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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JASON LING KHEE CHAN

Appeal 2017-011123
Application 14/248,631
Technology Center 3600

Before DENISE M. POTHIER, JUSTIN BUSCH, and SCOTT E. BAIN,
Administrative Patent Judges.

BUSCH, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant appeals from the Examiner’s decision to reject claims 1, 3–5, 7–12, and 14–16, which constitute all the claims pending in this application. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b). We affirm.

CLAIMED SUBJECT MATTER

Appellant’s claimed invention is generally related to “receiving, parsing, storing and sending sales data from multiple sales terminal devices.” Abstract. More specifically, the invention relates to “a device that is able to accept, understand and process sales data or information from different types of point-of-sales (POS) systems or electronic cash registers

(ECR), so that a single type of formatted data is then sent to a remote, primacy server for easier display, further processing and permanent storage.” Spec. 2. “The device shall make it possible for the different types of POS systems and ECRs to continue running on their different platforms and software, while working together harmoniously as a collective.” Spec. Claims 1 and 12 are independent, and claim 1 is reproduced below:

1. A universal sales data processing device comprising:
 - an input terminal adapted to be connected to and receive sales data simultaneously from multiple sales terminal devices wherein said sales terminals are of different types and broadcast their data in a single type of format at any baud rate;
 - a processor connected to said input terminal adapted to identify the sales data in said single type of format received over a fire-and-forget messaging protocol, wherein the sales terminal devices are pre-configured to not expect any response from said processor, said processor comprising
 - a listener application to receive sales data from said multiple sales terminal devices at any baud rate;
 - a queuing system for identifying and queuing the received sales data in a cyclic manner and
 - a random access memory that stores the received sales data for parsing the data into a predetermined, standardized format;
 - a memory module connected to said processor and said random access memory, said memory module storing the parsed data; and
 - an output module for periodically transmitting the stored data to a remote server.

REJECTIONS

Claims 1, 3–5, 7–12, and 14–16 stand rejected under 35 U.S.C. § 101 as being directed to ineligible subject matter. Final Act. 5–6.

Claims 1, 3–5, 7–12, and 14–16 stand rejected under 35 U.S.C. § 103 as obvious in view of Golden (US 5,774,872; June 30, 1998) and Official Notice. Final Act. 7–10.

ANALYSIS

We have reviewed the Examiner’s rejections in light of Appellant’s arguments that the Examiner erred. In reaching this decision, we have considered all evidence presented and all arguments Appellant made. Arguments Appellant could have made, but chose not to make in the Briefs, have not been considered and are deemed waived. *See* 37 C.F.R. § 41.37(c)(i)(iv).

THE 35 U.S.C. § 101 REJECTION

In step one of the *Alice* analysis, we “determine whether the claims at issue are directed to” a patent-ineligible concept, such as an abstract idea. *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014). In step two of our *Alice* analysis, we determine whether the *additional* limitations, when considered both “individually and ‘as an ordered combination’” contain an “inventive concept” sufficient to transform the claimed “abstract idea” into a patent-eligible application. *Alice*, 573 U.S. at 217–18.

The Examiner’s Findings and Conclusions

The Examiner concludes the claims are directed to judicially excepted subject matter. Final Act. 3–6; Ans. 2–6. In particular, the Examiner determines the claims are directed to a concept for automating a human activity of collecting and processing sales data, which are ineligible because they are similar claims found ineligible by the Federal Circuit. Final Act. 4–5; Ans. 2–4 (citing *Classen Immunotherapies, Inc. v. Elan Pharms., Inc.*, 786 F.3d 892 (Fed. Cir. 2015); *Elec. Power Grp. v. Alstom S.A.*, 830

F.3d 1350 (Fed. Cir. 2016); *Content Extraction & Transmission LLC v. Wells Fargo Ban, Nat'l Ass'n*, 776 F.3d 1343 (Fed. Cir. 2014); *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366 (Fed. Cir. 2011); *Digitech Image Techs., LLC v. Elecs. For Imaging, Inc.*, 758 F.3d 1344 (Fed. Cir. 2014)). The Examiner determines the claims do not improve the functioning of a computer or another technology or technical field because the claims are directed to receiving and processing data using generic computer components performing generic computer functions in order to automate a process that otherwise “could be done by a human analog (by hand or merely thinking).” Final Act. 3; Ans. 2–3. The Examiner distinguishes Appellant’s claims from those in *Enfish*, explaining that a computer benefit similar to the self-referential table in *Enfish* that led to “increased flexibility, faster search times, and smaller memory requirements” is neither recited in Appellant’s claimed collection and parsing of data nor described in Appellant’s Specification. Final Act. 5 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1334 (Fed. Cir. 2016)).

The Examiner also concludes the claims do not recite an inventive concept because, other than the abstract idea, the claims merely recite generic computer components at a high level of generality, and the generic components merely perform well-known computing functions related to manipulating data (i.e., obtaining, processing, storing, and transmitting data) to implement the abstract idea on a computer. Final Act. 4–6; Ans. 3–6. The Examiner finds the components executing these steps are similar to generic computing components sending and receiving data over the Internet and performing insignificant data-gathering steps, which the Federal Circuit

has concluded are insufficient to provide an inventive concept. Final Act. 6 (quoting *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350 (Fed. Cir. 2014) (“A computer ‘that receives and sends information over a network- with no further specification - is not even arguably inventive.’”); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014)); see Final Act. 8–9; Ans. 4–5. The Examiner identifies the generic computing components recited in claims 1 and 12 and explains why they do not add significantly more to the abstract idea. Ans. 3–5.

The Examiner also determines the dependent claims are directed to the same abstract idea as the independent claims and the additional limitations in the dependent claims merely “further describe the additional limitations” recited in the independent claims. Ans. 5–6.

Appellant’s Contentions

Appellant acknowledges that the claims are directed to an abstract idea, but argues the claims recite significantly more than the abstract idea itself because the claims “set out that a fire-and-forget [(FAF)] messaging protocol sends out sales data received by a processor” and recite a memory that receives “sales data and selects the data in a first-in first-out [(FIFO)] manner for parsing the data into a predetermined, standardized format.” Br. 11. Appellant argues the claims, therefore, provide benefits of not needing to specially configure the receiving device to work with various protocols of existing sales terminals while facilitating sales data collection and uniform presentation to a remote server. Br. 11–12.

Appellants also argue claim 4’s recitation of types of sales terminals “sets out the significant benefit of allowing different sales terminals to be used with the input terminal” without having to modify existing sales

terminals. Br. 12. Appellants argue claim 10’s recitation of details about a data backup module allow for collection of sales data even when the processing device is non-operational. Br. 12. Appellants also argue claim 14’s recitation of a rechargeable battery and secondary memory module allows for collecting sales data even when power is lost and extracting data from the secondary memory after restoring power. Br. 12.

Appellant argues the Examiner did not properly consider the claimed combination, including the benefits from the claimed use of the FAF messaging protocol, the different types of sales terminals, or the data backup module. Br. 12–14 (citing *BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016); *Research Corp. Techs., Inc. v. Microsoft Corp.*, 627 F.3d 859 (Fed. Cir. 2010)). Appellant points to the FAF messaging protocol and argues that, similar to the claims in *DDR*, Appellant’s “claimed invention solves the problem of collecting taxes or fees without continual expensive computer upgrades.” Br. 14. Appellant also attempts to distinguish *buySAFE*’s claims, arguing Appellant’s claims “are tied to particular machines, namely the sales terminals and the input terminal configured to receive data from the sales terminal devices” using the FAF messaging protocol. Br. 14–15. Appellant also argues the FAF messaging protocol is not routine or conventional when considered in combination with the other claim limitations and, therefore is different than the claims in *Ulramercial*. Br. 15.

