

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SUPERCCELL OY,
Petitioner,

v.

GREE, INC.,
Patent Owner.

Case PGR2018-00036
Patent 9,662,580 B2

Before MICHAEL W. KIM, LYNNE H. BROWNE, and
CARL M. DEFRANCO, *Administrative Patent Judges*.

DEFRANCO, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

GREE, Inc. (“GREE”) is the owner of U.S. Patent No. 9,662,580 B2 (“the ’580 patent”). Supercell Oy (“Supercell”) filed a petition for post-grant review of claims 1–10 of the ’580 patent. Paper 1 (“Pet.”). We instituted post-grant review of all the claims as challenged in the petition. Paper 7 (“Inst. Dec.”). GREE filed a response. Paper 9 (“PO Resp.”). Supercell replied. Paper 17 (“Pet. Reply”). And GREE had the last word in

a sur-reply. Paper 19 (“PO Sur-Reply”). In addition, GREE moved to exclude certain of Supercell’s evidence, namely, Exhibits 1010–1012. Paper 21 (“PO Mot. Exclude”).

We have jurisdiction under 35 U.S.C. § 6. An oral hearing was conducted on June 20, 2019. Paper 30 (“Tr.”). After considering the parties’ arguments and supporting evidence, we determine that Supercell has proven, by a preponderance of the evidence, that claims 1–10 of the ’580 patent are unpatentable. 35 U.S.C. § 326(e). We also deny GREE’s motion to exclude as moot.

I. BACKGROUND

A. *The ’580 Patent*

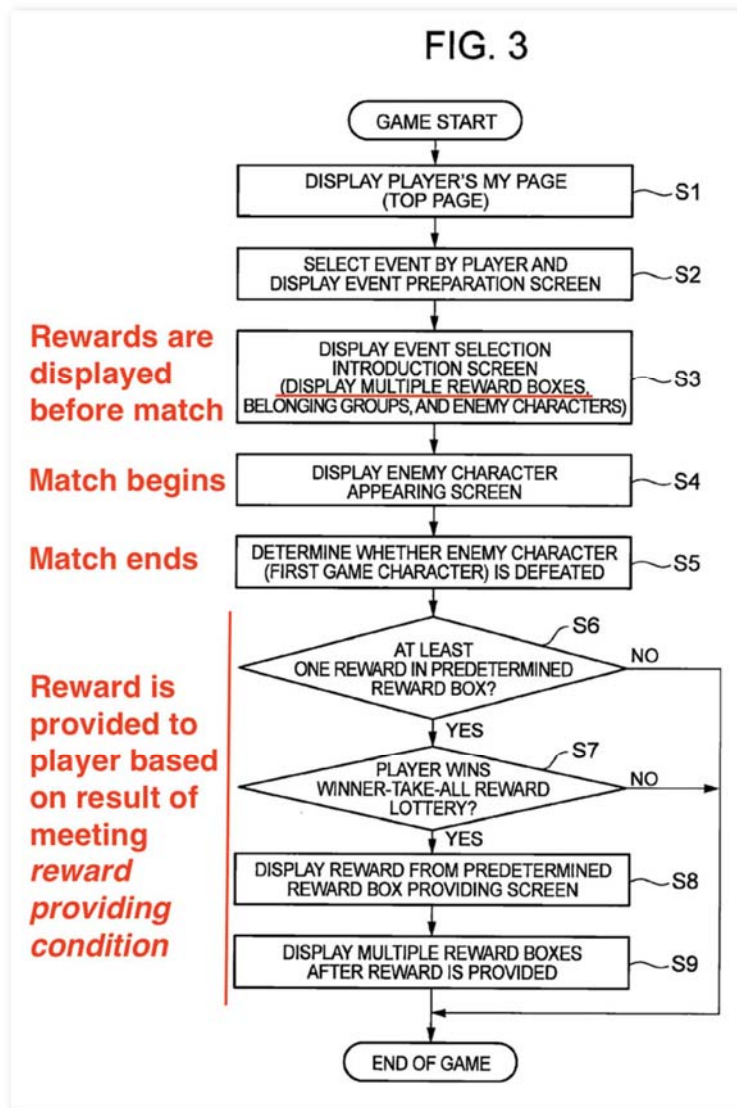
The ’580 patent, titled “Video Game in Which Groups of Players Earn Reward Boxes,” issued May 30, 2017, and claims priority to a foreign application filed August 21, 2013.¹ Ex. 1001, cover [30]. The ’580 patent begins by describing a conventional “social game” in which players operate player characters and attack one or more enemy characters. *Id.* at 1:9–27. Notably, in these conventional games, each player is “a member of a specific group.” *Id.* at 1:27–28. If a player within the group defeats the enemy characters, “various rewards such as points or items . . . can be given to each individual player or the group to which these players belong.” *Id.* at 1:28–31. According to the ’580 patent, however, the rewards available in these

¹ Because Supercell’s petition was filed within nine months of the ’580 patent’s issue date and the earliest possible priority date for the ’580 patent is after March 16, 2013 (the effective date for the first inventor to file provisions of the Leahy-Smith America Invents Act), the ’580 patent is eligible for post-grant review. See 35 U.S.C. § 321. GREE does not contest that the ’580 patent qualifies for post-grant review.

conventional social games “are fixed to some extent.” *Id.* at 1:35–37. These fixed rewards, the ’580 patent reports, “cause a reduction in the player’s motivation to participate in the game or continue the game,” such as “in come-from-behind victory in relation to the other players.” *Id.* at 1:38–44.

