UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte SAM S. AHN and HWA T. KHO

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Appeal 2016-008274
Application 13/103,129[1]
Technology Center 3600

_____

Before MICHAEL C. ASTORINO, MATTHEW S. MEYERS, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.

SILVERMAN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's
decision rejecting claims 1–6, 8–18, 20, and 22–24. We have jurisdiction
under 35 U.S.C. § 6(b).

We AFFIRM.

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[1] The Appellants identify Vascular Management Associates, Inc. as the real
party in interest. Appeal Br. 3.

ILLUSTRATIVE CLAIM

1. A non-transitory computer-readable medium having stored thereon sequences of instructions which, when executed by at least one processor, cause the at least one processor to:

output a graphical user interface (GUI), the GUI including a visual representation of at least a portion of a human body and a text input area;

receive input from a user via the GUI, the input selecting portions of the visual representation and identifying a sequence of medical procedures that were performed on a patient with respect to the selected portions;

highlight the selected portions on the visual representation, the highlighted portions providing a graphical representation of the sequence of medical procedures that were performed on the patient;

automatically generate billing codes corresponding to the medical procedures that were performed based on the input received via the GUI;

automatically generate text, based on input received via the GUI, identifying at least some of the medical procedures that were performed;

display the billing codes and the generated text on the GUI;

provide, via the GUI, a pop-up or dialog window in response to input corresponding to at least some of the medical procedures that were performed;

receive, from the user, information via the pop-up or dialog window; and

display at least some of the information provided via the pop-up or dialog window in the text input area of the GUI,

wherein the sequence of medical procedures corresponds to surgery performed on the patient and the visual representation displays a portion of a vascular system of the human body, and

wherein when highlighting the selected portions, the
instructions cause the at least one processor to highlight a path
in the displayed portion of the vascular system corresponding to
portions of the vascular system in which the surgery was
performed.

CITED REFERENCES

The Examiner relies upon the following references:

Dorne	US 5,325,293	June 28, 1994
Myers	US 2004/0254816 A1	Dec. 16, 2004
Kapit et al. (hereinafter "Kapit")	US 2008/0004505 A1	Jan. 3, 2008
Finlay	US 2008/0033759 A1	Feb. 7, 2008

REJECTIONS

I.   Claims 1–6, 8–18, 20, and 22–24 are rejected under 35 U.S.C.
§ 101 as ineligible subject matter.

II.   Claims 10–15, 17–20, 23, and 24 are rejected under 35 U.S.C.
§ 103(a) as unpatentable over Myers, Finlay, and Kapit.[2]

III.   Claim 16 is rejected under 35 U.S.C. § 103(a) as unpatentable
over Myers, Finlay, Kapit, and Dorne.

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[2] Although the Final Office Action (page 5) states that "[c]laims 1–6, 8–15
and 17–20 are rejected under 35 U.S.C. 103(a)," the Final Office Action
(page 14) states that the rejection of claims 1–6, 8, 9, and 22 under 35 U.S.C.
§ 103(a) is withdrawn.

FINDINGS OF FACT

We rely upon and adopt the Examiner's findings stated in the Final

Office Action at pages 3–23 and the Answer[3] at pages 3–30, except as stated

otherwise in the Analysis below. Additional findings of fact may appear in

the Analysis below.

ANALYSIS

Subject-Matter Eligibility

Applying the first step of the methodology delineated in *Alice Corp.*

Pty. Ltd. v. CLS Bank International, 134 S. Ct. 2347, 2355 (2014), the

rejection states:

> The claims are directed to a series of steps or an
> apparatus related to the providing a visual representation of a
> healthcare procedure, which merely encompasses the abstract
> ideas of comparing new and stored information and using rules
> to identify options; and/or using categories to organize, store
> and transmit information.

Final Action 3. Further, under the second *Alice* step, the claims do not

amount to significantly more than the abstract idea itself, because the

limitations are merely instructions to implement the abstract idea with

generic computer functions that are well-understood, routine, and

conventional. *Id.*[4]

Disputing the rejection, the Appellants argue, as to the first step of the

Alice analysis:

> [C]laim 1 includes features directed to outputting a graphical
> user interface (GUI), receiving input via the GUI, highlighting
> portions of the visual representation of a portion of a human

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[3] We refer, herein, to the Examiner's Answer dated July 6, 2016.

[4] The rejection of claims 1–6, 8, 9, and 22 under 35 U.S.C. § 101 as being
directed to a transitory signal (Final Action 4) is withdrawn. *See* Answer 12.

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> body on the GUI, and generating billing codes with respect to
> medical procedures performed based on input received via the
> GUI and generating text based on input received via the GUI.

Appeal Br. 10. The Appellants contend that this description does not

correspond to any abstract idea identified by courts or by the Office. *Id.* at

11. This argument is unpersuasive. Although the Appellants provide an

alternative characterization of claim 1, this alone does not identify an error

in the Examiner's determination that claim 1 is directed to an abstract idea.

Indeed, "[a]n abstract idea can generally be described at different levels of

abstraction." *Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1239 (Fed. Cir.

2016).

Accordingly, we are also not persuaded by the Appellants' criticisms

(Reply Br. 5–6)[5] of the Examiner's comparison of claim 1 to concepts

identified by courts as constituting abstract ideas — i.e., comparing new and

stored information, using rules to identify options, and using categories to

organize, store, and transmit information (Answer 15). The Appellants

allege that the Examiner "has not addressed all the features of claim 1" and

has "improperly described the features at a high level of abstraction that is

impermissibly reductive and untethered from the actual claim language."

Reply Br. 5. As noted above, "different levels of abstraction" may be

employed properly, in the first *Alice* step. *See Apple, Inc. v. Ameranth, Inc.*,

842 F.3d at 1239. Therefore, any such characterization of a claim is apt to

be less detailed than the claim itself. Here, the Appellants do not explain

adequately why the Examiner's characterization of claim 1 is purportedly

defective.

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[5] We refer, herein, to the Reply Brief filed September 6, 2016.

The Appellants also contend (*see* Appeal Br. 11–12) that claim 1 is not directed to an abstract idea, because claim 1 is similar to the subject matter of a claim (that is said to be non-abstract) from Example 23 of the Office's July 2015 Examples, which were provided as guidance. The referenced claim of Example 23, which is characterized as not being directed to an abstract idea, involves dynamically re-sizing and relocating text on a display screen. July 2015 Update Appendix 1: Examples (July 30, 2015), pp. 7–9. Although the referenced claim of Example 23, like claim 1 in this Appeal, relates to a display interface, the Appellants' argument is unpersuasive because the Appellants do not explain how the non-abstract character of the identified claim in Example 23 would apply to claim 1 in this Appeal. *See* Answer 16.

The Appellants also argue that claim 1 would not threaten to monopolize any basic tools of scientific and technological work, because "there are many other ways to generate billing information and provide a graphical representation of a surgery." Appeal Br. 12. According to the Appellants, the withdrawal of obviousness rejections as to independent claim 1 indicates that there is no preemption risk. *Id.* This argument is unpersuasive, however, because "[w]hile preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Furthermore, the Appellants' position, to the effect that the lack of a pending prior-art rejection of claim 1 signifies the absence of preemption risk, is unpersuasive, because even a determination of novelty or nonobviousness does not necessarily lead to the conclusion that subject

matter is patent-eligible. "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013).

Turning to the second *Alice* step, the Appellants contend that the elements of claim 1 "taken as a whole" amount to significantly more than an abstract idea itself. Appeal Br. 12. The Appellants go on to summarize essentially the entirety of claim 1 and urge that "these features cannot be reasonably construed to amount to mere instructions to apply an abstract idea or a generic computer structure to perform generic computer functions that are conventional activities known in the pertinent industry"; rather, the "features of claim 1 provide a unique and interactive GUI configured to receive input to automatically generate billing codes and text associated with medical procedures, as well as provide a pop-up or dialog window to obtain additional information." *Id.* at 13. Further, the Appellants contend that, like claims held to be patent-eligible in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245, 1257 (Fed. Cir. 2014), "claim 1 'is necessarily rooted in computer technology' in order to overcome a problem specifically arising in the area of generating medical billing information and providing a graphical output documenting a surgery." Appeal Br. 13. The Appellants also contend that the features of claim 1, taken together as an ordered combination, amount to significantly more than an abstract idea. *Id.* at 14. *See also* Reply Br. 7–9. Yet, these arguments are unpersuasive, because the Appellants do not identify (let alone provide any supporting explanation) any additional elements of claim 1 that might — either individually or in an ordered combination — amount to significantly more than the abstract idea itself.

Accordingly, we are not persuaded of error in the rejection of claim 1, or claims 2–6, 8–18, 20, and 22–24 — for which the Appellants rely upon the same arguments (*see* Appeal Br. 15) — such that we sustain the rejection of claims 1–6, 8–18, 20, and 22–24 under 35 U.S.C. § 101.

Obviousness

1. *Claims 10–15, 17–20, 23, and 24*

In one aspect, independent claim 10 recites:

> *receiving,* by the computer device, *input from a user via the GUI, the input selecting portions of the visual representation* and identifying a sequence of medical procedures that were performed on a patient with respect to the selected portions; [and]

> *highlighting,* simultaneously, by the computer device, *the selected portions of the visual representation,* the highlighted portions providing a graphical representation of the sequence of medical procedures that were performed on the patient.

(Emphasis added).

The Appellants argue that claim 10 stands rejected erroneously, because Kapit fails to teach or suggest the recited "receiving . . . input from a user via the GUI, the input selecting portions of the visual representation" and "highlighting . . . the selected portions of the visual representation." Appeal Br. 18.

This argument is unpersuasive, because the rejection relies upon Myers (*not* Kapit) to disclose input into a GUI by a user; Kapit is cited for disclosing the highlighting of the GUI. *See* Answer 20.

Also, according to the Appellants, the selected portion of Kapit is identified by an automated process (employing natural language processing) — not "via the GUI," as claimed. Appeal Br. 18–19. This argument, too, is

unpersuasive, because Kapit discloses human input into the GUI that
determines the highlighting of particular features. Answer 21 (citing Kapit
¶¶ 69–70). (We note that the Examiner's description of a portion of Kapit
disclosing a human coder correcting system-generated errors by inputting
the correct information, appears to correspond to paragraph 71 of Kapit,
rather than paragraph 70.)

In another aspect, claim 10 recites: "automatically generating text, by
the computer device and based on input received via the GUI, identifying the
medical procedures that were performed" and "displaying, by the computer
device, the billing codes and the generated text on the GUI." The
Appellants' arguments, about whether the combination of teachings from the
references teach or suggest these features (*see* Appeal Br. 19–23), turn on
the Appellants' challenge to the reasons for combining the cited references:

> In other words, the Final Office Action has parsed the
> two features of automatically generating text and displaying the
> billing codes and the generated text into totally unrelated
> features and then pointed to portions of Myers and Finlay that
> would not logically be combinable to somehow read on the
> interdependent features recited in claim 10. That is, the
> rejection amounts to a piecemeal analysis of the two features in
> an attempt to allege that the features are obvious.

Id. at 20–21. Consequently, the Appellants also allege improper hindsight
reasoning in the rejection. *Id.* at 22–23. Further, the Appellants contend:

> Each of these three references may be related to some
> aspect of medical procedures. However, each reference is
> clearly directed to different problems and goals and includes
> different types of systems and methodologies to obtain the
> desired results. As a result, one of ordinary skill in the art
> would not have looked to combine features from Myers, Finlay
> and Kapit without the benefit of the Appellants' specification.

Id. at 24.

As an initial matter, the Appellants' remark that each of the references is "directed to different problems and goals and includes different types of systems and methodologies to obtain the desired results" (*id.*) does not establish that "one of ordinary skill in the art would not have looked to combine features from Myers, Finlay and Kapit without the benefit of the Appellants' specification" (*id.*). The Appellants appear to be suggesting that the references do not constitute art analogous to the claimed invention. However, the analogous-art inquiry concerns whether the prior art at issue is (1) from the same field of endeavor as the claimed subject matter (regardless of the problem addressed), or (2) reasonably pertinent to the particular problem with which the inventor is involved. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). The similarity of prior art references *to each other* does not figure into an analogous-art challenge.

Moreover, as to the reasons for combining the references, the Final Office Action points to explicit teachings in the references themselves as the bases for combining them. With regard to Myers and Finlay, the Final Office Action states:

> It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Myers with the information manager for a procedure-based medical practice of Finlay, because to do so would result in a network-connected personal medical information and billing system wherein by "presenting patient-specific user interfaces for collecting pre-procedure data, aspects of the invention provide a user with an efficient and logical way to plan and record data relating to future procedures" and "by providing patient-specific user interfaces for collecting post-procedure execution, equipment, and billing data, aspects of the invention provide a user with a way to collect and analyze data relating to

procedures performed" thereby providing a more efficient and convenient method of administering healthcare to patients (Finlay, paragraph 4).

Final Action 7–8. Further, with regard to Myers and Kapit, the Final Office Action states:

> It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Myers with the method for medical coding of vascular interventional radiology procedures of Kapit, because to do so would result in a network-connected personal medical information and billing system containing a graphical anatomical interface wherein "[i]n addition to providing the ability to review the medical report, the interface may list the facts identified by the NLP [natural language processing] engine, and display a graphical vascular anatomy diagram that acts as a reference for reviewing and updating the billing codes" and the "GUI interface may also highlight the anatomical path of the VasIR [vascular interventional radiology] procedure, providing a visual representation of any coding error caused by a break in the path" so as to "advantageously assist a non-physician human coder in understanding the medical report" thereby providing a more complete, efficient and safer way of providing healthcare to patients (Kapit, paragraph 11).

Id. at 8. Such reliance upon the teachings of the references being combined may properly establish a reason to combine. *See WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999) ("The suggestion to combine may be found in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved.")

Accordingly, we are not persuaded by the Appellants' arguments disputing the obviousness of independent claim 10, such that we sustain the rejection of claim 10, as well as claims 11–15, 17–20, 23, and 24 —as to

which the Appellants rely upon the same arguments (*see* Appeal Br. 24–25)
— under 35 U.S.C. § 103(a).

2. *Dependent Claim 16*

Dependent claim 16 recites:

> 16. The method of claim 15, further comprising:
>
> providing, via the GUI, *a pop-up or dialog window in response to selection of a particular one of the sequence medical procedures that were performed*, wherein the pop-up or dialog window requests particular information from the user based on the particular medical procedure;
>
> receiving information, from the user, via the pop-up or dialog window; and
>
> *displaying at least some of the information provided via the pop-up or dialog window in the text input area of the GUI.*

(Emphasis added).

In addition to the arguments discussed above (*see* Appeal Br. 25), which apply to claims 10 and 15 (from which claim 16 depends), the Appellants contend that claim 16 stands rejected erroneously, for several reasons, which we address in turn.

The Appellants contend that the Examiner erred in rejecting claim 16, because Myers does not teach or suggest that the recited "pop-up or dialog window" is provided via Myers' GUI 1100, but is instead provided via the checklist GUI shown in Myers' Figures 3G–3J. Appeal Br. 26 (citing Myers ¶ 160). Further, the Appellants contend that Myers' paragraph 292 does not disclose claim 16's feature of being "provid[ed] . . . in response to selection of a particular one of the sequence medical procedures that were performed." *See* Reply Br. 15.

These arguments are not persuasive, because the rejection explains that Myers' paragraph 290 also teaches the features of "providing, via the GUI, a pop-up or dialog window in response to selection of a particular one of the sequence medical procedures that were performed" (Final Action 12) and, in any event, the Examiner explains that different teachings of a reference may be combined properly to show the obviousness of a recited feature — as in the case of the rejection of claim 16:

> The Office notes that the citations of the references are with regard to a 103 obviousness rejection, not a 102 anticipation rejection. Accordingly, the Office is indicating that the claims are obvious over a combination of references, not anticipated by a single reference. Pursuant to this, *it is immaterial which GUI results in a pop-up,* as the claims are still rendered obvious over the cited art. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller,* 642 F.2d 413, 208 USPQ 871 (CCPA1981). Here the combination of the references discloses all of the limitations as claimed.

Answer 27–28 (emphasis added).

The Appellants also assert error in the rejection of claim 16, because Dorne allegedly does not teach or suggest the recited "displaying at least some of the information provided via the pop-up or dialog window in the text input area of the GUI." Appeal Br. 26–27. According to the Appellants, the cited portions of Dorne (Figures 2B and 2G) merely disclose the entry of user information and selecting a referring physician via various input screens. *Id.* at 27.

This argument is unpersuasive of error, because — although Dorne's Figures 2B and 2G do show screens of a computer application that permit the entry of user information and selection of a referring physicians, these portions of Dorne nevertheless show the input of textual information in a pop-up or dialog window (in Figure 2B) and, in Figure 2G, the display of at least some of that information (e.g., a patient name). *See* Answer 28. Therefore, the rejection appropriately relies upon Dorne for claim 16's features of "displaying at least some of the information provided via the pop-up or dialog window in the text input area of the GUI."

In addition, the Appellants argue that the rejection of claim 16 lacks viable reasons to combine the identified teachings of the cited references. *See* Appeal Br. 27–28.

The reason for combining Myers and Dorne, as set forth in the rejection of claim 16, states:

> It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Myers with the method for correlating medical procedures and medical billing codes of Dorne, because to do so would result in a network-connected personal medical information and billing system that fills a need "for rapidly and simply correlating CPT [Current Procedural Terminology] codes with medical procedures performed during a patient examination which does not require a thorough understanding of the nomenclature used by the CPT coding system" thereby providing a more effective and reliable way of providing healthcare to patients.

Final Action 12 (quoting Dorne, col. 3, ll. 11–15).

The Appellants argue that "it would not have been obvious to combine Dorne's screen with respect to <u>entering patient demographic information</u> (Dorne – Fig[s]. 2B and 2G) with the GUI of Kapit, which

displays portions of the vascular system, since the two screens have totally

different purposes." Appeal Br. 28. *See also* Reply Br. 16. The Appellants

further contend that the statement of a motivation to combine Myers and

Dorne is "merely a conclusory statement providing an alleged benefit of the

combination." *Id.* at 27.

In response, the Examiner's Answer points out that "Dorne's screen is

combined with the GUI from Myers, not Kapit" and, furthermore, "[b]oth

the screen of Dorne and the GUI of Myers are devoted to the input and

display of patient information. Accordingly, the screens have exactly

similar purposes." Answer 29. The Examiner's Answer also states:

> Dorne teaches that it would have been obvious to one of
> ordinary skill in the art at the time of the invention to modify
> the teachings of Myers directed to the prompting and receipt of
> requested medical information through a GUI provided pop-up
> or dialog window with Dorne's display of information provided
> via a pop-up or dialog window in a text input area of the GUI,
> because to do so would result in a network-connected personal
> medical information and billing system that displayed the most
> important and relevant information through a GUI to a user
> while the user is utilizing the system, thereby decreasing errors
> related to the use of medical information and increasing patient
> safety. For example, in Myers, the most relevant information is
> requested, such as that related to the type/extent of medical
> procedure. It would be helpful that such information would be
> consistently displayed in a portion of the GUI dedicated to that
> display, such as Dorne discloses at Fig. 2G, where the system
> displays the most relevant information, herein the patient's
> name, received through a pop up or dialog window, in a portion
> of the GUI dedicated to that display.

Id. at 30–31.

Thus, the Examiner's reason for combining Myers and Dorne is based

explicitly on Dorne's disclosure — which is proper, because a prior art

reference may provide a reason to combine references. *See WMS Gaming*, 184 F.3d at 1355. Furthermore, as discussed above (regarding claim 10), the similarity of prior art references *to each other* does not squarely address the viability of an obviousness argument. Insofar as the Appellants might regard references as non-analogous, a different showing is required — i.e., prior art is analogous if it is either from the same field of endeavor as the claimed subject matter (regardless of the problem addressed), or reasonably pertinent to the particular problem with which the inventor is involved. *See Bigio*, 381 F.3d at 1325.

In view of the foregoing, the Appellants' arguments regarding the rejection of claim 16 are not persuasive of error, such that we sustain the rejection of claim 16 under 35 U.S.C. § 103(a).

DECISION

We AFFIRM the Examiner's decision rejecting claims 1–6, 8–18, 20, and 22–24 under 35 U.S.C. § 101.

We AFFIRM the Examiner's decision rejecting claims 10–20, 23, and 24 under 35 U.S.C. § 103(a).

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

AFFIRMED