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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RYAN ALAN BRUSH

Appeal 2017–005834
Application 13/457,758
Technology Center 3600

Before ANTON W. FETTING, BRUCE T. WIEDER, and
ROBERT J. SILVERMAN, *Administrative Patent Judges*.
FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE¹

Ryan Alan Brush (Appellant) seeks review under 35 U.S.C. § 134 of a final rejection of claims 1, 4, 5, 9, 10, and 14–19, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

¹ Our decision will make reference to the Appellant’s Appeal Brief (“Br.,” filed September 28, 2016) and the Examiner’s Answer (“Ans.,” mailed November 4, 2016), and Final Action (“Final Act.,” mailed February 26, 2016).

The Appellant invented a way of utilizing clinical information in disparate formats or structures to generate multiple derived representations of the clinical information, each derived representation structured to meet a particular clinical need. Specification para. 5.

An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below (bracketed matter and some paragraphing added).

1. One or more non-transitory computer storage media, executable by a computing system having a plurality of parallel processors and a plurality of low-latency processors operating on a cloud computing platform,

for facilitating a method of utilizing patent data in disparate formats to generate derived representations of the patient data,

the method comprising:

[1] receiving at a central location

a first set of patient data directed to a particular data item for a patient from a first medical organization,

the first set of patient data structured in a first format;

[2] receiving at the central location

a second set of patient data directed to the particular data item for the patient from a second medical organization,

the second set of patient data structured in a second format that is different from the first format,

the first medical organization and the second medical organization being disparate such that they do not share patient data with each other;

[3] generating, using at least one of the plurality of parallel processors,

a first derived representation of the particular data item comprising a timeline view of the particular data item,

the first derived representation generated using the first and second sets of patient data,

the first derived representation structured in a third format,

the first derived representation configured for use by a first computer application directed to a first clinical need; and

[4] generating

a second derived representation of the particular data item comprising an alert related to the particular data item,

the second derived representation generated using the first and second sets of patient data, the second derived representation structured in a fourth format,

the second derived representation configured for use by a second computer application directed to a second clinical need;

[5] receiving a request from the first computer application or the second computer application for the first derived representation or the second derived representation respectively; and

[6] communicating for presentation on a user interface associated with the first computer application or the second computer application

the first derived representation or the second derived representation respectively.

The Examiner relies upon the following prior art:

Brackett	US 2005/0114179 A1	May 26, 2005
Linthicum	US 2010/0131293 A1	May 27, 2010
Fuhrmann	US 2012/0179490 A1	July 12, 2012
Bhokal	US 2013/0041971 A1	Feb. 14, 2013

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Claims 1, 4, 5, 9, 10, and 14–19 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

Claims 1, 4, and 5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett and Linthicum.

Claims 9, 10, 14, 15, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, and Linthicum.

Claims 16 and 17 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, Linthicum, and Bhogal.

ISSUES

The issues of eligible subject matter turn primarily on whether the claims recite more than abstract conceptual advice of what a computer is to provide without implementation details.

The issues of obviousness turn primarily on whether the prior art describes the limitations in the claims.

FACTS PERTINENT TO THE ISSUES

The following enumerated Findings of Fact (FF) are believed to be supported by a preponderance of the evidence.

Facts Related to Claim Construction

01. The disclosure contains no lexicographic definition of “format.”

02. The ordinary meaning of “format” is the arrangement of data for storage or display.²

Facts Related to the Prior Art

Brackett

03. Brackett is directed to medical information processing and analysis, and more particularly, techniques for summarizing patient information available from a wide range of sources for informing decisions related to diagnosis and treatment. Brackett para. 1.

04. Brackett describes encapsulation and integration of disparate patient data into a useable form. A multi-media patient summary unifies different formats of patient information from different systems for delivery to care providers for use in medical diagnosis and care. Brackett para. 15.

05. Brackett describes a multi-media patient summary including a digital file encapsulating patient information of one or more formats, generated by accessing patient information at a compilation workstation from one or more systems, entering the patient information into the digital file, storing the digital file onto a machine readable medium, and loading the digital file at one or more remote client workstations. Brackett para. 16.

² American Heritage Dictionary, 2018
<https://www.ahdictionary.com/word/search.html?q=format>

06. Brackett describes a picture archival communication system (PACS), which generally consists of image/data acquisition, controller and archival functions, and display subsystems, which may be integrated by digital networks. Images and related patient data may be sent from imaging modalities (devices) to the PACS. For example, in a peer-to-peer network, an imaging modality computer may "push" to a PACS acquisition computer or the PACS acquisition computer may "pull." The PACS acquisition computer, along with other information handling applications, such as a hospital information system (HIS), a radiology department information system (RIS), may push imaging examinations along with pertinent patient information to a PACS controller. The PACS may upload generated and stored data to the multi-media patient summary. Brackett para. 52.

07. Brackett describes a compilation workstation used to assemble the patient information. The compilation workstation receives the patient data from various systems, such as the MRI, CT, HIS, and PACS systems. The assembled multi-media patient summary after deposit in a storage (memory) is available for access by clients. Such clients may be local or remote, and may include, for example, referring physicians, specialists, clinicians, other caretakers, patients, and so forth. Brackett para. 53.

Fuhrmann

08. Fuhrmann is directed to electronic medical records systems and more specifically to a plurality of separate entities maintaining

separate electronic medical records systems, wherein the entities can establish trusted relationships wherein trusted subset entities automatically obtain each other's patient medical data as patients move among the trusted subset entities as if the data is owned and managed by each of the trusted subset entities and, in at least some cases, so that updates to data at one of the entities are automatically used to modify the data at the other of the trusted subset entities. Fuhrmann para. 4.

09. Fuhrmann describes a process by which each of the entities in the trusted partner subset monitors for modifications to the first data subset and then pushes the modified first data subset to other trusted subset entities. Fuhrmann para. 84.

Linthicum

10. Linthicum is directed to providing graphical patient health record timelines and providing electronic health record information within and across clinical patient encounters. Linthicum para. 9.
11. Linthicum describes a graphical patient health record timeline interface system presenting patient health record information in a timeline for user interaction. Linthicum para. 10–11.
12. Linthicum describes a trending graph for interactive timeline visualization over the course of a patient's history, combining variables include gender, place of origin, etc. The graph can be provided by a real-time configurable graphing widget that displays any data type that benefits from a trending view. Showing labs, meds, vitals, inputs and outputs, and being able to compare these

variables over time can lead to better, individualized treatment, for example. Linthicum para. 149.

ANALYSIS

Claims 1, 4, 5, 9, 10, and 14–19 rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more

Claim 1 recites receiving two sets of patient data, generating two representations, and receiving a request for and sending one of the representations. Thus, claim 1 recites receiving, analyzing, modifying, and transmitting data. None of the limitations recite implementation details for any of these steps, but instead recite functional results to be achieved by any and all possible means. Data reception, analysis, modification, and transmission are all generic, conventional data processing operations to the point they are themselves concepts awaiting implementation details. The sequence of data reception-analysis-modification-transmission is equally generic and conventional. The ordering of the steps is therefore ordinary and conventional. The two other independent claims 9 and 15 are sufficiently similar to be accorded similar analysis. The remaining claims merely describe process parameters, with no implementation details.

The Supreme Court

set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts. First, [] determine whether the claims at issue are directed to one of those patent-ineligible concepts. [] If so, we then ask, “[w]hat else is there in the claims before us? [] To answer that question, [] 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. [The Court] described step two of this analysis as a search for an “inventive concept”—i.e., an element or combination of elements that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.”

Alice Corp., Pty. Ltd. v CLS Bank Intl, 134 S. Ct. 2347, 2355 (2014) (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012)).

To perform this test, we must first determine whether the claims at issue are directed to a patent-ineligible concept. The Examiner determines the claims to be directed to

generating and updating representations of clinical data, which at least correlates to the court identified abstract idea of (A) using categories to organize, store, and transmit information, and/or to the court identified abstract idea of (B) comparing new and stored information and using rules to identify options. While the claims do not explicitly recite abstract ideas (A) and/or (B), the concepts are described by receiving patient data, generating a timeline, generating an alert(s), receiving a request, communicating data, reformatting data, and receiving updated data.

Final Act. 2–3.

Although the Court in *Alice* made a determination as to what the claims were directed to, we find that this case’s claims themselves and the Specification provide enough information to inform one as to what they are directed to.

The preamble to claim 1 does not recite what it is directed to, but the steps in claim 1 result in sending data for some representation upon request absent any technological mechanism other than a conventional computer for

doing so. Although claim 1 recites using a parallel processor, this has been generic for too long to distinguish the claim. The Specification at paragraph 5 recites that the invention relates to utilizing clinical information in disparate formats or structures to generate multiple derived representations of the clinical information, each derived representation structured to meet a particular clinical need. Thus, all this evidence shows that claim 1 is directed to deriving representations from data inputs, i.e. data processing. This is consistent with the Examiner's determination.

It follows from prior Supreme Court cases, and *Bilski* (*Bilski v Kappos*, 561 U.S. 593 (2010)) in particular, that the claims at issue here are directed to an abstract idea. The concept of data processing is a fundamental data practice long prevalent in our system of commerce. The use of data processing is also a building block of ingenuity in data collection and interpretation. Thus, data processing, like hedging, is an "abstract idea" beyond the scope of §101. *See Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2356.

As in *Alice Corp. Pty. Ltd.*, we need not labor to delimit the precise contours of the "abstract ideas" category in this case. It is enough to recognize that there is no meaningful distinction in the level of abstraction between the concept of risk hedging in *Bilski* and the concept of data processing at issue here. Both are squarely within the realm of "abstract ideas" as the Court has used that term. *See Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2357.

Further, claims involving data collection, analysis, and display are directed to an abstract idea. *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (holding that "collecting information, analyzing it, and displaying certain results of the collection and analysis" are "a familiar class

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of claims ‘directed to’ a patent ineligible concept”); *see also In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016); *FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016). Claim 1, unlike the claims found non-abstract in prior cases, uses generic computer technology to perform data reception, analysis, modification, and transmission and does not recite an improvement to a particular computer technology. *See, e.g., McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (finding claims not abstract because they “focused on a specific asserted improvement in computer animation”). As such, claim 1 is directed to the abstract idea of receiving, analyzing, modifying, and transmitting data.

The remaining claims merely describe process parameters. We conclude that the claims at issue are directed to a patent-ineligible concept.

The introduction of a computer into the claims does not alter the analysis at Mayo step two.

the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention. Stating an abstract idea “while adding the words ‘apply it’” is not enough for patent eligibility. Nor is limiting the use of an abstract idea “to a particular technological environment.” Stating an abstract idea while adding the words “apply it with a computer” simply combines those two steps, with the same deficient result. Thus, if a patent’s recitation of a computer amounts to a mere instruction to “implemen[t]” an abstract idea “on . . . a computer,” that addition cannot impart patent eligibility. This conclusion accords with the preemption concern that undergirds our §101 jurisprudence. Given the ubiquity of computers, wholly generic computer implementation is not generally the sort of “additional featur[e]” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.”

Alice Corp. Pty. Ltd., 134 S. Ct. at 2358 (citations omitted).

“[T]he relevant question is whether the claims here do more than simply instruct the practitioner to implement the abstract idea [] on a generic computer.” *Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2359. They do not.

Taking the claim elements separately, the function performed by the computer at each step of the process is purely conventional. Using a computer for receiving, analyzing, modifying, and transmitting data amounts to electronic data query and retrieval—one of the most basic functions of a computer. The limitation of using a parallel processor is not a step, but a recitation of advice to use a generic form of processor. All of these computer functions are well-understood, routine, conventional activities previously known to the industry. *See Elec. Power Grp. v. Alstom S.A.*, *supra*. *See also In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (“Absent a possible narrower construction of the terms ‘processing,’ ‘receiving,’ and ‘storing,’ . . . those functions can be achieved by any general purpose computer without special programming”). In short, each step does no more than require a generic computer to perform generic computer functions. As to the data operated upon, “even if a process of collecting and analyzing information is ‘limited to particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am. Inc. v. InvestPic LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Considered as an ordered combination, the computer components of Appellant’s method add nothing that is not already present when the steps are considered separately. The sequence of data reception-analysis-modification-transmission is equally generic and conventional or otherwise

held to be abstract. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) (sequence of receiving, selecting, offering for exchange, display, allowing access, and receiving payment recited an abstraction), *Inventor Holdings, LLC v. Bed Bath & Beyond, Inc.*, 876 F.3d 1372, 1378 (Fed. Cir. 2017) (sequence of data retrieval, analysis, modification, generation, display, and transmission), *Two-Way Media Ltd. v. Comcast Cable Communications, LLC*, 874 F.3d 1329, 1339 (Fed. Cir. 2017) (sequence of processing, routing, controlling, and monitoring). The ordering of the steps is therefore ordinary and conventional.

Viewed as a whole, Appellant's claims simply recite the concept of data processing as performed by a generic computer. To be sure, the claims recite doing so by advising one to receive data from two locations in two formats and use the data to form two representations in two more formats and send one of those representations upon request. But this is no more than the parameters of the technological environment for such data processing and the generic computer processes necessary to process those parameters, and do not recite any particular implementation.

