981 (noting that a longtime ECS-OSI client, ██████, is in a "pilot right now for" ECS-COI); and 973 (adding that ██████ used ECS-CI for four years, before bringing their authorization "in-house").) Further, Ms. Calabrese testified that U.S. Bank sells POS with Image POP products, *see supra* note 7, to "small, mom and pop, middle market" stores. (*Id.* at 962.)

Also, in response to Solutran's argument that it would have taken on all of U.S. Bank's ECS-OSI customers had ECS-OSI been unavailable in November 2012, U.S. Bank presented testimony that 10 of its 12 ECS-OSI customers were already using that service by November 2012, including U.S. Bank's largest ECS-OSI client, Target. (*Id.* at 954 (Calabrese) (explaining that, with the exception of ██████ in 2014 and ██████ in 2015, all ECS-OSI customers began using the service before the '945 patent issued); *see*

also id. at 856 (Searcy) (noting that Target generated between █ percent and █ percent of ECS-OSI transactions in any given year.) Notably, U.S. Bank witnesses explained that, in May 2007, Target issued a BOC Request for Proposal (“RFP”) that allegedly inspired U.S. Bank to create, and then implement, ECS-OSI in 2008. (*See id.* at 1146-58 (Waldhauer).) Because of this close relationship, U.S. Bank stressed that in no alternative “two-supplier” world would Target have chosen Solutran for its check processing services. To emphasize the point, U.S. Bank elicited testimony from Ms. Hawkins on cross-examination that Solutran was not pursuing Target as a customer in 2010 and that she could not recall pursuing them since (*id.* at 515-16), and that Ms. Hawkins received an e-mail from a J.P. Morgan Chase employee stating that “Target has no plans of moving the business from [U.S. Bank] and [doesn’t] want to discuss other alternatives due to their declining check volume.” (*Id.* at 527.)

Finally, U.S. Bank presented testimony that some of its ECS-OSI customers received in-house bank products that a third-party payment processor like Solutran was not capable of offering. Most notably, U.S. Bank offered “verification and guarantee” services that protected merchants against NSF checks. Ms. Calabrese testified that at least four of its ECS-OSI customers use this service. (*See id.* at 966.)⁹

⁹ When asked about this difference between SPIN and ECS-OSI, Mr. Nordstrand made two remarks. First, he testified that Solutran worked with TeleCheck and Certegy, which collectively control 80% of the verification and guarantee market, to provide equivalent (if not better) verification and guarantee services to SPIN customers. (*Id.* at

3. The Parties Present Dueling Expert Opinions on the Lost Profits Solutran Would Have Earned Had U.S. Bank's Infringing Service Not Existed in November 2012

a. Mr. Green's Testimony on Behalf of Solutran

Mr. Green analyzed the four *Panduit* factors and ultimately concluded that, had ECS-OSI not been available in November 2012, all or most of U.S. Bank's 12 clients, including Target, would have purchased SPIN.¹⁰ Accordingly, he opined, Solutran would have captured significant lost profits but-for U.S. Bank's infringement, *i.e.*, most of the transactions U.S. Bank processed through ECS-OSI from November 13, 2012 through the end of 2017.

First, Mr. Green noted that demand for the unique check processing service offered by SPIN and ECS-OSI existed. (*Id.* at 610-12.) In particular, Mr. Green testified that the two services have processed more than 1.2 billion transactions since 2007 combined, and that large companies such as Target have continuously used the service for more a decade. (*Id.*)

Second, Mr. Green opined that, given the specific needs of the large, national retailers using ECS-OSI in 2012, SPIN constituted the only acceptable non-infringing alternative. In other words, Mr. Green contended that ECS-OSI and SPIN existed in a two-player market.

270-71.) He also testified that, because SPIN creates and saves check images, there is generally no "need to pay for that service." (*Id.* at 272.)

¹⁰ Under *Panduit*, a patentholder is entitled to lost profit damages if it can establish four things: "(1) demand for the patented product; (2) absence of acceptable non-infringing alternatives; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of profit it would have made." *Mentor Graphics Corp. v. Eve-USA, Inc.*, 851 F.3d 1275, 1285 (Fed. Cir. 2017) (citing *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152 (6th Cir. 1978)).

(*Id.* at 629.)¹¹ Mr. Green reached this conclusion by analyzing and differentiating the other available check processing services detailed above (*i.e.*, paper checks, POP, and U.S. Bank’s non-infringing BOC alternatives). He explained to the jury why U.S. Bank’s 10 large retailer clients in 2012 would not have used those alternatives. For instance, he noted that paper checks credit retailer’s accounts at a far slower rate and resulted in higher “exception processing” fees, (*id.* at 599-600), and that a Walmart-style POP service “won’t allow you to [electronically] process the business checks and the sort of more unusual types of things.” (*Id.* at 605.) And with U.S. Bank’s non-infringing BOC services (*i.e.*, ECS-COI and ECS-CI), he noted that companies would “incur[] the cost of actually running the scanning, training the employees, and getting that whole system managed and under control.” (*Id.* at 600.)

Mr. Green also noted that, despite the availability of all these other options, almost none of SPIN or ECS-OSI’s clients switched services after coming aboard. (*See, e.g., id.* at 603-05.) Indeed, U.S. Bank’s ECS contract offered retailers the choice between OSI and non-infringing BOC or POP alternatives, and yet virtually all of those retailers chose OSI. (*See id.* at 613-15 (walking through U.S. Bank’s contracts with ECS-OSI customers Schnucks and Barnes & Noble).) Furthermore, Mr. Green pointed out that the costs of switching to POP or traditional BOC in the declining check market of 2012 were far higher than the costs of switching to SPIN. (*See id.* at 618-21, 756.) He also testified that, based on his analysis of

¹¹ As discussed below, U.S. Bank argues that Mr. Green failed to clearly disclose this conclusion, among others, in his expert report. *See infra* at 51-52. U.S. Bank’s counsel cross-examined Mr. Green at great length about this purported inconsistency between his initial expert report and his trial presentation. (*See, e.g.,* Trial Tr. at 655-86.)

SPIN clients, a company's pre-existing relationship with U.S. Bank did not determine whether that company bought SPIN or not. (*See id.* at 616-17 (offering SuperValu as an example).) The ability to access U.S. Bank's in-house verification and authorization services would not have mattered for many clients in this market either, he added. (*See id.* at 622-24; *see also id.* at 803-04 (noting that ██████ among others, had "unbundled" those services from ECS-OSI by 2012).) As for Target – U.S. Bank's largest and most important ECS-OSI client – Mr. Green particularly noted that Target would likely have switched to SPIN because the cost of switching to SPIN was low compared to the alternatives (*id.* at 636-37) and because Target specifically expressed disinterest in POP. (*Id.* at 804-06.)

Third, with respect to Solutran's capacity to reach out to large retailers and process the additional ECS-OSI transactions, Mr. Green explained that he was "not aware of situations where Solutran hasn't been able to get to customers." (*See id.* at 626-28.) He also noted that Solutran's processing equipment could handle ██████ transactions a year. (*Id.*) Given that Solutran and U.S. Bank's combined transactions in 2012 were ██████ (*i.e.*, ██████ ██████ SPIN transactions and 23 million ECS-OSI transactions), Mr. Green surmised, Solutran could have taken on the additional work without sacrificing its profit ratio. (*Id.* at 626-27.)

Fourth, with respect to the amount of profit Solutran would have earned, Mr. Green reviewed Solutran's financial data and concluded that Solutran would have likely captured 80% of U.S. Bank's ECS-OSI sales at a net profit of 3.7 cents per transaction. (*Id.* at 628-36.) Because the parties agreed that U.S. Bank processed 134,000,362 ECS-OSI transactions

between November 13, 2012 and December 31, 2017, this assumption resulted in \$3,966,411 in lost profits. (*Id.* at 364.) However, Mr. Green showed the jury how to do this lost profits calculation “in any direction” (*i.e.*, up to 100% or down to any other percentage) (*id.* at 635), and later stated that “what I’ve done here with my testimony today . . . is explain how [the jury] could analyze a capture rate assuming a two-player market, 100 percent, 80 percent, or choose another amount that makes sense with respect to whatever testimony may come later or based on Mr. Nordstrand’s testimony or however they wanted to view the facts.” (*Id.* at 671; *see also id.* at 749-50 (noting that, as an example, “the jury could conclude that they were just going to use all the transactions other than the ones that were involved with Target”).)

b. Mr. Bero’s Testimony on Behalf of U.S. Bank

Mr. Bero similarly analyzed the four *Panduit* factors. However, he ultimately concluded that, had ECS-OSI not been available in November 2012, none of U.S. Bank’s 12 clients would have purchased SPIN given the available alternatives, especially U.S. Bank’s largest client, Target. Bero accordingly opined that Solutran would have captured no lost profits but-for U.S. Bank’s infringement.

Of the four *Panduit* factors, Mr. Bero only appeared to substantially contest Solutran’s case on one of them: an absence of acceptable non-infringing alternatives.¹² As

¹² Mr. Bero did briefly address the first and third *Panduit* factors in his testimony (*i.e.*, demand for the patented product and capacity to meet demand). (*See, e.g., id.* at 1505, 1508.) However, U.S. Bank did not focus on these factors in its motion for JMOL on lost profits.

to alternatives, Mr. Bero generally opined that SPIN and ECS-OSI did not operate in a two-player market. Although Mr. Bero admitted that SPIN and ECS-OSI were the only two options if a retailer did not want to scan images itself *and* wanted to accept 100% of checks (*id.* at 1560-62), he pointed out that (a) companies like Target expressed interest in 2007 for products like ECS-CI, which would have allowed them to handle all check processing in one, large in-house location (*id.* at 1506, 1612), (b) Wells Fargo and Bank of America offered other conventional BOC products (*id.*), (c) big retailers like Walmart use POP (*id.*), (d) Solutran lost SPIN clients to First Data POP products (*id.* at 1612), and (e) a thousand ECS customers use POP instead of ECS-OSI, while thousands more U.S. Bank customers use the “paper check” method. (*Id.*) Moreover, in discussing Target, Mr. Bero noted that, in 2012, Target was in the middle of its second three-year ECS-OSI contract with U.S. Bank (*id.* at 1496-97), that Target’s 2007 RFP repeatedly used the word “bank,” (*id.* at 1497-98), and that Target bought various in-house bank products alongside ECS-OSI, at least until 2012 (*id.* at 1498-1500). Further, Mr. Bero added, Wells Fargo competed most strongly with U.S. Bank for Target’s check processing business in 2007-2008, not Solutran. (*See id.* at 1496.) Relatedly, Mr. Bero noted that the CEO of Schnuck Markets, U.S. Bank’s second largest ECS-OSI client, sits on U.S. Bank’s Board of Directors. (*Id.*)

4. The Parties Present Dueling Expert Opinions on the Reasonable Royalty Solutran Would Have Charged U.S. Bank in 2012 to License its Patent

a. Mr. Green’s Testimony on Behalf of Solutran

With respect to royalty damages, Mr. Green contended that, in a hypothetical negotiation between Solutran and U.S. Bank in November 2012, Solutran would likely have charged U.S. Bank a 2 cent per transaction royalty to license its SPIN service. Mr. Green reached this conclusion by way of the *Georgia-Pacific* factors, and in light of his substantial experience negotiating patent licenses. (*See id.* at 589-90, 638-39.)¹³ Because Solutran has

¹³ The 15 *Georgia-Pacific* factors are: “(1) the royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty; (2) the rates paid by the licensee for the use of other patents comparable to the patent in suit; (3) the nature and scope of the license, as exclusive or non-exclusive; or as restricted or non-restricted in terms of territory or with respect to whom the manufactured product may be sold; (4) the licensor’s established policy and marketing program to maintain his patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly; (5) the commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business; or whether they are inventor and promoter; (6) the effect of selling the patented specialty in promoting sales of other products of the licensee; that existing value of the invention to the licensor as a generator of sales of his non-patented items; and the extent of such derivative or convoyed sales; (7) the duration of the patent and the term of the license; (8) the established profitability of the product made under the patent; its commercial success; and its current popularity; (9) the utility and advantages of the patent property over the old modes or devices, if any, that had been used for working out similar results; (10) the nature of the patented invention; the character of the commercial embodiment of it as owned and produced by the licensor; and the benefits to those who have used the invention; (11) the extent to which the infringer has made use of the invention; and any evidence probative of the value of that use; (12) the portion of the profit or of the selling price that may be customary in the particular business or in comparable businesses to allow for the use of the invention or analogous inventions; (13) the portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer; (14) the opinion testimony of qualified experts; and (15) the amount that a licensor (such as the patentee) and a licensee (such as the infringer) would have agreed

not licensed SPIN, and hence does not have an actual royalty to draw on (Trial Tr. at 651-52), Mr. Green focused on the following circumstantial evidence relevant to a hypothetical negotiation in 2012:

- (1) Because Solutran and U.S. Bank were direct competitors in the check processing market, Mr. Green argued, Solutran had a particularly strong incentive to protect its profit margins to the maximum extent possible. (*See id.* at 641-42, 652.) Moreover, Mr. Green noted that, in 2012, Solutran’s SPIN profit margins were on an upward trajectory, rising from around ██████ a transaction before 2012 to ██████ a transaction after 2012. (*Id.* at 643-44.) At a hypothetical negotiation in 2012, Mr. Green opined, Solutran “would be thinking we’re putting greater and greater amounts of profits at risk by licensing to” U.S. Bank. (*Id.*) (*Georgia-Pacific* Factors 5, 8.)
- (2) Mr. Green also looked to other side of the equation, at U.S. Bank’s revenue and profits from ECS-OSI. He determined that U.S. Bank received around █ cents of revenue per transaction and between █ and █ cents of profit per transaction. (*See id.* at 644-46.)¹⁴ (*Georgia-Pacific* Factor 11.)

upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee – who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention – would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.” *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970).