Analysis under Step One of the Alice Test

Appellant does not contest the Examiner’s conclusion that the claims are directed to an abstract idea. Br. 11. We agree with the Examiner’s conclusion that the claims are directed to an abstract idea because the claims

focus on receiving sales data, queuing the received data, storing the received data in a random access memory, storing the received data after it is parsed, and transmitting the stored data.

The focus of Appellant’s claims is similar to the focus of claims the Federal Circuit consistently has concluded are ineligible as being directed to abstract ideas. In particular, Appellant’s claims focus on obtaining data (i.e., sales data), extracting data (parsing the sales data) storing data (the received sales data and the parsed version of the data), and transmitting data (the stored data).¹ Thus, Appellant’s claims are similar to the claims the Federal Circuit concluded were ineligible in *Content Extraction*, which recited steps of receiving data, recognizing portions of the received data, and storing the recognized portions. *Content Extraction*, 776 F.3d at 1345, 1347 (characterizing the claims as being directed to the abstract idea of collecting data, recognizing certain data within the collected data set, and storing the recognized data in a memory). Although the claims recite various generic computer hardware and software components (e.g., “input terminal,” “sales terminal devices,” “processor,” “listener application,” “queuing system,” “random access memory,” “memory module,” “output module,” “data backup module,” and “a data retrieval program”), these elements do not change the character of the claims as a whole from being directed to an abstract idea. Notably, these components are generically recited, as discussed further below with respect to our analysis of whether these

¹ We note that claims 1, 3–5, and 7–11 do not affirmatively recite parsing the data. Nevertheless, data parsing is a similarly basic data processing function as, if not a particular implementation of, extracting data. Because it does not affect our analysis for purposes of this Decision, we treat the claims as requiring a step of parsing data.

elements add an inventive concept (e.g., memories storing information; listener application, data retrieval program, input terminal, sales terminal device, processor, queuing system, and output module receiving or sending data).

The Federal Circuit has concluded similar concepts were directed to abstract ideas. Specifically, in *Electric Power*, the Federal Circuit concluded claims reciting a method of *collecting data* from various sources (similar to collecting sales data from various terminals), “detecting and analyzing events” by *identifying information in the received data* (similar to parsing data), reporting the event analysis results and visualizations of measurements, aggregating the event analysis information, and providing a composite indicator were directed to an abstract idea because the claims were directed to “collecting information, analyzing it, and displaying certain results of the collection and analysis” (similar to transmitting the data to a central server). *Electric Power*, 830 F.3d at 1351–53; *see also Smart Sys. Innovations, LLC v. Chicago Transit Auth.*, 873 F.3d 1364, 1372 (Fed. Cir. 2017) (concluding “claims directed to the collection, storage, and recognition of data are directed to an abstract idea.”); *see also SAP Am., Inc. v. InvestPIC, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (“[M]erely presenting the results of abstract processes of collecting and analyzing information . . . is abstract as an ancillary part of such collection and analysis.”) (citation omitted). These cases demonstrate that the Federal Circuit has consistently concluded claims that recite receiving, parsing, storing, and transmitting information are directed to abstract ideas. We come to the same conclusion with respect to Appellant’s claims.

For the above reasons, we agree with the Examiner that the claims are directed to an abstract idea. Thus, we turn to step two of the *Alice* analysis.

Analysis under Step Two of the Alice Test

Appellant argues the claims provide alleged benefits of not needing to specially configure the receiving device to work with various protocols of existing sales terminals while facilitating sales data collection and uniform presentation to a remote server. Br. 11–12. Appellant argues these improvements are a result of the use of the FAF messaging protocol and the use of a FIFO queuing method to process the incoming sales data and converting it to a standardized format. Br. 11–12. Appellant argues these alleged improvements constitute an improvement to a technological process, go “beyond the mere concept of processing sales data using a computer,” “solves the problem of collecting taxes or other fees without continual expensive computer upgrades,” and require “particular machines, namely the sales terminals and the input terminal configured to receive data from the sales terminal devices in the aforementioned protocol.” Br. 13–15.

Initially, we note that the claims do not recite a FIFO queuing method.² Rather, the claims recite “a queuing system for identifying and queuing the received sales data in a cyclic manner” or “employing a queuing system to select data from the connected sales terminal devices in a cyclic manner.” *See* Br. 19–20, Claims App. (claims 1 and 12). Although the queuing is done in a “cyclic manner,” this language is broad and encompasses any method of queuing as long as it involves a cycle or repetition in its process; the queuing is not limited to FIFO. Moreover,

² There is no description of any specific queuing method described in Appellant’s Specification, let alone a first-in first-out method.

Appellant does not assert FIFO queuing in unconventional, and Appellant has not sufficiently explained how implementing a well-known queuing system to receive information in a conventional manner provides a technological improvement.

We are not persuaded Appellant's claims recite an inventive concept. We agree with the Examiner that Appellant's claims recite the computer components at a high level of generality and the components merely perform generic computing functions. *See, e.g.*, Spec. 3 (describing one exemplary sales terminal as merely a "generic computer running on any given operating system . . . with a point-of-sale (POS) software"). Similar to the claims in *Content Extraction*, Appellant's claims are "drawn to the basic concept [(i.e., abstract idea)] of data recognition and storage." *Content Extraction*, 776 F.3d at 1347. Unlike the claims in *DDR*, Appellants have not demonstrated, nor do Appellants' claims address, changing a conventional way in which known technology functions. *See DDR Holdings, LLC v. Hotels.com L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). Given the generic nature of the computer components and the ability to use general processors programmed to perform the recited steps, we disagree that Appellant's claims are tied to particular machines. *See* Br. 14–15.

Rather, Appellant's claims merely recite obtaining, parsing, storing, and transmitting data using generically recited components and, contrary to Appellants' assertion, do not improve a technical field. Reciting that data is transferred using a particular messaging protocol and a queuing system in the well-known and conventional way the protocol and queuing system were designed to be used does not provide a technical improvement. Appellant does not persuasively explain how the FAF messaging protocol or queuing

system are being used in an unconventional way. Notably, the Specification does not describe any particular modifications or variations to these well-known techniques and only discusses the FAF messaging protocol and queuing to the extent necessary to describe where these known systems are used in Appellant's system and method. *See* Spec. 2–5, 7–8, 10.

Appellant has not explained, and it is not clear from Appellant's Specification, how the alleged benefit of not needing to modify the POS terminals and uniform presentation of data to a remote server is related to using the FAF messaging protocol or the general concept. For example, the Specification suggests using the FAF messaging protocol for its known benefit—"[t]he fire-and-forget messaging protocol allows the different types of connected sales terminal devices (POS systems and ECRs) to send their data to the sales data processing device, without having to receive an 'acknowledged' signal from the device." Spec. 3. Even accepting for purposes of this Decision that not needing to modify terminals and presenting information in a uniform format provides an inventive concept, we see no persuasive explanation in Appellant's argument or Specification linking the use of the FAF messaging protocol to the alleged improvement.

We also agree with the Examiner that the additional limitations in the dependent claims: (i) further define the format and content of the data, the particular type of sales terminals, the method of communication (i.e., serial port, modem); (ii) merely recite duplicate parts (i.e., memory); or (iii) recite well-known and conventional methods or components used for redundancy and backup.

For these reasons, we conclude the claim limitations, considered both individually and together, do not add significantly more to the abstract idea and, therefore, do not render the subject matter patent eligible.

THE 35 U.S.C. § 103 REJECTION

The Examiner finds Golden teaches nearly every limitation recited in independent claim 1, but takes Official Notice of the fact that the features and advantages of FAF messaging protocol are old and well-known. Final Act. 7–8.

Appellant argues only that Golden requires two-way communication and provides no teaching or suggestion of using any other type of communication in its system. Br. 16–17. Appellant argues the Examiner’s proposed modification to Golden relies only on impermissible hindsight and Golden teaches away from using a FAF message protocol because the FAF message “protocol would not provide ‘continuous electronic linkage between each data collection sub-station and the central computer.’” Br. 17 (quoting Golden 4:13–14).

Golden discloses a similar system and method to Appellant’s invention. Specifically, Golden generally relates to systems and methods for automated transaction tax reporting and collection. Golden, Abstract. Golden discloses one embodiment where sub-stations collect sales and tax data from sales terminals on a periodic, rotating basis and ultimately transmit the collected data to a central computer. Golden, Abstract. Appellant is correct that Golden only explicitly discloses sales terminals providing their sales and tax data in response to an interrogation request from the central computer or the sub-stations. *See, e.g.*, Golden 3:22–27. Golden does, however, at least suggest that portable terminals may

automatically send its transaction data when connected to a network rather than in response to an interrogation request. Golden 4:45–61 (“the portable terminal will typically not be connected to the data network While the portable terminal alone cannot, of course, be automatically and periodically contacted by the data collection sub-station as is the case for the other types of terminals”).

Further, the FAF message protocol does not preclude two-way communication between the recited input terminal and the sales terminals. According to Appellant’s Specification, the FAF message protocol merely requires that the sender of a message does not wait for an “acknowledged” signal from the recipient. Spec. 3. Even to the extent we understand Golden’s disclosure of two-way communication to suggest that Golden discloses using a message protocol other than the FAF message protocol, that is not fatal to the Examiner’s findings and conclusion.

Whether a reference teaches away from a claimed invention is a question of fact. *In re Harris*, 409 F.3d 1339, 1341 (Fed. Cir. 2005). “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, . . . would be led in a direction divergent from the path that was taken by the applicant.” *In re Haruna*, 249 F.3d 1327, 1335 (Fed. Cir. 2001) (quoting *Tec Air, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1360 (Fed. Cir. 1999) (ellipsis in original)). “When a piece of prior art ‘suggests that the line of development flowing from the reference’s disclosure is unlikely to be productive of the result sought by the applicant’ the piece of prior art is said to ‘teach away’ from the claimed invention.” *Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (quoting *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994)). However,

teaching “an alternative or equivalent method does not teach away from the use of” a claimed method. *In re Dunn*, 349 F.2d 433, 438 (CCPA 1965).

The Examiner relies on the knowledge of an ordinarily skilled artisan and the uncontested Official Notice that the FAF message protocol and its benefits were well-known. Golden’s system focuses on the ability to receive sales and tax data from various POS terminals and focuses on one particular method of obtaining that data—namely an interrogation request and response. Golden’s system and method, however, do not rely on this method of requesting data to meet Golden’s goals. Notably, at least with respect to portable terminals, Golden suggests the interrogation request and response reporting method may not be possible. *See* Golden 4:45–61. As discussed above, Golden focuses on collecting sales and tax information from POS terminals on a periodic basis. Golden, Abstract. A thorough review of Golden reveals that, notwithstanding Golden’s disclosed embodiment using an interrogation request and response message, the particular communication protocol used to receive the data is not important to Golden’s disclosed system and method. Thus, Golden does not teach away from using *any* particular messaging protocol, let alone the FAF messaging protocol.

For these reasons, we are not persuaded the Examiner erred in rejecting the claims as obvious in view of Golden and Official Notice. Accordingly, we sustain the Examiner’s rejection of claims 1, 3–5, 7–12, and 14–16 under 35 U.S.C. § 103.

DECISION

We affirm the Examiner’s decision to rejection claims 1, 3–5, 7–12, and 14–16 under 35 U.S.C. §§ 101 and 103.

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Application 14/248,631

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