The claims do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field. The 25 pages of specification spell out different generic equipment³ and parameters that might be applied using this concept and the

³ The Specification describes personal computers, server computers, hand-held or laptop devices, multiprocessor systems, microprocessor-based systems, set top boxes, programmable consumer electronics, network PCs, minicomputers, mainframe computers. Spec. para. 18.

particular steps such conventional processing would entail based on the concept of data processing under different scenarios. They do not describe any particular improvement in the manner a computer functions. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of data processing using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice Corp. Pty. Ltd.*, 134 S. Ct. at 2360.

As to Appellant’s Appeal Brief arguments, we adopt the Examiner’s determinations and analysis from Final Action 2–4 and Answer 2–11 and reach similar legal conclusions. In particular, we are not persuaded by Appellant’s argument that the Examiner failed to articulate the abstract idea to which the claims are directed. Br. 16. As the Examiner responds, the Examiner determines the claims are directed to “generating and updating representations of clinical data.” Ans. 3. As we determine *supra*, this is no more than data processing, which was found to be abstract in *Electric Power* *supra*.

Claims 1, 4, and 5 rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett and Linthicum

As to Appellant’s Appeal Brief arguments, we adopt the Examiner’s determinations and analysis from Final Action 5–9 and Answer 11–15 and reach similar legal conclusions. In particular, we are not persuaded by Appellant’s argument that “Brackett only discusses separate types of media data being presented side by side, not actually combining the separate types

into something new, such as the derived representation recited in the claims.” Br. 23. As the Examiner responds,

As per the distinction between a "side by side" representation of Brackett (without digressing too much here, there is actually more to Brackett's multimedia patient summary than this) and the "derived representation recited in the claims", there appears to be none in terms of broadest reasonable interpretation. Brackett teaches a multimedia patient summary where the data has been converted into an efficient format and where translation may include file formatting and this reads on a broad "derived representation" as claimed.

Ans. 12. As the Examiner determines, the claims do not recite nor narrow the manner or implementation of such derivation.

Claims 9, 10, 14, 15, 18, and 19 rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, and Linthicum

As to Appellant’s Appeal Brief arguments, we adopt the Examiner’s determinations and analysis from Final Action 9–19 and Answer 15–17 and reach similar legal conclusions. In addition, Appellant argues that Fuhrmann teaches away from a central location. Br. 25–26. But Appellant does not show how Fuhrmann disparages using a central location, only that Fuhrmann chooses a different model. Examiner applies Fuhrmann for updating data in response to discovering it is stale, not for a central model.

What a reference teaches or suggests must be examined in the context of the knowledge, skill, and reasoning ability of a skilled artisan. What a reference teaches a person of ordinary skill is not [] limited to what a reference specifically "talks about" or what is specifically "mentioned" or "written" in the reference. Under the proper legal standard, a reference will teach away when it suggests that the developments flowing from its disclosures are unlikely to produce the objective of the applicant's invention. *In*

re Gurley, 27 F.3d 551, 553 (Fed. Cir. 1994). A statement that a particular combination is not a preferred embodiment does not teach away absent clear discouragement of that combination. *In re Fulton*, 391 F.3d at 1199-1200. [] [A] prior art reference that does not specifically refer to one element of a combination does not, per se, teach away. If it did, only references that anticipate could be used to support an obviousness analysis. However, prior art references that are capable of rendering an invention obvious under a section 103 analysis are not limited to reference that also anticipate the patent at issue.

Syntex (U.S.A.) LLC v. Apotex, Inc., 407 F.3d 1371, 1380 (Fed. Cir. 2005)

Claims 16 and 17 rejected under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, Linthicum, and Bhogal

As to Appellant's Appeal Brief arguments, we adopt the Examiner's determinations and analysis from Final Action 19–22 and reach similar legal conclusions. Appellant argues this rejection on the basis of the independent claims and this is equally unpersuasive here.

CONCLUSIONS OF LAW

The rejection of claims 1, 4, 5, 9, 10, and 14–19 under 35 U.S.C. § 101 as directed to a judicial exception without significantly more is proper.

The rejection of claims 1, 4, and 5 under 35 U.S.C. § 103(a) as unpatentable over Brackett and Linthicum is proper.

The rejection of claims 9, 10, 14, 15, 18, and 19 under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, and Linthicum is proper.

The rejection of claims 16 and 17 under 35 U.S.C. § 103(a) as unpatentable over Brackett, Fuhrmann, Linthicum, and Bhogal is proper.

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DECISION

The rejection of claims 1, 4, 5, 9, 10, and 14–19 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2011).

AFFIRMED