¹⁴ Mr. Green acknowledged that this revenue number included some services not included in Solutran’s SPIN product, like revenue from in-house “verification and

- (3) Mr. Green then testified about the benefits of the patented process over “other types of services,” *e.g.*, “POP and various types of BOC,” and about “the nature and benefits of the patented invention,” just he had in his lost profits analysis. (*Id.* at 646-47.) In so testifying, he stated that, although “some of” the ’945 patent’s benefits “are part of other systems,” “when we’re looking at the ’945 invention, we’re looking at all of those benefits together.” (*Id.*) (*Georgia-Pacific* Factors 9, 10, 13.)
- (4) Finally, Mr. Green took note of two licenses that U.S. Bank or its predecessor had negotiated with companies for their check processing services: the LML license and the DataTreasury license. (*See id.* at 641, 647-48.) Although LML reached settlements in litigation with banks like U.S. Bank for lump sum royalties at a rate far below two cents a transaction, Mr. Green noted that, as a general matter, LML’s “running royalty” license rate for its POP and BOC services was “about [REDACTED] cents per transaction.” (*Id.* at 647-49; *see also id.* at 797-98.) The DataTreasury license also involved a lump sum royalty settlement arising out of litigation, at a rate of about a fifth-of-a-penny per transaction. (*Id.* at 649.) However, because the DataTreasury check processing service concerned “signature recognition,” and not anything related to “processing a check through a whole ACH system,” Mr. Green did not find it useful here. (*Id.* at 650; *see also id.* at 800.) (*Georgia-Pacific* Factors 2, 12.)

guarantee” services. (*Id.* at 644.) However, testimony from U.S. Bank financial statement witness, Edward Searcy, provided support for the conclusion that, were these revenues “pass-through costs,” that would not affect bottom line ECS-OSI profits. (*Id.* at 853-54.)

Viewing all of this evidence together, Mr. Green opined that, at a hypothetical negotiation in which the patent was presumed valid, a two cents per transaction royalty would have been reasonable because, among other things, it “leaves U.S. Bank with a portion of its profits” while simultaneously allowing Solutran to protect a portion of its (then-growing) margins. (*Id.* at 651-52.)

b. Mr. Bero’s Testimony on Behalf of U.S. Bank

By contrast, Mr. Bero contended that, in a hypothetical negotiation between Solutran and U.S. Bank in November 2012, Solutran would only have charged U.S. Bank a half-cent per transaction royalty to license SPIN. Mr. Bero reached this conclusion by determining U.S. Bank’s revenues and profits for the “outsourced imaging” component of ECS-OSI, and then adjusting that profit number in light of the *Georgia-Pacific* factors. Mr. Bero focused on the following evidence that contradicted Mr. Green’s opinions:

- (1) Mr. Bero strongly contested Mr. Green’s accounting of the revenue and profits U.S. Bank received from ECS-OSI. Mr. Bero stated that, properly understood, in 2012 U.S. Bank received (1) [REDACTED] cents of revenue per ECS-OSI transaction (*id.* at 1489-90); (2) [REDACTED] cents of revenue per transaction from the outsourced imaging component of that revenue, as opposed to “processing, authorization, and other fees” (*id.* at 1514-15); and (3) [REDACTED] profit per *this outsourced imaging component* of the transaction, assuming the [REDACTED] ECS profit rate Mr. Green used (*id.* at 1519).¹⁵

¹⁵ On cross-examination, Mr. Green argued that [REDACTED] cents of revenue per ECS-OSI transaction, and his accordant finding of [REDACTED] to [REDACTED] cent profits per transaction, constituted the

(2) Mr. Bero further contended that the “outsourced imaging” practiced by the ’945 patent did not constitute a substantial improvement over other methods for converting transactions and facilitating payments. (*See id.* at 1530-32.) For instance, Mr. Bero suggested that a retailer could have bought a handful of BOC scanners to use in-store for only \$4,000 a scanner. (*Id.*; *but see id.* at 1552-55 (calling these numbers into question on cross-examination).)

(3) Mr. Bero also noted that, under the LML reasonable royalty settlements mentioned by Mr. Green, LML actually licensed its check processing service for somewhere between [REDACTED] per transaction (dividing the transactions during the relevant period by the lump sum). (*See id.* at 1521-24, 1527.) Similarly, Mr. Bero explained that the DataTreasury license mentioned by Mr. Green resulted in a reasonable royalty of one-fifth a penny per transaction. (*Id.* at 1525, 1527.)

(4) Finally, Mr. Bero explained that profits on these services were decreasing by 2012, just as the entire check processing market was shrinking. (*Id.* at 1529-30.)

All told, Mr. Bero argued that Mr. Green “overstate[d]” U.S. Bank’s revenue and profit per transaction on the specific “outsourced imaging” aspect of ECS-OSI, and “avoid[ed]”

more reliable accounting. (*See id.* at 768-71.) Although the financial information U.S. Bank compiled for this litigation suggested that ECS-OSI revenue was only [REDACTED] cents per transaction, Mr. Green contended that U.S. Bank arrived at that number by “only looking at the small slice of doing the transaction processing.” (*Id.* at 770.) “If you are looking at what [U.S. Bank] actually charge[s] a customer per transaction,” he added, “it’s the [REDACTED] cents or [REDACTED] cents per transaction.” (*Id.*)

asking why U.S. Bank customers were paying “so much more for” ECS-OSI. (*Id.* at 1536.) Mr. Bero accordingly opined that, at a hypothetical negotiation in which the patent was presumed valid, a half-cent per transaction royalty would have been reasonable.

5. The Parties Present Dueling Expert Opinions on Whether Two Pieces of Prior Art Rendered the ‘945 Patent Obvious

With respect to obviousness, U.S. Bank’s technical expert, Elliot McEntee, argued that two pieces of prior art, the 2002 Visa POS check service, *see supra* note 7, and a 1999 patent called Geer, taught every claim of the ‘945 patent other than “imaging after crediting.” And, with respect to that step, Mr. McEntee contented that the prior art “implied” that one could do BOC-style imaging at a point other than the point of sale. (*See, e.g.*, Trial Tr. at 1373, 1453.) Accordingly, Mr. McEntee argued, the SPIN process would have been obvious in 2006 to someone with experience in the check and ACH processing field. Solutran’s technical expert, Bill Saffici, contested these assertions at great length. However, because U.S. Bank does not seek JMOL on obviousness, the Court will not discuss this portion of the trial in any more detail.

6. The Verdict

The jury first ruled that U.S. Bank had not proven, by clear and convincing evidence, that either of U.S. Bank’s proposed prior arts rendered any disputed claim within the ‘945 patent invalid. (*See Redacted Jury Verdict.*)

The jury then determined that Solutran had proven, by a preponderance of the evidence, that U.S. Bank’s infringement caused Solutran to suffer lost profits. However, the jury did not find that Solutran had proven it would have captured 80% of the 134,000,362

ECS-OSI transactions, as Mr. Green suggested. Rather, it appears that the jury found that Solutran had proven that it would have captured approximately 26% of infringing sales (*i.e.*, 34,839,995 transactions), at Mr. Green's proposed profit rate of 3.7 cents per transaction. That is, \$1,289,079.80 in lost profit damages.

It appears that the jury apportioned the remaining 74% of infringing transactions to reasonable royalty damages (*i.e.*, 99,160,267 transactions), at Mr. Green's proposed royalty rate of two cents per transaction. That is, \$1,983,205.30 in reasonable royalty damages.

In sum, the jury awarded Solutran \$3,272,285.10 in damages.

III. DISCUSSION

A. U.S. Bank's Motion for Judgment as a Matter of Law

1. Standard of Review

The Federal Rules allow a party to move for judgment as a matter of law before a case goes to a jury, and then, if denied, renew that motion after the jury renders a verdict against them. *See Fed. R. Civ. P. 50*. U.S. Bank is only entitled to JMOL "if a reasonable jury would not have a legally sufficient evidentiary basis to return a verdict for" Solutran based on lost profits and a reasonable royalty. *Bavlsik v. General Motors, LLC*, 870 F.3d 800, 805 (8th Cir. 2017). The Eighth Circuit instructs lower courts to exercise "hesitancy" before interfering with a jury's verdict because "of the danger that the jury's rightful province will be invaded when [JMOL] is misused." *Id.* (citation omitted). Indeed, "[JMOL] is proper only when the evidence is such that, without weighing the credibility of the witnesses, there is a complete absence of probative facts to support the verdict." *Id.* (citation omitted); *see also Energy*

Heating, LLC v. Heat On-The-Fly, LLC, [889 F.3d 1291, 1303](#) (Fed. Cir. 2018) (noting that the Federal Circuit “appl[ies] the law of the regional circuit to procedural issues that are not unique to patent law,” and applying the law of the Eighth Circuit to the denial of a post-trial motion for JMOL).

2. Waiver

At the outset, the Court addresses Solutran’s argument that U.S. Bank’s renewed JMOL motion included three discrete arguments not found in U.S. Bank’s initial JMOL motion, or in U.S. Bank’s oral presentation in support of that motion, and that U.S. Bank therefore waived those arguments. (See Solutran’s Br. Opposing U.S. Bank’s JMOL Motion [[Doc. No. 404](#)] (“Solutran’s JMOL Opp. Br.”) at 2-4.) In particular, Solutran points to U.S. Bank’s arguments that (1) Mr. Green failed to analyze the relative value of the invention in comparison to the BankServ prior art; (2) Mr. Green failed to isolate U.S. Bank’s authorization revenue, for verification and guarantee services, from processing revenue; and (3) Mr. Green failed to undertake a *Mor-Flo*, or “market share,” analysis, in addition to his “two-supplier market” analysis. (*Id.*)

The Court disagrees. As U.S. Bank accurately explains in its reply brief, each of these arguments was sufficiently placed on the record in U.S. Bank’s brief or at oral argument. (See U.S. Bank’s Reply Br. in Support of JMOL [[Doc. No. 425](#)] (“U.S. Bank JMOL Reply Br.”) at 2-3.) U.S. Bank did not waive any arguments considered here. See *Conseco Fin. Servicing Corp. v. North American Mortg. Co.*, [381 F.3d 811, 821](#) (8th Cir. 2004) (stating that the Federal Rules of Civil Procedure “are such that technical precision

is not necessary in stating grounds for the [Rule 50] motion so long as the trial court is aware of the movant's position").

3. Reasonable Royalty

a. The Law

In patent infringement suits, a patentholder is always entitled to at least a "reasonable royalty" "for the use made of the invention by the infringer." 24 U.S.C. § 284. In cases where an established royalty for the patented product does not exist, like this one, the finder of fact may determine a "reasonable royalty" through the "hypothetical negotiation approach." *Lucent Tech., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324-25 (Fed. Cir. 2009). This approach "attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before the infringement began," usually through an expert-led examination of the *Georgia-Pacific* factors. *Id.* at 1324.

In determining a reasonable royalty, the finder of fact must assume "that the asserted patent claims are valid and infringed." *Id.* at 1325. Moreover, because this "hypothetical" approach "necessarily involves an element of approximation and uncertainty," *id.* (citation omitted), courts will generally uphold a jury's verdict unless "the award is, in view of all the evidence, either so outrageously high or so outrageously low as to be unupportable as an estimation of a reasonable royalty." *Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1238 (Fed. Cir. 2011) (citations omitted).

One important limitation on reasonable royalty awards, however, is the doctrine of apportionment. This doctrine maintains that, "in every case," the patent holder must "give

evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features." *Power Integrations, Inc. v. Fairchild Semiconduct Int'l, Inc.*, 904 F.3d 965, 977 (Fed. Cir. 2018) (citing *Garretson v. Clark*, 111 U.S. 120, 121 (1884)). For instance, if a "multi-component product [is] accused of infringement," "the royalty base should not be larger than the smallest salable unit embodying the patented invention." *Id.* This kind of analysis is not necessary, though, "when the patented feature is the sole driver of customer demand or substantially creates the value of the component parts." *Id.* at 979 (deeming this the "entire market rule").

Apportionment also functions on an "intra-patent" level. That is, "when a patent covers the infringing product as a whole, and the claims recite both conventional elements and unconventional elements, the [finder of fact] must determine how to account for the relative value of the patentee's invention in comparison to the value of the conventional elements recited in the claim, standing alone." *Exmark Mfg. Co. Inc. v. Briggs & Stratton Power Prod. Grp., LLC*, 879 F.3d 1332, 1348 (Fed. Cir. 2018) (citing *AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1338 (Fed. Cir. 2015)). The Federal Circuit has stated that, although "a proper [expert] analysis of the *Georgia-Pacific* factors" constitutes "one possible way" to apportion a royalty to only the "unconventional elements" in a patent, the expert must "conduct an[] analysis indicating the degree to which [the conventional elements in a patent] impact[ed] the market value or profitability of the [patent]." *Id.* at 1348-49. However, when a patent confers "new value" on the conventional elements by way of a "novel combination," "the value of

conventional elements” do not necessarily need to be “subtracted from the value of the patented invention as a whole when assessing damages.” *AstraZeneca*, 782 F.3d at 1339.

b. Analysis

U.S. Bank argues that four shortcomings in Solutran’s reasonable royalty presentation render the jury’s use of a two-cent-per-transaction royalty “utterly indefensible.” (U.S. Bank’s JMOL Br. at 2.) First, U.S. Bank argues that Mr. Green “failed to apportion out the value of the verification and guarantee components of the ECS-OSI product even though [Solutran’s] patent claims do not cover those components.” (*Id.*) Second, U.S. Bank argues that Mr. Green “failed to apportion out the value of the conventional elements of ECS-OSI” (*e.g.*, the MICR scanning used in POP and the BOC standard). (*Id.* at 1.) Third, U.S. Bank argues that Mr. Green “improperly used revenue and profit from Elavon’s non-infringing ECS product as a basis for his reasonable royalty calculations, even though that product has nothing to do with [Solutran’s] patent.” (*Id.* at 1-2.) Fourth, U.S. Bank argues that Mr. Green “failed to account for the relative value of” Solutran’s patent as compared to the excluded BankServ prior art. (*Id.* at 5.) These “failures,” U.S. Bank concludes, “require the Court to remove the difference between Mr. Green’s royalty rate figure and Mr. Bero’s one-half cent figure from the verdict.” (*Id.*)

Because the Court finds Mr. Green’s reasonable royalty calculation supported by substantial evidence in the record, and because U.S. Bank had ample opportunity during trial to cast doubt upon Mr. Green’s calculations through cross-examination and counter-expert testimony, the Court will not disturb the jury’s decision to credit Mr. Green’s two-cents-per-

transaction royalty. *See Finjan, Inc. v. Secure Computing Corp.*, [626 F.3d 1197, 1212](#) (Fed. Cir. 2010) (upholding jury damages award “[d]espite potential flaws in [the patentee’s] damages theory” because “the jury was entitled to hear the expert testimony and decide for itself what to accept or reject”). Moreover, because the Court found U.S. Bank’s BankServ proffer inadmissible as evidence of the “old modes or devices” available to U.S. Bank in 2012, the Court will not fault Mr. Green, or the jury, for failing to consider that evidence.

i. Apportioning Verification and Guarantee Revenue

U.S. Bank contends that “Mr. Green ignored the fact that much of the revenue [U.S. Bank] receives from [ECS-]OSI customers has no connection to the infringing process,” *i.e.*, “authorization revenue” from “verification and guarantee services that are not part of the ’945 patent claims.” (*Id.* at 14 (also called “V&G revenue”).) In particular, U.S. Bank notes that, while Mr. Bero found that U.S. Bank received about ■ cents per transaction in V&G revenue (assuming ■ cents in total revenue per-transaction) and took this into account in calculating net profits for the “patented component” of the infringing ECS-OSI service, Mr. Green merely stated that the ■ cent-per-transaction revenue figure he used as a base for his net profit numbers included “other things besides just the processing of transactions through what SPIN is doing,” such as “verification” and “guarantee” revenue. (*Id.* (citing Trial Tr. at 644); *see also infra* at 45-47 (discussing the parties’ dispute over whether Mr. Bero’s underlying ■ cent per-transaction revenue numbers are even correct).) This failure to apportion, U.S. Bank argues, violates the apportionment rule set forth in cases like *Finjan, Inc. v. Blue Coat Sys.*,

Inc., 879 F.3d 1299, 1309 (Fed. Cir. 2018), and *Virnetx, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1328 (Fed. Cir. 2014).

For its part, Solutran contends that, “because the evidence showed that verification and guarantee services are pass-through costs,” and hence did not affect the net profit per transaction numbers Mr. Green used as one factor in setting his reasonable royalty, the jury could have found that “such separation was not necessary.” (Solutran’s JMOL Br. at 7.)

The Court finds that, to the extent Mr. Green failed to separate out non-patented V&G revenue from revenue related to the patented business method, this error did not render the jury’s 2-cent-per-transaction reasonable royalty “either so outrageously high or so outrageously low as to be unsupportable as an estimation of a reasonable royalty.” *Powell*, 663 F.3d at 1238. This is especially true in light of the other evidence supporting Mr. Green’s estimate. *See, e.g., infra* at 50.

With respect to V&G revenue, the jury could have noted that, in reaching his 2-cent-per-transaction royalty, Mr. Green primarily relied on his reading of U.S. Bank’s *net profit* numbers (*i.e.*, between █ and █ cents per transaction), which arguably did not include the V&G “pass through” revenue. (*See, e.g.*, Trial Tr. at 646 (Green) (noting that U.S. Bank’s net profits were one indication that a two-cent royalty was reasonable).) Indeed, although Mr. Bero and Mr. Green’s revenue numbers are quite disparate (█ cents per transaction versus █ cents per transaction), their net profit estimates are far less so (██████████ to ██████████ ██████████ per transaction versus ████ to ██████ cents per transaction).

Moreover, the jury may have considered testimony that U.S. Bank’s add-on V&G services were only used by a small number of ECS-OSI clients, and did not at all drive customer interest in ECS-OSI. (*See, e.g., id.* at 272 (Nordstrand); *id.* at 622-24, 803-04 (Green).) Of course, U.S. Bank introduced evidence stating the opposite. (*See, e.g., id.* at 779-81 (Green).) But the jury was entitled to find Solutran’s narrative more compelling.¹⁶

Further, when placed in perspective, Mr. Green’s purported failure to apportion V&G revenue is a far cry from *Blue Coat Sys.* or *VirnetX*. In those cases, the patent holder’s expert failed to separate the value of a (relatively minor) piece of patented software from the value of a (much larger) computer product sold to customers. *See Blue Coat Sys.*, 879 F.3d at 1310-11 (expert failed to apportion “valuable” URL identification features “unrelated” to the patented function in an internet “dynamic real-time rating engine,” and instead relied on “web traffic handled by” the entire rating engine); *VirnetX*, 767 F.3d at 1327-28 (expert failed to apportion “value attributable to VPN On Demand and Facetime features,” and instead “relied on the entire value of the iOS devices”); *see also Lucent*, 580 F.3d at 1337 (expert failed to apportion value attributable to “minor” “date-picker tool” in Microsoft Outlook, and instead based damages on revenue for Outlook in general). That was not the case here.

¹⁶ Although Solutran did not request an instruction on the “entire market rule” exception to apportionment, the Court nonetheless finds the rule instructive in reviewing the reasonableness of the jury’s royalty determination. *See Power Integrations*, 904 F.3d at 979 (noting that apportionment is not necessary “when the patented feature is the sole driver of customer demand or substantially creates the value of the component parts”).

Because evidence in the record supports the position that U.S. Bank’s V&G add-ons did not drive demand for ECS-OSI, and that, even if they did, V&G revenue did not affect the net profit number Mr. Green relied on, there is little risk that the jury’s reasonable royalty award “improperly compensate[d] [Solutran] for non-infringing [V&G] components of” the infringing ECS-OSI service. *Cf. LaserDynamics v. Quanta Comp., Inc.*, [694 F.3d 51, 67](#) (Fed. Cir. 2012) (“Where *small elements of multi-component products* are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product.”) (emphasis added).

ii. Apportioning the “Conventional Elements”

U.S. Bank next argues that Mr. Green failed to perform an “intra-patent” apportionment analysis as well. U.S. Bank contends that Solutran’s own witnesses conceded that the only unconventional element of the patented invention was “the simple step of imaging paper checks *after* crediting the merchant,” and that the parts of the ’945 patent relating to BOC imaging, MICR scanning, and exception processing are all “conventional elements.” (U.S. Bank’s JMOL Br. at 8-10.) In particular, U.S. Bank cites *Ericsson, Inc. v. D-Link Sys., Inc.*, for the proposition that Mr. Green needed “to separate the benefits of the ’945 process from BOC processes.” (*Id.* at 10; *see* [773 F.3d 1201, 1233](#) (Fed. Cir. 2014) (“[A] royalty award for a [standard essential patent] must be apportioned to the value of the patented invention (or at least to the approximate value thereof), not the value of the standard as a whole.”).) Because Mr. Green failed to “tak[e] into account prior art [related to POP and BOC] . . . and the BOC standard that [Solutran’s] claimed invention followed,” U.S. Bank

argues, Mr. Green’s “conclusions [are] impermissibly speculative.” (U.S. Bank JMOL Br. at 10.)

By contrast, Solutran points to testimony explaining “why the [’945 patent’s] ‘conventional elements’ could not provide value to U.S. Bank’s ECS-OSI customers, standing alone.” (Solutran JMOL Br. at 9.) For instance, Solutran cites Mr. Green’s testimony elucidating why POP and conventional BOC were not suitable for the narrow portion of the retail market Solutran and U.S. Bank compete over. (*Id.* (citing Trial Tr. at 618-19).) Moreover, Solutran cites *AstraZeneca* for the proposition that Mr. Green did not need to apportion out the value of SPIN’s “conventional elements” because SPIN’s value stemmed from its “novel combination” of conventional and unconventional elements. (*Id.* at 9-10 (citing [782 F.3d at 1339](#)).) As Mr. Nordstrand explained, “Solutran was able to ‘unlock the ability to do some of these automated processes because the other ones [POP and conventional BOC] had fatal flaws that there’s a whole segment of the market that wouldn’t do them,’” namely “large regional or national retailers for whom buying scanners for every lane or even every store was a non-starter.” (*Id.* at 11 (quoting Trial Tr. at 176-77).) Finally, Solutran argues that U.S. Bank’s invocation of *Ericsson* is irrelevant because (a) the ’945 patent is not a “standard-essential patent” and (b) Mr. Green directly explained why he did not credit the 2007 BOC rule as “driving [SPIN’s] commercial success.” (*Id.* at 11-12; *see* Trial Tr. at 1845 (Green) (concluding that ECS-OSI was more valuable than ECS-OI and ECS-COI, both of which “got the same start back in 2007” [because of the BOC rules]).)

The Court agrees with Solutran that substantial evidence supports the conclusion that the '945 patent was a “novel combination” like the patent in *AstraZeneca*. Precise apportionment of the different elements of the patent was therefore unnecessary for the jury to find a two-cent royalty reasonable. In *AstraZeneca*, the Federal Circuit affirmed a District Court’s finding that, because the patented formulation for a prescription drug “substantially created the value of the entire” drug, the Court did not need to “exclude the value of the [well-known] active ingredient [used in the formulation] when calculating damages.” 782 F.3d at 1339. The formulation’s novel features “made it possible for drug manufacturers to commercialize” the prescription drug, and thus create a product that “was previously unknown in the art and was novel in its own right.” *Id.* at 1339-40.

Here, although some testimony supports U.S. Bank’s contention that the only “novel” aspect of the patented process was “imaging after crediting,” and that this step did not substantially create the value of the entire product (*see, e.g.*, U.S. Bank’s JMOL Br. at 8-10), other testimony supports the conclusion that the patented method (which the jury found non-obvious) created a “novel combination” that “made it possible for [Solutran] to commercialize” BOC for a segment of the retail market that had previously relied on more expensive and less desirable methods for processing checks. (*See, e.g.*, Trial Tr. at 197 (B. Nordstrand) (noting that Solutran had trouble selling traditional BOC (in anticipation of the BOC rules) because “[s]canners were dead on arrival”); *id.* at 1200 (Waldhauer) (agreeing that, for Target in 2007, “any proposal . . . that involved Target buying scanners or other equipment was dead on arrival”); *id.* at 260 (B. Nordstrand) (calling POP “dead on arrival”

with certain retailers that later became SPIN clients); *accord id.* at 646-47 (Green) (explaining why the jury should view “all of the benefits [of SPIN] together,” even if “some of these benefits actually are parts of other systems”).)

The Court also finds *Ericsson* distinguishable. For one, *Ericsson* only spoke to standard-essential patents, *i.e.*, patents in which a standard “*requires* that devices utilize specific technology,” such that compliant devices “*necessarily* infringe certain claims in the patent that cover technology incorporated into the standard.” 773 F.3d at 1209 (emphasis added). There is no allegation that the ’945 patent is a standard-essential patent, in that it “necessarily” infringes patented technology incorporated into the 2007 BOC standard. As best the Court can tell, the BOC rules do not require the use of any patented technology. Moreover, the Court finds that the jury could have credited Mr. Green’s explanation as to why the 2007 BOC standard did not drive SPIN’s value. (*See* Trial Tr. at 1845 (Green); *see also id.* at 198 (B. Nordstrand) (relaying how Solutran discovered a way to “use the BOC rules, but do it in a way that no one else [was] thinking about”).)

Accordingly, a reasonable jury could rely on Mr. Green’s two-cent royalty, even if he never provided “calculations” separating the value of the patented method from the prior BOC or POP methods. (U.S. Bank’s JMOL Reply Br. at 7.)

iii. Reliance on ECS-Level Profit and Revenue Numbers

U.S. Bank also argues that Mr. Green relied on an inaccurate revenue-per-transaction number belied by his own expert report. That is, although Mr. Green told the jury that U.S. Bank earned almost ■ cents in revenue per transaction based on U.S. Bank’s Profit and

Loss Statements for its entire ECS line (*i.e.*, including customers for non-infringing ECS services like ECS-CI and ECS-COI), Mr. Green’s expert report (and Mr. Bero) showed that, on a product-level basis, ECS-OSI generated only [REDACTED] cents of revenue per transaction. (*See* U.S. Bank’s JMOL Br. at 12.)¹⁷ Because of this purportedly erroneous revenue assumption, U.S. Bank continues, Mr. Green found that U.S. Bank’s profits ranged between [REDACTED] and [REDACTED] cents per transaction during the relevant period, rather than the [REDACTED] [REDACTED] per transaction found by Mr. Bero. (*Id.* at 13.) All told, U.S. Bank concludes, it is not “challenging a jury’s right to choose between competing experts’ calculations.” (*Id.*) Rather, it is “challenging Mr. Green’s testimony that [U.S. Bank’s] ECS-OSI revenues and profits were far higher than reality.” (*Id.*)

Solutran ripostes that, although Mr. Green’s expert report relays Elavon’s financial information concerning ECS-OSI revenue, he testified about this exact issue on cross-examination, and stated that the product-specific revenue cited in his expert report was unreliable because it “only look[ed] at the small slice of doing the transaction processing,” rather than what U.S. Bank “actually charge[s]” its customers. (Solutran’s JMOL Br. at 16 (citing Trial Tr. at 770).) Indeed, as Solutran notes in its brief (as it did on Mr. Bero’s cross-

¹⁷ Specifically, U.S. Bank cites a paragraph of Mr. Green’s expert report in which he states that “[t]he financial information Elavon provided . . . indicate that revenues for eleven of [U.S. Bank’s] twelve [ECS-OSI] customers amount to [REDACTED] from March 2008 through August 2016. Over that same period, for these eleven customers Elavon processed over 300 million transactions on the allegedly infringing BOC with OI platform.” (*Id.* at 12 (citing Green Expert Rpt. [Doc. No. 270] at 13).) 300 million divided by [REDACTED] equals [REDACTED] cents revenue per transaction.

examination and in closing argument), taking U.S. Bank’s ECS-OSI revenue numbers at face value asked “the jury to believe that U.S. Bank’s OI and COI options generated *eight times* more than revenue than did ECS-OSI,” despite the fact that U.S. Bank “undertook no imaging” when providing these services, and thus “charged its customers less for th[ose] options.” (*Id.* at 15-16; *see also* Trial Tr. at 1596-98 (Bero cross-examination), 1920-21 (closing).)

Still more, Solutran adds, relying on product-specific data for net *profits* in this case is challenging because “U.S. Bank maintains no financial records that reflect the *actual* ECS-OSI profit.” (Solutran’s JMOL Br. at 15.) This, in turn, required the parties to ask their respective experts “to *estimate* the actual ECS-OSI profit profits.” (*Id.*) In determining the possible range of ECS-OSI net profits for reasonable royalty purposes, then, Mr. Green permissibly extrapolated from the product-wide ECS numbers and P&L statements. *See Finjan*, 626 F.3d at 1209 (finding that substantial evidence supported an award that relied on “company-wide, instead of product-specific, gross profits” because the expert explained the reasoning underlying this conclusion); *Whitserve, LLC v. Comput. Packages, Inc.*, 694 F.3d 10, 28 (Fed. Cir. 2012) (finding no reversible error in expert’s calculation of average service fee that relied on non-infringing transactions in computing the revenue base).¹⁸

¹⁸ U.S. Bank notes in response that “*both* parties created [Profit and Loss] statements for this litigation.” (U.S. Bank JMOL Reply Br. at 10-11.) The only difference, U.S. Bank contends, is that Ms. Nordstrand (Solutran’s COO) created a SPIN P&L and Mr. Bero (U.S. Bank’s damages expert) created an ECS-OSI P&L. (*Id.*) However, the Court

The Court agrees with Solutran on this issue, too. Like in *Finjan*, “both parties positions on [ECS-OSI] profits were based on evidence and reasoned expert opinion.” *Finjan*, 626 F.3d at 1211. And, as in *Whitserve*, “[a]lthough it would have been preferable [for Mr. Green] to have broken down [the ECS data he relied on] by a specific transaction type,” his “reasoning on this point was [not] impermissible speculation.” 694 F.3d at 29. Indeed, the jury heard “vigorous cross-examination” and “presentation of contrary evidence” on precisely this issue, including during U.S. Bank’s closing argument. *Id.*; see Trial Tr. at 1885-87. As such, the Court “cannot second-guess the jury’s independent views of either” Mr. Green or Mr. Bero’s presentation. *Finjan*, 626 F.3d at 1211.

What is more, even if Mr. Green did overstate U.S. Bank’s anticipated ECS-OSI profits-per-transaction in 2012 by two to three cents, it is well-established that, because “what an infringer would prefer to pay is not the test for damages,” a damages award can be reasonable even if it is “not based on the infringer’s profits.” *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538, 1555 (Fed. Cir. 1995) (en banc); accord *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1338 (Fed. Cir. 2004) (royalty not unreasonable simply because it exceeded “Wal-Mart’s profit forecast for the product”). Thus, the (contested) fact that U.S. Bank might not have made profits under a two-cent royalty does not inherently make that royalty unreasonable.

iv. BankServ Prior Art

notes that, unlike Solutran, U.S. Bank does not appear to challenge the reliability of Ms. Nordstrand’s net profit numbers.

Finally, U.S. Bank argues that, under the Federal Circuit’s *Exmark* decision, the Court has a duty to consider the (excluded) BankServ prior art in evaluating whether the jury’s two-cent royalty award was reasonable. *See* [879 F.3d at 1352-52](#). In *Exmark*, the defendant wanted to use prior art to demonstrate that, under *Georgia-Pacific* factor number nine, “the utility and advantages of the patent property” were not substantially greater than “the old modes or devices . . . that had been used for working our similar results.” *Id.* However, the district court excluded the evidence solely because the prior art “had not been commercialized.” *Id.* The Federal Circuit reversed this decision, and held that “the fact that some prior art [methods] were not commercialized does not make them immaterial to determining the extent to which the [method] claimed in the [at-issue patent] provides utility and advantages over the prior art.” *Id.* at 1352. U.S. Bank contends that, likewise here, the BankServ evidence it proffered showed that the ’945 patent is “no advancement over the prior art,” and that “[this] fact alone renders Mr. Green’s two-cent royalty insupportable.” (U.S. Bank JMOL Br. at 7.)

Solutran distinguishes *Exmark* by simply noting that, “despite the Court’s willingness to entertain an offer of proof on this very issue,” U.S. Bank “failed to offer admissible evidence” regarding BankServ in its proffer. (Solutran’s JMOL Br. at 17-18.) Therefore, Solutran argues, U.S. Bank cannot “complain[] that the jury failed to consider evidence that its BankServ method was a non-infringing alternative or an old mode or device.” (*Id.* at 17.)

The Court finds that U.S. Bank's argument is not so much an attack on the jury's reasonable royalty determination as it is a motion for reconsideration of the Court's decision to exclude U.S. Bank's proffered BankServ testimony. Because of this, *Exmark* is inapposite. There, the district court excluded evidence based on legal irrelevance (incorrectly, it turned out). Here, the Court excluded BankServ evidence, not because "it was not commercialized" by 2012, *Exmark*, [879 F.3d at 1351](#), or because of any other relevancy concern, but because the proffered testimony had only a "tiny bit of probative value" with respect to a reasonable royalty analysis, when compared to the "prejudic[ial value] given [the Court's] rulings for its use for invalidity." (Trial Tr. at 466; *see also supra* at 8-10 (explaining this background).) The Court will not reconsider its Rule 403 ruling at this late juncture.

Moreover, even if this Court were to *sua sponte* consider the proffered BankServ evidence to determine whether a two-cent royalty were reasonable, it would be impossible to weigh that evidence based solely on U.S. Bank's one-sided proffer. Solutran never had an opportunity to cross-examine Ms. Waldhauer on this issue, much less conduct discovery. The Court could not, in good faith, vacate the jury's chosen two-cent-per-transaction royalty in favor of Mr. Bero's half-cent royalty based on the thin BankServ record before it.

* * * *

To step back for a moment, the Court also notes that, in some ways, U.S. Bank's reasonable royalty argument misses the forest for the trees. Although U.S. Bank argues numerous alleged weaknesses with certain aspects of Mr. Green's "hypothetical negotiation"

presentation, it does not mention other, important facts that might have led the jury to conclude that a two-cent-per-transaction royalty was reasonable. For instance, Mr. Green testified that Solutran and U.S. Bank were “direct competitors,” that Solutran had never licensed its patent, and that Solutran’s profit margins were on an upward trajectory in 2012, rising from [REDACTED] per transaction to [REDACTED] per transaction. (*See* Trial Tr. at 641-44, 652.) This alone provided evidence from which a jury could find a two-cent royalty reasonable. *Cf. Rite-Hite*, 56 F.3d at 1554 (finding a royalty set at one-half of expected profits supported because the patent was a “‘pioneer’ patent with manifest commercial success”; because the patent holder “had consistently followed a policy of exploiting its own patents, rather than licensing to competitors”; and because the patent holder “would have had to forego a large profit by granting a license to [the infringer] because [the infringer] was a strong competitor and [the patent holder] anticipated being able to sell a large number of restraints and related products”).

All told, a two-cent royalty is neither “so outrageously high or so outrageously low as to be unsupportable.” *Powell*, 663 F.3d at 1238 (Fed. Cir. 2011); *see also Bluebonnet Sav. Bank, F.S.B. v. United States*, 266 F.3d 1348, 1355 (Fed. Cir. 2001) (explaining that damage calculations are not an exact science and “it is enough if the evidence adduced is sufficient to enable a court or jury to make a fair and reasonable approximation”). Accordingly, U.S. Bank’s motion for JMOL on this issue is denied.

4. Lost Profits

a. Disclosure of Mr. Green’s Expert Opinions

The Court now turns to the lost profits portion of the jury's damages award. As a threshold matter, the Court addresses U.S. Bank's argument that Mr. Green failed to clearly disclose three of his expert opinions concerning lost profits "until noon on the first day of trial." (U.S. Bank's JMOL Br. at 23.) Fed. R. Civ. P. 26(a)(2) requires parties to disclose expert testimony "at least 90 days before the date set for trial," and include a report containing "a complete statement of all opinions the witness will express and the basis and reasons for them." This rule protects litigants against opponents giving them "sketchy and vague" information about their expert, such that it is impossible to prepare for a deposition or trial. *See* Fed. R. Civ. P. Advisory Committee Note (1993).

Here, U.S. Bank argues that Mr. Green did not disclose his views concerning (a) the two-supplier market; (b) the relevant market being defined by the scope of the '945 patent; and (c) Solutran's actual ability (rather than hypothetical ability) to capture 80% of U.S. Bank's ECS-OSI business. (*See* U.S. Bank's JMOL Br. at 23.) Solutran points out that Mr. Green's expert report contains all of these opinions, albeit framed as points on a damages spectrum more than strict black-and-white statements. (*See* Solutran's Opp. Br. at 23-26.) Even though Mr. Green might not have presented "all the nuances of the opinion in [his] expert report at trial," Solutran contends, U.S. Bank "had ample opportunity to cross-examine Mr. Green on this issue," and accordingly "does not get to object to the emphasis placed on [his] opinions at trial." (*Id.* at 26.)

The Court agrees with Solutran, just as it did during the trial. (*See, e.g.*, Trial Tr. at 584 (stating that cross-examination, rather than exclusion, was the remedy for this issue), 1865

(denying U.S. Bank’s Rule 50(a) JMOL motion on this issue.) All of the statements Mr. Green made at trial appeared, in some form or another, in his expert report.

Moreover, even if Mr. Green’s belated adjustments to his testimony could be viewed as contradicting the spirit of Rule 26, this is not a case like *Vanderberg v. Petco Animal Supplies Store, Inc.*, [906 F.3d 698](#) (8th Cir. 2018). There, the Eighth Circuit affirmed a district court’s decision to exclude expert testimony after a party failed to explicitly disclose the name of that expert in advance of trial. The panel noted that, because the other party never had an opportunity to either depose the expert or gather rebuttal evidence, the failure to disclose was not “harmless.” *Id.* at 704. Here, not only did U.S. Bank’s counsel cross-examine Mr. Green at length about his purported inconsistencies, but the jury had the opportunity to review the high and low estimates of damages in Mr. Green’s expert report and accompanying schedules. U.S. Bank was also able to call Mr. Green’s “two-supplier market” into question through Mr. Bero’s expert testimony. Mr. Green’s use of hypotheticals in his expert report in no way prejudiced U.S. Bank.

b. The Law

The Court now turns to the legal issues surrounding the jury’s lost profits award. For a patentholder to recover lost profits, it “must show ‘causation in fact,’ establishing that ‘but for’ the infringement, [it] would have made additional profits” on its patent. *Grain Processing Corp. v. American Maize-Products Co.*, [185 F.3d 1341, 1349](#) (Fed. Cir. 1999). The patentholder bears the “initial burden to show a reasonable probability that [it] would have made the asserted sales ‘but for’ the infringement.” *Id.* If it establishes this “reasonable

probability,” “the burden then shifts to the infringer to show that [the patent owner’s ‘but for’ causation claim] is unreasonable for some or all of the lost sales.” *Id.* (citing *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1438, 1544 (Fed. Cir. 1995) (en banc)). However, in attempting to establish “reasonable probability,” a patent holder “need not negate every possibility that [purchasers of the infringing service] might not have purchased a product other than its own, absent the infringement.” *Rite-Hite*, 56 F.3d at 1545.

Although “[t]here is no particular required method to prove but for causation,” a “useful, non-exclusive method” to establish lost profits is the four-part *Panduit* test, which the Court instructed the jury on here. *Mentor Graphics*, 851 F.3d at 1284; *but cf. Grain Processing*, 185 F.3d at 1350 (noting that “courts have given patentees significant latitude to prove and recover lost profits for a wide variety of foreseeable economic effects of the infringement”). Under *Panduit*, a patentholder must establish: “(1) demand for the patented product; (2) absence of acceptable non-infringing alternatives; (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of profit it would have made.” *Mentor Graphics*, 851 F.3d at 1285.

“[T]he most difficult obstacle for patent holders” seeking lost profits under *Panduit* is the second factor, *i.e.*, proving the absence of acceptable non-infringing alternatives to the patented process. *Id.* at 1286. Indeed, this factor is the locus of the parties’ dispute here. Because the question is whether an alternative product “would be acceptable compared to the patent owner’s product, not whether it is a substitute for the infringing product,” proving the second *Panduit* factor often “requires a reconstruction of the market, as it would have

developed absent the infringing product.” *Presidio Components, Inc. v. Amer. Tech. Ceramics Corp.*, 875 F.3d 1369, 1381 (Fed. Cir. 2017) (“*Presidio I*”).

To prevent this hypothetical market reconstruction from “lapsing into pure speculation,” the Federal Circuit requires “sound economic proof of the nature of the market and likely outcomes with infringement factored out of the economic picture.” *Grain Processing*, 185 F.3d at 1350. Generally speaking, the market for a patented product “includes other devices or substitutes similar in physical and functional characteristics to the patented invention,” but excludes “alternatives with disparately different prices or significantly different characteristics.” *Micro Chem., Inc. v. Lextron, Inc.*, 318 F.3d 1119, 1124 (Fed. Cir. 2003). Moreover, the “mere existence of a competing device does not make that device an acceptable substitute,” as “products lacking the advantages of the patented invention can hardly be termed a substitute acceptable to the customer who wants those advantages.” *Presidio Components, Inc. v. Amer. Tech. Ceramics Corp.*, 702 F.3d 1351, 1361 (Fed. Cir. 2012) (“*Presidio I*”). A patent holder may attempt to prove lost profits through a two-supplier market, as Solutran did here. *See Micro Chem.*, 318 F.3d at 1124. However, “it is quite common to see damage awards where . . . the patentee proves entitlement to lost profits for some of its sales, but not others.” *Mentor Graphics*, 851 F.3d at 1286.

c. Analysis

The question is whether Solutran carried its burden under *Panduit*, such that the jury had legally sufficient evidence upon which to base its determination that Solutran had a “reasonable probability” of capturing approximately 26% of ECS-OSI transactions

but-for U.S. Bank's infringement. *Grain Processing*, 185 F.3d at 1349. Although the jury's lost profits award is not a paragon of clarity, the Court finds that, "viewing the evidence in the light most favorable to the verdict," JMOL is not warranted on this issue either. *Energy Heating*, 889 F.3d at 1303 (citing *Hyundai Motor Finc. Co. v. McKay Motors I, LLC*, 574 F.3d 637, 640 (8th Cir. 2009)).

U.S. Bank argues that Solutran failed to meet its burden of either proving the existence of a two-supplier market or the absence of acceptable, non-infringing alternatives to the patented process. (*See* U.S. Bank's JMOL Br. at 17-22.) U.S. Bank asserts that Solutran "assumed that the relevant market is defined by the scope of its patent," and failed to "present any economic analysis of the pricing or characteristics of the other electronic check products on the market." (*Id.* at 19.) For example, U.S. Bank notes, Solutran's "own exhibit identified Certegy, First Data, NCR, Bank of America, and Wells Fargo as competitors offering electronic check solutions, including some competing BOC solutions, to the top 200 and top 500 retailers in the United States." (*Id.* at 20 (citing Pl.'s Trial Ex. 384).) Worse yet, U.S. Bank continues, evidence at trial demonstrated that "[b]oth parties have lost customers to alternative technologies, including POP and [U.S. Bank's] COI and CI solutions, none alleged to be infringing, and such alternatives are offered by multiple suppliers." (*Id.* at 21.) Finally, U.S. Bank contends, Solutran did not attempt "to prove lost profits on a customer-by-customer basis," and "made no effort to analyze the reason why" the 12 "ECS-OSI customers might have chosen either SPIN or a different alternative." (*Id.* at 22.)

For its part, Solutran argues that, because the jury's verdict only credited 26% of infringing transactions to lost profits, "it is unreasonable for U.S. Bank to assume that the jury found that a two-supplier market [even] existed." (Solutran JMOL Opp. Br. at 20.) That said, Solutran continues, "ample evidence" from both sides' witnesses "support[s] the existence of a two-supplier market." (*Id.*) For instance, Ms. Calabrese and Mr. Nordstrand testified that U.S. Bank and Solutran were "direct competitors" in this market for a "handful" of customers, that ECS-OSI customers would not have selected POP or another BOC product, and that each of U.S. Bank's customers could have selected POP, COI, or CI, but chose the infringing ECS-OSI process instead. (*Id.* at 20-22 (*citing, e.g.,* Trial Tr. at 987 (Calabrese)).) Finally, Solutran notes that Mr. Green provided a damages framework under which the jury could have justifiably chosen a percentage less than Solutran's preferred 80%. (*Id.* at 21-22; *see also supra* at 25.)

The Court again agrees with Solutran. As an initial matter, the Court notes that U.S. Bank does not appear to dispute that Solutran met its burden under *Panduit* of proving, with respect to the 26% of captured sales, "(1) demand for the patented product . . . (3) manufacturing and marketing capability to exploit the demand; and (4) the amount of profit it would have made." *Mentor Graphics*, 851 F.3d at 1285. Indeed, Mr. Green and Mr. Nordstrand provided ample testimony on these three factors.

Further, the Court finds that, even if Solutran fell short in convincing the jury that a two-supplier market existed here, substantial evidence supports the jury's verdict that an "absence of acceptable non-infringing alternatives" resulted in Solutran losing about a

quarter of the sales U.S. Bank made through ECS-OSI between November 2012 and the present. Contrary to U.S. Bank's assertion, Solutran *did* offer the jury an "economic analysis of the pricing or characteristics of the other electronic check products on the market." (U.S. Bank's JMOL Br. at 19.) Mr. Green and Mr. Nordstrand testified at length about why "alternative technologies" used by other retailers in the market, including paper checks, POP, and other traditional BOC technologies (such as ECS-CI and ECS-COI), "lack[ed] the advantages of the" '945 patent, such that they could "hardly be termed a substitute acceptable to the customer who wants those advantages." *Presidio I*, 702 F.3d at 1361. (*See, e.g.*, Trial Tr. at 178-97 (B. Nordstrand); 599-605 (Green).)

Although U.S. Bank accurately notes that a handful of clients switched from using ECS-OSI or SPIN to using a non-infringing technology during the relevant period, the jury could also have found significance in the fact that the vast majority of '945 patent clients consistently used the patented method for a decade or more, (*see, e.g., id.* at 299-301 (B. Nordstrand); 603-05 (Green)), or the fact that the cost of switching to SPIN in November 2012 would have been far lower than the cost of switching to a non-infringing service. (*See, e.g., id.* at 618-21, 756 (Green).) Indeed, Solutran provided evidence that these non-infringing services contained "significantly different characteristics" than SPIN or ECS-OSI, ranging from heightened in-store investments (traditional BOC) to different training processes for cashiers (POP). *Micro Chem., Inc.*, 318 F.3d at 1124. (*See, e.g.*, Trial Tr. at 178-97 (B. Nordstrand); 599-605 (Green).)

Moreover, the evidence at trial made clear that U.S. Bank and Solutran were “direct competitors” for a small class of “large, national retailers” with particular needs that the patented method was designed to serve. (*Id.* at 297-98 (B. Nordstrand); *see also id.* at 986-87 (Calabrese).) It was not unreasonable for the jury to assume that Ms. Hawkins and Solutran’s sales team would have persuaded some portion of U.S. Bank’s similarly large ECS-OSI clients, several of which were discussed on an individual basis during trial, to switch to SPIN in lieu of POP or other BOC services. (*See, e.g., id.* at 486-87 (Hawkins) (describing the positive reactions of various large grocer clients to SPIN).)

This is not a case like *Weschler v. Macke Int’l Trade, Inc.*, cited by U.S. Bank, in which a district court erred in failing to reverse a jury’s verdict of lost profit damages. 486 F.3d 1286, 1293-94 (Fed. Cir. 2007). There, the jury awarded lost profits despite a complete absence of factual evidence that the patentholder had the capacity to manufacture and market the patented product during the infringing period. *Id.* The Federal Circuit reversed the verdict, holding that a patentholder could not base a lost profits award solely on “conclusory [expert] evidence” that a patentholder “could have sold his products” during the infringing period. *Id.* at 1294. To the contrary, substantial factual evidence undergirded Mr. Green’s expert analysis here.

Nor is this a case like *Presidio II*, also cited by U.S. Bank. There, the Federal Circuit reversed a lost profits award because the patentholder did not present “substantial evidence” showing how the defendant’s non-infringing product would have competed with the patented product, “in a hypothetical market without the infringing” product. 875 F.3d at

1381. Indeed, the Federal Circuit noted, “undisputed evidence showed” that the defendant’s non-infringing product “was less expensive” than the patented product and exhibited “better performance.” *Id.* Here, by contrast, Mr. Nordstrand and Mr. Green discussed U.S. Bank’s non-infringing products, ECS-CI and ECS-COI, and explained why large retailers would have preferred the patented process to those non-infringing U.S. Bank services, especially when they cost more than SPIN. (*See, e.g.*, Trial Tr. at 756 (Green).) Still more, U.S. Bank’s own testimony showed that only two or three merchants ever purchased either of these non-infringing alternative services, despite U.S. Bank offering these alternatives to merchants when selling them ECS-OSI. (*See id.* at 960, 973, 981 (Calabrese); *see also id.* at 613-15 (Green) (explaining U.S. Bank’s ECS contract).)

One final matter: U.S. Bank claims that, even if Solutran satisfied *Panduit*, Solutran never asked for a 26% verdict on lost profits, and no direct evidence appears to connect this number to Solutran’s damages case. As such, U.S. Bank calls the jury’s verdict speculative, and “nothing more than a compromise down from [Solutran’s] improper two-supplier market theory.” (*See* U.S. Bank JMOL Reply Br. at 12.)

However, the Court notes that evidence in the record provides support for this “compromise” verdict. *See Reeves v. Sanderson Plumbing Products, Inc.*, [530 U.S. 133, 150](#) (2000) (holding that, “in entertaining a motion for judgment as a matter of law, the court should review *all* of the evidence in the record,” while “draw[ing] all reasonable inferences in favor of the non-moving party”) (emphasis added). For instance, during U.S. Bank’s direct examination of Mr. Bero, U.S. Bank showed the jury evidence that approximately

74% of infringing transactions resulted from sales to [REDACTED]. (See Trial Tr. at 1493-94 (describing Bero Schedule 5.1 [[Doc. No. 383](#)] at 12, which detailed the exact number of ECS-OSI transactions per client during the infringing period).)¹⁹ And, during trial, the jury heard a potentially compelling reason(s) why each of these particular clients would not have turned to SPIN, even assuming SPIN constituted the only “acceptable non-infringing alternative.” (See, e.g., *id.* at 1496 (Bero) (noting that the CEO of Schnuck Markets sits on U.S. Bank’s Board of Directors); 981 (Calabrese) (noting that [REDACTED] was transitioning to ECS-COI).)²⁰ The jury would not have been unreasonable to find that Solutran would have sold SPIN to all of U.S. Bank’s ECS-OSI customers besides [REDACTED], and to accordingly use a 26% capture rate. *Cf. Grain Processing*, [185 F.3d at 1349](#) (noting that, if the patent holder meets its “initial burden to show a reasonable probability that [it] would have made the asserted sales ‘but for’ the infringement,” “the burden then shifts to [the infringer] to show that [the patentee’s ‘but for’ causation claim] is unreasonable for some or all of the lost sales”).²¹

¹⁹ Specifically, [REDACTED] accounted for 98,887,216 of U.S. Bank’s 134,000,362 infringing transactions, *i.e.*, 73.8%. The remaining 35,113,146 transactions nearly mirrors the 34,839,995 transactions the jury found Solutran was entitled to lost profits on. (See Redacted Jury Verdict.)

²⁰ Because the record is replete with reasons why Target might not have chosen Solutran for its check processing business, the Court will not offer a specific citation.

²¹ Even though the Court did not instruct the jury on this burden-shifting analysis, the Court finds this law useful in explaining how a reasonable jury could have reached its verdict, based on the evidence in the record.

All told, because Solutran met its threshold burden of proving lost profits under *Panduit*, and because evidence in the record supports the jury's 26% capture rate, the Court will deny U.S. Bank's JMOL motion on lost profits as well.

B. Solutran's Motion for a Permanent Injunction

1. The Law

The Court now turns to Solutran's post-trial motions. Solutran first requests that the Court grant it a permanent injunction enjoining U.S. Bank from, *inter alia*, "infringing, inducing infringement of, or contributing to the infringement, directly or indirectly, of [the '945 patent]." (Solutran Proposed Order [[Doc. No. 401](#)].) U.S. Bank argues that a permanent injunction is unnecessary, and that the Court should instead "determine a time and procedure for efficiently deciding a figure for an ongoing royalty." (U.S. Bank's Opp. Br. [[Doc. No. 411](#)] at 2.)

To provide relief against ongoing infringement, a court can consider several remedies: "(1) it can grant an injunction; (2) it can order the parties to attempt to negotiate terms for future use of the invention; (3) it can grant an ongoing royalty; or (4) it can exercise its discretion to conclude that no forward-looking relief is appropriate in the circumstances." *Whitserve*, [694 F.3d at 35](#).

To receive a permanent injunction, a patentee must demonstrate: "(1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public

interest would not be disserved by a permanent injunction.” *Apple Inc. v. Samsung Elec. Co., Ltd.*, 735 F.3d 1352, 1359 (Fed. Cir. 2013) (citing *eBay Inc. v. MercExchange, LLC*, 547 U.S. 388, 391 (2006)). Although the Federal Circuit used to presume the propriety of an injunction following a finding of infringement, post-*eBay*, the Federal Circuit has clarified that “an injunction in patent law must be justified like any other.” *Nichia Corp. v. Everlight Am., Inc.*, 855 F.3d 1328, 1341 (Fed. Cir. 2017); accord *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149 (Fed. Cir. 2011) (“*eBay* jettisoned the presumption of irreparable harm as it applies to determining the appropriateness of injunctive relief.”). Accordingly, a patent holder “must prove that it meets all four equitable factors.” *Nichia*, 855 F.3d at 1341.

2. Analysis

For the following reasons, the Court will grant Solutran’s request for a permanent injunction.

a. Irreparable Injury

In determining whether a party has shown irreparable harm, courts “may consider factors such as the nature of competition between the patentee and the infringer, the willingness of a patentee to license, and any lost sales the patentee has proven.” *Presidio II*, 875 F.3d at 1383. The Court may look to “[p]ast harm to a patentee’s market share, revenues, and brand recognition,” in addition to potential future harm. *i4i Ltd. P’ship v. Microsoft Corp.*, 598 F.3d 831, 861 (Fed. Cir. 2010). Finally, as a general matter, “[w]here two companies are in competition against one another, the patentee suffers the harm—often irreparable—of being forced to compete against products that incorporate and infringe its own patented

inventions.” *Douglas Dynamics, LLC v. Buyers Products Co.*, 717 F.3d 1336, 1345 (Fed. Cir. 2013); *see also Presidio I*, 702 F.3d at 1363 (“Direct competition in the same market is certainly one factor suggesting strongly the potential for irreparable harm without enforcement of the right to exclude.”).

Here, Solutran argues that irreparable harm exists because U.S. Bank and Solutran are “direct competitors,” and, thus, “[e]very infringing transaction that U.S. Bank processes using Solutran’s invention represents fresh proof that Solutran does *not* have exclusive use of its invention.” (Solutran’s Post-Trial Br. at 3.) Solutran also points to the jury’s lost profits award as an “implicit finding of direct competition.” (*Id.* (quoting *Presidio I*, 702 F.3d at 1363)). By contrast, U.S. Bank argues that irreparable harm does not exist because (i) the jury only found that 26% of Solutran’s damages amounted to lost profits, and therefore affirmed U.S. Bank’s contention that ECS-OSI is not necessarily a “direct competitor” of Solutran; (ii) Solutran has not identified any “future customers it will lose” to ECS-OSI; and (iii) Solutran has essentially “licensed” SPIN by working with partner banks. (*See* U.S. Bank’s Opp. Br. at 3-10.)

The Court finds that this factor weighs in favor of Solutran. Most importantly, substantial evidence at trial showed that U.S. Bank and Solutran are direct competitors in this market, and that Solutran is harmed by “being forced to compete against [a] product that incorporate[s] and infringe[s] its own patented invention.” *Douglas Dynamics*, 717 F.3d at 1345. This is true even if the jury implicitly found that the parties do not operate in a two-supplier market. *See Robert Bosch*, 659 F.3d at 1151 (holding that, when two parties are direct competitors, “the absence of a two-supplier market does not weigh against a finding of

irreparable harm.”). Moreover, contrary to U.S. Bank’s assertion, there is no evidence that Solutran has attempted to license SPIN; working with partner banks is not the same as licensing. (See Trial Tr. at 641 (Green) (“[T]here [are] no licenses for the ’945 patent.”)).

b. Inadequacy of Money Damages

In determining whether a party has shown that remedies available at law, such as monetary damages, are inadequate to compensate for its injury, courts usually consider whether a patent holder has suffered non-quantifiable losses, such as “loss of business opportunity or damage to brand recognition.” *ActiveVideo Networks, Inc. v. Verizon Cmm’ns, Inc.*, 694 F.3d 1312, 1340 (Fed. Cir. 2012). In assessing whether a party has proven non-quantifiable losses, courts may also consider evidence that a party will not “stop infringing . . . absent an injunction,” alongside evidence that a defendant cannot fulfill a monetary award. See *Robert Bosch*, 659 F.3d at 1155-56 (“While competitive harms theoretically can be offset by monetary payments in certain circumstances, the likely availability of those monetary payments helps define the circumstances in which this is so.”).

Here, Solutran argues that money damages cannot repair the harm U.S. Bank inflicted on Solutran’s market share (as demonstrated by the jury’s lost profits award), and that U.S. Bank “has given no indication that [the jury’s] verdict has prompted it to stop infringing.” (Solutran’s Post-Trial Br. at 3-4.) By contrast, U.S. Bank argues that an ongoing royalty will sufficiently compensate Solutran for any harm it will suffer because Solutran has experienced “steady growth in size and profitability of its business, despite the presence of [U.S. Bank],” and because Solutran has not presented evidence of “price erosion, harm to brand recognition,

or erosion of its goodwill with customers.” (U.S. Bank’s Opp. Br. at 6, 10.) U.S. Bank also notes that it is “reasonable, indeed typical, for [a party] to continue providing [an infringing] service while they exercise their right to appeal.” (*Id.* at 14.)

Again, the Court finds that this factor weighs in favor of Solutran. As with irreparable harm, the jury’s lost profits verdict shows that Solutran has suffered “loss of business opportunity” and “damage to brand recognition” due to U.S. Bank’s infringement. *ActiveVideo Networks*, 694 F.3d at 1340. Although it is true that U.S. Bank is capable of paying an ongoing royalty, it is also true that U.S. Bank has indicated that it will not stop offering its infringing product until the (potentially lengthy) appeals process is complete. This additional harm to Solutran’s brand name and growth prospects is not accounted for in the jury’s verdict, and further suggests that mere money damages will not fully compensate Solutran here. *See Robert Bosch*, 659 F.3d at 1155 (finding a permanent injunction appropriate where “[t]here is no reason to believe that [an infringer] will stop infringing, or that the irreparable harms resulting from its infringement will otherwise cease, absent an injunction”).

c. Balance of Hardships

In determining whether a party has shown that the balance of hardships weighs in its favor, courts consider “the parties’ sizes, products, and revenue sources.” *Microsoft*, 598 F.3d at 862-63. Courts also consider whether the infringer has “non-infringing alternative [products] which it could easily deliver to the market.” *Douglas Dynamics*, 717 F.3d at 1345. However, courts should not consider “the expenses” the infringer “incurred in [using] the

infringing products,” as “neither commercial success, nor sunk development costs, shield an infringer from injunctive relief.” *Microsoft*, [598 F.3d at 863](#).

Here, Solutran argues that denying it a full injunction will deprive it of “sales,” “business relationships,” and “the exclusive use of its own [flagship] invention.” (Solutran’s Post-Trial Br. at 5.) On the other hand, it argues, U.S. Bank – the much larger company – would be able to sell its “non-infringing substitutes,” like ECS-CI or ECS-COI. (*Id.*) By contrast, U.S. Bank argues that granting Solutran a full injunction would cost U.S. Bank money. (See U.S. Bank’s Opp. Br. at 13 (describing ██████████ ██████████, which it must pay even if it is enjoined from selling its service).) At the same time, it argues, denying the injunction would “merely maintain the status quo existing since 2007,” a time in which Solutran’s “business has grown consistently despite competing with [U.S. Bank] in the same market.” (*Id.* at 14.)

The Court finds that this factor weighs in favor of Solutran. U.S. Bank’s relative size and access to non-infringing services like ECS-CI and ECS-COI make clear that the balance of hardships weighs against it. See *Acumed LLC v. Stryker Corp.*, [551 F.3d 1323, 1329-30](#) (Fed. Cir. 2008) (finding that balance of harms favored patentee where the infringer’s product “represent[ed] only a small portion of [the infringer’s] sales, whereas the patentee’s product . . . is one of the [patentee’s] flagship products” and where the infringer had “at all times the option to use its own non-infringing [] design”). That U.S. Bank may incur mandatory fees as a result of a permanent injunction is of no moment. See *Microsoft*, [598 F.3d at 863](#) (“[S]unk development costs” do not “shield an infringer from injunctive relief.”).

d. Public Interest

Finally, in determining whether a party has shown that the public interest would not be disserved by a permanent injunction, courts should consider “whether an injunction, both in scope and effect, strikes a workable balance between protecting the patentee’s rights and protecting the public from the injunction’s effects.” *Microsoft*, 598 F.3d at 863. The Federal Circuit has interpreted “the public” to include consumers and companies that use the infringing product. *See id.* at 863.

Here, Solutran argues that, because public policy favors protection of patents, the public would not be disserved by an injunction. (*See* Solutran’s Post-Trial Br. at 6.) By contrast, U.S. Bank argues that its ten remaining ECS-OSI customers, most of which “have been customers for many years,” would have to undergo a burdensome process to switch to a new check processing system. (*See* U.S. Bank’s Opp. Br. at 15-16 (citing Cichoski Declaration).) Indeed, U.S. Bank notes, because check processing is fast becoming obsolete, some of its grocer clients may choose to stop accepting checks entirely, which would “inhibit customers’ ability to obtain grocery or mass merchandising items with checks.” (*Id.* at 16.)

Although the Court acknowledges the transitional pains that U.S. Bank’s ten remaining ECS-OSI clients may have to go through as a result of an injunction, the Court ultimately finds that this factor weighs in favor of Solutran, too. The (temporary) logistical inconveniences detailed in Ms. Cichoski’s declaration do not outweigh the public policy favoring the protection of patents, especially given the size of U.S. Bank’s ECS-OSI clients, *e.g.*, Target, and the fact that fewer and fewer customers are paying for groceries with checks.

See Robert Bosch, [659 F.3d at 1149](#) (noting that, even after *eBay*, courts cannot “entirely ignore the fundamental nature of patents as property rights granting the owner the right to exclude,” a right which “has its roots in the Constitution”).

For these reasons, Solutran’s motion for a permanent injunction is granted.

C. Solutran’s Motion for Post-2017 Damages

The parties agree that Solutran’s damages award should include damages from January 1, 2018 through the date of the Court issuing this Order (*i.e.*, final judgment). The parties also agree that the jury’s damages award “amounts to a weighted average damage amount of \$.02442 per infringing transaction.” (Green Declaration [[Doc. No. 399](#)] ¶ 5.) Based on the parties’ briefing, and on supplemental declarations filed by U.S. Bank’s counsel, the Court understands that U.S. Bank has processed 13,672,711 ECS-OSI transactions between January 1 and October 31, 2018.²² U.S. Bank accordingly owes Solutran an additional \$333,887.60 in damages.

However, U.S. Bank must also pay Solutran for its post-verdict damages through the date of final judgment, using the weighted average damage amount described above.

D. Solutran’s Motion for Prejudgment and Post-Judgment Interest

²² Specifically, the Court understands that, between January 1 and March 16, 2018, U.S. Bank processed 3,484,632 ECS-OSI transactions, or \$85,094.68 (Green Declaration ¶ 7); followed by 4,798,021 between March 17 and June 30, or \$117,167.67 [[Doc. No. 436](#)]; 1,359,905 between July 1-31, or \$33,208.88 [[Doc. No. 440](#)]; 1,409,478 between August 1-31, or \$34,419.45 [[Doc. No. 444](#)]; 1,282,708 between September 1-30, or \$31,323.73 [[Doc. No. 445](#)]; and 1,337,967 between October 1-31, or \$32,673.15 [[Doc. No. 446](#)].

1. Prejudgment Interest

a. The Law

After an infringement finding, “the court shall award . . . damages adequate to compensate for the infringement . . . together with interest and costs.” 35 U.S.C. § 284. This statute “ensure[s] that the patent owner is placed in as good a position as he would have been in had the infringer entered into a reasonable royalty agreement,” including by compensating the patentholder for “the foregone use of money between the time of infringement and the date of judgment.” *Gen. Motors Corp. v. Devex Corp.*, 461 U.S. 648, 655-56 (1983). Prejudgment interest “runs from the earliest date of infringement for any patent issued,” and “should be awarded under § 284 absent some justification for withholding such an award.” *Comcast IP Holdings I LLC v. Spring Commc ’ns Co., LP*, 850 F.3d 1302, 1313-14 (Fed. Cir. 2017) (citations omitted). “The only recognized reason to withhold prejudgment interest is where ‘the patent owner has been responsible for undue delay’ in enforcing its patent rights.” *Anchor Wall Sys. v. Rockwood Retaining Walls, Inc.*, 610 F. Supp. 2d 998, 1023 (D. Minn. 2009) (quoting *Gen. Motors Corp.*, 461 U.S. at 657)).

Further, “a trial court is afforded wide latitude in the selection of interest rates . . . and may award interest at or above the prime rate.” *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 939 F.2d 1540, 1545 (Fed. Cir. 1991). In patent infringement cases, courts in this District have used “a variety of rates,” “including statutory rates set by state statute, the U.S. Treasury bill rate, the prime rate, the prime rate plus a percentage, and a rate on borrowed funds.” *Global Traffic Techs. LLC v. Emtrac Sys., Inc.*, No. 10-cv-4110 (ADM/JJG), 2014

WL 1663420, at *15 (D. Minn. Apr. 25, 2014), *aff'd in part, rev'd in part on different grounds*, 620 F. App'x 895 (Fed. Cir. 2015); *compare, e.g., Schwendimann v. Arkwright Advanced Coating, Inc.*, No. 11-cv-820 (JRT/HB), 2018 WL 3621206, at *21-22 (D. Minn. July 30, 2018) (awarding Minnesota's 10% statutory rate) with *Reshare Commerce, LLC v. Antioch Co.*, No. 11-cv-2616 (MJD/LIB), 2014 WL 309309, at *3 (D. Minn. Jan. 28, 2014) (awarding the then-prime rate of 3.25%).

However, given the gap between (low) Treasury bill rates and (high) state statutory rates in recent years, some courts have been reluctant to grant prejudgment interest at the state statutory rate where the patentholder "presented no evidence that it borrowed moneys at a higher rate during the infringement period or that it would have invested the royalties at a higher rate." *Comcast Cable Commc'ns, LLC v. Sprint Commc'ns Co., LP*, 262 F. Supp. 3d 118, 149 (E.D. Pa. 2017) (awarding prejudgment interest at the Treasury Bill rate rather than the 6% Pennsylvania statutory rate); *Finjan, Inc. v. Blue Coat Sys., Inc.*, No. 13-cv-39999 (BLF), 2016 WL 3880774, at *18 (N.D. Ca. July 18, 2016) (same reasoning), *rev'd on other grounds*, 879 F.3d 1299 (Fed. Cir. 2018); *see also Laitram Corp. v. NEC Corp.*, 115 F.3d 947, 955 (Fed. Cir. 1997) (finding no abuse of discretion where district court awarded Treasury Bill rate as adequate to compensate where there was no evidence that patent holder would have borrowed at a higher rate).

b. Analysis

Here, Solutran requests that the Court award it prejudgment interest from November 13, 2012 (because U.S. Bank was already infringing when Solutran secured its patent) through

the date of judgment, at Minnesota’s statutory rate of 10% interest. According to Mr. Green’s declaration, this prejudgment interest amounts to \$997,371.18, as of March 31, 2018. (*See* Green Declaration ¶¶ 9-12.) Solutran argues that the Federal Circuit usually grants patent holders prejudgment interest from the date of infringement to the date of judgment, and that district courts awarding patent damages commonly use the statutory interest rate of the state in which they sit. (Solutran’s Post-Trial Br. at 8-12.) Solutran also contends that the 10% Minnesota rate is appropriate because it “furthers the interest of justice by providing a consistent rate for the forum that all litigants can expect will apply,” and “avoids the danger of undercompensating Solutran – the rightful holder of the patent who, due to U.S. Bank’s infringement, essentially became an involuntary, unsecured, uninsured creditor.” (*Id.* at 11 (citing *Univ. of Pittsburgh v. Varian Med. Sys., Inc.*, No. 08-cv-1307, [2012 WL 1436569](#), at *9-10 (W.D. Pa. Apr. 25, 2012), *vacated in part on other grounds*, [561 Fed. App’x 934](#) (Fed. Cir. 2014)).)

By contrast, U.S. Bank argues that Solutran should only be awarded prejudgment interest from the date it filed suit, on September 25, 2013, at the 1-year Treasury Bill rate (without compounding). According to a declaration written by Mr. Bero, this prejudgment interest amounts to \$79,340.37, as of March 31, 2018. (*See* Bero Declaration [[Doc. No. 415](#)] ¶ 5.) Mr. Bero’s declaration also analyzed Solutran’s financial habits over the relevant time period and determined that (1) Solutran “distributed, rather than invested, most of its income during the infringement period,” and (2) “in the few years when [Solutran] borrowed money [during the relevant time period], it did so at rates far below the 10% it seeks.” (U.S. Bank’s

Opp. Br. at 21 (citing Bero Declaration ¶¶ 10, 13-14).) Solutran did not dispute these numbers in its reply brief or during oral argument. Accordingly, U.S. Bank argues that, were this Court to award Solutran 10% prejudgment interest on the jury's damages verdict, Solutran "would receive a windfall." (*Id.* at 19.)

The Court first finds that prejudgment interest should run from November 2012, as Solutran proposes. "Generally," in patent cases, "prejudgment interest should be awarded from the date of infringement to the date of judgment," absent undue delay. *DDR Holdings, LLC v. Hotels.com, LP*, 773 F.3d 1245, 1263 (Fed. Cir. 2014) (quoting *Nickson Indus., Inc v. Rol Mfg. Co.*, 847 F.2d 795, 800 (Fed. Cir. 1988)). The Court finds that Solutran did not engage in "undue delay" when it waited ten months before filing this suit. *Compare with Crystal Semiconductor Corp.*, 246 F.3d at 1362 (finding that "undue delay" existed where a patentee engaged in "two years" of "self-serving" "litigation tactics" before filing suit, which "resulted in prejudice to the defendants").

Next, the Court finds, in its discretion, that neither party's proposed prejudgment interest rate accords with the patent statute's goal of compensating the patentholder for "the foregone use of money between the time of infringement and the date of judgment." *Gen. Motors Corp.*, 461 U.S. at 655-56. On the one hand, Solutran has provided no evidence that it forewent investments that would have yielded 10% returns, or that it borrowed money at a similar rate. Indeed, Solutran did not contest Mr. Bero's findings that it invested very little during the relevant time period, that it borrowed money at rates less than half the

statutory rate (on the few occasions it borrowed money), and that interest rates between 2012 and 2017 were very low.

On the other hand, U.S. Bank's proposed 1-year Treasury Bill rate would significantly undercompensate Solutran, as those rates hovered around zero until very recently. (*See* Bero Declaration, Schedule B-1.)

Rather, the Court finds that Solutran should be awarded prejudgment interest from November 13, 2012 at the *prime* borrowing rate, which sat between 3.25% and 4.50% during the relevant time period. (*See* Bero Declaration, Schedule D-1.) At this rate, both Mr. Bero and Mr. Green agree that Solutran's prejudgment interest amounts to \$392,665.73, as of March 31, 2018. (*Compare* Green Declaration ¶¶ 13-16 *with* Bero Declaration ¶ 8.) The Court finds that this rate most accurately reflects Solutran's actual losses due to U.S. Bank's infringement. *See Sociedad Espanola de Electromedicina y Calidad, S.A. v. Blue Ridge X-Ray Co., Inc.*, 226 F. Supp. 3d 520, 536 (W.D.N.C. 2016) (awarding prejudgment interest at prime rate because "[t]he [8% statutory] rate greatly exaggerates the time value of money during the relevant period, while the Treasury Bill rate is designated to be a deeply discounted assessment of that value"); *cf. Great Lakes Gas Transmission Ltd. P'ship v. Essar Steel Minnesota, LLC*, No. 09-cv-3037 (SRN/LIB), 2015 WL 477194, at *4 (D. Minn. Aug. 13, 2015) (finding 3.25% federal Tariff rate appropriate for prejudgment interest when 0.33% Treasury Bill rate would be "too low to achieve . . . the purposes of awarding prejudgment interest").

Consequently, U.S. Bank shall pay Solutran prejudgment interest from November 13, 2012 through the date of final judgment, at the prime borrowing rate, compounded monthly.

