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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* SAMUEL I. BRANDT, JAN DEHAAN,  
JOHN D. HALEY, and ZHIJING LIU

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Appeal 2018–005693  
Application 11/285,807  
Technology Center 3600

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Before HUBERT C. LORIN, ANTON W. FETTING, and  
SCOTT C. MOORE, *Administrative Patent Judges*.

FETTING, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE<sup>1</sup>

Samuel I. Brandt, Jan DeHaan, John D. Haley, and Zhijing Liu  
(Appellant<sup>2</sup>) seeks review under 35 U.S.C. § 134 of a final rejection of

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<sup>1</sup> Our decision will make reference to the Appellant’s Appeal Brief (“App. Br.,” filed November 3, 2017) and Reply Brief (“Reply Br.,” filed May 16, 2018), and the Examiner’s Answer (“Ans.,” mailed March 22, 2018), and Final Action (“Final Act.,” mailed May 22, 2017).

claims 1–20, the only claims pending in the application on appeal. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b).

The Appellant invented a predictive user interface system enabling user selection of related parameters identifying an order for providing an item. Specification 1:9–12.

An understanding of the invention can be derived from a reading of exemplary claim 20, which is reproduced below (bracketed matter and some paragraphing added).

20. A method for

providing a user interface enabling user selection of related parameters identifying an order for providing an item,

comprising the activities of: using at least one computer system for:

[1] storing,

in a repository,

information identifying candidate items for order and associated corresponding related order parameters,

an individual item for order identifying a type of medication and being associated with a plurality of related order parameters including at least two of, (a) quantity, (b) a route of administration, (c) a frequency of administration, and (d) a form of medication and an order comprising a record indicating a medication for administration to a patient;

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<sup>2</sup> We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as Cerner Innovation, Inc. (Appeal Br. 3).

[2] in response to user entry of data identifying order parameters,

using the user entry and the information in the repository  
to provide data  
representing a display image identifying an initial  
complete candidate order of a medication that is  
relevant to the user entry,  
wherein the initial complete candidate order  
includes the plurality of related order parameters;

[3] in response to user selection of one or more of the plurality  
of related order parameters included in initial complete  
candidate order in the display image, using

the user selection,  
the repository,  
and  
a user's ordering history

for a plurality of different patients  
to select additional related order parameters for  
concatenation into complete candidate orders that include  
the one or more of the plurality of related order  
parameters of the user selection;

[4] using the repository and the user's ordering history,  
concatenating the selected additional related order parameters  
into a plurality of complete candidate orders that are responsive  
to the user selection,

wherein each of the plurality of complete candidate  
orders are different and individually selectable;

[5] provid[ing] data for display representing the plurality of  
different individually user selectable complete candidate orders  
that include the selected additional related order parameters,

wherein each of the selected additional related order  
parameters are individually constrained to sets of

allowable values specific to each respective individual related order parameter,

the sets of allowable values having a highest probability of being selected by a user based on frequency of selection of the respective individual parameter for an ordered item by the user based on the user's ordering history for a plurality of different patients;

[6] in response to a subsequent user selection of one of the plurality of different individually user selectable complete candidate orders provided,

selecting all of the additional related parameters concatenated into the one complete candidate order of the subsequent user selection;

and

[7] communicating data representing the selected one complete candidate order to a pharmacy.

Claims 1–20 stand rejected under 35 U.S.C. § 101 as directed to a judicial exception without significantly more.

## ISSUES

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

## ANALYSIS

### STEP 1<sup>3</sup>

Claim 20, as a method claim, nominally recites one of the enumerated categories of eligible subject matter in 35 U.S.C. § 101. The issue before us is whether it is directed to a judicial exception without significantly more.

### STEP 2

The Supreme Court has

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, [d]etermine 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, [c]onsider 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*, 573 U.S. 208, 217–18 (2014) (citations omitted) (citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66 (2012)). To perform this test, we must first determine what the claims are directed to. This begins by determining whether the claims recite one of the judicial exceptions (a law of nature, a

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<sup>3</sup> For continuity of analysis, we adopt the steps nomenclature from 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (“Revised Guidance”).

natural phenomenon, or an abstract idea). Then, if claims recite a judicial exception, determining whether the claims at issue are directed to the recited judicial exception, or whether the recited judicial exception is integrated into a practical application of that exception, i.e., that the claims “apply, rely on, or use the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception.” Revised Guidance 54. If the claims are directed to a judicial exception, then finally determining whether the claims provide an inventive concept because the additional elements recited in the claims provide significantly more than the recited judicial exception.

#### STEP 2A Prong 1

At a high level, and for our preliminary analysis, we note that method claim 20 recites storing information, providing data, selecting parameters using data, concatenating parameters using data, providing data for display based on frequency of selection, selecting parameters into an order, and communicating data. Providing and communicating data are data transmission. Selecting data is rudimentary data analysis. Concatenating data is data update. Thus, claim 20 recites storing, receiving, updating, analyzing, and transmitting data. None of the limitations recite technological implementation details for any of these steps, but instead recite only results desired by any and all possible means.

From this we see that claim 20 does not recite the judicial exceptions of either natural phenomena or laws of nature.

Under Supreme Court precedent, claims directed purely to an abstract idea are patent in-eligible. As set forth in the Revised Guidance, which

extracts and synthesizes key concepts identified by the courts, abstract ideas include (1) mathematical concepts,<sup>4</sup> (2) certain methods of organizing human activity,<sup>5</sup> and (3) mental processes.<sup>6</sup> Among those certain methods of organizing human activity listed in the Revised Guidance are commercial or legal interactions. Like those concepts, claim 20 recites the concept of creating and sending an order to a pharmacy. Specifically, claim 20 recites operations that would ordinarily take place in advising one to create and send to a pharmacy an order based on parameters selected from other orders based on frequency of selection. The advice to create and send to a pharmacy an order based on parameters selected from other orders based on frequency of selection involves sending an order to a pharmacy, which is an economic act, and creating the order, which is an act ordinarily performed in the stream of commerce. For example, claim 20 recites “communicating data representing the selected one complete candidate order to a pharmacy,” which is an activity that would take place whenever one is sending an order to a pharmacy. Similarly, claim 1 recites “identifying an initial complete

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<sup>4</sup> See, e.g., *Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972); *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Mackay Radio & Telegraph Co. v. Radio Corp. of Am.*, 306 U.S. 86, 94 (1939); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018).

<sup>5</sup> See, e.g., *Bilski*, 561 U.S. at 628; *Alice*, 573 U.S. at 219-20; *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014); *Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1383 (Fed. Cir. 2017); *In re Marco Guldenaar Holding B.V.*, 911 F.3d 1157, 1160–61 (Fed. Cir. 2018).

<sup>6</sup> See, e.g., *Benson*, 409 U.S. at 67; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371–72 (Fed. Cir. 2011); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016).

candidate order of a medication” which is also characteristic of creating an order for a pharmacy.

The Examiner determines the claims to be directed to comparing new and stored information using rules to identify options. Final Act. 2.

The preamble to claim 20 recites that it is a method for providing a user interface enabling user selection of related parameters identifying an order for providing an item. The steps in claim 20 result in communicating an order built from parameters selected by various data and rules, to a pharmacy absent any technological mechanism other than a conventional computer for doing so.

As to the specific limitations, limitation 1 recites data storage and limitations 2 and 5 recite providing data. Limitation 7 recites data transmission. Limitations 3 and 6 recite conventional analysis in the form of data selection. Limitation 4 recites rudimentary concatenation of parameter data, one of the most primitive data operations. The limitations thus recite advice for creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection. To advocate creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection is conceptual advice for results desired and not technological operations.

The Specification at 1:9–12 describes the invention as relating to a predictive user interface system enabling user selection of related parameters identifying an order for providing an item. Thus, all this intrinsic evidence shows that claim 20 recites creating and sending an order to a pharmacy. This is consistent with the Examiner’s determination.

This in turn is an example of commercial or legal interactions as a certain method of organizing human activity because ordering from a pharmacy is a generic commercial transaction. The concept of creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection is one idea for automating order creation. The steps recited in claim 20 are part of how this might conceptually be premised.

Our reviewing court has found claims to be directed to abstract ideas when they recited similar subject matter. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1084, 1089 (Fed. Cir. 2019) (receiving information, displaying such information, and sending an order to an electronic exchange based on a user input).

From this we conclude that at least to this degree, claim 20 recites creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection, which is a commercial and legal interaction, one of certain methods of organizing human activity identified in the Revised Guidance, and, thus, an abstract idea.

#### STEP 2A Prong 2

The next issue is whether claim 20 not only recites, but is more precisely directed to this concept itself, or whether it is instead directed to some technological implementation or application of, or improvement to, this concept i.e. integrated into a practical application.<sup>7</sup>

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<sup>7</sup> See, e.g., *Alice*, 573 U.S. at 223 (discussing *Diamond v. Diehr*, 450 U.S. 175 (1981)).

At the same time, we tread carefully in construing this exclusionary principle lest it swallow all of patent law. At some level, “all inventions . . . embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” Thus, an invention is not rendered ineligible for patent simply because it involves an abstract concept. “[A]pplication[s]” of such concepts “to a new and useful end,” we have said, remain eligible for patent protection. Accordingly, in applying the § 101 exception, we must distinguish between patents that claim the “buildin[g] block[s]” of human ingenuity and those that integrate the building blocks into something more.

*Alice*, 573 U.S. at 217 (citations omitted).

Taking the claim elements separately, the operation performed by the computer at each step of the process is expressed purely in terms of results, devoid of implementation details. Step 1 is a pure data storage step, and steps 2 and 5 are the complement of transferring data. Limitations describing the nature of the data do not alter this. Step 7 is generic post solution activity, such as storing, transmitting, or displaying the results. Steps 3, 4, and 6 recite generic computer processing expressed in terms of results desired by any and all possible means and so present no more than conceptual advice. All purported inventive aspects reside in how the data is interpreted and the results desired, and not in how the process physically enforces such a data interpretation or in how the processing technologically achieves those results.

Viewed as a whole, Appellant’s claim 20 simply recites the concept of creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection as performed by a generic computer. This is no more than conceptual advice on the parameters for this concept and the generic

computer processes necessary to process those parameters, and do not recite any particular implementation.

Claim 20 does not, for example, purport to improve the functioning of the computer itself. Nor does it effect an improvement in any other technology or technical field. The 17+ pages of Specification spell out different generic equipment<sup>8</sup> and parameters that might be applied using this concept and the particular steps such conventional processing would entail based on the concept of creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection under different scenarios. They do not describe any particular improvement in the manner a computer functions. Instead, claim 20 at issue amounts to nothing significantly more than an instruction to apply creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection using some unspecified, generic computer. Under our precedents, that is not enough to transform an abstract idea into a patent-eligible invention. *See Alice*, 573 U.S. at 225–26.

None of the limitations reflect an improvement in the functioning of a computer, or an improvement to other technology or technical field, applies or uses a judicial exception to effect a particular treatment or prophylaxis for a disease or medical condition, implements a judicial exception with, or uses a judicial exception in conjunction with, a particular machine or manufacture that is integral to the claim, effects a transformation or reduction of a

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<sup>8</sup> The Specification describes a personal computer (PC), a desktop computer, a laptop computer, a workstation, a minicomputer, a mainframe, a supercomputer, a network-based device, a personal digital assistant (PDA), a smart card, a cellular telephone, a pager, and a wristwatch. Spec. 5:9–14.

particular article to a different state or thing, or applies or uses the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception.

We conclude that claim 20 is directed to achieving the result of creating and sending an order to a pharmacy by advising one to create and send to a pharmacy an order based on parameters selected from other orders based on frequency of selection, as distinguished from a technological improvement for achieving or applying that result. This amounts to commercial or legal interactions, which fall within certain methods of organizing human activity that constitute abstract ideas. The claim does not integrate the judicial exception into a practical application.

## STEP 2B

The next issue is whether claim 20 provides an inventive concept because the additional elements recited in the claim provide significantly more than the recited judicial exception.

The introduction of a computer into the claims does not generally 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*, 573 U.S. at 223–24 (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*, 573 U.S. at 225. 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 storing, receiving, updating, analyzing, and transmitting data amounts to electronic data query and retrieval—one of the most basic functions of a computer. All of these computer functions are generic, routine, conventional computer activities that are performed only for their conventional uses. *See Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *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.”). None of these activities are used in some unconventional manner nor do any produce some unexpected result. Appellant does not contend they invented any of these activities. 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 America, Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018).

Considered as an ordered combination, the computer components of Appellant’s claim 20 add nothing that is not already present when the steps are considered separately. The sequence of data storage-reception-update-analysis-transmission is equally generic and conventional. *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); *see also 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.

We conclude that claim 20 does not provide an inventive concept because the additional elements recited in the claim do not provide significantly more than the recited judicial exception.

### REMAINING CLAIMS

Claim 20 is representative. The remaining method claims merely describe process parameters. We conclude that the remaining method claims at issue are directed to a patent-ineligible concept itself, and not to the practical application of that concept.

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*, 573 U.S. at 226. As a corollary, the claims are not directed to any particular machine.

### LEGAL CONCLUSION

From these determinations we further determine that the claims do not recite an improvement to the functioning of the computer itself or to any other technology or technical field, a particular machine, a particular transformation, or other meaningful limitations. From this we conclude the claims are directed to the judicial exception of the abstract idea of certain methods of organizing human activity as exemplified by the commercial and legal interaction of creating and sending an order to a pharmacy by creating and sending to a pharmacy an order based on parameters selected from other orders based on frequency of selection, without significantly more.

### APPELLANT’S ARGUMENTS

As to Appellant’s Appeal Brief arguments, we adopt the Examiner’s determinations and analysis from Final Action 2–5 and Answer 5–6 and reach similar legal conclusions. We now turn to the Reply Brief.

Appellant argues that the asserted claims are akin to the claims found patent-eligible in *Core Wireless Licensing S.A.R.L. v. LG Electronics*,

*Inc.*, 880 F.3d 1356 (Fed. Cir. 2018). Reply Br. 2–8. But the Court in *Trading Techs.* addressed Appellant’s Core Wireless argument.

Relying principally on *Core Wireless*, TT argues the claimed invention provides an improvement in the way a computer operates. We do not agree. The claims of the ’999 patent do not improve the functioning of the computer, make it operate more efficiently, or solve any technological problem. Instead, they recite a purportedly new arrangement of generic information that assists traders in processing information more quickly.

*Trading Techs.*, 921 F.3d at 1093 (citations omitted). The instant claims do not improve the functioning of the computer, make it operate more efficiently, or solve any technological problem. Instead, they recite a purportedly new arrangement of generic information that assists users in processing information more quickly.

We are not persuaded by Appellant’s argument that because a question of fact exists with regard to independent claim 1, the examiner bears the burden of providing factual support or evidence for its determination that features are well-understood, routine, or conventional. Currently the record does not include support or evidence. As such, it has not been established that the features of amended independent claim 1 are well-understood, routine, and/or conventional.

Reply Br. 8. Such support and evidence are made of record supra.

#### CONCLUSIONS OF LAW

The rejection of claims 1–20 under 35 U.S.C. § 101 as directed to a judicial exception without significantly more is proper.

CONCLUSION

The rejection of claims 1–20 is affirmed.

In summary:

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–20	101	Eligibility	1–20	

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