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 DETLEF KOLL and THOMAS POLZIN
(Applicant: MMODAL IP LLC)

———————

Appeal 2016–001487
Application 13/896,684
Technology Center 3600

———————

Before ANTON W. FETTING, BRUCE T. WIEDER, and
KENNETH G. SCHOPFER, *Administrative Patent Judges.*

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE[1]

Detlef Koll and Thomas Polzin (Appellants) seeks review under
35 U.S.C. § 134 of a final rejection of claims 2–11, the only claims pending
in the application on appeal. We have jurisdiction over the appeal pursuant
to 35 U.S.C. § 6(b).

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[1] Our decision will make reference to the Appellants's Appeal Brief ("Br.,"
filed July 6, 2015) and the Examiner's Answer ("Ans.," mailed September
10, 2015), and Final Action ("Final Act.," mailed January 7, 2015).

The Appellants invented techniques for improving the accuracy of billing codes and other data generated by automated inference engines. Specification para. 7.

An understanding of the invention can be derived from a reading of exemplary claim 2, which is reproduced below (bracketed matter and some paragraphing added).

> 2. A method performed by at least one computer processor executing computer program instructions tangibly stored on at least one non–transitory computer–readable medium,
>
>> the method for use with a system including a data source and a billing code,
>
> the method comprising using the at least one computer processor to perform operations of:
>
> (A) receiving,
>
>>> by a billing code feedback module executed by the at least one computer processor,
>
>> input from a user,
>
>> wherein the input represents a verification status of the billing code;
>
> (B) applying,
>
>>> by the billing code feedback module,
>
>> first inverse logic to the input, the billing code, and a set of forward logic,
>
>> to identify first and second concept extraction components, wherein (B) comprises:
>
> (B) (1) identifying,
>
>>> by the billing code feedback module,
>
>> a first logic component that generated the billing code, wherein the first logic component comprises means for implementing first logic, wherein the first logic includes

a first condition, wherein the first condition includes a first sub–condition and a second sub–condition;

and

(B) (2) applying,

by the billing code feedback module,

first inverse logic to the input received from the user to identify at least one of the first and second sub– conditions;

and

(C) applying,

by the billing code feedback module,

reinforcement to the first and second concept extraction components, comprising:

(C) (1) determining,

by the billing code feedback module,

whether the verification status indicates that the billing code is accurate;

and

(C) (2) if the verification status indicates that the first sub– component is responsible for an inaccuracy of the billing code,

then applying,

by the billing code feedback module,

negative reinforcement to the first sub–component.

Claims 2–11 stand rejected under 35 U.S.C. § 101 as directed to non– statutory subject matter.

Claims 2–11 stand rejected under the judicially created doctrine of obviousness type double patenting as claiming the patentably indistinguishable subject matter as another U.S. Patent.

ISSUES

The issues of eligible subject matter turn primarily on whether the claims recite more than abstract conceptual advice.

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 "billing code."

02. The disclosure contains no lexicographic definition of "inverse logic."

03. The disclosure contains no lexicographic definition of "concept extraction component."

04. The disclosure contains no lexicographic definition of "reinforcement."

05. The disclosure contains no lexicographic definition of "verification status."

06. "Applying reinforcement" is associating reinforcement. Spec. para. 79.

Facts Related to Appellants' Disclosure

07. Billing codes need to be generated and provided to an insurer for reimbursement. Spec. para. 4.

08.   Each of the forward logic components 132a–c may implement a distinct symbolic rule for generating or selecting billing codes based on information derived from the draft transcript. Each such rule includes a condition (also referred to herein as a premise) and a conclusion. Spec. para. 46.

09.   The symbolic rules represented by the forward logic components 132a–c may be adjusted manually. Para. 48.

10.   Links 134a–b may or may not be generated and/or stored as elements of the system. For example, links 134a–b may be stored within data structures in the system, such as in data structures within the set of billing codes. For example, each of the billing codes may contain data identifying the forward logic component concept content (or part thereof) that caused the billing code to be generated. Spec. para. 63.

11.   A human reviewer may conclude that a billing code is inaccurate as a result of a concept extraction component incorrectly encoding text with a concept code. Spec. para 69.

12.   The system also includes a billing code feedback module. Once a human reviewer has determined whether a particular billing code is accurate, the reviewer provides input representing that determination to a billing code feedback module. In general, this input represents a verification status of the reviewed billing code, where the verification status may have a value selected from a set of permissible values, such as "accurate" and "inaccurate" or "true" and "false." Spec. para. 70.

13. The billing code feedback module may associate a truth value with the identified forward logic component. For example, if the reviewer's feedback confirms the reviewed billing code, then the billing code feedback module may associate a truth value of "true" with the identified forward logic component; if the reviewer's feedback disconfirms the reviewed billing code, then the billing code feedback module may associate a truth value of "false" with the identified forward logic component. The billing code feedback module may, for example, store such a truth value in or in association with the corresponding forward logic component. Spec. para. 74.

14. The system may identify the concept extraction component responsible for generating the billing code by, for example, following the series of links from the billing code back to the corresponding forward logic component. For example, if the reviewer provides feedback on billing code 142b, then the feedback module may identify the concept extraction component 120b as the concept extraction component that generated billing code 142b by following the link 144b from billing code 142b to forward logic component 132b, by following the link 134b from the forward logic component 132b to the concept content 122b, and by following the link 124b from the concept content 122b to the concept extraction component 120b. It is not necessary to use links to identify the concept extraction component responsible for generating a billing code. Instead, inverse logic may be applied to

identify the responsible concept extraction component without the use of links. Spec. para. 75.

15. A forward logic component may represent logic having multiple clauses (sub–conditions). For example, consider a forward logic component that implements a rule of the form "if A AND B, Then C." Such a rule contains two clauses (sub–conditions): A and B. In the description herein, each such clause is said to correspond to and be implemented by a "sub–component" of the forward logic component that implements the rule containing the clauses. Spec. para. 77.

16. Each sub–component of a forward logic component may correspond to and implement a distinct clause (sub–condition) of the logic represented by the forward logic component. Spec. para. 78.

17. Associating reinforcement with a component is also referred to herein as "applying" reinforcement to the component. Spec. para. 79.

18. Both praise and blame are examples of "reinforcement" as that term is used herein. Therefore, in general the billing code feedback module may generate reinforcement output, representing praise and/or blame. Such reinforcement output may take any of a variety of forms. For example, a score, referred to herein as a "reliability score," may be associated with each of one or more components. The reliability score of a particular component represents an estimate of the degree to which the particular

component reliably generates accurate output. Assume for purposes of example that the value of a reliability score may be a real number that ranges from 0 (representing complete unreliability) to 1 (representing complete reliability). The reliability score associated with each particular component may be initialized to some initial value, such as 0, 1, or 0.5. Spec. para. 81.

19. Inverse reasoning module 630 includes inverse logic components, each of which may be implemented in any of the ways disclosed in connection with forward logic components of reasoning module 130. Each of the inverse logic components may implement distinct logic for reasoning backwards over the set of logic (e.g., set of rules) represented and implemented by the reasoning module as a whole. The set of logic represented and implemented by the reasoning module as a whole will be referred to herein as the "rule set" of the reasoning module, although it should be understood more generally that the reasoning module may implement logic in addition to or other than rules, and that the term "rule set" refers generally herein to any such logic. Spec. para. 96.

20. Each of the inverse logic components may contain both a confirmatory logic component and a disconfirmatory logic component, both of which may be implemented in any of the ways disclosed above in connection with forward logic components of the reasoning module. Spec. para. 98.

ANALYSIS

Claims 2–11 rejected under 35 U.S.C. § 101 as directed to non–statutory subject matter

Claim 2 recites many phrases that are not conventional or terms of art, and so we begin by construing the claim.

A billing code is undefined, but the Specification indicates they are codes provided to insurers for reimbursement. Thus, billing codes are codes indicating a reason for billing.

Forward logic and inverse logic are undefined, but the Specification indicates they are inferential logic applied to rules of the form premise→conclusion, i.e. conventional if–then–else logic. Forward logic derives the conclusion from the premise, and inverse logic derives the set of premises from the conclusion.

Concept extraction components are undefined but the Specification indicates they are what is responsible for generating billing codes. Thus, they are the actors that carry the results from applying forward logic. As forward and inverse logic components are the inferential processes and repositories of the rules for such forward and inverse logic, a logic component that generated the billing code is then the process and repository of the rules whose output is used by the actor in generating the billing code.

Reinforcement is undefined but the Specification provides attributes of "blame" and "praise" as examples. Applying reinforcement is defined as associating reinforcement. So applying reinforcement is associating some reinforcing attribute in any manner.

Verification status is undefined but the Specification provides attributes of "true" and "false" as examples.

Means for implementing first logic is drafted as means plus function. Appellants direct us to Specification paragraphs 77–78. App. Br. 11. These paragraphs describe how a logical AND operator is implemented by referring to each operand of the AND operation as a separate sub–component.

