UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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Ex parte TARA CHAND SINGHAL
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Appeal 2019-000287
Application 12/287,610
Technology Center 3600
_____

Before CARL W. WHITEHEAD JR., JAMES B. ARPIN, and
MICHAEL M. BARRY, *Administrative Patent Judges*.

ARPIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Examiner's
final rejection of claims 1–20, all of the pending claims. Final Act. 2;
Appeal Br. 4.[2] We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] "Appellant" here refers to "applicant" as defined in 37 C.F.R. § 1.42.
Appellant identifies the real party-in-interest as Tara Chand Singhal. Appeal
Br. 4.

[2] In this Decision, we refer to Appellant's Appeal Brief ("Appeal Br.," filed
July 9, 2018) and Reply Brief ("Reply Br.," filed October 10, 2018); the
Final Office Action ("Final Act.," mailed February 9, 2018); the Examiner's
Answer ("Ans.," mailed August 10, 2018); and the originally-filed
Specification ("Spec.," filed October 12, 2008). Rather than repeat the
Examiner's findings and determinations and Appellant's contentions in their
entirety, we refer to these documents.

STATEMENT OF THE CASE

Appellant's claimed methods and systems relate to "a mobile wireless advertising platform that enables commercial message providers to implement a mobile wireless device based advertising campaign and for the mobile wireless device users to be exposed to such commercial messages." Spec. 2:3–6. As noted above, claims 1–20 are pending. Claims 1, 8, and 15 are independent. Appeal Br. 50–51 (claim 1), 52–53 (claim 8), 54 (claim 15) (Claims App.). Claims 2–7 depend directly or indirectly from claim 1, claims 9–14 depend directly or indirectly from claim 8, and claims 16–20 depend directly from claim 15. *Id.* at 51–55.

Claim 1, with disputed limitations emphasized, is representative.

1. A mobile wireless advertising system the system comprising:

a message server in a global computer and communication network, a mobile wireless device of the type of smart phones with a display and a touch screen operating in a cellular wireless communication network, and *a wireless mobile device user*;

the message server having a database server, wherein the database server pre-stores in a user database (i) identifications of pre-authorized wireless devices with their security associations that provide for mutual identification and authentication between the mobile device and the message server and (ii) mobile device user demographic data, wherein the mobile device user demographic data has been received into the message server from the mobile device user at the time of the mobile device user registering with the message server;

the message server having a message provider interface logic stored in a memory and operating in a CPU of the message server, wherein the interface logic being used by a message provider for entering commercial messages and for selecting demographic data applicable for each of the entered commercial messages, and the message server receiving and storing the

commercial messages with their associated demographics data in a message database of the database server;

a first logic stored in the memory and operating in the CPU of the message server, wherein the first logic used by the message server on a periodic basis for creating a single message file with contained therein in the single message file, multiple messages, for each of the pre-authorized mobile device users, pre-stored in the database server, from pre-stored messages that satisfy the pre-stored demographic data, wherein each message in the message file has a preprogrammed criterion, wherein the preprogrammed criterion characterizes each of these messages, with at least the attributes of message types of visual, text, or aural, and a time duration of the message, wherein the preprogrammed criterion is for use by the mobile device; and

a second logic stored in the memory and operating in the CPU of the message server, wherein the second logic periodically is used for communicating wirelessly with mobile wireless devices that have been pre-authorized in the user database and automatically downloading to each of the mobile devices, the single message file.

Id. at 50–51 (emphasis added).

REFERENCES AND REJECTIONS

The Examiner relies upon the following references in rejecting the pending claims:

Name[3]	Number	Published	Filed
Kim	US 2003/0050837 A1	Mar. 13, 2003	Feb. 27, 2001
Vitenson	US 2007/0116227 A1	May 24, 2007	Oct. 11, 2005
Bayraktar	US 2009/0265220 A1	Oct. 22, 2009	Apr. 18, 2008

The Examiner rejects claims 1–20 under 35 U.S.C. § 112, ¶ 2, as indefinite. Final Act. 2–3. The Examiner rejects claims 1–20 under 35

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[3] All reference citations are to the first named inventor only.

U.S.C. § 101 as directed to patent ineligible subject matter. *Id.* at 3–11. The Examiner rejects claims 1–15 and 17–20 under 35 U.S.C. § 103 as obvious over the combined teachings of Vitenson and Bayraktar (*id.* at 11–27) and claim 16 under 35 U.S.C. § 103 as obvious over the combined teachings of Vitenson, Bayraktar, and Kim (*id.* at 27–29).

We review the appealed rejections for error based upon the issues identified by Appellant, and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential). Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(iv). Unless otherwise indicated, we adopt the Examiner's findings in the Final Action and the Answer as our own and add any additional findings of fact for emphasis. For the reasons given below, we affirm rejections of the pending claims.

ANALYSIS

I. *Definiteness*

Claim 1 recites "a message server in a global computer and communication network, a mobile wireless device of the type of smart phones with a display and a touch screen operating in a cellular wireless communication network, and *a wireless mobile device user*." Appeal Br. 50 (Claims App.) (emphasis added). Claims 8 and 15 also encompass a "mobile device user." *Id.* at 52, 54. The Specification makes clear that such a "user" is a human. *E.g.*, Spec., 2:5–6, 4:3–4, 4:15–18, 5:21–24. Thus, we understand the Examiner to find that, although claims 1 and 15 purport to claim "systems" and claim 8 purports to claim a "method for a mobile advertising system," each claim positively recites a human. Consequently,

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the Examiner finds that claims 1, 8, and 15, and the claims dependent therefrom, are indefinite. *See In re Foster*, 438 F.2d 1011, 1015 (CCPA 1971) ("To the extent that appellants have declared their intention not to claim herein a procedure that could be carried out manually but nevertheless have presented claims 26 and 27 which are so broad as to embrace a manual computation, or at most one using an electric desk calculator, these claims fail to point out that which appellants regarded as their invention as is necessary under 35 U.S.C. § 112.").

Appellant contends that "[t]he specification is clear for what it teaches and that a claimed system does require a human operator, which in the claimed subject matter system is in the form a mobile device user *for interfacing with the system*." Appeal Br. 16 (emphasis added). Further, Appellant "disagrees with the Examiner position that a human operator cannot be part of a system because a system does necessary include a human operator in the form of the mobile device user" and asserts that "the mobile device user is an integral part of the system and this is a structural limitation and not a functional limitation as Examiner has argued." Reply Br. 3.

Paragraph 2 of Section 112 provided that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter *which the [applicant] regards as his invention*." (Emphasis added.) Appellant has done that here. Appellant's systems and methods require a mobile device user to interface with the system. Appeal Br. 16; Reply Br. 3. As discussed below, the positive recitation of a human may render the claims unpatentable for other reasons, but it does not render them indefinite. *In re Mahony*, 421 F.2d 742, 745 (CCPA 1970) (35 U.S.C. § 112, ¶ 2, "requires that an applicant distinctly

claim what *he* regards as his invention. To inject any question of statutory subject matter into that paragraph is to depart from its wording and to complicate the law unnecessarily. The proper consideration here is whether the appealed claims cover only what appellant regards as his invention." (emphasis in original)). Therefore, we disagree with the Examiner that positively reciting a human here renders the claim indefinite, and we do not sustain this rejection.

II. *Patent Ineligible Claims*

A. *Section 101*

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 U.S. Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Court's two-part 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."). According to the Court, 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)).

In *Diamond v. Diehr*, the claim at issue recited a mathematical formula, but the Court held that "a claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). Having said that, the 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.* at 191 (citing *Benson* and *Flook*). Nevertheless, the Court noted that "[i]t 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." *Id.* at 187; *see also BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1352 (Fed. Cir. 2016) (Even if the individual components were known, "an inventive concept can be found in the ordered combination of claim limitations that transform the abstract idea of filtering content into a particular, *practical application* of that abstract idea" (emphasis added).).

If the claim is "directed to" an abstract idea, we next "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.*

B. *Office Patent Eligibility Guidance*

In an effort to achieve clarity and consistency in how the Office

applies the Court's two-part test, the Office published revised guidance on

the application of § 101. *2019 Revised Patent Subject Matter Eligibility

Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019).[4] In Step One of our analysis, we

look to see whether the claims, as written, fall within one of the four

statutory categories identified in § 101. *Id.* at 53 ("Examiners should

determine whether a claim satisfies the criteria for subject matter eligibility

by evaluating the claim in accordance with the criteria discussed in

MPEP[5] § 2106, *i.e.*, whether the claim is to a statutory category (Step 1) and

the *Alice/Mayo* test for judicial exceptions (Steps 2A and 2B)"). Further, as

noted in MPEP § 2105(III), "Congress has excluded claims directed to *or

encompassing a human organism* from patentability. The Leahy-Smith

America Invents Act . . . states: Notwithstanding any other provision of law,

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[4] "All USPTO personnel are, as a matter of internal agency management,
expected to follow the guidance." *2019 Revised Patent Subject Matter
Eligibility Guidance*, 84 Fed. Reg. at 51; *see also October 2019 Update:
Subject Matter Eligibility*, 2 (Oct. 17, 2019) ("Note, the feedback received
was primarily directed to examination procedures and, accordingly, this
update focuses on clarifying practice for patent examiners. However, all
USPTO personnel are expected to follow the guidance.").

[5] All Manual of Patent Examining Procedure ("MPEP") citations herein are
to MPEP, Rev. 08.2017, January 2018.

no patent may issue on a claim directed to *or encompassing a human*

organism." (Emphases added.)

Under the guidance, we then look to whether the claim recites:

(1) Step 2A – Prong One: 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) Step 2A – Prong Two: additional elements that integrate the
judicial exception into a practical application (*see* MPEP
§§ 2106.05(a)–(c), (e)–(h)).

See 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg.

at 54–55 ("Revised Step 2A").

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, conventional" in the field (*see*
MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional
activities previously known to the industry, specified at a high
level of generality, to the judicial exception.

See id. at 56 ("*Step 2B: If the Claim Is Directed to a Judicial Exception,*

Evaluate Whether the Claim Provides an Inventive Concept.").

C. Step One – Claims Not Directed to Statutory Categories

Appellant's independent claim 8 and its associated dependent claims

are directed to methods (i.e., a "process"), and claims 1 and 15 and their

associated dependent claims are directed to systems (i.e., a "machine").

Appeal Br. 10–12 (Claims App.). Nevertheless, as the Examiner notes,

because each of these claims recites a "mobile device user," they improperly

encompass a human organism. Final Act. 11 (citing MPEP § 2105); Ans. 4.
We agree with the Examiner that, for this reason alone, the claims are patent
ineligible.[6]

D. Two-Part Alice/Mayo Test

1. Independent Claims 1, 8, and 15

a. Step 2A, Prong One – Claims Recite Abstract Idea

Applying the first part of the *Alice/Mayo* analysis (Step 2A), the
Examiner determines claim 1 is "directed to a concept of delivering targeted
messages to mobile users, . . . which is considered an abstract idea *using a
fundamental economic practice and using certain methods of organizing
human activity*." Final Act. 4 (emphasis added); *see id.* at 30 ("In the
rejection under 35 U.S.C. 101, the inventive concept was clearly identified
as abstract as being directed towards at least the exemplary 'fundamental
economic practice' . . ."). For the reasons given below, we agree.

In a system comprising a message server on a global computer and
communication network, such as the Internet, a mobile wireless device, and
a mobile wireless device user, claim 1 broadly recites the limitations of (1) a
database storing (i) the identities and authentications of pre-authorized
wireless devices and (ii) initial, wireless device user demographics ("the
message server having a database server, wherein the database server pre-
stores in a user database (i) identifications of pre-authorized wireless devices

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[6] The Examiner indicates that Appellant may amend the claims to remove
the recitation of a "mobile device user" in order to overcome the rejection
under 35 U.S.C. § 112, ¶ 2. Final Act. 3; *see* Appeal Br. 16. As discussed
above, we do not sustain that rejection. Nevertheless, such an amendment
would overcome this reason for rejection under 35 U.S.C. § 101.

with their security associations that provide for mutual identification and
authentication between the mobile device and the message server and
(ii) mobile device user demographic data, wherein the mobile device user
demographic data has been received into the message server from the mobile
device user at the time of the mobile device user registering with the
message server"); (2) a message provider interface logic allowing
commercial messages and associated demographic data to be entered and
stored together in the database ("the message server having a message
provider interface logic stored in a memory and operating in a CPU of the
message server, wherein the interface logic being used by a message
provider for entering commercial messages and for selecting demographic
data applicable for each of the entered commercial messages, and the
message server receiving and storing the commercial messages with their
associated demographics data in a message database of the database
server"); (3) a first logic periodically creating a single message file
containing a plurality of the commercial messages having a criterion
including visual, text, aural, and duration attributes ("a first logic stored in
the memory and operating in the CPU of the message server, wherein the
first logic used by the message server on a periodic basis for creating a
single message file with contained therein in the single message file,
multiple messages, for each of the pre-authorized mobile device users, pre-
stored in the database server, from pre-stored messages that satisfy the pre-
stored demographic data, wherein each message in the message file has a
preprogrammed criterion, wherein the preprogrammed criterion
characterizes each of these messages, with at least the attributes of message
types of visual, text, or aural, and a time duration of the message, wherein

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the preprogrammed criterion is for use by the mobile device"); and (4) a second logic periodically communicating with the wireless mobile device and downloading the single message file to the device ("a second logic stored in the memory and operating in the CPU of the message server, wherein the second logic periodically is used for communicating wirelessly with mobile wireless devices that have been pre-authorized in the user database and automatically downloading to each of the mobile devices, the single message file"). Appeal Br. 50–51 (Claims App.); *see* Final Act. 6. Independent claims 8 and 15 recite substantially similar limitations. Appeal Br. 52–53, 54 (Claims App.). The Specification explains, "it is also an objective of the embodiments to provide improved systems and methods for advertisers to target commercial messages and collect exposure data, for them to tailor their advertising campaigns, using cell phones as an advertising medium." Spec., 4:28–31; *see Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1272 (Fed. Cir. 2016) ("[The patent] claims the general concept of streaming user-selected content to a portable device. The addition of basic user customization features to the interface does not alter the abstract nature of the claims and does not add an inventive component that renders the claims patentable."); *Electric Power Grp., LLC v. Alstrom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("collecting information, analyzing it, and displaying certain results of the collection and analysis" is not patent eligible); *see also Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1319 (Fed. Cir. 2019) (citing *Electric Power Grp.* with approval).

Appellant contends,

> The USPTO interim guidelines dated July 15, 2015
> provide examples on how to judge abstract subject matter. These
> guidelines are clear as they can be that for the claimed subject
> matter to be judged abstract subject matter under Alice, the
> claims have to be directed to a mental concept or to steps that can
> be performed or be capable of being performed mentally, that is
> using pen and paper.

Appeal Br. 22. Nevertheless, neither the precedential decisions of the

U.S. Supreme Court or those of our reviewing court nor the Office's

guidelines limit patent ineligible abstract ideas to mental processes. *See*

2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. at

51–53 ("I. Groupings of Abstract Ideas"); *see also* Ans. 8 ("[T]he Examiner

respectfully notes that whether the claimed subject matter can be performed

mentally or manually via pen and paper is not the only test or categorical

example of what constitutes an abstract idea.").

Claim 1's limitations, under their broadest reasonable interpretation,

recite providing customized or targeted commercial messages (e.g.,

advertisements), such that a mobile device user can see the commercial

messages, which are fundamental economic practices and "commercial . . .

interactions (including . . . sales activities or behaviors . . .); [and] manag[e]

personal behavior or relationships or interactions between people[, e.g.,

message providers and mobile device users,] (including . . . following rules

or instructions)." Spec., 2:3–6, 4:28–31; *2019 Revised Patent Subject*

Matter Eligibility Guidance, 84 Fed. Reg. at 52. Such practices and

interactions fall within the broader category of "[c]ertain methods of

organizing human activity." *2019 Revised Patent Subject Matter Eligibility*

Guidance, 84 Fed. Reg. at 52. Thus, we determine that the rejected claims

recite an abstract idea, namely "[c]ertain methods of organizing human activity." Final Act. 4; Ans. 8.

> b. *Step 2A, Prong Two – Abstract Ideas Not Integrated Into Practical Application*

The Examiner finds:

> The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims do not amount to significantly more than the abstract idea. The claim (and similarly independent claims 8 and 15) recites the additional limitations of "message server", "smart phone", "cellular wireless communication network", "database", "interface", "logic", "memory", "CPU". The "message server", "smart phone", "cellular wireless communication network", "database", "interface", "logic", "memory", "CPU". The additional elements are recited at a high level of generality and are recited as performing generic computer functions routinely used in computer applications. "Generic computer implementation" is insufficient to transform a patent-ineligible abstract idea into a patent-eligible invention (*See Affinity Labs*, [838 F.3d 1266] (Fed. Cir. 2016), citing *Alice*, 134 S. Ct. at 2352, 2357) and more generally, "simply appending conventional steps specified at a high level of generality" to an abstract idea does not make that idea patentable (*See Affinity Labs*, [838 F.3d 1266] (Fed. Cir. 2016), citing Mayo, 132 S. Ct. at 1300). Moreover, "the use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter["] (*See FairWarning*[*IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096–97 (Fed. Cir. 2016)], citing *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1256 (Fed. Cir. 2014)). As such, the additional elements of the claim do not add a meaningful limitation to the abstract idea because they would be generic computer functions in any computer implementation. Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea). Looking at the limitations as an ordered combination adds nothing that is not already present when

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> looking at the elements taken individually. There is no indication
> that the combination of elements improves the functioning of the
> computer or improves any other technology. Their collective
> functions merely provide conventional computer
> implementation.[7]

Final Act. 7–8 (emphasis added); *see id.* at 31–32; Ans. 8–10.

Appellant contends the steps of claim 1 "are rooted in the technology
of computer systems and specifically the technology of servers." Appeal
Br. 27. In particular, Appellant contends

> the claims are directed to a system with system structure using
> servers on the global computer network with unique interfaces
> and including clients that interface with the servers of the global
> computer network for an e-commerce system:
>
> > for an e-commerce system, for solving a problem that had
> > not existed in the age prior to advent of computers; and thus
> > prima facie is not directed to an Alice abstract subject matter.

Id. at 17.

Initially, we note that this argument is inconsistent with the
Specification, which states that the interfaces are not unique, but are part of
the "prior art." Spec., 13:21–14:5; *but see id.* at 38:27–29 ("Message
provider interface 23 may include a combination of traditional currently
utilized or a future developed web-based approaches to interact with

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[7] We acknowledge that some of the considerations at Step 2A, Prong Two,
properly may be evaluated under the second part of *Alice/Mayo* analysis
(Step 2B of the Office's guidance). For purposes of maintaining consistent
treatment within the Office, we evaluate those considerations under first part
of the *Alice/Mayo* analysis (Step 2A of the Office's guidance). *See 2019
Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. at 55
nn.25, 27–32.

the message server 20 as well as interactions that are unique for this system 10."). To the extent any such interfaces are unique, Appellant fails to identify them or point out where they are recited in the rejected claims.

As the Examiner found, the claims do not recite the particular technology employed in the recited systems and methods, except in the most general terms. Final Act. 7–8, 31–32. The recited claim components are known or "in the prior art." *E.g.*, Spec., 3:22–27 ("mobile wireless device"), 13:21–14:5 ("interfaces"), 14:14–17 ("message database"), 19:7–9 ("technology . . . for integrating messages"), 19:11–14 ("mobile wireless devices or cell phones are general purpose computing devices"), 29:13–19 (technology for creation of commercial message formats, including video, audio, and text is "prior art"); 32:20–29 (technology for programming mobile devices to deliver messages is "prior art"). In the Specification, Appellant does not assert that the recited "servers" are different or operate differently from known servers. Further, the networks used to implement the systems also are known. *Id.* at 7:11–14 ("These embodiments of a system of the wireless advertising platform have a wireless device and a commercial message server, and use a currently utilized or a future developed wireless network that is provided by Telco companies such as AT&T, Verizon, Sprint, and other companies."). Consequently, taken individually or as an ordered combination, the Examiner finds, "the claimed subject matter as being directed towards an abstract idea, and the computer technology recited in the claim is a generic in nature, and merely serves to tie the abstract idea to a technological environment." Ans. 9; *see* Final Act. 8–9. We agree.

Appellant further asserts "the claimed subject matter is necessarily rooted in computer technology for servers to overcome a problem specifically in online commerce." Appeal Br. 20. However, we are not persuaded that this suggests a *technical* problem or its solution. Instead, as the Specification explains, the objective of the recited embodiments is "to provide improved systems and methods for advertisers to target commercial messages and collect exposure data, for them to tailor their advertising campaigns, *using cell phones as an advertising medium*." Spec. 4:28–31 (emphasis added); *see id.* at 2:3–6. Although technology is used in its solution, this is clearly a business, e.g., advertising, problem, rather than a technical problem.

The systems of claims 1 and 15 merely recite and the methods of claim 8 merely invoke generic hardware and generic data collecting, storage, retrieval, and display techniques, and the recited systems and methods are not linked to any particular machine (MPEP § 2106.05(b)) and merely apply generic computer hardware and software to facilitate the solution to an advertising problem (MPEP § 2106.05(f)). Final Act. 7–8, 31–32; *see 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. at 55 nn.27, 30; *see also* Ans. 13 ("**Contrary to Appellant's assertion, any generic computer would be capable of performing the steps upon execution of the programmed instructions, and none of the steps performed and/or limitations claimed represent anything 'significantly more' than the abstract idea itself, nor represent an actual improvement to the machine itself or to another technology/technical environment resulting in a modification of routine computer functions into non-routine computer functions.**"). Thus, the Examiner concludes:

The Applicant has failed to provide evidence on how the instant claims are rooted in technology such that the routine and conventional sequence of events is manipulated to yield a desired result. In fact, similar to the *Ultramercial*[*, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014)] decision cited by the court, the instant claims appear to offer nothing more than a generic online (i.e. Internet-based) system to perform its abstract business practice.

Ans. 17. We agree.

In view of Appellant's claim recitations and Specification and consistent with the Examiner's determinations, we are persuaded the rejected claims do not recite:

(i)   an improvement to the functioning of a computer;
(ii)   an improvement to another technology or technical field;
(iii)   an application of the abstract idea with, or by use of, a particular machine;
(iv)   a transformation or reduction of a particular article to a different state or thing; or
(v)   other meaningful limitations beyond generally linking the use of the abstract idea to a particular technological environment.

See MPEP §§ 2106.05(a)–(c), (e)–(h); *see also* Final Act. 8 ("There is no indication that the combination of elements improves the functioning of the computer or improves any other technology. Their collective functions merely provide conventional computer implementation."); Ans. 9–10 ("Contrary to Appellant's assertions, many of the claimed functional steps could be (and in some instances are) performed . . . using a general purpose computer as a tool to implement the abstract idea."), 12 ("overall specialized names or terminology for the system components involved fail to make [them] 'special', and these particular instances of 'components' are only performing the particular functions that are being implemented by

programmed software-based instructions using a generic processor."). Thus, we conclude that the rejected claims do not integrate the recited judicial exception into a practical application and that the claims are directed to an abstract idea.

c. *Step 2B – Not Significantly More Than the Abstract Idea*

Because we find that the claims are directed to an abstract idea and do not integrate that abstract idea into a practical application, we now consider whether the claims include additional limitations, such that the claims amount to significantly more than the abstract idea. As noted above, applying the second part of the *Alice/M*ayo analysis, the Examiner concludes

> the additional elements of the claim do not add a meaningful limitation to the abstract idea because they would be generic computer functions in any computer implementation. *Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea). 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 the computer or improves any other technology. Their collective functions merely provide conventional computer implementation.

Final Act. 8; Ans. 9–10. Appellant does not argue persuasively to the contrary. Appeal Br. 33–38; Reply Br. 3–5. As noted above, Appellant simply quotes passages from the Federal Circuit's decision in *DDR Holdings*, repeats the claim language, and provides unsupported conclusions about what the recited components, individually and as an ordered combination, amount to that is "significantly more" than the abstract idea, to which the claim is directed. Appeal Br. 36, 37–38. Appellant fails to

persuade us that the Examiner erred in finding that the rejected claims do not recite "significantly more" than the abstract idea. *See* Ans. 13–19.

Claims 1, 8, and 15 recite generic computer components performing generic computer functions, which, considered individually or as an ordered combination, are well-understood, routine, and conventional, and these claims do not recite "significantly more" than the identified abstract idea. Final Act. 8; *see* Spec., 3:22–27, 7:11–14, 13:21–14:5, 14:14–17, 19:7–9, 19:11–14, 29:13–19; 32:20–29 (discussed above). On this record, we agree with the Examiner that independent claims 1, 8, and 15 are directed to an abstract idea and fail to recite significantly more than the identified abstract idea. Thus, we are not persuaded that the Examiner erred in determining that these claims are patent ineligible, and we sustain that rejection.

2. *Dependent Claims 2–7, 9–14, and 16–20*

The Examiner determines that dependent claims 2–7, 9–14, and 16–20 also are directed to an abstract idea and fail to recite significantly more than the identified abstract idea. *See* Final Act. 3, 8–9. Appellant does not challenge the patent ineligibility rejection of the dependent claims separately from their base claims, independent claims 1, 8, and 15. Appeal Br. 38; Reply Br. 5. Therefore, on this record and for the reasons given above, we also sustain the patent ineligibility rejection of the dependent claims.

III. *Obviousness Over Vitenson and Bayraktar, Alone or in Combination with Kim*

A. *Independent Claims 1, 8, and 15*

As noted above, the Examiner rejects independent claims 1, 8, and 15 under 35 U.S.C. § 103 as obvious over the combined teachings of Vitenson and Bayraktar. Final Act. 12–17 (claims 1 and 8), 20–25 (claim 15). With

respect to claim 1, the Examiner determines that Vitenson teaches or suggests most of the claim limitations, but the Examiner acknowledges that Vitenson does not appear to explicitly disclose, "the message server having a database server that pre-stores in a user database (i) identifications of pre-authorized wireless devices <u>with their security associations that provide for mutual identification and authentication between the device and the message server</u>." *Id.* at 15–16 (quoting Claim 1) (underlining added by the Examiner)). However, the Examiner determines that Bayraktar

> teaches a targeted telecommunications ad system in which a user database contains information on the user community who subscribes to the sponsored system and [is] willing to receive advertisements during a telecommunications session. In addition, Bayraktar implements an Authentication-Authorization-Accounting (AAA) database which contains information such as user-ids, telephone numbers and encrypted passwords to authorize and authenticate users receiving the service . . . .

Id. at 16 (citing Bayraktar ¶¶ 66–67). The Examiner concludes that a person of ordinary skill in the art would have had reason to combine the teachings of Vitenson and Bayraktar to achieve the systems recited in claim 1, as well as the methods of claim 8. *Id.* at 16–17. The Examiner makes corresponding findings and conclusions regarding the systems of independent claim 15. *Id.* at 21–25.

Appellant contends that the Examiner erred in rejecting claims 1, 8, and 15 over the combined teachings of Vitenson and Bayraktar based on four contentions. Appeal Br. 39–49. For the reasons given below, we are not persuaded that the Examiner erred in rejecting these claims.

First, Appellant contends that the Examiner erred in interpreting "a message server," as recited in claim 1, such that it is allegedly taught or

suggested by Vitenson's disclosure. Appeal Br. 40–42. Specifically, Appellant contends that the Examiner's interpretation is inconsistent with the language of the claim, read in light of the Specification, as that language would be understood by a person of ordinary skill in the art. *Id.* at 40. Appellant asserts that this contention regarding the interpretation of "a message server" applies equally to claims 8 and 15. *Id.* at 42.

Nevertheless, beyond quoting the text of claim 1 regarding "a message server" in its entirety, Appellant offers no interpretation of "a message server" and does not cite to any portion of the Specification that would support a distinguishing interpretation of "a message server." *Id.* at 41–42. Further, Appellant does not indicate how a person of ordinary skill in the art would interpret the term "message server" or why such an interpretation would distinguish the systems of claim 1 over the combined teachings of Vitenson and Bayraktar. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) ("[T]he PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification.").

In particular, Appellant asserts "a person of ordinary skill in the art would not equate claimed 'message server' to a Vitenson telephony system and a Vitenson user making or receiving a telephone call and during the live voice communication being made to hear commercial messages while on hold." Appeal Br. 41. Nevertheless, Appellant fails to explain why a person of ordinary skill in the art would not equate the recited "message server" to

these teachings of Vitenson, especially given that claim 1 does not specify, other than that the single message file is downloaded "periodically," when commercial messages are delivered to a mobile device user. *See id.* at 50–51 (Claims App.).

The Examiner finds, "Appellant's argument that one would not equate the claimed 'message server' to Vitenson's telephony system is without any explanation, findings of fact or reasoning of 'why'. Therefore, this argument is considered spurious and conclusory in nature, and thus considered moot." Ans. 21. We agree that Appellant's contention is conclusory, and we find it unpersuasive. Instead, we are persuaded the Examiner has shown adequately that the combined teachings of Vitenson and Bayraktar teach or suggest the "message server," as recited in claim 1. *Id.*; *see* Final Act. 12–16.

Second, Appellant contends "a functional limitation must be evaluated and considered just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used." Appeal Br. 42–43 (citing MPEP § 2173.05(g)). Appellant appears to contend that, because features of the message server are described by their operation and function, the Examiner failed to treat them as structural limitations. *Id.* at 43. Thus, Appellant concludes that the Examiner improperly overlooked claim limitations distinguishing the recited message server over the combined teachings of Vitenson and Bayraktar. *Id.* at 43–45 (highlighting the text of claim describing the "message server" in

its entirety). Nevertheless, Appellant fails to identify what "functional" limitations of claim 1 the Examiner has misinterpreted or overlooked. *Id.*

The Examiner asserts that no limitation of claim 1 was overlooked in the rejection and that all of the limitations were addressed. Ans. 22; *see* Final Act. 32–33. The Examiner acknowledges that "the claimed subject matter is claimed as system claims, with structural elements accompanied by functional limitations," but asserts that, "as long as the prior art contains no structural difference is of the claimed device [sic], while also performing all the functions, the prior art will anticipate the claim." Ans. 22 (citing MPEP § 2114) (bolding omitted). We are not persuaded that the Examiner has misinterpreted or overlooked functional limitations in claim 1.

Third, Appellant contends:

> Examiner cited primary prior art of Vitenson directed to *an old style telephony system*. In contrast, claim 1, 8 and 15 are directed to a wholly different platform that of a message server, its functions and features and not to a telephony system and not to a live voice communication between telephone-end-users in that telephony system.
>
> Examiner cites secondary prior art of Bayraktar et al. Bayraktar is directed to teaching "Intelligent Multi-Channel Targeted Telecommunications Advertisement Campaign Manager".

Appeal Br. 43 (emphasis added). Consequently, identifying the recitation of the "message server" in its entirety in each of claims 1, 8, and 15, Appellant contends that the combined teachings of Vitenson and Bayraktar would not

make these limitations obvious to a person of ordinary skill in the art. *Id.* at 43–47.

Initially, we note that Appellant reads Vitenson's teachings too narrowly. Vitenson teaches "an old style telephony system," but is not limited to such systems. Vitenson discloses:

> The systems and methods of the present invention can be implemented through the use of any suitable hardware and/or software configured to communicate within one or more telephone networks such as, for example, the Public Switched Telephone Network (PSTN, sometimes referred to as Plain Old Telephone Service (POTS)), a mobile telephone network, a Voice-over-Internet-Protocol (VoIP) network, a Private Branch eXchange (PBX) network, any other suitable telephone network, their successor network(s), and/or any suitable combination of telephone networks.

Vitenson ¶ 4; *see id.*, Fig. 4 (depicting telephone communication over the Internet).

Appellant fails to identify with specificity what portions of claims 1, 8, and 15 would not be taught or suggested by the combined teachings of Vitenson and Bayraktar. Appeal Br. 43–47. Thus, we find Appellant's contention conclusory. Further, Appellant's contention is based on a misunderstanding of Vitenson's teachings. Consequently, we find Appellant's contention unpersuasive.

Fourth, Appellant contends that "[t]he claimed subject matter teaches away from the combination of the cited prior art by teaching 'a message server .... with all its structural and functional limitations,'" and "[the] Examiner with all due respect uses hindsight search, by searching for isolated elements of the claimed subject matter in the combination of cited prior art in an attempt to argue obviousness." *Id.* at 47. Thus, Appellant

concludes "[t]here is no teaching suggestion or motivation within the prior arts themselves to combine their teachings for the claimed subject matter." *Id.* at 49.

A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. *In re Gurley*, 27 F.3d 551, 53 (Fed. Cir. 1994); *see DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009) ("A reference does not teach away […] if it merely expresses a general preference for an alternative invention[.]"). Appellant identifies no specific teaching in Vitenson or Bayraktar that would discourage a person of ordinary skill in the art or lead a person of ordinary skill in the art away from the claimed systems and methods. We find Appellant's teaching away contention conclusory and unpersuasive. Ans. 23.

> Further,

> [a]ny judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper.

In re McLaughlin, 443 F.2d 1392, 1313–1314 (CCPA 1971). The Examiner has explained adequately the reasons for combining the teachings of Vitenson and Bayraktar to achieve the claimed systems and methods. Final

Act. 16, 25. We find Appellant's improper hindsight contention conclusory
and unpersuasive. Ans. 23–25.

In light of the conclusory nature of Appellant's contentions, we are
persuaded that the Examiner has shown sufficient reasons to have combined
the teachings of Vitenson or Bayraktar to achieve the claimed systems and
methods of claims 1, 8, and 15. Final Act. 16, 25; *see* Appeal Br. 49.

Consequently, we are not persuaded that the Examiner erred in
rejecting claims 1, 8, and 15 as rendered obvious over the combined
teachings of Vitenson and Bayraktar; and we sustain the rejection of those
claims.

B. *Dependent Claims 2–7, 9–14, and 16–20*

The Examiner determines that dependent claims 2–7, 9–14, and 16–20
are rendered obvious over the combined teachings of Vitenson and
Bayraktar, alone or in combination with the teachings of Kim. *See* Final
Act. 17–29. Appellant does not challenge the obviousness rejections of the
dependent claims separately from their base claims, independent claims 1, 8,
and 15. Appeal Br. 49; Reply Br. 38–39. Therefore, on this record and for
the reasons given above, we also sustain the obviousness rejections of the
dependent claims.

DECISIONS

1. The Examiner erred in rejecting claims 1–20 under 35 U.S.C. § 112,
   ¶ 2, as indefinite.
2. The Examiner did not err in rejecting:
   a. claims 1–20 under 35 U.S.C. § 101, as directed to patent ineligible
      subject matter;

b. claims 1–15 and 17–20 under 35 U.S.C. § 103, as obvious over the combined teachings of Vitenson and Bayraktar; and

c. claim 16 under 35 U.S.C. § 103, as obvious over the combined teachings of Vitenson, Bayraktar, and Kim.

3. Thus, on this record, claims 1–20 are not patentable.

CONCLUSION

Because we affirm at least one rejection of each claim, we affirm the Examiner's rejections of claims 1–20.

Claims Rejected	35 U.S.C. §	Basis/References	Affirmed	Reversed
1–20	112	Indefiniteness		1–20
1–20	101	Eligibility	1–20	
1–15, 17–20	103	Vitenson, Bayraktar	1–15, 17–20	
16	103	Vitenson, Bayraktar, Kim	16	
Overall Outcome			1–20	

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

<u>AFFIRMED</u>