# United States Court of Appeals for the Federal Circuit

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**SOLUTRAN, INC.,**
*Plaintiff-Cross-Appellant*

**v.**

**ELAVON, INC., U.S. BANCORP,**
*Defendants-Appellants*

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2019-1345, 2019-1460

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Appeals from the United States District Court for the District of Minnesota in No. 0:13-cv-02637-SRN-BRT, Judge Susan Richard Nelson.

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Decided: July 30, 2019

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ROBERT JAMES GILBERTSON, Greene Espel, PLLP, Minneapolis, MN, argued for plaintiff-cross-appellant. Also represented by SYBIL LOUISE DUNLOP, DAVID WALLACE-JACKSON.

JOHN THOMAS VITT, Jones Day, Minneapolis, MN, argued for defendants-appellants. Also represented by GREGORY A. CASTANIAS, Washington, DC; PETER MCCREERY LANCASTER, TIMOTHY J. DROSKE, BEN DESMOND KAPPELMAN, Dorsey & Whitney LLP, Minneapolis, MN.

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

CHEN, *Circuit Judge.*

U.S. Bancorp and its affiliate Elavon, Inc. (collectively, U.S. Bank) appeal orders in the United States District Court for the District of Minnesota (1) denying U.S. Bank's motion for summary judgment that claims 1–5 of U.S. Patent No. 8,311,945 ('945 patent), assigned to Solutran, Inc. (Solutran), are invalid under 35 U.S.C. § 101 for failing to recite patent-eligible subject matter and (2) granting Solutran's motion for summary judgment that Solutran's products infringe claims 1–5 of the '945 patent. Solutran cross-appeals, arguing that the district court abused its discretion when it denied Solutran the ability to amend its complaint to include a claim for willful infringement after the deadline set out in the scheduling order.

Because we agree with U.S. Bank that claims 1–5 of Solutran's patent are invalid under § 101, we reverse.

BACKGROUND

A.   The '945 Patent

The '945 patent, issued in 2012, describes a system and method for processing paper checks. '945 patent. The patent explains that in the past, the payee would transport the check to his or her own bank to be read and processed, then the payee's bank would transport the check to the payor's bank, where it also would be read and processed. *Id.* at col. 1, ll. 30–39. At this point, the payor's bank would debit the payor's account and transfer the money to the payee's bank, which would credit the payee's account. *Id.* at col. 1, ll. 39–45.

The Background section of the '945 patent explains that the digital age ushered in a faster approach to processing checks, where the transaction information—*e.g.,* amount of the transaction, routing and account number— on the check is turned into a digital file at the merchant's

point of sale (POS) terminal.  *Id.* at col. 1, l. 51 – col. 2, l. 8, col. 4, ll. 51–58 (at the point of purchase, "the merchant keys, or applies amount captured at POS, into the terminal the amount of the purchase" and "passes the check through a MICR (magnetic ink character recognition) reader to capture the consumer's account number, routing number of the financial institution holding the account, and the check number").  The digital check information is sent electronically over the Internet or other network, *id.* at col. 1, ll. 54–61, and the funds are then transferred electronically from one account to another.  *Id.* at col. 2, ll. 5–8.  By converting the check information into digital form, it no longer was always necessary to physically move the paper check from one entity to another to debit or credit the accounts.  *Id.* at col. 2, ll. 1–5.  But retaining the checks was still useful for, among other things, verifying accuracy of the transaction data entered into the digital file.  *Id.* at col. 2, ll. 11–15.  It was well-known that merchants could optionally capture a digital image of the check at the point of purchase.  *Id.* at col. 2, ll. 61–63, col. 4, ll. 58–59, FIG. 1; *see also id.* at col. 2, ll. 30–31 ("The original check can be scanned and its digital image stored for later use . . . .").

The patent also discloses a method proposed by the National Automated Clearing House Association (NACHA) for "back office conversion" where merchants scan their checks in a back office, typically at the end of the day, *id.* at col. 2, l. 65 – col. 3, l. 1, "instead of at the purchase terminal," *id.* at col. 5, ll. 2–4, FIG. 2.  A scanner captures an image of the check, and MICR data from the check is stored with the image.  *Id.* at col. 3, ll. 1–2.  An image file containing this information can be transferred to a bank or third-party payment processor.  *Id.* at col. 3, ll. 2–4.

The patent describes its invention as a system and method of electronically processing checks in which (1) "data from the checks is captured at the point of purchase," (2) "this data is used to promptly process a deposit to the merchant's account," (3) the paper checks are moved

elsewhere "for scanning and image capture," and (4) "the image of the check is matched up to the data file." *Id.* at col. 3, ll. 16–46. The proffered benefits include "improved funds availability" for merchants and allegedly "reliev[ing merchants] of the task, cost, and risk of scanning and destroying the paper checks themselves, relying instead on a secure, high-volume scanning operation to obtain digital images of the checks." *Id.* at col. 3, ll. 46–62. Solutran explains that its method allows merchants to get their accounts credited sooner, without having to wait for the check scanning step.

The court treated claim 1 as representative, which the parties do not dispute. *See* J.A. 47. Claim 1 recites:

> 1. A method for processing paper checks, comprising:
>
> a) electronically receiving a data file containing data captured at a merchant's point of purchase, said data including an amount of a transaction associated with MICR information for each paper check, and said data file not including images of said checks;
>
> b) after step a), crediting an account for the merchant;
>
> c) after step b), receiving said paper checks and scanning said checks with a digital image scanner thereby creating digital images of said checks and, for each said check, associating said digital image with said check's MICR information; and
>
> d) comparing by a computer said digital images, with said data in the data file to find matches.

*Id.* at claim 1.

## B.  District Court and CBM Proceedings

Solutran sued U.S. Bank in the United States District Court for the District of Minnesota, alleging infringement of claims 1–5 of the '945 patent.  U.S. Bank filed an answer and counterclaims alleging, *inter alia*, that it did not infringe and that the asserted claims were invalid under § 101.  U.S. Bank later filed a motion for summary judgment that the '945 patent was invalid because it did not recite patent-eligible subject matter under § 101, specifically because the claims were directed to the "abstract idea of delaying and outsourcing the scanning of paper checks." *See* J.A. 50.  The district court disagreed, concluding that the claims were not directed to an abstract idea and the '945 patent was therefore patent-eligible.

The district court found a previous covered business method (CBM) review of the '945 patent by the Patent Trial and Appeal Board (Board) persuasive in reaching its determination.  J.A. 52 n.5.  In August 2014—two months after the Supreme Court issued its *Alice Corp. Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014), decision—the Board issued an institution decision denying the petition as to the § 101 challenge, concluding that claim 1 of the '945 patent was not directed to an abstract idea.  *U.S. Bancorp v. Solutran, Inc.*, No. CBM2014-00076, 2014 WL 3943913 (P.T.A.B. Aug. 7, 2014).  The Board reasoned that "the basic, core concept of independent claim 1 is a method of processing paper checks, which is more akin to a physical process than an abstract idea." *Id.* at *8.  "Indeed, there is nothing immediately apparent about this basic, core concept that would indicate that it is directed to an abstract idea at all." *Id.*

The district court's reasoning aligned with the Board's. The district court focused on the physical nature of checks' processing and movement and accused U.S. Bank of improperly construing the claim to "a high level of abstraction." J.A. 51–57.  The district court distinguished U.S.

Bank's cited Federal Circuit and Board decisions involving check-related patents on the basis that the '945 patent, in its view, is directed to an improved technique for processing and transporting physical checks, rather than just handling data that had been scanned from the checks.  J.A. 55.

The district court concluded, in the alternative, that the asserted claims also recited an inventive concept under step two of *Alice*.  The district court accepted Solutran's assertion that "Claim 1's elements describe a new combination of steps, in an ordered sequence, that was never found before in the prior art and has been found to be a non-obvious improvement over the prior art by both the USPTO examiner and the PTAB's three-judge panel (affirmed by the Federal Circuit)."[1]  J.A. 58.  The district court also concluded that the claim passes the machine-or-transformation test because "the physical paper check is transformed into a different state or thing, namely into a digital image."  J.A. 59.

U.S. Bank appeals, *inter alia*, the § 101 ruling.  Solutran cross-appeals on the issue of willful infringement. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

### DISCUSSION

Patent eligibility under § 101 is a question of law that may contain underlying issues of fact.  *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1342 (Fed. Cir. 2018) (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir.

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[1]    CBM2014-00076, which this court affirmed, only included an obviousness challenge to the '945 patent, as the § 101 challenge had already been denied at institution. *See U.S. Bancorp v. Solutran, Inc.*, No. CBM2014-00076, 2015 WL 4698463, at \*17 (P.T.A.B. Aug. 5, 2015); *U.S. Bancorp v. Solutran, Inc.*, 668 F. App'x 363, 364 (Fed. Cir. 2016).

2018)).  We review an ultimate conclusion on patent eligibility *de novo*.  *See id.*

The Supreme Court has held that certain categories of subject matter, including abstract ideas, are not eligible for patent protection under § 101.  *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012).  "The 'abstract ideas' category embodies the longstanding rule that an idea of itself is not patentable."  *Alice*, 573 U.S. at 218 (internal brackets and quotation marks omitted).  To determine whether claimed subject matter is patent-eligible, we apply the two-step framework explained in *Alice*.  *Id.*  First, we "determine whether the claims at issue are directed to a patent-ineligible concept" such as an abstract idea.  *Id.*  Second, if so, we "examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application."  *Id.* at 221 (internal quotation marks omitted) (quoting *Mayo*, 566 U.S. at 72, 80).  At each step, the claims are considered as a whole.  *See id.* at 218 n.3, 225.

## 1.   Step One

We agree with U.S. Bank that the claims of the '945 patent are directed to an abstract idea, although we articulate it a bit differently than U.S. Bank does.  We conclude that the claims are directed to the abstract idea of crediting a merchant's account as early as possible while electronically processing a check.

We have previously ruled that certain transaction claims performed in a particular order or sequence are directed to abstract ideas.  In *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), the claims at issue were drawn to a method for distribution of copyrighted content over the Internet including the steps of, *inter alia*, receiving media from a content provider, selecting an ad, offering the media to the consumer in exchange for watching the ad, displaying the ad, then allowing the consumer to access

the media. *Id.* at 714–15. We determined that the ordered combination of steps recited "an abstraction—an idea, having no particular concrete or tangible form." *Id.* at 715. We defined the abstract idea as "showing an advertisement before delivering free content." *Id.* "Because the innovative aspect of the claimed invention [wa]s an entrepreneurial rather than a technological one," we deemed the invention patent-ineligible. *Id.* at 722.

Aside from the timing of the account crediting step, the '945 patent claims recite elements similar to those in *Content Extraction & Transmission LLC v. Wells Fargo Bank, National Ass'n,* 776 F.3d 1343 (Fed. Cir. 2014). There, we held that a method of extracting and then processing information from hard copy documents, including paper checks, was drawn to the abstract idea of collecting data, recognizing certain data within the collected data set, and storing that recognized data in a memory. *Id.* at 1347. We explained that "[t]he concept of data collection, recognition, and storage is undisputedly well-known"; "[i]ndeed, humans have always performed these functions." *Id.* We also recognized that "banks have, for some time, reviewed checks, recognized relevant data such as the amount, account number, and identity of account holder, and stored that information in their records." *Id.* Here, too, the claims recite basic steps of electronic check processing. In its background, the '945 patent explains that "there has been an industry transition to the electronic processing of checks[, including] the recordation of the data . . . presented by the check into a digital format which can then be transferred electronically." *Id.* at col. 1, ll. 53–57, col. 1, ll. 61–62. It had become standard for the merchant to capture the check's transaction amount and MICR data at the point of purchase. *Id.* at col. 4, ll. 52–58, FIG. 1. Further, the patent's background explains that verifying the accuracy of the transaction information stored in the digital file

against the check was already common.[2]  *Id.* at col. 2, ll. 13–15.

Crediting a merchant's account as early as possible while electronically processing a check is a concept similar to those determined to be abstract by the Supreme Court in *Bilski v. Kappos*, 561 U.S. 593 (2010) and *Alice*.  In *Bilski*, the Supreme Court determined that claims directed to "the basic concept of hedging, or protecting against risk" recited "a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class" and therefore "an unpatentable abstract idea." 561 U.S. at 611–12.  In *Alice*, the Supreme Court deemed "a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk" to be an abstract idea.  573 U.S. at 219.  The desire to credit a merchant's account as soon as possible is an equally long-standing commercial practice.

Solutran argues that the claims "as a whole" are not directed to an abstract idea.  *See, e.g.*, Cross-Appellant's Op. Br. at 38.  The '945 patent articulates two benefits of its invention: (1) "improved funds availability" because the merchant's account is credited before the check is scanned or verified; and (2) relieving merchants of the task, cost, and risk of scanning and destroying paper checks by outsourcing those tasks.  '945 patent at col. 3, ll. 38–64.  At oral argument, Solutran's counsel conceded that the claims are not limited to an embodiment that requires outsourcing.  Oral Argument at 25:36–26:09 ("Claim 1 doesn't require that it be done by someone other than the merchant . . . .").  The only advance recited in the asserted claims is thus crediting the merchant's account before the

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[2]    Solutran does not contend that using a digital rather than paper version of the check for that comparison is inventive.

paper check is scanned.  We conclude that this is an abstract idea.

This is not a situation where the claims "are directed to a specific improvement to the way computers operate" and therefore not directed to an abstract idea, as in cases such as *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016).  Solutran's counsel acknowledged at oral argument that the '945 patent's invention did not improve the technical capture of information from a check to create a digital file or the technical step of electronically crediting a bank account.  *See, e.g.*, Oral Argument at 23:40–24:12 ("So I grant you that there is not a specific technical change in the way the data file is constructed or in the way the crediting occurs . . . ."), 33:14–33:29.  Nor does the '945 patent invention improve how a check is scanned.  This is also not a situation where the claims are "limited to rules with specific characteristics" to create a technical effect and therefore not directed to an abstract idea, as in *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299, 1313 (Fed. Cir. 2016).  To the contrary, the claims are written at a distinctly high level of generality.

We do not agree that U.S. Bank "improperly construe[d] Claim 1 to 'a high level of abstraction.'"  J.A. 51 (quoting *Enfish*, 822 F.3d at 1337).  In *Enfish*, the district court and the appellees generalized the claims such that their characterization of the alleged abstract idea was "untethered from the language of the claims."  *See Enfish*, 822 F.3d at 1337.  That is not the case here; rather, both our characterization and U.S. Bank's characterization are directly tethered to the claim language.  We understand that it may be difficult at times to determine what the correct level of abstraction is to characterize the claims.  After all, "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71.  We share the Supreme Court's concern that "too broad an interpretation of this exclusionary principle could eviscerate patent law."  *Id.*  But

where, as here, the abstract idea tracks the claim language and accurately captures what the patent asserts to be the "focus of the claimed advance over the prior art," *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016), characterizing the claim as being directed to an abstract idea is appropriate. Moreover, the specification states, and Solutran does not dispute, that the steps of the claim are conventional processes for processing checks electronically.

Contrary to Solutran's arguments, the physicality of the paper checks being processed and transported is not by itself enough to exempt the claims from being directed to an abstract idea. As we explained in *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1161 (Fed. Cir. 2018), "the abstract idea exception does not turn solely on whether the claimed invention comprises physical versus mental steps." In fact, "[t]he claimed methods in *Bilski* and *Alice* also recited actions that occurred in the physical world." *Id.* We have likewise determined that a method for voting that involved steps of printing and handling physical election ballots, *Voter Verified, Inc. v. Election Sys. & Software LLC*, 887 F.3d 1376 (Fed. Cir. 2018), and a method of using a physical bankcard, *Smart Sys. Innovations, LLC v. Chi. Transit Auth.*, 873 F.3d 1364 (Fed. Cir. 2017), were abstract ideas. And the Supreme Court has concluded that diagnostic methods that involve physical administration steps are directed to a natural law. *Mayo*, 566 U.S. at 92. The physical nature of processing paper checks in this case does not require a different result, where the claims simply recite conventional actions in a generic way (*e.g.*, capture data for a file, scan check, move check to a second location, such as a back room) and do not purport to improve any underlying technology

The district court's and Solutran's reliance on the paper checks being processed in two "different location[s]" via two paths as preventing the claims from being directed to an abstract idea is also misplaced. *See, e.g.*, J.A. 51; Cross-

Appellant's Op. Br. at 39–40, 42–43, 46, 48–49. The claims on their face are broad enough to allow the transaction data to be captured at the merchant's point of purchase and the checks to be scanned and compared in the merchant's back office. The location of the scanning and comparison—whether it occurs down the hallway, down the street, or across the city—does not detract from the conclusion that these claims are, at bottom, directed to getting the merchant's account credited from a customer's purchase as soon as possible, which is an abstract idea.

### 2.   Step Two

We disagree with the district court that the '945 patent claims "contain a sufficiently transformative inventive concept so as to be patent eligible." *See* J.A. 60. Even when viewed as a whole, these claims "do not, for example, purport to improve the functioning of the computer itself" or "effect an improvement in any other technology or technical field." *See Alice*, 573 U.S. at 225. To the contrary, as the claims in *Ultramercial* did, the claims of the '945 patent "simply instruct the practitioner to implement the abstract idea with routine, conventional activity." 772 F.3d at 715. As we noted above, the background of the '945 patent describes each individual step in claim 1 as being conventional. Reordering the steps so that account crediting occurs before check scanning (as opposed to the other way around) represents the abstract idea in the claim, making it insufficient to constitute an inventive concept. *Id.* Any remaining elements in the claims, including use of a scanner and computer and "routine data-gathering steps" (*i.e.*, receipt of the data file), have been deemed insufficient by this court in the past to constitute an inventive concept. *Content Extraction*, 776 F.3d at 1349 (conventional use of computers and scanners); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363 (Fed. Cir. 2015) (routine data-gathering steps).

To the extent Solutran argues that these claims are patent-eligible because they are allegedly novel and non-obvious, *see* Cross-Appellant's Op. Br. at 49, 52, 54–55, 63, 67, we have previously explained that merely reciting an abstract idea by itself in a claim—even if the idea is novel and non-obvious—is not enough to save it from ineligibility. *See, e.g.*, *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) ("[A] claim for a *new* abstract idea is still an abstract idea." (emphasis in original)).

Solutran also argues on appeal that its claims pass the machine-or-transformation test—*i.e.*, "transformation and reduction of an article 'to a different state or thing.'" *See Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). While the Supreme Court has explained that the machine-or-transformation test can provide a "useful clue" in the second step of *Alice*, passing the test alone is insufficient to overcome Solutran's above-described failings under step two. *See DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014) ("[I]n *Mayo*, the Supreme Court emphasized that satisfying the machine-or-transformation test, by itself, is not sufficient to render a claim patent-eligible, as not all transformations or machine implementations infuse an otherwise ineligible claim with an 'inventive concept.'").

In any respect, we disagree with Solutran that the claims pass the test. Solutran reads the analysis in *In re Bilski*, 545 F.3d 943, 962–63 (Fed. Cir. 2008) (en banc), which the Supreme Court explicitly declined to follow, as supporting its argument that "scanning . . . paper checks with a digital-image scanner to create images of the checks" alone passes the machine-or-transformation test. *See* Appellant's Op. Br. at 65 (relying on discussion of *In re Abele*, 684 F.2d 902 (C.C.P.A. 1982) in *In re Bilski*, 545 F.3d at 962–63). Regardless of whether our *Bilski* opinion's analysis of *Abele* is still sound in view of recent Supreme Court opinions, Solutran's check-scanning argument directly conflicts with *Content Extraction*. Merely using a

general-purpose computer and scanner to perform conventional activities in the way they always have, as the claims do here, does not amount to an inventive concept. *See Content Extraction*, 776 F.3d at 1348–49; *Ultramercial*, 772 F.3d at 716–17.

Because the claims of the '945 patent recite the abstract idea of using data from a check to credit a merchant's account before scanning the check, and because the claims do not contain an inventive concept sufficient to transform this abstract idea into a patent-eligible application, the claims are not directed to patent-eligible subject matter under § 101. We therefore need not review U.S. Bank's alternative § 103 argument or Solutran's cross-appeal relating to a potential willful infringement claim. We have considered the parties' remaining arguments and find them unpersuasive. Accordingly, we reverse.

**REVERSED**