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To: USPTO, via email to: Eligibility2018@uspto.gov

From: Karl Koster, IP Counsel for Noble Systems¹

Re: Comments on the USPTO's Proposed Subject Matter Eligibility Prosecution Guidelines Based on *Berkheimer* ("Berkheimer Memo" of April 19, 2018)

These comments are made in response to the Federal Register Notice titled "Request for Comments on Determining Whether a Claim Element is Well-Understood, Routine, Conventional for Purposes of Subject Matter Eligibility," dated April 20, 2018, 83 Fed. Reg. 17536. These comments are made in the context of computer-related technological inventions, including those patent applications frequently assigned to Art Units 2600 and 3600.

Some of the points made are illustrated using the analysis and claims language of *Berkheimer v. HP Inc.*, No. 2017-1437 (Fed. Cir., Feb. 8, 2018).

1. Additional Examiner Education/Monitoring Is Needed Regarding Training On Subject Matter Eligibility ("SME") Guidelines

In general, there appears a wide spectrum of how examiners apply the USPTO's subject matter eligibility ("SME") guidelines. It appears that some examiners routinely generate rejections using a standard response template, where only a few words are altered, such that the rejection is not tailored to the pending claims of the present application to any significant degree. It is highly improbable that a reasoned SME analysis of the limitations of 20 claims in Step 2A and Step 2B of the *Alice/Mayo* test can be provided by a single paragraph in an office action. Too often, the analysis only goes so far as identifying a component (for example, a processor or computer) and perhaps one or two actions recited in the claims as being performed by that component (reading or writing data), followed by a conclusory statement the claims the other claim elements do not add anything "significantly more" and therefore the claims are patent ineligible. By that logic, every claim reciting a computer that reads/write data (among other recited limitations) would be deemed abstract and patent ineligible.

As stated in the USPTO's *Berkheimer* Memo, examiners should provide support at Step 2B for the allegation that various claim elements are well-known, routine, and conventional ("WRC"). However, it appears that in a number of cases encountered after the USPTO released its *Berkheimer* Memo, examiners are providing little beyond a conclusory statement that the claim elements are well-known, routine, and conventional. In a recent interview addressing a § 101 rejection where the USPTO's *Berkheimer* Memo and training materials were provided to the

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examiner, the examiner indicated it was the first time he had seen the USPTO's *Berkheimer* Memo and the USPTO's Training slides. So, four months after the USPTO issued its *Berkheimer* examination guidelines, some examiners are unaware of the materials! Further, even some board decisions issued after *Berkheimer* and the USPTO's *Berkheimer* Memo appeared to have ignored the *Berkheimer* Memo. Any blame for this situation should be shared with USPTO's management for not ensuring all examiners are timely and properly trained on current guidelines.

The USPTO should sample some of the SME rejections for each art unit (as appropriate) and determine whether the examiners are adhering to the USPTO's SME guidelines (including *Berkheimer*). Additional training should be provided to examiners as needed. Too often, it appears the examiners are not adhering to the SME guidelines, and there does not appear to be any meaningful review regarding the work product.

2. Well-understood, Routine, and Conventional ("WRC") Claim Element(s) Includes Activities and Functions

The court in *Berkheimer* analyzed a method claim, and the analysis makes it clear that the relevant claim limitations or elements can be activities and functions.

At step two, we "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." [Alice, 134 S.Ct. at 2355](#) (quoting [Mayo, 566 U.S. at 78-79, 132 S.Ct. 1289](#)). The second step of the *Alice* test is satisfied when the claim limitations "involve more than performance of 'well understood, routine, [and] conventional activities previously known to the industry.'" [Content Extraction, 776 F.3d at 1347-48](#) (quoting [Alice, 134 S.Ct. at 2359](#)). (*Berkheimer* at 1367.)

The USPTO *Berkheimer* Memo initially reflects that such "activities" are part of the analysis (see, e.g., *Berkheimer* Memo, p. 1.) Further analysis of *Berkheimer* show that the Federal Circuit was examining whether the claims recited method steps of "purportedly unconventional activities." (*Berkheimer* at 1369, emphasis added.) *Berkheimer* explicitly makes clear that these activities can be recited functions or steps in a method claim.²

These functions may be distinguished from what functions known systems were able to perform. For example, in *Berkheimer*, certain claims were held to recite steps of the "unconventional inventive concept" as described in the specification. Note the following from *Berkheimer* that includes a comparison of recited claim elements with what conventional components/systems were able to do:

² See e.g. *Berkheimer* citing *Content Extractions, 776 F.3d at 1349* ("patent owner conceded the argued invention concept 'was a routing function of scanning technology at the time the claims were filed'").

Claims 4-7, in contrast, contain limitations directed to the arguably unconventional inventive concept described in the specification. Claim 4 recites "storing a reconciled object structure in the archive without substantial redundancy." The specification states that storing object structures in the archive without substantial redundancy improves system operating efficiency and reduces storage costs. '713 patent at 16:52-58. **It also states that known asset management systems did not archive documents in this manner.** *Id.* at 2:22-26. Claim 5 depends on claim 4 and further recites "selectively editing an object structure, linked to other structures to thereby effect a one-to-many change in a plurality of archived items." The specification states one-to-many editing substantially reduces effort needed to update files because a single edit can update every document in the archive linked to that object structure. *Id.* at 16:58-60. This one-to-many functionality is more than "editing data in a straightforward copy-and-paste fashion," as characterized by the district court. [Berkheimer, 224 F.Supp.3d at 645](#). **According to the specification, conventional digital asset management systems cannot perform one-to-many editing because they store documents with numerous instances of redundant elements, rather than eliminate redundancies through the storage of linked object structures.** '713 patent at 1:22-55, 4:4-9, 16:52-60. Claims 6-7 depend from claim 5 and accordingly contain the same limitations. **These claims recite a specific method of archiving that, according to the specification, provides benefits that improve computer functionality.** (*Berkheimer*, slip op. at 16, emphasis added.)

Claim 1 of the patent analyzed by the court begin with "A method of archiving an item in a computer processing system comprising..." The court found that the recited functions were aspects not found in 'conventional digital asset management systems' and that the claims recited this inventive aspect of archiving (i.e. storing) that provided the benefits of improving computer functionality. Thus, the claim is essentially directed to an improvement to computer-based digital asset management system. The fact that conventional digital asset management systems were known (as were computer processing systems) did not make the invention or the improvement *per se* abstract. In other words, the court analyzed the improvement made to existing computer systems or digital asset management systems in order to evaluate the patent eligibility.

This is consistent with the earlier statement in *Berkheimer* that stated: "The second step of the Alice test is satisfied when the claim limitations "involve more than performance of 'well understood, routine, [and] conventional activities previously known to the industry.'" In summary, even if the specification discloses (or the claim recites) the invention executes on a conventional computer or represents an improvement to other existing known systems, that does not mean the recited "activities" are *per-se* well-known. Thus, the focus of the analysis for patent eligibility analysis is the recited activities, not on the component performing them. The court stated: "**known asset management systems did not archive documents in this manner.**" Too often the examiner will respond that a well-known recited component (i.e., a computer or processor) is used to "store" data (or "archive" a document using the example in *Berkheimer*), which is a well-known function, and then ignore the other limitations that may represent an unconventional activity.

This appears to be a common practice that occurs in patent eligibility examination where the examiners focus on an element in a claim, namely a component (such as a processor), and

allege that because that component is well-known, the recited claim limitations are therefore well-known. Specifically, the examiner may be tempted to read the “computer processing system” as being a well-known component, and therefore all the steps are well-known. (After all, don’t all computers “store”, “read”, and “compare” data?)

Doing so obviously ignores the specific limitations in the recited steps or activities, and certainly ignores the ordered combination thereof and the improvement it represents. Recall that in *Berkheimer* the court acknowledged that conventional digital asset management systems were known in the art, and noted that conventional systems could not perform the recited functions or archiving (storing) documents in the manner recited. Because the claim recited functions representing the improvement, claiming a conventional component (i.e., a computer or digital asset management system) to perform the steps did not cause the claim to be patent ineligible.

There is a danger that examiners will ignore the recited functions/activities, and instead focus on a single element consisting of the component that performs the function. There is a possibility that examiners may interpreting the guidelines referring to a “claim element(s)” to exclusively refer to a component recited in the claim and not the functions recited as being performed by the component. The USPTO should explicitly clarify that the “claim element” could be a function or activity recited in the claim performed by a well-known component or system. As such, whether the claims are performed on a conventional computer or the invention comprises an improvement to a conventional system, the fact that some of the components may be well-known should not lead to the conclusion that all of the other recited functions must therefore also be well-known.

Further, the USPTO should make it explicit that the “claim element or **combination of elements**” is to be analyzed. In other words, if the claim recites a method performed by a “computer processor” comprising “storing a reconciled object structure in the archive without substantial redundancy” (*Berkheimer*, slip op. at 16), then the examiner should be required to analyze all the relevant limitations. Too often, it appears the examiner would allege the “computer processor” claim element is generic, and that it is only configured to “store” data or “archive documents.” Thus, the examiner would allege the claim element(s) are WRC. In *Berkheimer*, the Federal Circuit did not analyze just the “storing” limitation but the entire limitation comprising “storing a reconciled object structure in the archive without substantial redundancy.” Because it found “known asset management system did not archive documents in this manner” the Federal Circuit found it incorrect to conclude at that point that the claims were patent ineligible. (*Berkheimer*, slip op. 16.)

The USPTO needs to ensure that such “shortcuts” are not taken during the SME examination and should define procedural mechanisms to discourage this. One suggestion is that if the patentee responds to an Office Action where the examiner did not analyze all the

appropriate claim element(s), then the examiner should be required respond with a new, **non-final** office action addressing those claim elements. Without appropriate controls allowing the patentee to demand that the rejection is non-final, examiners will generate final rejections without providing adequate support for a *prima facie* case of patent ineligibility.

3. Citation To A Publication Means A Single Publication

The *Berkheimer* Memo identifies one approach for an examiner to support that claim element(s) are WRC. The *Berkheimer* Memo states:

A citation to a publication that demonstrates the well-understood, routine, conventional nature of the additional element(s). An appropriate publication could include a book, manual, review article, or other source that describes the state of the art and discusses what is well-known and in common use in the relevant industry. It does not include all items that might otherwise qualify as a "printed publication" as used in 35 U.S.C. § 102.³ Whether something is disclosed in a document that is considered a "printed publication" under 35 U.S.C. § 102 is a distinct inquiry from whether something is well-known, routine, conventional activity. A document may be a printed publication but still fail to establish that something it describes is well-understood, routine, conventional activity. *See Exergen Corp.*, 2018 WL 1193529, at *4 (the single copy of a thesis written in German and located in a German university library considered to be a "printed publication" in *Hall* "would not suffice to establish that something is 'well-understood, routine, and conventional activity previously engaged in by scientists who work in the field"). The nature of the publication and the description of the additional elements in the publication would need to demonstrate that the additional elements are widely prevalent or in common use in the relevant field, comparable to the types of activity or elements that are so well-known that they do not need to be described in detail in a patent application to satisfy 35 U.S.C. § 112(a). For example, while U.S. patents and published applications are publications, merely finding the additional element in a single patent or published application would not be sufficient to demonstrate that the additional element is well-understood, routine, conventional, unless the patent or published application demonstrates that the additional element are widely prevalent or in common use in the relevant field. (USPTO *Berkheimer* Memo, p. 4.)

The text supports that **a single publication** should be used. This should be clarified and emphasized by the USPTO. Examiners should not rely on building an obviousness-like WRC argument using a plurality of publications. The examiner should demonstrate specifically how and where a single document renders the claim element(s) as being WRC.

The examiner should be informed that demonstrating a claim element(s) is WRC is a higher burden than merely finding a reference disclosing the claim element(s). If an examiner cannot find a reference(s) for anticipating and/or rendering obvious the claim, it should be emphasized to the examiner that it is unlikely that the examiner will be able to then find a document rendering that the claim element(s) are WRC. There is almost a presumption that if

the examiner can't identify suitable references for anticipation or obviousness, it is unlikely that the examiner will be able to support an allegation based on a publication that the claim element(s) are WRC. Of course, the examiner can support that the claim element(s) are WRC based on one of the other three approaches identified in the *Berkheimer* Memo (citation to the specification, court case, or official notice).

4. Clarify the Relationship of Claim Elements In the Abstract Concept at Step 2A and the "Something More" Analysis at Step 2B.

The claim limitations of a claim are analyzed to first determine what the claims are directed to, and this is evaluated as to whether it is an abstract concept. For example, in *Berkheimer*, the court held that claim 4 was directed to "parsing, comparing, and storing data." The court then looked at the claim elements of each claim both individually and as an ordered combination to determine whether those limitations are WRC. This involved evaluating whether the other claim elements included unconventional improvements. Returning to claim 4, the court found that other limitations represented activities that known systems could not do, e.g., "storing a reconciled object structure in the archive without substantial redundancy." Thus, these limitations could be considered as reciting "something more" for which the WRC analysis is applied.

Thus, using claim 4 as an example, the court found the claim directed to an abstract idea ("parsing, comparing and storing data") and then identified the other limitations in that claim ("storing a reconciled object structure in the archive without substantial redundancy") to be analyzed as 'something more.' The court noted that conventional document management systems stored data (i.e., they archived documents), but "known asset management systems did not archive documents in this manner." (*Berkheimer*, slip op. 16.) In other words, existing systems did not perform "storing a reconciled object structure in the archive without substantial redundancy".

To emphasize: the claim element "storing" is part of the abstract idea ("parsing, comparing, and storing data.") Consequently, the other limitations, e.g., what is stored ("a reconciled object structure in the archive without substantial redundancy") are not part of the abstract idea. In one approach, it is these other claim limitations would be the limitations subjected to the "something more" analysis at Step 2B.³

A patentee may argue that these other limitations are not well-known. Frequently, the response by the examiners is that "merely narrowing or limiting an abstract idea does not make the abstract idea patent eligible." Applying this logic, there are no narrowing limitations that

³ See e.g., *BSG Tech LLC v. Buyseasons, Inc.*, No. 2017-1980 (Fed. Cir., Aug. 15, 2018) stating that "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." This would seem to support the approach that the limitation of "storing" in claim 4 of *Berkheimer* must not be included in the considering the other limitations that are analyzed in Step 2B. But this is just what the court in *Berkheimer* did.

would render the claim patent eligible. Such responses cannot be reconciled with *Berkheimer* where “storing” was narrowed by “a reconciled object structure in the archive without substantial redundancy.” The USPTO guidelines should ensure examiners do not “shortcut” the SME analysis in this manner.

Another approach observed is that an examiner may allege the claims are directed at a high level of an abstract idea (e.g., “parsing, comparing, and storing data.”) Then, the examiner will identify all the claim limitations as supporting this idea, including, e.g., “storing a reconciled object structure in the archive without substantial redundancy.” The examiner may allege that this limitation is part of or supports the abstract idea. In essence, the examiner provides a broad claim characterization, alleges it is abstract, and then identifies all of the other claim limitations as supporting the broad claim characterization. Again, with this logic, any claim can be characterized at a high level by ignoring specific limitations, and then alleging the specific limitations merely contribute to or narrow the abstract idea. No computer related invention would ever be patent eligible using this approach.

Assuming the claim is directed to an abstract idea, the USPTO *Berkheimer* Memo does not clarify any distinction between those claim limitations that are used to support the abstract idea from those “other” claim limitations that are outside of the abstract idea (and which are part of the “something more” analysis). As the USPTO *Berkheimer* Memo reads now, it appears that all claim limitations in the claim are subject to that “something more” analysis. (It is unclear whether that is the intention, but this needs to be clarified one way or the other.)⁴

Assuming it is appropriate to segregate claim limitations used to define what the claims are directed to from those other claim limitations, the examiners should be given guidance and training on this aspect. Specifically, it should be clarified that at least the claim elements which are not supporting the abstract idea *per se* are subject to the “something more” analysis under *Berkheimer*. Returning to claim 4 in *Berkheimer* to illustrate, if the claim is directed to “parsing, comparing, and storing data”, then the limitations reciting what kind of data is being stored are subject to the “something more” analysis. That is, to maintain a 101 rejection, the examiner should show that it is a well-known activity to “stor[e] a reconciled object structure in the archive without substantial redundancy.”⁵

⁴ There appears to be tension as to what claim limitations are subject to the test at Step 2B. In *BSG Tech*, the Federal Circuit noted: “At step two, if claims are directed to a patent ineligible concept, “we 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.” *Alice*, 134 S. Ct. at 2355 (quoting *Mayo*, 566 U.S. at 78–79).” (*BSG Tech*, slip op. at 15.) This would suggest all elements in the claims are analyzed. But yet later in the same case, the court stated: “Instead, the Court only assessed whether the claim limitations other than the invention’s use of the ineligible concept to which it was directed were well-understood, routine and conventional. *Id.* at 2359–60. (*Id.*, slip op. at 17.) This suggests only those limitations other than those of the ineligible concept are analyzed.

⁵ It seems the limitation “storing” is inherently associated with the limitation “a reconciled object structure in the archive without substantial redundancy.” If the analysis involves analyzing the limitation “storing a ...substantial redundancy” for a WRC determination, then this is an example of where the limitation “storing” is both part of the

On the other hand, if the examiner finds the claim is directed to, e.g., “parsing, comparing, and storing a reconciled object structure in the archive without substantial redundancy”, then that is the concept that should be evaluated as to whether it is an abstract idea. This means that the limitations of “storing a reconciled object structure in the archive without substantial redundancy” are not subject the “something more” analysis. Too often it appears examiners characterize claims at a high level, and then state all the other limitations are merely supporting the “storing”, “reading” or “comparing” abstract concepts and therefore ineligible. Or, they allege all the detailed limitations that not found in the claim characterization are part of the claim characterization or simply narrow the abstract concept. This is a “heads we win, tails you lose” proposition for applicants.

To ensure that examiners adhere to a rule of properly considering all the limitations, procedural safeguards should be in place to encourage adherence. Specifically, if the patentee responds with identification of one or more specific claim limitations which are not part of the claim characterization, and which the examiner has not addressed in a *Berkheimer* analysis, then the examiner should respond to those claim limitations in a non-final office. This should be considered new grounds for rejection and should be clearly reflected in the rules. This will encourage the examiner to perform a complete analysis, and inform the patentee of all the patent ineligibility allegations up front. The USPTO should recognize SME analysis is comparatively new, complicated, and evolving, and that many of its guidelines are not being followed and that procedural mechanisms are needed. Too often, it seems the applicant is required to pay RCE or appeal fees to have a complete opportunity to have their SME arguments addressed.

Conclusion

It is appreciated that the USPTO offered the opportunity to receive feedback regarding the USPTO’s SME guidelines under *Berkheimer*. It is suggested that the USPTO implement ongoing mechanisms to regularly monitor examiner performance and conduct feedback from practitioners in this area.

abstract idea and the “other” limitations. This calls into question the appropriateness of the analysis in *BSG Tech* that suggested that limitations are either part of the abstract idea or part the ‘something else’ analysis. Recall that in *Berkheimer* the court noted that “known asset management system did not archive documents in this manner.” This means the court examined the “storing” limitation along with the other claim limitations when performing the “something else” analysis. The court did not simply analyze whether the “reconciled object structure in the archive without substantial redundancy” was WRC, but whether conventional systems stored documents in the recited manner. (“Conventional digital asset management systems cannot perform one-to-many editing because they store documents with numerous instances of redundant elements....” (*Berkheimer*, slip op. at 16.)