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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte TINGYI WU, SOPHIA THITIRAT PERL, ENRIQUE ANDRES
MUNOZ TORRES, ANDREW POON, and CONRAD WAI

_____

Appeal 2018-006972
Application 14/277,964[1]
Technology Center 3600

_____

Before JUSTIN BUSCH, MATTHEW J. McNEILL, and SCOTT E. BAIN,
Administrative Patent Judges.

Opinion for the Board filed by *Administrative Patent Judge*
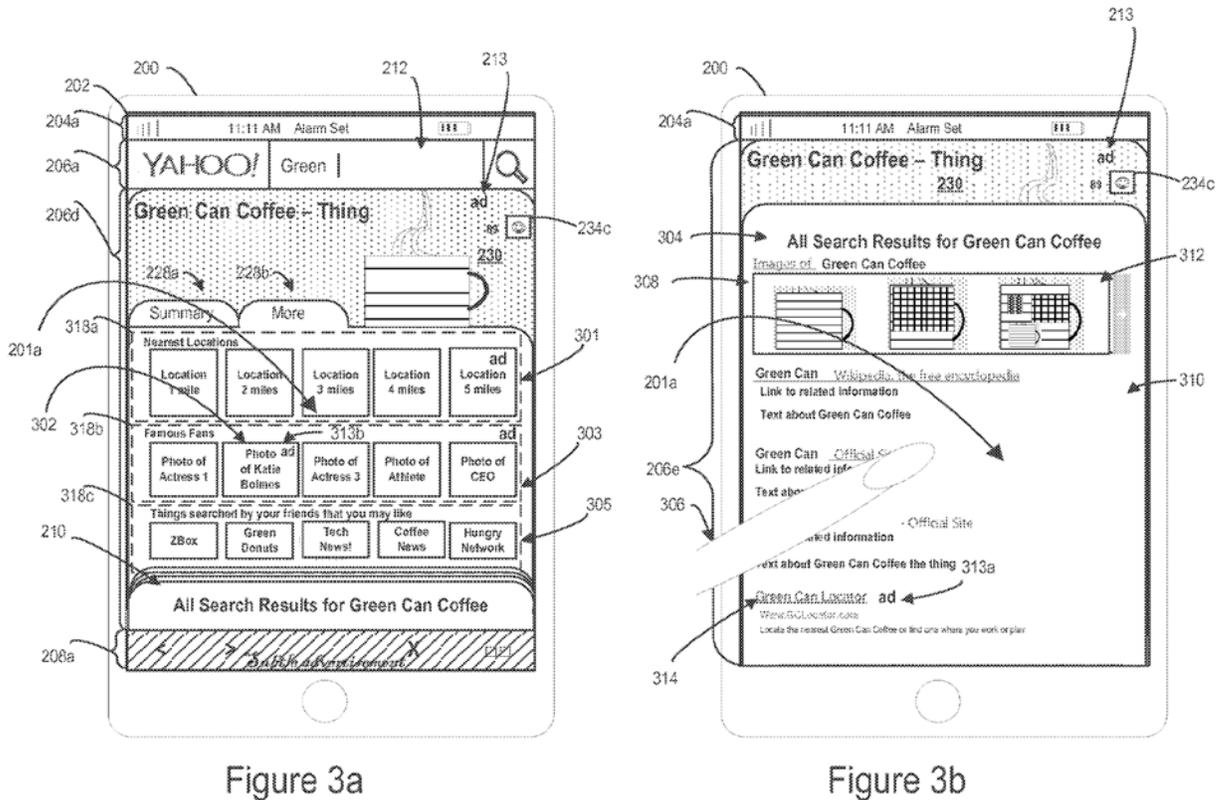SCOTT E. BAIN.

Opinion Dissenting filed by *Administrative Patent Judge* JUSTIN BUSCH.

BAIN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's

Final Rejection of claims 1–20. We have jurisdiction under 35 U.S.C.

§ 6(b).

We reverse.

BACKGROUND

The Claimed Invention

The invention relates to a mobile device display, and specifically, a "less intrusive" way to present advertisements in a constrained display environment. Spec. ¶¶ 2–3, 21–22. According to the Specification, the common techniques of providing lists of search results or advertisements are "not well adapted to the particular constraints of a mobile device," and a "set of engineering problems [must] be solved in order to provide search results to users that are well adapted to mobile devices." *Id.* at ¶ 3. Appellants' invention addresses these problems by providing a display configuration including "moveable" visual objects that may be repositioned by user interaction, such as user touch on the screen. Embodiments are shown in Figures 2a, 2b, 3a, and 3b, reproduced below.

Figure 2a

Figure 2b

Figure 3a

Figure 3b

Figures 2a, 2b, 3a, and 3b depict "screen presentations" on mobile device 200 as provided by the invention. Spec. ¶¶ 74–77. Display 202 includes "GUI parts" 204a, 206a, 206b, and 206c among others. *Id.* at ¶ 77. As shown in the figures, "any combination" of the GUI parts may be "hidden" on the display based on user interaction such as "when a user's finger [306] . . . interacts with a GUI part within a section" of the display framework, as shown in Figure 3b, allowing other parts to be seen more easily. *Id.* at ¶¶ 77–78.

Claims 1 and 18 are independent. Claim 1, reproduced below, is representative of the invention and the subject matter in dispute:

> 1. A system stored in a non-transitory medium executable by processor circuitry, comprising:
>
> first interface circuitry configured to receive a search

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query from a search field on a page view displayed on a display screen of a mobile client device;

second interface circuitry communicatively coupled to the first interface circuitry, the second interface circuitry configured to receive analytics data about characteristics of an audience including a user of the mobile client device or about advertisements displayed on the display screen of the mobile client device, or about user interactions with advertisements displayed on the display screen of the mobile client device, the analytics data corresponding to the search query;

first framework circuitry communicatively coupled to the first interface circuitry and the second interface circuitry, the first framework circuitry configured to determine a plurality of sponsored entity search results according to the search query and the analytics data and to display one or more sponsored entity search results of the plurality of sponsored entity search results on the display screen of the mobile client device;

third interface circuitry communicatively coupled to the first framework circuitry, the third interface circuitry configured to receive a user interaction with a sponsored entity search result of the one or more sponsored entity search results displayed on the display screen of the mobile client device; and

second framework circuitry communicatively coupled to the third interface circuitry, the second framework circuitry configured to determine an interactive entity section for display on the page view in response to the user interaction with the sponsored entity search result, wherein the *interactive entity section includes a plurality of moveable visual objects moveable within the interactive entity section in response to interactions including the user interaction* to expose to user view a moveable visual object of current interest to the user of the mobile client device and to hide from view other moveable visual objects not of current interest to the user of the mobile client device to allow more screen space for viewing of the moveable visual object of current interest to the user.

App. Br. 22–23 (Claims Appendix) (emphasis added).

The Rejections on Appeal

Claims 1–20 are rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 6–8.

Claims 1–4, 8, 12, 13, 15, and 17 are rejected under 35 U.S.C. § 103 as being unpatentable over Talluri et al. (US 2014/0372218 A1; pub. Dec. 18, 2014) ("Talluri"). Final Act. 9–37.

Claims 5, 6, 9, and 10 are rejected under 35 U.S.C. § 103 as being unpatentable over Talluri and Smith et al. (US 2003/0006911 A1; pub. Jan. 9, 2003) ("Smith"). Final Act. 38–51.

Claims 7 and 11 are rejected under 35 U.S.C. § 103 as being unpatentable over Talluri and Agius et al. (US 2009/0157507 A1; pub. June 18, 2009) ("Agius"). Final Act. 52–58.

Claims 14, 16, 18, and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Talluri and Huang et al. (US 2012/0197857 A1; pub. Aug. 2, 2012) ("Huang"). Final Act. 58–76.

Claim 20 is rejected under 35 U.S.C. § 103 as being unpatentable over Talluri and Wilson et al. (US 2010/0031185 A1; pub. Feb. 4, 2010) ("Wilson"). Final Act. 77–81.

DISCUSSION

We have reviewed the Examiner's rejections in light of Appellants' arguments. For the reasons set forth below, we cannot sustain the Examiner's rejections on the record before us.

Rejection Under 35 U.S.C. § 101

The Examiner determined that the claims constitute ineligible subject matter because they recite "search engine advertising," which the Examiner characterizes as a "field of use" and abstract idea, and "simply append[] well-understood, routine, and conventional activities" using generic computer functions. Ans. 4–5; Final Act. 6–8 (citing *Alice Corp. v. CLS Bank lnt'l*, 573 U.S. 208, 217 (2014) (describing two-step framework "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts")). Appellants argue the Examiner erred and that the claims are patent-eligible because they "solve[] an existing technical problem," namely, the limited space on mobile device displays that is available to display promotional items in search results. Reply Br. 3–5. Appellants contend the Examiner has "oversimplified" the claims and that they are not abstract, and moreover, that the claims recite a "clear . . . improvement to computer technology." App. Br. 7–15.

After the Briefs were filed and Answer mailed in this case, the USPTO published revised guidance synthesizing case law and providing agency instruction on the application of § 101. USPTO's January 7, 2019, *2019 Revised Patent Subject Matter Eligibility Guidance* 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under the Guidance, we must look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract
> ideas (i.e., mathematical concepts, certain methods of organizing

human activity such as a fundamental economic practice, or mental

processes) ("Step 2A, Prong One")[2]; and

(2) additional elements that integrate the judicial exception into a

practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) ("Step 2A,

Prong Two").

See 84 Fed. Reg. at 54–55.

Only if a claim recites a judicial exception and does not integrate that

exception into a practical application, do we then look to whether the claim:

(3) adds a specific limitation beyond the judicial exception that is not

"well-understood, routine, conventional" in the field (*see*

MPEP § 2106.05(d)); or

(4) simply appends well-understood, routine, conventional activities

previously known to the industry, specified at a high level of

generality, to the judicial exception.

See id. at 56 (collectively "Step 2B").

After considering Appellants' arguments and the Examiner's Answer

in light of the new Guidance and corresponding case law, we are persuaded

the Examiner erred in rejecting the claims as patent ineligible.

We begin with claim 1. Claim 1 recites a system comprising

"circuitry" that is "configured" to do the following: (1) "receive a search

query," (2) "receive analytics data," (3) "determine [calculate] sponsored

entity search results," (4) "display one or more sponsored entity search

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[2] The Guidance refers to "Step One" as determining whether the claimed
subject matter falls within the four statutory categories identified by 35
U.S.C. § 101: process, machine, manufacture, or composition of matter.
This step is not at issue in this case.

results," (5) "receive a user interaction" (i.e., an input) with a sponsored entity search result, (6) "determine an interactive entity section for display," including "moveable visual objects moveable within the interactive entity section in response to . . . user interaction" on a "mobile client device." App. Br. 22–23 (claim 1). We do not discern that these steps fall into any of the categories deemed abstract ideas under Step 2A, Prong One of the Guidance, i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes. Although *some* of the foregoing steps relate merely to data collection or analysis (e.g., receiving a search query and determining search results), the claim as a whole is directed to a particular way of *displaying* search results within a constrained display area on a mobile device. *See* Spec. ¶¶ 3, 21, 74–77, Figs. 2a, 2b, 3a, 3b. The claimed steps present a technical solution to the problem of a constrained display screen: "moveable" visual objects which can be repositioned on the screen by user interaction *after* the search result is displayed. *Id.*

The foregoing steps of displaying visual objects cannot be performed merely by mental steps, and are not mathematical concepts – they are specific steps relating to display on a mobile device. Moreover, although "search engine advertising" generally may be characterized as organizing human activity, the particular system in claim 1 is not, as discussed above, merely directed to the concept of search engine advertising but to a particular *display configuration* on a mobile device. As the Specification explains, the invention uses "predictive circuitry" and a "modular search object framework" in order to produce a display configuration "well adapted to mobile devices." *Id.* at ¶¶ 3, 25–26.

Accordingly, we conclude under Step 2A, Prong One of the Guidance that claim 1 does not recite any of the judicial exceptions enumerated in the Guidance, including certain groupings of abstract ideas. Thus, we conclude claim 1 is directed to patent-eligible subject matter.

Appellants group independent claim 18 with claim 1 for purposes of the subject matter eligibility rejection, and claim 18 includes limitations commensurate in scope with claim 1. App. Br. 6. The Examiner rejects claim 18 for the same reasons as claim 1. Ans. 3–8. For the same reasons as discussed above, we conclude that claim 18 is directed to patent-eligible subject matter.

For the foregoing reasons, we do not sustain the rejection of claims 1 and 18 under 35 U.S.C. § 101. For the same reasons, we also do not sustain the rejection of remaining claims 2–17, 19, and 20, all of which depend from claim 1 or claim 18.

Rejections Under 35 U.S.C. § 103

Appellants argue the Examiner erred in finding Talluri teaches or suggests "a plurality of moveable visual objects moveable within the interactive entity section in response to . . . the user interaction," as recited in claim 1. App. Br. 16–17. Specifically, Appellants allege that although Talluri (the sole reference relied upon by the Examiner as to claim 1) teaches "position[ing] items on the display," the items are not "moveable" by user interaction (such as dragging by touch) as required by the claim. Rather, in Talluri, the positioning of items in a display, such as advertisements, is determined by a "rank" (score) of the items, or orientation of the screen (portrait or landscape). *Id.*; Talluri ¶¶ 22, 25, 34. For the following reasons, we are persuaded by Appellants' arguments.

The Examiner interprets "user interaction" in the disputed claim limitation as including setting a "preference" for display, such as portrait or landscape display, or "personalization factors" previously determined based upon "for example[,] users clicking on ads." Ans. 9–10. Accordingly, the Examiner finds Talluri teaches or suggests the disputed claim limitation in Talluri's description of ad placement based upon display mode or personalization preferences. *Id.*; Talluri ¶¶ 18, 22, 25, 34. We, however, do not agree that mere *settings* or *display modes* satisfy the claim limitation. Appellants' claim 1 recites that the user interaction is "a user interaction with . . . *one [of the] sponsored entity search results displayed on the display screen.*" App. Br. 22 (claim 1) (emphasis added). The "interactive entity section," in turn, is determined "in response to the user interaction with the sponsored entity search result." *Id.* (claim 1).

Thus, the language of claim 1 requires that "moveable" visual objects refers to user interaction with the display *after a search query* (such as finger touch or dragging), not mere positioning of objects in a display based on previous search queries or based on the device mode, as in Talluri. Appellants' Specification further confirms this interpretation. *See supra* Figs. 2a, 2b, 3a, 3b; Spec. ¶¶ 74–77.

Accordingly, giving claim 1 its broadest reasonable interpretation consistent with the Specification, *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004), we determine that "moveable visual objects moveable within the interactive entity section in response to . . . user interaction" does not include objects positioned according to predetermined settings or modes that cannot be moved subsequently in response to user interaction. We, therefore, conclude that the Examiner erred in finding

Talluri's description of display modes and personalization settings teaches or suggests the disputed limitation. For these reasons, we do not sustain the Examiner's obviousness rejection of claim 1.

Independent claim 18 recites a disputed limitation similar to that in claim 1: "search results being moveable about the touchscreen of the mobile client device in response to tactile gestures." App. Br. 26. As to claim 18, the Examiner acknowledges that "Talluri does not specifically teach search results are movable on a touch screen by a user's gesture" but finds that "Huang et al. teaches in paragraph 63 a user may use a gesture to cause the search results to be expanded." Ans. 13 (citing Huang ¶¶ 57, 60, 63, Fig. 7). The Examiner reasons that one of ordinary skill would have been motivated to apply Huang's teaching to Talluri in order to provide for an "adjust[ed] view of search results." Ans. 14. On this record, however, we are persuaded the Examiner has erred.

As Appellants argue, Huang merely teaches "gestures to change *the scope of a search*." Reply Br. 12–13 (emphasis added). Specifically, Huang teaches performing a search by using tactile gestures to highlight a word in a display, and that a user can change the search by, for example, dragging the user's fingers over additional words. Huang ¶¶ 60, 63, Fig. 4. An example is shown in Huang Figure 4, reproduced below.
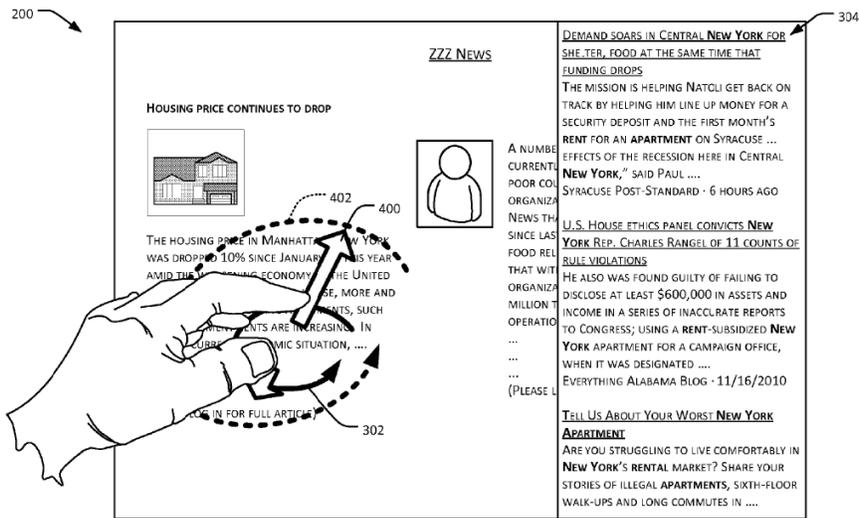
FIG. 4

Figure 4 illustrates an "example technique for altering a scope of a search by resizing the representation [of the search] 302," by a "resizing gesture [with a finger] 400." Huang ¶ 60. The resulting search is now defined by representation 402. *Id.*

Huang does not teach or suggest, however, "moveable" visual objects as recited in the claim. Like Talluri, Huang teaches *defining* particular *placement* of stationary items or results, based on preferences or previously-taken actions. *See supra.* The record does not demonstrate, however, that one of ordinary skill in the art would understand placement of a stationary item, as taught by the combination of Talluri and Huang, is the same as "moveable" visual objects in a search result display "to allow more screen space on the touchscreen for viewing of the moveable visual object of current interest to the user," as recited in claim 18.

For the foregoing reasons, we conclude that the Examiner erred in rejecting independent claim 18, and we do not sustain the rejection. Each of the remaining claims depends from claim 1 or claim 18, and therefore, for

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the reasons discussed above, we also do not sustain the obviousness rejections of those claims.

DECISION

We reverse the Examiner's decision rejecting claims 1–20.

REVERSED

BUSCH, *Administrative Patent Judge*, dissenting.

Although I agree with and join the Majority's decision reversing the rejection of claims 1–17 and 20 under 35 U.S.C. § 103, I respectfully dissent with respect to the overall disposition of the case. Specifically, I disagree with and write separately regarding the portions of the Majority's decision reversing the Examiner's rejection of claims 1–20 under 35 U.S.C. § 101 as being directed to ineligible subject matter without significantly more and reversing the rejection of claims 18 and 19 under 35 U.S.C. § 103.

THE 35 U.S.C. § 101 REJECTION OF CLAIMS 1–20

The Examiner rejects the claims as being "directed to the [abstract] idea of comparing new and stored information and using rules to identify options." Final Act. 6–7. The Examiner further determines the claims do not recite "additional elements that are sufficient to amount to significantly more than the judicial exception because the additional elements when considered alone [and] in combination amount to no more than" generally linking the abstract idea to a particular environment, instructions to apply the abstract idea on a computer, simply appending well-understood, routine and conventional activities, specified at a high level of generality, to the abstract idea, and insignificant extra-solution activity. Final Act. 7–8; Ans. 4–6.

Appellants dispute the Examiner's conclusion that the claims are directed to an abstract idea. Appeal Br. 6–16; Reply Br. 2–9. In particular, Appellants argue the claims are eligible because the "claims are directed to a specific set of technological features that result in improvements to computer capabilities for improving the display of information on a display of a mobile device during user interaction with the display of the device" and the claims "define specific combinations of features for improving the

technology for providing results such as search results on a display of a mobile device." Appeal Br. 6–7.

Appellants summarize various Federal Circuit decisions holding the respective claims eligible because they recited improvements to computer functionality or another technology. Appeal Br. 7–10. Appellants then argue the pending claims similarly "focus on a specific asserted improvement, or technological solution to a noted technological problem." Appeal Br. 11. Appellants explain that conventional lists of search results are not well adapted to the small display sizes of mobile devices. Appeal Br. 11–13 (citing Spec. ¶¶ 3, 22,[1] 77–78, 81, 90, 97, 115, Figs. 2a–6b); Reply Br. 2–3, 6–7. Appellants also argue claim 20's recitation of overlapping moveable cards further supports Appellants' assertion that the claims are directed to a technological improvement. Appeal Br. 14; Reply Br. 5–6.

Appellants contend "the problem of displaying multiple features, including sponsored search results, on a limited-size display on a mobile communication device, has been solved." Appeal Br. 13. Specifically, Appellants assert "using analytics data and a search query to determine sponsored entity search results" and providing moveable visual objects that can be hidden or exposed in response to a user interaction provides a solution to "the technical problem of displaying information, including sponsored ad listings, on a small screen of a mobile device." Appeal Br. 14. Appellants also argue the claimed solution improves computer functionality by providing a more readable and useable user-interface than the

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[1] Appellants cite paragraph 25, but the quoted language is in paragraph 22 of the Specification.

conventional results lists. Appeal Br. 15.

Appellants also assert the claims recite more than a mere result because the claims "describe[] the action of the computer in generating the display" and "provide for an improved display arrangement that allows for desired content to be displayed, seen, and/or interacted with." Appeal Br. 15 (describing exemplary embodiments that hide or expose various visual objects); Reply Br. 8. Appellants argue the claim language relating to exposing objects of current interest and hiding objects not of current interest to the user to allow more screen space for showing the objects of interest "illustrates the actual solution to the problem of displaying varying information on a mobile client device." Appeal Br. 15.

As the Majority notes, the Supreme Court's two-step framework guides patent eligibility analysis under 35 U.S.C. § 101. *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). As also set forth by the Majority, after the Briefs were filed, the Office published revised guidance for evaluating subject matter eligibility under 35 U.S.C. § 101, specifically with respect to applying the *Alice* framework. USPTO, 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance").

If a claim falls within one of the statutory categories of patent eligibility (i.e., a process, machine, manufacture, or composition of matter), we determine whether the claim is directed to one of the judicially recognized exceptions (i.e., a law of nature, a natural phenomenon, or an abstract idea). *Alice*, 573 U.S. at 217. As part of our inquiry, we "look at the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed.

Cir. 2016). The Guidance directs us to address this inquiry using two prongs of analysis: (i) does the claim recite a judicial exception (e.g., an abstract idea), and (ii) if so, is the judicial exception integrated into a practical application. 84 Fed. Reg. at 54.

Under the Guidance, if the judicial exception is integrated into a practical application, the claim is patent eligible under § 101. 84 Fed. Reg. at 54–55. If the claim is directed to a judicial exception (i.e., the claim both recites a judicial exception and fails to integrate the exception into a practical application), we next determine whether the claim provides an inventive concept, which includes determining whether any element, or combination of elements, amounts to significantly more than the judicial exception. *Alice*, 573 U.S. at 217; 84 Fed. Reg. at 56.

Here, I conclude Appellants' claims are directed to mental processes (i.e., a concept performed in the human mind, such as, an observation, evaluation, judgment, and opinion), which are abstract ideas. *See* 84 Fed. Reg. at 52. Appellants' claims generally are directed to providing interactive advertisements responsive to a search query. This is consistent with how Appellants describe the claimed embodiments of the invention. Appeal Br. 2 ("In particular, the present invention relates to displaying content including sponsored entity search results on the display of a mobile client device."); *See* Spec. ¶¶ 3–4, 21 ("Provided herein are novel systems, methods, and circuitry related to the sponsorship and monetization of entity based content (such as entity search results and graphical user interfaces (GUIs))" and "modular search objects and frameworks for supporting entity based content, modular search objects, and user interactions with the aforementioned," which provide "less intrusive advertising and a more

manageable environment for online browsing in a mobile context."). Notwithstanding Appellants' characterization of the claims as improving technology, Appeal Br. 6–16, Appellants' description regarding the claimed invention describes a problem with the usability of GUIs. Although Appellants describe this problem as an "engineering problem," the Appellants describe and broadly claim a solution rooted in the design (i.e., the layout and interactivity) and use of conventional GUI elements.

Claim 1 is reproduced below with the claim limitations that recite providing interactive advertisements responsive to a search query emphasized in *italics*:

> 1. A system stored in a non-transitory medium executable by processor circuitry, comprising:
>
> first interface circuitry configured to *receive a search query from a search field on a page view displayed on a display screen of a mobile client device*;
>
> second interface circuitry communicatively coupled to the first interface circuitry, the second interface circuitry configured to *receive analytics data about characteristics of an audience including a user of the mobile client device or about advertisements displayed on the display screen of the mobile client device, or about user interactions with advertisements displayed on the display screen of the mobile client device, the analytics data corresponding to the search query*;
>
> first framework circuitry communicatively coupled to the first interface circuitry and the second interface circuitry, the first framework circuitry configured to *determine a plurality of sponsored entity search results according to the search query and the analytics data and to display one or more sponsored entity search results of the plurality of sponsored entity search results on the display screen of the mobile client device*;
>
> third interface circuitry communicatively coupled to the first framework circuitry, the third interface circuitry configured

> to receive a user interaction with a sponsored entity search result
> of the one or more sponsored entity search results displayed on
> the display screen of the mobile client device; and
>
> second framework circuitry communicatively coupled to
> the third interface circuitry, the second framework circuitry
> configured to *determine an interactive entity section for display
> on the page view in response to the user interaction with the
> sponsored entity search result,* wherein the interactive entity
> section includes a plurality of moveable visual objects moveable
> within the interactive entity section in response to interactions
> including the user interaction to expose to user view a moveable
> visual object of current interest to the user of the mobile client
> device and to hide from view other moveable visual objects not
> of current interest to the user of the mobile client device to allow
> more screen space for viewing of the moveable visual object of
> current interest to the user.

More particularly, providing interactive advertisements responsive to a search query comprises (i) receiving the data necessary to display the results (i.e., the search query and the analytics data); (ii) determining search results to be displayed based on the received data; (iii) displaying the search results; and (iv) determining the "interactive entity section for display."

The concept recited in the claims is simply a series of observations, evaluations, and judgements for determining search results and how to arrange the results for display on a device. Consistent with our Guidance and case law, I conclude this concept is a mental process and, therefore, an abstract idea. *See* 84 Fed. Reg. at 52; *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (concluding "taking existing information . . . and organizing this information into a new form" is an abstract idea); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (concluding claims were directed to the abstract idea of "selecting certain information, analyzing it using mathematical techniques,

and reporting or displaying the results of the analysis"); *see also Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (concluding that "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea category" and concluding claims directed to "collecting information, analyzing it, and displaying certain results of the collection and analysis" were abstract); *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (concluding claims that focused on collecting, displaying and manipulating data were directed to an abstract idea).

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. *See Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) ("[W]ith the exception of generic computer-implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper."); *see also CyberSource Corp.* v. *Retail Decisions, Inc.*, 654 F.3d 1366, 1375, 1372 (Fed. Cir. 2011) (holding that the incidental use of "computer" or "computer readable medium" does not make a claim otherwise directed to process that "can be performed in the human mind, or by a human using a pen and paper" patent eligible); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012) (explaining mental processes are not patentable); 84 Fed. Reg. at 52–53 nn.14–15.

Even though GUIs are, by their nature, used in electronic devices,

simply claiming relationships between elements in a GUI or between a user and the GUI elements does not necessarily recite an improvement to technology sufficient to render the claimed subject matter eligible. Two relatively recent Federal Circuit cases discuss the eligibility of claims that focus on alleged improvements to GUIs. *Compare Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (determining claims directed to a GUI that allowed a user to select items from a first set of menus and facilitated generating a second menu were abstract ideas because "[t]hey do not claim a *particular way of programming or designing the software* to create menus that have these features, but *instead merely claim the resulting systems*") (emphases added), *with Core Wireless Licensing S.A.R.L. v. LG Electronics, Inc.*, 880 F.3d 1356, 1360 (Fed. Cir. 2018) (determining claims directed to a GUI providing access to application information from a main menu with the application in an unlaunched state were not directed to an abstract idea). Admittedly, distinguishing the claims held ineligible in *Apple* from the claims held eligible in *Core Wireless* is difficult, and, at first blush, Appellants' claims have may seem analogous to the claims in *Core Wireless.*

In *Core Wireless*, the court determined the claims were "directed to an improved user interface for computing devices," reiterating the emphasized portions of the claims and stating that the "limitations disclose a *specific manner* of displaying a limited set of information to the user, *rather than using conventional user interface methods* to display a generic index on a computer." *Core Wireless*, 880 F.3d at 1362–63 (emphases added). Notably, the court focused on the fact that the claims recited "an application summary window that can be *reached directly* from the main menu . . . while the application is in an *un-launched state*." *Core Wireless*, 880 F.3d at

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1360 (reproducing the claim to demonstrate emphasis on what the court presumably found important regarding eligibility).

Here, unlike the claims in *Core Wireless*, there is no evidence suggesting that the moveable visual objects, which are part of the determined interactive entity section, are anything other than conventional GUI elements (e.g., windows in any graphics-based operating system) implemented using conventional GUI methods. In other words, the claims simply recite determining an interactive entity section for display that includes particular GUI elements. The broad scope of the claims, however, at least encompasses conventional windows (or tabs in a window or application) in a conventional operating system that are moveable in response to a user selecting and dragging those windows (or clicking through the different tabs). Because the claims encompass these conventional windowing or tabbing GUI elements, I do not find Appellants' claims similar to the claims in *Core Wireless*.

Rather, I find Appellants' claims are more similar to the claims held ineligible in *Apple*. The ineligible claims in that case focused on particular relationships between GUI elements and creating new GUI elements from existing GUI elements. *Apple*, 842 F.3d at 1241. The court determined the claims did "not claim a *particular way of programming or designing the software* to create menus that have these features, but *instead merely claim the resulting systems*." *Apple*, 842 F.3d at 1241 (emphases added). The Court further stated that, "[e]ssentially, the claims are directed to certain functionality—here, the ability to generate menus with certain features," not "to a specific improvement in the way computers operate." *Apple*, 842 F.3d at 1241.

Other than receiving data, determining and displaying search results according to the received data, receiving a user interaction with the search results, Appellants' claims simply recite determining an *interactive entity section for display* having objects that, in response to a user action, are moveable "to expose to user view . . . and to hide from view" particular objects depending on which objects currently are of interest to the user. Accordingly, as in *Apple*, Appellants' claims fail to "claim a particular way of programming or designing the software to create [moveable visual objects] that have these features, but instead merely claim the resulting systems." *Apple*, 842 F.3d at 1241.

Because the claim recites a judicial exception, I next analyze whether the claim integrates the judicial exception into a practical application. 84 Fed. Reg. at 54. To determine whether the judicial exception is integrated into a practical application, we identify whether there are "*any additional elements recited in the claim beyond the judicial exception(s)*" and evaluate those *additional* elements to determine whether they integrate the judicial exception into a recognized practical application. 84 Fed. Reg. at 54–55 (emphasis added); see also Manual of Patent Examining Procedure ("MPEP") § 2106.05(a)–(c), (e)–(h) (9th ed. Rev. 08.2017, Jan. 2018).

Here, I would find the additional limitations do not integrate the judicial exception into a practical application. More particularly, the claims do not recite: (i) an improvement to the functionality of a computer or other technology or technical field (see MPEP § 2106.05(a)); (ii) use a "particular machine" to apply or use the judicial exception (see MPEP § 2106.05(b)); (iii) a particular transformation of an article to a different thing or state (see MPEP § 2106.05(c)); or (iv) any other meaningful limitation (see MPEP

§ 2106.05(e)). *See also* 84 Fed. Reg. at 55.

Rather, the additional elements simply (1) use computers as tools to implement the abstract idea requiring no more than generic computer elements to perform generic computer functions or (2) add insignificant extra-solution activity. The additional elements recited in the claims include the variously recited interface and framework circuitry and receiving a user interaction with a displayed sponsored entity of a search result. For purposes of this Dissent, although I determine the entirety of the determining an interactive entity step is merely a mental process (i.e., an evaluation) and part of the abstract idea, I alternatively consider the recitation that the interactive entity section includes moveable visual objects to expose or hide certain of those objects to be an additional element.

The recited interface and framework circuitry elements are generic computer elements recited at a high level of generality. The majority of the references to the circuitry in the Specification provide only general, vague, open-ended (i.e., non-limiting), and functional descriptions of these elements. *See, e.g.*, Spec. ¶¶ 7–19, 40 ("Analytics circuitry may be used to determine analytics data, and such circuitry may be embedded in any one of the servers and client devices."), 98 ("Each module has respective[] circuitry configured to execute various aspects of the module."), 119–134 (describing Figure 7's block diagram of exemplary circuitry by associating various functions with each block; for example, paragraph 128 describing "Display GUI Circuitry" 716 as being configured to display a GUI and/or sub-GUI associated with the search result without describing structure or *how* this circuity performs the function), 148–149. Appellants' disclosure also describes circuitry as potentially including software and/or hardware. Spec.

¶¶ 78–79 (explaining the circuitry *can be* "a combination of circuitry of the native operating system, the native client-side application, and the framework," and "parts of the circuitry can include client-side code such as AJAX, JavaScript, or any combination thereof"), 141 ("circuitry may include circuits connected wirelessly as well as circuits connected by hardware, such as wires").

Additionally, "receiv[ing] a user interaction with [information] displayed on the display screen of the mobile client device" is the most fundamental, generic, and basic purpose of GUIs (graphical *user interfaces*). Although not all GUIs necessarily include *moveable* visual objects that may be moved in response to a user action to expose or hide certain of those objects depending on the objects in which the user currently is interested, conventional operating systems (e.g., Microsoft Windows®) having moveable windows or applications and/or having applications with tabs (e.g., Microsoft Excel®) use an "interactive entity section" that includes moveable objects to hide or expose the objects based on the objects in which the user is interested. Accordingly, these limitations simply recite the use of generic computer components as tools to implement the abstract idea. *See* 84 Fed. Reg. at 55; MPEP § 2106.05(f).

Although the receiving a search query and receiving analytics data steps are part of the above-identified abstract idea because these steps are merely observations (i.e., mental processes), to the extent these steps could be considered additional elements beyond the abstract idea, they are merely pre-solution data gathering steps required to obtain the data necessary to make the recited determinations. Furthermore, to the extent displaying the actual GUI elements determined to be displayed goes beyond the abstract

idea, displaying the results of the determination is merely post-solution activity to output the results of the mental steps. These steps recite the type of insignificant extra-solution activity the courts have determined insufficient to transform judicially excepted subject matter into a patent-eligible application. *See* 84 Fed. Reg. at 55, 55 n.31; MPEP § 2106.05(g); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Can.*, 771 F.Supp.2d 1054, 1065 (E.D. Mo. 2011) *aff'd,* 687 F.3d 1266 (Fed. Cir. 2012) (explaining that "providing data . . . [is] insignificant post solution activity"); *Bilski v. Kappos*, 561 U.S. 593, 612 (holding the use of well-known techniques to establish inputs to the abstract idea as extra-solution activity that fails to make the underlying concept patent eligible); *also Parker v. Flook,* 437 U.S. 584, 590 (1978) (explaining "[t]he notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process exalts form over substance"); *Elec. Power,* 830 F.3d at 1354 (recognizing "that merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis").

Therefore, I disagree with Appellants' contention that the claims recite an improvement to technology. To the extent Appellants argue the claims provide a solution to the "problem of displaying information, including sponsored ad listings, on a small screen of a mobile device," Appeal Br. 14, I disagree that this constitutes a technical problem or a technical solution to the problem that provides an improvement to *technology*. Rather, the claims are directed to determining a usable GUI layout but are not, for example, creating new GUI elements.

Appellants' alleged benefits focus simply on GUI elements that are movable. The claims are not directed to "an improvement in computers as tools," like those claims found patent-eligible. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). Rather, the claims invoke computers merely as a tool to implement an abstract idea for presenting information in a particular way. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1287–88 (Fed. Cir. 2018) (disagreeing with BSG "that its claims focus on a non-abstract improvement in database functionality" by improving the quality and organization of information in the database because the recited benefits "are not improvements to database functionality" but instead are "benefits that flow from performing an abstract idea in conjunction with a well-known database structure"). Analogous to the claims in *BSG*, the claims do not relate to how GUIs function, but how conventional GUIs are used to organize and present information in a way that allegedly improves the arrangement of information presented in a GUI. *See BSG*, 899 F.3d at 1287. At best, I believe Appellants' claims recite an improvement to a user's ability to interact with the GUI, but this simply results from a decision on how to present the information using extant GUI elements, not from an improvement to the device itself or some other *technology*.

The most relevant portion of the Guidance instructs us that "improvement in the functioning of a computer, or an improvement to other technology or technical field" may be enough to integrate the abstract idea into a practical application. *See* 84 Fed. Reg. at 55. In my view, the present claims are similar to those at issue in *Apple* and, therefore, do not recite the type of technological solution or address the type of technical problem the

Guidance suggests would be sufficient to integrate an abstract idea into a
practical application. Even assuming that the particular GUI arrangement is
useful for browsing information on the small screen of a mobile device, this
is not enough to integrate the abstract idea into a practical application. *Cf.*
Univ. of Fla. Research Found., Inc. v. General Elec. Co., 916 F.3d 1363,
1367 (Fed. Cir. 2019) (noting that although the claimed invention may
"'result in life altering consequences' . . . is laudable, [] it does not render
[the claims] any less abstract").

It is unclear to me how the claims' broad aspirational language
provides a technological solution. Under the broadest reasonable
interpretation, the claims encompass (1) receiving three types of
information: (a) a search query from a search field in a browser web page
displayed on a tablet running a GUI of various operating systems,
(b) analytics data, and (c) user interactions with advertisements displayed on
the screen of the tablet; (2) determining sponsored search results using the
received search query and analytics data; (3) displaying the search results on
the tablet's screen; (4) receiving a user interaction with the displayed search
results; and (5) determining GUI elements to display, including moveable
GUI elements (that, in response to user interaction, expose objects of interest
to the user and hide other objects not of interest). As broadly recited, the
claims' determining an interactive entity step encompasses any type of
"moveable visual object," such as windows that a user can resize (including
expanding, contracting, minimizing, maximizing) or click-and-drag to cover
other windows in which the user is not interested or GUI elements similar to
tabbed worksheets. In other words, the claims recite at a high level of
generality the *idea* of having moveable GUI elements with which a user may

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interact to (a) expose GUI elements in which the user is interested and (b) hide GUI elements in which the user is not interested recited at a high level of generality—essentially, generic GUI functions. Appellants argue claims recite a solution rather than a mere result, but Appellants fail to explain persuasively how reciting the intended capabilities and visual results of manipulating GUI elements teaches *how* this capability is technically implemented and, more importantly, how such an implantation is an improvement to technology.

I believe an analogy to organizing physical documents underscores the lack of an improvement to technology. The claims recite, at a high level of generality, determining what information to display and how to display it for ease of readability. If I have multiple documents relating to each of my car insurance, home insurance, and auto insurance, but I have a small desk, I may not be able to view all of the information at the same time. I may determine to place each document relating to my car insurance in a first folder, each document relating to my auto insurance in a second folder, and each document relating to my home insurance in a third folder. When I wish to look at my home insurance documents, I may close my first two folders and move them out of sight, or simply place my third folder on top of them, then open my third folder. With the documents placed in folders, I am able interact with the folders to expose the documents in which I am interested and hide the documents in which I am not interested. This document organization technique makes it easier for me to view a subset of the information available to me, but it does not constitute a technological improvement. Similarly, I do not find applying the *idea* of using generic electronic devices to implement information organization and display

techniques, recited at a high level of generality, improves the devices or any other *technology*.

For at least the foregoing reasons, the claims do not integrate the judicial exception into a practical application. Accordingly, I agree with the Examiner that the claims are directed to an abstract idea and turn to step 2 of the *Alice* analysis.

Because I would determine the claims are directed to an abstract idea, I analyze the claims under step two of *Alice* to determine if there are additional limitations that individually, or as an ordered combination, ensure the claims amount to "significantly more" than the abstract idea. *Alice*, 573 U.S. at 217–18 (citing *Mayo*, 566 U.S. at 72–73, 77–79 (2012)). As stated in the Guidance, many of the considerations to determine whether the claims amount to "significantly more" under step two of the *Alice* framework are already considered as part of determining whether the judicial exception has been integrated into a practical application. 84 Fed. Reg. at 56. Thus, at this point of the analysis, I determine if the claims add a specific limitation, or combination of limitations, that is not well-understood, routine, conventional activity in the field, or simply appends well-understood, routine, conventional activities at a high level of generality. 84 Fed. Reg. at 56.

Appellants' claims fail to recite specific *additional* limitations (or a combination of limitations) that are not well-understood, routine, and conventional. As discussed above, the additional elements, at most include the various circuitry, receiving information and a user interaction, and displaying information in a GUI. As also discussed above, the circuitry elements, as supported by the Specification, are generic computer components recited at a high level of generality. Similarly, receiving

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information, a user interaction, and displaying information in a GUI are basic computer functions, none of which recite limitations beyond what was well-understood, routine, and conventional in the art. *See Berkheimer Memo[2]* § III.A.1; *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive."); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1096 (Fed. Cir. 2016) ("[T]he use of generic computer elements like a microprocessor or user interface do not alone transform an otherwise abstract idea into patent-eligible subject matter.").

For the reasons discussed above, I am not persuaded the Examiner erred, and I would sustain the Examiner's rejection of claims 1–20 under 35 U.S.C. § 101.

THE 35 U.S.C. § 103 REJECTION OF CLAIMS 18 AND 19

The Examiner rejects claim 18 as obvious in view of Talluri and Huang. Final Act. 68–74. Particularly relevant to Appellants' arguments, the Examiner finds Talluri teaches or suggests outputting a plurality of search results moveable about the touchscreen of the mobile device, but acknowledges Talluri does not explicitly teach "search results are moveable

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[2] "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)" at 3 (Apr. 19, 2018), available at https://www.uspto.gov/sites/default/files/documents/memo-berkheimer-20180419.PDF (explaining that a specification that describes additional elements "in a manner that indicates that the additional elements are sufficiently well-known that the specification does not need to describe the particulars of such additional elements to satisfy 35 U.S.C. § 112(a)" can show that the elements are well understood, routine, and conventional).

on a touch screen by a user's gesture or more specifically," as recited in claim 18:

> in response to tactile gestures made on the touchscreen on or proximate to the sponsored and the non-sponsored search results to expose to user view a moveable visual object of current interest to the user of the mobile client device and to hide from view other moveable visual objects not of current interest to the user of the mobile device to allow more screen space on the touchscreen for viewing of the moveable visual objects of current interest to the user.

Final Act. 71–72 (citing Talluri ¶¶ 16, 46, Figs. 5–6); Ans. 12–13 (additionally citing Talluri ¶¶ 7, 17–18, Abstract). However, the Examiner finds Huang teaches or suggests this missing aspect of claim 18 and provides a rationale for combining these teachings. Final Act. 73–74 (citing Huang ¶ 57, 60, 63, 66; Talluri ¶ 39, 46). As the Examiner notes, in response to a user gesture, Huang's display causes the search results to be expanded, moving the search results from a partial window on the edge of the screen to a full window, thereby covering (or hiding) the news section from which the user performed the gesture-based search. Ans. 13. The Examiner explains that this gesture results in a display presenting information of interest to the user and hiding information not of interest to the user. Ans. 13.

Appellants acknowledge Huang discloses "expansion (and presumably contraction) of an on-screen image," but assert "this still fails to show movement about the touchscreen of the device." Appeal Br. 20. More specifically, Appellants argue Huang simply teaches expanding an edge of a window, but the claims require "moving entire objects around the screen, the [sic] expose to view objects of interest to the user and hide from view objects not of interest . . . not just a resizing function," which requires

deleting objects from view and adding objects to view. Final Act. 20; Reply Br. 13.

I agree with the Examiner's findings and conclusion. I am not persuaded the broadest reasonable interpretation of the "search results being moveable about the touchscreen . . . in response to tactile gestures . . . to expose" objects of interest to the user and hide objects not of interest to the user excludes Huang's disclosure of expanding search results. As Appellants' acknowledge, Huang teaches expansion (and at least suggests contraction) of the search results portion of a display in response to a user gesture on a touchscreen. Huang teaches displaying multiple elements on a touch screen. Huang further teaches receiving a user gesture on the screen to change what is displayed on the screen. One such gesture changes the display from showing news on one part of a screen and search results on another part of the screen to showing the search results in a larger window and hiding the news. Huang ¶ 63; *Compare* Huang Fig. 7 (depicting two visual objects: (1) a window with news partially covered by (2) search results), *with* Huang Fig. 8 (depicting a single visual object showing more information of the search results previously displayed on the right edge of the screen in Figure 7 and hiding the news that was displayed in Figure 7). Therefore, I am not persuaded the Examiner erred in rejecting claim 18 and claim 19, not argued separately with particularity.

For the above reasons, I respectfully dissent.