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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RYAN JACOB SHAPIRO

Appeal 2018-006256
Application 13/783,863
Technology Center 3600

Before JAMES R. HUGHES, ERIC S. FRAHM, and MATTHEW J. McNEILL, *Administrative Patent Judges.*

HUGHES, *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 rejecting claims 1–3, 7–9, 12–15, and 17–26. Claims 4–6, 10, 11, and 16 have been canceled. *See* Final Act. 1–2.[2] We have jurisdiction under 35 U.S.C. § 6(b).

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Securus Technologies, Inc. *See* Appeal Br. 3.

[2] We refer to Appellant's Specification ("Spec."), filed Mar. 4, 2013 (claiming benefit of US 12/814,201 (filed June 11, 2010), US 11/041,431 (filed Jan. 21, 2005), and US 60/538,933 (filed Jan. 22, 2004); Appeal Brief ("Appeal Br."), filed Dec. 15, 2007; and Reply Brief ("Reply Br."), filed

We AFFIRM.

CLAIMED SUBJECT MATTER

The invention relates generally "to the field of electronic communications," and specifically, "to the delivery and access of electronic data by individuals in a restrained environment, such as correctional facility." Spec. 1:11–13;[3] *see* Spec. 2:6–4:24; Abstract. Claims 1, 12, and 20 are independent. Claim 1, reproduced below, is illustrative of the claimed subject matter:

> 1. A system for managing an exchange of digital content between inmates in a correctional facility and non-inmates, comprising:
>
> at least one computer server having a processor and connected to software stored on non-transitory media, the server software configured to:
>
> receive digital content for distribution to an intended inmate of the correctional facility,
>
> authenticate a requesting inmate requesting distribution of the digital content to an inmate device associated with a unique identifier, wherein the requesting inmate is authenticated as the intended inmate;
>
> determine whether the inmate device is registered to the authenticated requesting inmate based on the unique identifier of the inmate device; and
>
> distribute, to the inmate device, the digital content and license information authorizing use of the digital

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May 29, 2018. We also refer to the Examiner's Final Office Action ("Final Act."), mailed June 23, 2017; and Answer ("Ans.") mailed Mar. 28, 2018.

[3] Appellant references the Specification by paragraph number. *See, e.g.*, Appeal Br. 3–5. It appears Appellant cites to the published Application (US 2013/0179949 A1, published July 11, 2013). We reference the present Application as originally filed (on Mar. 4, 2013), which does not include paragraph numbers.

content by the authenticated requesting inmate using the registered inmate device; and

the inmate device registered to the requesting inmate, the registration based on the unique identifier associated with the inmate device, and the inmate device having a processor, a digital display, and controls, the inmate device including software stored on non-transitory media, the software configured to;

connect to the at least one computer server and provide information used to authenticate the requesting inmate and further provide the unique identifier;

receive the digital content distributed by the at least one server and determined to be intended for the requesting inmate, wherein the digital content includes the license information authorizing use of the content by the requesting inmate on the inmate device; and

store the license information in a secure key locker located on the inmate device, wherein the license information is bound to the requesting inmate device based on the unique identifier associated with the inmate device.

Appeal Br. 24–25 (Claims App.).

REFERENCES

The prior art relied upon by the Examiner as evidence is:

Name	Reference	Date
Mow	US 6,668,045 B1	Dec. 23, 2003
Sidler et al. ("Sidler")	US 7,860,222 B1	Dec. 28, 2010 (filed June 30, 2006)
Ringewald	US 8,364,595 B1	Jan. 29, 2013 (filed May 5, 2009)
Zhang et al. ("Zhang")	US 2007/0282751 A1	Dec. 6, 2007
Rae et al. ("Rae")	US 2008/0057976 A1	Mar. 6, 2008

REJECTIONS[4, 5]

1. The Examiner rejects claims 1–3, 7–9, 12–15, and 17–26 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter. *See* Final Act. 5–25.

2. The Examiner rejects claims 1–3, 7–9, 12, 17–20, 24, and 25 under 35 U.S.C. § 103(a) as being unpatentable over Mow, Rae, and Zhang. *See* Final Act. 25–68.

3. The Examiner rejects claims 13–15 and 21–23 under 35 U.S.C. § 103(a) as being unpatentable over Mow, Rae, Zhang, and Sidler. *See* Final Act. 68–76.

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[4] *See* Footnote 2 (*supra*). The Examiner finds that US 11/041,431 (filed Jan. 21, 2005), and US 60/538,933 (filed Jan. 22, 2004), to which Appellant claims benefit with respect to Appellant's effective filing date, fail to provide adequate support for certain claim features. *See* Final Act. 2–5. The Examiner further finds that US 12/814,201 (filed June 11, 2010), also fails to provide adequate support for certain claim features. *See* Final Act. 2–5. Accordingly, the Examiner concludes that the earliest effective filing date of claims 1–3, 8, 9, 12–14, and 18–26 is June 11, 2010, and that the earliest effective filing date of claims 7, 15, and 17 is March 4, 2013. *See* Final Act. 5. Appellant does not address the Examiner's findings and conclusions with respect to the effective filing date of the claims, nor does Appellant address the effective date of the cited prior art. Instead, Appellant argues the merits of the prior art rejections. *See* Appeal Br. 17–22. In view of the Examiner's undisputed findings and conclusions, we do not review the Examiner's findings and conclusions regarding the effective filing date of the claims.

[5] The Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29, 125 Stat. 284 (2011), amended 35 U.S.C. § 103, e.g., to rename 35 U.S.C. § 103's subsections. The Examiner has determined the effective filing date of the present application is, at the latest, March 4, 2013. *See* Footnote 3 (*supra*). Because the present application has an effective filing date prior to the AIA's effective date for applications (March 16, 2013), this decision refers to the pre-AIA versions of 35 U.S.C. § 103, i.e., § 103(a).

4. The Examiner rejects claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Mow, Rae, Zhang, and Ringewald. *See* Final Act. 77–79.

OPINION

Subject Matter Eligibility—35 U.S.C. § 101

Under 35 U.S.C. § 101, a patent may be obtained for "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." The Supreme Court has "long held that this provision contains an important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 77–80 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 573 U.S. at 217. The framework requires us first to consider "whether the claims at issue are directed to one of those patent-ineligible concepts." *Alice*, 573 U.S. at 217. If so, we then examine "the elements of [the] 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." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). That is, we examine the claim for an "inventive concept," "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.'" *Alice*, 573 U.S. at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

The Patent Office recently published revised guidance concerning this framework and the application of § 101. USPTO's 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) (hereinafter "2019 Revised Guidance"). Under that guidance, we first look to whether the claim recites:

> (1) any judicial exceptions, including certain groupings of abstract ideas (i.e., mathematical concepts, mental processes, or certain methods of organizing human activity such as a fundamental economic practice or managing personal behavior or relationships or interactions between people) (hereinafter "Step 2A, prong 1"); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP §§ 2106.05(a)–(c), (e)–(h)) (hereinafter "Step 2A, prong 2").[6]

See 2019 Revised Guidance, 84 Fed. Reg. at 51–52, 55.

A claim that integrates a judicial exception into a practical application applies, relies on, or uses the judicial exception in a manner that imposes a meaningful limit on the judicial exception, such that the claim is more than a drafting effort designed to monopolize the judicial exception. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54. When the judicial exception is so integrated, then the claim is not directed to a judicial exception and is patent eligible under 35 U.S.C. § 101. *See* 2019 Revised Guidance, 84 Fed. Reg. at 54.

[6] All references to the MPEP are to the Ninth Edition, Revision 08-2017 (rev. Jan. 2018).

Only if a claim: (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then evaluate whether the claim provides an inventive concept. *See* 2019 Revised Guidance 84 Fed. Reg. at 56; *Alice*, 573 U.S. at 217–18.

For example, 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.[7]

See 2019 Revised Guidance, 84 Fed. Reg. at 56. With these principles in mind, we turn to the merits of the § 101 rejection. The Examiner rejects Appellant's claims 1–3, 7–9, 12–15, and 17–26 as being directed to patent-ineligible subject matter. *See* Final Act. 5–25; Ans. 3–8. Appellant does not separately argue the claims with specificity and, instead, argues claims 1–3, 7–9, 12–15, and 17–26 together for this rejection. *See* Appeal Br. 8–17. Accordingly, we address the Examiner's rejection of independent claim 1 and the claims not separately argued by Appellant as a group based on claim 1, as permitted by 37 C.F.R. § 41.37(c)(1)(iv).

Statutory Subject Matter

Claim 1 recites a "system" (*infra*). Appellant's "system" uses at least one computer server including a processor and an inmate device including a processor to implement a number of functions. *See* claim 1 (Appeal Br. 24–

[7] Items (3) and (4) are collectively referred to as "Step 2B" hereinafter and in the 2019 Revised Guidance.

25 (Claims App.)). Accordingly, we analyze Appellant's system as a process, which is a statutory category of invention (subject matter) (USPTO's Step 1).

Abstract Idea

The Examiner rejects Appellant's claim 1 as being directed to patent-ineligible subject matter. *See* Final Act. 5–25; Ans. 3–8. Specifically, the Examiner concludes "the claims are directed towards the abstract idea of data management in a correctional facility, . . . specifically, monitoring the exchange of digital content in order to determine whether a recipient is allowed to receive the digital content.'" Final Act. 6; *see* Final Act. 6–18; Ans. 4–8. More specifically, the Examiner rejects claim 1 because the claim merely recites the "recognized abstract ideas of comparing information and using rules to identifying options, . . . in order to determine . . . whether a recipient is allowed to view the content" (Final Act. 6), which amount to mental processes similar to *Electric Power Group* (*Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350 (Fed. Cir. 2016)) and *SmartGene* (*SmartGene, Inc. v. Advanced Biological Labs., SA*, 555 F. App'x 950 (Fed. Cir. 2014)). *See* Final Act. 6, 11–12, 19–20; Ans. 7–8. The Examiner also concludes "that the concept of distributing licensing information and storing the information in a secure location" in a "device's storage" (Final Act. 7) is not a technological improvement, but instead "rel[ies] on the use of a generic computing device to perform the abstract idea of data management" (Final Act. 18) similar to *TLI Communications* (*In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607 (Fed. Cir. 2016)). *See* Final Act 7–19; Ans. 7–8.

