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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte OLIVER LEI, DAVID ALLEN KOWALSKI, DEHUA CUI,
CYNTHIA M. NEUBECKER, ALLEN R. MURRAY, PERRY ROBINSON
MacNEILLE, NOORULLA MOHAMMED, and BRIAN BENNIE

Appeal 2019-004865
Application 14/849,768
Technology Center 3600

Before JOHN A. JEFFERY, BETH Z. SHAW, and NORMAN H.
BEAMER, *Administrative Patent Judges*.

JEFFERY, *Administrative Patent Judge*.

DECISION ON APPEAL

Under 35 U.S.C. § 134(a), Appellant¹ appeals from the Examiner's
decision to reject claims 1–9. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ We use the word “Appellant” to refer to “applicant” as defined in 37
C.F.R. § 1.42. Appellant identifies the real party in interest as Ford Global
Technologies, LLC. Appeal Br. 1.

STATEMENT OF THE CASE

Appellant's invention broadcasts messages to vehicles while certain detected vehicular conditions exist, where the messages are tailored based on a particular aspect of the vehicle's state, thus enabling selling or advertising goods or services to vehicle occupants under certain conditions. *See Spec.*

¶¶ 2–3, 32–40. Claim 1 is illustrative:

1. A system comprising:

a processor configured to:

receive an indication of a vehicle-detected trigger state indicating that a message, having a predefined association with the trigger state, should be broadcast over dedicated short-range communication (DSRC) from a broadcasting vehicle;

tailor the message, to include variable, predefined text based on at least one trigger state aspect, for broadcast; and

broadcast the selected message while the trigger state persists.

THE REJECTIONS

The Examiner rejected claims 1–9 under 35 U.S.C. § 101 as ineligible. Final Act. 2–5.²

² Throughout this Opinion, we refer to (1) the Final Office Action mailed September 24, 2018 (“Final Act.”); (2) the Appeal Brief filed December 14, 2018 (“Appeal Br.”); (3) the Examiner’s Answer mailed April 5, 2019 (“Ans.”); and (4) the Reply Brief filed June 5, 2019 (“Reply Br.”).

The Examiner rejected claims 1, 2, and 7³ under 35 U.S.C. § 102(a)(1) as anticipated by Lamont (US 2014/0344062 A1; published Nov. 20, 2014).
Final Act. 7.

The Examiner rejected claim 3 under 35 U.S.C. § 103 as unpatentable over Lamont and Amla (US 2014/0316900 A1; published Oct. 23, 2014).
Final Act. 8.

The Examiner rejected claim 4 under 35 U.S.C. § 103 as unpatentable over Lamont and Huang (US 2007/0050248 A1; published Mar. 1, 2007).
Final Act. 9.

The Examiner rejected claim 5 under 35 U.S.C. § 103 as unpatentable over Lamont and Tuukkanen (US 2017/0352273 A1; published Dec. 7, 2017). Final Act. 9–10.

The Examiner rejected claims 6 and 9 under 35 U.S.C. § 103 as unpatentable over Lamont and Parkes (US 2015/0283939 A1; published Oct. 8, 2015). Final Act. 10–11.

The Examiner rejected claim 8 under 35 U.S.C. § 103 as unpatentable over Lamont and Frashure (US 2014/0146152 A1; published May 29, 2014).
Final Act. 11.

THE INELIGIBILITY REJECTION

The Examiner determines that the claimed invention is directed to an abstract idea, namely selecting and broadcasting a message based on a

³ Although the Examiner rejects claims 1, 2, 4, 5, 7, and 8 as anticipated by Lamont on page 7 of the Final Office Action, the Examiner nonetheless revises the anticipation rejection's claim listing to claims 1, 2, and 7 on page 3 of the Answer. Accordingly, we present the Examiner's corrected claim listing here and elsewhere in this Opinion.

received trigger. *See* Final Act. 2; Ans. 4–7. According to the Examiner, the recited additional elements, including the recited (1) processor; (2) dedicated short-range communication (DSRC); (3) broadcasting vehicle; and (4) vehicle-detected indication perform generic computer functions that do not add significantly more to the abstract idea. Final Act. 3–4; Ans. 4–7.

Appellant argues that the claims are eligible because, among other things, they improve vehicle communication by constraining communication to trigger-relevant messages for the trigger’s duration. Appeal Br. 4–11; Reply Br. 2–3. According to Appellant, the claimed invention’s “atypical approach” avoids otherwise missed opportunities for selling or advertising to certain vehicle occupants, namely by (1) tailoring a message responsive to a state trigger, and (2) broadcasting that message while the trigger state persists. Appeal Br. 10; Reply Br. 2.

ISSUE

Under § 101, has the Examiner erred in rejecting claims 1–9 as directed to ineligible subject matter? This issue turns on whether the claims are directed to an abstract idea and, if so, whether the recited elements—considered individually and as an ordered combination—transform the nature of the claims into a patent-eligible application of that abstract idea.

PRINCIPLES OF LAW

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. *See, 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, 67 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as “molding rubber products” (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); “tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores” (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. (15 How.) 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 191 (“We view respondents’ claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula.”). That said, 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.* (alterations in original) (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.*

In January 2019, the United States Patent and Trademark Office (“USPTO”) published revised guidance on the application of § 101. *See* USPTO’s 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed.

Reg. 50 (Jan. 7, 2019) (“Guidance”).⁴ 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 activity such as a fundamental economic practice, or mental processes); and
- (2) additional elements that integrate the judicial exception into a practical application (*see* MANUAL OF PATENT EXAMINING PROCEDURE (“MPEP”) §§ 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 10.2019, June 2020)).

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 is not well-understood, routine, and conventional in the field (*see* MPEP § 2106.05(d)); or
- (4) simply appends well-understood, routine, and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Guidance, 84 Fed. Reg. at 56.

ANALYSIS

Claims 1–9: Alice/Mayo Step One

Representative independent claim 1 recites:

⁴ *See also* October 2019 Update: Subject Matter Eligibility, https://www.uspto.gov/sites/default/files/documents/peg_oct_2019_update.pdf.

A system comprising:

a processor configured to:

receive an indication of a vehicle-detected trigger state indicating that a message, having a predefined association with the trigger state, should be broadcast over dedicated short-range communication (DSRC) from a broadcasting vehicle;

tailor the message, to include variable, predefined text based on at least one trigger state aspect, for broadcast; and

broadcast the selected message while the trigger state persists.

As the Specification explains, the environment associated with driving a vehicle can create previously-unfelt needs as conditions change, such as traffic conditions, and, therefore, present opportunities to satisfy those needs by selling or advertising goods and services to those vehicle occupants. *See* Spec. ¶¶ 2–3, 32. For example, a person trapped in traffic around lunchtime is an opportunity to sell food to that person. Spec. ¶ 2. Similarly, a person involved in an accident is an opportunity to sell collision repair services, insurance, or legal services to that person. *Id.*

Advertising goods or services under these conditions, however, requires (1) observing the condition, and (2) delivering materials, such as business cards, flyers, food, etc., to the vehicle—both of which can be impractical, and even dangerous, depending on the condition. *See id.* The disclosed invention overcomes these drawbacks by broadcasting messages from a vehicle using DSRC while certain detected vehicular conditions exist, where the messages are tailored based on a particular aspect of the vehicle's state. *See* Spec. ¶¶ 33–40.

Turning to claim 1, we first note that the claim recites a system and, therefore, falls within the machine category of § 101. But despite falling within this statutory category, we must still determine whether the claim is directed to a judicial exception, namely an abstract idea. *See Alice*, 573 U.S. at 217. To this end, we must determine whether the claim (1) recites a judicial exception, and (2) fails to integrate the exception into a practical application. *See Guidance*, 84 Fed. Reg. at 52–55. If both elements are satisfied, the claim is directed to a judicial exception under the first step of the *Alice/Mayo* test. *See id.*

The Examiner determines that claim 1 is directed to an abstract idea, namely selecting and broadcasting a message based on a received trigger. *See Final Act. 2; Ans. 4–7.* To determine whether a claim recites an abstract idea, we (1) identify the claim’s specific limitations that recite an abstract idea, and (2) determine whether the identified limitations fall within certain subject matter groupings, namely, (a) mathematical concepts⁵; (b) certain methods of organizing human activity⁶; or (c) mental processes.⁷

⁵ Mathematical concepts include mathematical relationships, mathematical formulas or equations, and mathematical calculations. *See Guidance*, 84 Fed. Reg. at 52.

⁶ Certain methods of organizing human activity include fundamental economic principles or practices (including hedging, insurance, mitigating risk); commercial or legal interactions (including agreements in the form of contracts; legal obligations; advertising, marketing or sales activities or behaviors; business relations); managing personal behavior or relationships or interactions between people (including social activities, teaching, and following rules or instructions). *See Guidance*, 84 Fed. Reg. at 52.

⁷ Mental processes are concepts performed in the human mind including an observation, evaluation, judgment, or opinion. *See Guidance*, 84 Fed. Reg. at 52.

Here, apart from the recited (1) *processor*; (2) *vehicle-detected* trigger state; and (3) broadcasting *over DSRC*, all of claim 1's recited limitations fit squarely within at least one of the above categories of the USPTO's guidelines. When read as a whole, the recited limitations are directed to broadcasting messages tailored to a recipient's condition or environment while that condition or environment exists.

That is, apart from the recited (1) *processor*; (2) *vehicle-detected* trigger state; and (3) broadcasting *over DSRC*, the claimed limitations recite certain methods of organizing human activity including fundamental economic practices and marketing and sales activities. *See* Guidance, 84 Fed. Reg. at 52.

First, the limitation calling for “receiv[ing] an indication of a . . . trigger state indicating that a message, having a predefined association with the trigger state, should be broadcast . . . from a broadcasting vehicle” can be done by merely observing the recipient's “trigger state”—a state that merely reflects a certain condition or environment associated with an intended recipient that supports “triggering” communication with that recipient. *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (noting that a person could construct a map of credit card numbers by merely *writing down a list* of credit card transactions made from a particular IP address). The recited indication can also be received from another person, such as a colleague, by communicating with that person either orally or in writing. *Cf. Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1344 (Fed. Cir. 2018) (noting that a nontechnical human activity of passing a note to a person who is in a meeting or conversation as illustrating the invention's focus, namely providing information to a person without interfering with the

person's primary activity). In short, the recited receiving function fits squarely in the certain methods of organizing human activity category of the USPTO's guidelines and, therefore, recites an abstract idea. *See* Guidance, 84 Fed. Reg. at 52 (listing exemplary mental processes including observation, evaluation, and judgment); *see also id.* (listing exemplary methods of organizing human activity, including advertising, marketing or sales activities or behaviors, personal interactions, and following rules or instructions).

In addition, the recited message tailoring and "broadcast[ing] the selected message while the trigger state persists" fall in the certain methods of organizing human activity category of the USPTO's Guidelines because these limitations recite fundamental economic practices, including marketing and sales activities, by customizing and targeting advertisements to certain customers based on certain conditions associated with those customers. *See* Guidance, 84 Fed. Reg. at 52. *Cf. Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015) (noting that tailoring content based on certain criteria, such as a viewer's location or address, is a fundamental practice prevalent in our system); *see also id.* at 1370 ("Tailoring information based on the time of day of viewing is also an abstract, overly broad concept long-practiced in our society."); *EasyWeb Innovations, LLC v. Twitter, Inc.*, 689 F. App'x 969, 969–71 (Fed. Cir. 2017) (unpublished) (holding claims reciting message publishing system that (1) converted part of a received message to a different format, and (2) published the converted portion only if the sender was identified as authorized, were directed to the abstract idea of receiving, authenticating, and publishing data); *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d

1253, 1255–65 (Fed. Cir. 2016) (holding ineligible claim reciting broadcast system including selecting a regional broadcasting channel from a cellular telephone located outside the channel’s broadcast region as directed to the abstract idea of providing out-of-region access to regional broadcast content).

Therefore, apart from the recited (1) *processor*; (2) *vehicle-detected* trigger state; and (3) broadcasting *over DSRC*, the recited limitations fall squarely within the certain methods of organizing human activity category of the USPTO’s guidelines and, therefore, recite an abstract idea. *See* Guidance, 84 Fed. Reg. at 52.

Notably, the three elements enumerated above are the only recited elements beyond the abstract idea, but these additional elements, considered individually and in combination, do not integrate the abstract idea into a practical application when reading claim 1 as a whole.

First, we are not persuaded that the claimed invention improves a computer or its components’ functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016) despite Appellant’s contentions to the contrary (Appeal Br. 7). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellant contends that the claimed invention uses such a data structure to improve a computer’s functionality or efficiency, or otherwise change the way that device functions, there is no persuasive evidence on this record to substantiate such a contention.

To the extent that Appellant contends that the claimed invention is rooted in technology because it is ostensibly directed to a technical solution (*see* Appeal Br. 4–11; Reply Br. 2–3), we disagree. Even assuming, without deciding, that the claimed invention can broadcast tailored messages to recipients’ vehicles faster or more efficiently than doing so manually, any speed or efficiency increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Serv., LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) (“[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.”)); *see also Intellectual Ventures I LLC v. Erie Indemnity Co.*, 711 F. App’x 1012, 1017 (Fed. Cir. 2017) (“Though the claims purport to accelerate the process of finding errant files and to reduce error, we have held that speed and accuracy increases stemming from the ordinary capabilities of a general-purpose computer do not materially alter the patent eligibility of the claimed subject matter.”). Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095.

We also find unavailing Appellant’s reliance on *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253 (Fed. Cir. 2017) (Appeal Br. 7). There, the court held eligible claims directed to a computer memory system with a main memory connected to a bus with a cache connected thereto, where the system’s programmable operational characteristics determined the type of

data stored by the cache. *Visual Memory*, 867 F.3d at 1257–62. Notably, the court emphasized the recited improvement in computer capabilities in that case, namely by using programmable operational characteristics that were configurable based on the processor’s type. *Id.* at 1259–60.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

Appellant’s reliance on *Finjan, Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018) (Appeal Br. 7) is likewise unavailing. There, the court held eligible claims directed to a behavior-based virus scanning system. In reaching this conclusion, the court noted that the claimed invention employed a new kind of file that enabled a computer security system to do that which could not be done previously, including accumulating and using newly-available, behavior-based information about potential threats. *Finjan*, 879 F.3d at 1305.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

We reach the same conclusion regarding Appellant’s reliance on *Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018) (Appeal Br. 7). There, the court held eligible claims reciting a computing device that could display an application summary window that was not only reachable directly from the main menu, but could also display a limited list of selectable functions while the application was in an un-

launched state. *Core Wireless*, 880 F.3d at 1360–63. Upon selecting a function, the device would then launch the application and initiate the selected function. *Id.* at 1360. In reaching its eligibility conclusion, the court noted that the claimed invention was directed to an improved user interface for computing devices that used a particular manner of summarizing and presenting a limited set of information to the user, unlike conventional user interface methods that displayed a generic index on a computer. *Id.* at 1362–63.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

Appellant’s reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (Appeal Br. 4, 8–9) is likewise unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making a known filtering solution—namely a “one-size-fits-all” filter at an Internet Service Provider (ISP)—more dynamic and efficient via individualized filtering at the ISP. *BASCOM*, 827 F.3d at 1351. Notably, this customizable filtering solution improved the computer system’s performance and, therefore, was patent-eligible. *See id.* But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses generic computing components to implement an abstract idea as noted previously.

Appellant's reliance on *Data Engine Technologies LLC v. Google LLC*, 906 F.3d 999 (Fed. Cir. 2018) (Appeal Br. 7) is likewise unavailing. There, the court held eligible claims directed to a specific interface and implementation for navigating complex three-dimensional spreadsheets using techniques unique to computers. *See Data Engine*, 906 F.3d at 1005–11.

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

Appellant's reliance on *Ancora Technologies, Inc. v. HTC America, Inc.*, 908 F.3d 1343 (Fed. Cir. 2018) (Appeal Br. 7) is likewise unavailing. There, the court held eligible a method of restricting software operation within a license for use with a computer including an erasable, non-volatile memory area of the computer's BIOS and a volatile memory area, where an agent was used to set up a verification structure in the erasable, non-volatile memory of the BIOS, and the program was verified using a verification structure from the non-volatile memory of the BIOS. *See Ancora*, 908 F.3d at 1345–50. In reaching its eligibility conclusion, the court emphasized that the claimed invention identified the particular way in which the improvement was realized, namely by storing a structure containing a license record in a particular, modifiable, non-volatile portion of the computer's BIOS, where the structure in that memory location was used for verification by interacting with the distinct computer memory containing the program to be verified. *See id.* at 1348–49. The court added that the recited

functionality addressed a technological problem with computers, namely license-authorization software's vulnerability to hacking. *Id.*

That is not the case here. To the extent that Appellant contends that the claimed invention is directed to such improvements in computer capabilities (*see* Appeal Br. 7), there is no persuasive evidence on this record to substantiate such a contention.

On this record, then, the claimed invention does not recite additional elements that (1) improve a computer itself; (2) improve another technology or technical field; (3) implement the abstract idea in conjunction with a particular machine or manufacture that is integral to the claim; (4) transform or reduce a particular article to a different state or thing; or (5) apply or use the abstract idea in some other meaningful way beyond generally linking the abstract idea's use to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* Guidance, 84 Fed. Reg. at 55 (citing MPEP §§ 2106.05(a)–(c), (e)). In short, the claim's additional elements do not integrate the abstract idea into a practical application when reading claim 1 as a whole.

In conclusion, although the recited functions may be beneficial by broadcasting messages tailored to a recipient's condition or environment while that condition or environment exists, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379–80 (Fed. Cir. 2015).

We, therefore, agree with the Examiner that claim 1 is directed to an abstract idea.

Claims 1–9: Alice/Mayo Step Two

Turning to *Alice/Mayo* step two, claim 1’s additional recited elements, namely the recited (1) *processor*; (2) *vehicle-detected* trigger state; and (3) broadcasting *over DSRC*—considered individually and as an ordered combination—do not provide an inventive concept that amounts to significantly more than the abstract idea when reading claim 1 as a whole. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56. As noted above, the claimed invention merely uses generic computing components to implement the recited abstract idea.

To the extent Appellant contends that the recited limitations, including those detailed above in connection with *Alice* step one, add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two (*see* Appeal Br. 4–11; Reply Br. 2–3), these limitations are not *additional* elements *beyond* the abstract idea, but rather are directed to the abstract idea as noted previously. *See BSG*, 899 F.3d at 1290 (explaining that the Supreme Court in *Alice* “only assessed whether the claim limitations *other than the invention’s use of the ineligible concept* to which it was directed were well-understood, routine and conventional”) (emphasis added); *see also* Guidance, 84 Fed. Reg. at 56 (instructing that *additional* recited elements should be evaluated in *Alice/Mayo* step two to determine whether they (1) *add* specific limitations that are not well-understood, routine, and conventional in the field, or (2) simply *append* well-understood, routine, and conventional activities previously known to the industry (citing MPEP § 2106.05(d)).

Rather, the claimed (1) *processor*; (2) *vehicle-detected* trigger state; and (3) broadcasting *over DSRC* are additional recited elements whose

generic computing functionality is well-understood, routine, and conventional. *See Mortgage Grader*, 811 F.3d at 1324–25 (noting that components such as an “interface,” “network,” and “database” are generic computer components that do not satisfy the inventive concept requirement); *accord* Spec. ¶¶ 17–31, 43, 51, 55, 58; Ans. 4–7 (determining that the recited generic computer components are additional elements that do not add significantly more than the abstract idea).

In reaching this conclusion, we emphasize that the above-noted additional elements (i.e., those elements beyond the abstract idea) are not considered in isolation as Appellant apparently contends (*see* Appeal Br. 5, 7–8), but rather considered in light of the other recited elements, namely those reciting the abstract idea, when reading the claim as a whole. That is, the additional elements are considered in light of the other recited limitations to determine whether the additional elements add significantly more to the abstract idea such that they transform the nature of the claims into a patent-eligible application of that abstract idea. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56.

Lastly, we find unavailing Appellants’ preemption-based contentions. *See* Appeal Br. 7. Where, as here, the claims cover a patent-ineligible concept, preemption concerns “are fully addressed and made moot” by an analysis under the *Alice* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

In conclusion, the additional recited elements—considered individually and as an ordered combination—do not add significantly more than the abstract idea to provide an inventive concept under *Alice/Mayo* step two. *See Alice*, 573 U.S. at 221; *see also* Guidance, 84 Fed. Reg. at 56.

Therefore, we are not persuaded that the Examiner erred in rejecting claim 1 and claims 2–9 not argued separately with particularity.

THE ANTICIPATION REJECTION

Regarding independent claim 1, the Examiner finds that Lamont discloses a processor that receives an indication of a vehicle-detected trigger state indicating that a message should be broadcast over DSRC. Final Act. 7. According to the Examiner, Lamont’s paragraphs 29, 33, 34, 39–42, 51, 63, 65–68, 71, and 72 disclose tailoring the message to include variable, pre-defined text based on at least one trigger state aspect. Final Act. 7; Ans. 8–9.

Appellant argues that not only does the Examiner fail to distinguish or explain what, in Lamont, constitutes the recited trigger, tailoring, and variable, predefined text, Lamont also does not broadcast a tailored message, let alone over DSRC as claimed. Appeal Br. 12–13; Reply Br. 3–4.

ISSUE

Under § 102, has the Examiner erred in rejecting claim 1 by finding that Lamont (1) tailors a message to include variable, pre-defined text based on at least one trigger state aspect, and (2) broadcasts the selected message while a vehicle-detected trigger state persists?

ANALYSIS

We begin by noting that independent claim 1 recites, somewhat inartfully, (1) *tailoring* a message to include variable, pre-defined text, and (2) broadcasting *the selected* message while the trigger state persists.

Despite this emphasized inconsistency in terminology, and lack of antecedent basis for *the* selected message, we nonetheless presume that the “selected” message that is broadcast in the last clause is the “tailored” message in the preceding clause.

In addition, although the indication received in claim 1’s second clause indicates that a message *should* be broadcast over DSRC from a broadcasting vehicle, the last clause does not require these particular broadcasting parameters, namely that the broadcast is (1) over DSRC, and (2) from a vehicle. Rather, the last clause merely recites, quite broadly, that the selected message is broadcast while the trigger state persists, but does not specify further the type or manner of this broadcast. Although the received indication specifies how the message *should* be broadcasted, that does not mean it *must* be broadcasted in that particular manner, particularly given the last clause’s high level of generality regarding the actual broadcast.

Nevertheless, despite the claim’s breadth, we find the Examiner’s anticipation rejection problematic on this record. In the rejection, the Examiner finds, without supporting explanation, that Lamont’s paragraphs 29, 33, 34, 39–42, 51, 63, 65–68, 71, and 72 disclose tailoring the message to include variable, pre-defined text based on at least one trigger state aspect. Final Act. 7. Notably, these citations—like all other citations in the rejection—were provided without supporting explanation apart from merely quoting the claim language. *See id.*

In response to Appellant’s challenge to the Examiner’s failure to explain how Lamont anticipates various aspects of the claimed invention, including the tailoring step (Appeal Br. 12–13), the Examiner cites Lamont’s

paragraphs 29, 40, 33, 51, 67, 71, and 72 for teaching triggering advertisements (i.e., messages) based on (1) geography and/or vicinity; (2) proximity; (3) being within range of a particular vehicle; and (4) when a driver is near a particular exit. Ans. 8–9. According to the Examiner, the latter exit-based example illustrates tailoring a message with variable, predefined text, namely hotels, gas stations, and other facilities near that exit, based on an exit-dependent “trigger.” Ans. 9.

These findings are problematic on this record. Lamont’s exit-based functionality on which the Examiner relies is shown in Figure 5A. As shown in that figure, sign 524a is over a roadway and includes an advertising module 108 that transmits information, such as restaurants at the exit, to a device in an approaching vehicle 522a to present that information to the driver or passenger. *See* Lamont ¶¶ 69–72; Figs. 1A, 5A. As explained in Lamont’s paragraph 34, advertising modules or “beacons” include transmitting and/or receiving components to enable communication with a user communication device.

Although the vehicle’s proximity to the sign triggers the vehicle’s occupants receiving the sign’s transmitted information, we cannot say—nor has the Examiner shown—that Lamont’s processor is *necessarily* configured to (1) tailor the message to include variable, predefined text based on a trigger state aspect, and *then* (2) broadcast the message while that trigger state persists as claimed.

Our emphasis underscores a key aspect of the claimed invention, namely that the processor is configured to tailor the message *before* broadcasting it. To be sure, information that the user receives in Lamont can be based on user preferences and determined dynamically or automatically

as noted in paragraph 72—a determination that effectively tailors that information.

Still, that does not mean that this determination is *necessarily* made before broadcasting the message. Rather, the determination could be made *after* the message is broadcasted by, for example, filtering *received* broadcasted content at the user’s device consistent with the user’s preferences. In this scenario, the message is tailored *after* its broadcast—not before. That Lamont’s paragraph 72 states explicitly that the *vehicle* can set a filter to allow gas station information when the vehicle has less than a quarter tank of fuel only underscores this point.

We reach this finding despite the vehicle 523a in Lamont’s Figure 5A also including an advertising module that provides data to occupants of other vehicles, including vehicle 521a. *See* Lamont ¶ 66. Here again, although the vehicle 522a’s proximity to the advertising vehicle 523a triggers the vehicle 522a’s occupants receiving the advertising vehicle’s transmitted information, we cannot say—nor has the Examiner shown—that Lamont’s processor is *necessarily* configured to (1) tailor the message to include variable, predefined text based on a trigger state aspect, and *then* (2) broadcast the message while that trigger state persists as claimed.

To be sure, a business can determine criteria related to advertising its data by, for example, transmitting data within a certain geographical area or during certain time periods. Lamont ¶ 40. Although the transmitted message is effectively tailored consistent with these geographical and temporal criteria,⁸ we cannot say—nor has the Examiner shown—that the

⁸ *Accord Intellectual Ventures I*, 792 F.3d at 1369 (noting that tailoring content based on certain criteria, such as a viewer’s location or address, is a

message *necessarily* includes *variable, predefined text* based on a trigger state aspect. That is, despite the transmission being limited to certain times or geographic areas, the message may nonetheless be the same—not variable.

We reach this finding even if it was *probable* that Lamont’s broadcasted message includes variable, predefined text associated with different times or geographic locations consistent with these criteria—a feature that is at least suggested by the court in *Intellectual Ventures*. See *Intellectual Ventures I*, 792 F.3d at 1369 (noting that tailoring content based on certain criteria, such as a viewer’s location or address, is a fundamental practice prevalent in our system); see also *id.* at 1370 (“Tailoring information based on the time of day of viewing is also an abstract, overly broad concept long-practiced in our society.”).

Although tailoring content for broadcast consistent with these criteria may have been *probable* in Lamont, that alone is insufficient for anticipation, for it is well settled that “[i]nherency . . . may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.” *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (citations omitted).

Therefore, we are persuaded that the Examiner erred in rejecting (1) independent claim 1, and (2) dependent claims 2 and 7 for similar reasons. Because this issue is dispositive regarding our reversing the Examiner’s

fundamental practice prevalent in our system); see also *id.* at 1370 (“Tailoring information based on the time of day of viewing is also an abstract, overly broad concept long-practiced in our society.”).

rejection of these claims, we need not address Appellant's other associated arguments.

THE OBVIOUSNESS REJECTIONS

Because the Examiner has not shown that the cited prior art cures the deficiencies noted above regarding the rejection of independent claim 1, we will not sustain the obviousness rejections of dependent claims 3–6, 8, and 9 (Final Act. 8–11) for similar reasons.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s) /Basis	Affirmed	Reversed
1–9	101	Eligibility	1–9	
1, 2, 7	102(a)(1)	Lamont		1, 2, 7
3	103	Lamont, Amla		3
4	103	Lamont, Huang		4
5	103	Lamont, Tuukkanen		5
6, 9	103	Lamont, Parkes		6, 9
8	103	Lamont, Frashure		8
Overall Outcome			1–9	

TIME PERIOD FOR RESPONSE

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).

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AFFIRMED