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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JU-YUN SUNG, HEE-JEONG CHOO,  
KEUM-KOO LEE, and JI-YOUNG KWAHK<sup>1</sup>

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Appeal 2017-011441  
Application 14/692,162  
Technology Center 3600

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Before STEVEN D.A. McCARTHY, JAMES P. CALVE, and  
LEE L. STEPINA, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134(a) from the Office Action rejecting claims 1, 3–7, and 9–13. *See* Appeal Br. 4. Claims 2 and 8 are cancelled. *Id.* at 16, 17 (Claims App.). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> Appellants identify Samsung Electronics Co., Ltd., the applicant under 37 C.F.R. § 1.46, as the real party in interest. Appeal Br. 1.

### CLAIMED SUBJECT MATTER

Claims 1, 7, and 13 are independent with claim 1 reproduced below.

1. A server for managing information related to moving paths of a plurality of devices connected to the server, the server comprising:

a communication interface configured to receive first information related to a moving path of a first device among the plurality of devices and receive second information related to a moving path of a second device among the plurality of devices, wherein the first device is different from the second device; and

a controller configured to:

generate, integrated history information based on the first information and the second information, and

provide, using the communication interface, the integrated history information to at least one of the plurality of devices,

wherein the plurality of devices are managed as a single group in the server, and

wherein the controller is configured to authenticate the plurality of devices in the single group, and register the authenticated plurality of devices as devices among which the integrated history information can be shared.

Appeal Br. 16 (Claims App.).

### REJECTIONS

Claims 1, 3–7, and 9–13 are rejected as directed to patent-ineligible subject matter under the judicial exception to 35 U.S.C. § 101.

Claims 1, 3–7, and 9–13 are rejected under 35 U.S.C. § 103(a) as unpatentable over Subramanian (US 2009/0276154 A1; pub. Nov. 5, 2009) and Goel (US 2010/0125411 A1; pub. May 20, 2010).

## ANALYSIS

### *Claims 1, 3–7, and 9–13 Rejected as Directed to Patent-Ineligible Subject Matter*

Initially, we determine that independent claims 1, 7, and 13 are similar in scope. *See* Appeal Br. 13–14 (arguing that claims 7 and 13 include similar recitations as claim 1 and are allowable for the reasons provided for claim 1). We thus select claim 1 as a representative claim for our analysis.

We analyze patent-eligibility under the two-step framework of *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2355 (2014) and *Mayo Collaborative Services v. Prometheus Labs., Inc.*, 566 U.S. 66 (2012). First, we consider whether claim 1 is directed to a patent-ineligible concept such as a law of nature, natural phenomena, or abstract idea. *Alice*, 134 S. Ct. at 2355. If claim 1 is directed to a patent-ineligible concept, we consider the elements of claim 1 individually and as an ordered combination to determine whether there are additional elements that transform claim 1 into a patent-eligible application. *Id.* This search for an “inventive concept” in the second step of the *Alice/Mayo* two-step analysis involves a search for an element or combination of elements “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Id.* (quoting *Mayo*, 566 U.S. at 72).

#### *Alice Step One*

The Examiner determines that claim 1 is “directed to the concept of gathering, integrating, and providing information which is an abstract idea.” Final Act. 2. The Examiner finds that this concept is similar to collecting information, analyzing it, and displaying certain results that were held to be abstract ideas in *Elec. Power Grp.*, 830 F.3d 1350 (Fed. Cir. 2016). Ans. 5.

The Examiner also finds that this concept of gathering, integrating, and providing information involves steps that can be done by a human analog (either by hand or merely by thinking). *Id.*

The Examiner further finds that the limitations of claim 1 recite mere instructions that implement the abstract idea on a generic computer that performs generic computer functions that are well-understood, routine, and conventional activities known in the industry and therefore bespeak the abstract nature of the claimed server. *Id.*

Regarding the limitations recited in claim 1, the Examiner explains that “a communication interface configured to receive first information . . . and receive second information” is a general purpose computer that performs mere data gathering, which is an abstract idea. Final Act. 2.

The Examiner also finds that “a controller configured to: generate, integrated history information based on the first information and the second information” is directed to the abstract idea of integrating information using mathematical techniques that are routine server functions. *Id.* at 2–3.

