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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte DENNIS TRIBBLE, JOEL A. OSBORNE, ABDUL WAHID KHAN, MATTHEW VALENTINE, and BHAVESH PADMANI

Appeal 2018-005875
Application 11/844,135
Technology Center 3600

Before MICHAEL J. STRAUSS, HUNG H. BUI, and NABEEL U. KHAN, *Administrative Patent Judges*.

KHAN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant[1] appeals under 35 U.S.C. § 134(a) from the Final Rejection of claims 1–29, 31–41, and 43. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

[1] Appellant identifies Baxter Englewood Corporation as the real party in interest. Appeal Br. 1.

BACKGROUND

THE INVENTION

According to Appellant, the invention relates to:

> A centralized system and method for preparing and managing medications prepared in anticipation of use for at a remote location. An order processing server receives a patient-specific dose order from a remote site connected to a remote location through a network. A dose preparation station prepares doses in anticipation of use, information about which is stored in a database. The dose preparation stations can be instructed to prepare certain non-patient-specific doses based on the availability of the stations or the patient-specific dose orders received from the remote site. An application server matches any received dose order with one of the prepared inventory doses based on the stored inventory data, and associates the patient-specific dose order with the inventory dose order. The inventory data is managed to reflect the association of the patient-specific dose order with the matched inventory dose, and the association can be stored in the database.

Abstract.

Exemplary independent claim 1 is reproduced below.

> 1. A centralized system for preparing and managing sterile compounded medication products prepared in anticipation of use at a remote location, the system comprising:
>
> a dose preparation station for sterile compounded preparation of a plurality of inventory doses in anticipation of use based on corresponding non-patient-specific inventory dose orders, wherein the inventory doses are non-patient specific doses independent of any particular patient-specific dose order, and wherein the inventory doses are sterile compounded medication products suitable for administration by intravenous introduction to a patient that do not require any further sterile compounded preparation;

an inventory database configured to store inventory data concerning the plurality of inventory doses prepared at the dose preparation station;

an application server executing software on a processor thereof and configured to access an order database to:

analyze a plurality of previously received patient-specific dose orders contained in the order database, wherein the plurality of patient-specific dose orders are collectively analyzed without regard to any particular patient-specific dose order to make a determination of how frequently patient-specific-dose orders for a particular type of medication are received, and

generate at least one inventory dose order for a given particular type of medication for preparation at the dose preparation station to produce a corresponding inventory dose for the given particular type of medication according to the determination of how frequently patient-specific-dose orders for the given particular type of medication are received; and

an order processing server connected by a network to a remote site configured to receive a patient-specific dose order from the remote site, wherein, after receipt of the patient specific dose order, the application server is configured to:

query the inventory data stored in the inventory database regarding the plurality of inventory doses prepared by the dose preparation station for a matching inventory dose corresponding to the patient-specific dose order, wherein:

in the absence of a match, the application server provides instructions to the dose preparation station for preparation of a patient-specific dose that fulfills the received patient-specific dose order and prints a label reflecting an association of the received patient-specific dose order with the patient-specific dose order prepared by the dose preparation station; or

> in the event of a match, the order processing server is operative to associate the received patient-specific dose order with at least one of the plurality of inventory doses previously prepared by the dose preparation station to thereby satisfy the received patient-specific dose order and print a label reflecting an association of the received patient-specific dose order with the at least one of the inventory doses matched to the received patient-specific dose order;
>
> wherein a match at least comprises the inventory dose and the received patient-specific dose order corresponding to an identical medication.

REFERENCES AND REJECTIONS

1. Claims 1–29, 31–41, and 43 stand rejected under 35 U.S.C. § 101. Final Act. 2–9.

2. Claims 1–14, 16–29, 31–34, 36–38, and 43 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Halvorson (US 4,847,764, issued Jul. 11, 1989) and Roden (US 6,249,774 B1, issued Jun. 19, 2001). Final Act. 9–28

3. Claims 15, 35, and 39–41 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Halvorson, Roden, and Waugh (WO 2008/006203 A1, published Jan. 17, 2008). Final Act. 28–31.

DISCUSSION

REJECTION UNDER 35 U.S.C. § 101[2]

Legal Principles

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, *i.e.*, the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

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[2] We note that a separate panel of the Board, in relation to related patent application (US Appl. No. 13/399,092), found claims with subject matter similar to that of the pending claims in this case, to be patent ineligible. *Ex parte Tribble*, Appeal No. 2015-008278 (PTAB June 13, 2017) (*Rehearing Req. denied*). That decision was affirmed by the Federal Circuit on appeal. *In re Baxter Corp. Englewood*, 739 Fed. Appx. 643 (Fed. Cir. 2018). We note that the aforementioned decision issued before the PTO published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019).

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (*id.* at 182 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1853))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 176; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id*. at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO recently published revised guidance on the application of § 101. *2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Revised Guidance"). Under the Revised Guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)); or
>
> (4) simply appends well-understood, routine, conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception.

See Revised Guidance.

Guidance Step 1

Under step 1 of the Guidance, the Examiner finds the claims are directed to a statutory category. For example, the Examiner finds "**[c]laim 1-20 & 43** are drawn to a system for preparing and managing sterile compounded medication products prepared in anticipation of use at a remote location, which is within the four statutory categories (i.e. machine). Final Act. 2. The Examiner also finds "**[c]laims 21–29 & 31–41** are drawn to a method for support of centralized preparation and management of sterile compounded medication products in anticipation of use at a remote location, which is within the four statutory categories (i.e. process)." Final Act. 2. We agree with the Examiner that the pending claims are directed to one of the statutory categories, i.e. either a machine, or process.

Revised Guidance Step 2A - Whether the Claims are Directed to a Judicial Exception

The Examiner analyzed the pending independent claims and summarized them as reciting to the following general steps:

> storing inventory data, analyzing previously received patient-specific dose orders, determining frequency that the patient-specific dose orders are received, generating inventory dose orders based on the determination of frequency that the patient-specific dose orders are received, querying an inventory databased to find a match between the inventory & patient-specific dose orders, printing a label indicating if the outputted patient-specific orders matched orders from the inventory dose database.

Final Act. 3 (emphasis removed). Based on this summary, the Examiner analogized the claims to "the court-defined abstract idea in *Electric Power Group*." Final Act. 3. The Examiner found that the claims involve collecting information by tracking previously received patient-specific dose

orders, analysis of that information to determine the frequency that the patient-specific dose orders are received and displaying the results of that analysis by printing a label indicating if the patient-specific does orders matched those in an inventory database. Final Act. 3.

Prong One

Under prong one, we note that claim 1 recites at least the following steps: (1) "an inventory database configured to store inventory data concerning the plurality of inventory doses prepared at the dose preparation station;" (2) "analyze a plurality of previously received patient-specific dose orders contained in the order database, wherein the plurality of patient-specific dose orders are collectively analyzed without regard to any particular patient-specific dose order to make a determination of how frequently patient-specific-dose orders for a particular type of medication are received" (3) "query the inventory data stored in the inventory database regarding the plurality of inventory doses prepared by the dose preparation station for a matching inventory dose corresponding to the patient-specific dose order" (4) "in the absence of a match, the application server provides instructions to the dose preparation station for preparation of a patient-specific dose that fulfills the received patient-specific dose order" (5) "in the event of a match, the order processing server is operative to associate the received patient-specific dose order with at least one of the plurality of inventory doses previously prepared by the dose preparation station to thereby satisfy the received patient-specific dose order."

These limitations, under the broadest reasonable interpretation, recite collecting inventory data and analyzing patient-specific dose orders so that those orders can be filled quickly using already prepared inventory of dose

orders, which is nothing more than a series of "mental processes" that could be performed in the human mind or by a human using a pen and paper—a subject matter that is identified in the Revised Guidance, and therefore, an abstract idea. *See CyberSource*, 654 F.3d at 1372–73 ("[A] method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101."); *see also In re Comiskey*, 554 F.3d 967, 979 (Fed. Cir. 2009) ("[M]ental processes—or processes of human thinking—standing alone are not patentable even if they have practical application."); *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972) ("Phenomena of nature, . . . *mental processes*, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." (Emphasis added)). Additionally, mental processes remain unpatentable even when automated to reduce the burden on the user of what once could have been done with pen and paper. *CyberSource*, 654 F.3d at 1375 ("That purely mental processes can be unpatentable, even when performed by a computer, was precisely the holding of the Supreme Court in *Gottschalk v. Benson*."); *see also In re Salwan*, 681 F. App'x 938, 941 (Fed. Cir. 2017) (claims for organizing patient health information, transferring patient health information to a patient network, and billing insurance companies held patent-ineligible).

For example, the inventory database stores inventory data, which is a step that may be performed a person administrator with aid of a pen and paper for recording purposes. Analyzing previous orders to make a determination of how frequently orders are received for a particular medication is also a step that can be performed mentally. Querying a database to see if a dose order matches an already existing inventory dose is again a step that can be performed mentally by looking up a table or ledger

containing information about stored inventory doses. Finally, determining whether there is or is not a match between the incoming dose order and the stored inventory doses is also a step that can be performed mentally.

As further recognized by the Examiner, several of the claim limitations also involve collection and analysis of information that is analogous to the claims identified by the Federal Circuit as directed to an abstract idea in *Electric Power Group, LLC, v. Alstom*, 830 F.3d 1350 (Fed. Cir. 2016). Final Act. 3. .

Alternatively, these limitations of Appellant's claim 1 also recite "preparing and managing sterile compounded medication products," collecting inventory data and analyzing dose orders so that those orders can be filled quickly using already prepared inventory of dose orders. The Specification explains that one of the goals of the invention was "to prepare medications in an environment that uses economies of scale to prevent the demand for medications from outstripping the supply and/or preparation capabilities of the pharmacy." Spec. 6:4–6. Anticipating demand for products so that demand does not outstrip supply is crucial to inventory management and is a typical problem encountered generally in sales of a product. As such, the recitation of "a dose preparation station for sterile compounded preparation of a plurality of inventory doses in anticipation of use" signifies that the claims also recite limitations related to inventory management, which is a commercial practice involving the acquisition and monitoring of stocked goods to maintain stock levels in a business. Commercial practices fall under the category of certain methods of organizing human activity which is one of the categories of abstract ideas under the Guidance. As such, in addition to finding that the claims recite

mental processes, we also determine the claims recite a fundamental economic practice—one of the certain methods of organizing human activity identified in the Revised Guidance, and thus an abstract idea. *See* Revised Guidance (*Revised Step 2A, Prong One*), 84 Fed. Reg. at 52 (describing an abstract idea category of "[c]ertain methods of organizing human activity—fundamental economic principles or practices . . . commercial or legal interactions (including . . . advertising, marketing or sales activities or behaviors; business relations)").

Prong 2

Under prong 2 of step 2A of the Revised Guidance, we determine whether the claim as whole integrates the recited abstract idea into a practical application of the abstract idea. A claim that integrates a judicial exception into a practical application will 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. To evaluate whether the claims integrate the abstract idea into a practical application, we identify whether there are any additional elements recited beyond the abstract idea, and evaluate those additional elements individually and in combination.

Some exemplary considerations laid out by the Supreme Court and the Federal Circuit indicative that an additional element integrates an abstract idea into a practical application include (i) an improvement in the functioning of a computer or to another technological field, (ii) an application of the judicial exception with, or by use of, a particular machine, (iii) a transformation or reduction of a particular article to a different state or thing, or (iv) a use of the judicial exception in some other meaningful way

beyond generally linking the use of the judicial exception to a particular technological environment. *See* MPEP § 2106.05(a)–(c), (e)–(h).

> Appellant argues
>
> > each of claims 1 and 21 enables preparation and management of medication products in anticipation of use by incorporating a dose preparation station, an inventory database, an application server, and an order processing server. The specific configuration and interoperation of the components claimed are limited to rules with specific characteristics, which allow for improvement to the specifically identified problem with respect to traditional pharmacy practice in large institutional pharmacies. Namely, the configuration and interoperation of the components claimed improve both pharmacy information technology systems and automated pharmacies.

Appeal Br. 8; *see also* Reply Br. 7 (analogizing the claims to those in *BASCOM Global Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) and arguing that claim 1 recites components that are "arranged in a particular way" that improves pharmacy information technology.) Appellant argues that the instant claims are comparable to those in *BASCOM*, and provides a chart comparing independent claims 1 and 21 to the claims in *BASCOM*. Appeal Br. 13–17. Appellant emphasizes that "the present claims specifically recite the relative location and characteristics of various technological components, specific interactions therebetween, and the results of the specific interactions that improve dose preparation and management of sterile compounded medication products." Appeal Br. 19.

Appellant argues that the limitations of claim 1 indicate that the claims include specific rules that lead to a technological improvement. For example, Appellant argues

> independent claim 1 requires that the application server accesses the order database, analyzes previously received patient-specific dose orders in the order database to make a determination of how frequently patient-specific-dose orders for a particular type of medication are received, and generates at least one inventory dose order for a given particular type of medication for preparation at the dose preparation station. Likewise, the order processing server receives a patient-specific dose order from the remote site and queries the inventory database for a matching inventory dose corresponding to the patient-specific dose order. When there is no match, the application server provides instructions to the dose preparation station for preparation of a patient-specific dose that fulfills the received patient-specific dose order and prints a label reflecting an association with the patient-specific dose order prepared by the dose preparation station. By comparison, when there is a match, the order processing server is operative to associate the received patient-specific dose order with at least one of the plurality of inventory doses previously prepared to thereby satisfy the received patient-specific dose order and print a label reflecting an association with the at least one of the inventory doses matched to the received patient-specific dose order. Independent claim 21 includes similar specific rules.

Appeal Br. 8–9.

Appellant also argues the claims improve computer technology and are directed to a technological improvement. Specifically, Appellant argues

> Each of present independent claims 1 and 21 are directed improving a centralized system including a dose preparation station, an inventory database, and an application server. By maintaining an order database containing records corresponding to the previously received orders, when a large volume of orders is received, the pharmacy is poised to respond to the orders by matching at least some orders to inventory doses and having to prepare medications on-demand for only those orders that were not anticipated based on the analysis of previously received patient-specific orders. Claims 1 and 21 are directed to a technological improvement, improving computer technology

> with respect to the centralized system, and are therefore not abstract.

Appeal Br. 10. Appellant argues that claims include "specific technical modifications [that] are intended to resolve a problem: the tension between maintaining an inventory of medication for use in fulfilling orders and the need to keep pace with potentially large volumes of orders . . . ." Appeal Br. 11.

We are unpersuaded by Appellant's arguments. Appellant's emphasis on limitations reciting a server accessing the inventory database, analyzing previously received dose orders, determining how frequently patient-specific-dose orders for a particular type of medication are received, generating dose orders, querying a database to see if a received dose order matches an already stored inventory dose, providing instructions for preparation of a patient-specific dose, or associating the received patient-specific dose order with a previously prepared inventory dose are all, as explained above, mental processes. Thus, these claim limitations are not additional elements beyond the recited mental processes. Furthermore, the problem of dealing with "the tension between maintaining an inventory of medication for use in fulfilling orders and the need to keep pace with potentially large volumes of orders" (Appeal Br. 11) is, as explained above, a problem related to inventory management and commercial practices. This too, is simply a restatement of the abstract idea recited by the claims.

Claim 1, does, however, recite elements such as a "dose preparation station," and "inventory database" an "application server" and an "order processing server." Appellant argues these elements are specifically configured and interoperate in specific way which allows for improvement to both pharmacy information technology systems and automated

pharmacies. Appeal Br. 8. Similarly, Appellant argues the claims "recite the relative location and characteristics of various technological components" similar to the claims in *BASCOM*. Appeal Br. 19.

