



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/707,440	05/08/2015	Matthew G. Berry	60097-1195	8093
127614	7590	10/25/2018	EXAMINER	
Wong & Rees LLP 4340 Stevens Creek Blvd. Suite 106 San Jose, CA 95129			BRANDENBURG, WILLIAM A	
			ART UNIT	PAPER NUMBER
			3681	
			NOTIFICATION DATE	DELIVERY MODE
			10/25/2018	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docteting@wongrees.com
jyang@wongrees.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MATTHEW G. BERRY,
BENJAMIN J. WEINBERGER, SCHUYLER E. ECKSTROM,
and
ALBERT L. SEGARS¹

Appeal 2017-003239
Application 14/707,440
Technology Center 3600

Before DENISE M. POTHIER, LARRY J. HUME, and JOYCE CRAIG,
Administrative Patent Judges.

HUME, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1–30, which are all claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ According to Appellants, the real party in interest is TiVo, Inc. App. Br. 1.

STATEMENT OF THE CASE²

Related Case

An Appeal has been decided by the Board in related Application Serial No. 12/624,987, Appeal No. 2017-002911 in which we affirmed the rejection of all claims on appeal.

The Invention

Appellants' disclosed embodiments and claimed invention "relate[] generally to targeted advertisements and, more particularly, to methods and systems for delivering targeted advertisements in association with a video program based on metadata associated with the video program." Spec. ¶ 2.

Exemplary Claim

Claim 1, reproduced below, is representative of the subject matter on appeal (*emphasis* added to contested prior-art limitations):

1. A method, comprising:
 - receiving end user characteristics metadata from a video display device associated with an end user;
 - receiving a time-based metadata file providing time-coded information associated with a video program, the time-coded information being used to select advertisements for presentment at specific time-code locations of the video program;

[L1] *receiving in real-time, by an advertisement placement system from the video display device, a current time-*

² Our decision relies upon Appellants' Appeal Brief ("App. Br.," filed June 17, 2016); Reply Brief ("Reply Br.," filed Dec. 9, 2016); Examiner's Answer ("Ans.," mailed Nov. 2, 2016); Final Office Action ("Final Act.," mailed Dec. 4, 2015); and the original Specification ("Spec.," filed May 8, 2015).

code location of the video program as the video program is being viewed on the video display device by the end user;

[L2] selecting in real-time, an advertisement based on the end user characteristics metadata, the time-based metadata file, and the current time-code location as the video program is being viewed;

providing the advertisement, as the video program is being viewed, by the advertisement placement system over the Internet to the video display device, for real-time presentment of the advertisement on the video display device at the current time-code location of the video program, the real-time presentment of the advertisement comprising presentment of the advertisement simultaneous and in non-interference with the video program;

wherein the method is performed by one or more computing devices.

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

Raskin et al. ("Raskin") US 2008/0172293 A1 July 17, 2008

Rejections on Appeal

R1. Claims 1–30 stand rejected under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. Final Act. 4.

R2. Claims 1–30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Raskin. Final Act. 7.

CLAIM GROUPING

Based on Appellants' arguments (App. Br. 6–22) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of patent-ineligible

subject matter Rejection R1 of claims 1–30 on the basis of representative claim 1; and we also decide the appeal of anticipation Rejection R2 of claims 1–30 on the basis of representative claim 1.³

ISSUES AND ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellants. To the extent Appellants have not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

Based upon our review of the record, we find a preponderance of the evidence supports particular arguments advanced by Appellants with respect to anticipation Rejection R2 of claim 1 for the specific reasons discussed below.

However, we disagree with Appellants' arguments with respect to patent-ineligible Rejection R1 of claim 1 and, unless otherwise noted, we incorporate by reference herein and adopt as our own: (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellants' arguments. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

³ "Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(iv). In addition, when Appellants do not separately argue the patentability of dependent claims, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

1. § 101 Rejection R1 of Claims 1–30

Issue 1

Appellants argue (App. Br. 6–14; Reply Br. 1–12) the Examiner's rejection of claim 1 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter is in error. These contentions present us with the following issue:

Under our governing case law concerning 35 U.S.C. § 101, did the Examiner err in concluding claim 1 is directed to a judicial exception, i.e., an abstract idea, without significantly more?

Analysis

Alice Framework

Section 101 provides that anyone who "invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof" may obtain a patent. 35 U.S.C. § 101. The Supreme Court has repeatedly emphasized that patent protection should not extend to claims that monopolize "the basic tools of scientific and technological work." *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012); *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2354 (2014). Accordingly, laws of nature, natural phenomena, and abstract ideas are not patent-eligible subject matter. *Alice*, 134 S.Ct. at 2354.

The Supreme Court's two-part *Alice* framework guides us in distinguishing between patent claims that impermissibly claim the "building blocks of human ingenuity" and those that "integrate the building blocks into something more." *Id.* (internal quotation marks, citation, and bracketing

omitted). First, we "determine whether the claims at issue are directed to [a] patent-ineligible concept[]." *Id.* at 2355. If so, we "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." *Id.* at 2357 (quoting *Mayo*, 566 U.S. at 72, 79). While the two steps of the *Alice* framework are related, the "Supreme Court's formulation makes clear that the first-stage filter is a meaningful one, sometimes ending the § 101 inquiry." *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). We note the Supreme Court "has not established a definitive rule to determine what constitutes an 'abstract idea'" for the purposes of step one. *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016) (citing *Alice*, 134 S.Ct at 2357).

In *Enfish*, our reviewing court held claims directed to a self-referential logical model for a computer database patent-eligible under step one of *Alice*. *Enfish*, 822 F.3d at 1330. The disclosed technique enabled faster searching and more effective storage of data than previous methods. *Id.* at 1333. The court found the claims directed to "a specific improvement to the way computers operate, embodied in the self-referential table" (*id.* at 1336), and explained that the claims are "not simply directed to *any* form of storing tabular data, but instead are specifically directed to a *self-referential table* for a computer database" that functions differently than conventional databases. *Id.* at 1337.

In *McRO*, the claims were not held to be abstract because they recited a "specific . . . improvement in computer animation" using "unconventional rules that relate[d] sub-sequences of phonemes, timings, and morph weight sets." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1302–

03, 1307–08, 1314–15 (Fed. Cir. 2016). In *McRO*, "the incorporation of the claimed rules, not the use of the computer," improved an existing technological process. *Id.* at 1314.

Our reviewing court has held claims ineligible as directed to an abstract idea when they merely collect electronic information, display information, or embody mental processes that could be performed by humans. *Elec. Power Grp.*, 830 F.3d at 1353–54 (collecting cases). At the same time, "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo*, 566 U.S. at 71. Abstract ideas may include, but are not limited to, fundamental economic practices, methods of organizing human activities, an idea of itself, and mathematical formulas or relationships. *Alice*, 134 S.Ct. at 2355–57. Under this guidance, we must therefore ensure at step one that we articulate what the claims are directed to with enough specificity to ensure the step one inquiry is meaningful. *Id.* at 2354 ("[W]e tread carefully in construing this exclusionary principle lest it swallow all of patent law.").

Under the "abstract idea" step we must evaluate "the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a whole' is directed to excluded subject matter." *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016) (internal citation omitted). If the claims are not directed to a patent-ineligible concept, the inquiry ends. See *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1262 (Fed. Cir. 2017). If the concept is directed to a patent-ineligible concept, we proceed to the "inventive concept" step. For that second step we must "look with more specificity at what the claim elements add, in order to determine 'whether they identify an "inventive concept" in the application

of the ineligible subject matter' to which the claim is directed." *Affinity Labs*, 838 F.3d at 1258 (quoting *Elec. Power Grp.*, 830 F.3d at 1353).

Alice Step 1 — Abstract Idea

The Examiner concludes:

Claim(s) 1-30 are directed to a system performing the steps of selecting advertisements for insertion into video programming based on metadata, which is considered an abstract idea using a fundamental economic practice. Such as in Smart Gene, which compares new and stored information and using rules to identify options, the current invention compares current time-code information with user characteristics metadata and time-based metadata file to select an appropriate advertisement to present an end user. Therefore an abstract idea is present in the claims.

Final Act. 4–5. The Examiner further determined:

The claimed invention is directed to a judicial exception (i.e., a law of nature, a natural phenomenon, or an abstract idea) without significantly more. Claim(s) **1–30** are directed to an inventive concept of selecting advertisements for insertion into video programming based on metadata, as explained in detail below, which is considered an abstract idea using a fundamental economic practice.

Ans. 9.

Appellants generally contend the Examiner's conclusion that the claims are directed to a "fundamental economic practice" lacks legal support. Specifically, "*SmartGene* is designated by the Federal Circuit Court as 'non-precedential,' is in non-analogous art, and in particular contains no holdings for 'fundamental economic practice,' as alleged by the Final Office Action. Indeed, the entire decision is devoid of any mention of the word 'fundamental', much less 'fundamental economic practice'

Therefore, *SmartGene* does not provide legal basis for the Final Office Action's **'fundamental economic practice' assertion.**" App. Br. 7; *see also* App. Br. 9.

Appellants further contend the Examiner failed to comply with the requirements of the Manual for Patent Examination Procedure (MPEP §§ 707.07 (d) and 2103) because "there is no rule, law, or court decision giving the Examiner with [sic] authority to reject patent claims under 101 as a matter of law with no evidence required." App. Br. 7–8. "[T]he word 'burden' refers to that of introducing evidence. In order to prove a *prima facie* case, evidence would clearly have been required." App. Br. 8.

Appellants' argument concerning the absence of evidence supporting the § 101 rejection also does not persuade us of Examiner error. "Patent eligibility under § 101 presents an issue of law." *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1340 (Fed. Cir. 2013). There is no requirement that an examiner cite evidentiary support to conclude that a claim is directed to a patent-ineligible concept, such as an abstract idea.

The courts consider the determination of whether a claim is eligible (which involves identifying whether an exception such as an abstract idea is being claimed) to be a question of law. *Rapid Litig. Mgmt. v. CellzDirect*, 827 F.3d 1042, 1047, 119 USPQ2d 1370, 1372 (Fed. Cir. 2016); *OIP Techs. v. Amazon.com*, 788 F.3d 1359, 1362, 115 USPQ2d 1090, 1092 (Fed. Cir. 2015); *DDR Holdings v. Hotels.com*, 773 F.3d 1245, 1255, 113 USPQ2d 1097, 1104 (Fed. Cir. 2014); *In re Roslin Institute (Edinburgh)*, 750 F.3d 1333, 1335, 110 USPQ2d 1668, 1670 (Fed. Cir. 2014); *In re Bilski*, 545 F.3d 943, 951, 88 USPQ2d 1385, 1388 (Fed. Cir. 2008) (*en banc*), *aff'd by Bilski v. Kappos*, 561 U.S. 593, 95 USPQ2d 1001 (2010). Thus, the

court does not require "evidence" that a claimed concept is a judicial exception, and generally decides the legal conclusion of eligibility without resolving any factual issues. *FairWarning IP, LLC v. Iatric Sys.*, 839 F.3d 1089, 1097, 120 USPQ2d 1293, 1298 (Fed. Cir. 2016) (citing *Genetic Techs. Ltd. v. Merial LLC*, 818 F.3d 1369, 1373, 118 USPQ2d 1541, 1544 (Fed. Cir. 2016)); *OIP Techs.*, 788 F.3d at 1362, 115 USPQ2d at 1092; *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1349, 113 USPQ2d 1354, 1359 (Fed. Cir. 2014).

MPEP § 2106.07(a) (III).

In response, the Examiner states "there can be significant overlap between abstract idea categories, and one abstract idea that could be deemed as a fundamental economic practice may also be categorized as an idea of itself, and/or organizing human activity, etc. As such, while the inventive concept was labeled as a fundamental economic practice, the Examiner identified the inventive concept overlapping into an idea of itself, which is why *SmartGene* was cited. Ans. 4. The Examiner further determined that there is no requirement of

only using precedential, binding cases in the examination of the instant claims. Even assuming *arguendo* that was the requirement (which the Examiner does not concede), the particular decision of *SmartGene* applied the two-step Mayo analysis and other analyses established in the Alice decision, which makes the *SmartGene* decision clearly based on the precedential and superseding Alice decision and thereby indeed has a foundation and holding in the law.

Ans. 4 (emphasis omitted).

Under the "abstract idea" step we must evaluate "the 'focus of the claimed advance over the prior art' to determine if the claim's 'character as a

whole' is directed to excluded subject matter." *Affinity Labs*, 838 F.3d at 1257 (citation omitted).

Turning to the claimed invention, claim 1 (Claims App'x) recites a method "performed by one or more computing devices" that requires the steps of:

- (a) "receiving metadata . . . ;"
- (b) "receiving a time-based metadata file . . . ;"
- (c) "receiving in real-time . . . a current time-code location of the video program . . . ;"
- (d) "selecting in real-time, an advertisement based on the end user characteristics metadata, the time-based metadata file, and the current time-code location . . . "; and
- (e) "providing the advertisement . . . over the Internet to the video display device, for real-time presentment of the advertisement on the video display device at the current time-code location of the video program."

Under step one, we agree with the Examiner that the inventions claimed in each of independent claims 1, 8, and 21 are directed to an abstract idea. *However*, we disagree that a conclusion of a fundamental *economic* practice most correctly characterizes the subject matter of the claims on appeal. Instead, as a matter of claim construction, and while recognizing the potential overlap between the various characterizations of abstract subject matter in examination guidelines found in the MPEP⁴ based upon the body of our controlling case law precedent, we conclude the claims on appeal may be more appropriately characterized as being directed to a fundamental practice, albeit not an *economic* practice, or may alternatively be

⁴ *See, e.g.*, Manual of Patent Examination Procedure (MPEP) §§ 2103–2106.

characterized as being directed to a method of organizing human activity, i.e., tailoring content based on information about the user. *See* Ans. 4.

In *Intellectual Ventures I LLC v. Capital One Bank (USA)*, analogous in key respects to the claims before us on appeal (both of which tailor content based on information about the user), our reviewing court determined such claims were directed to an abstract idea and, thus, patent-ineligible.

At step one of the *Alice* framework, it is often useful to determine the breadth of the claims in order to determine whether the claims extend to cover a "fundamental . . . practice long prevalent in our system" *Alice*, 134 S.Ct. at 2356. As noted, the claim relates to customizing information based on (1) information known about the user and (2) navigation data. . . . [T]ailoring is "a fundamental . . . practice long prevalent in our system" *Id.* There is no dispute that newspaper inserts had often been tailored based on information known about the customer—for example, a newspaper might advertise based on the customer's location. Providing this minimal tailoring—e.g., providing different newspaper inserts based upon the location of the individual—is an abstract idea.

Intellectual Ventures I LLC v. Capital One Bank (USA), 792 F.3d 1363, 1369 (Fed. Cir. 2015). Regardless of how the claims are characterized under Step 1, we conclude they are directed to patent-ineligible subject matter.

As the Specification discloses, "[t]he present invention relates generally to targeted advertisements and, more particularly, to methods and systems for delivering targeted advertisements in association with a video program based on metadata associated with the video program." Spec. ¶ 2.⁵

⁵ *See also* Spec. 27 ("Abstract"):

A system for using metadata from a video signal to associate advertisements therewith, comprising (i) a segmentation system

We find this type of activity, i.e., tailoring content based on information about the user, for example, includes longstanding conduct that existed well before the advent of computers and the Internet and, outside the recitation of "one or more computing devices," could be carried out by a human with pen and paper. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1375 (Fed. Cir. 2011) ("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*.").⁶

Our reviewing court has previously held other patent claims ineligible for reciting similar abstract concepts. For example, while the Supreme Court has enhanced the § 101 analysis since *CyberSource* in cases like *Mayo* and *Alice*, the Federal Circuit continues to "treat[] analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, as essentially mental processes within the abstract-idea

to divide the video signal into video clips, (ii) a digitizing system for digitizing the video clips, (iii) a feature extraction system for extracting audio and video features from each video clip, associating each audio feature with respective video clips, associating each video feature with respective video clips, and saving the audio and video features into an associated metadata file, (iv) a web interface to the feature extraction system for receiving the video clips, and (v) a database, wherein video signals and associated metadata files are stored and indexed, wherein the associated metadata file is provided when a video player requests the corresponding video signal, enabling selection of a relevant advertisement for presentment in conjunction with respective video clips based on the associated audio and video features of the respective video clip.

⁶ *CyberSource* further guides that "a method that can be performed by human thought alone is merely an abstract idea and is not patent-eligible under § 101." *CyberSource*, 654 F.3d at 1373.

category." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146–47 (Fed. Cir. 2016) (alteration in original) (quoting *Elec. Power Grp.*, 830 F.3d at 1354).

In addition, our reviewing court has concluded that abstract ideas include the concepts of collecting data, recognizing certain data within the collected data set, and storing the data in memory. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1347 (Fed. Cir. 2014). Additionally, the analysis of collected information (e.g., recognizing certain data within the dataset) are also abstract ideas. *Elec. Power Grp.*, 830 F.3d at 1353–54 (collecting information and "analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, [are] essentially mental processes within the abstract-idea category"). Similarly, "collecting, displaying, and manipulating data" is an abstract idea. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017). Also, collecting and comparing known information has been determined to be an abstract idea. *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1067 (Fed. Cir. 2011) ("Claim 1 of the '283 patent states the idea of collecting and comparing known information"). Further, a process that employs mathematical algorithms to manipulate existing information to generate additional information is abstract. *Digitech Image Techs., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014). More recently, our reviewing court has also concluded that acts of parsing, comparing, storing, and editing data are abstract ideas. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018).

Therefore, in agreement with the Examiner, we conclude claim 1 involves nothing more than identifying, collecting, storing, comparing, and generating data, without any particular inventive technology, that takes the form of tailoring content based on information about the user — an abstract idea. *See Elec. Power Grp.*, 830 F.3d at 1354.⁷

Accordingly, on this record, and under step one of *Alice*, we agree with the Examiner's conclusion the claims are directed to an abstract idea.

Alice Step 2 —Inventive Concept

If the claims are directed to a patent-ineligible concept, as we conclude above, we proceed to the "inventive concept" step. For that step we must "look with more specificity at what the claim elements add, in order to determine 'whether they identify an "inventive concept" in the application of the ineligible subject matter' to which the claim is directed." *Affinity Labs*, 838 F.3d at 1258 (quoting *Elec. Power Grp.*, 830 F.3d at 1353).

In applying step two of the *Alice* analysis, our reviewing court guides we must "determine whether the claims do significantly more than simply describe [the] abstract method" and thus transform the abstract idea into patentable subject matter. *Ulramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014). We look to see whether there are any "additional features" in the claims that constitute an "inventive concept," thereby rendering the claims eligible for patenting even if they are directed to an abstract idea. *Alice*, 134 S.Ct. at 2357. Those "additional features" must be

⁷ Merely automating previously manual processing by using computers does not qualify as an eligibility-rejection-defeating improvement. *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1055 (Fed. Cir. 2017).

more than "well-understood, routine, conventional activity." *Mayo*, 566 U.S. at 79.

Appellants argue additional features recited in claim 1 add significantly more to the abstract idea because they "cannot be performed as mental steps as each step in these claim features is incapable [of] being performed in the head(s) of a person or people, or by a computing device acting like the head(s) of a person or people." App. Br. 13.

These claim features of Claim 1 also clearly involves "effecting a transformation or reduction of a particular article to a different state or thing" by the fact that the method results in "providing the advertisement, as the video program is being viewed, by the advertisement placement system over the Internet to the video display device, for real-time presentment of the advertisement on the video display device at the current time-code location of the video program, the real-time presentment of the advertisement comprising presentment of the advertisement simultaneous and in non-interference with the video program."

For these reasons, the Final Office Action fails to properly perform part 2 of the subject matter eligibility test in rejecting Claims 1–30 under section 101.

Id.

With respect to Appellants' apparent "machine-or-transformation" argument, we disagree. *See In re Bilski*, 545 F.3d 943, 962 (Fed. Cir. 2008) (*en banc*), *aff'd on other grounds*, 561 U.S. 593 (2010) ("[T]he involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity."); *see also Bilski* at 545 F.3d at 963 (characterizing data gathering steps as insignificant extra-solution activity); *Parker v. Flook*, 437 U.S. 584, 590 (1978) (insignificant post-solution activity found to be insufficient to impart patentability). *Apple, Inc. v.*

Ameranth, Inc., 842 F.3d 1229, 1242 (2016) (same). And, as noted previously, merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. *Elec. Power*, 830 F.3d at 1354.

Thus, evaluating representative claim 1 under step 2 of the *Alice* analysis, we agree with the Examiner that it lacks an inventive concept that transforms the abstract idea of tailoring content based on information about the user by receiving and analyzing data into a patent-eligible application of that abstract idea by using "one or more computing devices." *See* Ans. 17–18.⁸

The Examiner further determines:

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims do not amount to significantly more than the abstract idea. The claim recites the additional limitations of "a video display device" and "one or more

⁸ For example, the Examiner concludes:

The claim(s) does/do not include additional elements that are sufficient to amount to significantly more than the judicial exception because the claims do no more than use a generic processor and generic memory to perform the steps of the abstract idea of selecting advertisements for insertion into video programming based on metadata. The additional elements of the claim do not add a meaningful limitation to the abstract idea because they would be routine in any computer implementation. The claims recite the use of a generically recited data processor for implementing the allocation and communication links which support information transfer, which is considered generic/routing computer technology.

Final Act. 5.

computing devices" (and similarly "one or more media", "one or more processors" and "a video display device of claim 11 and similarly "an apparatus" with a plurality of "subsystems" and "a video display device" in claim 21). The additional elements are recited at a high level of generality and are recited as performing generic computer functions routinely used in computer applications. As such, the additional elements of the claim do not add a meaningful limitation to the abstract idea because they would be generic computer functions in any computer implementation. Thus, taken alone, the additional elements do not amount to significantly more than the above-identified judicial exception (the abstract idea). Looking at the limitations as an ordered combination adds nothing that is not already present when looking at the elements taken individually. There is no indication that the combination of elements improves the functioning of the computer or improves any other technology. Their collective functions merely provide conventional computer implementation.

The additional elements are each functional generic computer components that perform the generic functions of processing, communicating and displaying, all common to electronics and computer systems. Generic computer implementation does not provide significantly more than that abstract idea. The multiple receiving steps and providing is merely extra-solution activity and does not meaningfully limit the claim.

Ans. 10–11.

We note the patent eligibility inquiry may contain underlying issues of fact. *Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). In particular, "[t]he question of whether a claim element or combination of elements is well-understood, routine and conventional to a skilled artisan in the relevant field is a question of fact." *Berkheimer*, 881 F.3d at 1368.

As evidence of the conventional nature of the claimed network components and processes, we note the disclosure of Appellant's Specification. For example:

[0031] Turning now to FIG.1A, a first preferred embodiment of an advertisement placement system 100A based primarily upon time-coded metadata associated with an underlying video program displayed therewith is illustrated. In this first embodiment, it is contemplated that the video program will be viewed in a Video-on-Demand (VOD) or video streaming context from a video provider 110 and that the underlying metadata file associated with the video program, once created, is maintained by the video provider 110. This system 100A includes one or more video storage databases 115 of the video provider 110 and a video server 113 that provides video programs in VOD or video streaming format over a computer network, such as the Internet for example, to a viewer 150 (or end user).

[0032] Before a specific video is provided to the viewer 150, a video file 120 associated with the video program 121 is preferably provided to a metadata generator 130. The video file 120 has or includes a unique file name or other video identifier (designated herein by the variable VID). As will be described in greater detail hereinafter, the metadata generator 130 receives the video file 120 and, using a metadata processor 133, creates or generates a time-coded metadata file 125 associated with the corresponding video file 120 and underlying video program 121. As shown in FIG. 1A, this metadata file 125 is stored in a database 135 of the metadata generator 130 but also provided back to the video provider 110 and associated with the corresponding video file 120 and underlying video program 121 in video storage databases 115.

Spec. ¶¶ 31–32. Thus, Appellants' Specification does not ascribe specialized, non-conventional functions or performance attributes to the generically-recited hardware components.

We agree with the Examiner that the claim limitations may be broadly but reasonably construed as reciting and relying upon conventional computer components and techniques, particularly in light of Appellants' Specification, as quoted above.⁹

With respect to the *Step 2* analysis, we agree with the Examiner that no additional element in claim 1 adds “significantly more” because, as in *Alice*, the recitation of a method for tailoring content based upon information about the user using "one or more computing devices" (claim 1) is simply not enough to transform the patent-ineligible abstract idea here into a patent-eligible invention. *See Alice*, 134 S.Ct. at 2357 (“[C]laims, which merely require generic computer implementation, fail to transform [an] abstract idea into a patent-eligible invention.”).¹⁰

⁹ During prosecution, claims must be given their broadest reasonable interpretation when reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Under this standard, we interpret claim terms using "the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997).

¹⁰ In the Reply Brief, Appellant alleges the Examiner failed to properly carry out the *Alice* analysis. Reply Br. 7–8.

The Examiner apparently attempts to make up the lack of the two-part analysis in the Final Office Action, especially Part II of the analysis, by belatedly presenting a two-part analysis with a Part II that mentions two terms extracted from the claim language of Claim 1 such as "a display device" and "one or more computing device."

Accordingly, based upon the findings above, on this record, we are not persuaded of error in the Examiner's conclusion that the appealed claims are directed to patent-ineligible subject matter. Therefore, we sustain the Examiner's § 101 rejection of independent claim 1, and grouped claims 2–30, which are not argued separately, and which fall therewith. *See* Claim Grouping, *supra*.

Therefore, based upon the findings above, on this record, we are not persuaded of error in the Examiner's factual findings in support of the legal conclusion that independent claim 1 and grouped claims 2–30 are directed to patent-ineligible subject matter. *See* Claim Grouping, *supra*.

2. § 103 Rejection R2 of Claims 1–30

Issue 2

Appellants argue (App. Br. 14–22; Reply Br. 12–22) the Examiner's rejection of claim 1 under 35 U.S.C. § 102(e) as being anticipated by Raskin is in error. These contentions present us with the following issue:

Did the Examiner err in finding the cited prior art discloses a method that includes, *inter alia*, the steps of L1, "receiving in real-time, by an

Respectfully, "a high level of generality" for these terms happens because the Examiner only extracts these terms from the claim language of Claim 1 without the underlying context for these terms as recited in Claim 1. This belated two-part analysis as presented in the Examiner's Answer still overlooks a large number of claim limitations in the Claim 1, and all the claim limitations of each of the dependent claims.

Reply Br. 7–8. Even assuming, without agreeing, the Examiner did not properly carry out the requisite *Alice* analysis under *Step 2*, this Decision clarifies the proper claim construction along with a complete two-step *Alice* analysis.

advertisement placement system from the video display device, a current time-code location of the video program as the video program is being viewed on the video display device by the end user;" and L2, "selecting in real-time, an advertisement based on the end user characteristics metadata, the time-based metadata file, and the current time-code location as the video program is being viewed," as recited in claim 1?

Analysis

Appellants contend Raskin fails to disclose limitation L1, particularly receiving the claimed "current time-code location of the video program as the video program is being viewed on the video display device by the end user." App. Br. 14–15.

Anticipation of a claim under 35 U.S.C. § 102 occurs when each claimed element and the claimed arrangement or combination of those elements is disclosed, inherently or expressly, by a single prior art reference. *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010). A reference inherently discloses an element of a claim "if that missing characteristic is *necessarily* present, or inherent, in the single anticipating reference." *Schering Corp. v. Geneva Pharms.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003) (citation omitted) (emphasis added). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Therasense*, 593 F.3d at 1332 (citing *Cont'l Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991)).

The Examiner cites Raskin paragraphs 35 and 53 through 67 as disclosing limitation L1, including use of the recited "current time-code location." Final Act. 7–8.

However, we have reviewed the Examiner's extensive citations to Raskin, and find no explicit or inherent disclosure of receipt of a "current time-code" or receipt of data that can be reasonably construed as current time-code information.

Thus, we disagree with the Examiner's finding that Raskin discloses Limitation L1 as recited in claim 1. Ans. 14. Although Appellants also agree Limitation L2 is not disclosed by Raskin, we find the analysis with respect to Limitation L1 to be dispositive such that we need not reach additional issues argued by Appellants.

Therefore, based upon the findings above, on this record, we are persuaded of error in the Examiner's reliance on the cited prior art to disclose the disputed limitations of claim 1, and we find error in the Examiner's resulting finding of anticipation. Therefore, we reverse the Examiner's anticipation rejection of (1) independent claim 1, (2) independent claims 11 and 21, which recite commensurate limitations, and (3) dependent claims 2–10, 12–20, and 22–30. *See Claim Grouping, supra.*

REPLY BRIEF

To the extent Appellants *may* advance new arguments in the Reply Brief (Reply Br. 1–22) not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the

Examiner's Answer will not be considered except for good cause (*see* 37 C.F.R. § 41.41(b)(2)), which Appellants have not shown.

CONCLUSIONS

(1) The Examiner did not err with respect to patent-ineligible subject matter Rejection R1 of claims 1–30 under 35 U.S.C. § 101, and we sustain the rejection.

(2) The Examiner erred with respect to anticipation Rejection R2 of claims 1–30 under 35 U.S.C. § 102(e) over the cited prior art of record, and we do not sustain the rejection.

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, we affirm the Examiner's decision. *See* 37 C.F.R. § 41.50(a)(1).

DECISION

We affirm the Examiner's decision rejecting claims 1–30.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED