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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JOHN KENYON GERKEN III

Appeal 2017-003323
Application 13/741,111
Technology Center 3700

Before JENNIFER D. BAHR, DANIEL S. SONG, and
SEAN P. O'HANLON, *Administrative Patent Judges*.

O'HANLON, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's November 4, 2015, final decision rejecting claims 1–30. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Appellant is the Applicant, International Business Machines Corp., which, according to the Appeal Brief, is the real party in interest. Appeal Br. 2.

SUMMARY OF THE INVENTION

Appellant's disclosure is directed to the recognition of a subject's emotions through facial and vocal cues. Spec. ¶ 1. Claims 1, 19, and 26 are independent. Claim 1, reproduced below from page 27 (Claims Appendix) of the Appeal Brief, is illustrative of the claimed subject matter:

1. A method of characterizing emotional cues, the method, implemented by an information handling system, comprising:
 - receiving, from a human subject, a set of real-time inputs at one or more receivers included in the information handling system, wherein the human subject is participating in a real-time, face-to-face interaction with a user of the information handling system, and wherein the received set of real-time inputs corresponds to the real-time face-to-face interaction between the human subject and the user, and wherein the information handling system is a portable system that is transported by the user;
 - comparing, by one or more processors included in the information handling system, the received set of real-time inputs to one or more predefined sets of emotional characteristics;
 - identifying an emotion being displayed by the human subject in response to the comparisons; and
 - providing feedback to the user of the information handling system regarding the identified emotion.

REJECTIONS

Claims 1–4, 9–17, 19–21, and 24–30 stand rejected as being directed to patent ineligible subject matter under the judicial exception to 35 U.S.C. § 101.²

² The rejection of claims 5–8, 18, 22, and 23 as directed to patent ineligible subject matter was withdrawn. Ans. 2.

Claims 1–4, 9–12, 16, 17, 19–21, and 24–30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cunningham.³

Claims 5–8, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cunningham and Tartz.⁴

Claims 13–15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cunningham and Cohen.⁵

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cunningham and Miller.⁶

Claims 1–30 stand provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 16–41 of U.S. Patent Application No. 13/526,713 (“the ’713 Application”).

ANALYSIS

Patent Ineligible Subject Matter

The Examiner rejects claims 1–4, 9–17, 19–21, and 24–30 as being directed to judicially excepted subject matter—namely, “the abstract idea of a method of organizing human activities, or an idea of itself.” Final Act. 2–3. In rejecting the claims, the Examiner determines that “the claimed invention is directed to a process for managing or assessing a subject’s emotions, which is an abstract idea of a method of organizing human activities, or an idea of itself.” *Id.* at 3. The Examiner further determines

³ US 2011/0295392 A1, published Dec. 1, 2011.

⁴ US 2013/0063256 A1, published Mar. 14, 2013.

⁵ US 2008/0254419 A1, published Oct. 16, 2008.

⁶ US 2003/0068057 A1, published Apr. 10, 2003.

that “the abstract idea concept of the claimed invention is similar to one or more examples described according to the [July 2015 Update: Subject Matter Eligibility] guideline, such as: comparing new and stored information and using rules to identify options.” Ans. 4 (emphasis omitted). The Examiner further determines that “each dependent claim is directed merely to a function(s) that a generic computer serves to perform; and consequently, none of the claims amounts to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 5–6.

Independent Claims 1, 19, and 26

Appellant contests the rejection of independent claims 1, 19, and 26 collectively. Appeal Br. 7–14. We select claim 1 as representative, treating claims 19 and 26 as standing or falling with representative claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

In contesting the rejection, Appellant argues that the claimed subject matter is not abstract and the Examiner’s characterization of claim 1 as abstract is conclusory and lacks sufficient evidentiary support. *See* Appeal Br. 7–14; *see also id.* at 8 (“[T]he Examiner has not cited any reference or taken Official Notice that Appellant’s claims are directed to an abstract idea.”), 11 (“The claims of the present Application are directed to improvements in the field of communications”), 13 (“Appellant’s claims are clearly not an attempt to ‘tie up’ any judicial exception.”); *and* Reply Br. 2–7.

Appellant further argues that even if the claims are directed to a patent-ineligible abstract idea, the additional claim elements—namely, the receiving and comparing the received inputs with predefined sets of

emotional characteristics using a processor and identifying an emotion in response to the comparisons—amount to significantly more than the abstract idea. Appeal Br. 11–13.

Section 101 provides that a patent may be obtained for “any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.” 35 U.S.C. § 101. The Supreme Court has long recognized, however, that § 101 implicitly excludes “laws of nature, natural phenomena, and abstract ideas” from the realm of patent-eligible subject matter, as monopolization of these “basic tools of scientific and technological work” would stifle the very innovation that the patent system aims to promote. *Alice Corp. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2354 (2014) (quoting *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576[, 589] (2013)); see also *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66[, 72–79] (2012); *Diamond v. Diehr*, 450 U.S. 175, 185 (1981).

The Supreme Court has instructed us to use a two-step framework to “distinguish[] patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Alice*, 134 S. Ct. at 2355. At the first step, we determine whether the claims at issue are “directed to” a patent-ineligible concept. *Id.* If they are, we then “consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (quoting *Mayo*, [566 U.S. at 79]). This is the search for an “inventive concept”—something sufficient to ensure that the claim amounts to “significantly more” than the abstract idea itself. *Id.* (quoting *Mayo*, [566 U.S. at 72–73]).

Starting at step one, we must first examine the . . . “claimed advance” to determine whether the claims are directed to an abstract idea. *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). In cases involving software innovations, this inquiry often turns on whether the claims focus on “the specific asserted improvement in computer

capabilities . . . or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016).

Finjan, Inc. v. Blue Coat Systems, Inc., 879 F.3d 1299, 1303 (Fed. Cir. 2018) (parallel citations omitted).

Alice Step One

Turning to *Alice* step 1, instead of using a definition of an abstract idea, “the decisional mechanism courts now apply is to examine earlier cases in which a similar or parallel descriptive nature can be seen—what prior cases were about, and which way they were decided.” *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016) (citing *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)). Our reviewing court has said that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (“The concept of data collection, recognition, and storage is undisputedly well-known.”). Additionally, the collection of information and analysis of information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power*, 830 F.3d at 1353. Similarly, “collecting, displaying, and manipulating data” is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Our reviewing court has also held that “analyzing information by steps people [can] go through in their minds, or by mathematical algorithms, without more [are] mental processes within the abstract-idea category.” *Synopsis*,

Inc. v. Mentor Graphics Corp., 839 F.3d 1138, 1146 (Fed. Cir. 2016) (quoting *Elec. Power*, 830 F.3d at 1354).

Here, claim 1 recites a portable “information handling system” that includes one or more receivers and one or more processors. Appeal Br. 27 (Claims App.). Appellant’s Specification describes this information handling system as a general purpose computer. *See, e.g.*, Spec. ¶ 43 (“the various methods described are conveniently implemented in a general purpose computer selectively activated or reconfigured by software”). Claim 1 further recites the following steps:

- receiving, from a human subject, a set of real-time inputs . . . wherein the received set of real-time inputs corresponds to [a] real-time face-to-face interaction between the human subject and the user . . . ;
- comparing . . . the received set of real-time inputs to one or more predefined sets of emotional characteristics;
- identifying an emotion being displayed by the human subject in response to the comparisons; and
- providing feedback to the user of the information handling system regarding the identified emotion.

Appeal Br. 27 (Claims App.). In other words, claim 1 merely requires collecting (receiving inputs), analyzing (comparing inputs to predefined data sets and identifying an emotion), and transmitting (providing feedback) information or data using a generic computer. As with the cases cited above, claim 1, therefore, is directed to an abstract idea.

Alice Step Two

For the second step of our analysis, we determine whether the limitations present in the claims represent a patent-eligible application of the abstract idea. *Alice*, 134 S. Ct. at 2357. For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of this analysis, it must involve more than performance of “well-

understood, routine, [and] conventional activities previously known to the industry.” *Id.* at 2359 (quoting *Mayo*, [566 U.S. at 73] (internal quotation marks and brackets omitted)). Further, “the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention.” *Id.* at 2358.

Content Extraction, 776 F.3d at 1347–48.

As noted above, claim 1 merely requires collecting, analyzing, and transmitting information using a generic computer. There are no additional elements to transform the nature of the claim into a patent-eligible application. *See Alice*, 134 S. Ct. at 2359 (“Considered ‘as an ordered combination,’ the computer components of petitioner’s method ‘ad[d] nothing ... that is not already present when the steps are considered separately.’” (citation omitted)).

Nor are we persuaded by Appellant’s argument that claim 1 is “directed to improvements in the field of communications.” Appeal Br. 11; *see also* Reply Br. 2–7 (regarding an alleged improvement in the field of computer-assisted communications). Contrary to Appellant’s assertions, claim 1 merely uses a generic computer as a tool to perform the steps of collecting, analyzing, and transmitting information. Claim 1 is unlike the claims at issue in *Enfish*. In that case, the court “relied on the distinction made in *Alice* between, on one hand, computer-functionality improvements and, on the other, uses of existing computers as tools in aid of processes focused on ‘abstract ideas.’” *Elec. Power*, 830 F.3d at 1354 (citing *Enfish*, 822 F.3d at 1335–36). For the reasons provided above, claim 1 falls into the latter category.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 1, 19, and 26 as being directed to patent ineligible subject matter.

Dependent Claims 2–4, 9–17, 20, 21, 24, 25, and 27–30

Appellant argues that “the Examiner has not provided bases for the rejections of the dependent claims under 35 U.S.C. § 101.” Appeal Br. 14. Appellant presents arguments for each dependent claim, which are addressed below.

Claims 2, 20, and 27

Appellant contests the rejection of claims 2, 20, and 27 collectively. *Id.* at 15–16. We select claim 2 as representative per 37 C.F.R. § 41.37(c)(1)(iv). Claim 2 depends directly from claim 1 and recites “identifying an intensity of the emotion that is being displayed in response to the comparisons; and providing additional feedback to the user regarding the identified intensity.” *Id.* at 27 (Claims App.).

Appellant argues “[i]dentifying both an emotion and the intensity of the emotion, and then providing additional feedback to a user regarding the intensity of the identified emotion is much more than the alleged abstract idea of ‘managing or assessing a subject’s emotions.’” *Id.* at 15–16.

The recited “identifying” step is merely the analysis of information using the generic computer system. The recited “providing” step is merely the transmission of the analyzed information using the generic computer system. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 2 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 37–38.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 2, 20, and 27 as being directed to patent ineligible subject matter.

Claims 3, 4, 21, 28, and 29

Appellant contests the rejection of claims 3, 4, 21, 28, and 29 collectively. Appeal Br. 16. We select claims 3 and 4 as representative per 37 C.F.R. § 41.37(c)(1)(iv). Claim 3 depends directly from claim 1 and recites “wherein the set of real-time inputs are visual inputs” and “receiving the visual inputs at a camera accessible by the information handling system, wherein the camera is directed at the human subject.” *Id.* at 27 (Claims App.). Claim 4 also depends directly from claim 1 and recites “wherein the set of real-time inputs are audio inputs” and receiving one or more vocal cues from the human subject via a microphone accessible by the information handling system. *Id.* at 28 (Claims App.).

Appellant argues that “[a] camera and a microphone are not abstract ideas.” *Id.* at 16.

A camera is a component of a generic computer system. *See, e.g.*, Spec. ¶¶ 10, 43. A microphone is also a component of a generic computer system or is part of the camera. *See, e.g.*, Spec. ¶¶ 11, 15, 17, 24. The recited “receiving” steps are merely the collection of information using the generic computer system. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claims 3 and 4 are “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 38–39.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 3, 4, 21, 28, and 29 as being directed to patent ineligible subject matter.

Claims 9, 10, and 24

Appellant contests the rejection of claims 9, 10, and 24 collectively. Appeal Br. 17. We select claim 9 as representative per 37 C.F.R. § 41.37(c)(1)(iv). Claim 9 depends directly from claim 1 and recites “wherein the feedback is provided to the user using a speaker output that provides an audible feedback to the user” and “indicating the identified emotion as set of tones based on the identified emotion.” *Id.* at 29 (Claims App.).

Appellant argues that “[u]sing a speaker to provide audible feedback, i.e. higher and lower pitched tones, is not an abstract idea.” *Id.* at 17.

A speaker is a component of a generic computer system. *See, e.g.,* Spec. ¶¶ 11, 43. The recited “provid[ing] audible feedback” and “indicating” steps are merely the categorization and transmission of information using the generic computer. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 9 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 39–40. Furthermore, we note using higher and lower pitched tones appears to be a conventional manner of expressing emotions, and Appellant does not persuasively apprise us otherwise.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 9, 10, and 24 as being directed to patent ineligible subject matter.

Claims 11, 12, and 25

Appellant contests the rejection of claims 11, 12, and 25 collectively.
Appeal Br. 18. We select claim 11 as representative per 37 C.F.R.

§ 41.37(c)(1)(iv). Claim 11 depends directly from claim 1 and recites:

wherein the feedback is provided to the user using a display device that provides a visible feedback to the user, the method further comprising:

displaying a positive visible cue on the display device in response to a positive emotion being identified; and

displaying a negative visible cue on the display device in response to a negative emotion being identified.

Id. at 29 (Claims App.).

Appellant argues that “[u]sing a display device to provide visible feedback to the user is not an abstract idea.” *Id.* at 18.

A display device is a component of a generic computer system. *See, e.g.,* Spec. ¶¶ 8, 43. The recited “displaying” steps are merely the categorization and transmission of information regarding such categorization using the generic computer system. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 11 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 40–41.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 11, 12, and 25 as being directed to patent ineligible subject matter.

Claims 13 and 14

Appellant contests the rejection of claims 13 and 14 collectively.
Appeal Br. 18–19. Claim 13 depends directly from claim 1 and recites:

receiving, from the user, a response corresponding to the human subject, wherein the response is an emotion identification by the user, and wherein the response is received before the feedback is provided to the user; and
storing the user's response and the received set of real-time inputs in a data store.

Id. at 30 (Claims App.). Claim 14 further recites, *inter alia*, performing a subsequent analysis of the interactions between the user and the human subject. *Id.*

Appellant argues that “receiving a response from a user, where the response is an emotion identification, storing the received response, and then performing a subsequent analysis of the interactions between the user and the human subject is significantly more than an abstract idea.” *Id.* at 19.

A data store is a component of a generic computer system. *See, e.g.*, Spec. ¶¶ 14, 43. The recited “receiving” and “storing” steps are merely the collecting and storing of information using the generic computer system. The step of performing subsequent analysis of the interactions is recited as comprising various other steps of retrieving, displaying, and providing various information, each of which is performed by the generic computer system. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 13 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 41–42.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 13 and 14 as being directed to patent ineligible subject matter.

Claim 15

Claim 15 depends directly from claim 1 and recites:

receiving, from the user, a response corresponding to the human subject, wherein the response is an emotion identification by the user, and wherein the response is received before the feedback is provided to the user;

storing the user's response and the received set of real-time inputs in a data store, wherein a plurality of sets of real-time inputs and a plurality of user responses related to the interactions between the user and a plurality of human subjects are stored in the data store over a period of time;

generating a trend analysis based on a plurality of comparisons between the plurality of user responses and the identified emotions corresponding to the plurality of sets of real-time inputs; and

identifying, based on the trend analysis, one or more emotion types that are difficult for the user to identify.

Appeal Br. 30–31 (Claims App.).

Appellant argues that “‘generating a trend analysis’ in order to identify ‘based on the trend analysis, one or more emotion types that are difficult for the user to identify’ is significantly more than the alleged abstract idea of managing or assessing a subject’s emotions.” *Id.* at 19.

A data store is a component of a generic computer system. *See, e.g.*, Spec. ¶¶ 14, 43. The recited “receiving,” “storing,” “generating,” and “identifying” steps are merely the collecting, storing, and analyzing of information using the generic computer system. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 15 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 43.

Accordingly, for the foregoing reasons, we sustain the rejection of claim 15 as being directed to patent ineligible subject matter.

Claims 16 and 17

Appellant contests the rejection of claims 16 and 17 collectively. Appeal Br. 18. Claim 16 depends directly from claim 1 and recites “wherein the feedback is provided via a device worn by the user,” and claim 17 recites that the worn device is an ear bud. *Id.* at 31 (Claims App.).

Appellant argues that “[a] device worn by a user, specifically an ear bud . . . can not be said to be an abstract idea.” *Id.* at 20.

The recited feedback device is a speaker device, and a component of a general purpose computer system. *See, e.g.*, Spec. ¶¶ 15, 43. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 16 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 43–44.

Accordingly, for the foregoing reasons, we sustain the rejection of claims 16 and 17 as being directed to patent ineligible subject matter.

Claim 30

Claim 30 depends directly from claim 26 and recites “wherein the feedback is provided by a feedback component selected from the group consisting of a thermal output unit, a vibrating output unit, a speaker, and a display.” Appeal Br. 34 (Claims App.).

Appellant argues that “[a] thermal output unit, a vibrating output unit, a speaker, and a display are all concrete, physical devices that can not be said to be an ‘abstract idea.’” *Id.* at 20.

As discussed above, a speaker is a component of a general purpose computer system. *See, e.g.*, Spec. ¶¶ 8, 11, 15, 43. Appellant also discloses that a display is a component of a general purpose computer system. *Id.* ¶¶ 8, 43. Thus, for the same reasons as discussed above regarding the rejection of claim 1, we agree with the Examiner that claim 30 is “directed merely to a function(s) that a generic computer serves to perform” and does not “amount[] to significantly more than the abstract idea itself.” Final Act. 5; *see also* Ans. 44.

Accordingly, for the foregoing reasons, we sustain the rejection of claim 30 as being directed to patent ineligible subject matter.

Obviousness over Cunnington

Appellant contests the rejection of claims 1–4, 9–12, 16, 17, 19–21, and 24–30 collectively. Appeal Br. 20–24. We select claim 1 as representative per 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Cunnington discloses a method of characterizing emotional cues substantially as recited in claim 1, but “does not explicitly describe[] comparing the received set of real-time inputs to one or more predefined sets of emotional characteristics.” Final Act. 11–12 (citing Cunnington ¶¶ 22, 23, 32, 41, 44, 48, 50, 55, 74). The Examiner finds that Cunnington teaches that the system stores predetermined thresholds and other factors, thereby enabling the system to generate relevant feedback to the presenter. *Id.* at 12 (citing Cunnington ¶ 60). Thus, the Examiner reasons, Cunnington “suggests, at least implicitly, the implementation of an algorithm that compares the audience member’s input with a relevant threshold(s) of emotional characteristics, thereby generating

a relevant feedback(s) in response to the comparisons.” *Id.* The Examiner also reasons that it would have been obvious to one of ordinary skill in the art to modify Cunnington’s system to incorporate

functionality that involves one or more algorithms for evaluating one or more emotional attributes of the participant(s) according to one or more corresponding emotional thresholds, in order to enable the system to easily and accurately identify the emotional state(s) of one or more participants and generate the most appropriate feedback(s) to the presenter, so that the presenter would modify his/her interaction style to mend the comforts of one or more of the participants; thereby making the system more comprehensive and efficient to all users.

Id. at 12–13.

Appellant traverses, first arguing that Cunnington focuses on non-face-to-face interactions. Appeal Br. 21. According to Appellant, “the examples discussed in Cunnington, such as a group of people in a conference setting . . . is not a real-time, face-to-face interaction between a human subject and a user of an information handling system” because “[a]n interaction where the participants can not directly observe each other is not a face-to-face interaction.” *Id.* at 22; *see also* Reply Br. 7–9.

A claim under examination is given its broadest reasonable interpretation consistent with the underlying specification. *See In re American Acad. of Science Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). In the absence of an express definition of a claim term in the specification or a clear disclaimer of scope, the claim term is interpreted as broadly as the ordinary usage of the term by one of ordinary skill in the art would permit. *See In re ICON Health & Fitness, Inc.*, 496 F.3d 1374, 1379 (Fed. Cir. 2007); *see also In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

Appellant does not direct us to, nor does our review reveal, any specialized definition of “face-to-face” or “interaction” in the Specification. Appellant’s arguments fail to apprise us of error in the Examiner’s determination that Cunnington discloses face-to-face presenter-audience interaction. Indeed, Cunnington explicitly discloses such interaction: “The technologies described herein are generally directed towards detecting reactions of one or more participants *during interaction* with others to provide feedback for improving communication.” Cunnington ¶ 22 (emphasis added). Moreover, Cunnington explicitly discloses that such interactions can be “smaller in-person group meetings, . . . ad hoc hallway interactions, and the like” (*id.* ¶ 23), and, thus, discloses real-time, face-to-face interaction. *See* Ans. 45–50.

Appellant next argues that “Cunnington does not disclose ‘a portable system that is transported by the user.’” Appeal Br. 22; *see also* Reply Br. 9–10.

This argument is unpersuasive for the reasons set forth by the Examiner. *See* Final Act. 35–36 (citing Cunnington ¶ 74); Ans. 50–51 (citing Cunnington ¶ 74). Notably, Cunnington discloses that “information [detected by sensors] may be passed to a computing device . . . for analysis and generating feedback” (*id.* ¶ 47), and that such computing devices “may be any of . . . laptops, mobile computing devices, hand-held computing devices, cell phones, smart phones, personal digital assistants, or other suitable computing devices” (*id.* ¶ 74). We further note that it has been held that “it is not regarded as inventive to merely make an old device portable or movable without producing any new and unexpected result.” *In re Lindberg*, 194 F.2d 732, 735 (CCPA 1952).

Finally, Appellant argues that it would not be obvious to add predefined sets of emotional characteristics, to which the received real-time inputs are compared, to Cunnington’s device. Appeal Br. 23–24; *see also* Reply Br. 10. Appellant argues that the rejection is based on hindsight reasoning. Appeal Br. 24.

Appellant’s arguments are presented in conclusory fashion with no supporting evidence or persuasive technical reasoning, and thus fail to apprise us of error in the Examiner’s rationale. For example, Appellant states that “Appellant does not agree that a threshold, which could be something as simple as a number of people who are tapping (Cunnington, paragraph 0044), is equivalent to ‘predefined sets of emotional characteristics.’” *Id.* This does not apprise us of error, especially given that the Examiner relies on paragraph 60 of Cunnington (*see* Final Act. 12, 36), which provides, in relevant part: “[T]he feedback may include alerts or messages 524 when certain audience reactions are detected. Such messages may be based upon predetermined thresholds or other factors.” (boldface omitted). Appellant fails to apprise us of error in the Examiner’s conclusion that Cunnington, therefore, “teaches that the system stores predetermined thresholds and other factors, thereby enabling the system to generate one or more relevant feedbacks to the presenter; for example, a message to the presenter when the audience confusion level reaches a certain threshold.” Final Act. 36 (citing Cunnington ¶ 60); *see also* Ans. 51–54. In other words, Appellant fails to persuade us of error in the Examiner’s determination that the predetermined thresholds or other factors constitute predefined sets of emotional characteristics. Moreover, Appellant fails to explain why the example threshold cited by Appellant (“tapping”) does not qualify as an

emotional characteristic—we note that the Specification sets forth that the emotional characteristics include body language cues. *See* Spec. ¶ 18. Nor are we persuaded that the Examiner relies on impermissible hindsight reasoning, as the Examiner states a rationale for the modification that we determine is supported adequately by sufficient facts. *See In re Cree*, 818 F.3d 694, 702 n.3 (Fed. Cir. 2016).

Accordingly, for the foregoing reasons, we sustain the rejection of claims 1–4, 9–12, 16, 17, 19–21, and 24–30 as being unpatentable over Cunningham.

Obviousness over Cunningham and Tartz

Appellant does not make any substantive argument regarding the rejection of dependent claims 5–8, 22, and 23 apart from the arguments advanced with respect to claim 1 and discussed above. *See* Appeal Br. 24–25. Therefore, we sustain the rejection of claims 5–8, 22, and 23 as being unpatentable over Cunningham and Tartz.

Obviousness over Cunningham and Cohen

Appellant contests the rejection of claims 13–15 collectively. *Id.* at 25. We select claim 13 as representative per 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds that Cunningham does not explicitly disclose the recitations of claim 13. Final Act. 26. The Examiner finds that Cohen discloses a system that prompts a user to input responses regarding perceived feelings or emotions related to a participant, and reasons that it would have been obvious to one of ordinary skill in the art to modify Cunningham’s system to incorporate

functionality that presents one or more questions to the user regarding a given interaction (e.g. observed feelings or emotions of the participant during the interaction, etc.) and evaluates the user's responses, thereby generating one or more performance data to the user (and/or facilitator, etc.), in order to help the user to develop/improve one or more skills that allow him/her to easily and accurately identify one or more characteristics of other user(s) during interactions so that the user would be more successful; thereby making the system more beneficial to the user.

Id. at 26–27 (citing Cohen ¶¶ 133, 136, 137, 141, 144); *see also* Ans. 55–56 (citing Cohen ¶¶ 113, 133, 137, 141, 144).

Appellant argues that “there is nothing in the cited sections of Cohen that discloses receiving ‘an emotion identification by the user.’” Appeal Br. 25. Appellant also asserts that “identifying an error or repeating guideline language, as disclosed by Cohen, is not the same as receiving ‘an emotion identification.’” Reply Br. 12.

We are not persuaded by Appellant's arguments. As correctly noted by the Examiner (*see* Ans. 55–56), Cohen discloses testing a user for listening mastery and listening comprehension, which “can enhance emotional intelligence (the ability to understand and assess what someone is feeling and to deal with those feelings).” Cohen ¶ 141. Thus, by testing for emotional intelligence, Cohen at least suggests receiving an emotion identification from the user.

Moreover, the Examiner's rejection does not rely on Cohen to teach the recited emotion identification; rather, the rejection relies on Cohen to teach querying a user and providing feedback. *See* Final Act. 26–27. The rejection combines such teaching of Cohen with Cunnington, which Appellant describes as “teach[ing] sensing and analyzing reaction

information of participants to an interaction.” Appeal Br. 21. The rejection relies on Cunnington to disclose identifying an emotion displayed by a human subject. *See* Final Act. 11–12. Appellant’s attacks on Cohen, individually, fail to apprise us of error in the Examiner’s determination that the combination of Cunnington and Cohen discloses the subject matter of claim 16. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (“Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references.”).

Accordingly, for the foregoing reasons, we sustain the rejection of claims 13–15 as being unpatentable over Cunnington and Cohen.

Obviousness over Cunnington and Miller

Appellant does not make any substantive argument regarding the rejection of dependent claim 18 apart from the arguments advanced with respect to claim 1 and discussed above. *See* Appeal Br. 26. Therefore, we sustain the rejection of claim 18 as being unpatentable over Cunnington and Miller.

Double Patenting

The Examiner provisionally rejects claims 1–30 on the ground of non-statutory obviousness-type double patenting, finding them not to be patentably distinct from claims 16–41 of the ’713 Application. Final Act. 30–31.

The ’713 Application has been abandoned. *See* ’713 Application, Notice of Abandonment (mailed Apr. 19, 2018). Therefore, we do not sustain the rejection of claims 1–30 on the ground of non-statutory

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obviousness-type double patenting as being unpatentable over claims 16–41 of the '713 Application.

DECISION

The Examiner's decision to reject claims 1–30 based on 35 U.S.C. §§ 101 and 103 is affirmed.

The Examiner's decision to reject claims 1–30 on the ground of non-statutory obviousness-type double patenting is reversed.

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).

AFFIRMED