Accordingly, claim 2 is then:

> 2. A method performed by at least one computer processor executing computer program instructions tangibly stored on at least one non–transitory computer–readable medium,
>
> > the method for use with a system including a data source and a billing code,
>
> the method comprising using the at least one computer processor to perform operations of:
>
> (A) receiving,
>
> > by computer processor,
>
> > input representing a billing code verification attribute from a user,
>
> (B) applying,
>
> > by the billing code feedback module,
>
> > first inverse inferential logic to the input, the billing code, and a set of forward logic rules,
>
> > to identify first and second actors which previously applied those rules, wherein (B) comprises:
>
> (B) (1) identifying,
>
> > by the billing code feedback module,
>
> > a first process and logic rules repository that generated the billing code,

wherein the first rules repository comprises inferential rules for implementing first logic,

wherein the first logic includes a first condition,

wherein the first condition includes a first sub–condition and a second sub– condition that are logically connected by an AND operation;

and

(B) (2) applying,

by the billing code feedback module,

first inverse inferential logic to the input received from the user to identify at least one of the first and second sub–conditions;

and

(C) associating,

by the billing code feedback module,

a reinforcement attribute to the first and second actors which previously applied those rules, comprising:

(C) (1) determining,

by the billing code feedback module,

whether the verification status indicates that the billing code is accurate;

and

(C) (2) if the verification status indicates that the first sub–component is responsible for an inaccuracy of the billing code,

then associating, by the billing code feedback module, a negative reinforcement attribute to the first sub–component.

In other words, (A) get a billing code verification attribute; (B) identify what concepts led to that billing code by identifying where the rules leading to that concept came from and then identifying two conditions in those rules

that led to the inference resulting in the billing code, and then (C)

associating some reinforcement attribute to where those rules came from by

determining whether the billing code is indicated as accurate and if a rule is

indicated as inaccurate, associate a negative value to the reinforcement

attribute of the rule. As such this is little more than conceptual advice.

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.*, 132

S.Ct. 1289 (2012)).

To perform this test, we must first determine whether the claims at issue

are directed to a patent–ineligible concept. The Examiner finds the claims

directed to applying rules to documents to generate codes, which is a

fundamental economic practice or advice on how to practice business. Final

Act. 4.

While the Court in *Alice* made a direct finding 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 2 recites that it is a method for use with a system including a data source and a billing code. The steps in claim 2 result in determining whether a code is accurate, and if not, then making some negative association with the code. The Specification at paragraph 7 recites that the invention relates to improving the accuracy of billing codes and other data. Thus, all this evidence shows that claim 2 is directed to making data more accurate, i.e. proofreading.

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. Like the risk hedging in *Bilski*, the concept of proofreading is a fundamental business and legal practice long prevalent in our system of commerce. The use of proofreading is also a building block of making contractual arrangements. Thus, proofreading, like hedging, is an "abstract idea" beyond the scope of §101. *See Alice Corp. Pty. Ltd.* 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 proofreading at issue here. Both are squarely within the realm of "abstract ideas" as the Court has used that term. *See Alice Corp. Pty. Ltd.*at 2357.

The remaining claims merely describe inferences to be drawn. 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 "implement[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 feature[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 to read data and perform inferential logic amounts to electronic data query and retrieval—one of the most basic functions of a computer. All

of these computer functions are well–understood, routine, conventional activities previously known to the industry. In short, each step does no more than require a generic computer to perform generic computer functions.

Considered as an ordered combination, the computer components of Appeallants' method add nothing that is not already present when the steps are considered separately. Viewed as a whole, Appeallants' method claims simply recite the concept of proofreading as performed by a generic computer. The method 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. Instead, the claims at issue amount to nothing significantly more than an instruction to apply the abstract idea of proofreading 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.* at 2360.

> As to the structural claims, they
>
>> are no different from the method claims in substance. The method claims recite the abstract idea implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea. This Court has long "warn[ed] ... against" interpreting § 101"in ways that make patent eligibility 'depend simply on the draftsman's art.'
>
> *Alice Corp. Pty. Ltd.* at 2360.

We are not persuaded by Appeallants' argument that the record as a whole suggests that it is more likely than not that the claimed invention would be considered a practical application of an abstract idea. App. Br. 17.

Claim 2 is no more than abstract conceptual advice to follow inferential
rules to verify a code.

We are not persuaded by Appellants' argument that the Examiner merely
states his conclusion that the claims are directed to nothing significantly
more than an abstract idea, without relying on any evidence in the record.
App. Br. 18. We find supra that the claims and Specification provide
substantial evidence that the claims are directed to a form of proofreading.

We are not persuaded by Appellants' argument that the method of claim
2 goes significantly beyond the mere abstract idea. App. Br. 18–21.
Appellant recite the claim limitations and conclude based only on that
recitation that the claim goes significantly beyond the mere abstract idea.
Appellants go on to contend that limitation (B)(2) is neither contained within
nor suggested by the abstract idea the claim is drawn toward. *Id.* But
limitation (B)(2) is abstract conceptual advice to look up one of the
conditions leading to a code with inverse inferential logic, with the
admonishment to automate it.

We are not persuaded by Appellants' argument that the express claim
limitations go significantly beyond an instruction to implement the abstract
idea of applying rules to billing documents to generate codes on a computer.
App. Br. 21. Appellants contend that claim 2 includes a variety of express
limitations which are nowhere to be found in or suggested by the Examiner's
asserted abstract idea. *Id.* at 22. Appellants conflate the *Alice* steps. The
first step asks what the claim is directed to and whether that is an abstract
idea. It is the second step that looks at the limitations and how they are
organized and the claim as a whole with those limitations. The added

limitations are no more than conceptual advice on inferences to be made based on rules. The fact that there are a number of such inferences to be made and that the claim recites various labels for the rules, data, and who performs the inferences, does not convert the abstract conceptual advice into more than that.

We are not persuaded by Appellants' argument that the Examiner has failed to demonstrate, or even to point to any evidence suggesting, that the express limitations of claim 2 recite "conventional activities previously known to the pertinent industry." Appellants contend that demonstrating that claim 2 is limited to "conventional activities previously known to the pertinent industry" would require, at the very least, pointing to some reference or combination of references proving that the express limitations of claim 2 were previously known to the pertinent industry. App. Br. 22–23. One of ordinary skill in the art would have the equivalent of a degree in computer science, which generally includes courses in digital logic, which in turn include inferential logic. As the limitations are no more than abstract advice to perform inferential logic, this would be necessarily known to those of ordinary skill.

We are not persuaded by Appellants' argument that there is nothing "generic" about the express elements of claim 2. These elements are specific, not generic. App. Br. 23. This is a conclusory argument. It appears Appellants are referring to their labels for the data and software modules as adding specificity, but merely labelling parts of abstract advice does not add to specificity.

Appellants further argue that the asserted claims are akin to the claims found patent–eligible in *DDR Holdings, LLC v. Hotels.com, L.P.* 773 F.3d 1245 (Fed. Cir. 2014). In *DDR Holdings*, the Court evaluated the eligibility of claims "address[ing] the problem of retaining website visitors that, if adhering to the routine, conventional functioning of Internet hyperlink protocol, would be instantly transported away from a host's website after 'clicking' on an advertisement and activating a hyperlink." *Id.* at 1257. There, the Court found that the claims were patent eligible because they transformed the manner in which a hyperlink typically functions to resolve a problem that had no "pre–Internet analog." *Id.* at 1258. The Court cautioned, however, "that not all claims purporting to address Internet–centric challenges are eligible for patent." *Id.* For example, in *DDR Holdings* the Court distinguished the patent–eligible claims at issue from claims found patent–ineligible in *Ultramercial. See id.* at 1258–59 (citing *Ultramercial, Inc. v. Hulu, LLC,* 772 F.3d 709, 715–16 (Fed. Cir. 2014)). As noted there, the *Ultramercial* claims were "directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before." *Id.* at 1258 (quoting *Ultramercial,* 772 F.3d at 715–16). Nevertheless, those claims were patent ineligible because they "merely recite[d] the abstract idea of 'offering media content in exchange for viewing an advertisement,' along with 'routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet.'" *Id.*

Appellants' asserted claims are analogous to claims found ineligible in *Ultramercial* and distinct from claims found eligible in *DDR Holdings.*

The ineligible claims in *Ultramercial* recited "providing [a] media product for sale at an Internet website;" "restricting general public access to said media product;" "receiving from the consumer a request to view [a] sponsor message;" and "if the sponsor message is an interactive message, presenting at least one query to the consumer and allowing said consumer access to said media product after receiving a response to said at least one query." 772 F.3d at 712. Similarly, Appellants' asserted claims recite receiving data and making basic if–then–else types of inferences. This is precisely the type of Internet activity found ineligible in *Ultramercial*.

Claims 2–11 rejected under the judicially created doctrine of obviousness type double patenting as claiming the patentably indistinguishable subject matter as another U.S. Patent

We summarily affirm this uncontested rejection. Although Appellants filed a terminal disclaimer on February 12, 2015, the Examiner has neither withdrawn the rejection nor indicated whether the disclaimer is proper.

CONCLUSIONS OF LAW

The rejection of claims 2–11 under 35 U.S.C. § 101 as directed to non–statutory subject matter is proper.

The rejection of claims 2–11 under the judicially created doctrine of obviousness type double patenting as claiming the patentably indistinguishable subject matter as another U.S. Patent is proper.

DECISION

The rejection of claims 2–11 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