2. Post-Judgment Interest

The parties agree that Solutran is entitled to post-judgment interest “at a rate equal to the weekly average 1-year constant maturity Treasury yield, as published by the Board of Governors of the Federal Reserve System, for the calendar week preceding the date of judgment.” 28 U.S.C. § 1961(a). Based on the Federal Reserve’s website, that rate is currently 2.70%.²³

Post-judgment interest will accrue daily, and will apply to Solutran’s total money award, including prejudgment interest, until the judgment is satisfied. *See Travelers Prop. Cas. Ins. Co. of Am. v. Nat’l Union Ins. Co.*, 735 F.3d 993, 1008 (8th Cir. 2013) (applying post-judgment interest to both the amount awarded in damages and prejudgment interest).

E. Solutran’s Bill of Costs

Solutran also filed a bill of costs for \$32,750.23, along with an accompanying declaration [Doc. No. 435]. U.S. Bank objected to Solutran’s “claim for ‘ground and air’ travel and ‘food and lodging’ expenses of \$1,017.29 for its Minnesota-based court reporter and \$846.09 for its Minnesota-based videographer to attend the [Amy] Waldhauer deposition in Walnut Creek, California,” because Solutran did “not state why it did not arrange for a local court reporter and videographer to attend the deposition.” [Doc. No. 439]. Solutran filed

²³ <https://fred.stlouisfed.org/series/DGS1>

a letter in response, in which it noted that it “used Stirewalt & Associates for the deposition in California because of the consistently high quality of Stirewalt’s court-reporting and videography services and the fact that its billing practices generally result in a lower cost even factoring in the travel expenses.” [[Doc. No. 441](#)].

The Court accepts Solutran’s explanation, overrules U.S. Bank’s objection, and grants Solutran its Bill of Costs in full. *See Damgaard v. McKennan*, No. 13-cv-2192 (SRN/JSM), [2016 WL 1718370](#), at *2 (D. Minn. Apr. 29, 2016) (noting that “[t]he prevailing party in litigation is presumptively entitled to its statutorily allowed costs,” and “courts have wide discretion in awarding costs generally”).

F. Solutran’s Motion for Attorney’s Fees

1. The Law

The Court now turns to Solutran’s affirmative, sanction-based motions against U.S. Bank. Solutran first argues that the Court should award it attorney fees under [35 U.S.C. § 285](#). That statute provides that, “in exceptional cases,” a court “may award reasonable attorney fees to the prevailing party.” [35 U.S.C. § 285](#). The Supreme Court has held that “an ‘exceptional’ case is simply one that stands out from the others with respect to [1] the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or [2] the unreasonable manner in which the case was litigated.” *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, [134 S. Ct. 1749, 1756](#) (2014). “The party seeking fees must prove that the case is exceptional by a preponderance of the evidence, and the district court makes the exceptional case determination on a case-by-case basis

considering the totality of the circumstances.” *Energy Heating*, 889 F.3d at 1306 (citing *Octane Fitness*, 134 S. Ct. at 1756, 1758).

Although courts have substantial discretion in awarding fees under this statute, the Federal Circuit has also “cautioned that fee awards are not to be used as a penalty for failure to win a patent infringement suit.” *Checkpoint Sys., Inc. v. All-Tag Security S.A.*, 858 F.3d 1371, 1376 (Fed. Cir. 2017) (internal quotation marks and citations omitted). Indeed, twice in the last year, a judge of this Court declined to award fees to a prevailing party in a patent infringement suit, because the losing party in both cases did not exhibit sufficiently bad behavior to justify a fees award. *See Arctic Cat Inc. v. Bombardier Recreational Products, Inc.*, No. 12-cv-2692 (JRT/LIB), 2018 WL 345481, at *2 (D. Minn. July 19, 2018) (denying fees to prevailing party at summary judgment because, “[a]lthough Arctic Cat’s case was not strong enough to survive summary judgment, its positions were not so weak as to support finding this case ‘exceptional’”); *Schwendimann v. Arkwright Advanced Coating, Inc.*, No. 11-cv-820 (JRT/HB), 2018 WL 1041038, at *1 (D. Minn. Feb. 23, 2018) (denying fees to prevailing patentholder at trial because, even though the patentholder “provide[d] a laundry list of ‘bad acts’ committed by” the defendant, the Court was “unpersuaded that this case is exceptional under the totality of the circumstances”).

Moreover, the Supreme Court has noted that, when a losing party has not committed “independently sanctionable” conduct, such as “willful infringement” or “conduct that violates Fed. R. Civ. P. 11,” it will be a “rare case” in which that party’s “unreasonable conduct” will “nonetheless be so ‘exceptional’ as to justify an award of fees.” *Octane Fitness*,

134 S. Ct. at 1756-57; *see also Energy Heating*, 889 F.3d at 1307 (noting that district courts are not required to award fees *even after* a finding of inequitable conduct or willful infringement).

2. Analysis

Solutran argues that this case is “exceptional” under 35 U.S.C. § 285 for two reasons. (*See* Solutran’s Post-Trial Br. at 14-25.) First, Solutran argues that U.S. Bank litigated this case in an unreasonable manner. Specifically, Solutran points to U.S. Bank’s minimal participation in discovery at the outset of this case (*id.* at 15-16), U.S. Bank’s alleged mischaracterizations of prior art to the PTAB (*id.* at 16-19), U.S. Bank’s long-belated initiation of a litigation hold for certain key witnesses (particularly Amy Waldhauer) (*id.* at 19-20), U.S. Bank’s purportedly improper 90-day e-mail destruction policy, alongside its “self-selection” document custodial policy (*id.* at 20-22), and U.S. Bank’s arguably misleading testimony about the Geer prior art at trial (*id.* at 22-24). Second, Solutran argues that U.S. Bank’s invalidity arguments were substantially weak. Specifically, Solutran cites U.S. Bank’s (unprecedented) losses at the PTAB, on both abstractness and obviousness, and Solutran’s victory on infringement at summary judgment. (*Id.* at 17-18.)

U.S. Bank disagrees with Solutran on both fronts. (*See* U.S. Bank’s Opp. Br. at 22-35.) First, U.S. Bank disputes that it litigated this case in an unreasonable manner. U.S. Bank points out that, of “the two motions to compel” filed “in the five-year history of this case,” U.S. Bank won both. (*Id.* at 24). U.S. Bank also notes that it issued a litigation hold “just fifteen days after the complaint was served.” (*Id.* at 28.) Moreover, U.S. Bank asserts that,

even though Solutran attacks its corporate policies of deleting e-mails after 90 days and asking document custodians to self-select relevant files, multiple courts (including this one) have found its document retention policies acceptable. Indeed, it continues, Solutran never even moved for Rule 37 discovery sanctions on this issue. (*See id.* at 27-29.) What is more, because U.S. Bank largely preserves files in paper form, rather than e-mail, U.S. Bank notes that its e-mail deletion policy did not prevent Solutran from receiving “more than 74,000 pages of documents, many of them emails dating back to 2007, including electronic versions of more than 3,000 non-email files.” (*Id.* at 30.) With respect to Ms. Waldhauer, U.S. Bank argues that its belated contact with her harmed U.S. Bank far more than Solutran, as that delay prevented U.S. Bank from introducing the BankServ prior art. (*Id.* at 31.)

Second, U.S. Bank disputes that its invalidity arguments were substantively weak. Although it offered “inartful” and “unsuccessful” arguments to the PTAB and Federal Circuit, U.S. Bank admits, its arguments were not so meritless as to warrant the sanction of fees. (*Id.* at 27, 32-35.) Indeed, U.S. Bank adds, Solutran “did not even attempt summary judgment on [U.S. Bank’s] invalidity defense, and the Court denied [Solutran’s] motion for JMOL [at the end of trial] on obviousness.” (*Id.* at 33.) With respect to its expert’s testimony about the Geer prior art at trial, U.S. Bank argues that Solutran did not object to the relevant line of questioning at trial, and that at no point did U.S. Bank attempt to “flaunt” the Court’s claim construction ruling. (*Id.* at 32.)

The Court agrees with Solutran that some of U.S. Bank's behavior during discovery was troubling. However, the Court ultimately concludes that U.S. Bank's conduct over the five-year life of this case was not so "exceptional" as to justify an award of fees.

With respect to U.S. Bank's litigation conduct, the Court finds that none of Solutran's examples of misconduct show that U.S. Bank crossed the line from vigorous advocacy to abusive gamesmanship. First, although the Court agrees with Magistrate Judge Rau that U.S. Bank was, at best, a "reluctant participant in the discovery process," the fact that Judge Rau then denied Solutran's motion to compel (and accompanying requests for fees) belies Solutran's assertion of unreasonableness. (Order Granting Stay Pending PTAB Review [Doc. No. 50] at 4; *see also* Text-Only Order Denying Motion to Compel Without Prejudice [Doc. No. 49].) Indeed, after the case returned to discovery following U.S. Bank's losses at the PTAB, U.S. Bank won the only other discovery motion filed in this case. (*See* Order Granting U.S. Bank's Motion to Compel [[Doc. No. 150](#)] at 9 (holding that Solutran waived attorney-client privilege with respect to certain documents and that "Solutran's privilege logs fail to meet the requirements of Magistrate Judge Rau's initial Pretrial Scheduling Order, and are deficient under the Federal Rules of Civil Procedure").)

Moreover, although U.S. Bank's 90-day e-mail deletion and "self-selection" custodial policies may have prevented Solutran from accessing electronic copies of relevant e-mails, this Court has already held that U.S. Bank's document retention policies do not evince willful disrespect for the litigation process, both as a general matter and as applied to this case. *See Solutran*, [2018 WL 1050403](#), at *2-3 (noting that the policy at issue was "U.S. Bank's

standard document-retention policy,” that Solutran never moved for Rule 37 sanctions after learning of this policy in 2016, and that, on the whole, “the Court fails to see anything but the most tenuous connection between U.S. Bank’s document-retention policy and the kind of concealment conduct that could support a claim of willful infringement”); *accord Verona v. U.S. Bancorp*, No. 07-cv-57 (BR), [2010 WL 11566086](#), at *3-5 (E.D.N.C. Apr. 19, 2010) (finding identical document-retention policy “to be a neutral policy aimed at managing the presumably large volumes of email generated by a sizeable company” and declining to issue sanctions despite evidence that U.S. Bank’s counsel failed to timely initiate a litigation hold under the policy).

Further, despite deposing all of U.S. Bank’s key witnesses and recovering paper copies of thousands of U.S. Bank e-mails dating back to 2007 (several of which paint U.S. Bank in an unfavorable light), Solutran does not point to any evidence lost as a result of U.S. Bank’s discovery policies that would have materially changed the outcome of this case. *Compare with In re Rembrandt Tech. LP Patent Litig.*, [899 F.3d 1254, 1271](#) (Fed. Cir. 2018) (affirming “exceptional case” finding, in part because the losing plaintiff’s counsel allowed thousands of boxes of documents to be destroyed in bad faith, including documents “directly helpful to [the defendants’] invalidity defenses”).

Similarly, although Solutran rightly asserts that U.S. Bank should have contacted Ms. Waldhauer far earlier in this litigation, U.S. Bank has sufficiently explained why it did not do so, and how its own case suffered as a result. (*See* U.S. Bank’s Opp. Br. at 31 (noting that Ms. Waldhauer “had not been involved with ECS-OSI for three years when this suit was filed,”

that she “left Elavon in September 2015, while this case was stayed,” and that U.S. Bank’s counsel failure to contact Ms. Waldhauer prevented it from learning of BankServ).) Finally, the Court finds that none of U.S. Bank’s arguments to the PTAB, or during trial, were excessively misleading. On the Geer prior art, for instance, U.S. Bank’s technical expert, Mr. McEntee, only testified that Geer “implied” or “suggested” the ’945 patent’s “imaging after crediting” step. (*See, e.g.*, Trial Tr. at 1373, 1453 (McEntee).) Neither he nor U.S. Bank’s counsel explicitly attempted to mislead the jury about the fact that the Court’s construction of that step required the physical movement of checks. Further, because Solutran’s technical expert, Mr. Saffici, explained why Geer did not seriously “imply” this step of the patent (because Geer appeared to foreclose the physical movement of the check after crediting), Mr. McEntee’s presentation did not prejudice Solutran. (*See id.* at 1671-73 (Saffici); *see also id.* at 1907-08 (further explaining this point during closing argument); *cf. Schwendimann*, [2018 WL 1041038](#), at *1 (denying fees, in part because the losing attorney’s alleged misrepresentation to the jury was “immaterial”).)

With respect to the substantive strength of U.S. Bank’s defenses, the Court finds that U.S. Bank’s validity defenses were neither “exceptionally” weak, nor litigated without justification. Solutran correctly notes that, as of August 2015, U.S. Bank’s Covered Business Method (“CBM”) challenge “was the first one to result in a complete victory for the patent-holder on all challenged claims.” (Solutran’s Br. at 17.) However, CBM review was a fairly new procedure at that time. Indeed, from its founding in September 2012 to U.S. Bank’s loss in August 2015, the PTAB had issued only 55 final decisions in CBM cases. (*Id.*; *see*

generally P. Andrew Riley et al., *The Surprising Breadth of Post-Grant Review for Covered-Business-Method Patents: A New Way to Challenge Patent Claims*, 15 Colum. Sci. & Tech. L. Rev. 235 (2014) (explaining this then-“new” procedure.) Moreover, the parties’ subsequent disputes on claim construction and summary judgment were close enough that the Court had to issue lengthy rulings addressing the cogent arguments on both sides.

Additionally, despite its success before the PTAB, Solutran did not move for summary judgment on U.S. Bank’s abstractness defense until the eve of trial (after the Court had denied U.S. Bank’s summary judgment motion on this defense), and never moved for summary judgment on U.S. Bank’s obviousness defense. Further, when Solutran moved for JMOL on obviousness at the close of evidence, the Court denied that motion and sent the issue to the jury. “Had the Court believed these . . . defenses indisputably meritless, it would have granted summary judgment or [JMOL] at the appropriate time.” *Schwendimann*, [2018 WL 1041038](#), at *2 (declining to find that a defendant’s invalidity defenses “were so exceptionally meritless as to warrant an award of attorney fees”).

All told, based on the Court’s experience adjudicating patent cases, U.S. Bank’s defenses were not “exceptionally” weak. *Cf. Mountain Marketing Grp, LLC v. Heimerl & Lammers, LLC*, No. 14-cv-846 (SRN/BRT), [2016 WL 2901735](#), at *5 (D. Minn. May 18, 2016) (declining to award fees to a prevailing defendant under the analogous trademark infringement statute and noting that the losing party’s “perceptions about the strength of their claims were incorrect, but that does not equate to vexatious intent or frivolous claims”).

The Court accordingly denies Solutran’s motion for attorney fees.

