

**United States Court of Appeals  
for the Federal Circuit**

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**INTELLECTUAL VENTURES I LLC,  
INTELLECTUAL VENTURES II LLC,**  
*Plaintiffs-Appellants*

v.

**CAPITAL ONE BANK (USA), NATIONAL  
ASSOCIATION, CAPITAL ONE FINANCIAL  
CORPORATION, CAPITAL ONE, NATIONAL  
ASSOCIATION,**  
*Defendants-Appellees*

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2014-1506

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Appeal from the United States District Court for the  
Eastern District of Virginia in No. 1:13-cv-00740-AJT-  
TCB, Judge Anthony J. Trenga.

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Decided: July 6, 2015

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Before DYK, REYNA, and CHEN, *Circuit Judges*.

DYK, *Circuit Judge*.

Plaintiffs Intellectual Ventures I LLC and Intellectual Ventures II LLC (collectively, “Intellectual Ventures”) asserted infringement of claims of three patents against defendants Capital One Bank (USA), NA, Capital One Financial Corporation, and Capital One, NA (collectively, “Capital One”). The three patents were U.S. Patent Nos. 8,083,137, 7,603,382, and 7,260,587 (“the ’137 patent,” “the ’382 patent,” and “the ’587 patent,” respectively).

Following the district court’s claim construction of the term “machine readable instruction form” in the ’587 patent, the parties stipulated to non-infringement of the asserted claims of that patent. The district court also determined that the asserted claims of the ’137 patent claimed ineligible subject matter and the asserted claims of the ’382 patent claimed ineligible subject matter and were also indefinite under 35 U.S.C. § 112(b). Intellectual

Ventures appeals the district court's invalidity determinations with respect to the '137 and '382 patents and its claim construction with respect to the '587 patent.

We affirm, concluding that the asserted claims of the '137 and '382 patents claim unpatentable abstract ideas and that the district court's claim construction with respect to the '587 patent was correct.<sup>1</sup>

#### BACKGROUND

Intellectual Ventures owns the three patents at issue, the first two of which generally relate to activities on the Internet, and the third of which generally relates to photography organization using a computer. The '137 patent, entitled "Administration of Financial Accounts," claims methods of budgeting, particularly methods of tracking and storing information relating to a user's purchases and expenses and presenting that information to the user vis-à-vis the user's pre-established, self-imposed spending limits. The '382 patent, entitled "Advanced Internet Interface Providing User Display Access of Customized Webpages," claims methods and systems for providing customized web page content to the user as a function of user-specific information and the user's navigation history. The '587 patent, entitled "Method for Organizing Digital Images," claims methods for scanning hard-copy images onto a computer in an organized manner.

On June 19, 2013, Intellectual Ventures filed suit in the United States District Court for the Eastern District

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<sup>1</sup> Capital One filed a counterclaim alleging anti-trust violations by Intellectual Ventures. The district court dismissed for failure to state a claim, and Capital One cross-appealed. On April 7, 2015, we granted Capital One's motion to dismiss the cross-appeal.

of Virginia against Capital One, alleging infringement of claims 5–11 of the '137 patent, claims 1–5, 16, 17, and 19–22 of the '382 patent, and claims 1 and 18 of the '587 patent. On December 18, 2013, the district court issued its claim construction order, construing terms for all three patents. The representative asserted claim of the '587 patent (claim 1) claims a method of organizing digital images in which hard-copy images are scanned into a computer and sorted according to an associated machine readable instruction form. The district court construed “digitally scanning a plurality of hard copy prints [that have been grouped into one or more categories, each category separated by] an associated machine readable instruction form” as requiring the “associated machine readable instruction form” be in a hard-copy, rather than electronic, form. Because of that construction, Intellectual Ventures stipulated to non-infringement of all asserted claims of the '587 patent.

On April 16, 2014, the district court granted summary judgment with respect to the asserted claims of the '137 and '382 patents. The district court concluded that the asserted claims of the '137 and '382 patents claimed ineligible subject matter in violation of 35 U.S.C. § 101. The district court also determined that, based on its construction of “interactive interface,” the asserted claims of the '382 patent were indefinite under 35 U.S.C. § 112(b). The district court thus held invalid all of the asserted claims of both patents.

