

NOTE: This disposition is nonprecedential.

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

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**GREE, INC.,**  
*Appellant*

v.

**SUPERCELL OY,**  
*Cross-Appellant*

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2019-1864, 2019-1960

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Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. PGR2018-00008.

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Decided: November 19, 2020

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

STOLL, *Circuit Judge*.

This appeal relates to eligibility under 35 U.S.C. § 101. GREE, Inc. appeals from a final written decision by the Patent Trial and Appeal Board holding claims 1, 8, and 10–20 of U.S. Patent No. 9,597,594 ineligible. Supercell Oy cross-appeals the Board’s determination that Supercell did not show claims 2–7 and 9 of the ’594 patent to be patent ineligible. We affirm the Board’s determination that claims 1, 8, and 10–20 of the ’594 patent are directed to patent-ineligible subject matter and its determination that claims 5–7 are not directed to patent-ineligible subject matter. We reverse the Board’s determination that claims 2–4 and 9 are not directed to patent-ineligible subject matter.

#### BACKGROUND

GREE is the assignee of the ’594 patent, titled “Computer Control Method, Control Program and Computer.” The specification of the ’594 patent describes the invention in the context of “city building games,” in which “a player builds a city within a virtual space (hereinafter referred to as ‘game space’) provided in the game program” in a computer. ’594 patent col. 1 ll. 27–30. Cities include arrangements of “game contents,” i.e., “items such as protective walls, buildings[,] . . . soldiers, weapons, etc.” *Id.* at col. 1 ll. 46–48, 50–51. A computer “progresses a game by arranging game contents within a game space based on a command by a player.” *Id.* at col. 3 ll. 19–21.

“[I]n recent city building games, a city built by one player is attacked by a different player, and the city . . . is one of [the] factors for deciding the winning and losing” players. *Id.* at col. 1 ll. 45–49. As players build more complicated cities, “it is very complicated for a player to change positions, types, levels, etc., of individual items” in the

cities. *Id.* at col. 1 ll. 50–53. “Therefore, many players have limited themselves to change only certain kinds of items, such as soldiers and weapons, for which changing positions, types, levels, etc., is easy.” *Id.* at col. 1 ll. 55–58. This leads to the undesirable result, as the game progresses, that players may find the game increasingly “monotonous.” *Id.* at col. 1 ll. 58–60. The claimed invention sought to address this monotony problem by “provid[ing] a method for controlling a computer, a recording medium and a computer that improve the usability of city building games and continuously attract players to the game.” *Id.* at col. 1 ll. 61–65.

More specifically, the claimed invention employs templates to improve the usability of city building games. Among other things, the claimed systems and methods involve creating a template defining positions of one or more game contents and subsequently applying the template to a predetermined area within the game space. *Id.* at col. 26 ll. 33–46, col. 27 l. 44–col. 28 l. 23. “When the template is applied,” the computer “moves the game contents arranged within the game space to the positions of the game contents defined by the template.” *Id.* at col. 3 ll. 27–29.

In some embodiments, the numbers of game contents of each type defined by the template match the numbers of game contents of each type in the game space to which the template is to be applied. *Id.* at col. 7 ll. 37–48 (disclosing an embodiment in which “[t]he number of types of facilities and the number of facilities in each type arranged within the game space 420 are equal to the number of types of facilities and the number of facilities in each type . . . defined by the template”). In that case, “all [game contents] arranged within the game space 420 are moved to positions of [game contents] as defined by the template.” *Id.* at col. 7 ll. 43–45.

In other embodiments, there is a mismatch between the numbers of game contents of each type defined by the

template and the numbers of game contents of each type in the game space to which the template is to be applied. *E.g.*, *id.* at col. 7 l. 54–col. 8 l. 29; *see also id.* at col. 11 ll. 25–28, 38–63. For example, the number of game contents of each type within the game space may be larger than the number of game contents of each type defined by the template. In that case, “those [game contents] with the smallest moving distance (e.g., Manhattan distance) to positions of [game contents] defined by the template” may be “moved to the positions of [game contents]” as defined by the template. *Id.* at col. 7 ll. 61–64. Alternatively, the number of game contents of each type arranged within the game space may be smaller than the number of game contents of each type defined by the template. In that case, “all [game contents] arranged within the game space” may be “moved to positions of [game contents] defined by the template 410, to which the moving distance is the smallest,” with “positions on which no [game contents] are arranged among the positions of [game contents] defined by the template . . . illustrated in a condition where the [game content] type is discernible.” *Id.* at col. 8 ll. 18–29. We refer to these embodiments in which the number of game contents defined by the template is not equal to the number of game contents in the game space to which the template is to be applied as “mismatched template scenarios.”