G. Solutran's Motion for Enhanced Damages

1. The Law

Finally, Solutran moves for enhanced damages under 35 U.S.C. § 284. This statute allows a court to “increase the damages up to three times the amount found or assessed.” Admittedly, prior to 2016, the Court could not have entertained this argument because Federal Circuit precedent squarely held that enhanced damages required a predicate finding of willful infringement. *See, e.g., In re Seagate Tech., LLC*, 497 F.3d 1360, 1368 (Fed. Cir. 2007) (noting that, because the patent statute “is devoid of any standard for awarding” enhanced damages, “we have held that an award of enhanced damages requires a showing of willful infringement”); *Read Corp. v. Portec, Inc.*, 970 F.2d 816, 830-31 (Fed. Cir. 1992) (“Absent willful infringement . . . there is no basis . . . for enhanced damages.”); *but cf. Seagate*, 497 F.3d at 1376-77 (Gajarsa, J., concurring) (arguing that the Federal Circuit should not “graft” a “willfulness requirement” onto 35 U.S.C. § 284). Because the Court precluded Solutran from asserting a willful infringement claim in this case, *see supra* at 10-12, and because the jury therefore never issued a finding of willful infringement, Solutran would have lacked the necessary foundation to enhance its damages award.

However, in June 2016, the Supreme Court overruled the “unduly rigid” test articulated in *Seagate* and its predecessors, in favor of a looser standard under which district courts may “exercise” their “discretion” under 35 U.S.C. § 284 “to punish the full range of culpable behavior.” *Halo Elec., Inc. v. Pulse Elec., Inc.*, 136 S. Ct. 1923, 1933 (2016). Still, the Supreme Court emphasized that “district courts are to be guided by the sound legal

principles developed over nearly two centuries of application and interpretation of the Patent Act,” and should accordingly “limit[] the award of enhanced damages to *egregious* cases of misconduct beyond typical infringement.” *Id.* at 1935 (internal citations and quotation marks omitted) (emphasis added). Indeed, the Supreme Court clarified, enhanced damages “should generally be reserved for egregious cases *typified by willful misconduct.*” *Id.* at 1934 (emphasis added). As an example, the Supreme Court invoked a “wanton and malicious pirate who intentionally infringes another’s patent, with no doubts about its validity or any notion of a defense, for no purpose other than to steal the patentee’s business.” *Id.* at 1932; *accord Presidio II*, 875 F.3d at 1382 (noting that “[e]nhanced damages are generally only appropriate in egregious cases of misconduct, such as willful, wanton, or malicious behavior,” as opposed to the “‘garden-variety’ hard-fought patent case”).

Halo has “had a profound impact on how district courts have assessed willful infringement claims,” and “district courts have often disagreed about what lessons are properly drawn from” the decision. *Valinge Innovation AB v. Halstead New England Corp.*, No. 16-cv-1082 (LPS/CJB), 2018 WL 2411218, at *3 (D. Del. May 29, 2018). For instance, at least one district court has held, post-*Halo*, that, “while willfulness may support a finding of enhancement, *Halo* does not hold that willfulness is necessary for enhanced damages.” *Finjan*, 2016 WL 3880774, at *16 (declining to award enhanced damages after reviewing defendant’s allegedly “egregious” behavior on its own). Similarly, in light of *Halo*, one unpublished Federal Circuit decision declined to endorse “a blanket rule” that “a jury must

consider willfulness before the district court may exercise its discretion to enhance damages.” *Exegen Corp. v. Kaz USA, Inc.*, [725 Fed. App’x 959, 972](#) (Fed. Cir. 2018).

At the same time, the general practice of the Federal Circuit suggests that, even after *Halo*, a jury finding of willful infringement remains practically necessary to an award of enhanced damages. *See, e.g., Exmark*, [879 F.3d at 1353](#) (reversing award of enhanced damages where jury did not consider all evidence of willful infringement); *Arctic Cat Inc. v. Bombardier Recreational Prod. Inc.*, [876 F.3d 1350, 1371](#) (Fed. Cir. 2017). Indeed, the Court, in its own research, cannot locate a single post-*Halo* case where a court unilaterally awarded enhanced damages without a predicate finding of willful infringement. By contrast, the Court has located cases where the Federal Circuit has affirmed a district court’s decision to *not* enhance damages, *despite* a jury finding of willful infringement. *See, e.g., Presidio II*, [875 F.3d at 1382](#). As one district court helpfully summarized this law: “The implication from *Exmark* and *Arctic Cat* is that the jury must decide whether the infringement was intentional, and then the court must decide whether the intentional conduct was egregious enough to justify enhanced damages.” *Ericsson Inc. v. TCL Commc’n Tech. Holdings, Ltd.*, No. 15-cv-11 (RSP), [2018 WL 2149736](#), at *8 (E.D. Tex. May 10, 2018).

As such, the Court concludes that, in this post-*Halo* environment, it is not certain whether the Federal Circuit’s longstanding treatment of “willful infringement” as a predicate to enhanced damages remains good law. Regardless of that uncertainty, however, the Court also concludes that courts should exercise substantial caution before awarding enhanced damages, especially absent a factual finding of willful infringement.

2. Analysis

Here, the Court finds that, under any reading of *Halo*, Solutran has not demonstrated that U.S. Bank's infringement involved "egregious" misconduct.

In support of enhanced damages, Solutran argues that the nine-factor *Read Corp* test counsels in favor of increasing damages. 970 F.2d at 827.²⁴ Besides U.S. Bank's purported litigation misconduct and substantively weak validity defenses, which the Court discussed in denying Solutran's motion for attorney fees, Solutran primarily relies on circumstantial e-mail evidence suggesting that U.S. Bank may have "copied" ECS-OSI from Solutran. (*See* Solutran's Post-Trial Br. at 30-37.)

The primary gist of this evidence, which the Court considered in denying Solutran's motion for leave to amend its complaint to add a claim of willful infringement in January 2017, is that (1) U.S. Bank was aware of SPIN since at least August 2006, shortly after Solutran first applied for its patent, and its employees may have tracked SPIN's patent application; (2) U.S. Bank viewed Solutran as a direct competitor in the check processing market, and sought to deliver an analogous product to SPIN; (3) around 2011 (three years after releasing ECS-OSI), some U.S. Bank employees expressed an interest in "replicating"

²⁴ The nine factors are: (1) whether the infringer deliberately copied the ideas or design of another; (2) whether the infringer, when he knew of the other's patent protection, investigated the scope of the patent and formed a good-faith belief that it was invalid or that it was not infringed; (3) the infringer's behavior as a party to litigation; (4) the infringer's size and financial condition; (5) the closeness of the case; (6) duration of the infringer's misconduct; (7) remedial action by the infringer; (8) the infringer's motivation for harm; and (9) whether the infringer attempted to conceal its misconduct.

aspects of Solutran's business model, like its use of an armored car to collect checks; (4) U.S. Bank may have offered to indemnify some of its ECS-OSI customers, in light of its belief that Solutran's patent was invalid; and (5) U.S. Bank paid an arguably suspicious "marketing expense" to ██████ in return for allowing U.S. Bank to set up its ECS-OSI system. Worse yet, Solutran notes, U.S. Bank did not disclose the e-mails containing this evidence until late summer 2016, when most discovery had concluded. (*Id.* at 31.) Solutran further argues that U.S. Bank's purported lack of a good-faith belief of non-infringement, size and financial condition, and failure to sell its readily available, non-infringing service in lieu of ECS-OSI (or attempt to develop a different, non-infringing service) favor enhancement. (*Id.* at 38-45.)

U.S. Bank argues that, to the extent the Court can even consider this evidence absent a finding of willful infringement, none of this evidence shows that it engaged in egregious infringement. As to Solutran's "copying" argument, U.S. Bank first emphasizes that this Court already rejected Solutran's nefarious interpretation of this evidence when it denied Solutran's motion to amend its complaint to include a willfulness claim. (*See* U.S. Bank's Opp. Br. at 39.) Moreover, U.S. Bank maintains that substantial evidence, including the 2007 Target RFP and the excluded BankServ proffer, shows that U.S. Bank developed ECS-OSI in response to customer demand, based on internal check processing knowledge – not out of a desire to copy Solutran's process, which was not even patented at the time U.S. Bank developed ECS-OSI. (*See id.* at 40.)

Further, U.S. Bank asserts that, since Solutran secured its patent in November 2012, U.S. Bank has argued invalidity and non-infringement in good faith. Indeed, it points out, it

sincerely believed that the Court’s claim construction ruling favored non-infringement until the Court clarified its ruling five months later on summary judgment decision, which effectively resolved the infringement suit against U.S. Bank. (*Id.* at 40-42; *see also Solutran*, 291 F. Supp. 3d at 883-84 (noting “that the Court was not as clear in defining the comparing step as it had originally intended,” and that, “[i]n light of this updated—and, hopefully, clearer—construction, the Court concludes that summary judgment is warranted in favor of Solutran on the issue of infringement”).)

The Court finds that, based on the totality of the circumstances, U.S. Bank did not engage in egregious misconduct. *See Presidio II*, 875 F.3d at 1382-83 (noting that, under *Halo*, “the district court is not required to discuss the *Read* factors,” and need only “consider the particular circumstances of the case to determine whether it is egregious”); *Trustees of Boston Univ. v. Everlight Elec. Co., Ltd.*, 212 F. Supp. 3d 254, 257 (D. Mass. 2016) (“While the *Read* factors remain helpful to this Court’s analysis, the touchstone for awarding enhanced damages after *Halo* is egregiousness.”).

First, although litigation misconduct can be considered on the question of enhanced damages, such misconduct is more relevant to a motion for attorney’s fees. It is a lesser consideration in determining whether U.S. Bank’s infringement was “egregious.” *See Spectralytics, Inc. v. Cordis Corp.*, 649 F.3d 1336, 1349 (Fed. Cir. 2011) (finding “attorney misconduct or other aggravation of the litigation process may weigh heavily with respect to attorney fees, but not for enhancement of damages”); *see also Halo*, 136 S. Ct. at 1929, 1937 (explaining that, in light of the fee-shifting statute, “enhanced damages may not ‘serve to

compensate patentees' for infringement-related costs or litigation expenses"). Even if the Court gave this evidence greater weight, it would not find that it supported enhanced damages, for the reasons described in the portion of this opinion denying Solutran's request for fees.

More importantly, though, after careful consideration of the "copying" evidence offered by Solutran in its brief, the Court finds this e-mail correspondence insufficient to support enhanced damages. *Accord Solutran*, [2017 WL 89558](#), at *3. At worst, this evidence reveals a company aggressively responding to a competitor's new product by developing its own competing product, years before any patent issued. *See Schwendimann*, [2018 WL 3621206](#), at *21 (denying motion for enhanced damages in part because the patentholder's "copying" argument relied on "pure speculation" of the defendant's "nefarious" motives).

Similarly, having witnessed U.S. Bank's counsel litigate this case for five years, the Court credits U.S. Bank's assertion that it has continuously believed, in good faith, that Solutran's patent was invalid, and that, even if it was valid, ECS-OSI constituted a non-infringing service. Further, as the Court noted in its summary judgment opinion, the Court's initial claim construction order was perhaps "not as clear" as it should have been. *Solutran*, [291 F. Supp. 3d at 883](#). U.S. Bank did not act in bad faith by continuing to pursue a non-infringement defense after that initial Order issued. Accordingly, the Court will not sanction U.S. Bank for continuing to process transactions for its ECS-OSI customers over the course of this litigation.

In the end, U.S. Bank's infringement does not amount to the "wanton and malicious pirate who intentionally infringes another's patent, with no doubts about its validity or any

notion of a defense, for no purpose other than to steal the patentee's business." *Halo*, 136 S. Ct. at 1932. Consequently, the Court denies Solutran's motion for enhanced damages.

IV. ORDER

Based on the submissions and the entire file and proceedings herein, **IT IS HEREBY ORDERED** that:

1. Judgment is entered in favor of Solutran on U.S. Bank's invalidity defense under 35 U.S.C. § 103;
2. U.S. Bank's Motion for Judgment as a Matter of Law on Damages [Doc. No. 378] is **DENIED**;
3. Solutran's Motion for a Permanent Injunction [Doc. No. 386] is **GRANTED**;
 - a. Defendants and their agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, assigns, and all others acting in concert with Defendants are, as of thirty (30) days of this Order, permanently **ENJOINED** from (a) infringing, inducing infringement of, or contributing to the infringement, directly or indirectly, of U.S. Patent No. 8,311,945; (b) using their Electronic Check Service, Outsourced Imaging option (ECS-OSI), or any other option by another name that employs the steps of U.S. Patent No. 8,311,945; (c) assisting, aiding, or abetting any other person or business entity in engaging in or performing any of the activities referred to in this paragraph, or taking any action that contributes to any of the activities referred to in this paragraph. Defendants shall file with the Court and serve

upon Plaintiff's counsel, within thirty (30) days of this Order, a report in writing and under oath setting forth the manner in which they have complied with all of the above, including the identities of the clients whom they have notified of the cessation of the ECS-OSI service.

4. Solutran's Motion for Post-2017 Damages [[Doc. No. 386](#)] is **GRANTED**, as more fully described in this Order;
5. Solutan's Motion for Prejudgment Interest [[Doc. No. 386](#)] is **GRANTED IN PART**, as more fully described in this Order;
6. Solutran's Motion for Post-Judgment Interest [[Doc. No. 386](#)] is **GRANTED**;
7. U.S. Bank's Objection to Solutran's Bill of Costs [[Doc. No. 439](#)] is **DENIED**, and Solutran's Bill of Costs [[Doc. No. 434](#)] is **GRANTED**. The Court of Clerk shall tax costs against U.S. Bank in the amount of \$32,750.23;
8. Solutran's Motion for Attorney Fees [[Doc. No. 386](#)] is **DENIED**; and
9. Solutran's Motion for Enhanced Damages [[Doc. No. 386](#)] is **DENIED**.
10. This Order is filed under seal. **Within fourteen (14) days of the date of this Order, the parties are ORDERED to show cause** as to why the Order should remain under seal, and if so, which portions of the Order should remain sealed and for how long. The parties will file briefs, under seal, each no longer than seven (7) pages, on this subject. Each party will also file, again under seal, a copy of this Order showing its proposed redactions. If the parties agree on these issues, they may file under seal a joint brief and/or proposed Redacted order.

11. **Within seven (7) days of the date of this Order, the parties are ORDERED to jointly file with this Court their calculation of the appropriate final damages award, including post-2017 damages and prejudgment interest, so that the Court can enter final judgment in this matter. In making this calculation, the parties should use the date on which they file their joint brief as the date of final judgment. Further, the parties must file this joint brief before 12:00 PM on that day.**

Dated: December 11, 2018

/s/ Susan Richard Nelson
SUSAN RICHARD NELSON
United States District Judge