Intellectual Ventures appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1). We review summary judgment determinations de novo. *Laber v. Harvey*, 438 F.3d 404, 415 (4th Cir. 2006). Patent eligibility under § 101 is an issue of law we review de novo. *In re BRCA1- & BRCA2-Based Hereditary Cancer Test Patent Litig.*, 774 F.3d 755, 758 (Fed. Cir. 2014). We review the district court’s claim construction based on intrinsic evidence and

the district court’s ultimate claim construction de novo. See *Warsaw Orthopedic, Inc. v. NuVasive*, 778 F.3d 1365, 1369 (Fed. Cir. 2015) (citing *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015)).

## DISCUSSION

### I

We first address patent eligibility with respect to the ’137 and ’382 patents. An invention is patent-eligible if it fits into one of four statutory categories: processes, machines, manufactures, and compositions. 35 U.S.C. § 101. But there is an implicit exception. “Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (citation omitted). To determine whether an invention claims ineligible subject matter, we engage in a two-step process. First, “we determine whether the claims at issue are directed to one of [the] patent-ineligible concepts”—laws of nature, natural phenomena, or abstract ideas. *Id.* at 2355. “The ‘abstract ideas’ category embodies ‘the longstanding rule’ that ‘[a]n idea of itself is not patentable.’” *Id.* (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). An abstract idea does not become nonabstract by limiting the invention to a particular field of use or technological environment, such as the Internet. See *Alice*, 134 S. Ct. at 2358 (limiting an abstract idea to a particular technological environment, such as a computer, does not confer patent eligibility); *Bilski v. Kappos*, 561 U.S. 593, 612 (2010) (“[L]imiting an abstract idea to one field of use . . . d[oes] not make the concept patentable.”).

If we determine that the patent is drawn to an abstract idea or otherwise ineligible subject matter, at a second step we ask whether the remaining elements, either in isolation or combination with the non-patent-ineligible elements, are sufficient to “transform the

nature of the claim’ into a patent-eligible application.” *Alice*, 134 S. Ct. at 2358 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1297 (2012)). Put another way, there must be an “inventive concept” to take the claim into the realm of patent-eligibility. *Id.* at 2355. A simple instruction to apply an abstract idea on a computer is not enough. *Alice*, 134 S. Ct. at 2358 (“[M]ere recitation of a generic computer cannot transform a patent-ineligible idea into a patent-eligible invention. Stating an abstract idea ‘while adding the words “apply it” is not enough for patent eligibility.’” (quoting *Mayo*, 132 S. Ct. at 1294)).

Nor, in addressing the second step of *Alice*, does claiming the improved speed or efficiency inherent with applying the abstract idea on a computer provide a sufficient inventive concept. See *Bancorp Servs., LLC v. Sun Life Assurance Co. of Can.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”); *CLS Bank, Int’l v. Alice Corp.*, 717 F.3d 1269, 1286 (Fed. Cir. 2013) (en banc) *aff’d*, 134 S. Ct. 2347 (2014) (“[S]imply appending generic computer functionality to lend speed or efficiency to the performance of an otherwise abstract concept does not meaningfully limit claim scope for purposes of patent eligibility.” (citations omitted)).

#### A

The ’137 patent generally relates to budgeting, or, as the district court described it, “utiliz[ing] user-selected pre-set limits on spending that are stored in a database that, when reached, communicates a notification to the user via a device.” J.A. 780. Claim 5 is representative and provides:

A method comprising:

storing, in a database, a profile keyed to a user identity and containing one or more user-selected categories to track transactions associated with said user identity, wherein individual user-selected categories include a user pre-set limit; and

causing communication, over a communication medium and to a receiving device, of transaction summary data in the database for at least one of the one or more user-selected categories, said transaction summary data containing said at least one user-selected category's user pre-set limit.

'137 patent col. 10 ll. 4–15.

Here, the patent claims are directed to an abstract idea: tracking financial transactions to determine whether they exceed a pre-set spending limit (i.e., budgeting). Although Intellectual Ventures argues the claims are not “[d]irected or [d]rawn to an [a]bstract [i]dea,” Appellant’s Br. 30, Intellectual Ventures admits budgeting “undoubtedly . . . is an abstract idea.” Appellant’s Br. 31. And while the claims recite budgeting using a “communication medium” (broadly including the Internet and telephone networks), that limitation does not render the claims any less abstract.

The abstract idea here is not meaningfully different from the ideas found to be abstract in other cases before the Supreme Court and our court involving methods of organizing human activity. In *Bilski*, the Supreme Court determined that a claim directed to a method of hedging risk was directed to an abstract idea. 561 U.S. at 599, 613. In *Alice*, the Supreme Court held that a computer-based implementation of a method of mitigating settlement risk using a third-party intermediary was drawn to an abstract idea. 134 S. Ct. at 2351–52. Our cases have rejected similar concepts as being directed towards ineli-

gible subject-matter.<sup>2</sup> In light of these precedents, we conclude that the asserted claims are equally drawn to an abstract idea.

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<sup>2</sup> See *Cybersource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370, 1373 (Fed. Cir. 2011) (holding that “a method for verifying the validity of a credit card transaction over the Internet” was directed to an abstract idea or unpatentable mental process); *Fort Props., Inc. v. Am. Master Lease LLC*, 671 F.3d 1317, 1318, 1320 (Fed. Cir. 2012) (concluding that a patent claiming an “investment tool designed to enable property owners to buy and sell properties without incurring tax liability” was drawn to an abstract idea); *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1331, 1334 (Fed. Cir. 2012) (determining that a computer-implemented method of managing a credit application was drawn to a patent-ineligible abstract idea); *Bancorp*, 687 F.3d at 1269, 1277, (holding that a patent claiming “systems and methods for administering and tracking the value of life insurance policies in separate accounts” was directed to an abstract idea); *Accenture Global Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1339, 1342 (Fed. Cir. 2013) (determining that claims to automated methods for generating task lists to be performed by an insurance organization were directed to a patent-ineligible abstract idea); *Ultramercial, Inc. v. Hulu LLC*, 772 F.3d 709, 712, 714 (Fed. Cir. 2014) (holding that a computer- and Internet-based implementation of displaying an advertisement in exchange for access to copyrighted media was directed to an abstract idea); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1351, 1355 (Fed. Cir. 2014) (determining that a claim directed toward guaranteeing a party’s performance in an online transaction was directed to an abstract idea); *OIP Techs., Inc. v. Amazon.com, Inc.*, No. 2012-1696, 2015 WL 3622181, at



Moving to step two of the *Alice* framework, it is clear that the claims contain no inventive concept. The recited elements, e.g., a database, a user profile (“a profile keyed to a user identity,” ’137 patent col. 10 l. 5), and a communication medium, are all generic computer elements. Instructing one to “apply” an abstract idea and reciting no more than generic computer elements performing generic computer tasks does not make an abstract idea patent-eligible. See *Alice*, 134 S. Ct. at 2359–60 (holding patent-ineligible claims that “amount to nothing significantly more than an instruction to apply the abstract idea . . . using some unspecified, generic computer” and in which “each step does no more than require a generic computer to perform generic computer functions” (internal quotation marks, citation omitted)); *Ultramercial*, 772 F.3d at 716 (“Adding routine[,] additional steps . . . does not transform an otherwise abstract idea into patent-eligible subject matter.”); *Bancorp*, 687 F.3d at 1274, 1278 (appending generic computer components does not “salvage an otherwise patent-ineligible process”); *Cyber-Source*, 654 F.3d at 1375 (“[T]he incidental use of a computer to perform the [claimed process] does not impose a sufficiently meaningful limitation on the claim’s

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\*3–4 (Fed. Cir. June 11, 2015) (holding that methods of offer-based price optimization in an e-commerce environment were drawn to an abstract idea); see also *Smart-Gene, Inc. v. Advanced Biological Labs., SA*, 555 F. App’x 950, 951, 954 (Fed. Cir. 2014) (determining that a computer-implemented method for “guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition” was directed to an abstract idea); *Planet Bingo LLC v. VKGS LLC*, 576 F. App’x 1005, 1006 (Fed. Cir. 2014) (determining that claims to a computer-aided management system for bingo games was directed to an abstract idea).

scope.”). Indeed, the budgeting calculations at issue here are unpatentable because they “could still be made using a pencil and paper” with a simple notification device, *Cybersource*, 654 F.3d at 1371 (quoting *Parker v. Flook*, 437 U.S. 584, 586 (1978) (punctuation omitted)), even in real time as expenditures were being made.

