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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/768,409	02/15/2013	Jens SCHIMMELPFENNIG	5135-98	1021

23117   7590   10/01/2019

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ART UNIT	PAPER NUMBER
3624	

NOTIFICATION DATE	DELIVERY MODE
10/01/2019	ELECTRONIC

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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 JENS SCHIMMELPFENNIG
_____

Appeal 2018-005833
Application 13/768,409
Technology Center 3600
_____

Before ERIC B. CHEN, IRVIN E. BRANCH, and
JOSEPH P. LENTIVECH, *Administrative Patent Judges*.

BRANCH, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

Pursuant to 35 U.S.C. § 134(a), Appellant[2] appeals from the
Examiner's decision to reject claims 1–12 and 14–24, which are all of the
pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] We reference, herein, the Final Action mailed September 5, 2017 ("Final"),
Appeal Brief filed April 25, 2018 ("Br."), Examiner's Answer mailed
April 4, 2018 ("Ans."), Reply Brief filed May 17, 2018 ("Reply"), and
Specification filed February 15, 2013 ("Spec.").

[2] According to Appellant, the real party in interest is "SOFTWARE AG."
Br. 3.

STATEMENT OF THE CASE

APPELLANT'S INVENTION

The invention relates to "dynamically adapting processes." Spec. 1, l. 8. Claim 1 is illustrative of the claimed invention and reproduced, below, with emphasis on "additional elements" (explained *infra*).

> 1. A ***computer-implemented*** method for adapting at least one process defined as a base model in a process management system, the at least one process being a physical process, the method comprising:
>
> storing, ***in non-transitory storage associated with the process management system,*** a base model defining the at least one process;
>
> defining, in the process management system, a plurality of adaptation layers separate from the base model, wherein each of the adaptation layers comprises at least one definition of an adaptation to be performed relative to the base model and aggregation rules defining how to apply the respective adaptation layer relative to the base model, each adaptation layer defining, separate from and relative to the base model, a different adaptation of the base model,
>
> at least one adaptation layer defining a model element that is not present in the base model and aggregation rules for adding the model element that is not present in the base model into a specified location relative to the base model to provide a modified process flow of the base model, at least one adaptation layer defining, relative to the base model, a modification to a property of one or more model elements included in the base model, and at least one adaptation layer identifying one or more elements included in the base model and aggregation rules to delete the identified one or more elements relative to the base model or replace the identified one or more elements with one or more other elements to provide a modified process flow of the base model;

receiving an input selecting one or more of the defined adaptation layers; and

in response to the received input, dynamically applying, in connection **with at least one processor**, the selected adaptation layer(s) on the base model in accordance with at least one aggregation rule included in the selected adaptation layer(s), to generate an adapted model of the at least one process in the base model,

wherein the adapted model is dynamically generated at runtime by aggregating the base model with the selected adaptation layer(s) without changing the base model,

wherein the generated adapted model includes at least one model element that is not present in the base model and/or at least one modification to one or more model elements included in the base model to actively modify the physical process,

wherein the base model comprises at least one restriction for the at least one aggregation rule included in the selected adaptation layer(s), defining which types of adaptations of the base model are allowed to be performed.

Br. 31–32 (claims appendix).

REJECTIONS

Claims 1–12 and 14–24 stand rejected under 35 U.S.C. § 101 as directed to patent-ineligible subject matter. Final 2–7.

Claims 1–12 and 14–24 stand rejected under 35 U.S.C. § 103 as obvious over Hallerbach,[3] Baeuerle (US 2009/0281777 A1; published Nov. 12, 2009), and Prigge (US 2010/0153149 A1; published June 17, 2010). Final 8–50.

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[3] *Configuration and Management of Process Variants*, *Handbook on Business Process Management 1*, Berlin Heidelberg, 237 (2010),

REJECTION UNDER 35 U.S.C. § 101

PRINCIPLES OF LAW

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. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (internal quotation marks and citation omitted).

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.").