To address this problem, the ’580 patent provides a method and system of “*improving unexpectedness, dramatic impact, and taste* when medals, game items, or the like as a reward are provided to a player.” *Id.* at 1:45–53 (emphasis added). As described, this purported improvement is achieved by an “information storage unit” that stores information relating to “a reward providing condition, rewards, and [a] reward box” and a control unit that accesses the stored information and “*allocates* at least one reward” to a “reward box.” *Id.* at 1:62–66 (emphasis added). As part of allocating the reward, the reward box is “displayed on the terminal device . . . to let the player know that the reward can be acquired by defeating [an] enemy character.” *Id.* at 7:21–26, Fig. 5. The control unit then “*determines* whether the reward providing condition is met based on match-up situations or match-up results between the players and first game characters [i.e., enemy game characters] in the game.” *Id.* at 1:65–2:2 (emphasis added); see also *id.* at Fig. 3. If the condition is met, then the allocated reward is provided to the player. *Id.* at 2:2–5.

GREE’s expert illustrates Figure 3 of the ’580 patent, reproduced below, to illustrate the operation of the game. Ex. 2001 ¶¶ 63–64.



As explained by GREE’s expert in annotated Figure 3 above, the reward is “displayed” in allocating step S3 “before match . . . begins,” and then reward is “provided to player” in determining steps S6–S9 as a result of the player “meeting reward providing condition.” *Id.*

B. The Challenged Claims

Of the challenged claims, five are independent—claims 1 and 7–10. Claim 1 is directed to a “control method,” claim 7 is directed to a “non-transitory computer-readable recording medium recording process,” claims 8

and 10 are directed to a “control apparatus,” and claim 9 is directed to a “game system.” Common across these claims are the following steps for execution by a computer:

“storing” game information that defines “a plurality of groups to which . . . players belong,” “rewards,” “a reward providing condition,” and a “reward box . . . associated exclusively with a respective one of said groups,”

“allocating” a reward into a reward box,

“determining” if a reward providing condition is met based on match-ups between players and game characters,

“displaying” the reward in the reward box, and

“providing” the reward from the reward box to a player who meets the reward providing condition.

See Ex. 1001, claims 1, 7, 8, 9, 10.

Supercell asserts that claim 1 is “representative” of the independent claims. Pet. 19. Although GREE disputes that assertion (PO Resp. 13–14), it nonetheless limits its arguments to claim 1 without arguing the other independent claims separately (*id.* at 18–61).² Given the significant overlap in the steps recited by the independent claims, we agree with Petitioner that claim 1 is representative. Claim 1 recites:

1. A control method for a computer network, comprising:

storing, by a memory for *storing information related to a game* in which a plurality of players can participate, *information defining a plurality of groups to which said players belong, a reward providing condition, rewards, and reward box information* for a plurality of reward boxes each associated exclusively with a respective one of said groups, as part of the information related to the game; and

² GREE does argue the dependent claims separately. See Pet. 50–53; PO Resp. 22–23, 61–65.

by an arithmetic processor, performing computation on the game, and

displaying images of the game on terminal devices operated by the players[,]

allocating at least one reward out of the rewards to at least one of the reward boxes,

determining whether the reward providing condition is met based on match-up situations or match-up results between the players and first game characters in the game, and

displaying, on the terminal devices, a screen for *providing the reward allocated to at least part of one of the reward boxes to at least one player in the group* associated with the one of the reward boxes based on the determination results.

Ex. 1001, 11:12–35 (emphases added).

C. The Asserted Grounds of Unpatentability

In its petition, Supercell asserts that claims 1–10 of the ’580 patent are unpatentable, first, as being directed to non-statutory subject matter under 35 U.S.C. § 101 (Pet. 26–53), and, second, as being indefinite under 35 U.S.C. § 112(b) (*id.* at 54–58).

II. ANALYSIS

A. Claim Construction

Neither Supercell nor GREE proposes a construction for any particular claim term. See Pet. 17–26; PO Resp. 13–14, 20–23, 31–35. With one exception, we confirm that no express constructions are necessary. The exception relates to the terms “allocating” and “allocates” recited throughout the claims. The ’580 patent does not ascribe any special meaning to those terms. See, e.g., Ex. 1001, 1:65–66, 3:10–11, 8:30–53, 11:25–26. As such, we construe the terms “allocating” and “allocates” in accordance with their

plain and ordinary meaning³—“to place,” “to apportion for a specific purpose or to particular persons or things : distribute,” “to set apart or earmark : designate.” *Merriam-Webster’s Collegiate Dictionary*, 30 (10th ed. 2000) (Ex. 3001).

During the hearing, however, GREE argued for a narrower construction of “allocating rewards” in the context of claim 1. *See* Tr. 92:15–25. Pointing to the specification of the ’580 patent (Ex. 1001, 8:41–53), GREE proposed that “allocating rewards” includes consideration of “multiple factors,” such as “the game elapsed time, number of enemy characters, state [of] the player, progress of the game, kind of treasure box, items possessed by the player, and the kind of predetermined event.” *Id.* But those factors are recited in dependent claim 3 of the ’580 patent. Ex. 1001, 11:48–55. In that regard, GREE conceded during the hearing that it is “not asking for the limitations to be read into [claim 1].” Tr. 93:6–17. Thus, to the extent GREE maintains a narrower construction of the term “allocating rewards,” we reject it, first, as improperly reading limitations from the specification into the claim, and, second, as contrary to the doctrine of claim differentiation.

Moreover, GREE’s argument for a narrower construction is distinctly at odds with the understanding of its own expert that “allocating” means not only placing the reward in, or designating the reward to, a rewards box but also “displaying” the reward to inform players of the reward before the

³ We apply the “broadest reasonable construction” standard per 37 C.F.R. § 42.100(b) (2017), which was in effect at the time of filing the instant petition. A recent amendment to that rule does not apply here. *See* 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b), effective November 13, 2018).

match begins. Ex. 2001 ¶¶ 63–64. We agree with that understanding of GREE’s expert, as it is consistent with the ’580 patent specification, which explains that, as part of allocating the reward, the reward box is “displayed on the terminal device . . . to let the player know that the reward can be acquired by defeating [an] enemy character.” *Id.* at 7:21–26, Fig. 5. As such, in addition to construing the term “allocating” in accordance with its plain and ordinary meaning as “placing” or “designating,” as reflected by the above dictionary definition, we construe it as also encompassing “displaying” the reward.⁴

B. Supercell’s Challenge Under 35 U.S.C. § 101

Supercell asserts that claims 1–10 do not recite patent eligible subject matter under 35 U.S.C. § 101. Pet. 26–53. GREE disagrees. PO Resp. 13–65. The United States Supreme Court has long interpreted 35 U.S.C. § 101 to exclude from patenting “[l]aws of nature, natural phenomenon, and abstract ideas.” *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014) (“*Alice*”) (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–78 (2012) (“*Mayo*”). Here, we are concerned with the judicial exception of abstract ideas. In evaluating whether the challenged claims are

⁴ To avoid any confusion, we note that the “displaying” step at the end of claim 1 is not part of the allocating step. Rather, the final “displaying” step speaks to “a screen” for “providing” the “allocated” reward to the player at the end of the match. Ex. 1001, 11:31–35. It is not the “introduction screen” that “let[s] the player know” of the reward before the match begins, but rather it is a “providing screen” for rewarding the player with the allocated reward after the match ends. *Compare id.* at 7:21–26, Fig. 5, with *id.* at 9:28–35, Fig. 8.

“directed to” a patent-ineligible abstract idea, we are guided by the framework set out by the Supreme Court in *Alice* and *Mayo*. *Alice*, 573 U.S. at 217–227 (citing and quoting *Mayo* throughout).⁵

In accordance with the *Alice/Mayo* framework, we determine first whether the claim is directed to an abstract idea.⁶ *Id.* If so, we then consider whether “additional features” beyond the abstract idea itself transform the claim into a “practical application” of the idea.⁷ *Mayo*, 566 U.S. at 77–78, 84–85 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972)); *see also Alice*, 573 U.S. at 223–24 (evaluating whether computer implementation of a mathematical formula is “the sort of ‘additional featur[e]’ that provides any ‘practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself’”) (quoting *Mayo*, 566 U.S. at 77); *Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (“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.”). As a final safeguard, we analyze whether the additional features, either individually or

⁵ We are also guided by Office’s *2019 Revised Patent Subject Matter Eligibility Guidance* (“Office Guidance”), which frames the *Alice/Mayo* test in terms of a three-part inquiry. 84 Fed. Reg. 50, 53–56 (Jan. 7, 2019) (outlining “Step2A,” which includes “Prong One” and “Prong Two,” followed by “Step 2B”).

⁶ This step of the *Alice/Mayo* inquiry is recounted in the Office Guidance as “Revised Step 2A . . . Prong One: Evaluate Whether the Claim Recites a Judicial Exception.” 84 Fed. Reg. at 54.

⁷ This step of the *Alice/Mayo* framework is recounted in the Office Guidance as “Revised Step 2A . . . Prong Two: If the Claim Recites a Judicial Exception, Evaluate Whether the Judicial Exception is Integrated Into a Practical Application.” 84 Fed. Reg. at 54.

in combination, amount to an “inventive concept,” in other words, something “significantly more” than “well-understood, routine, conventional activities previously known to the industry.”⁸ *Alice*, 573 U.S. at 221–222, 225 (internal quotations, brackets, and citations omitted).

1. Whether the Claims Recite an Abstract Idea

Supercell asserts that the claims of the ’580 patent are directed to the abstract idea of a “method of organizing human activity,” which it characterizes as “the idea of providing a reward to a video game player from a player group reward box if a reward condition is met.” Pet. 26, 42, respectively. In conforming to the “groupings” of abstract ideas provided in the Office Guidance (84 Fed. Reg. at 51–52), which issued after the filing of the petition here, Supercell further argues that the claims “broadly recite[] *rules governing a game* (i.e., allocating rewards to a reward box, determining [if] a condition is satisfied, [and then] providing the allocated reward to the player).” Pet. Reply 4 (emphasis added); *see also id.* at 5 (further contending that the claims “are directed to providing a simple ‘game mechanic’ . . . which is nothing more than a way of managing a video game.”). As such, Supercell surmises that such rules for playing a game fall squarely within the excepted group of abstract ideas that the U.S. Court of Appeals for the Federal Circuit has held to be methods of organizing human activity. *Id.* at 5; *see also* Office Guidance, 84 Fed. Reg. at 52 n.13.

⁸ This aspect of the *Alice/Mayo* framework is recounted in the Office Guidance as “Step 2B: If the Claim is Directed to a Judicial Exception, Evaluate Whether the Claim Provides an Inventive Concept.” 84 Fed. Reg. at 56.

In support, Supercell compares the claims of the '508 patent to claims held to be abstract in *In re Smith*, 815 F.3d 816 (Fed. Cir. 2016),⁹ and *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157 (Fed. Cir. 2018). Pet. Reply 4–5. In each case, the Federal Circuit explained that the claims recite a patent-ineligible abstract idea because they are directed to nothing more than “a set of rules for a game,” *Smith*, 815 F.3d at 819, or “rules for playing a dice game,” *Guldenaar*, 911 F.3d at 1160–61. The *Guldenaar* court further observed that rules for a game are a “method of organizing human activity,” which is a patent-ineligible abstract idea. *Id.* at 1160. Supercell takes a similar position here. Pet. 26–27; Pet. Reply 5.

In response, GREE argues that Supercell’s articulation of the abstract idea “indicate[s] a fundamental misunderstanding of what is claimed and how the claimed subject matter improves the computational flexibility of multiplayer online battle games.” PO Sur-Reply 3. In particular, GREE contends that Supercell “improperly oversimplifies the challenged claims by cherry-picking elements” to summarily conclude that the claims are directed to an abstract idea. *Id.* at 5. According to GREE, the claims do not recite simply rules for playing a game, but rather “recite a specific storage archetype with paired computer processing functionality *that enables more flexible and nuanced reward-giving.*” *Id.* at 7 (emphasis added). GREE points to the claimed “storing,” “allocating,” and “determining” steps as capturing this increased flexibility. *Id.* (citing Ex. 1001, 11:13–30.

⁹ The Office Guidance cites *In re Smith* as an example of “[c]ertain methods of organizing human activity.” 84 Fed. Reg. at 52 n.13 (quoting *In re Smith*’s conclusion that “[a]pplicants’ claims, directed to rules for conducting a wagering game’ are abstract).”).

We disagree that the above-recited limitations remove the challenged claims from the realm of an abstract idea. Instead, we determine that these limitations are typical of a rule for competitive gameplay—namely, *if* a player meets a certain condition of gameplay, *then* the player receives a pre-defined reward. More specifically, as claimed in the '580 patent, a reward is allocated to a “box” so as to inform a group of players in advance of the reward to be received *if* they meet a condition of gameplay. Whichever player meets that condition is *then* presented with that reward. Virtually any game in which players compete against each other for a designated prize incorporates that “if-then” rule. The '580 patent itself recognizes as much in the “Background” section—“there is known, for example, a system” in which “if the player defeats the enemy characters, various rewards such as points or items available in the game can be given to each individual player or the group to which these players belong.” Ex. 1001, 1:22–31.

Furthermore, merely reciting the “if-then” rule of gameplay in terms of “allocating” a reward to a display box, “determining” whether a reward providing condition is met, and “providing” the displayed reward to the player meeting that condition, does not save the claims from being a rule for playing a game. That is because those claimed steps compare substantively to the steps of “placing at least one wager” and “paying a payout amount if the at least one wager occurs” found to be abstract “rules for playing a dice game” in *Guldenaar*, 911 F.3d at 1160–61, and the steps of “accepting at least one first wager” and “resolving any player versus dealer wagers” found to be an abstract “set of rules for a game” in *Smith*, 815 F.3d at 819.

Moreover, in describing how the video game is played, the specification of the '580 patent underscores the abstract nature of the idea embodied in the claims:

[A]n image indicating what kind of event is taking place is displayed in a lower part of Fig. 4. For example, as shown in the lower part of Fig. 4, the player knows that a winner-take-all reward event is taking place, and that 300 medals are potentially acquired as the reward the winner can take . . .

As the event introduction screen displayed on the terminal device 2, for example, a string of characters such as “Winner-take-all chance against enemy character A” is displayed on the terminal device 2 . . . to let the player know that the reward can be acquired by defeating enemy character A. . .

As shown in Fig. 6, a group A to which at least one player character belongs, a treasure box A, and an enemy character A are associated with one another. . . . [W]hen a player (player character Ca) belonging to the group A defeats the enemy character A associated with the group A, the player can acquire a reward stored in the treasure box A.

Ex. 1001, 7:8–49 (emphases added).

Those descriptions support that the idea underlying the claims is nothing more than an “if-then” rule or instruction for playing the game, namely, *if* a player from a group of players defeats an enemy character, *then* that player receives a reward from a “box.” As described and claimed, the “box” is nothing more than a display “to let the player know” what the reward is before the game begins. *Id.* at 7:21–26. GREE’s expert admits as much. Ex. 2001 ¶¶ 63–64 (explaining that “allocation of the rewards happens before the actual match starts . . . in which event S3 [in flowchart in Fig. 3 of the '580 patent] *displays* the reward boxes on the ‘introduction screen,’ before the match [and game screen in Fig. 4] shows ‘an image indicating what kind of event is taking place’ and what the reward for the

winner is (e.g., ‘300 medals’).”) (emphasis added). That the allocating step may include the selection and display of the reward does not, without more, take the claims outside the realm of the abstract idea of one of certain methods of organizing human activity (i.e. “allocating” a reward to a reward box, “determining” if a condition of game play is met, and then “providing” the allocated reward to the player). *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (holding that a process of “selecting an ad” and “facilitating display of the ad” on the Internet is a “combination of steps [that] recites an abstraction—an idea.”).

GREE’s expert likewise acknowledges that the claims are directed simply to “the mechanics of the game.” *See* Ex. 2001 ¶¶ 44–52. In explaining his use of that phrase, GREE’s expert testifies that the step of “allocating” a reward to a box is a game mechanic and that game mechanics include rules for playing a game—

Q [by Supercell’s Counsel]: Mr. Crane, will you turn to paragraph 48 of your declaration, please. The first sentence there says, “The ’580 Patent explains that the arithmetic processing unit of the server allocates rewards to respective boxes . . . This mechanic is different from conventional social games” *What are you referring to when you say “this mechanic”?*

A [by GREE’s Expert]: I’m referring to the way in which the ’580 Patent allocates rewards to what they call reward boxes.

Q: And . . . you’ve used that term, in your declaration in various places, “game mechanic,” so is the allocation of rewards to a reward box a game mechanic?

A: Game mechanic is a term of the art in the video games referring to the way in which the player interacts with a game.

Q: Can anything else be a game mechanic? [Objection by GREE’s Counsel].

A [by GREE's Expert]: It's actually pretty much all inclusive of how a game operates, how it operates, and accessed by a game player. It covers just about everything. . . .

Q: Does it include the rules of the game?

A: It does.

Ex. 1009, 77:20–79:2 (emphasis added).

That testimony, as well as the '580 patent's own description, support that the steps of simply displaying a reward for players to know what they will get *if* they win the match, and *then* giving the displayed reward to the player upon winning the match, are nothing more than basic rules or instructions for playing a game. *See Smith*, 815 F.3d at 818–819; *Guldenaar*, 911 F.3d at 1160–61; *see also Planet Bingo LLC v. VKGS LLC*, 576 F. App'x 1005, 1007 (Fed. Cir. 2014) (“The district court correctly concluded that managing the game of bingo consists solely of mental steps which can be carried out by a human using pen and paper.”) (quotation omitted). That being the case, we determine that the independent claims here recite the abstract idea of one of certain methods of organizing human activity (i.e., following the rules or instructions for playing a video game).¹⁰

In reaching this determination, we have considered GREE's arguments that *Guldenaar* and *Smith* are distinguishable, but remain persuaded Supercell is correct. *See* PO Sur-Reply 8. For instance, GREE attempts to distinguish *Smith* and *Guldenaar* by arguing that the claims in

¹⁰ Our determination is consistent with the Office Guidance's identification of “managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions)” among the types of “certain methods of organizing human activity” that are abstract ideas. 84 Fed. Reg. at 52 n.13 (citing *Smith*).

those cases are drawn to “a wagering game—a fundamental economic practice.” PO Sur-Reply 8. But to the extent GREE relies on the claimed “wager” in *Smith* and *Guldenaar* as being monetary in nature, nothing precludes the claimed “reward” here from being monetary or otherwise. Moreover, similar to the “resolving the wagers” based on winning a hand of cards in *Smith* or the “paying a payout amount” based on winning a roll of dice in *Guldenaar*, the claimed “providing the reward” here depends on winning a match of game characters. They all recite rules for winning a game—if you meet this condition of gameplay, then you win this reward. As such, we are not persuaded that the claims found to be abstract in *Smith* and *Guldenaar* are meaningfully distinguishable from the claims here. Like the claims in those cases, the claims here recite an abstract idea because they amount to rules or instructions for playing a game—display a reward in a box for a group of players to see before the match begins, determine if any player meets a reward-providing condition (such as winning the match), and then give the reward to the player who wins the match.

2. *Whether the Claims Integrate the Abstract Idea Into a Practical Application*

Having determined that the claims recite an abstract idea, we now decide whether any “additional features” of the claims integrate the abstract idea into a “practical application.” *Mayo*, 566 U.S. at 77–78, 84–85 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 71 (1972)). Additional features may give rise to a practical application if they reflect a “specific improvement to the way computers operate” or otherwise apply the abstract idea in a meaningful way beyond invoking a computer “merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

Here, GREE contends that additional features transforming the claims into a practical application include the “storing” and “processor” steps because they “establish[] reward distribution specific to individual players and battles.” PO Sur-Reply 10–11 (citing Ex. 1002, 71; Ex. 2001 ¶¶ 45–49); see also PO Resp. 24–27. According to GREE, “[t]he ’580 patent improved the way that data objects associated with a multiplayer online battle game were stored in computer memory by providing flexibility regarding rewards that other multiplayer online battle games did not provide.” PO Resp. 24 (citing Ex. 2001 ¶¶ 31, 45) (emphasis added). That increased flexibility in allocating rewards, GREE contends, is achieved “in part, by using a control method to perform computation on data structures stored in an information storage unit.” *Id.* at 25. In support of these assertions, GREE analogizes the ’580 patent to the claims found not to be abstract in *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356 (Fed. Cir. 2018), and *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1002 (Fed. Cir. 2018).

We disagree that the storing and processing limitations represent a technological improvement in computer capability or a meaningful application of the abstract idea beyond generic computer hardware. See *Trading Techs. Int’l, Inc. v. CQG, Inc.*, 675 F. App’x 1001, 1005 (Fed. Cir. 2017) (“[I]neligible claims generally lack steps or limitations specific to [a] solution of a problem, or improvement in the functioning of technology.”); *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1262 (Fed. Cir. 2016) (“The patent in this case is not directed to the solution of a ‘technological problem’ . . . nor is it directed to an improvement in computer or network functionality. Instead, it claims the general concept of out-of-region delivery of broadcast content through the use of conventional devices,

without offering any technological means of effecting that concept.”). If anything, the *Core Wireless* and *Data Engine* cases relied on by GREE highlight the abstract nature of the claims of the ’580 patent.

For instance, in *Core Wireless*, the claims recited an improved user interface for small-screen computing devices. *Core Wireless*, 880 F.3d at 1362. As held by the Federal Circuit, the claimed invention improved the “efficient functioning of a computer” by increasing the speed at which a user could navigate through images on a display screen by reciting *specific implementation details of the GUI* including specific graphical characteristics, a limited set of displayed data, and specific requirements for the state of the device applications. *Id.* at 1359. Likewise, in *Data Engine*, the Federal Circuit found the claims not abstract because they recited a *specific, user interface solution* to known problems with computerized spreadsheets, in particular, “a specific structure (i.e., notebook tabs) within a particular spreadsheet display that performs a specific function (i.e., navigating within a three-dimensional spreadsheet).” *Data Engine*, 906 F.3d at 1010–11.

In contrast, the claims here are not directed to *specific* implementation details of user interface technology despite their recitation of “displaying” steps. See *Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (holding that, rather than reciting “the ‘interactive interface’ is a specific application of the abstract idea, . . . the interactive interface limitation is a generic computer element.”); *Affinity Labs*, 838 F.3d at 1261 (holding that “graphical user interface [] used to display a menu of options to the user” was “conventional” and “used in conventional ways”). Nor are the claims directed to *specific* implementation details of any

computer functionality. Although the '580 patent purports to improve the “unexpectedness, dramatic impact, and taste” of the game, the claims are devoid of any specific means or technological detail for achieving that desired result. *See, e.g.*, Ex. 1001, 1:35–53. Instead, the claims merely employ result-oriented functional language, in which the recited functions are executed on general purpose computer components such as “a memory,” “an arithmetic processor,” and “terminal devices.”

More specifically, the claimed “storing” step, which GREE argues is a technological improvement, recites nothing more than “a memory for storing information” that includes “groups to which [] players belong,” “a reward providing condition,” “rewards,” and a “reward box” for each group. *Id.* at 11:14–24. And the “arithmetic processor,” also relied on by GREE as a technological improvement, simply allocates the reward to “one of the reward boxes” and determines if a reward providing condition is met “based on match-up situations or match-up results.” *Id.* at 11:13–20, 31–35. No further technological details are given in the claims for *how* the reward information is stored and processed, let alone an improvement in the way it is stored and processed. Nor is any specific criteria given for how match-up results or match-up situations are computed by the processor.

Arguably the only detail given about the processor is its determination that *if* the reward providing condition is met, *then* the player is provided with the reward from the box. *Id.* at 11:27–35. But that determination relates to the abstract idea itself, namely, the “if-then” rule for playing the game. Rather than a technological improvement, the “allocating” and “determining” steps performed by the processor are directed generally to how any competitive match with a reward would be played—display the

reward to the players before the match begins, determine *if* a player meets a condition precedent for winning the reward, *then* give the reward to the winning player at match end. Aside from that general idea of match-play, the independent claims lack sufficiently non-abstract details for implementing the way a reward is allocated to a display box, or the way match-up results and situations are computed to determine a winner. See *Two-Way Media Ltd. v. Comcast Cable Commc’n, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017) (“Claims directed to generalized steps to be performed on a computer using conventional computer activity are not patent eligible.”). Because the allocating and determining steps relied on by GREE do not recite sufficient details to represent a technological improvement in computer functionality or video game technology, we are not persuaded that those recited steps transform the abstract idea into a practical application worthy of patent eligibility.¹¹

¹¹ GREE also argues that the challenged claims are directed to a technological improvement because, “although a general-purpose computer may be used to carry out the method described in the ’580 patent, the computer must be specially programmed” and “running a program described by the ’580 patent, [the computer] becomes specialized hardware specific to the purpose of the ’580 patent.” PO Resp. 26. This argument fails for the simple reason that the claims recite nothing about a software program, let alone describe how the computer would be programmed to achieve the functional result. In any event, the rationale that an otherwise ineligible program could be made patent-eligible by unspecified “special programming” has been soundly rejected by the Federal Circuit. See *Eon Corp. IP Holdings LLC v. AT&T Mobility LLC*, 785 F.3d 616, 623 (Fed. Cir. 2015) (citing *Alice*).

3. *Whether the Claims Include an Inventive Concept*

We next consider whether the claims recite an “inventive concept” beyond the abstract idea, in other words, whether an element or combination of elements other than the abstract idea involve “significantly more” than the performance of “well understood, routine, conventional activities previously known to the industry.” *Alice*, 573 U.S. at 222–223 (quoting *Mayo*, 566 U.S. at 78); *see also Berkheimer v. HP, Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018) (“The question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact.”). Here, Supercell asserts that all the elements of the claims “are conventional, generic and well understood, and thus present no patentable inventive concept.” Pet. 45–46; *see also* Pet. Reply 11–13.

Beginning with the recited hardware elements, Supercell argues that the ’580 patent does not describe the claimed “memory,” “arithmetic processor,” and “terminal devices,” as specialized in any meaningful way. *Id.* at 46. We agree. Notably, the specification of the ’580 patent describes the “memory” generically in terms of “storage devices,” such as “ROM,” “RAM,” or “external memory.” Ex. 1001, 4:64–65, 6:44–47. Likewise, the specification describes the “arithmetic processor” in conventional terms of “a CPU or an MPU” (Ex. 1001, 4:63–64) that performs the unremarkable functions of “accessing the information related to the game, performing computation on the game, and displaying images of the game on terminal devices operated by the players” (*id.* at 1:58–61, 3:8–10). *See also id.* at 5:14–18 (“perform[s] various arithmetic processing necessary to execute the game”), 6:1–3 (“processes the various data by itself”). Finally, the

specification describes the claimed “terminal devices” for displaying the game data as simply a “computer,” “tablet,” or “smartphone.” *Id.* at 6:48–51. Moreover, during prosecution of the ’580 patent, GREE admitted that the recited functions are performed on “known general-purpose computers.” Ex. 1002, 46. Thus, the specification and prosecution history of the ’580 patent, along with other evidence of record (*see, e.g.*, Ex. 1003), fully support that the recited hardware elements are nothing more than well understood, routine, and conventional computer components.

As for the functional recitation of the claims, Supercell argues they are “generic computer functions that courts have found insufficient to confer patent eligibility.” Pet. 47. In support, Supercell cites several Federal Circuit cases holding that storage, retrieval, manipulation, and display of routine data are some of “the most basic functions of generic computers” and therefore “cannot supply an inventive concept.” Pet. 47–49 (citing *Smartflash LLC v. Apple Inc.*, 680 F. App’x 977, 983 (Fed. Cir. 2017); *Intellectual Ventures I LLC v. Capital One Bank*, 792 F.3d 1363, 1370 (Fed. Cir. 2015); *Affinity Labs*, 838 F.3d at 1261; *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016)).

GREE responds that the petition fails to satisfy the second step of *Alice* because it “generaliz[es] the claim elements . . . and ignor[es] the specific features” that recite the purported inventive concept. PO Resp. 56. According to GREE, Supercell fails to explain why a skilled artisan would have understood the “allocating” and “determining” steps to be “well understood, routine, or conventional.” *Id.* at 56–57, 59–60; *see also id.* at 50–53 (faulting Supercell for neglecting the purported inventive concept of the “allocating” and “determining” steps). We disagree.

From our review, we note that Supercell addresses how each of the recited functional steps is routine and conventional. Pet. 47–50; *see also* Pet. Reply 12–13. For instance, Supercell explains that the limitations of “storing information related to a game,” “performing computation on the game,” and “displaying images of the game on terminal devices” are all comparable to “functions the Federal Circuit routinely finds cannot supply an inventive concept.” Pet. 48 (citing *Smartflash*, 680 F. App’x at 983; *Intellectual Ventures I*, 792 F.3d at 1370; *Affinity Labs*, 838 F.3d at 1261). GREE does not dispute that contention. *See* PO Resp. 47–61.

With respect to the “allocating” and “determining” steps, which GREE identifies as providing the purported inventive concept (*see* PO Resp. 56–57, 59–60), we agree with Supercell that those steps are merely “data selection, analysis, and manipulation steps” that the Federal Circuit also has held to be “non-inventive.” Pet. 48 (citing *Elec. Power*, 830 F.3d at 1355). As discussed earlier, the allocation step amounts to nothing more than *displaying* the reward on a screen “to let the player know” of the reward before the match begins. Ex. 1001, 7:21–26. And the determination step amounts to nothing more than *analyzing* the game data to see if the player satisfies a condition for winning the reward. Without more, those types of steps are routine and conventional activities previously known to skilled artisans in the game industry, as the specification of the ’580 patent admits and GREE’s expert confirms.

More specifically, in the “Background” section, the ’580 patent admits that the concept of allocating a reward to a group of players and then giving the reward to a player in the group based on their defeat of enemy characters was well-known in the art of social video games. *See* Ex. 1001,

1:22–31 (“there is known, for example, a system for a competition event such as a battle (fighting) where . . . each player becomes a member of a specific group, and if the player defeats the enemy characters, various rewards such as points or items available in the game can be given to each individual player or the group to which these players belong”). GREE’s expert confirms as much. See Ex. 1009, 27:9–30:5.

That admission in the specification stands in direct contrast to GREE’s assertion that Supercell provides no support for the routine and conventional nature of the “allocating” and “determining” steps. See PO Resp. 59–61. As such, we are not persuaded by GREE’s assertion to the contrary. Rather, we find that the functional steps of displaying, i.e., “allocating,” a reward for players to see before the game begins, and then analyzing, i.e., “determining,” whether a player meets a reward-providing condition, are routine and conventional activities of any computer-executed game in which players are grouped together to compete against one another for a reward. Indeed, the Federal Circuit has held that merely “specify[ing] what information in [a particular] field it is desirable to gather, analyze, and display” without including “any requirement for performing the claimed functions . . . by use of anything but entirely conventional, generic technology . . . do[es] not state an arguably inventive concept in the realm of application of the information-based abstract ideas.” *Elec. Power*, 830 F.3d at 1356. That is the case here. Notably absent from the claims is any commensurate recitation of a technological advance for achieving the recited functions of allocating a reward, and then determining a winner of the reward.

Nor are we persuaded by GREE's contention that the "storing" step of the claims "enables diversification of reward giving, in and of itself." PO Resp. 49. That contention fails for the simple reason that "enumerating types of information and information sources available within [a particular] environment" and then "requiring the selection and manipulation of [such] information . . . by itself does not transform the otherwise abstract processes of information collection and analysis." *Elec. Power*, 830 F.3d at 1355. Thus, we are not persuaded by GREE's argument that merely enumerating a variety of standard game data for storage and processing by entirely conventional, generic components—"a memory" and "an arithmetic processor"—somehow differentiates the claims here from those previously held by the Federal Circuit to lack an inventive concept, as discussed above.

In sum, we determine that Supercell's analysis under *Alice* step two addresses all the limitations of the independent claims, individually and as an ordered combination, and adequately supports through (1) case law comparison, (2) the specification of the '580 patent, and (3) expert testimony that the claims do not provide an inventive concept.

4. Whether Dependent Claims 2–6 Recite a Practical Application or Inventive Concept

The '580 patent includes five dependent claims, each of which ultimately depends from claim 1. Because dependent claims 2–6 embody the "game mechanic" or "rule of playing a game" idea of claim 1, we consider whether they add an element or combination of elements that is "significantly more" than the idea itself, i.e., transform the abstract idea into a "patent-eligible application" or "inventive concept." *Alice*, 573 U.S. at 217–218, 221–222 (quoting *Mayo*). Supercell argues they do not. Pet. 50–

53; Pet. Reply 14–17. GREE responds that the dependent claims recite features and advancements that “allow[] for variability of the rewards that are provided to a player,” and points specifically to dependent claims 3 and 4 as reciting “a specific manner of allowing a video game to improve the unexpectedness, dramatic impact and taste of a game” that is described in the specification. See PO Resp. 22–23, 61–65 (citing Ex. 1001, 1:45–53). We have considered GREE’s arguments, but find Supercell’s arguments more persuasive for the following reasons.

Claim 2 recites simply that the players, groups, and reward boxes of claim 1 be “associated” with each other, and that “the whole of the reward allocated to the reward box” be provided to the player upon meeting the reward providing condition. Associating players with a particular group and reward box provides no technological advance in the art of game playing. Indeed, it amounts to a rule governing the game. *Smith*, 815 F.3d at 819. That being the case, simply adding another rule to the rules already found to be abstract in claim 1 renders claim 2 no less abstract. *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

Furthermore, as noted above, to solve the purported problem of “fixed” rewards in video games, the specification discloses a manner of allocating rewards that purportedly results in “improving unexpectedness [and] dramatic impact” for players of the game. Ex. 1001, 1:45–53, 3:54–61. However, like claim 1, we fail to see how claim 2’s additional recitation of simply associating a reward box with a group, and allocating the whole of the reward to the box, “captures these improvements.” *Berkheimer*, 881 F.3d at 1369. Thus, we determine that the limitations of claim 2 fail to

transform the abstract idea into a patent-eligible application or an inventive concept.

Claim 3 recites a list of factors that may control allocation of the reward to the reward box. As recited, the factors include “at least any one of the following”:

an elapsed time of the game, the number of first game characters defeated by the player, progress of the game, the kind of event in the game, the kind of reward box, a state of a second game character corresponding to the player, and an item possessed by the second game character.

Ex. 1001, 11:50–55. The listed factors relate generally to the progress of gameplay and the state of game characters. In other words, they simply enumerate types and sources of data available within, and common to, many game environments in which a player battles enemy characters. But, as the Federal Circuit has held, “claims [] devoted to . . . merely selecting information, by content or source, for collection, analysis, and display does nothing significant to differentiate a process from ordinary mental processes, whose implicit exclusion from § 101 undergirds the information-based category of abstract ideas,” particularly where, as here, the dependent limitations “do not even require a new source or type of information, or new techniques for analyzing it.” *Elec. Power*, 830 F.3d at 1355; *Capital One Bank*, 792 F.3d at 1369. Thus, we determine that the limitations of claim 3 fail to transform the abstract idea into a patent-eligible application or an inventive concept.

Claim 4 recites that the reward is provided to the player either “unconditionally or based on a predetermined condition,” while claim 5 defines the “predetermined condition” as “any one of the following”:

the number of first game characters defeated by the player, a state of the first game character defeated by the player, and a state of a second game character corresponding to the player when a fixed amount of the reward is allocated to the reward box.

Ex. 1001, 11:56–67. Like claim 3, however, these factors merely narrow the scope of the reward-providing condition, without capturing the “unexpectedness” or “dramatic impact” disclosed as the purported improvement in the specification of the ’580 patent. *See Berkheimer*, 881 F.3d at 1369. In addition, the listed factors fail to transform the abstract idea into a patent-eligible application or inventive concept because, like claim 3, they are devoted merely to the selection and manipulation of data that does nothing significant to differentiate such steps from the ordinary rules or instructions for gameplay, while lacking “a new source or type of information, or new techniques for analyzing it.” *Elec. Power*, 830 F.3d at 1355. Thus, we determine that the reward-providing factors of claims 4 and 5 fail to transform the abstract idea into a patent-eligible application or an inventive concept.

Claim 6 recites simply the idea of “display[ing] a history of providing a reward to a player” on a terminal device. That post-solution activity has no bearing on allocating or providing the reward. The displayed history is purely informational. Merely providing “a ‘humanly comprehensible’ amount of information useful for users, . . . by itself does not transform the abstract processes of information collection and analysis.” *Elec. Power*, 830 F.3d at 1355. Thus, we determine that the conventional limitation of displaying a player’s game history, as recited in claim 6, is neither a practical application nor an inventive concept.

In sum, while they may narrow the scope of claim 1, dependent claims 2–6 neither capture the purportedly inventive concept of variability of rewards provided to a player, nor do they otherwise transform the abstract idea into a patent-eligible application. As such, we determine that claims 2–6 are patent ineligible.

5. Conclusion

After considering the entire record, we determine that Supercell has demonstrated by preponderant evidence that claims 1–10 are ineligible for patent under 35 U.S.C. § 101.

C. Supercell’s Challenge Under 35 U.S.C. § 112(b)

Supercell asserts that claims 1–10 are indefinite because the scope of the claimed step of “determining whether the reward providing condition is met based on match-up situations or match-up results between the players and first game characters” cannot be discerned from the specification. Pet. 54–58. According to Supercell, the specification is unclear as to “who must meet the reward providing condition” (*id.* at 56), as well as whether “match-up situations and match-up results [are] completely independent of one another” (*id.* at 57). We disagree on both points.

With respect to Supercell’s first point, the ’580 patent draws a clear distinction between a “player” and an “enemy character (first game character).” Ex. 1001, Fig. 3. According to the specification, “[t]he player can generally participate in the game through a so-called player character taking an active part, acting, and thinking in virtual game space on behalf of the player.” *Id.* at 2:6–13. The specification then explains that the “player” or “player character” fights against the “enemy character,” and “when the player or the player character wins the battle, *the player can acquire a*

reward.” *Id.* at 7:60–63 (emphasis added); *see also id.* at Fig. 7 (proceeding to reward steps S6–S9 only if “Player Wins”). Those descriptions, we find, make clear that the reward providing condition is met by a “player character” under the control of a “player,” rather than an “enemy character” under the control of the game itself.

With respect to Supercell’s second point that the ’580 patent does not discern between “match-up situations” and “match-up results,” we note the specification explains clearly that “match-up results” equate to a player winning a battle against an enemy character, whereas “match-up situations” account for factors such as the number or strength of the enemy characters defeated by a player. *See id.* at 7:60–63, 9:4–13, respectively. For these reasons, we are not persuaded that Supercell has carried its burden of showing that the “determining” step of the claims, when read in light of the specification, is indefinite.

D. GREE’s Assertion Under 35 U.S.C. § 325(d)

GREE argues that we should terminate this review under 35 U.S.C. § 325(d) “as an improper attempt to re-adjudicate arguments fully considered during prosecution of the ’580 patent.” PO Resp. 2. We previously refused at the institution stage to exercise our discretion under 35 U.S.C. § 325(d). *See* Inst. Dec. 13–14. Having proceeded with trial, we will not now exercise that discretion where the parties have expended substantial time and resources to introduce additional argument and evidence that neither party asserts were ever considered during prosecution of the ’580 patent, in particular, any consideration of the Federal Circuit’s *Smith* and *Guldenaar* decisions.

E. Gree's Motion to Exclude

GREE seeks to exclude Supercell's Exhibits 1010, 1011, and 1012. PO Mot. Exclude 1. We do not rely on any of those exhibits in rendering our decision. Thus, we deny GREE's motion to exclude as moot.

III. ORDER

Accordingly, it is:

ORDERED that claims 1–10 of the '580 patent are held *unpatentable*;

FURTHER ORDERED that GREE's Motion to Exclude (Paper 21) is *denied*; and

FURTHER ORDERED that, because this is a Final Written Decision, any party to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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