Although the claims recite the aforementioned elements and their functions, they do not specify any particular configuration that evidences an improvement to pharmacy technology. Unlike the claims in *BASCOM*, which involved "the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user," and provided "the benefits of a filter on a local computer and the benefits of a filter on the ISP server" (*BASCOM*, 827 F.3d at 1350), there is no evidence that the physical arrangement of the components here leads to any technological benefits. Indeed, contrary to Appellant's argument, we do not find the claims recite the relative location of its components. The only location recited in claim 1 involves the use of the medication products occurring at a "remote location" and that the order processing server is configured to receive a dose order from a "remote site." The remote site, however, does not appear to be an explicit component of the claim. Nor does Appellant explain the technological benefit of this site being remote to the order processing server or to any of the other explicitly recited components.

It is true that the recited components interact with each other (e.g. the application server queries the inventory database), but such interaction does not improve the technology of either the components or the system as a whole. Rather such interaction appears to occur in a conventional manner where, for example, the database is used to store information and other programs query the database to acquire relevant information.

In addition to the elements discussed above, the claims also recite that the application server "prints a label reflecting an association of the received patient-specific dose order with" either the order prepared by the dose preparation station (when the dose order does not match an inventory order) or with an inventory dose (when the dose order matches an inventory order). We find the printing of the claimed labels to be insignificant post-solution activity that occurs after analyzing previous dose orders to predict future orders, and after it is determined whether a received does order matches an already stored inventory order. As such, the printing limitations do not show that the claims recite a practical application of the recited abstract ideas.

Appellant's arguments above, largely addressed the first factor under the practical application analysis, namely whether the claims include any additional elements of the claims reflects an improvement in the functioning of a computer or to another technological field. For the reasons stated above, we do not find that they do. We also do not find the claims reflect an application of the judicial exception with, or by use of, a particular machine, or a transformation or reduction of a particular article to a different state or thing. Finally, we also do not find the claims use the recited mental processes and commercial practices in some meaningful way beyond generally linking the use of the judicial exception to a particular technological environment. Here, the recitation of "dose preparation station," and "inventory database" an "application server" and an "order processing server" simply link the claimed inventory management practice of anticipating demand for a product, and the mental processes involved in determining such anticipation, to the field of pharmacy.

Guidance Step 2B - Whether the Claims Provide an Inventive Concept

Under step 2B of the Guidance we analyze the claims to determine whether they provide an inventive concept (*i.e.,* whether the additional elements amount to significantly more than the exception itself). Considerations that are evaluated with respect to step 2B include determining whether the claims as a whole add a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field (*see* MPEP § 2106.05(d)).

The claim limitations include the "dose preparation station," and "inventory database" an "application server" and an "order processing server." These components, however, either perform functions that are the recited mental processes (e.g. the application server analyzes previous dose orders and determines the frequency of orders for a particular type of medication) and therefore are not beyond the abstract ideas, or operate in their well-understood, routine, and conventional manner. For example, the Specification describes the application server as communicating with healthcare providers over a network such as the Internet. Spec. 27:14–19, 28:1–2. The Specification also describes the communication function of the application server to be accomplished by a "webserver, such as MS IIS or Apache" which one of ordinary skill in the art would recognize as standard webservers. The claimed database is also described as functioning in its ordinary and customary way. Spec. 28:14–21. In fact, many of the functions of the claimed components can be "performed by one computer." Spec. 29:3–7.

Thus, we do not find that the claims add limitations beyond the judicial exception that are not "well-understood, routine, conventional" in the field.

Accordingly, we sustain the Examiner's rejection of independent claim 1 and of independent claim 21, which Appellant argues together with claim 1, under 35 U.S.C. § 101. Appellant does not present any separate arguments against the Examiner's rejection under § 101 for any other pending claims, except for claims 8 and 9, which we address below. Thus, we sustain the Examiner's rejection of the pending dependent claims 2–20, 22–29, 31–41, and 43.

