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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 THOMAS ZIER and FRANK ROSENGART
_____

Appeal 2019-003282
Application 13/579,327
Technology Center 3600
_____

Before CAROLYN D. THOMAS, BRADLEY W. BAUMEISTER, and
PHILLIP A. BENNETT, *Administrative Patent Judges.*

BENNETT, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the
Examiner's decision to reject claims 1–16. We have jurisdiction under
35 U.S.C. § 6(b).

We affirm.

CLAIMED SUBJECT MATTER

The claims are directed to an adaptive placement of auxiliary media in recommender systems. Spec., Title. Claim 15, reproduced below, is illustrative of the claimed subject matter:

15. A method of controlling placement of auxiliary media in form of at least one of audio, video and text information in relation to at least one content item presented to a user, wherein the content item is a data stream containing video and/or audio data, said method comprising:

a) scheduling said at least one content item by a first scheduler component based on a user profile received by the first scheduler component from a recommender engine, wherein the at least one content item is to be played out on a personalized content channel to be displayed on a screen;

b) outputting by said first scheduler component information about a scheduled content, wherein the information about the scheduled content is information in the form of metadata describing the content item; and

c) determining by a second scheduler component based on said output information in the form of metadata describing the content item which auxiliary media to place into a presentation space, wherein said second scheduler is adapted to check whether a targeting rule for the auxiliary media matches the content item, wherein the placement of auxiliary media is controlled in relation to at least one content item presented to the user via said screen, and wherein the user profile is personalized to the user and the user profile is based at least in part on explicit feedback on content items provided by the user;

d) detecting by the second scheduler a trigger event and

e) inserting by the second scheduler an item of the auxiliary media to a target object of a content channel in response to the detected trigger event, said trigger event comprising at least one of a recording of a content item, a deletion of a content item, and an arrival of a new object of the auxiliary media for

placement, and wherein said target object comprises a single show or event within the content channel,

wherein the output of the recommender engine is connected to the first scheduler and wherein the first scheduler is connected to a common storage device; and wherein the first scheduler is adapted to compute a recording schedule for scheduling the recording of content items offered by the recommender engine onto said storage device; and wherein the second scheduler is also connected to the storage device, so that auxiliary media that match user profile or targeting requirements can be pushed by the second scheduler to the storage device even if a channel is not subscribed.

Appeal Br. 26–27 (Claims Appendix).

REJECTION

Claims 1–16 stand rejected under 35 U.S.C. § 101 as being directed to patent ineligible subject matter. Final Act. 2–6.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellant's arguments set forth in the Appeal Brief and the Reply Brief. We are not persuaded by Appellant's arguments. We adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken (Final Act. 2–10) and (2) the findings, reasons, and explanations set forth by the Examiner in the Examiner's Answer in response to Appellant's Brief (Ans. 3–10) and concur with the conclusions reached by the Examiner. We add the following for emphasis.

Standard for Patent Eligibility

In issues involving subject matter eligibility, our inquiry focuses on whether the claims satisfy the two-step test set forth by the Supreme Court in

Alice Corp. v. CLS Bank Int'l, 573 U.S. 208 (2014). The Court instructs us to "first determine whether the claims at issue are directed to a patent-ineligible concept," *id.* at 218, and, in this case, the inquiry centers on whether the claims are directed to an abstract idea. If the initial threshold is met, we then move to the second step, in which we "consider the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Id.* at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 79, 78 (2012)). The Court describes the second step as a search for "an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'" *Id.* (quoting *Mayo*, 566 U.S. at 72–73).

The USPTO has published revised guidance on the application of § 101 consistent with *Alice* and subsequent Federal Circuit decisions. USPTO, *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 activity such as a fundamental economic practice, or mental processes) (referred to Step 2A, prong 1 in the Guidance); and

> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)) (referred to Step 2A, prong 2 in the Guidance).

Guidance, 84 Fed. Reg. at 52–55.

Only if a claim (1) recites a judicial exception and (2) does not

integrate that exception into a practical application, do we then move to

Step 2B of the Guidance. There, we 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.

Guidance, 84 Fed. Reg. at 56.

Examiner's Findings and Conclusions[2]

The Examiner rejects the claims as being directed to a judicial

exception without significantly more. Final Act. 2–6; Ans. 3–10. Under the

first step of the *Alice* inquiry, the Examiner determines the claims are

"directed to the abstract idea of providing information to someone based on

what is known about her, which is similar to the concept identified as

abstract in *Affinity Labs*." Final Act. 2. The Examiner further finds the

claims abstract because they recite "collecting and analyzing information in

order to provide a desirable information-based result, [which] is similar to

the concept identified as abstract by the court in *Electic Power Group*." *Id.*

Under the second step of the *Alice* inquiry, the Examiner determines

the additional claim elements are insufficient to amount to significantly

more than the judicial exception. Final Act. 5. The Examiner determines

that the additional elements "include[] 'hardware component' and three

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[2] The Final Office Action was mailed prior to the Guidance. It applied the
case-law based approach from previous eligibility guidance in rejecting the
claims under § 101. The Reply Brief was filed subsequent to the issuance of
the Guidance and presents arguments made in view of the Guidance.

black-box modules described entirely functionally[—]a 'first scheduler', a 'second scheduler', a 'storage device' and a 'user interface'." Final Act. 5. The Examiner finds "these elements are recited at an exceedingly high degree of generality and only perform generic computer functions of manipulating information and sharing information with persons and/or other devices." Final Act. 5.

Appellant's Contentions

Appellant presents several arguments for eligibility. Because the Guidance was issued after the Appeal Brief but before the Reply Brief, the arguments made in the Reply Brief better apply the Guidance to the claims. We, therefore, primarily address those latter arguments of the Reply Brief.

Appellant first argues the claim does not recite a judicial exception under Step 2A, prong 1, of the Guidance. Reply Br. 3–5. Appellant asserts the claim elements "could not be practically performed in the human mind" and "it is no more practical to perform such actions mentally than it is to track how much memory has been allocated to a computer application over a predetermined time period." Reply Br. 4.

Appellant further argues that even if the claim recites an abstract idea, the claim integrates the abstract idea into a practical application under Step 2A, prong 2. Reply Br. 5–7. Appellant asserts the claims are similar to the eligible claim provided Example 37 provided in the Guidance. Reply Br. 6.

Appellant additionally argues,

> Claim 1 does not recite merely analyzing data and providing an information-based result as asserted in the Final Office Action . . ., but recites an apparatus including at least a first scheduler, a second scheduler, and a user interface, as discussed above. The

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claim also recites receiving a user profile (based on explicit feedback on content items provided by the user with the user interface), pushing auxiliary media that meet targeting requirements or the user profile from the second scheduler to the storage device, receiving information about scheduled content in the form of metadata deciding which auxiliary media is placed in a presentation space based on the information, checking whether a targeting rule for the auxiliary media matches the content item, and inserting auxiliary media into a target object of a content channel in response to detecting a trigger event. Taken collectively, these features apply any allegedly abstract "analysis of information" into a practical application by providing for the insertion of an auxiliary media into a content item in the form of an audio or video data stream, in the particular manner claimed, which provides an improvement over prior systems.

Reply Br. 6–7. Appellant further asserts the invention improves the functioning of a computer (Reply Br. 7; Appeal Br. 12–14, 17) and also effects a transformation of an article to a different state or thing (Reply Br. 7, Appeal Br. 17–18).

Appellant also contends the claims are eligible under Step 2B of the Guidance. Specifically, Appellant argues the Examiner's analysis is flawed because "claim 1 recites non-abstract elements in addition to the computer hardware," and the Examiner fails to address those limitations. Reply Br. 8.

Revised Guidance, Step 2A, Prong One [3]
The Judicial Exception

The Guidance instructs us first to determine whether any judicial exception to patent eligibility is recited in the claim. The Guidance identifies three judicially-excepted groupings: (1) mathematical concepts,

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[3] Throughout this opinion, we give the claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

(2) certain methods of organizing human activity such as fundamental economic practices and commercial interactions (including . . . advertising, marketing or sales activities or behaviors; business relations), and (3) mental processes. We focus our analysis on the second and third groupings— certain methods of organizing human activity and mental processes.[4]

We agree with the Examiner that the limitations of claim 1 recite a process of delivering advertising content to a person based on what is known about the person—a form of targeted advertising—which as a whole, recites a commercial practice of advertising under the Guidance. Guidance, 84 Fed. Reg. at 52 n.13. Individually, several of the limitations also are mental processes.[5] *Id.* at 52 n.14.

For example, the Claim 1 recites,

> a) scheduling . . . at least one content item[6] . . . based on a user profile . . . wherein the at least one content item is to be played out on a personalized content channel to be displayed on a screen;

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[4] Appellant argues the § 101 rejection of claims 1, 15, and 16 together. We treat claim 15 as representative of the independent claims. 37 C.F.R. § 41.37(c)(1)(iv) (2018) ("When multiple claims subject to the same ground of rejection are argued as a group or subgroup by Appellant, the Board may select a single claim from the group or subgroup and may decide the appeal as to the ground of rejection with respect to the group or subgroup on the basis of the selected claim alone."). We address dependent claims separately *infra*.

[5] *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017) ("Adding one abstract idea . . . to another abstract idea . . . does not render the claim non-abstract."); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093–94 (Fed. Cir. 2016) (patent-ineligible claims were directed to a combination of abstract ideas).

[6] The Specification describes a "content items" as including "books, songs, television (TV) programs, movies, etc.". Spec. 1, ll. 18–19.

b)   outputting . . . information about a scheduled content, wherein the information about the scheduled content is information in the form of metadata describing the content item;

c)   determining . . . based on said output information in the form of metadata describing the content item which auxiliary media[7] to place into a presentation space,

> [(c.1)]   wherein said second scheduler is adapted to check whether a targeting rule for the auxiliary media matches the content item,"

> [(c.2)]   wherein the placement of auxiliary media is controlled in relation to at least one content item presented to the user via said screen,

> [(c.3)]   wherein the user profile is personalized to the user and the user profile is based at least in part on explicit feedback on content items provided by the user,

d)   detecting . . . a trigger event[,] and

e)   inserting . . . an item of the auxiliary media . . . in response to the detected trigger event,

> [(e.1)] said trigger event comprising at least one of a recording of a content item, a deletion of a content item, and an arrival of a new object of the auxiliary media for placement,

> [(e.2)]   wherein said target object comprises a single show or event within the content channel,

f)   compute a recording schedule for scheduling the recording of content items . . . so that auxiliary media that match user profile or targeting requirements can be pushed . . . to the storage device even if a channel is not subscribed.

Appeal Br. 26–27 (Claims Appendix).

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[7] The Specification describes "auxiliary media" as including "auxiliary audio, video or text information related to a personalized channel or content item and used for user support, *advertisement* or the like." Spec. 1, ll. 7–9 (emphasis added).

These limitations, under their broadest reasonable interpretation, recite the familiar commercial practice of advertisement placement, and more specifically recite the commercial practice of receiving advertisements from advertisers, selecting the intended audience for receiving the advertisement, and delivering the advertisements to the intended audience.

For example, limitation (a), which recites scheduling the playing a content item based on a user profile, is analogous to the traditional business practice of selecting items on behalf of a customer based on a customer profile. This limitation also can be considered a mental process under the Guidance because a person could maintain and develop a programming schedule in their mind with the aid of pen and paper.

Limitation (b), which recites outputting metadata about a scheduled content item, is analogous to the customary commercial practice of providing advertisers information about programming and potential audience reach in order to determine the suitability of running an advertisement in connection with that programming.

Limitation (c), which recites determining which auxiliary media to place based on the metadata, also reflect typical activities that occur in placing advertisements. This limitation also can be reasonably considered as a mental process as an evaluation or judgment. Guidance, 84 Fed. Reg. at 52 n.15. Limitations (c.1), (c.2), and (c.3), which further specify how the auxiliary media is identified for placement using a targeting rule and user feedback, also recite advertising practices.

Limitations (d) and (e), which recite detecting a trigger event and inserting the auxiliary media in response, also are typical of television advertising in that commercials are often placed during breaks in television

programming, such as, for example, time outs in sporting events. Similarly, limitations (e.1) and (e.2) recite specific triggering events for media insertion along with specifying that the insertion is to be made into a specific item of content. Although the limitations refine the advertising concept, they nevertheless recite abstract ideas because the language merely limits the recited commercial practice of advertising to a particular content and scenario. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) ("As many cases make clear, even if a process of collecting and analyzing information is 'limited to particular content' or a particular 'source,' that limitation does not make the collection and analysis other than abstract.").

Under the Guidance, these limitations, under their broadest reasonable interpretation, recite both a commercial interaction of advertising (a certain method of organizing human activity) and a mental process for identifying content in which to insert appropriate advertising based on user profiles. Accordingly, we conclude the claimed process set forth in claim 15 *recites* judicial exceptions of both a mental process and of a commercial interaction (advertising), which is a certain method of organizing human activity under the Guidance.[8]

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[8] As noted above, Appellant argues the claim does not recite a judicial exception. Reply Br. 3, 4 ("It is no more practical to perform such actions mentally than it is to track how much memory has been allocated to a computer application over a predetermined time period."). Appellant bases its argument on Example 37 in the Guidance. Reply Br. 3. This argument is not persuasive, as the issue illustrated by that particular example was whether a mental process was recited in the claim. Here, as explained by the Examiner, the main focus of the claim is a commercial interaction of advertising, and in particular, how to provide appropriate advertisements "to

Revised Guidance, Step 2A, Prong Two
Integration of the Judicial Exception into a Practical Application

Having determined that the claim 15 recites a judicial exception, our analysis under the Memorandum turns now to determining whether there are additional elements that integrate the judicial exception into a practical application. *See* Guidance, 84 Fed. Reg. at 54–55 (citing MPEP § 2106.05(a)–(c), (e)–(h)).

Under the Guidance, limitations that are indicative of "integration into a practical application" include:

1. Improvements to the functioning of a computer, or to any other technology or technical field — *see* MPEP § 2106.05(a);

2. Applying the judicial exception with, or by use of, a particular machine — *see* MPEP § 2106.05(b);

3. Effecting a transformation or reduction of a particular article to a different state or thing — *see* MPEP § 2106.05(c); and

4. Applying or using the judicial exception in some other meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception — *see* MPEP § 2106.05(e).

In contrast, limitations that are not indicative of "integration into a practical application" include:

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a person based on what is known about her." Ans. 5. Thus, even if Example 37 were pertinent to the mental process analysis, Appellant's argument inadequately explains why the claim does not recite a commercial practice.

1. Adding the words "apply it" (or an equivalent) with the judicial exception, or merely include instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea — *see* MPEP § 2106.05(f);

2. Adding insignificant extra-solution activity to the judicial exception — *see* MPEP § 2106.05(g); and

3. Generally linking the use of the judicial exception to a particular technological environment or field of use — *see* MPEP § 2106.05(h).

Guidance, 84 Fed. Reg. at 54–55 ("Prong Two").

As shown above, most of the claim limitations in claim 1 recite abstract ideas. Additional to those abstract limitations, claim 1 recites that (1) scheduling and other operations are performed by "a first scheduler component" and "a second scheduler component," (2) content items are received "from a recommender engine," and (3) a "common storage device" connected to the first and second schedulers. Appeal Br. 25–26 (Claims Appendix).

We conclude these limitations are insufficient to integrate the recited abstract idea into a practice application. Each of these limitations merely recites the use of conventional computer technology to implement the otherwise abstract process on a computer. Each of these components are described in functional terms in the Specification, without meaningful detail regarding their structure or configuration. *See, e.g.*, Spec. 8, ll. 4–35 (describing hardware including storage as "set of hard disk drives"), *id.* at 10, ll. 6–24 (describing functions performed by scheduler without detail about how the functions are performed).

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As the Examiner explains:

The claim includes "hardware components" and three black-box modules described entirely functionally, a "first scheduler", a "second scheduler", a "storage device" and a "user interface". The "hardware components" would cover any and all devices, known and unknown, which can process data. The claims mention a "screen", but it is not within the scope of the claim. Even if it was, all of these elements are recited at an exceedingly high degree of generality and only perform generic computer functions of manipulating information and sharing information with persons and/or other devices.

Ans. 5.

It is well-established that the use of generic technology to implement an abstract idea is insufficient to integrate it into a practical application. *See* MPEP 2106.05(f) (explaining that it is not indicative of integration into a practical application where the claims "merely include instructions to implement an abstract idea on a computer, or merely uses a computer as a tool to perform an abstract idea").

Claim 15 also recites (4) "wherein the output of the recommender engine is connected to the first scheduler and wherein the first scheduler is connected to a common storage device," (5) "wherein the first scheduler is adapted to compute a recording schedule for scheduling the recording of content items offered by the recommender engine onto said storage device," and (6) "wherein the second scheduler is also connected to the storage device, so that auxiliary media that match user profile or targeting requirements can be pushed by the second scheduler to the storage device even if a channel is not subscribed." Appeal Br. 26 (Claims Appendix).

These limitations generally recite the output or result of performing the abstract process. As such, they constitute post-solution activity

insufficient to integrate the abstract idea into a practical application. Even taken together as an ordered combination, the elements merely recite data gathering, output, and storage operations which are incidental to the advertising in the claim. MPEP § 2106.05(h).

Appellant argues the claim integrates any abstract idea into a practical application. Reply Br. 5–7. We address these arguments in turn.

Appellant first argues Example 37 of the Guidance demonstrates that claim 1 integrates the judicial exception into a practical application. Reply Br. 6. Specifically, Appellant argues the additional claim elements integrate the abstract idea into a practical application "by providing for the insertion of an auxiliary media into a content item in the form of an audio or video data stream, in the particular manner claims, which provides an improvement over prior systems." Reply Br. 7. This argument is not persuasive. As we explained above, the insertion of auxiliary media into an audio or video stream is, at its core, an advertising practice and therefore part of the judicial exception. That the insertion of the auxiliary media is performed by a computer does not remove it from the abstract realm.

Appellant also argues the claims integrate the invention into a practical application because they improve the functioning of a computer. Appeal Br. 14. In support, Appellant cites the Specification, which states that "[i]t is an abject of the present invention to provide an improved placement of auxiliary media, by means of which signaling and processing load as well as storing amount associated with the placement process can be reduced." Appeal Br. 14 (quoting Spec. 3, ll.15–17).

We do not agree that this statement, or the others cited by Appellant, demonstrates a practical application. We agree with the Examiner that the

alleged reduction in signaling and storage requirements is not explained or verified in the Specification. In essence, Appellant's argument is that the mere act of deleting unused files provides an improvement to technology. We disagree that such a routine and conventional implementation practice provides a technological improvement to how a computer operates. Moreover, as explained by the Examiner, the Specification does not indicate what the prior processing and storage requirements entailed, nor does the Specification describe the details of how any alleged reduction would be achieved. Ans. 6.

In sum, Appellant's invention is focused on improving the commercial practice of selecting advertisements to display based on user profiling. Thus, purported improvement identified by Appellant is to targeted advertising, and is not an improvement to technology. The improvement provided by these process steps improves the abstract idea itself. It is well-established, however, that improvements in the abstract idea are insufficient to confer eligibility on an otherwise ineligible claim. *SAP Am. Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018). We conclude claim 1 is *directed to* a judicial exception.

The Inventive Concept – Step 2B

Having determined the claim is directed to a judicial exception, we proceed to evaluating whether the claim adds a specific limitation beyond the judicial exception that is not "well-understood, routine, conventional" in the field (*see* MPEP § 2106.05(d)) or 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.

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Our review of the Examiner's rejection under Step 2B is guided by the revised examination procedure published online by the USPTO on April 19, 2018, entitled "Changes in Examination Procedure Pertaining to Subject Matter Eligibility, Recent Subject Matter Eligibility Decision (*Berkheimer v. HP, Inc.*)" ("*Berkheimer Memorandum*"), which describes the fact finding requirement for Examiners applicable to rejections under § 101. Consistent with the *Berkheimer Memorandum*, we agree with the Examiner that the claim does not add specific limitations beyond what is well-understood, routine, and conventional.

Our analysis focuses largely on the same limitations addressed in Step 2A, Prong 2, above. We agree with the Examiner that the additional limitations do not supply an inventive concept under Step 2B because the additional machine learning algorithms used in the claim are described at a high level without detail in the Specification. This lack of detailed description evidences their well-understood, routine, and conventional nature.

Appellant contends that claim 1's following limitation amounts to significantly more than the abstract idea: "wherein said second scheduler is adapted to detect a trigger event and to insert an item of the auxiliary media to a target object of a content channel in response to said detected trigger event, said trigger event comprising at least one of a recording of a content item, a deletion of a content item, and an arrival of a new object of the auxiliary media for placement, and wherein said target object comprises a single show or event within the content channel." Appeal Br. 18. As noted above, we select claim 15 as representative, so this specific limitation is not

recited in claim 15. However, claim 15 recites a substantively similar limitation—which we consider in light of Appellant's contention.

We are not persuaded by Appellant's argument. As we discussed above, this limitation, which we identified as limitations (d) and (e) above, recites an abstract idea because detecting a trigger event (a commercial break) and inserting the auxiliary media (i.e., an advertisement) in response is typical of television advertising. The specific triggering events recited in the limitation merely refine the delivery of the advertising to a particular content and situation. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168 (Fed. Cir. 2018) ("As many cases make clear, even if a process of collecting and analyzing information is 'limited to particular content' or a particular 'source,' that limitation does not make the collection and analysis other than abstract."); *see also* <u>BSG Tech LLC v. Buyseasons, Inc.</u>, 899 F.3d 1281, 1290 (Fed. Cir. 2018) ("It has been clear since *Alice* that a claimed invention's use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention "significantly more" than that ineligible concept.").

Because the Examiner correctly concluded claim 15 is directed to a judicial exception, and because Appellant does not identify any error in the Examiner's determination under step 2B of the Guidance, we sustain the rejection of representative claim 15 under 35 U.S.C. § 101, as well as of the remaining independent claims.

Dependent Claims

Appellant proffers arguments for patent eligibility with respect to the dependent claims. Appeal Br. 20–21; Reply Br. 9–12. Appellant generally argues the Examiner has failed to properly support the rejection with

evidence required by the *Berkheimer Memorandum*. Appeal Br. 20. The Examiner determines that the dependent claims, but for the recitation of generic computer elements, recite further refinements to the abstract idea. Ans. 8 ("Abstract steps, however unconventional, cannot amount to 'significantly more' than abstraction because they are not <u>even more </u>than abstraction.").

Appellant's argument does not explain why the Examiner errs in determining the limitations recited in the dependent claims are themselves abstract. We agree with the Examiner that the dependent "claims simply recite the use of common, routine, data processing steps implemented on generic computers in order to carry out the abstract idea." Final Act. 6. We further agree with the Examiner that the Specification, by describing the recited system components in purely functional terms and at a high level, provides sufficient evidence of the well-understood, routine, and conventional nature of the computer elements in the claims. *See, e.g.*, Spec. 8, ll. 4–35 (describing hardware including storage as "set of hard disk drives"), *id.* at 10, ll. 6–24 (describing functions performed by scheduler without detail about how the functions are performed).

Appellant also provides a specific argument with respect to claim 2, which recites "the scheduler is adapted to initiate downloading of auxiliary media to be placed in relation to a specific content item and to discard further auxiliary media not to be placed in relation to the specific content item." Appeal Br. 24 (Claims Appendix). Appellant asserts the claim provides a technological improvement because it reduces storage requirements on the client device. Appeal Br. 20–21 (citing Spec. 4, ll. 17–23). For the same reasons we explained above, we do not agree that the

mere removal of unused files is a non-conventional, technological

improvement sufficient to confer patent eligibility.

CONCLUSION

We affirm the Examiner's rejection under 35 U.S.C. § 101.

DECISION SUMMARY

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1–16	101	Eligibility	1–16	

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with

this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R.

§ 1.136(a)(1)(iv).

AFFIRMED