Claims 1, 10, 11, and 12 are independent claims. Claim 1 recites:

1. A method for controlling a computer that is provided with a storage unit configured to store game contents arranged within a game space, first positions of the game contents within the game space, and a template defining second positions of one or more of the game contents, and that progresses a game by arranging the game contents within the game space based on a command by a player, the method comprising:

when the template is applied to a predetermined area within the game space based on the command by the player, moving, by the computer, the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template within the predetermined area.

*Id.* at col. 26 ll. 33–46.

Claims 5–7 ultimately depend from claim 1 and are directed to mismatched template scenarios. They recite:

5. The method according to claim 1, wherein when the number of game contents arranged within the game space is smaller than the number of game contents for which the second positions are defined by the template, the computer moves the game contents arranged at the first positions within the game space to the second positions of the game contents defined by the template to which the moving distance is the smallest.

6. The method according to claim 5, wherein out of the second positions of the game contents defined by the template, the computer displays positions on which no game contents are arranged and the game contents, in a discernible condition.

7. The method according to claim 1, wherein when the number of game contents arranged within the game space is larger than the number of game contents for which the second position[s] are defined by the template, the computer moves the game contents arranged at the first positions within the game space for which the moving distance to the second positions of the game contents defined by the template is the smallest, to the positions.

*Id.* at col. 27 ll. 8–30.

Supercell petitioned for post-grant review of the '594 patent in November 2017, asserting that claims 1–20 are patent ineligible under 35 U.S.C. § 101. The Board instituted review of all challenged claims and, following trial proceedings, issued its final written decision finding claims 1, 8, and 10–20 of the '594 patent ineligible under § 101.

At step one of the *Alice* two-step framework for determining patent eligibility, the Board agreed with Supercell that the claims of the '594 patent are directed to the abstract idea of “creating and applying a template of positions of one or more game contents.” *Supercell Oy v. GREE, Inc.*, No. PGR2018-00008, 2019 WL 80477, at \*10, \*16 (Jan. 2, 2019); see *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014). The Board also found persuasive Supercell's characterization of the independent claims of the '594 patent as simply automating the known game of correspondence chess, in which a “first player fills out a post card with information that represents the current state of the board and makes an indication on the post card of [the first] player's intended move” and mails the post card to a second player who, “having already set up a chess board, moves a piece on the board in accordance with the instruction on the post card.” *GREE*, 2019 WL 80477, at \*15 (citation omitted). The Board reasoned that the first player in correspondence chess “creates a template defining game contents” “by indicating on the post card the first player's intended move.” *Id.* (citation omitted).

At *Alice* step two, the Board concluded that claims 1, 8, and 10–20 lacked an inventive concept. The Board determined that the computer implementations recited in independent claims 1 and 10–12 “are ancillary, as opposed to a computer-specific improvement.” *Id.* at \*18. With respect to claims 8 and 13–20, the Board discerned no meaningful distinctions of patentable significance over the independent claims. See *id.* at \*20–22. By contrast, the Board concluded that claims 2–7 and 9 each recite an inventive concept. The Board agreed with Supercell's

characterization of claims 2–4 and 9, but rejected Supercell’s assertion that these claims confer no inventive concept, reasoning that Supercell failed to address “a template based on a combination of more than one template’ in some form or manner.” *Id.* at \*19. Finally, with respect to claims 5–7, the Board rejected Supercell’s assertion that these claims merely amount to “insignificant extra-solution activity.” *Id.* at \*20. Using claim 5 as an example, the Board concluded that the added limitations “further define the concept of, or solution to, ‘creating and applying a template’ itself,” because “there are potentially infinite ways” to apply a template, and the “claim limitation explicitly specifies one such way” that Supercell had not demonstrated to be “conventional” or “obvious.” *Id.* As such, the Board held that at *Alice* step two, Supercell did not meet its “burden of showing that dependent claims 5–7 do not contain an *inventive concept* beyond the abstract idea of ‘creating and applying a template of positions of one or more game contents.’” *Id.* (emphasis added).

GREE and Supercell appeal. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4).

## DISCUSSION

### I

We review the Board’s factual findings for substantial evidence, 5 U.S.C. § 706(2)(E), and review de novo its legal conclusions. *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1048 (Fed. Cir. 2017) (citing *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1314 (Fed. Cir. 2016)). Patent eligibility under § 101 is ultimately a question of law that may contain underlying issues of fact. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018) (first citing *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017); and then citing *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016)). We review de novo the Board’s conclusions with respect to patent eligibility

under § 101. *Credit Acceptance*, 859 F.3d at 1053 (citing *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1236 (Fed. Cir. 2016)).

Section 101 defines patent-eligible subject matter as “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has held that this provision “contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable.” *Alice*, 573 U.S. at 216 (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). The “Supreme Court articulated a two-step test for examining patent eligibility when a patent claim is alleged to involve one of these three types of subject matter.” *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1367 (Fed. Cir. 2020); *see Alice*, 573 U.S. at 217–18. “At step one, we consider the claims ‘in their entirety to ascertain whether their character as a whole is directed to excluded subject matter.’” *CardioNet*, 955 F.3d at 1367 (quoting *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016)). If the answer is yes, we then consider the claim elements, “both individually and ‘as an ordered combination,’” to determine whether they contain an “inventive concept” sufficient to “‘transform the nature of the claim’ into a patent-eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 72, 78 (2012)). “This inventive concept must do more than simply recite ‘well-understood, routine, conventional activity.’” *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093 (Fed. Cir. 2016) (quoting *Mayo*, 566 U.S. at 79–80).

## II

### A

Beginning our analysis with *Alice* step one, we agree with the Board that the claims of the ’594 patent are



directed to the abstract idea of creating and applying a template<sup>1</sup> of positions of one or more game contents. Considered in their entirety, the claims of the '594 patent are directed to creating and applying templates to a game space to simplify game play. Though the dependent claims of the '594 patent recite additional limitations with respect to creation, storage, selection, and application of a template, none of these implementation details change the overall nature of the claims. Overall, the claims focus on applying a template to a game space to move game contents from a first position to a second position. The additional limitations recited in the '594 patent claims merely limit the use of a template to the technological environment of a game space on a computer, and GREE admitted that “the generic idea of a template existed prior to the invention,” J.A. 168.

We also agree with the Board that certain claims of the '594 patent are broad enough to cover simply implementing the long-standing and conventional game of correspondence chess using chess templates on a computer. In particular, claims 1–4 and 8–20 are broad enough to cover automation of conventional correspondence chess. We thus agree with the Board that claims 1–4 and 8–20 encompass the application of conventional correspondence chess

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<sup>1</sup> GREE argues that the Board erred in broadly construing “template” as merely a record. We agree and conclude that the Board erred in its construction because it overlooked the function of a template. We note, however, that the Board did not rely on this construction in its *Alice* step one analysis. Adopting GREE’s position on the meaning of “template” for purposes of our de novo § 101 analysis, we agree with the Board’s articulation of what the '594 patent claims are directed to at *Alice* step one. Accordingly, we find any error arising from the Board’s overly broad construction harmless.

templates to a generic computer environment. *See GREE*, 2019 WL 80477, at \*15–16. As such, they are not directed to a patentable improvement. *See Credit Acceptance*, 859 F.3d at 1055 (“[M]ere automation of manual processes using generic computers does not constitute a patentable improvement in computer technology.”).

GREE’s arguments that the claims of the ’594 patent are directed to an improved graphical user interface are unavailing. The claims do not limit how the claimed device displays template creation or application to the player. Claim 6, the sole claim requiring display of any information to the player, provides no detail regarding how the information is displayed, mandating only that the information be displayed “in a discernible condition.” ’594 patent col. 27 ll. 17–21. We therefore agree with the Board that there is nothing about the claim language that indicates an improvement to a graphical user interface.

Given the breadth of the ’594 patent claims, we agree with the Board that the claims are directed to an abstract idea at *Alice* step one.

## B

At *Alice* step two, we must examine the elements of the claims to determine whether they contain an “inventive concept” sufficient to transform the claimed abstract idea into a patent-eligible application. *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72). We agree with the Board’s holding that claims 1, 8, and 10–20 are not patent eligible, and that claims 5–7 are patent eligible, but we conclude that the Board erred in holding claims 2–4 and 9 patent eligible.

The Board correctly determined that claims 1, 8, and 10–20 lack an inventive concept. As the Board concluded, the “ancillary” computer limitations of these claims “are described generically in functional terms and, as such, are insufficient to impart an inventive concept.” *GREE*,

2019 WL 80477, at \*18, \*21. Rather than “transform[ing] the nature of the claim’ into a patent-eligible application,” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78), these claims merely invoke generic computer components performing their standard functions to limit the use of the abstract idea itself to the technological environment of a game space on a computer. *E.g.*, ’594 patent col. 27 ll. 31–36 (requiring that “the computer stores positions of game contents . . . as the template, in the storage unit”); *id.* at col. 28 ll. 10–23 (reciting a memory device that stores software instructions and a hardware processor that is configured to execute software instructions and perform operations). Additionally, claims 1, 8, and 10–20 are so broad that they encompass automation of the “well-understood, routine, conventional activity” of correspondence chess. *Mayo*, 566 U.S. at 79–80. Accordingly, the Board did not err in holding claims 1, 8, and 10–20 ineligible under § 101.

We also agree with the Board’s differing conclusion with respect to claims 5–7, although we recognize that this is a close question. In reciting specific steps for applying templates in mismatched template scenarios, these claims require something more than automating correspondence chess. Indeed, Supercell has not shown that conventional correspondence chess template application included any technique—let alone the specifically claimed technique—for applying a template in the claimed mismatched template scenarios. We also agree with the Board that the added limitations in claims 5–7 “further define the concept of, or solution to, ‘creating and applying a template’ itself,” because “there are potentially infinite ways” to apply a template, and claims 5–7 expressly specify particular ways. *GREE*, 2019 WL 80477, at \*20. We thus agree with the Board that Supercell has not shown these claims to lack an inventive concept under *Alice* step two, and, accordingly, we affirm the Board’s determination of eligibility of these claims.

We disagree, however, with the Board’s conclusion that claims 2–4 and 9 are patent eligible under *Alice* step two. Claims 2–4 recite the additional limitations of storing templates of different players, applying the templates of different players, and obtaining and applying templates from different computers. ’594 patent col. 26 l. 47–col. 27 l. 7. Claim 9 recites creating a template by combining a plurality of templates based on a command from the player or from another player, without further limitation. *Id.* at col. 27 ll. 37–43. Though these limitations narrow the scope of claims 2–4 and 9, we see no inventive concept sufficient to transform the claimed abstract idea into a patent-eligible application. *See Alice*, 573 U.S. at 217–18. Unlike claims 5–7, claims 2–4 and 9 do not claim a solution for applying a template in a mismatched template scenario. Nor do they claim a solution to any other technological problem encountered in the creation and application of templates in a computer game. Instead, like claims 1, 8, and 10–20, claims 2–4 and 9 recite generic computer components performing their standard functions, and they are broad enough to encompass the implementation of longstanding and conventional correspondence chess on a computer. We therefore conclude that the Board erred in concluding that claims 2–4 and 9 provide an inventive concept.

### C

Finally, we note that certain statements in the Board’s opinion appear inconsistent with the appropriate framework for addressing eligibility under § 101. For example, in conducting the *Alice* step one analysis, the Board stated: “Identifying the concept to which the claim is ‘directed’ merely addresses some claim limitations in connection with the first aspect of the *Alice* inquiry.” *GREE*, 2019 WL 80477, at \*7. The Board also determined that under the *Alice* framework, “Petitioner only needed to account for each claim limitation under either a formulation of the concept a claim is ‘directed to’ or under *Alice* step two.” *Id.* at \*8. To the extent that the Board meant that a proper

§ 101 analysis may consider some claim limitations only at *Alice* step one and others only at *Alice* step two, we do not agree with its reading of Supreme Court precedent. Instead, both steps of the *Alice* inquiry require that the claims be considered in their entirety. See *CardioNet*, 955 F.3d at 1367 (“At step one, we consider the claims ‘*in their entirety*’ to ascertain whether their character as a whole is directed to excluded subject matter.” (emphasis added) (quoting *McRO*, 837 F.3d at 1312)); *Alice*, 573 U.S. at 217 (noting, at step two, that courts “consider the elements of each claim *both individually and ‘as an ordered combination’* to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” (emphasis added) (quoting *Mayo*, 566 U.S. at 79, 78)).

#### CONCLUSION

We have considered the parties’ remaining arguments and do not find them persuasive. For the foregoing reasons, we affirm the Board’s decision that claims 1, 8, and 10–20 are ineligible and that claims 5–7 are not ineligible, and we reverse the Board’s decision that claims 2–4 and 9 are not ineligible.

#### **AFFIRMED-IN-PART AND REVERSED-IN-PART**

#### COSTS

No costs.