The Examiner finds that “a controller configured to: provide, using the communication interface, integrated history information” is insignificant post solution activity and routine server implementations. *Id.* at 3.

The Examiner further finds that “wherein the plurality of devices are managed as a single group in the server” to involve routine server computing of managing things in a group. *Id.*

The Examiner finds that dependent claims 2–6 and 8–12 also recite routine server implementation functions like claim 1 and do not amount significantly more than the abstract concept recited in claim 1. *See Id.*

We agree.

The Examiner’s findings and determinations are in line with, and supported by, the many decisions of our reviewing court on this topic. In this regard, claim 1 recites a “server for *managing information* related to moving paths of a plurality of devices connected to the server.” Appeal Br. 16, Claims App. (emphasis added). As the Examiner correctly finds, the claimed communication interface is configured to receive first and second “information” that is related to a moving path of a first and second device. The controller then processes that received information to generate an integrated history “based on” the first and second information and provide the integrated history information to at least one of the devices. *Id.*

The decision in *Electric Power* makes clear that “[i]nformation as such is an intangible.” *Elec. Power*, 830 F.3d at 1353. Thus, collecting information, even when limited to particular content (such as moving path information) is an abstract idea. *Id.* Similarly, analyzing such information by steps people go through in their minds or by mathematical algorithms, without more, also are abstract ideas in the form of mental processes. *Id.* at 1354. Merely presenting the results of the abstract processes of collecting and analyzing information, without more, is abstract as an ancillary part of the collection and analysis. *Id.*

Claim 1 merely recites abstract concepts of information gathering and processing with subsequent presentation without explaining sufficiently how to achieve these results in a non-abstract way with physical components that do more than provide a generic environment to carry out the abstract idea. *See Two-Way Media Ltd. v. Comcast Cable Commc’ns, LLC*, 874 F.3d 1329, 1337–38 (Fed. Cir. 2017) (citing *Elec. Power*, *TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 611 (Fed. Cir. 2016)).

Claim 1 broadly recites the abstract idea of receiving, processing (via integration), and presenting information received from mobile devices via a communication interface and controller. Sharing moving path information among multiple people as an integrated history of movements is an abstract idea involving mental processes and data processing of information. Absent from claim 1 are technical details of how information is received, integrated, or presented. *See Move, Inc. v. Real Estate Alliance Ltd.*, 721 F. Appx. 950, 956 (Fed. Cir. 2018) (non-precedential) (“[T]he focus of claim 1 is not on any technological advancement but rather on the performance of an abstract idea ‘for which computers are invoked merely as a tool.’”); *TDE Petroleum Data Solutions, Inc., v. AKM Enterprise, Inc.*, 657 F. Appx. 991, 993 (Fed. Cir. 2016) (non-precedential) (“[C]laim 1 is the sort of data gathering and processing claim that is directed to an abstract idea under step one of the *Alice* analysis.”); *Content Extraction and Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347 (Fed. Cir. 2014) (claims are directed to abstract idea of data collection, recognition, and storage, which are well-known and performed by humans); *see also BSG Tech LLC v. Buyseasons*, 2018 WL 3862646, No. 2017-1980, (Fed. Cir. 2018) (claims were directed to the abstract idea of considering historical usage information while inputting data rather than inventive database structures).

Reciting a generic controller configured to authenticate and register devices at such a high level of generality also is an abstract concept. *See Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014, 1017 (Fed. Cir. 2017) (claims were directed to abstract idea of “providing restricted access to resources” by authenticating devices and determining their authorization to access requested resources).

Providing tailored content to a user or group is an abstract concept as well. *See Evolutionary Intelligence LLC v. Sprint Nextel Corp.*, 677 F. App'x 679, 680 (Fed. Cir. 2017) (non-precedential) (“[T]ailoring of content based on information about the user—such as where the user lives or what time of day the user views the content—is an abstract idea.”) (citations omitted); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1369–70 (Fed. Cir. 2015) (providing dynamic website navigation data to a user by tailoring the content based on the viewer’s location and time of day is a fundamental practice long prevalent in our system).

Whether claim 1 recites a server that falls within a statutory category of invention (*see* Appeal Br. 8) is not dispositive. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1374 (Fed. Cir. 2011) (“Regardless of what statutory category (‘process, machine, manufacture, or composition of matter,’ 35 U.S.C. § 101) a claim’s language is crafted to literally invoke, we look to the underlying invention for patent-eligibility purposes.”).

Appellants’ comparison of claim 17 of *Enfish* with claim 1 here shows the abstract nature of the claimed server for managing information. Unlike claim 1, *Enfish* claimed a data storage and retrieval system (database) with a particularly claimed logical table that included logical rows having an object identification number (OID) to identify each logical row and a plurality of logical columns intersecting the rows and including an OID to identify each column with a means for indexing data stored in the *self-referential* table that functions differently than conventional relational databases. *See* Appeal Br. 10; *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336–37 (Fed. Cir. 2016). Here, claim 1 recites a communication interface and controller that perform generic functions of receiving and processing information.

The claimed communication interface and controller implement the abstract idea conventionally. *Affinity Labs of Texas, LLC v. Amazon.com Inc.*, 838 F.3d 1266, 1270–71 (Fed. Cir. 2016) (“Affinity makes no claim that it invented any of those components or their basic functions, nor does it suggest that those components, at that level of generality, were unknown in the art as of the priority date of the ’085 patent.”).

Based on the foregoing, we determine that claim 1 is directed to an abstract idea of information collection, processing, and presentation with restrictions on access to members of a group. We agree with the Examiner that the dependent claims are directed to this abstract idea. Final Act. 3. For example, claim 3 recites “wherein the controller is configured to group the plurality of devices as the single group.” Appeal Br. 16 (Claims App.). Claim 4 recites that the communication interface receives third information and compares it with fourth information in the integrated history and updates the fourth information. *Id.* Claim 5 recites that the controller is configured to add the third information to the integrated history information. Claim 6 displays a moving path in the integrated history information on a screen of a device. *Id.* Thus, the dependent claims recite further aspects of the abstract idea of collecting and presenting information.

#### Alice Step Two

The Examiner further finds that the claims do not include additional elements that amount to significantly more than the abstract idea or claim improvements to the functioning of the computer itself, another technology, or a technical field such as the Internet. Final Act. 2–3; Ans. 5. In this regard, the Examiner finds that the claims recite generic computer elements and routine server implementations. Final Act. 3; Ans. 5. We agree.

Appellants argue only that claim 1 provides a server for managing information related to moving paths of a plurality of devices connected to the server” and the communication interface and controller are directed to patent-eligible subject matter. Appeal Br. 8. Appellants also argue that “the claims are directed to a specific implementation of a solution to a problem in the technology of managing information related to moving paths of a plurality of devices connected to the server.” *Id.* at 12. Appellants do not explain, however, which aspects of the claimed server represent an advance in this technological field.

Appellants do not identify any advance in the configuration of the communication interface in the way that it receives information from a first device related to a moving path. Nor do Appellants identify any advance in the manner that the controller generates “integrated history information” or provides that information to a device. Appellants do not identify any non-conventional or non-generic arrangement of the server, communication interface, or controller such that an inventive concept can be found. *Id.* at 9 (discussing *BASCOM*). If there is some novelty or advance in the server, it does not reside in the claims. *See Automated Tracking Solutions LLC v. The Coca-Cola Co.*, 723 F. App’x 989, 995 (Fed. Cir. 2018) (non-precedential) (claims to system for locating, identifying, and tracking objects with radio frequency identification (RFID) technology were directed to an abstract idea of collecting and analyzing data; they did not recite any specialized RFID components or non-conventional combination or arrangement, and the mere recitation of concrete, tangible components did not confer patent eligibility to the abstract idea where the components performed well-understood, routine, conventional activities known in the industry).

Appellants acknowledge that claim 1 recites a server for managing information of moving paths of devices. Appeal Br. 11–12. The type of information does not confer patent eligibility. *See Elec. Power*, 830 F.3d at 1354–55. The Specification discloses that the system shares travel (moving path) information generated by mobile devices among a plurality of users. Spec. 2:6–18, 5:19–6:4. Family members can share moving-path related information after authenticating and registering their mobile communication devices in a home server. *Id.* at 11:20–12:2. Information about shortcuts may be shared. *Id.* at 25:4–6. Devices used in the system are identified schematically or generically. *Id.* at 9:1–13:4, Figs. 1–3.

The Specification provides very little guidance as to the scope of the claimed integration of history information. The term “integrate” is used only in the Summary of Invention, the original claims, and the abstract. *Id.* at 2:10–3:15 and 44:2–48:9.

Considering the limitations of claim 1 individually and as an ordered combination, we determine that they do not recite an inventive concept that is sufficient to elevate the claimed abstract idea to a patent-eligible status. Claim 1 simply recites generic components that collect, process, and present moving path information among mobile devices that are authenticated and registered to share this information as a group. Appellants do not identify any innovation beyond managing information. *See* Appeal Br. 8–14; Reply Br. 4–6. Appellants are correct that our reviewing court admonishes us to avoid analyzing the claims at too high a level of generality; however, here, claim 1 recites an information management server, interface, and controller at such a high level of generality and functionality as to be an abstract idea that lacks an inventive concept to make it patent eligible.

*Claims 1, 3–7, and 9–13  
Rejected Over Subramanian and Goel*

Appellants argue claims 1, 3–7, and 9–13 as a group. *See* Appeal Br. 4–8 (arguing that claims 7 and 13 are allowable for the reasons argued for claim 1 and independent claims 3–6 and 9–12 are allowable based on their dependency from claims 1 and 7, respectively). We select claim 1 as the representative claim. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner relies on Subramanian to teach all features recited in claim 1 except for generating and providing integrated history information. Final Act. 4–5. The Examiner relies on Goel to teach this feature. *Id.* at 5.

Appellants argue that the Examiner errs in relying on item 403 of Figure 4 of Subramanian to disclose a controller configured to authenticate and register the plurality of devices as recited in claim 1, and Goel fails to cure this defect. Appeal Br. 5–7. This argument is not persuasive.

First, merely reproducing Figure 4 of Subramanian and arguing that the Examiner is incorrect to allege that item 403 discloses that the controller is configured to authenticate and register a plurality of devices as recited in claim 1 (Appeal Br. 5) does not apprise us of Examiner error in this regard.

Second, Subramanian discloses a system that manages a group of mobile devices to obtain and share routing information. Subramanian ¶ 36.

In step **403**, *communication links among group members are authenticated, authorized, and encrypted to ensure that communication of routing and destination information are private and secure. Privacy and security are important because group members may be sharing potentially sensitive information such as group destination, preferred routes, member locations, and member identities.*

*Id.* ¶ 37 (emphasis added).

We agree with the Examiner that Subramanian teaches authentication and registration of mobile devices that are managed within a group so that moving path information can be collected and shared among members of the group via their mobile devices.

Appellants also argue that Subramanian teaches authentication of “communication links among group members” rather than authentication of “the plurality of devices in the single group” as claimed. Reply Br. 2 (emphasis omitted). We find this to be a distinction without a difference in regards to claim 1.

A skilled artisan would understand a communication link to exist between mobile devices joined in a group for sharing travel information. *See* Subramanian ¶ 17, Fig. 1. Therefore, authenticating a communication link between mobile devices necessarily involves authentication of the mobile devices that form the communication link. Stated another way, a skilled artisan would understand that a communication link connects or links communication devices together such that authentication of the link requires authentication of the devices that are linked together. Subramanian confirms this understanding by also disclosing that authentication and authorization (registration) ensure that communication of travel information (between devices) is private and secure. *Id.* ¶ 37 (“Privacy and security are important because group members may be sharing potentially sensitive information such as a group destination, preferred routes, member locations, and member identities.”). Therefore, there are no defects in Subramanian for Goel to cure in this regard. Appeal Br. 5–7.

Accordingly, we sustain the rejection of claims 1, 3–7, and 9–13 as unpatentable over Subramanian and Goel.

Appeal 2017-011441  
Application 14/692,162

DECISION

We affirm the rejections of claims 1, 3–7, and 9–13.

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

AFFIRMED