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 184 n.7 (quoting *Corning v. Burden*, 56 U.S. 252, 267–68 (1854))); 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 (internal citation 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.*

PTO GUIDANCE

The United States Patent and Trademark Office (USPTO) recently published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) ("Guidance"). Under the 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 interactions such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* Manual of Patent Examining Procedure (MPEP) § 2106.05(a)–(c), (e)–(h) (9th Ed., Rev. 08.2017, Jan. 2018)).

See Guidance, 84 Fed. Reg. at 52, 54–55. Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, we conclude the claim is directed to a judicial exception (*id.* at 54) and then look to whether the claim:

> (3) adds a specific limitation or combination of limitations beyond the judicial exception that are not "well-understood, routine, conventional" activity 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 Guidance, 84 Fed. Reg. at 56.

ANALYSIS

Claim 1 is representative of claims 2–12 and 14–24 for this rejection.

See 37 C.F.R. § 41.37(c)(1)(iv). There is no dispute that claim 1 falls within

a category of patentable subject matter. *See* 35 U.S.C. § 101 ("process,

machine, manufacture, or composition of matter"); *see also* Guidance,

84 Fed. Reg. at 53–54 ("Step 1"). We accordingly turn to the issues raised

by the Guidance and Appellant's arguments.

Step 2A, Prong One:[4] Does the Claim Recite
Any Judicial Exceptions?

Turning to the first issue set forth by the Guidance (*see supra* 5,

bullet "(1)"), we agree with the Examiner that claim 1 recites judicial

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[4] The Guidance separates the enumerated issues (1) to (4) (*see supra* 6) into
Steps 2A(1), 2A(2), and 2B, as follows:

> [T]he revised procedure . . . focuses on two aspects [of whether
> a claim is "directed to" a judicial exception under the first
> step of the *Alice/Mayo* test (USPTO Step 2A)]: (1) [w]hether
> the claim recites a judicial exception; and (2) whether a recited
> judicial exception is integrated into a practical application.
> [W]hen a claim recites a judicial exception and fails to integrate
> the exception into a practical application, . . . further analysis
> pursuant to the second step of the *Alice/Mayo* test (USPTO
> Step 2B) . . . is needed . . . in accordance with existing USPTO
> guidance as modified in April 2018.[footnote omitted]

84 Fed. Reg. at 51 (referencing, via the omitted footnote, "USPTO
Memorandum of April 19, 2018, 'Changes in Examination Procedure

exceptions. Specifically, we agree with the Examiner's corresponding

identification of all un-emphasized claim features of reproduced claim 1

(*supra* 2–3). Final 3–4. We also agree "the claim [recites] defining and

applying [of] adaptations to a process management system" (Final 2) and

"enhanc[ing] the arrangement [of the] workflow processes in a dynamic and

rule based fashion" (Ans. 4). We further agree that, absent more, "design

and management of business processes in a company including cycle

management and checks in regard to changes to business processes are . . .

abstract concepts." *Id.* at 4–5.

We add that each of the un-emphasized claim features of reproduced

claim 1 fall within the Guidance's following categories of judicial

exceptions:[5] "(b) Certain methods of organizing human activity—

fundamental economic principles or practices" (Guidance,

84 Fed. Reg. at 52); and/or "(c) Mental processes—concepts performed in

the human mind" (*id.*). We determine the un-emphasized claim features

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Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility
Decision (*Berkheimer v. HP, Inc.*)' (Apr. 19, 2018), *available at https://
www.uspto.gov/sites/default/files/documents/memo-berkheimer-
20180419.PDF* [. . . 'USPTO *Berkheimer* Memorandum'].").

[5] The Examiner alleges judicial exceptions not recognized by the Guidance.
For example, the Examiner alleges exceptions of: "collecting information,
analyzing it, and displaying certain results of the collection and analysis"
(Final 2–3); and "obtaining and comparing intangible data" (*id.* at 3).
Pursuant to USPTO policy, we do not uphold these determinations.
See Guidance 84 Fed. Reg. at 51 ("All USPTO personnel are, as a matter of
internal agency management, expected to follow the guidance."). We do
not, however, find the examiner has erred as a matter of law. *See*
id. ("Rejections will continue to be based upon the substantive law[.]"). We
apply the Guidance to facilitate prosecution.

plainly constitute a fundamental economic practice of maintaining process flows for business operations and corresponding mental steps.

We add Appendixes A and B (attached) to show a long-practiced model of a process flow. They illustrate typical flowcharts for evaluating tort claims (legal actions) and exemplify the claimed modeling of a process flow as a "base model" and associated "adaptation layers."

Appendix A shows a base process flowchart for ascribing an action to a specific tort or as non-tortious. The flowchart exemplifies the claimed base model.[6]

Appendix B shows a sub-process flowchart for adapting the base process. The flowchart shows, specifically, a sub-process (i.e., more detail) for determining whether an action constitutes a defamation tort of libel or slander. The flowchart replaces a branch of the base process flowchart (the defamation branch shown within the red dashed lines of Appendix A) and exemplifies the claimed adaptation layer for replacing an element of the base model.

We also add that the claimed use of the base model to represent a "physical process" constitutes a judicially-recognized abstraction, because the representation constitutes 'printed matter' that is not functionally related to the claimed method. *See Praxair Distribution, Inc. v. Mallinckrodt Hosp. Prod. IP Ltd.*, 890 F.3d 1024, 1031–33 (Fed. Cir. 2018). That is, the claimed representation limits the content of information within the base model and is not interrelated with the rest of the claim (e.g., does not impact

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[6] We are corresponding the claim terms, in quotes, to the flowcharts for purposes of analysis. We are not attempting to read claim 1 on the flowcharts.

how the claim steps are performed to adapt the base model). *Id.* Such claim restrictions fall outside the scope of 35 U.S.C. § 101. *Id.* at 1032.

For the foregoing reasons, we determine claim 1 recites judicial exceptions.

*Step 2A, Prong Two: Are the Recited Judicial Exceptions
Integrated Into a Practical Application?*

Turning to the second issue set forth by the Guidance (*see supra* 5, bullet "(2)"), we agree with the Examiner that the recited judicial exceptions are not integrated into a practical application. *See* Guidance, 84 Fed. Reg. at 53 (describing a "practical application" as a "meaningful limit on the [recited judicial exceptions], such that the claim is more than a drafting effort designed to monopolize the [exceptions]"). Specifically, we agree "[t]he application of computer technology in . . . [claim 1] is merely . . . a computer[,] . . . storing . . . in non-transitory storage associated with the process management system[,] . . . and receiving an input [to select the] adaptation layers[.]" Final 5 (quotation marks omitted). We also agree these claim features are "no more than a general linking of the use of the . . . [judicial exceptions] to a particular technological environment (the use of computers to calculate and transmit data)." Final 4–5. We further agree claim 1 does not recite "***how*** [technological solutions] are occurring . . . through [the invention's] adaptation processes." Ans. 6 (original emphasis); *see also Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335 (Fed. Cir. 2018) (explaining, throughout the opinion, the need to recite "how" results are achieved).

For the foregoing reasons, we determine claim 1 is directed to the recited judicial exceptions—not to a practical application thereof.

*Step 2B: Does the Claim Recite Anything That Is
Beyond the Recited Judicial Exceptions and Not a Well-Understood,
Routine, Conventional Activity?*

Turning to the third and fourth issues set forth by the Guidance
(*see supra* 6, bullets "(3)" and "(4)"), we agree with the Examiner that the
claimed invention does not comprise a feature that is neither a judicial
exception nor "well-understood, routine, conventional" (herein
"conventional"). 84 Fed. Reg. at 56. Specifically, we agree that Appellant's
Specification shows the claimed computer elements are generic. Final 5
(citing Spec. 23, l. 32–24, l. 18). We also agree the USPTO July 2015
Update: Subject Matter Eligibility (July 30, 2015)[7] shows their claimed
"storing" and "receiving an input" functions are generic. Final 5 (citing July
2015 Update at 7).