## B

The ’382 patent generally relates to customizing web page content as a function of navigation history and information known about the user.<sup>3</sup> Claim 1 is representative and provides:

A system for providing web pages accessed from a web site in a manner which presents the web pages tailored to an individual user, comprising:

an interactive interface configured to provide dynamic web site navigation data to the user, the interactive interface comprising:

a display depicting portions of the web site visited by the user as a function of the web site navigation data; and

a display depicting portions of the web site visited by the user as a function of the user’s personal characteristics.

’382 patent col. 7 ll. 13–22. The district court construed “interactive interface” to mean “a selectively tailored medium by which a web site user communicates with a web site information provider.” J.A. 756. The district

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<sup>3</sup> Because the asserted claims of the ’382 patent are invalid for claiming ineligible subject matter, we do not reach the question of whether “interactive interface” is indefinite.

court construed “[d]isplay depicting portions of the web site visited by the user as a function of the user’s personal characteristics” to mean “[a] display depicting portions of the web site visited by the user preselected by a web page manager by matching personal characteristics in a user profile automatically downloaded from the interactive interface based on information identifiers for portions of the web site.” J.A. 757. Finally, the parties stipulated that “[d]ynamic web site navigation data” meant “[d]ata representing portions of the web site visited by the user.” J.A. 757.

At step one of the *Alice* framework, it is often useful to determine the breadth of the claims in order to determine whether the claims extend to cover a “fundamental . . . practice long prevalent in our system . . . .” *Alice*, 134 S. Ct. at 2356. As noted, the claim relates to customizing information based on (1) information known about the user and (2) navigation data.

With respect to the first aspect, at oral argument Intellectual Ventures admitted that tailoring content based on the viewer’s location or address would satisfy the “as a function of the user’s personal characteristics” limitation. This sort of information tailoring is “a fundamental . . . practice long prevalent in our system . . . .” *Id.* There is no dispute that newspaper inserts had often been tailored based on information known about the customer—for example, a newspaper might advertise based on the customer’s location. Providing this minimal tailoring—e.g., providing different newspaper inserts based upon the location of the individual—is an abstract idea.

With respect to the second aspect, the specification provides an example of tailoring information based on navigation data. The specification describes tailoring a portion of the website’s logo throughout the day. If a user accesses the website in the early morning, the website

will use that navigation data (i.e., information relating to when the user navigated to the website) to “customize” the website by modifying the logo to look like a rising sun. ’382 patent col. 5 ll. 9–10. Conversely, if the user accesses the website in the late evening, the website will “customize” the logo to look like a moon with stars. ’382 patent col. 5 ll. 11–12. At oral argument, Intellectual Ventures did not challenge the conclusion that tailoring content based on the time of day at which the user viewed the content is within the scope of the claim limitation. Tailoring information based on the time of day of viewing is also an abstract, overly broad concept long-practiced in our society. There can be no doubt that television commercials for decades tailored advertisements based on the time of day during which the advertisement was viewed. For example, a television channel might choose to present a commercial for children’s toys during early morning cartoon programs but beer during an evening sporting event. An advertisement taking into account the time of day and tailoring the information presented to the user based on that information is another “fundamental . . . practice long prevalent in our system . . .” *Alice*, 134 S. Ct. at 2356.

Turning to the second step of *Alice*, here there is no inventive concept that would support patent eligibility. As discussed above, our precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea. Intellectual Ventures argues that claims limited to dynamic presentation of data—that is, that the claimed invention in “real time” customizes the web page based on the information it knows about the particular viewer—supplies an inventive concept. The claims are not so limited. Although the claim includes a “dynamic” limitation, the specification makes clear that determining whether the user falls into

one category or another (e.g., whether the viewer is a “Generation X’er” or an “older individual”) and then presenting the user a pre-created advertisement based on the category determination, satisfies the dynamic requirement. At oral argument, counsel for Intellectual Ventures admitted that the web site might have a series of pre-designed advertisements, which, based on the user’s information, the web site would then choose between and present to the user. Moreover, the fact that the web site returns the pre-designed ad more quickly than a newspaper could send the user a location-specific advertisement insert does not confer patent eligibility. *See Bancorp*, 687 F.3d at 1278; *CLS Bank*, 717 F.3d at 1286.

Intellectual Ventures argues that the “interactive interface” is a specific application of the abstract idea that provides an inventive concept. But nowhere does Intellectual Ventures assert that it invented an interactive interface that manages web site content. Rather, the interactive interface limitation is a generic computer element. At Intellectual Ventures’ urging, “interactive interface” was broadly construed by the district court to mean “a selectively tailored medium by which a web site user communicates with a web site information provider.” J.A. 756. Intellectual Ventures describes the “interactive interface” as “tasked with tailoring information and providing it to the user.” Appellant’s Br. 43. Elsewhere, Intellectual Ventures equates the “interactive interface” with the “web page manager,” which “tailors the web page to the specific individual based on the profile.” At oral argument, Intellectual Ventures described the interactive interface as “software” and agreed that it “is basically the brains of the outfit.” Oral Argument Tr. 16:24–16:40. Nowhere in these vague and generic descriptions of the “interactive interface” does Intellectual Ventures suggest an “inventive concept.” *Alice*, 134 S. Ct. at 2355. Rather,

the “interactive interface” simply describes a generic web server with attendant software, tasked with providing web pages to and communicating with the user’s computer.

Steps that do nothing more than spell out what it means to “apply it on a computer” cannot confer patent-eligibility. *Alice*, 134 S. Ct. at 2359 (warning against a § 101 analysis that turns on the draftsman’s art (citing *Flook*, 437 U.S. at 593)). Requiring the use of a “software” “brain” “tasked with tailoring information and providing it to the user” provides no additional limitation beyond applying an abstract idea, restricted to the Internet, on a generic computer. The district court properly determined that the asserted claims of the ’382 patent:

consist[] of nothing more tha[n] the entry of data into a computer database, the breakdown and organization of that entered data according to some criteria, . . . and the transmission of information derived from that entered data to a computer user, all through the use of conventional computer components, such as a database and processors, operating in a conventional manner.

J.A. 784. These elements do not confer patent eligibility. *See Alice*, 134 S. Ct. at 2359–60; *Ultramercial*, 772 F.3d at 716; *Dealertrack*, 674 F.3d at 1333; *Fort Props.*, 671 F.3d at 1317, 1323; *CyberSource*, 654 F.3d at 1375.

Finally, Intellectual Ventures argues that the claims are patentable in light of our recent decision in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). The patent at issue in that case dealt with a problem unique to the Internet: Internet users visiting one web site might be interested in viewing products sold on a different web site, but the owners of the first web site did not want to constantly redirect users away from their web site to a different web site. *Id.* at 1257–58. The

claimed solution used a series of steps that created a hybrid web page incorporating “look and feel” elements from the host web site with commerce objects from the third-party web site. *Id.* The patent at issue in *DDR* provided an Internet-based solution to solve a problem unique to the Internet that (1) did not foreclose other ways of solving the problem, and (2) recited a specific series of steps that resulted in a departure from the routine and conventional sequence of events after the click of a hyperlink advertisement. *Id.* at 1256–57, 1259. The patent claims here do not address problems unique to the Internet, so *DDR* has no applicability.

The asserted claims of the ’382 patent claim an abstract idea and do not otherwise claim an inventive concept.

## II

We finally address claim construction with respect to the ’587 patent. Claim 1 is representative and provides:

A method of automatically organizing digital images obtained from a plurality of hard copy prints, each of said hard copy prints having an image thereon, comprising the steps of:

digitally scanning a plurality of hard copy prints that have been grouped into one or more categories, *each category separated by an associated machine readable instruction form* as to obtain a digital file of each of said images and digitally associating said one or more categories with said digital images in accordance with said associated machine readable instruction form executed by a computer;

storing said digital images files and associated categories on a digital storage medium; and

producing a product incorporating images from one or more of said categories as required by a customer.

'587 patent col. 20 ll. 13–29 (emphasis added).

At claim construction, the parties disputed whether the “associated machine readable instruction form” must be in a hard-copy format and scanned into the computer along with the hard-copy pictures, or whether a wholly electronic embodiment of the instruction form could satisfy the claim limitation. Intellectual Ventures argued that the machine readable instruction forms need not be in a hard-copy format. Capital One argued that the forms must be in a hard-copy format. In the claim construction order, the district court concluded “that the ‘machine readable instruction form’ refers to a hard copy form that is presented and scanned along with the hard copy images and which physically separates the categories of images, as defined by the user.” J.A. 760.

We conclude that the district court was correct to require that the machine readable instructions be in hard-copy for three reasons.

First, the language of the claim itself suggests that the machine readable instructions are used to physically separate the hard-copy prints. The claim provides for “separat[ing]” the hard-copy prints before scanning “by an associated machine readable instruction form.” '587 patent col. 20 ll. 19–22. This necessarily suggests that the machine readable instruction form is also in hard copy, as physical separation of the hard-copy prints before scanning can only be achieved by something that is itself a physical embodiment.

Second, the specification consistently describes the machine readable instruction form as a hard-copy document and thus in no way contradicts the plain meaning of



the claim language. *See, e.g.*, '587 patent figs. 6A, 7 (showing hard-copy machine readable instruction form 74); '587 patent col. 6 ll. 50–55 (describing that instruction form 74 is physically placed in front of the hard-copy prints before the prints are scanned); '587 patent col. 7 ll. 26–36 (explaining that instructions are written on form 74 and then form 74 is scanned prior to the hard-copy prints associated with that form); '587 patent col. 8 ll. 18–41 (depicting instruction form 74 as being physically placed in an envelope with the images associated with the information written on the form).

Intellectual Ventures argues that the specification discloses non-hard-copy embodiments, relying on col. 5 ll. 35–40 and col. 5 l. 61–col. 6 l. 4. Although it is true that the first passage describes an embodiment in which the instruction form is provided to the user via HTML, that passage also describes providing the user with hard-copy labels onto which the HTML form can be printed. Thus, even when the specification discusses delivering the instruction form to the customer in a non-hard-copy format, the specification nonetheless describes that instruction form as ultimately being printed out on a hard-copy document. *See* '587 patent col. 5 ll. 39–40. The second passage states: “While in the particular embodiment illustrated, the instructions would typically be provided on a hard-copy document, the instructions may be provided in an audio or visual format.” But the instructions described there refer to instructions that are provided to the user instructing him or her on how to use the product embodying the claimed method—not the machine readable instruction forms referenced in the claim. The fact that these user instructions were disclosed in non-hard-copy embodiments, but the machine readable instruction form was not, only emphasizes that the machine readable instruction form was limited to a hard-copy format. There is no disclosure in the specifica-

tion of the machine readable instruction form being anything other than a hard-copy document.

Third, the prosecution history suggests that the machine readable instructions must be in hard copy. In response to an office action, the applicant stated, “Claim 1 clearly provides steps for obtaining of digital images and instructions by digitally scanning, clearly a physical step, from hard copy prints.” J.A. 468. The applicant’s statement treats the “images and instructions” collectively and as involving scanning, “clearly a physical step.” J.A. 468. Additionally, in the same response, the applicant remarked: “this claim is directed to a method of automatically organiz[ing] digital images obtained from a plurality [of] hard copy prints by scanning a plurality of hard copy prints that *have been* grouped into one or more categories, each category separated by a machine readable instruction form.” *Id.* (emphasis added). The applicant describes using the machine readable instruction form to “separate[]” the “hard copy” prints prior to scanning. As with the claim language itself, this suggests that the machine readable instruction form is also in hard copy.

In light of the claim language, the specification, and the prosecution history, we conclude that a person of ordinary skill in the art would have understood the claim as requiring the machine readable instruction form to be in a hard-copy format. The district court’s claim construction on this issue was correct.

#### CONCLUSION

We affirm the district court’s judgment of invalidity with respect to the claims of the ’137 and ’382 patents and the judgment of non-infringement of the asserted claims of the ’587 patent based on the district court’s claim construction.

**AFFIRMED**

COSTS

Costs to appellees.