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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN G. MUSIAL, ABHINAY R. NAGPAL, SANDEEP R. PATIL, and CAROLYN A. WHITEHEAD

Appeal 2017-001164
Application 13/396,177
Technology Center 3600

Before CARLA M. KRIVAK, HUNG H. BUI, and JON M. JURGOVAN, *Administrative Patent Judges*.

JURGOVAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants[1] seek review under 35 U.S.C. § 134(a) from a Final Rejection of claims 14, 21, and 22, which are all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse and enter a new ground of rejection.[2]

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[1] Appellants identify International Business Machines Corporation as the real party in interest. (App. Br. 2.)

[2] Our Decision refers to the Specification ("Spec.") filed February 14, 2012, the Final Office Action ("Final Act.") mailed November 18, 2015, the Appeal Brief ("App. Br.") filed March 16, 2016, the Examiner's Answer ("Ans.") mailed September 16, 2016, and the Reply Brief ("Reply Br.") filed October 24, 2016.

CLAIMED INVENTION

The claims are directed to computer program products for distributing advertisements to an aggregation of people in an airport, using a "service vehicle associated with a flight" for which the people have checked-in. (Spec. ¶¶ 4, 31; Title; Abstract.) Such "service vehicles can include fuel trucks, food and beverage delivery trucks, baggage handling equipment, and the like." (Spec. ¶ 31.) Appellants' invention dispatches an advertisement to the service vehicle for rendering, the advertisement selected based on an "aggregated population characteristic" formed from "cumulative characteristics [of the aggregation of people] selected from at least one of the group consisting of age, marital status, and parental status associated with at least one of the first check-in and second check-in." (Spec. ¶ 57; Abstract.)

Claims 14 and 21 are independent. Claim 14, reproduced below, is illustrative of the claimed subject matter:

> 14. A computer program product for selecting an advertisement, the computer program product comprising:
>
> a computer readable non-transitory medium having computer readable program code stored thereon, the computer readable program code comprising:
>
> program instructions to receive a first check-in corresponding to at least one person, wherein the first check-in is a indication of presence relative to an airport gate servicing a flight and the first check-in is received from a kiosk;
>
> program instructions to receive a second check-in to form an aggregation of people, wherein the second check-in is a indication of presence relative to the airport gate servicing the flight;
>
> program instructions to characterize the aggregation based on cumulative characteristics selected of at least one vital

statistic of each person checking-in to form an aggregated population characteristic;

program instructions to receive flight details concerning the flight, wherein the flight details comprise a flight destination, and the advertisement concerns a service provider at the flight destination;

program instructions to select at least one advertisement based on the aggregated population characteristic and the flight details, in response to the second check-in;

program instructions to receive a check-out of at least one person, wherein the check-out comprises reading an identifier of an at least one person who departs;

program instructions to select at least one advertisement based on the aggregated population characteristic;

program instructions to second characterize the aggregation based on the cumulative characteristics to form a second cumulative characteristic based on the aggregation without at least one vital statistic corresponding to the at least one person who departs, wherein the program instructions to select at least one advertisement based on the aggregated population characteristic perform to select the at least one advertisement is based on the second cumulative characteristic;

program instructions to select at least one advertisement based on the second cumulative characteristic, and a destination of the flight details, wherein the destination is stated within the at least one advertisement;

program instructions to dispatch the at least one advertisement; and

program instructions to detect presence of a service vehicle associated with a flight near and outside an aircraft associated with the flight, wherein the detecting presence relies on at least one global positioning satellite (GPS) signal received at the service vehicle and reported as location data to the hardware processor, wherein program instructions to dispatch comprises instructions to dispatch the at least one advertisement to the service vehicle for rendering and such dispatching is responsive to detecting presence of the service vehicle.

(App. Br. 14–16 (Claims App'x).)

REJECTIONS[3]

Claims 14, 21, and 22 stand rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. (Final Act. 4–5.)

ANALYSIS

Rejection of Claims 14, 21, and 22 under 35 U.S.C. § 101 as being directed to an abstract idea without "significantly more"

The Examiner finds the claims are "directed to the abstract idea of displaying advertisements based on an aggregation of people which falls into the category of . . . a method of organizing human activities, . . . [and] an idea of itself." (Final Act. 4; *see also* Ans. 3.) The Examiner further finds "[t]he additional elements or combination of elements in the claims other than the abstract idea per se amounts to no more than the recitation of generic computer structure that serves to perform generic computer functions that are well-understood, routine, and conventional activities." (Final Act. 4–5; *see also* Ans. 3–5.) For these reasons, the Examiner concludes the claims are directed to unpatentable subject matter under 35 U.S.C. § 101. *Id.*

To determine whether subject matter is patentable under 35 U.S.C. § 101, the Supreme Court has set forth a two part test "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347, 2355 (2014).

[3] Claims 14, 21, and 22 were rejected under 35 U.S.C. § 112 (pre-AIA), second paragraph, as being indefinite. (Final Act. 3–4.) However, this rejection was withdrawn in the Examiner's Answer, and is no longer pending on appeal. (Ans. 2.)

The first step in the analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts," such as an abstract idea. *Id.* (citation omitted). For computer-related technologies, "the first step in the *Alice* inquiry . . . asks whether the focus of the claims is on the *specific asserted improvement* in computer capabilities" (which would be eligible subject matter) or instead "on a process that qualifies as an 'abstract idea' for which *computers are invoked merely as a tool*" (which would be ineligible subject matter). *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36, 1338 (Fed. Cir. 2016) (emphasis added). "If the claims are not directed to an abstract idea [or other patent-ineligible concept], the inquiry ends. If the claims are 'directed to' an abstract idea, then the inquiry proceeds to the second step of the *Alice* framework." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016).

The second step in the *Alice* framework is to consider the elements of the claims "individually and 'as an ordered combination'" to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Id.* (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 78, 79 (2012)). In other words, the second step is to "search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (citing *Mayo*, 566 U.S. at 72–73).

Under step one of the *Alice* framework, we note, claims 14 and 21 are directed to advertisement selection based on aggregated population characteristics pertaining to aggregations of people. (App. Br. 14–16 (Claims App'x); Spec. ¶¶ 4, 25–26; Title.) The claim language, in light of

the Specification, thus supports the Examiner's determination that the claims are directed to the abstract idea of "targeted advertising," which is a fundamental economic practice. (Ans. 3–4.) Indeed, courts have regarded "targeted advertising," in various forms, as an abstract idea. *See Affinity Labs of Tex., LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1271 (Fed. Cir. 2016) ("tailoring of content based on information about the user—such as where the user lives or what time of day the user views the content—is an abstract idea that is as old as providing different newspaper inserts for different neighborhoods") (citing *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015)); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713 (Fed. Cir. 2014) (allowing a consumer to receive copyrighted media in exchange for watching a selected advertisement was an abstract idea); *Morsa v. Facebook, Inc.*, 77 F.Supp.3d 1007 (C.D. Cal. 2014), *aff'd*, 622 F. App'x 915 (Fed. Cir. 2015); and *OpenTV, Inc. v. Netflix Inc.*, 76 F.Supp.3d 886, 893 (N.D. Cal. 2014) ("The concept of gathering information about one's intended market and attempting to customize the information then provided is as old as the saying, 'know your audience.'"). Therefore, we are not persuaded that the Examiner erred in determining claims 14 and 21 are directed to an abstract idea under step one of the *Alice* framework.

Under step two of the *Alice* framework, however, we are persuaded that the Examiner erred in determining that claims 14 and 21 do not recite significantly more. Particularly, the Examiner states

> looking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually. There is no indication that the combination of elements improves the functioning of a computer or improves

> any other technology. Their collective functions merely provide conventional computer implementation.

(Ans. 4.) However, as Appellants argue (Reply. Br. 3–4)

> The Examiner has not even explained how dispatching an advertisement for rendering *at a service vehicle* would be conventional given that passengers/users who have checked-in/checked-out are not even on or in that service vehicle. A fair characterization would be that to render such advertisements (or even the mere dispatching of advertisements) to such a vehicle runs counter to the notion that passenger/users should be entertained/informed within the aircraft. Rather, such an approach, as described in the claim limitations, is odd, counter-intuitive and unconventional. . . .
>
> The output, in the claims 14, 21 and 22 is, for example "dispatch the at least one advertisement to the service vehicle for rendering". . . . it is unconventional to dispatch and/or render material for an audience on a vehicle that the audience does not even occupy.

That is, the ordered combination of steps in claims 14 and 21 performs targeted advertising for an aggregation of people (based on cumulative characteristics and flight details pertaining to the aggregation) by delivering/dispatching an advertisement "to [a] service vehicle [associated with the flight] for rendering[,] and such dispatching is responsive to detecting presence of the service vehicle" "near and outside an aircraft associated with the flight" using a GPS signal received at the service vehicle. (App. Br. 14–15 (claim 14).) The *ordered combination* of Appellants' steps thus recites *an advancement to the technology for delivering targeted advertising*.

Although "the limitations of the claims, taken individually, recite generic computer, network and Internet components, none of which is inventive by itself," "an inventive concept can be found in the non-

conventional and non-generic arrangement of known, conventional pieces." *Bascom Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–50 (Fed. Cir. 2016). Here, the ordered combination of steps in claims 14 and 21 is directed to a specific technological solution to a specific problem pertaining to targeted advertising, namely the problem of assessing receptiveness to various advertisements and then advertising to changing captive audiences in airport areas where network access may be limited or constrained. (*See* Spec. ¶¶ 1–3, 25–26, 57.)

Furthermore, claims 14 and 21 do not attempt to preempt every way of performing "targeted advertising"; rather claims 14 and 21 recite specific ways for delivery of targeted advertising by "dispatching an advertisement for rendering *at a service vehicle*" for viewing by "passengers/users who have checked-in/checked-out [but] are not even on or in that service vehicle." (Reply Br. 3; *see DDR Holdings, LLC, v. Hotels.com, L.P.*, 773 F.3d 1245, 1259 (Fed. Cir. 2014).)

Therefore, claims 14 and 21 include "additional features" that ensure the claims are "more than a drafting effort designed to monopolize [an abstract idea]." *Alice*, 134 S. Ct. at 2357.

We are persuaded of error in the rejection of claims 14 and 21 under 35 U.S.C. § 101. Accordingly, we do not sustain the Examiner's rejection under 35 U.S.C. § 101, of claims 14, 21, and 22.

New Grounds of Rejection of Claims 14, 21, and 22 under 35 U.S.C. § 101 as directed to software per se and printed matter

Pursuant to our authority under 37 C.F.R. § 41.50(b), we enter a new ground of rejection against claims 14, 21, and 22 under 35 U.S.C. § 101

because the claims are directed to software *per se* and, thus, are not within one of the four classes of statutory subject matter.

Particularly, claims 14, 21, and 22 are directed to "[a] computer program product for selecting an advertisement, the computer program product comprising: a computer readable non-transitory medium having *computer readable program code* stored thereon, the *computer readable program code* comprising: *program instructions*," and Appellants' Specification teaches the "computer readable program code" and "program instructions" may be *software*. (*See* Spec. ¶¶ 17, 20–21, 64–65.)[4] Regarding the claimed "computer program product," Appellants' Specification provides "the invention can take the form of *a computer program product accessible from a* computer-usable or computer-readable *medium providing program code* for use by or in connection with a computer or any instruction execution system." (*See* Spec. ¶ 65 (emphasis added).) Thus, the claimed "computer program product" does not exclude it being *software*. Additionally, the "computer readable non-transitory

[4] Appellants' Specification provides "the invention can take the form of a *computer program product accessible from* a computer-usable or computer-readable medium *providing program code* for use by or in connection with a computer or any instruction execution system," where the "[c]omputer *program code* for carrying out operations for aspects of the present invention may be *written in any combination of one or more programming languages*"; additionally, the "[p]rogram code embodied on a computer readable medium may be transmitted using any appropriate medium." (*See* Spec. ¶¶ 20–21, 65 (emphasis added).) The Specification further provides "one or more embodiments may take the form of . . . *an entirely software embodiment* (including firmware, *resident software, micro-code, etc.*)," and "[t]he *program code* may execute . . . *as a stand-alone software package*." (*See* Spec. ¶¶ 17, 21, 64 (emphasis added).)

medium" as claimed and described in Appellants' Specification also does not exclude it being *software*. (*See* Spec. ¶¶ 18–19; *see also infra* n. 5.)

Although claims 14 and 21 reference method steps (e.g., a step that "receive[s] a first check-in corresponding to at least one person," etc.), the claims are directed to a "computer program product" including "program code" for performing the method and not the method itself. Further, although claims 14 and 21 reference a "hardware processor" (in the last step of each claim), the claims are not directed to that processor. Rather, claims 14, 21, and 22 are directed to a computer program product comprising *program code*, i.e., software *per se*, and are, accordingly, not patent-eligible.

We additionally reject independent claims 14 and 21 and dependent claim 22 under 35 U.S.C. § 101 as directed to a mere arrangement of "printed matter" and merely claiming the content of "printed" information. *See In re Distefano*, 808 F.3d 845, 848 (Fed. Cir. 2015); *In re Miller,* 418 F.2d 1392 (CCPA 1969) (holding that claims directed to a mere arrangement of printed matter are patent-ineligible under 35 U.S.C. § 101); and *In re Jones,* 373 F.2d 1007 (CCPA 1967).

As discussed *supra*, claims 14 and 21 (and dependent claim 22) are directed to "[a] *computer program product* for selecting an advertisement, the computer program product comprising: *a computer readable non-transitory medium* having *computer readable program code stored thereon*, the computer readable program code comprising: program instructions." (App. Br. 14–16 (Claims App'x).) That is, the scope of claims 14, 21, and 22 is very broad and includes a computer-readable substrate ("computer readable non-transitory medium") with information in digital form ("computer readable program code" comprising "program instructions")

printed thereupon.[5] *See Miller*, 418 F.2d at 1392; *In re Lowry*, 32 F.3d 1579, 1583–84 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338 (Fed. Cir. 2004) (holding that claims directed to conveying data or meaning to a human reader rather than establishing a functional relationship between recorded data and a computer system are patent-ineligible under 35 U.S.C. § 101).

Accordingly, we reject claims 14, 21, and 22 under 35 U.S.C. § 101 as patent ineligible as software per se and as directed to "printed matter."

DECISION

For the above reasons, the Examiner's rejection of claims 14, 21, and 22 under 35 U.S.C. § 101 as being directed to an abstract idea without "significantly more" is reversed.

We enter new grounds of rejection against claims 14, 21, and 22 under 35 U.S.C. § 101.

37 C.F.R. § 41.50(b) provides that, "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

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[5] Appellants' Specification provides "[t]he *computer readable medium* may be *a computer readable signal medium* or *a computer readable storage medium*," where the "*computer readable storage medium may be any tangible medium* that can *contain, or store a program* for use by or in connection with an instruction execution system, apparatus, or device," and the "*computer readable signal medium may be any computer readable medium that is not a computer readable storage medium and that can communicate, propagate, or transport a program*." (Spec. ¶¶ 18–19 (emphasis added).) The Specification further provides the "[c]omputer program code for carrying out operations for aspects of the present invention may be written in any combination of one or more programming languages." (Spec. ¶ 21.)

37 C.F.R. § 41.50(b) also provides that the Appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new grounds of rejection to avoid termination of proceedings as to the rejected claims:

> (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new Evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner.
>
> (2) Request rehearing. Request that the proceeding be reheard under 37 C.F.R. § 41.52 by the Board upon the same Record.

REVERSED
37 C.F.R. § 41.50(b)