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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/622,432	11/20/2009	Charles C. Turner	206-OAG-06-2009	4322
86548	7590	02/28/2019	EXAMINER	
Garlick & Markison (IH) 106 E. 6th Street, Suite 900 Austin, TX 78701			DAGNEW, SABA	
			ART UNIT	PAPER NUMBER
			3682	
			NOTIFICATION DATE	DELIVERY MODE
			02/28/2019	ELECTRONIC

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* CHARLES C. TURNER and ALAN L. CARLSON

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Appeal 2017-005811  
Application 12/622,432<sup>1</sup>  
Technology Center 3600

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Before JOHN A. JEFFERY, CATHERINE SHIANG, and  
MATTHEW J. McNEILL, *Administrative Patent Judges*.

McNEILL, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–20, which are all the claims pending in this application.

We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> According to Appellants, the real party in interest is iHeartMedia Management Services, Inc. App. Br. 3.

## STATEMENT OF THE CASE

### *Introduction*

Appellants' application relates to managing a billboard having powered features, such as lighting. Spec. ¶ 2. Claim 1 illustrates the appealed subject matter and reads as follows:

1. A method of managing signage by a workstation, comprising:

storing data defining parameters for at least one condition of a plurality of conditions related to operation of a plurality of signage locations, the data including a first booking status code in a database providing an indication related to customer reservation of a powered feature of a plurality of powered features of the signage at a signage location of the plurality of signage locations;

establishing at least one approval condition, related to the powered feature, including a requirement that the first booking status code match one of a plurality of predetermined booking status codes;

monitoring compliance with the at least one approval condition; and

when non-compliance with the at least one approval condition occurs:

generating a control signal in response to the non-compliance with the at least one approval condition of a targeted signage at a target signage location of the plurality of signage locations;

transmitting, via the workstation, the control signal to the targeted signage;

disabling the powered feature of the targeted signage responsive to the transmitted control signal; and

receiving via the workstation, responsive to the transmitted control signal, a confirmation signal indicating the disabling of the powered feature of the targeted signage.

*The Examiner's Rejections*

Claims 1–20 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 2–4.

Claims 1–5, 8, and 18–20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kao et al. (US 2006/0136625 A1; June 22, 2006) and Yuan (US 2008/0094246 A1; Apr. 24, 2008). Final Act. 5–13.

Claims 6, 7, and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kao and Hanwright et al. (US 2010/0066484 A1; Mar. 18, 2010). Final Act. 13–15.

Claims 9–17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Kao, Yuan, and Hanwright. Final Act. 15–20.

ANALYSIS

*Patent-Ineligible Subject Matter*

An invention is patent-eligible if it claims a “new and useful process, machine, manufacture, or composition of matter.” 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: “[I]aws of nature, natural phenomena, and abstract ideas” are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court’s two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is “directed to.” *See Alice*, 573

U.S. at 219 (“On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk.”); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) (“Claims 1 and 4 in petitioners’ application explain the basic concept of hedging, or protecting against risk.”).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981)); “tanning, dyeing, making waterproof cloth, vulcanizing India rubber, smelting ores” (*id.* at 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that “[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula.” *Diehr*, 450 U.S. at 176; *see also id.* at 192 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). Having said that, the Supreme Court also indicated that a claim “seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological

environment.” *Id.* (citing *Benson and Flook*); *see, e.g., id.* at 187 (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.”).

If the claim is “directed to” an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where “we must 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.” *Alice*, 573 U.S. at 221 (quotation marks omitted). “A claim that recites an abstract idea must include ‘additional features’ to ensure ‘that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].’” *Id.* (quoting *Mayo*, 566 U.S. at 77). “[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention.” *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO’s January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* (“Memorandum”). Under that guidance, we first look to whether the claim recites:

- (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human interactions such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

- (3) adds a specific limitation beyond the judicial exception that are not “well-understood, routine, conventional” in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

*See* Memorandum.

The Examiner concludes claim 1 is directed to the abstract idea of enabling or disabling a powered feature of signage, such as lighting, in response to a payment due date or the expiration of the contract. Ans. 2.

Appellants argue modifying physical power settings for a remote powered device is not a simple abstract idea and extends beyond mere thoughts, plans, or suggestions about what to do. App. Br. 13. According to Appellants, the claims relate to specific technical functions that are performed by specific devices, not general purpose computers.

Appellants have persuaded us of Examiner error. Claim 1 recites, in relevant part, “generating a control signal in response to the non-compliance with the at least one approval condition of a targeted signage,” “transmitting, via the workstation, the control signal to the targeted signage,” “disabling the powered feature of the targeted signage responsive to the transmitted control signal,” and “receiving via the workstation, responsive to the transmitted control signal, a confirmation signal indicating the disabling of the powered feature of the targeted signage.”

Claim 1 is directed to enabling or disabling a powered feature of signage in response to a changed condition related to the feature. Even if the claim is directed to a method of organizing human activity, such as business

relations or agreements in the form of contracts, and therefore directed to an abstract idea, claim 1 integrates such an idea into a practical application. In particular, claim 1 recites steps that allow for the automatic management of powered features of a billboard without user interaction. Our reviewing court has held that claims that recite rules allowing automation of animation tasks that could only be performed manually were not directed to an abstract idea. *See McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1313–14 (Fed. Cir. 2016); *see also* MPEP 2106.015(a). Like *McRO*, the claims here improve an existing technology and are, therefore, not directed to an abstract idea.

For these reasons, we do not sustain the Examiner’s rejection of independent claim 1 as directed to patent-ineligible subject matter. We also do not sustain the rejection of independent claims 9 and 18, which recite commensurate subject matter, or claims 2–8, 10–17, 19, and 20, dependent therefrom.

#### *Obviousness*

Appellants argue the Examiner erred in rejecting claim 1 as unpatentable over Kao and Yuan because Kao is directed to rectifying billing errors caused by equipment failure, not controlling remote electronic signage. App. Br. 17–18. Appellants argue it would not have been obvious to modify Kao’s teachings to apply to a remote signage environment because Kao’s system is a self-service kiosk. *Id.* at 18.

Appellants have not persuaded us of Examiner error. The Examiner finds, and we agree, Kao teaches monitoring and controlling electrically powered devices, such as advertising displays. Final Act. 6 (citing Kao

¶ 39). We agree with the Examiner that such a teaching at least suggests managing “signage” as claimed.

Appellants’ argument that Kao’s system is a self-service kiosk (*see* App. Br. 18 (citing Kao ¶ 40)) is also unpersuasive. Kao teaches system 30 is configured to operate as a self-service facility. System 30 refers to the workstation that manages and controls electrically powered devices, not the electrically powered devices themselves. *See* Kao ¶¶ 25–27. Thus, Kao teaches that a user may operate system 30 to manage electrically powered devices, such as advertising displays, not the remote physical signage as suggested by Appellants. *See* App. Br. 18.

Appellants also argue the Examiner erred because Yuan teaches a state indicator, not a “booking status code,” as claimed. App. Br. 19–20. Appellants argue Yuan’s state indicator merely indicates an on/off state, not the claimed booking status code. *Id.* (citing Spec. 10). Appellants argue Yuan teaches comparing real-time data to turn on schedule data, which is different than matching a first booking status code to one of a plurality of booking status codes, as claimed. *Id.* at 20.

Appellants have not persuaded us of Examiner error. The claim term “booking status code” is not defined in the Specification. We agree with the Examiner that the broadest reasonable interpretation of the term “booking status code” includes a code indicating whether a service is active (on) or inactive (off).

Claim 1 also recites matching a first booking status code to one of a plurality of predetermined booking status codes. We agree with the Examiner that Kao teaches “a requirement that the first booking status code match one of a plurality of predetermined booking status codes” by teaching

matching the state indicator (booking status code) to either “on” or “off” (one of a plurality of predetermined booking status codes). Appellants’ arguments to the contrary are conclusory (*see* App. Br. 19–20) and do not persuasively show error in the Examiner’s reasoning.

For these reasons, we sustain the Examiner’s rejection of claim 1 as unpatentable over Kao and Yuan. We also sustain the Examiner’s obviousness rejection of claim 9, which Appellants argue is in error for substantially the same reasons as claim 1. *See* App. Br. 22. We also sustain the Examiner’s obviousness rejection of independent claim 18, and dependent claims 2–8, 10–17, 19, and 20, for which Appellants offer no separate argument. *See* App. Br. 20–22.

#### DECISION

Because we have sustained at least one ground of rejection with respect to each claim on appeal, we affirm the decision of the Examiner rejecting claims 1–20. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED