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LEVEL 3 COMMUNICATIONS, LLC
Attn: Patent Docketing
1025 Eldorado Blvd.
Broomfield, CO 80021

EXAMINER	
ROTARU, OCTAVIAN	

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD L. WALL, KENDALL GELNER, BRENDAN SULLIVAN, and SANJAY SINGHAL

Appeal 2017-005477[1]
Application 13/102,960
Technology Center 3600

Before MURRIEL E CRAWFORD, ANTON W. FETTING, and CYNTHIA L. MURPHY, *Administrative Patent Judges*.

MURPHY, *Administrative Patent Judge*.

DECISION ON APPEAL

The Appellants[2] appeal under 35 U.S.C. § 134 from the Examiner's rejection of claims 1, 3–6, 27–29, and 33–40 under 35 U.S.C. § 101. We have jurisdiction over this appeal under 35 U.S.C. § 6(b).

We REVERSE.

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[1] A hearing was held on April 18, 2019.

[2] The Appellants identify the real party in interest as "Level 3 Communications, LLC." (Appeal Br. 2.)

BACKGROUND DISCUSSION

The Appellants' invention relates to a customer "ordering network service over the internet" and "deliver[ing] the network service to [the] ordering customer." (Spec. ¶ 2.)

When a customer is ordering network service from a network provider, certain service parameters, such as "bandwidth," "geographic region," and "gateways," must be accommodated. (Spec. ¶ 32.) And, apparently, the network service provider's ability to accommodate a customer's service parameters pivots primarily upon whether a "route is available." (*Id.* ¶ 33.) Thus, "[o]nce the customer's request for service has been received, an optimal route must be found." (*Id.* ¶ 3.)

However, "communication networks" are "highly complex in their design," and finding the "optimal route" is sometimes easier said than done. (Spec. ¶ 3.) This is because "[a]ll the network elements along the route must be available," and the "[a]vailable elements must be connectable to make up the circuit design" to deliver a customer's communication line. (*Id.*) Even "[w]hat appears to be a valid design on the engineer's drafting board" may contain network elements that "are not connectable." (*Id.* ¶ 4.)

The Appellants acknowledge that a "computing system" can be used for "finding the optimal route." (Spec. ¶ 4.) Specifically, a computing system can be "programmed to make assumptions in creating a route" for installation of a customer's communication line, based upon its "stored field inventory" of network elements. (*Id.*) But "the actual field inventory" of available network elements "often differs from "the stored field inventory in the computing system." (*Id.*) In short, "[w]hat is available in the computer records may not in fact be available in the field." (*Id.*)

In any event, complications arise when a route-related order is "initially created based on outdated and/or incomplete information that is inaccurate." (Appeal Br. 11.) One problem is that the initially-created route "may not be valid when it is time to connect network elements together to complete the communication circuit design." (Spec. ¶ 4.)

The Appellants' system comprises a "command control engine" that "works with" customer-interfacing modules to provide "real time feedback to the customer on availability, reservation, and installation status for a service order." (Spec. ¶ 25.) Also, an installation system is "checking network capacity, assigning and validating network components and connecting and testing components" while "the customer's service order is being created, reserved and submitted." (*Id.*)

The Appellants contend that "improvements" are provided by their system, and that these "improvements" are "largely attributable to the arrangement and interrelation between the recited claim features." (Appeal Br. 10.) A key player in this arrangement/interrelation is the command control engine, which has "visibility into the actual state of network and route availability." (*Id.* at 12, italics omitted.) Put another way, the Appellants' claimed combination of "interconnecting elements" provides a customer-interfacing module "with visibility into [the] network" through the command control engine. (*Id.* at 13, italics omitted.)

Thus, thanks to the "system elements and their respective resources" being arranged in the claimed manner, the Appellants' system functions to "increase the reliability of software assumptions, increase the efficiency of installation, and make it easier to troubleshoot and implement repairs." (Appeal Br. 10, italics omitted.)

ILLUSTRATIVE CLAIM
(annotated version)[3]

1. A system for ordering, testing and installing a network service over a telecommunications network for a customer, the system comprising:

a **capacity check module**, executed by a **computer** to:

[(a)] *receive, from the customer, service order parameters comprising at least: a start date of the network service, a service term of the network service, a bandwidth of the network service, at least one geographical region of the network service, and at least one gateway of the network service*;

[(b)] send the service order parameters to a **command control engine** to check availability and capacity of the network service for a route of the network service ***based on the service order parameters***; and

[(c)] when the network service is available for the route, *send a message indicating the availability, the capacity and a price of the network service to the customer*;

a **reservation and order module**, executed by the **computer** to

[(d)] *display the service order to the customer, and prompt the customer to order the network service in the service order* when the network service is available;

an **installation system**, executed by the **computer** to

[(e)] install the network service ***in response to ordering of the network service***, and complete a design of network components for the network service and return a design complete message as a circuit layout record; and

a **workflow management module**, that, ***in response to the design complete message resulting from the ordering of the network service***, is executed by the **computer** to:

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[3] In our annotated version of the illustrative claim (i.e., independent claim 1), paragraphing is modified; bracketed text is inserted; and italicizing and/or bolding are added to existing text. In our analysis, quotations to recitals in independent claim 1 (and reworded synopses thereof) include these annotations.

[(f)] send a request to configure and activate the network service to the **command control engine**,

[(g)] receive a list of the network components associated with the at least one gateway of the network service,

[(h)] analyze the received list of the network components, to further generate a work site task list,

[(i)] schedule the installation of the network service between the customer's equipment and the at least one gateway according to the work site task list,

[(j)] test and activate, after the installation, the network service between the customer's equipment and the at least one gateway,

[(k)] *notify,* after the testing and activating*, the customer that the network service is ready and prompt the customer to accept the network service*,

[(l)] when the customer has accepted the network service, enable alarms along the route of the network service to detect faults, and

[(m)] initiate repair of the detected faults using a network operation center;

wherein the **reservation and order module** is further executed by the **computer** to

[(n)] *display the* circuit layout *record to the customer*.

REJECTION

The Examiner rejects claims 1, 3–6, 27–29, and 33–50 under 35 U.S.C. § 101 as being directed to a judicial exception (i.e., an abstract idea) without significantly more.

JUDICIAL EXCEPTIONS

The Patent Act defines subject matter eligible for patent protection as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U.S.C. § 101. Yet the Supreme Court has "long held" that this provision contains an important

implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas are not patentable." (*Ass'n for Molecular Pathology* v. *Myriad Genetics, Inc.*, 569 U. S. 576, 589 (2013).) These three concerns are "judicially created exceptions to § 101," or more concisely, "judicial exceptions." (*McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016).) Thus, an "abstract idea" is a judicial exception to subject matter (e.g., a system) that would otherwise be deemed patent eligible under 35 U.S.C. § 101.

THE *ALICE* TEST

In *Alice Corp., Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014), the Supreme Court provided a two-step test to guard against an attempt to patent purely an abstract idea. (Alice, 573 U.S. at 217–18.) In *Alice* step one, a determination is made as to whether the claim at issue is "directed to" an abstract idea. (*Id.* at 218.) If not, it can be concluded that no attempt is being made to patent purely an abstract idea, and the *Alice* Test is complete. If the claim at issue is "directed to" an abstract idea, the second step of the *Alice* Test must be performed. (*Id.*) In *Alice* step two, attention is given to whether additional elements in the claim are "well-understood," "routine," or "conventional." (*Id.* at 225.)

2019 GUIDANCE

The 2019 Revised Patent Subject Matter Eligibility Guidance ("2019 Guidance") provides a procedure for determining whether a claim is "directed to" an abstract idea under *Alice* step one. (*See* Federal Register Vol. 84, No. 4, 50–57.) "In accordance with judicial precedent," the 2019 Guidance synthesizes abstract-idea subject matter into three groupings:

"[m]ental processes," "[m]athematical concepts," and "[c]ertain methods of organizing human activity." (*Id.* at 52.) If a claim does not contain limitations reciting a concept that falls within one of these identified groupings, this is redolent of the claim not being "directed to" an abstract idea. (*Id.* at 54). But even if a claim does contain limitations reciting an identified abstract idea, this, alone, is not sufficient to establish that the claim is "directed to" this abstract idea.[4] Rather, in order for *Alice* step one to be satisfied, it must also be established that the claim does not contain additional elements (i.e., "claim features, limitations, and/or steps that are recited in the claim beyond the identified judicial exception") that "integrate" the abstract idea "into a practical application." (*Id.* at 55, n. 24.)[5]

ANALYSIS

The Examiner determines that independent claim 1 is "directed to" an abstract idea so as to satisfy step one of the *Alice* Test for patent eligibility. (Final Action 11.) We are persuaded by the Appellants' arguments (*see* Appeal Br. 7–15) that this *Alice*-step-one determination is not adequately supported by the record.

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[4] During *Alice* step one, "it is not enough to merely identify a patent-ineligible concept underlying the claim; we must determine whether that patent-ineligible concept is what the claim is 'directed to.'" (*Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017).)

[5] A claim reciting an abstract idea, that does not require a "practical application," of this abstract idea, would result in "a patent" on the abstract idea "itself." (*Gottschalk v. Benson*, 409 U.S. 63, 71–72 (1972).) "On the other hand," when a claim containing an abstract idea "applies" the abstract idea in "a structure or process" which "the patent laws were designed to protect," then "the claim satisfies the requirements of 101." (*Diamond v. Diehr*, 450 U.S. 175, 192 (1981).)

The system set forth in independent claim 1 comprises a **capacity check module**, a **reservation and order module**, and a **workflow management module**. These modules, when executed by a **computer**, perform steps set forth in limitations (a), (c), (d), (k), and (n), which include: *receiving, from the customer, service order parameters*; *sending a message to the customer indicating the availability, the capacity and a price of the network service*; *displaying, to the customer, a service order*; *prompting the customer to order the network service in the service order*; *notifying the customer that the network service is ready*; *prompting the customer to accept the network service*; and *displaying, to the customer, a service-order-related record*.

These *customer-interfacing steps* are performed whenever a customer purchases a service from a service provider. For example, when a customer is contemplating the purchase of a service from a service provider, the customer asks the service provider whether certain parameters can be accommodated, and the service provider responds by indicating that these parameters can be accommodated for a stated price. Thereafter, the customer is presented with a service order, the customer is encouraged (e.g., prompted) to submit this service order, the customer submits the service order, the customer is notified when the service ready, and the customer is asked (e.g., prompted) to accept the service. Also, at some point in the service-purchasing process, the customer is given his/her own copy of a service-related record.

These *customer-interfacing steps*, which are performed whenever a customer purchases a service, mirror the customer-interfacing steps performed whenever a customer purchases a product. Purchasing a

product/service is a fundamental economic practice[6] that falls within the abstract-idea grouping of "certain methods of organizing human activity," and thus can be identified as an abstract idea. (Federal Register Vol. 84 at 54.)

The record, therefore, establishes that independent claim 1 contains limitations reciting an identified abstract idea. But this, alone, is not enough to support an *Alice*-step-one determination that independent claim 1 is "directed to" this identified abstract idea. To support an *Alice*-step-one determination, the record must also establish that additional elements in independent claim 1 fail to integrate the identified abstract idea into a practical application.

We agree with the Appellants (*see e.g.*, Appeal Br. 7–8) that the **capacity check module**, the **reservation and order module**, and the **workflow management module** constitute additional elements, as these software components are not rudimentary to a customer purchasing a service. But we agree with the Examiner (*see* Final Action 11) that, with respect to the above-discussed *customer-interfacing steps*, these software components are used simply as a tool to implement the identified abstract idea.[7] As explained by the Examiner, a customer "checking" whether

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[6] *See, e.g., Inventor Holdings, LLC* v. *Bed Bath & Beyond, Inc.,* 876 F.3d 1372, 1378–79 (Fed. Cir. 2017) (The concept of "local processing of payments for remotely purchased goods" is a "fundamental economic practice").)

[7] As software lies dormant unless it is executed by a computer, independent claim 1's requirement that these modules be executed by a **computer** imparts little, if anything, toward an integration of the corresponding *customer-interfacing steps* into a practical application.

"telephone" service is available at "his/her location" is an "old practice," and implementing this old practice in an "electronic" environment "does not necessarily save [a] claim[] from patent ineligibility." (Answer 8.)

However, the **capacity check module** and the **workflow management module**, when executed by the **computer**, also perform steps set forth in limitations (b) and (f). These steps include sending the service order parameters to a **command control engine** to check availability and capacity of the network service for a route of the network service based on the service order parameters; and sending a request to configure and activate the network service to the **command control engine**. Additionally, limitation (e) sets forth an **installation system** that "installs the network service in response to ordering of the network service, and complete a design of network components for the network service and return a design complete message as a circuit layout record.

As argued by the Appellants (*see, e.g.*, Appeal Br. 14), independent claim 1 requires a certain sequence of interaction between the **customer-interfacing modules**, the **command control engine**, and the **installation system**. For example, the **capacity check module** calls upon the **command control engine** to check availability after the customer's parameters are received; the **installation system** completes the design of network components ***in response to the customer ordering the network service***, and the **workflow management module** calls upon the **command control engine** to configure and activate the network service ***in response to a design complete message*** returned by the **installation system**.

The Examiner appears to find that the **command control engine** is a "database" which is "merely quer[ied]" in conjunction with "a set of rules."

(Answer 10.) This finding establishes, at most, that the command control engine is not enough, individually, to integrate the identified abstract idea into a practical application. But it can be "the combination of [additional] elements that provide[s] the practical application," and "careful consideration" must be given to how this additional element is "used or arranged in the claim as a whole." (Federal Register Vol. 84 at 55.)

As for the claimed combination of the **command control engine** with the **customer-interfacing modules**, the Examiner observes "that mere combination and compilation of disparate information sources does not make the claims patent eligible." (Answer 9.) This observation does not address the alleged contribution made by the command control engine when the steps are performed in the claimed sequence of interaction. As discussed above, the Appellants contend that the command control engine has "visibility into the actual state of the network," and its interaction with the customer-interfacing modules correspondingly provides them with "visibility into" the network. (Appeal Br. 12, 13, italics omitted.)

The Examiner does find that "the asserted visibility into the actual state of [the] network," equates to "merely requiring the selection and manipulation of information to visibly provide a humanly comprehensible amount of information useful for users." (Answer 11.) But this finding by the Examiner misses the mark. The Appellants' use of the word "visibility" does not pertain to the command control engine's visual display of information to a person, but rather the command control engine's ability to appraise actual field inventory, and base its evaluations thereon.

Finally, the Examiner seems to emphasize the "generic" nature of the computer components recited in independent claim 1. (Final Action 6; *see*

also Answer 12.) But again, it can be "the combination of elements that provide[s] the practical application." (Federal Register Vol. 84, No. 4, 55.) And, insofar as the Examiner is saying that it is impossible for an ordered arrangement of generic computer components to integrate an abstract idea into a practical application, this contradicts controlling case law.[8]

Thus, we agree with the Appellants that the Examiner did not give careful consideration to the ordered arrangement of the **customer-interfacing modules**, the **command control engine**, and the **installation system**. The record, therefore, does not establish that independent claim 1 is "directed to" an abstract idea so as to satisfy *Alice* step one.

For at least this reason, we need not proceed to *Alice* step two in order to conclude that, on the record before us, it is has not been established that independent claim 1, and the claims depending therefrom, fail the *Alice* Test for patent eligibility.

Independent claim 33 recites a similar ordered arrangement of **customer-interfacing functions**, a **command control engine**, and an **installation system**, and so we reach the same conclusion with respect to independent claim 33, and the claims depending therefrom.

Thus, on the record before us, we cannot sustain the Examiner's rejection of claims 1, 3–6, 27–29, and 33–40 under 35 U.S.C. § 101.

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[8] In *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) "the limitations of the claims, taken individually, recite[d] generic computer, network and Internet components, none of which [was] inventive by itself." (*BASCOM* 827 F. 3d at 1349.) The Federal Circuit nonetheless found that it could be possible for the "ordered combination" of these generic components to transform the identified abstract idea into a "practical application of that abstract idea." (*Id.* at 1352.)

DECISION

We REVERSE the Examiner's rejection of claims 1, 3–6, 27–29, and 33–40.

REVERSED