Claims 8 and 9

Claim 8 depends from claim 1, and further recites "a plurality of preparation stations," and claim 9 adds "wherein the plurality of preparation stations includes at least one automated preparation station and at least one manual preparation station." Although Appellant argues claims 8 and 9 separately, Appellant makes essentially the same arguments for claims 8 and 9 as it did for the independent claims 1 and 21. For example, Appellant argues "[t]he specific configuration and interoperation of the components claimed are limited to rules with specific characteristics, which allow for improvement to the specifically identified problem with respect to traditional pharmacy practice in large institutional pharmacies." Appeal Br. 20. Appellant also argues the "present claims 8 and 9 are directed to improving accuracy, improving computer technology, and involve specific technical modifications." Appeal Br. 21. Similarly, Appellant argues claims 8 and 9 "are directed to specific technical modifications including implementation of an application server analyzing previously received patient-specific dose

orders and generating inventory dose orders among a plurality of preparation stations" and that the technical modification "are intended to resolve a problem: the tension between maintaining an inventory of medication for use in fulfilling orders and the need to keep pace with potentially large volumes of orders across a number of preparation stations." Appeal Br. 22. Appellant also compares claims 8 and 9 to the claims in *BASCOM*. Appeal Br. 23–24.

We have addressed these arguments above with respect to claim 1. We do not find the recitation of "a plurality of preparation stations" and that the "preparation stations includes at least one automated preparation station and at least one manual preparation station" to recite a practical application of the abstract ideas recited in independent claim 1 or to add significantly more to the abstract idea that is not "well-understood, routine, conventional."

Accordingly, we sustain the Examiner's rejection of dependent claims 8 and 9 under 35 U.S.C. § 101.

REJECTION UNDER 35 U.S.C. § 103(A)

Appellant argues that Halvorson

> expressly recognizes that intravenous medications are not stocked in the cabinet 32. Rather, such medications are prepared and delivered according to the traditional approach described above in relation to an on-demand context. As such, while the Examiner relies on teachings in *Halvorson* regarding methodology associated with delivery of medications from a cabinet, *Halvorson* expressly recognizes that such teachings related to a cabinet are inapplicable to IV doses like those recited in claim 1, as they are treated differently "for a variety of reasons." In this regard, *Halvorson* suggests, to a person having ordinary skill in the art at the time of the invention, that the types

> of medication orders of claim 1 would be handled traditionally in relation to an on-demand context.

Appeal Br. 25. According to Appellant, the portions of Halvorson that the Examiner relies upon, are "inapplicable to the subject matter of claim 1 related to sterile compounded medication products suitable for administration by intravenous introduction to a patient, because *Halvorson* expressly states that such medications are not stocked in a cabinet." Appeal Br. 26. Appellant contends "[T]here is no scenario in *Halvorson* in which intravenous medication orders are matched to stock in a cabinet, as those types of medications are expressly taught as not being stocked in the cabinets in *Halvorson*." Appeal Br. 26.

Appellant's arguments are unpersuasive. In particular, Halvorson teaches "[t]he system will also schedule other medications that, for a variety of reasons, are not stocked in the cabinet **32**; such as intravenous medications that will be needed by patients at a dispensing station." Halvorson 4:64–67. We do not find this teaching to go so far as to render Halvorson inapplicable to intravenous mediation and or that such medication must be delivered according to the traditional on-demand approach. Instead, we agree with the Examiner that Halvorson's teaching is intended to be inclusionary, indicating that Halvorson's system can apply its methodology to intravenous medication even if they are not stocked in Halvorson's cabinet. Moroever, we do not find this statement to indicate that Halverson's teachings could not apply to intravenous medication even if they are not stocked in Halvorson's cabinet.

Appellant argues that t Halvorson's preparation station is "unrelated to a preparation station for preparing doses of any kind, much less sterile

compounded medication products suitable for administration by intravenous introduction to a patient." Appeal Br. 26.

We disagree with Appellant. Claim 68 of Halvorson, which the Examiner relies upon for teaching the claimed "dose preparation station," discloses that if a medication order is not found in the unreserved doses of the cabinet then a notification is sent to personnel on a pharmacy terminal means so that medications to fulfill the order can be delivered. Halvorson 36:3–15. Halvorson also discloses that when medication orders are scheduled, the lead time offered by the schedule "allow[s] the medications to be prepared and delivered for use at the appropriate time." Halvorson 4:64–5:2; *see also* Ans. 14. Thus, we agree with the Examiner that Halvorson teaches or suggests a dose preparation station.

Appellant argues that Halvorson does not disclose "generating inventory dose orders (i.e. non-patient-specific orders)." Appeal Br. 27. Rather, according to Appellant, Halvorson describes "retrieval of a multi-dose and bulk packages specifically for a patient where any excess is stored in that patient's drawer" and that "[t]he check of the dispenser or reorder from the pharmacy is related specifically to that patient, and [thus] does not involve any generation of an inventory dose order claimed in claim 1." Appeal Br. 27–28. Appellant emphasizes that the Examiner acknowledges that Halvorson does not teach "collectively analyzing previously received patient-specific dose orders" and therefore "[g]iven *Halvorson* fails to teach making such a determination, which is recognized by the Examiner, *Halvorson* also fails to teach producing an inventory dose according to such a determination." Appeal Br. 28.

We are unpersuaded by Appellant's arguments. The Examiner finds Halvorson teaches generating medication orders at the pharmacy, "which is where inventory doses are prepared, to fulfill & replace the specific medications that have been depleted at the dispensing station." Final Act. 10. The Examiner also relies on Roden as teaching the "analyze" step of claim 1 where previously received orders are collectively analyzed so that an inventory order may be generated. Final Act. 13 (citing Roden 8:28–49). The Examiner finds, and we agree, that combination of Halvorson and Roden therefore teaches generating an inventory dose order based on a determination of how frequently patient-specific-dose orders are received. Appellant's argument attacks Halvorson individually and fails to acknowledge the teachings of Roden and how they are applied to Halvorson by the Examiner.

Appellant also argues that Roden does not remedy the deficiencies of Halvorson. Appeal Br. 29–31. Specifically, Appellant argues that "there is no disclosure regarding analysis of medication dose orders at all [in Roden], much less previously received patient-specific dose orders that are collectively analyzed without regard to any particular patient-specific dose order to make a determination of how frequently patient-specific orders for a particular type of medication are received." Appeal Br. 30. Appellant argues that Roden's disclosures "do not relate to medication orders at all" but are rather more generic applying to inventory in general. Appeal Br. 30.

We are unpersuaded by Appellant's argument. Roden teaches tracking sales of a customer for a start-up period of several weeks to establish a history of consumer demand which will then be used to create a perpetual forecast to accurately predict the quantity and schedule of

replenishment items to be shipped to the customer. Roden 3:46–56, 8:29–49. Roden's teachings apply generally to many different types of inventory items, including medication. *See* Roden 4:7–37 (discussing the sale of pharmaceuticals). Thus, one of ordinary skill in the art would have understood that the teachings of Roden, which discusses determining and anticipating demand for inventory items, could be applied to Halvorson, which discusses the inventory of medication specifically.

Accordingly, we sustain the Examiner's rejection of independent claim 1 and of independent claim 21, which Appellant argues together with claim 1. *See* Appeal Br. 32. Appellant does not separately argue the pending dependent claims, thus the Examiner's rejection of these dependent claims is also sustained.

DECISION

The Examiner's rejection of claims 1–29, 31–41, and 43 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejections of claims 1–29, 31–41, and 43 under 35 U.S.C. § 103 is affirmed.

In summary:

Claims Rejected	Basis	Affirmed	Reversed
1–29, 31–41, and 43	35 U.S.C. § 101	1–29, 31–41, and 43	
1–29, 31–41, and 43	35 U.S.C. § 103	1–29, 31–41, and 43	
Overall Outcome		1–29, 31–41, and 43	

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

AFFIRMED