We add that the claimed computer elements are the only additional
elements (i.e., only features that are not judicial exceptions). Therefore,
because claim 1 does not specify any further involvement of the computer
elements, claim 1 recites all additional elements as generic computer
technology that merely applies the recited judicial exceptions. *See*
Guidance, 84 Fed. Reg. at 55 ("apply it" bullet corresponding to the
Guidance's footnote 30). That is, the additional elements are "mere
instructions to apply a judicial exception." *Id.* at n. 30; *see also* MPEP

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[7] The July 2015 Update is available at https://www.uspto.gov/
sites/default/files/documents/ieg-july-2015-update.pdf. The Update presents
a list of computer functions that are judicially-recognized as conventional.
See also MPEP § 2106.05(d)(II) (presenting a substantially similar list of
computer functions that are judicially-recognized as conventional; cited by
the Berkheimer Memorandum at, § III.A.2, as sufficient support for a
Step 2B finding).

11

§ 2106.05(f) (cited by the Guidance's footnote 30 as instructive for this issue).

For the foregoing reasons, we determine the claimed additional elements do nothing more than append generic computer technology that merely applies the recited judicial exceptions.

Appellant's Arguments

Appellant contends the claimed invention provides advantages in the art of managing "complex business processes . . . using specialized software tools." Br. 12. Specifically, Appellant contends: "processes will be able to automatically adapt themselves to [specific] machinery and environments" (*id.* at 13; *see also id.* at 14); "a single base model may be changed once [and all] process variants . . . will incorporate the change" (*id.*); "[w]hen releasing a new variation . . . , only the new adaptation layers may need to be examined and released" (*id.* at 14); and "[w]ith adaptation layers . . . , the adapted model is dynamically generated at runtime" (*id.*). Appellant further contends these benefits constitute a "technical advantage": "reduced memory and processing complexities (e.g., due to reduction of redundant information)" (*id.* at 15); and "an adapted model [that] can be produced dynamically and flexibly, while . . . [also being] consistent and up to date" (*id.*; *see also* Reply 5).

We are unpersuaded. The argued benefits result solely from the claimed judicial exceptions; e.g., the "reduction of redundant information" (Br. 15) results from using a base model (base flowchart) and adaptations to reduce an overall quantity of recorded process flow sequences. "[An] advance [that] lies entirely in the realm of abstract ideas . . . is ineligible for

patenting." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1163 (Fed. Cir. 2018), *cert. denied*, 139 S. Ct. 2747 (2019).

Appellant also contends the benefits arise from claimed "specific 'rules' (as even acknowledged by . . . the Examiner's Answer) that improve computer-related technology by allowing computer performance of functions not previously performable by a computer." Reply 5.

We are unpersuaded. Appellant is referencing a claimed process of *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1315 (Fed. Cir. 2016), which was held patent-eligible in part because of "us[ing] a combined order of specific rules that renders information into a specific format that is then used and applied to create desired results" (*id.* at 1315). The underlying basis for this finding was that a claim reciting a judicial exception is nonetheless patent-eligible if reciting a mechanism that prevents preemption of the exception; i.e., the claimed rules satisfied this criterion. *Id.* at 1314. *McRO* explains:

> The preemption concern arises when the claims are not directed to a specific invention and instead improperly monopolize the basic tools of scientific and technological work. . . . A patent is not good for an effect, or the result of a certain process because such patents would prohibit all other persons from making the same thing by any means whatsoever. A patent may issue for the means or method of producing a certain result, or effect, and not for the result or effect produced. We therefore look to whether the claims in these patents focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery.

Id. (citations and quotation marks omitted).

The claim features Appellant argues do not fall within the concerns raised in *McRO*. For example, even assuming the claimed base model and adaptation layers constitute specific rules, they are also basic tools of a fundamental economic practice—namely basic tools of maintaining process flows. Accordingly, the argued claim features do not prevent preemption of a judicial exception.

Appellant also contends claim 1 compels a finding of patent-eligibility under *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). Br. 20–21. We are unpersuaded. Like the claim addressed by *McRO*, the claim addressed by *DDR* was held patent-eligible because of reciting a specific mechanism of the invention and thereby preventing preemption of the recited abstract ideas. *DDR*, 773 F.3d at 1257–59. As explained above, Appellant's claim 1 is not specific in this regard.

Appellant also contends claim 1 compels a finding of patent-eligibility under *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) and *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299 (Fed. Cir. 2018). Reply 3, 6. We are unpersuaded. The argued principles of *Enfish* and *Finjan* are explained within *Finjan* as follows:

> In *Enfish*, . . . the court determined that claims related to a database architecture that used a new, self-referential logical table were non-abstract because they focused on "an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity." [822 F.3d] at 1336. . . . *Enfish's* self-referential database could be launched "with no or only minimal column definitions" and configured and adapted "on-the-fly." *Id.* at 1333.
>
> Similarly, the method of claim 1 employs a new kind of file that enables a computer security system to do things it could not do before.

879 F.3d at 1304–05. Unlike the above-described claims of *Enfish* and *Finjan*, Appellant's argued claim features do not focus on "computer functionality itself." *Id.* (above block quote). Rather, the argued features focus on a basic tool of process flows—a base model and adaptations—"for which a computer is used in its ordinary capacity." *Id.* (above block quote). *See also Benson*, 409 U.S. at 68 (Claim focused on a mathematical relationship and was, thus, patent-ineligible despite improving a calculation of a computer.)

Appellant also contends "the specific features recited in . . . [claim 1] cannot be performed in the human mind or by a human using a pen and paper." Br. 19. We are unpersuaded for each of two reasons. First, as explained above, we find claim 1 is also directed a fundamental economic practice. Second, as explained in the Guidance, "if a claim . . . covers performance in the mind but for the recitation of generic computer components, then it is still in the mental processes category unless the claim cannot practically be performed in the mind." Guidance, 84 Fed. Reg. at 52 n. 14. For the reasons presented in our analysis for Steps 2A and 2B, claim 1 satisfies this "mental processes" description.

Appellant also contends, pursuant to the *Berkheimer* Memorandum (*see supra fn.* 2), the Examiner must present evidence that the claimed additional elements impart only "well-understood, routine, conventional" activities. Reply 4–5. We are unpersuaded for each of two reasons.

First, Appellant does not address the Examiner's presented evidence that "[t]he application of computer technology in . . . [claim 1] is merely routine and conventional." Final 5 (block-quoted at *supra* 11; citing Spec. 23, l. 32–24, l. 18 and July 2015 Update at 7).

15

Second, even assuming the Examiner did not present such evidence, the Examiner must do so only if the rejection rests on a finding that an additional element constitutes a "well-understood, routine, conventional" activity. *See* USPTO *Berkheimer* Memorandum 3 ("[A]n additional element (or combination of elements) is not well-understood, routine or conventional unless the examiner finds, and expressly supports a rejection in writing with, one or more of the following . . ."). As discussed, the claimed additional elements constitute mere instructions to apply an abstract idea on a computer. *See supra* 11, Step 2B. Neither *Berkheimer* nor the USPTO *Berkheimer* Memorandum concerns mere instructions to 'apply' a judicial exception on a computer. *See* USPTO *Berkheimer* Memorandum, 1–2 ("*Berkheimer* informs the inquiry into . . . well-understood, routine, conventional activity."); *see also id.* at 3 ("This memorandum revises . . . MPEP § 2106.07(a) . . . and . . . (b)); Guidance 84 Fed. Reg. at 55 n. 30 ("See MPEP 2106.05(f) for . . . mere instructions to apply a judicial exception"); MPEP 2106.05(f) ("[T]he well-understood, routine, conventional consideration (see MPEP § 2106.05(d)) . . . ***may assist*** . . . a determination of . . . mere instructions to apply an exception." (emphasis added)).

CONCLUSION

For the foregoing reasons, we sustain the rejection of claims 1–12 and 14–24 under 35 U.S.C. § 101.

REJECTION UNDER 35 U.S.C. § 103

ANALYSIS

Claims 1–12, 14–16, 20–22, and 24

Claim 1 is representative of claims 2–12, 14–16, 20–22, and 24 for this rejection. *See* 37 C.F.R. § 41.37(c)(1)(iv).

A first issue is whether Hallerbach teaches or suggests the claimed "dynamically applying . . . the selected adaptation layer(s) . . . to generate an adapted model of . . . the base model . . . at runtime . . . without changing the base model." Br. 22. Appellant contends Hallerbach creates finalized process flows by cloning and then adjusting a base process, thus "changing the processes defined in the base process, . . . start[ing] in a completely different direction from that which is claimed." *Id.*; *see also id.* at 25 (Hallerbach's "grouped change operations . . . are not dynamically applied on the base model (at runtime) to provide adapted model without changing the base model.").

We are unpersuaded for each of two reasons. First, one of ordinary skill in the art (herein "artisan") would understand Hallerbach as maintaining a base process during runtime—not as changing a base process—because Hallerbach teaches that a process variant (i.e., finalized process) is configured from a base process (Hallerbach 243) and sometimes configured during runtime (*id.* at 242). Moreover, even assuming Hallerbach clones and then adjusts a base process (as argued), Appellant does not explain why (much less show) such cloning/adjusting would be understood as changing the base process at runtime.

A second issue is whether Hallerbach teaches or suggests the claimed "adaptation layers separate from the base model, . . . each . . . [defining] an

adaptation to be performed relative to the base model and . . . how to apply the respective adaptation layer relative to the base model." Br. 24, 26. Appellant contends that neither Hallerbach's process variants nor its change operations (which configure a process variant from a base process) teach the claimed adaptation layers. *Id.* Specifically, Appellant contends the process variants "are not definitions of adaptations to be performed relative to the base model and do not . . . defin[e] how to apply the respective adaptation layer relative to the base model . . . [, but] instead are themselves final versions of the adapted process models." *Id.* at 24. Appellant contends the "change operations (see Table 1[)] are applied to a base model[, but are] not adaptation layers including the specific information [claimed]." *Id.* at 25.

We are unpersuaded. The Examiner finds Hallerbach's change operations teach the claimed adaptation layers. Ans. 8. We agree. Because the change operations are applied to a base process (Hallerbach 243), an artisan would understand a change operation as being separate from base processes. Because the change operations have respective "purposes" and "parameters" (*id.* at Table 1), the artisan would understand a change operation as defining an adaptation (purpose) and describing how the adaptation is applied to a base model (parameters).

A third issue is whether Hallerbach teaches or suggests the claimed "base model compris[ing a] . . . restriction . . . defining which types of adaptations of the base model are allowed to be performed." Appellant contends Hallerbach's change operations are not comprised by the base process and therefore cannot teach the claimed restriction. Br. 26–27.

We are unpersuaded. The Examiner finds Hallerbach's process
context teaches the claimed restriction. Final 14. We agree. Hallerbach
teaches a base process as having a process context that determines (i.e.,
dictates) the applicable change operations. Hallerbach 237–39. In an
example, a base process is a master process for ***managing vehicle repair*** and
the available change operations add specific requirements (locality-specific)
for ***managing vehicle repair***. *Id.* at 238. Appellant does not show, nor even
argue, such a process context (emphasized above) fails to teach or suggest
the claimed restriction.

For the foregoing reasons, we sustain the rejection of claims 1–12,
14–16, 20–22, and 24 under 35 U.S.C. § 103.

Claims 17–19 and 23

Claim 17 depends from claim 1 and adds that "the . . . restriction . . .
defines an order of aggregating the adaptation layers." Appellant contends
Hallerbach's change options are not comprised by the base process (as
required by base claim 1) and therefore cannot teach the claimed restriction.
Br. 27–28.

We are unpersuaded. As discussed for claim 1, the Examiner finds
Hallerbach's process context teaches the claimed restriction. Final 14; *see
also id.* at 42 (claim 18). As further discussed, Hallerbach teaches a base
process as having a process context that determines the applicable change
operations. Hallerbach 237–39. The process context also determines the
applicable options, which are set sequences of change operations (and thus
define an order of aggregating adaptations, as claimed). *Id.* at 246–47.

Claim 18 depends from claim 1 and adds that "the . . . restriction . . .
defines which model element[s] of the base model are allowed to be

19

adapted." The Examiner finds Baeuerle's "flexible" blocks teach or suggest adding the claimed restriction to a base process. Ans. 12–13 (citing Baeuerle ¶ 6). Appellant contends "Baeuerle does not disclose that the graphical notations for task selection constraints are comprised in a base model." Br. 28.

We are unpersuaded. Baeuerle teaches the flexible blocks as part of a base process inasmuch stating the flexible blocks allow for a "partially defined model" whereby a "full specification of the model is done just before or during runtime and may be unique to each instance," i.e., "instead of representing . . . workflow control through a . . . model that attempts to capture every step." Baeuerle ¶ 4. Baeuerle thereby teaches or suggests adding the claimed restriction—an identification of what base model elements can be modified (i.e., are flexible)—to a base model.

Claim 19 depends from claim 1 and adds that "the . . . restriction . . . restricts permission . . . to apply the selected adaptation layer(s) on the base model." The Examiner finds Prigge's modeling environment teaches or suggests adding the claimed restriction to Hallerbach's base process. Ans. 13–14 (citing Prigge ¶ 36). Appellant contends "Prigge says nothing regarding the features . . . being included in a base model." Br. 29.

We are unpersuaded. Prigge provides access to models at respective "virtual collaboration rooms [that] allow developers to work together efficiently . . . while enforcing security requirements." Prigge ¶ 36. Prigge thereby teaches to define permissions for adapting a model and, moreover, teaches to do so on a model-by-model basis. Prigge also thereby suggests to identify those permissions in a model, which would naturally be the base model that is adapted to form a final model.

Claim 23 depends from claim 1 and adds "a restriction defining a portion of a process of the base model that cannot be modified by the selected plurality of adaptation layers." The only difference between claim 23 and claim 18 (addressed above) is that claim 23 restricts what portions/elements of the base model ***cannot*** be modified and claim 18 restricts what portions/elements of the base model ***can*** be modified. As discussed, Baeuerle teaches or suggests adding claim 18's restriction to a base model. Because identifications of what can (claim 18) and cannot (claim 23) be modified are obvious 'sides of the same coin,' Baeuerle likewise teaches or suggests adding claim 23's restriction to a base model. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) ("A person of ordinary skill is also a person of ordinary creativity, not an automaton."); *see also* Manual of Patent Examining Procedure § 2144.04.VI.A (Legal Precedent as Source of Supporting [Obviousness] Rationale—Reversal of Parts) (Rev. 08.2017, Jan. 2018).

For the foregoing reasons, we sustain the Examiner's rejection of claims 17–19 and 23 under 35 U.S.C. § 103.

CONCLUSION

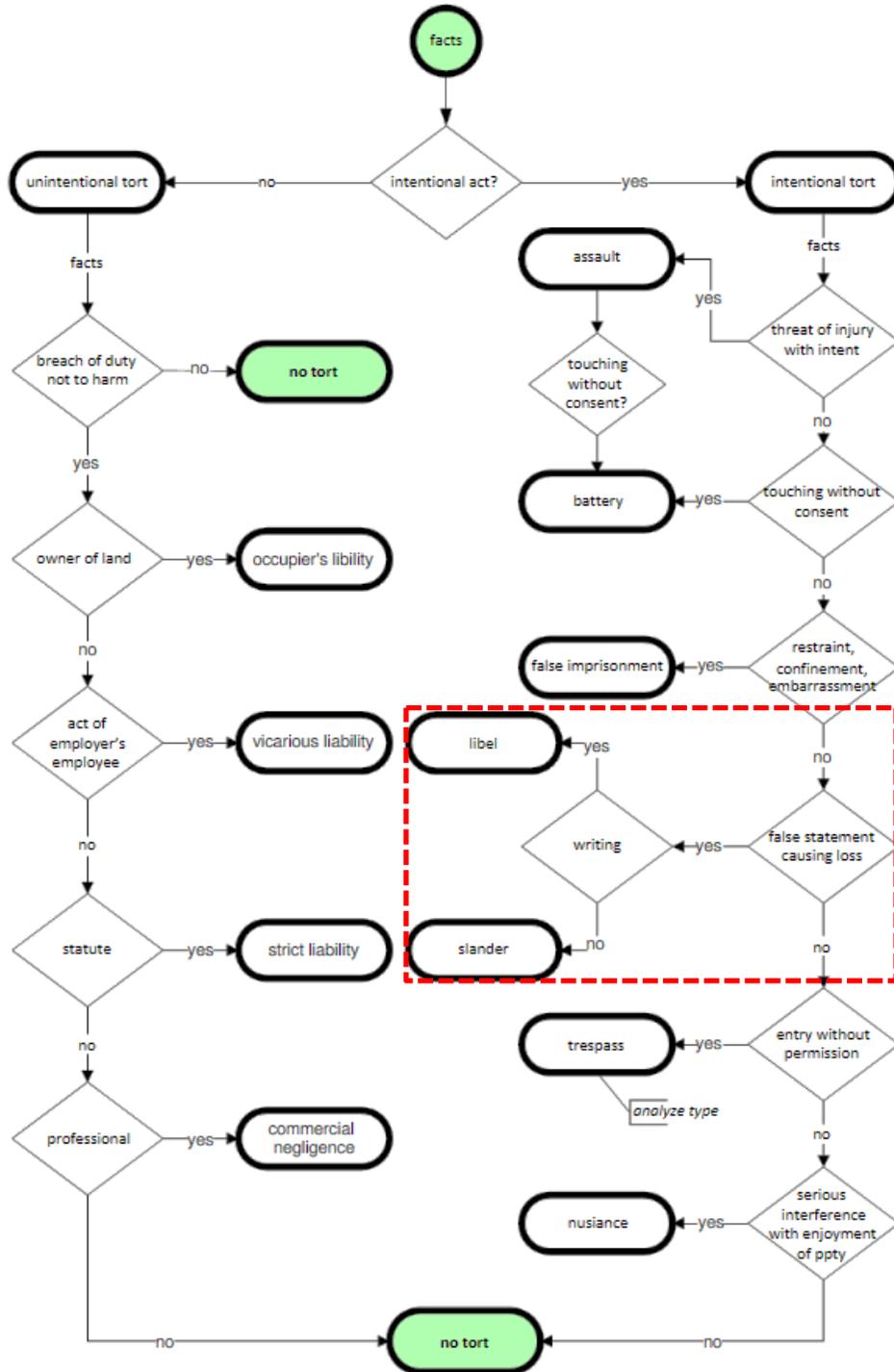| Claim(s) Rejected	35 U.S.C. §	Basis	Affirmed	Reversed
1–12, 14–24	101	Eligibility	1–12, 14–24	
1–12, 14–24	103	Hallerbach, Baeuerle, Prigge	1–12, 14–24	
Overall Outcome			1–12, 14–24	

DECISION

We affirm the rejections of claims 1–12 and 14–24.

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

AFFIRMED

APPENDIX A

APPENDIX B