

# United States Court of Appeals for the Federal Circuit

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RECOGNICORP, LLC,  
*Plaintiff-Appellant*

v.

NINTENDO CO., LTD., NINTENDO OF AMERICA,  
INC.,  
*Defendants-Appellees*

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2016-1499

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Appeal from the United States District Court for the  
Western District of Washington in No. 2:12-cv-01873-  
RAJ, Judge Richard A. Jones.

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Decided: April 28, 2017

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JONATHAN DANIEL BAKER, Farney Daniels PC, San  
Mateo, CA, argued for plaintiff-appellant. Also represent-  
ed by DAVID P. SWENSON, Minneapolis, MN.

MARK S. PARRIS, Orrick, Herrington & Sutcliffe LLP,  
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Before LOURIE, REYNA, and STOLL, *Circuit Judges*.

REYNA, *Circuit Judge*.

RecogniCorp sued Nintendo for patent infringement. The district court found that RecogniCorp's patent claims ineligible subject matter and, based on that finding, granted Nintendo's motion for judgment on the pleadings. RecogniCorp appeals. The patent's claims are directed to the abstract idea of encoding and decoding image data, and the claims do not contain an inventive concept sufficient to render the patent eligible. Therefore, we affirm.

#### BACKGROUND

##### 1. The '303 Patent

U.S. Patent No. 8,005,303 ("303 patent") patent is entitled "Method and Apparatus for Encoding/Decoding Image Data." J.A. 17. It teaches a method and apparatus for building a composite facial image using constituent parts. *See, e.g.*, J.A. 27 (col. 1 ll. 30–56 and col. 2 ll. 19–28); J.A. 28 (col. 4 ll. 35–45).

Prior to the invention disclosed in the '303 patent, composite facial images typically were stored in file formats such as "bitmap," "gif," or "jpeg." But these file formats required significant memory, and compressing the images often resulted in decreased image quality. Digital transmission of these images could be difficult. The '303 patent sought to solve this problem by encoding the image at one end through a variety of image classes that required less memory and bandwidth, and at the other end decoding the images.

For purposes of this appeal, we find amended claim 1 to be representative.<sup>1</sup> It recites:

1. A method for creating a composite image, comprising:

displaying facial feature images on a first area of a first display via a first device associated with the first display, wherein the facial feature images are associated with facial feature element codes;

selecting a facial feature image from the first area of the first display via a user interface associated with the first device, wherein the first device incorporates the selected facial feature image into a composite image on a second area of the first display, wherein the composite image is associated with a composite facial image code having at least a facial feature element code and wherein the composite facial image code is derived by performing at least one multiplication operation on a facial code using one or more code factors as input parameters to the multiplication operation; and

reproducing the composite image on a second display based on the composite facial image code.

J.A. 35 (US 8,005,303 C1, col. 1 ll. 23–40) (Reexamination Certificate for '303 patent)).

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<sup>1</sup> RecogniCorp argued before the district court that “each asserted claim must be analyzed separately.” J.A. 3 n.1. RecogniCorp does not maintain this argument on appeal; it therefore is waived. *SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1319 (Fed. Cir. 2006). We discuss limitations of other claims where appropriate.

## 2. District Court Litigation and Reexamination

The '303 patent issued on August 23, 2011. J.A. 17. It later was assigned to RecogniCorp, LLC ("RecogniCorp"). In 2012, RecogniCorp filed suit in the United States District Court for the District of Oregon against Nintendo Co., Ltd. and Nintendo of America, Inc. (together, "Nintendo") for infringement of several claims of the '303 patent. J.A. 49, 196. In 2012, the case was transferred to the United States District Court for the Western District of Washington.

The district court stayed the case in 2013 pending a reexamination by the United States Patent and Trademark Office ("PTO"). The reexamination focused on obviousness and resulted in several amended claims, including claim 1. *See* J.A. 35. The amended claims all contain similar language regarding multiplication operations. Specifically, the limitation "wherein the composite facial image code is derived by performing at least one multiplication operation on a facial code using one or more code factors as input parameters to the multiplication operation" (or a limitation substantially identical) was added to the independent claims. J.A. 4. In light of these amendments, the PTO issued a reexamination certificate for the '303 patent. Upon completion of the reexamination in 2014, the district court lifted the stay.

In March 2015, Nintendo filed a motion for judgment on the pleadings, asserting that the claims were ineligible under 35 U.S.C. § 101. Section 101 provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . . ." There is an exception to that general principle: subject matter directed to laws of nature, natural phenomena, or abstract ideas is not patent-eligible. *Alice Corp. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014). The Supreme Court has established a two-

step test to determine whether patent claims are directed to ineligible subject matter. In the first step, “we determine whether the claims at issue are directed to one of those patent-ineligible concepts.” *Id.* at 2355. If the answer in step one is yes, “we then ask, ‘[w]hat else is there in the claims before us?’” *Id.* (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1297 (2012)). In other words, step two asks whether the patent claims an “‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Id.* at 2357 (quoting *Mayo*, 132 S. Ct. at 1294, 1298).

In December 2015, without issuing a claim construction ruling, the district court granted Nintendo’s motion. At *Alice* step one, the district court concluded that the asserted claims are “directed to the abstract idea of encoding and decoding composite facial images using a mathematical formula.” J.A. 8. According to the district court:

[The claims] boil down to: (1) displaying potential input variables (the facial features and their modifications), (2) selecting and manipulating the inputs, (3) deriving an output code by performing a “multiplication operation” on the inputs, and (4) outputting the original inputs on another device by performing the sequence in reverse on another device.

J.A. 8. The district court analogized the process to “paint by numbers.” J.A. 8.

At *Alice* step two, the district court found that the ’303 patent contains no inventive concept. J.A. 11. It stated that “the entirety of the ’303 Patent consists of the encoding algorithm itself or purely conventional or obvious pre-solution activity and post-solution activity insufficient to transform the unpatentable abstract idea into a patent-eligible application.” J.A. 14 (quotation marks, citations, and alterations omitted). Based on these find-

ings, the district court granted Nintendo’s motion for judgment on the pleadings.

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

## DISCUSSION

### 1. Standard of Review

We review procedural aspects of motions for judgment on the pleadings using regional circuit law, which in this case is the Ninth Circuit. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016). The Ninth Circuit reviews motions for judgment on the pleadings *de novo*. *Enron Oil Trading & Transp. Co. v. Walbrook Ins. Co.*, 132 F.3d 526, 528 (9th Cir. 1997). We review § 101 patent eligibility determinations *de novo*. *McRO*, 837 F.3d at 1311.

### 2. Analysis

#### A. *Alice* Step One

Under the first step of *Alice*, we decide whether the claims are directed to ineligible subject matter, such as an abstract idea. *McRO*, 837 F.3d at 1312; *Internet Patents Corp. v. Active Network, Inc.*, 790 F.3d 1343, 1346 (Fed. Cir. 2015). The inquiry often is whether the claims are directed to “a specific means or method” for improving technology or whether they are simply directed to an abstract end-result. *McRO*, 837 F.3d at 1314. If the claims are not directed to an abstract idea, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017).

While “generalized steps to be performed on a computer using conventional computer activity” are abstract, *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1338 (Fed. Cir. 2016), not all claims in all software patents are necessarily directed to an abstract idea, *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). For

example, we have held that software patent claims satisfy *Alice* step one when they are “directed to a specific implementation of a solution to a problem in the software arts,” such as an improvement in the functioning of a computer. *Enfish*, 822 F.3d at 1338–39.

We find that claim 1 is directed to the abstract idea of encoding and decoding image data. It claims a method whereby a user displays images on a first display, assigns image codes to the images through an interface using a mathematical formula, and then reproduces the image based on the codes. *See* J.A. 35 (col. 1 ll. 23–40). This method reflects standard encoding and decoding, an abstract concept long utilized to transmit information. *Cf. Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340–41 (Fed. Cir. 2017) (organizing, displaying, and manipulating data encoded for human- and machine-readability is directed to an abstract concept). Morse code, ordering food at a fast food restaurant via a numbering system, and Paul Revere’s “one if by land, two if by sea” signaling system all exemplify encoding at one end and decoding at the other end. Even the ’303 patent describes “a common technique for synthesizing single images of faces involv[ing] horizontally dividing the image of a face into bands for different features,” such that “[p]aper strips containing exemplary features [can] then be combined to form a composite drawing of a face.” J.A. 27 (col. 1 ll. 37–43).

RecogniCorp invokes *Diamond v. Diehr*, 450 U.S. 175 (1981), to support its argument that claiming the use of a mathematical formula does not necessarily render a patent ineligible. RecogniCorp is correct. In *Diehr*, the Supreme Court held that despite a method claim’s recitation of a mathematical formula, “a physical and chemical process for molding precision synthetic rubber products falls within the § 101 categories of possibly patentable subject matter.” *Id.* at 184. In confirming patentability, the Supreme Court focused not on the presence of a

mathematical formula but on the subject matter of the claims as a whole. *Id.* at 192 (“[A] claim containing a mathematical formula” satisfies § 101 when it “implements or applies that formula in a structure or process which, when considered as a whole, is performing a function which the patent laws were designed to protect.”). Here, the relevant inquiry does not turn one way or the other just on claim 1’s use of multiplication. *See* J.A. 35 (’303 Reexamination Certificate, col. 1 ll. 34–38). Rather, the focus is on the claim *as a whole*. *Diehr* is distinguishable because, outside of the math, claim 1 of the ’303 patent is not directed to otherwise eligible subject matter. Adding one abstract idea (math) to another abstract idea (encoding and decoding) does not render the claim non-abstract.

RecogniCorp argues that, as in *Enfish*, “the district court mischaracterized the invention using an improperly high level of abstraction that ignored the particular encoding process recited by the claims.” Appellant’s Op. Br. 11. In *Enfish*, we warned that “describing the claims at such a high level of abstraction and untethered from the language of the claims all but ensures that the exceptions to § 101 swallow the rule.” 822 F.3d at 1337. But the district court did not make that mistake regarding the ’303 patent. The claims of the ’303 patent are clearly directed to encoding and decoding image data. Unlike *Enfish*, claim 1 does not claim a software method that improves the functioning of a computer. *See id.* It claims a “process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Id.* at 1336.

This case is similar to *Digitech Image Technologies, LLC v. Electronics for Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014). There, the claims of the challenged patent were directed to the abstract idea of organizing information through mathematical correlations. *Id.* at 1350–51. We explained that the claim at issue “recites a process of taking two data sets and combining them into a

single data set” simply by organizing existing data into a new form. *Id.* at 1351. A process that started with data, added an algorithm, and ended with a new form of data was directed to an abstract idea. *Id.* In this case, the ’303 patent claims a method whereby a user starts with data, codes that data using “at least one multiplication operation,” and ends with a new form of data. We discern no material difference between the *Alice* step one analysis in *Digitech* and the analysis here.

We proceed to the second step of *Alice* because the ’303 patent claims are directed to an abstract idea.

### B. *Alice* Step Two

In step two of the *Alice* inquiry, we search for an “‘inventive concept’ sufficient to ‘transform the nature of the claim into a patent-eligible application.’” *McRO*, 837 F.3d at 1312 (quoting *Alice*, 134 S. Ct. at 2355). To save a patent at step two, an inventive concept must be evident in the claims. *See Alice*, 134 S. Ct. at 2357 (“[W]e must examine the *elements of the claim* to determine whether it contains an ‘inventive concept.’” (emphasis added)); *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (“The § 101 inquiry must focus on the language of the Asserted Claims themselves.”).

RecogniCorp argues that the claims of the ’303 patent contain an inventive concept sufficient to render them patent-eligible. Specifically, it contends that the combination of claim elements, *i.e.*, the “particular encoding process using the specific algorithm disclosed” in the patent “transforms” the abstract idea into a patentable invention. RecogniCorp also points out the “facial feature element codes” and “pictorial entity symbols” disclosed in the ’303 patent claims. We find that these claim elements do not transform the nature of the ’303 patent claims into a patent-eligible application. *McRO*, 837 F.3d at 1312.

In *DDR Holdings, LLC v. Hotels.com, L.P.*, we found that the patent claims satisfied *Alice* step two because “the claimed solution amounts to an inventive concept for resolving [a] particular Internet-centric problem.” 773 F.3d 1245, 1259 (Fed. Cir. 2014). Claim 1 of the ’303 patent contains no similar inventive concept. Nothing “transforms” the abstract idea of encoding and decoding into patent-eligible subject matter. *Alice*, 134 S. Ct. at 2357. Nor does the presence of a mathematical formula dictate otherwise. Claims that are directed to a non-abstract idea are not rendered abstract simply because they use a mathematical formula. *Diehr*, 450 U.S. at 187. But the converse is also true: A claim directed to an abstract idea does not automatically become eligible merely by adding a mathematical formula. See, e.g., *Clarilogic, Inc. v. FormFree Holdings Corp.*, \_\_ F. App’x \_\_, 2017 WL 992528, at \*3 (Fed. Cir. Mar. 15, 2017). As we explained above, claim 1 is directed to the abstract idea of encoding and decoding. The addition of a mathematical equation that simply changes the data into other forms of data cannot save it.

In *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, the patent owner “alleged that an inventive concept can be found in the ordered combination of claim limitations that transform the abstract idea of filtering content into a particular, practical application of that abstract idea.” 827 F.3d 1341, 1352 (Fed. Cir. 2016). We found the allegation sufficient to survive a motion to dismiss, where all facts had to be construed in the patent owner’s favor. *Id.* Here, RecogniCorp has not alleged a particularized application of encoding and decoding image data. Indeed, claim 1 does not even require a computer; the invention can be practiced verbally or with a telephone. J.A. 28 (col. 4 ll. 59–63); J.A. 32 (col. 11 ll. 53–59). Independent claim 36 claims the use of a computer, but it does exactly what we have warned it may not: tell a user to take an abstract idea and apply it with a computer.

*Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1332 (Fed. Cir. 2015).

In sum, the claims of the '303 patent lack an inventive concept that transforms the claimed subject matter from an abstract idea into a patent-eligible application. *Alice*, 134 S. Ct. at 2357.

#### CONCLUSION

The claims of the '303 patent are directed to encoding and decoding image data, an abstract idea. The claims provide no inventive concept to render them eligible under § 101. We therefore affirm the district court's grant of Nintendo's motion for judgment on the pleadings.

#### AFFIRMED

#### COSTS

No costs.