Appellant contends the Examiner erred in rejecting the claims as being directed to patent-ineligible subject matter. *See* Appeal Br. 8–17; Reply Br. 2–11. Specifically, Appellant contends, with respect to the first step of the *Alice* analysis, that the Examiner improperly interpreted the claims (in particular claim 1), and that claim 1 "is directed at a system of two interoperating hardware devices[,] a server and an inmate device[,] . . . . [that] addresses particular security challenges posed by distributing digital content to personal devices assigned to inmates of a controlled-environment facility." Reply Br. 2; *see* Appeal Br. 8–12; Reply Br. 2–6. Appellant further contends the Examiner's interpretation does not account for "binding of license information to an inmate device" (Appeal Br. 9–10), "distribution of digital content to a specific inmate device that has been registered to an inmate" (Appeal Br. 10), and "storage of license information in a secure key locker" (Appeal Br. 10). Appellant also contends claim 1 is (and the other pending claims are) "directed to an improvement to the relevant technology" in that claim 1 "recites a system that addresses a specific technological problem" of "preventing illicit sharing or other unauthorized use of digital content that is distributed to personal devices used by residents of controlled-environment facilities" (Appeal Br. 12), similar to the claims in *DDR Holdings* (*DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014)). *See* Appeal Br. 12–16; Reply Br. 7–8. In addition, Appellant contends the Examiner misapplied SmartGene, and claim 1 recites devices that "cannot be fairly characterized as merely implementing 'mental steps'" (Appeal Br. 17). *See* Appeal Br. 16–17; Reply Br. 8–10.

For the reasons discussed below, we conclude Appellant's claim 1 (and the other pending claims) recites abstract ideas, these abstract ideas are

not integrated into a practical application, nor do they include an inventive concept. In view of the 2019 Revised Guidance, we clarify and expand the Examiner's reasoning as follows.

We begin our analysis by broadly but reasonably construing Appellant's claim 1 (*see* Appeal Br. 24–25 (Claims App.)). Claim 1 recites "[a] system for managing an exchange of digital content between inmates in a correctional facility and non-inmates" including "at least one computer server having a processor and connected to software stored on non-transitory media" and an "inmate device having a processor, a digital display, and controls, the inmate device including software stored on non-transitory media" where the server software and inmate device software are "configured to" perform particular functions. In other words, claim 1 recites a system including a server (further including a processor) and an inmate device (further including a processor) executing software to manage distribution of digital content (data). *See* Spec. 1:11–13; 2:6–4:24. This is consistent with Applicant's description of the system:

> [A] system for managing an exchange of digital content between inmates in a correctional facility and non-inmates . . . configure[d] to obtain digital content from inmates or non-inmates, store the digital content until a staffperson of the correctional facility approves distribution of the digital content to an intended recipient, and distribute the digital content to the intended recipient if approved.

Spec. 2:6–12.

The system recited in claim 1 includes non-abstract elements (physical structure), including one or more computer servers, the server(s) further includes a processor, and the server is connected to (impliedly executes) software—the server software of the digital content management

system—we hereinafter refer to this limitation as "Limitation A." The server software is configured to (i.e., the digital content management process includes a (step, sub-process, or) function to) "receive digital content" where the content is characterized as being "for distribution to an intended inmate of the correctional facility." Hereinafter we refer to this limitation as "Limitation A1."

Claim 1 also recites the server software configured to perform a digital content management process function to "authenticate a requesting inmate . . . wherein the requesting inmate is authenticated as the intended inmate," and that the authentication occurs when an inmate requests "distribution of the digital content to an inmate device associated with a unique identifier." In other words, validating or verifying an inmate's identity as the intended recipient of the digital content by an unclaimed and undisclosed process. *See* Spec. 26:31–32; 34:20–25; 42:15–33. Hereinafter we refer to this feature as "Limitation A2."

Claim 1 further recites the server software configured to perform a digital content management process function to "determine whether the inmate device" (*see* Limitation A2) "is registered to the authenticated requesting inmate" (*see* Limitation A1) "based on the unique identifier of the inmate device." That is, determining that the (inmate) device is registered to (matches registration information for) the inmate (who was previously authenticated) based on the unique identifier of the device by an unclaimed and undisclosed process. *See* Spec. 23:16–20; 24:7–12; 30:21–25; 31:12–13, 15–17; 42:15–33. Hereinafter we refer to this feature as "Limitation A3."

Claim 1 additionally recites that the system includes additional non-abstract elements (physical structure), including the inmate device, which also includes a processor, a digital display, controls, and software (the inmate device software of the digital content management system), where the processor impliedly executes the software (the software is configured to perform functions). We hereinafter refer to this limitation as "Limitation B." The inmate device software is configured to perform a digital content management process function to "connect to the at least one computer server and provide information used to authenticate the requesting inmate and further provide the unique identifier." In other words, connecting (via an unclaimed and undisclosed network) to the server (*see* Limitation A) in order to exchange (provide) data including information used to authenticate the requesting inmate (*see* Limitation A2) as well as the inmate device unique identifier (*see* Limitation A3). Hereinafter we refer to this step as "Step B1."

Claim 1 also recites that the inmate device software is configured to perform a digital content management process function to "receive the digital content distributed by the at least one server . . . wherein the digital content includes the license information authorizing use of the content by the requesting inmate on the inmate device." That is, receiving data (digital content) from the server (to an inmate device), where the data includes the license information (which allows viewing or use of the content by the inmate on the inmate device). *See* Spec. 18:18–22, 30–34. Hereinafter we refer to this feature as "Limitation B2."

Claim 1 continues, reciting the inmate device software being configured to perform a digital content management process function to "store the license information in a secure key locker located on the inmate device, wherein the license information is bound to the requesting inmate device based on the unique identifier associated with the inmate device." In other words, storing the license information in a secure key locker (a secure memory location) located on the inmate device, such that the license information is confined or restricted (bound) to the inmate device. Claim 1 also characterizes the storing process as being based on the inmate device unique identifier. *See* Spec. 18:30–34; 20:15–20; 20:27–21:5. Hereinafter we refer to this feature as "Limitation B3."

In summary, claim 1 recites a system including a server and an inmate device (both including processors) executing software to perform a process for managing an exchange of data and digital content by receiving digital content (data) to be distributed to an inmate, authenticating an inmate (user), determining if an inmate device is registered to the authenticated inmate based on a unique identifier of the inmate device, receiving the digital content and license information associated with the content at the inmate device, and storing the license information in a secure memory location of the inmate device. Hereinafter, we refer to this process as the "digital content management process." This is consistent with how Appellant describes the claimed invention:

> Claim 1 recites two interoperating devices that are configured to authenticate the inmate, confirm the resident device is registered to the inmate, and, once the device is confirmed as registered to the authenticated inmate, the content and license are distributed to the resident device where the license is bound to the resident's device using the unique identifier.

Reply Br. 5; *see also* Abstract; Spec. 1:11–13; 2:6–20.

Appellant's contentions (*supra*) focus on the Examiner's purported improper interpretation of the claims (in particular claim 1) (*see* Appeal Br. 8–12; Reply Br. 2–6). Here, in rejecting the claims (in particular claim 1) under 35 U.S.C. § 101, the Examiner analyzed the claims using the *Mayo*/*Alice* two-step framework, consistent with the guidance set forth in the USPTO's "2014 Interim Guidance on Patent Subject Matter Eligibility," 79 Fed. Reg. 74618 (Dec. 16, 2014), in effect at the time the rejection was made on June 23, 2017. The Examiner notified Appellant of the reasons for the rejection "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of . . . [the] application." 35 U.S.C. § 132. *See* Final Act. 5–25. In doing so, the Examiner set forth a prima facie case of unpatentability such that the burden of production shifted to Appellant to demonstrate that the claims are patent eligible.

Appellant also contends (*supra*) the at-issue claims are not abstract and that the claims (in particular claim 1) are "directed to an improvement to the relevant technology" (Appeal Br. 12). *See* Appeal Br. 12–16; Reply Br. 7–8. Claim 1, however, recites no substantive limitations on how the digital content management process receives data or digital content to be distributed to an inmate, authenticates the inmate, determines if the inmate device is registered to the inmate, or stores received data (the license information) (in a secure memory location of the inmate device). The limitations are entirely functional in nature, or characterize various data (digital content or licensing information) utilized in Limitations A1–A3 and B1–B3. Limitations A and

B (reciting the system devices) are additional elements that are not part of the abstract idea analysis.

Although Appellant contends the claims describe purported technological improvements or advances provided by the recited digital content management process, claim 1 (and the other pending claims) does not explicitly recite any specific improvements to technology, i.e., the system software performing any improved processing or analysis. Claim 1, instead, simply recites receiving and storing data as well as authenticating a user and verifying registration of a device based on a device identifier. In each instance, the particular means of accomplishing the functionality is not recited in the claim.

A person can practically perform the function of Limitations A1–A3 and B1–B3 (delineated above) mentally, or by using pen and paper. Nowhere does Appellant point to specific claim limitations that distinguish over a human process. Further, the revised guidance explains that "mental processes" include acts that people can perform in their minds or using pen and paper, even if the claim recites that a generic computer component performs the acts. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52 n.14 ("If a claim, under its broadest reasonable interpretation, 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.") Because each of the limitations discussed above encompasses an act that people can perform in their minds or using pen and paper, claim 1 recites mental processes. Appellant's arguments have not persuaded us otherwise.

To the extent Appellant argues utilizing devices (the server and inmate device) to perform the recited functionality is not abstract, Appellant misconstrues the inquiry. As we explain *supra*, the devices are additional elements that are not part of this part of the abstract idea analysis. The relevant inquiry is whether the processes (functionality) recited in the claims (in particular claim 1) are abstract.

We construe claim 1 (*supra*) as reciting receiving and storing data, authenticating a user, and verifying registration of a device based on a device identifier. Claims that recite performing information analysis (e.g., user authentication and device identification or registration), and the collection and exchange of information related to such analysis, have been determined by our reviewing court to be an abstract concept that is not patent eligible. *See SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1165, 1167–68 (Fed. Cir. 2018) (Claims reciting "[a] method for providing statistical analysis" (*id.* at 1165), were determined to be "directed to an abstract idea" (*id.* at 1168). "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" (*id.* at 1168 (citation and quotation marks omitted)). *See also Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1340 (Fed. Cir. 2017) (identifying the abstract idea of collecting, displaying, and manipulating data); *Elec. Power Grp.*, 830 F.3d at 1354 (characterizing collecting information, analyzing information by steps people go through in their minds, or by mathematical algorithms, and presenting the results of collecting and analyzing information, without more, as matters within the realm of abstract ideas); *Content Extraction & Transmission LLC v. Wells*

Fargo Bank, Nat'l Ass'n, 776 F.3d 1343, 1345, 1347 (Fed. Cir. 2014) (finding the "claims generally recite . . . extracting data . . . [and] recognizing specific information from the extracted data" and that the "claims are drawn to the basic concept of data recognition"); *Bancorp Servs., L.L.C. v. Sun Life Assurance Co. of Can. (U.S.)*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter."). Indeed, even if the analysis requires one to access and gather data from a database or memory, or utilize a pen and paper in the analysis, such analysis may still be an abstract mental process. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) ("[E]ven if some physical steps are required to obtain information from the database . . . such data-gathering steps cannot alone confer patentability." A claim focused on verifying credit card transaction information is directed to "unpatentable mental processes" because the claim's steps "can be performed in the human mind, or by a human using a pen and paper.").

Further, the exchange of licensing information, and the control of information exchange, which is the focus of Appellant's claims—the claims are "directed at a system . . . . [that] addresses particular security challenges posed by distributing digital content to personal devices assigned to inmates of a controlled-environment facility" (Reply Br. 2)—may be categorized as certain methods of organizing human activity; specifically, the fundamental economic practice of exchanging licensing information and managing interactions (information exchange) between people. Claims focusing on similar processes and functionality have been determined by our reviewing

court to be abstract concepts that are not patent eligible. *See Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372 (Fed. Cir. 2017) (verifying (authenticating) payment information, as well as "financial transactions . . . and data collection related to such transactions"); *Smartflash LLC v. Apple LLC*, 680 F. App'x 977, 982–83 (Fed. Cir. 2017) (controlling access based on verification); *OIP Technologies, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362–63 (Fed. Cir. 2015) (offer-based price optimization); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353–55 (Fed. Cir. 2014) (transaction guaranty as well as sending and receiving communications over a computer network to facilitate online commercial transactions "constitute[] 'a fundamental economic practice long prevalent in our system of commerce'"). The Supreme Court additionally guides that contractual relations, like licenses and licensing, constitute "a fundamental economic practice long prevalent in our system of commerce." *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *see also Alice*, 573 U.S. 221–22, as cited in *buySAFE*, 765 F.3d at 1354. Thus, claim 1 is directed to a combination of abstract ideas, including methods of organizing human activity and mental processes.

In summary, we conclude Appellant's claim 1 recites a judicial exception (USPTO's Step 2A, Prong 1; *see* 2019 Revised Guidance). Specifically, claim 1 recites a process for managing the distribution of digital content to inmates in a correctional facility—the digital content management process—by receiving and storing data, authenticating a user, and verifying registration of a device based on a device identifier as discussed *supra*. The digital content management process consists of methods of organizing human activity and mental processes that can be practically performed in the human mind (or utilizing pen and paper)

including observation, evaluation, or judgment. *See* 2019 Revised Guidance, 84 Fed. Reg. at 52, 53 (listing "[m]ental processes—concepts performed in the human mind (including an observation, evaluation, judgment, opinion)" as one of the "enumerated groupings of abstract ideas" (footnote omitted)).

Practical Application

We next consider whether claim 1 integrates the abstract idea into a practical application (USPTO's Step 2A, Prong 2). *See* Revised Guidance, 84 Fed. Reg. at 51. In doing so, we consider whether there are any additional elements beyond the abstract idea that, individually or in combination, "integrate the [abstract idea] into a practical application, using one or more of the considerations laid out by the Supreme Court and the Federal Circuit." Revised Guidance, 84 Fed. Reg. at 54–55.

Claim 1 recites additional elements beyond the abstract digital content management process (the judicial exception) (*supra*). The additional elements in claim 1 include the recited "at least one computer server having a processor and connected to software stored on non-transitory media" (the server) (*see* Limitation A, *supra*) and "the inmate device having a processor, a digital display, and controls, [and] including software stored on non-transitory media" (the inmate device) (*see* Limitation B, *supra*) that together execute software "configured to" perform the digital content management process. Appeal Br. 24–25 (Claims App).

Appellant summarizes these additional elements as "a *server* and a *device registered to an inmate*" as described in Figure 3 "depicting a 'digital content store 14' corresponding to the recited *server* and 'client machine 16' corresponding to the recited *device registered to an inmate*." *See* Appeal Br.

3–4 (citing Spec. 18:9–11; Fig. 3). Appellant's written description indicates that each of these elements encompass commonplace generic components. For example, Appellant's Specification explains that "[t]he present disclosure may be implemented in one or more servers, one or more client devices, including computer terminals or portable client devices, or a combination thereof" (Spec. 7:30–31), and further describes the system and its components and software:

> The disclosure is operational with numerous other computing system environments or configurations. Examples of well known computing systems, environments, and/or configurations that may be suitable for use with the disclosure include, but are not limited to, personal computers, server computers, hand-held or laptop devices, smartphones, multiprocessor systems, microprocessor-based systems, set top boxes, programmable consumer electronics, network PCs, minicomputers, mainframe computers, distributed computing environments that include any of the above systems or devices, and the like.
>
> The disclosure may be described in the general context of computer-executable instructions, such as program modules, being executed by one or more computing devices. Generally, program modules include routines, programs, objects, components, data structures, etc., that perform particular tasks or implement particular abstract data types. The disclosure may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote computer storage media including memory storage devices.

Spec. 8:11–25.

In summary, Appellant's written description does not portray the server or inmate device (or their respective processors) as anything but

standard computer components. Nor does Appellant's written description portray these components as operating in a new way. Instead the written description depicts these components as generic components operating in their accustomed manner.

Appellant's written description does not describe these additional elements as performing in any way other than their accustomed functions utilizing standard techniques. Accordingly, Appellant's written description shows that additional elements are generic. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986) ("[A] patent need not teach, and preferably omits, what is well known in the art."); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1331 (Fed. Cir. 2017) ("The claimed mobile interface is so lacking in implementation details that it amounts to merely a generic component (software, hardware, or firmware) that permits the performance of the abstract idea, i.e., to retrieve the user-specific resources.").

Appellant contends claim 1 (and the other pending claims) provides "an improvement to the relevant technology" in that the recited system of claim 1 "addresses a specific technological problem" of "preventing illicit sharing or other unauthorized use of digital content that is distributed to personal devices used by residents of controlled-environment facilities" (Appeal Br. 12), similar to the claims in *DDR Holdings*. *See* Appeal Br. 12–16; Reply Br. 7–8. Appellant further contends the additional elements (the server and the inmate device) are not generic—"[c]laim 1 cannot be accomplished using generic computer devices" (Appeal Br. 11). *See* Appeal Br. 11–17; Reply Br. 5–10. In other words, Appellant contends the claims recite a technological improvement that amounts to more than simply

utilizing a computer as a tool to accomplish the digital content management process.

Appellant's contentions correspond to the reasoning in MPEP §§ 2106.05(a)–(c), where additional elements integrate the judicial exception into a practical application. We, however, disagree with Appellant's contentions. Appellant's additional elements do not apply or use the digital content management process (the judicial exception) in a manner that imposes a meaningful limit on the judicial exception, such that it is more than a drafting effort designed to monopolize the exception. *See Alice*, 573 U.S. at 221–24 (citing *Mayo*, 566 U.S. at 78–85). Rather, Appellant's claim recites generic computer elements (the server and the inmate device) that are utilized as tools to carry out the receiving and storing data, authenticating a user, and verifying registration of a device based on a device identifier as discussed *supra*. Utilizing computers as tools to perform common data information analysis and data exchange functions that can be mental processes (an abstract idea) does not impose a meaningful limit on the abstract idea. *See* MPEP § 2106.05(f); *see also Alice*, 573 U.S. at 223 (finding "if [the] recitation of a computer amounts to a mere instruction to implement an abstract idea on a computer that addition cannot impart patent eligibility" (quotations and internal citations omitted)).

Appellant's claim 1 (and the other pending claims) can be distinguished from patent eligible claims such as those in *McRO*, *Enfish*, *BASCOM*, and *DDR Holdings* that are directed to "a specific means or method that improves the relevant technology" (*McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016)), or "a specific improvement to the way computers operate" (*Enfish, LLC v.*

Microsoft Corp., 822 F.3d 1327, 1336 (Fed. Cir. 2016)), solving a technology-based problem (*BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1349–52 (Fed. Cir. 2016)), or a method "rooted in computer technology in order to overcome a problem specifically arising in the realm of computer [technology]" (*DDR Holdings*, 773 F.3d at 1257). Contrary to Appellant's arguments, claim 1 is not a technological improvement or an improvement in a technology. Appellant's claim 1 does not "improve the functioning of the computer itself" or "any other technology or technical field." *Alice*, 573 U.S. at 225. Nor does it provide a technological solution to a technological problem. *See DDR Holdings*, 773 F.3d at 1257; MPEP § 2106.05(a). Appellant fails to explain sufficiently and persuasively how the instant claim(s) are directed to an improvement in the way computers operate, nor has Appellant identified any technical advance or improvement or specialized computer components. *See* Appeal Br. 11–17; Reply Br. 5–10.

As discussed *supra*, nothing in claim 1 precludes a human from performing the digital content management process. Performing such information processing functionality is the reason computers exist. The mere automation of a process that can be performed by a human is not sufficient to show an improvement in computer functionality, and the fact that a computer may increase efficiency—be more efficient and accurate by reducing the difficulty of distributing content (*see* Appeal Br. 11–17; Reply Br. 5–10; Spec. 1:16–2:3 ("receiving and distributing inmates' paper mail is a significant challenge" (Spec. 1:16–17)))—does not change the abstract-idea analysis. *See Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (holding that "merely adding computer

functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea"); *OIP Techs.*, 788 F.3d at 1363 ("[R]elying on a computer to perform routine tasks more quickly or more accurately is insufficient to render a claim patent eligible"); *see also FairWarning IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016).

In summary, "the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools." *Elec. Power Grp.*, 830 F.3d at 1354; *see also* MPEP § 2106.05(f) (emphasis omitted) (instructing Examiners to consider "[w]hether the claim invokes computers or other machinery merely as a tool to perform an existing process" in determining whether the claim recites mere instructions to apply the exception), cited in 2019 Revised Guidance, 84 Fed. Reg. at 55, n.30. Thus, we conclude the claims are directed to an abstract idea that is not integrated into a practical application.

Inventive Concept

Having concluded Appellant's claims are directed to an abstract idea under the 2019 Revised Guidance (Step 2A analysis), we consider whether claim 1 has an inventive concept, that is, whether the claim has additional elements that "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 78, 79). As discussed above, this requires us to evaluate whether the additional claim elements add "a specific limitation or combination of limitations that are not well-understood, routine, conventional activity in the field" or "simply append[] well-understood, routine, conventional activities previously known

to the industry, specified at a high level of generality." Revised Guidance, 84 Fed. Reg. at 56.

The Examiner determined that Appellant's claim 1 (and the other pending claims) "do not offer 'significantly more' than the abstract idea itself because the claims do not recite an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or provide meaningful limitations beyond generally linking an abstract idea to a particular technological environment." Final Act. 7. The Examiner provides a detailed explanation as to why Appellant's claims to do not provide an inventive concept under the second step of the *Alice* analysis. *See* Final Act. 7–25; Ans. 4–5.

Appellant, on the other hand, does not even address the second step of the *Alice* analysis. Appellant instead contends claim 1 is similar to the claims in *DDR Holdings* (*supra*). *See* Appeal Br. 11–17; Reply Br. 5–10. Appellant fails to persuade us of error in the Examiner's rejection with respect to the second *Alice* step (USPTO's Step 2B). We agree with the Examiner that Appellant's claim 1 (and the other pending claims) does not evince an "inventive concept" that is significantly more than the abstract idea itself. In particular, Appellant fails to explain how the additional elements (above) add specific limitations beyond the judicial exception that are not well-understood, routine, and conventional in the field.

As previously discussed, claim 1 (and the other pending claims) merely recites additional non-abstract elements (above) that perform the digital content management process. We conclude that these additional elements, individually and as an ordered combination, are generic computer components that carry out common information exchange and analysis

functions recited in the digital content management process (the abstract idea). *See, e.g.*, Spec. 8:11–25. Such conventional computer processes operating on conventional computer hardware "do not alone transform an otherwise abstract idea into patent-eligible subject matter." *FairWarning*, 839 F.3d at 1096 (citing *DDR Holdings*, 773 F.3d at 1256).

For at least the reasons above, we are not persuaded of Examiner error in the rejection of claim 1 under 35 U.S.C. § 101. Thus, we sustain the Examiner's rejection under § 101 of independent claim 1, independent claims 12 and 20, and dependent claims 2, 3, 7–9, 13–15, 17–19, and 21–26, which depend from claims 1 and 12, respectively, and which were not separately argued with specificity.

Obviousness Rejections of Claims 1–3, 7–9, 12, 17–20, 24, and 25

Appellant argues independent claim 1, independent claims 12 and 20, and dependent claims 2, 3, 7–9, 17–19, 24, and 25, together as a group with respect to the 35 U.S.C. § 103 rejection. *See* Appeal Br. 17–22. We select independent claim 1 as representative of Appellant's arguments with respect to claims 1–3, 7–9, 12, 17–20, 24, and 25. 37 C.F.R. § 41.37(c)(1)(iv).

Appellant contends "*Zhang* does not teach or suggest license information that is bound to the requesting inmate device based on the unique identifier associated with the inmate device" (Appeal Br. 17–18), "thus restricting the inmate's ability to transfer the digital content to another inmate" (Appeal Br. 18). *See* Appeal Br. 17–20; Reply Br. 11–14.

The Examiner rejects claims 1–3, 7–9, 12, 17–20, 24, and 25 over Mow, Rae, and Zhang. *See* Final Act. 25–67. Specifically, with respect to claim 1 (*see* Final Act. 25–38), the Examiner explains that Rae teaches providing an inmate with a communication device, using a unique identifier

to register and monitor the communication device, and verifying "that a device is correctly registered for use for a specific inmate" (Final Act. 32) to control the content or features provided to the device. *See* Final Act. 31–33, 35–38; Ans. 8–11 (citing Rae ¶¶ 25–27, 55–60, 83). The Examiner further explains Zhang teaches storing license information on a client device in a secure memory location. *See* Final Act. 34–38; Ans. 8–11 (citing Zhang ¶¶ 19, 20, 25, 26, 31–33).

We agree with the Examiner that the Examiner that the combination of Mow, Rae, and Zhang (and, in particular, Rae and Zhang) would have taught or at least suggested the disputed limitation of "stor[ing] the license information in a secure key locker" (a secure memory location) "on the inmate device" such that "the license information is bound" (i.e., restricted) to the device "based on the unique identifier." Appeal Br. 25 (Claims App.); *see* claim construction, "Limitation B3," (*supra*).

Appellant does not provide an explicit definition for the term "bound," nor does Appellant explain with any specificity how the license information is bound to the particular inmate device. Appellant's Specification provides a cursory description of the bound information, explaining that an asset key (license information) may be "bound" to a client machine (inmate device) "in conjunction with machine identification." Spec. 18:32–34. Accordingly, we find the broadest reasonable interpretation of this disputed limitation means storing the license information in a secure memory location of the inmate device where the license information is provided to the device in conjunction with a machine identification process using the device's unique identifier, such that the license information is restricted to the particular device.

Zhang's describes storing license information in a secure storage area of a client device. See Zhang ¶ 19. Rae describes registering a wireless communication device (provided to a resident of a controlled environment facility)—i.e., an inmate device—with an information processing system, as well as controlling access or communications to the device using a device identifier (such as an "electronic serial number (ESN)" or "mobile identification number (MIN)" (Rae ¶ 25)) and a validation process. *See* Rae ¶¶ 25–27, 55–60, 83. Therefore, we conclude the combination of Rae and Zhang would have at least suggested to one having ordinary skill in the art storing license information in a secure memory location of an inmate device in conjunction with a machine identification process using the device's unique identifier. Here, Appellant argues the references individually and does not address the specific arguments set out by the Examiner. The references cited by the Examiner must be read, not in isolation, but for what each fairly teaches in combination with the prior art as a whole. *See In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references).

Accordingly, Appellant's contentions do not persuade us of error in the Examiner's obviousness rejection of representative independent claim 1. Therefore, we affirm the Examiner's rejection of representative claim 1, independent claims 12 and 20, and dependent claims 2, 3, 7–9, 17–19, 24, and 25, not separately argued with particularity (*supra*).

Obviousness Rejection of Claims 13–15, 21–23, and 26

The Examiner rejects claims 13–15 and 21–23 over Mow, Rae, Zhang, and Sidler. *See* Final Act. 68–76. The Examiner rejects claim 26

over Mow, Rae, Zhang, and Ringewald. See Final Act. 77–79. Appellant does not provide substantive specific arguments with respect to these claims or the additional references (Sidler and Ringewald). See Appeal Br. 22.

For the same reasons as claim 1 (*supra*), we agree with the Examiner that Appellant does not persuade us of error in the Examiner's obviousness rejection of claims 13–15 and 21–23 over Mow, Rae, Zhang, and Sidler and the Examiner's obviousness rejection of claim 26 over Mow, Rae, Zhang, and Ringewald. *See* Final Act. 68–79. Therefore, we affirm the Examiner's obviousness rejections of claims 13–15, 21–23, and 26.

CONCLUSION

For the reasons discussed above, we determine that claims 1–3, 7–9, 12–15, and 17–26 are directed to an abstract idea and do not demonstrate an inventive concept. We also determine that claims 1–3, 7–9, 12–15, and 17–26 are obvious in view of the cited prior art.

Appellant has not shown that the Examiner erred in rejecting claims 1–3, 7–9, 12–15, and 17–26 under 35 U.S.C. § 101. Appellant has also not shown that the Examiner erred in rejecting claims 11–3, 7–9, 12–15, and 17–26 under 35 U.S.C. § 103(a). We therefore sustain the Examiner's rejection of claims 1–3, 7–9, 12–15, and 17–26.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1–3, 7–9, 12–15, 17–26	101	Patent Eligible Subject Matter	1–3, 7–9, 12–15, 17–26	
1–3, 7–9, 12, 17–20, 24, 25	103(a)	Mow, Rae, Zhang	1–3, 7–9, 12, 17–20, 24, 25	
13–15, 21–23	103(a)	Mow, Rae, Zhang, Sidler	13–15, 21–23	
26	103(a)	Mow, Rae, Zhang, Ringewald	26	
Overall Outcome			1–3, 7–9, 12–15, 17–26	

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)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED