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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte LUCIO BORTOLOTTI, AGOSTINO COLUSSI, VIRGINIA D. HILL, PETER H. SOHN, and SCOTT A. WILL

Appeal 2017-010946
Application 12/114,728
Technology Center 3600

Before JOHNNY A. KUMAR, JUSTIN BUSCH, and LINZY T. McCARTNEY, *Administrative Patent Judges*.

McCARTNEY, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants seek review under 35 U.S.C. § 134 of the Examiner's final rejection of claims 1–23. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

BACKGROUND

This patent application concerns analyzing a product's "consumability," that is, "how well the product suits the purchaser." Specification ¶¶ 2, 20, filed May 2, 2008 ("Spec."). Claims 1, 17, 18, and 23 are independent. Claim 1 illustrates the claimed subject matter:

> 1. A method for analyzing a product's consumability comprising:
>
> with a processor, gathering a plurality of customer service records, said customer service records containing customer service data including records of calls made by customers to a technical support facility to address issues with said product that a calling customer has experienced;
>
> defining a plurality of consumability characteristics regarding said product, wherein said consumability characteristics are arranged in a hierarchy of consumability characteristics including, first, market drivers that have been determined to drive a market for said product, second, consumability attributes defined within a market driver and, third, consumability criteria defined within a consumability attribute; and
>
> with the processor, mapping said customer service records of calls made by customers to said technical support facility to said hierarchy of consumability characteristics; and
>
> with the processor, generating a description of a distribution of said customer service records among said plurality of consumability characteristics.

Appeal Brief 43, filed March 14, 2017 ("App. Br.").

REJECTIONS

Claims	Basis	References
1–23	§ 101	
1, 2, 5–10, 12, 13, 21, and 22	§ 103	Crawford[1] and Wang[2]
3	§ 103	Crawford, Wang, and Reisman[3]
4	§ 103	Crawford, Wang, Reisman, and Silvain[4]
11	§ 103	Crawford, Wang, and Conway[5]
14	§ 103	Crawford, Wang, and Tsai[6]
15 and 16	§ 103	Crawford, Wang, Tsai, and Gupta[7]
17–20	§ 103	Crawford, Gupta, Wang, and Bushey[8]
23	§ 103	Crawford, Silvain, Conway, Wang, and Bushey

DISCUSSION

We have reviewed the Examiner's rejections and Appellants' arguments. We disagree with Appellants that the Examiner erroneously

[1] Crawford et al. (US 2005/0114106 A1; May 26, 2005).
[2] Wang et al., *Product-Driven Supply Chain Selection Using Integrated Multi-Criteria Decision-Making Methodology*, Int. J. Production Econ., Sept. 2004, at 1.
[3] Reisman (US 7,406,436 B1; July 29, 2008).
[4] Silvain et al. (US 2007/0174390 A1; July 26, 2007).
[5] Conway et al. (US 8,023,639 B2; Sept. 20, 2011).
[6] Tsai et al., *A Hybrid QFD Framework for New Product Development*, Asian J. on Quality, August 2002, at 138.
[7] Gupta et al. (US 2006/0224437 A1; Oct. 5, 2006).
[8] Bushey et al. (US 2004/0240635 A1; Dec. 2, 2004).

rejected claims 1–23 under § 101. For this rejection, we adopt the Examiner's findings, conclusions, and reasoning in the Final Office Action mailed October 11, 2016 ("Final Act.") and the Answer mailed June 2, 2017 ("Ans."). We, however, agree with Appellants that the Examiner erroneously rejected claims 1–23 under § 103. We address the § 101 and § 103 rejections in turn.

Section 101 Rejection

Section 101 of the Patent Act provides that "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" is patent eligible. 35 U.S.C. § 101. But the Supreme Court has long recognized an implicit exception to this section: "Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). To determine whether a claim falls within one of these excluded categories, the Court has set out a two-part framework. The framework requires us first to consider whether the claim is "directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If so, we then examine "the elements of [the] 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." *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78, 79 (2012)). That is, we examine the claim for an "inventive concept," "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.'" *Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Patent Office recently issued guidance about this framework. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"). Under the Revised Guidance, to decide whether a claim is directed to an abstract idea, we evaluate whether the claim (1) recites subject matter that falls within one of the abstract idea groupings listed in the Revised Guidance ("Prong One") and (2) fails to integrate the recited abstract idea into a practical application ("Prong Two"). *See* Revised Guidance, 84 Fed. Reg. at 51. If the claim is directed to an abstract idea, as noted above, we then determine whether the claim has an inventive concept. The Revised Guidance explains that when making this determination, we should consider whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply append[] well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality." Revised Guidance, 84 Fed. Reg. at 56.

With these principles in mind, we turn to the § 101 rejection. Appellants argue claims 1–23 together for this rejection, so as permitted by 37 C.F.R. § 41.37, we decide the appeal for this rejection based on claim 1. *See* 37 C.F.R. § 41.47(c)(i)(iv).

Abstract Idea

The Examiner determined that claim 1 is directed to "a mental process (thinking) that can be performed in the human mind, or by a human using a

pen and paper." Final Act. 23 (quotation marks omitted). For the reasons discussed below, Appellants have not persuaded us that the Examiner erred.

Prong One

Claim 1 recites (1) "gathering a plurality of customer service records, said customer service records containing customer service data including records of calls made by customers to a technical support facility to address issues with said product that a calling customer has experienced." App. Br. 43. Claim 1 also recites (2) "defining a plurality of consumability characteristics regarding said product, wherein said consumability characteristics are arranged in a hierarchy of consumability characteristics including, first, market drivers that have been determined to drive a market for said product, second, consumability attributes defined within a market driver and, third, consumability criteria defined within a consumability attribute." App. Br. 43. Finally, claim 1 recites (3) "mapping said customer service records of calls made by customers to said technical support facility to said hierarchy of consumability characteristics" and (4) "generating a description of a distribution of said customer service records among said plurality of consumability characteristics." App. Br. 43.

Claim 1 does not meaningfully limit how these steps are performed; the claim merely recites a series of broadly worded results. Given the breadth of these steps, they each encompass a process that people can perform in their minds or using pen and paper. *Cf. CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1373 (Fed. Cir. 2011) (determining that a method step was "so broadly worded that it encompasse[d] literally *any* method for" performing the step, including "logical reasoning that can be performed entirely in the human mind"). For example, people can gather

the recited customer service records by taking notes during customer service calls or by reading the records from a computer screen or a database. In any event, even if this step required physical steps such as entering search terms into a computer or thumbing through a file cabinet, these data gathering steps would not make claim 1 patent eligible. *Cf. CyberSource Corp.*, 654 F.3d at 1372 ("[E]ven if some physical steps are required to obtain information from the database (e.g., entering a query via a keyboard, clicking a mouse), such data-gathering steps cannot alone confer patentability.").

People can define the recited consumability characteristics for a product by writing down the characteristics arranged in the recited hierarchy. For instance, people can write down a market driver such as "Positive First Use" and write underneath it a consumability attribute like "Install." *See* Spec. Fig. 1, items 130, 135 (showing a hierarchical relationship between a market driver and a consumability attribute). People can also write a consumability criterion such as "Evaluation/Setup" below the "Install" consumability attribute. *See* Spec. Fig. 1, items 155, 160 (showing a hierarchical relationship between a consumability attribute and a consumability criterion); *see also id.* Fig. 6, items 610, 650 (showing a graph with consumability criteria grouped by consumability attribute).

Similarly, people can manually map the recited records to the recited hierarchy of consumability characteristics. The written description indicates that the recited mapping involves simply determining whether a customer service record contains data fields that satisfy certain conditions, and if so, associating the record with a particular market driver category, consumability attribute, or consumability criterion. *See, e.g.*, Spec. ¶¶ 37–40,

44–46, Figs. 2, 5. For example, if a record's "Customer Activity," "Integration," and "Target" data fields respectively contain "Installation," "Product Only," and "Customer Configuration," the method maps the record to the "Positive First Use" market driver and the "Install" consumability attribute. *See* Spec. ¶ 39, Fig. 3. People can mentally perform this mapping process or write down lists of records that satisfy the conditions for each market driver, consumability attribute, and consumability criterion.

Finally, people can generate a description of a distribution of the customer service records among the consumability characteristics by drawing a simple graph that represents this information or writing down the number of records that correspond to each characteristic. *See, e.g.*, Spec. ¶¶ 41–42, 47–48, Figs. 4, 6.

Despite the broad language of claim 1, Appellants contend that the written description makes clear that "it is not realistic to attempt to extract a 'quantitative and actionable understanding of the consumability of a product' using pen and paper" because of "the data volume and lack of organization in customer service records of a technical support facility." App. Br. 16. (citing Spec. ¶¶ 19, 23).

We find these arguments unpersuasive. First, the cited paragraphs do not mention "the data volume and lack of organization in customer service records of a technical support facility," much less suggest that either factor prevents people from mentally performing the claimed method. *See* Spec. ¶¶ 19, 23. The cited paragraphs state that support records are "often untapped" but do not explain why that is the case. *See* Spec. ¶¶ 19, 23. The cited paragraphs explain that "[a] method is needed to derive quantitative and actionable understanding of the consumability of a product from support

records." Spec. ¶ 23. But the cited paragraphs suggest that this is so because the call records are "a valuable and direct source of information about the consumability of the product," not because of the data volume or the lack of organization in customer service records. *See* Spec. ¶ 23.

Second, the claimed method encompasses processing as few as two customer service records and two consumability characteristics. *See* App. Br. 43. (reciting a "plurality of customer service records" and "a plurality of consumability characteristics"). Appellants have provided no persuasive evidence that people would struggle to perform the claimed method in their heads or by hand for this small number of records and characteristics.

Third, the cited paragraphs teach that "complex products" may pose analytical challenges, but the claimed method encompasses analyzing more than complex products. For example, the cited paragraphs explain that "[p]articularly in complex products, such as software suites and computer systems, obtaining a quantitative and actionable understanding of aspects or areas of the product that need improvement can be difficult." Spec. ¶ 19. But claim 1 recites analyzing a "product" and does not limit the method to analyzing complex products like software suites and computer programs. *See* App. Br. 43. In fact, the written description explicitly states that "[a]s used in the specification and *appended claims*, the term 'product' refers broadly to goods, services, systems, support, or other tangible or intangible goods or materials that are offered by a manufacturer or vendor to a customer or consumer." Spec. 20 (emphasis added).

Appellants also contend that the Examiner has not shown that claim 1 is "drawn to" an abstract idea because the Examiner "clearly . . . oversimplifie[d]" the claim and "merely identified" an abstract idea that

"pertain[s]" to the claim. App. Br. 16. According to Appellants, claim 1 is not drawn to an abstract idea because the claimed invention does not "prevent or monopolize" the identified abstract idea. App. Br. 18; *see also* Reply Brief 5, 8, filed July 19, 2017 ("Reply Br.").

We find these arguments unpersuasive. The Examiner identified the claim limitations that recite an abstract idea, explained why the limitations do so, and cited supporting case law. *See, e.g.*, Final Act 3–5, 6–7, 23–24; Ans. 6–7, 9–10, 13–14. We thus disagree that the Examiner improperly oversimplified the claim and merely identified an abstract idea that pertains to the claim. As for Appellants' monopolization argument, even if claim 1 does not monopolize or preempt a particular abstract idea, this fact alone does not establish that claim 1 is patent eligible. The Federal Circuit has "consistently held that claims that are otherwise directed to patent-ineligible subject matter cannot be saved by arguing the absence of complete preemption." *Return Mail, Inc. v. U.S. Postal Serv.*, 868 F.3d 1350, 1370 (Fed. Cir. 2017).

Appellants further argue that the Examiner should have used the streamlined analysis set out in the 2014 Interim Guidance on Patent Subject Matter Eligibility. *See* App. Br. 18; Reply Br. 5–6, 8. But examiners are not required to apply the streamlined eligibility analysis; in fact, if an examiner has any doubt about the eligibility of a claim, the examiner should apply the full eligibility analysis. *See, e.g.*, 2014 Interim Guidance of Patent Subject Matter Eligibility, 79 Fed. Reg. 74, 619, 74,625 ("[A] streamlined eligibility analysis *can* be used . . . . However, if there is doubt as to whether the applicant is effectively seeking coverage for a judicial exception itself, *the full analysis should be conducted* . . . ." (emphases added)). Regardless,

"[t]he results of the streamlined analysis *will always be the same as the full analysis*, thus the streamlined analysis is not a means of avoiding a finding of ineligibility that would occur if a claim were to undergo the full eligibility analysis." Manual of Patent Examining Procedure § 2106.06 (emphasis added). We thus see no error in the Examiner's choice to conduct a full eligibility analysis.

Appellants next assert that claim 1 does "not have anything to do with" with the subject matter at issue in the *SmartGene*[9] and *Content Extraction*[10] decisions cited by the Examiner. *See* App. Br. 19. But like claim 1, the claims at issue in *SmartGene* and *Content Extraction* involve methods steps that people can perform in their minds or using pen and paper. *See, e.g.*, *SmartGene*, 555 F. App'x at 955 (determining that a claimed method is directed to an abstract idea when "every step is a familiar part of the conscious process that doctors can and do perform in their heads"); *Content Extraction*, 776 F.3d at 1347 (Fed. Cir. 2014) (explaining that the claims at issue are drawn to the abstract idea of collecting data, recognizing certain data within the collected data set, and storing the recognized data in a memory and that "humans have always performed these functions"). And even if Appellants were correct that claim 1 differs in a meaningful way from the claims in *SmartGene* and *Content Extraction*, for the reasons discussed above, we would still determine that claim 1 recites mental processes.

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[9] *SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App'x 950 (Fed. Cir. 2014).
[10] *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n*, 776 F.3d 1343 (Fed. Cir. 2014).

Finally, Appellants turn to a Patent Office memorandum addressing *McRO, Inc. v. Bandai Namco Games America Inc.*, 837 F.3d 1299 (Fed. Cir. 2016). *See* Reply Br. 7. Appellants note that this memorandum explains that "[a]n indication that a claim is directed to an improvement in computer-related technology may include," among other things, "a particular solution to a problem or a particular way to achieve a desired outcome defined by the claimed invention." Reply Br. 7 (quoting Memorandum on Recent Subject Matter Eligibility Decisions 2–3 (Nov. 2, 2016), https://www.uspto.gov/sites/default/files/documents/McRo-Bascom-Memo.pdf). Appellants argue that claim 1 recites such a solution and is therefore patent eligible. *See* Reply Br. 7.

Appellants forfeited this argument by failing to raise it in the Appeal Brief. *See* 37 C.F.R. § 41.37(c)(1)(iv) (explaining that, with certain inapplicable exceptions, "any arguments or authorities not included in the appeal brief will be refused consideration by the Board for purposes of the present appeal"). Regardless, in *McRO*, the claim at issue used "limited rules in a process specifically designed to achieve an improved technological result in conventional industry practice." *McRO*, 837 F.3d at 1316. In contrast, we see nothing here akin to the limited rules in *McRO*. Claim 1 recites a series of broadly worded, result-oriented steps, and as discussed below, Appellants have pointed to no persuasive evidence that suggests that the claimed method improves a technological result. So even if Appellants had timely presented this argument, we would have found it unpersuasive.

In sum, considered as a whole, claim 1 recites a method that people can perform in their heads or using pen and paper. As a result, claim 1 is no different from other claims that courts have determined are drawn to mental

processes. *See, e.g.*, *CyberSource*, 654 F.3d at 1372 (determining that a claim whose "steps can be performed in the human mind, or by a human using a pen and paper" is directed to an unpatentable mental process). This is true even though claim 1 recites that a processor performs some of the claimed steps. "Courts have examined claims that required the use of a computer and still found that the underlying, patent-ineligible invention could be performed via pen and paper or in a person's mind." *Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1335 (Fed. Cir. 2015). *See also* Revised Guidance, 84 Fed. Reg. at 52 n.14 ("If a claim, under its broadest reasonable interpretation, covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind."). We therefore conclude that claim 1 recites mental processes, one of the abstract idea groupings identified in the Revised Guidance. *See* Revised Guidance, 84 Fed. Reg. at 52. Claim 1 thus recites an abstract idea.

Prong Two

Because we conclude that claim 1 recites an abstract idea, we next evaluate whether claim 1 integrates the abstract idea into a practical application. *See* Revised Guidance, 84 Fed. Reg. at 51. In doing so, we consider whether there are any additional elements beyond the abstract idea that, individually or in combination, "integrate the [abstract idea] into a practical application, using one or more of the considerations laid out by the Supreme Court and the Federal Circuit." Revised Guidance, 84 Fed. Reg. at 54–55.

Along with the steps recited above, claim 1 also recites a "processor." *See* App. Br. 43. We see nothing in either the claims or the written

description that suggests that the recited processor is anything but a generic computer component used as a tool to implement the claimed method. Indeed, the written description only mentions a processor when explaining that the invention can use a processor to execute computer program instructions. *See* Spec. ¶ 15.

Nevertheless, Appellants argue that the claimed subject matter "improve[s] the functionality of a computer system by determining what consumability characteristics need to be improved to increase the usability of a computer system for the average user" and "deriv[ing] quantitative and actionable understanding of the consumability of a product from support records." App. Br. 20 (citing Spec. ¶ 19), 21 (quoting Spec. ¶ 23). According to Appellants, under *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), these improvements to computer functionality establish that claim 1 is patent eligible. App. Br. 19–20; *see also* Reply Br. 6–7, 10–12.

We find Appellants' arguments unpersuasive. First, the parts of the written description cited by Appellants do not show that the claimed method improves how a computer system functions. The cited paragraphs explain that it can be difficult to obtain "quantitative and actionable understanding of aspects or areas of" complex products that need improvement and that "[a] method is needed to derive quantitative and actionable understanding of the consumability of a product from support records." Spec. ¶¶ 19, 23. Even if the claimed method addresses these issues, nothing in the cited paragraphs suggests that in doing so the claimed method improves how a computer functions. *See* Spec. ¶¶ 19, 23. The claimed method simply uses a generic processor to execute an abstract idea; the claimed method does not purport to change, much less improve, how the generic processor functions.

Second, in *Enfish*, the claims specifically recited a self-referential table that the accompanying written description made clear "function[ed] differently than conventional database structures." *Enfish*, 822 F.3d at 1337. Here, claim 1 recites broad, result-oriented method steps, and as just discussed, Appellants have not shown that the method causes a computer element to perform differently than expected.

Appellants next contend that the claimed subject matter "effect[s] a transformation or reduction of a particular article to a different state or thing." App. Br. 22. According to Appellants, "the claimed subject matter takes an unorganized volume of customer service data and provides from this 'a description of a distribution of said customer service records among [a defined hierarchy of several tiers] of consumability characteristics.'" App. Br. 22 (alteration in original); *see also* Reply Br. 12.

We find this argument unpersuasive. Even if Appellants' characterization of the claimed subject matter is correct, the claimed subject matter merely transforms one type of data (customer service data) into a different type of data (a description of a distribution of said customer service records). This is generally not the type of transformation that integrates an abstract idea into a practical application. *Cf. CyberSource*, 654 F.3d at 1375 ("The mere manipulation or reorganization of data, however, does not satisfy the transformation prong.").

At bottom, the additional element recited in claim 1 is a generic computer component used as a tool to perform an abstract idea. We thus determine that claim 1 does not integrate the recited abstract idea into a practical application. *See Alice*, 573 U.S. at 223–24 ("[W]holly generic computer implementation is not generally the sort of 'additional featur[e]'

that provides any 'practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.'" (second and third alterations in original) (quoting *Mayo*, 566 U.S. at 77)).

Inventive Concept

We next consider whether claim 1 has an "inventive concept." That is, we examine "the elements of [the] 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." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). Under the Revised Guidance, we evaluate whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply append[] well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality." Revised Guidance, 84 Fed. Reg. at 56.

As noted above, the only additional element recited in claim 1 is the processor. We see no indication that the recited processor is anything other than a generic computer component that performs well-understood, routine, and conventional activities. As discussed above, the written description only mentions a processor when explaining that the invention can use a processor to execute computer program instructions. *See* Spec. ¶ 15.

Appellants contend that the Examiner did not adequately address this aspect of the § 101 inquiry. *See* Reply Br. 11. But Appellants forfeited this argument by failing to expressly raise it in the Appeal Brief. *See* 37 C.F.R. § 41.37(c)(1)(iv). In any event, we see no merit in this argument. The

Examiner explained why claim 1 lacks an inventive concept in the Final Office Action. *See, e.g.*, Final Act. 2–3, 4–6, 24–27.

Appellants also argue that the cited art does not teach or suggest organizing consumability characteristics into a hierarchy and therefore claim 1 "add[s] a specific limitation other than what is well-understood, routine and conventional in the field." App. Br. 22; Reply Br. 13. Even if the cited art does not teach or suggest aspects of the recited abstract idea such as organizing consumability characteristics into a hierarchy, "a claim for a new abstract idea is still an abstract idea." *Synopsys*, 839 F.3d at 1151. "It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention 'significantly more' than that ineligible concept." *BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018). *See also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018) ("We may assume that the techniques claimed are '[g]roundbreaking, innovative, or even brilliant,' but that is not enough for eligibility. Nor is it enough for subject-matter eligibility that claimed techniques be novel and nonobvious in light of prior art, passing muster under 35 U.S.C. §§ 102 and 103." (citations omitted)). We therefore find this argument unpersuasive.

Appellants next contend that the claimed method is "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks" like the claimed subject matter in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). App. Br. 23. In support of this argument, Appellants assert the claimed subject matter addresses an issue "in complex products, such as software suites and *computer systems*" and uses network technologies such as

technical support facilities. App. Br. 23 (quoting Spec. ¶ 19) (emphasis modified); Reply Br. 14. Appellants argue the recited "description of a distribution of said customer service records" is "entirely analogous" to the claimed subject matter in *DDR Holdings*. App. Br. 23; *see also* Reply Br. 13–14.

We find these arguments unpersuasive. In *DDR Holdings*, the claims at issue "specif[ied] how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink." *DDR Holdings*, 773 F.3d at 1258. Appellants have pointed to no persuasive evidence that the claimed method changes how a computer element operates. Simply because the claimed method can be used to address an issue *involving* a computer system does not mean that method *uses* a computer system to do so, let alone uses the computer system in an unconventional manner. As noted above, the claimed method is not limited to computer systems and people can perform the method in their heads or using pen and paper. So, although the claimed method may be used to obtain "a quantitative and actionable understanding of aspects or areas" of computer systems, we disagree that the method is "necessarily rooted in computer technology" like the subject matter at issue *in DDR Holdings*.

We see no indication that the generic processor recited in claim 1 is anything other than a generic computer component that performs well-understood, routine, and conventional activities. Claim 1 thus "simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality." Revised Guidance, 84 Fed. Reg. at 56. The processor therefore does not "transform the nature of

the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). We thus determine that claim 1 does not contain an inventive concept.

Conclusion

For at least the above reasons, we determine that claim 1 is directed to mental processes and does not have an inventive concept. We therefore sustain the Examiner's rejection of claim 1 under § 101.

Section 103 Rejection

Claim 1 recites "defining a plurality of consumability characteristics regarding said product, wherein said consumability characteristics are arranged in a hierarchy of consumability characteristics including, first, market drivers that have been determined to drive a market for said product, second, consumability attributes defined within a market driver and, third, consumability criteria defined within a consumability attribute." App. Br. 43. Claim 1 also recites "mapping said customer service records of calls made by customers to said technical support facility to said hierarchy of consumability characteristics." App. Br. 43.

Appellants argue that the Examiner's combination of Crawford and Wang fails to teach or suggest these limitations. *See* App. Br. 26–28. Appellants contend that neither Crawford nor Wang teaches or suggests arranging consumability characteristics into the recited hierarchy or mapping customer service records to the recited hierarchy. *See* App. Br. 26–28.

We find Appellants' arguments persuasive. The Examiner mapped Crawford's common metrics to the recited market drivers *and* the recited consumability criteria. *See* Final Act. 12; Ans. 23. But claim 1 recites that consumability criteria are indirectly "defined within" a market driver." *See*

App. Br. 43. The Examiner has not adequately explained how common metrics are both a market driver and a consumability criteria defined within the market driver.

The Examiner also mapped the "values associated with the various [common metrics] as can be seen in paragraphs 46-48" of Crawford to the recited consumability attributes. *See* Final Act. 12. But claim 1 recites that the consumability attributes are "defined within a market driver." App. Br. 43. Although the values in paragraphs 46–48 of Crawford may relate to Crawford's common metrics, the Examiner has not adequately explained how the values are "defined within" the common metrics as required by claim 1.

The Examiner has not specifically identified anything in Wang that addresses these deficiencies. For at least the above reasons, on this record, we do not sustain the Examiner's rejection of claim 1 and its dependent claims under § 103. Because the Examiner's rejections of independent claims 17, 18, and 23 under § 103 suffer from similar deficiencies, we also do not sustain the Examiner's rejections of these claims and their respective dependent claims.

DECISION

Claims	Basis	References	Affirmed	Reversed
1–23	§ 101		1–23	
1, 2, 5–10, 12, 13, 21, and 22	§ 103	Crawford and Wang		1, 2, 5–10, 12, 13, 21, and 22
3	§ 103	Crawford, Wang, and Reisman		3
4	§ 103	Crawford, Wang, Reisman, and Silvain		4
11	§ 103	Crawford, Wang, and Conway		11
14	§ 103	Crawford, Wang, and Tsai		14
15 and 16	§ 103	Crawford, Wang, Tsai, and Gupta		15 and 16
17–20	§ 103	Crawford, Gupta, Wang, and Bushey		17–20
23	§ 103	Crawford, Silvain, Conway, Wang, and Bushey		23
Outcome			1–23	

Because we affirm at least one ground of rejection for each claim on appeal, we affirm the Examiner's decision. *See* 37 C.F.R. § 41.50(a)(1). No

period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED