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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ASHEESH KUMAR, RAMESH CHANDRA PATHAK
and SURYANARAYANA K. RAO¹

Appeal 2018-004076
Application 14/082,427
Technology Center 3600

Before CARL W. WHITEHEAD JR, JEFFREY S. SMITH and
PHILLIP A. BENNETT, *Administrative Patent Judges*.

WHITEHEAD JR., *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant is appealing the final rejection of claims 1–8 and 10–20 under 35 U.S.C. § 134(a). Appeal Brief 1. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

¹ Appellant identifies International Business Machines Corporation as the real party in interest. Appeal Brief 1.

Introduction

The invention is directed to a “method for determining a health of an account, identifying risks in the account, assessing the impact of the risks, and suggesting a remediation action and in particular to a method and associated system for providing a remedy based on account health determination.” Specification 1.

Representative Claim

1. A hardware component health improvement method comprising:

retrieving, by a computer processor of an integrated mechanism computing system of an IT infrastructure from a plurality of endpoint hardware components of said IT infrastructure, metrics associated with a customer account of a customer, wherein said metrics identify root causes for unresolved incidents and events affecting said endpoint hardware components, wherein said endpoint hardware components comprise databases, operating systems, middleware, virtual machines, hardware storage arrays, backup servers, and hardware network components, and wherein each of said computing system and said endpoint hardware components comprises a particular configuration of hardware;

categorizing, by said computer processor, a performance, an availability, monitoring, capacity management, and component hygiene of said metrics for said endpoint hardware components;

identifying, by said computer processor, incident symptom markers comprising unique markers associated with each of said unresolved incidents;

identifying, by said computer processor, root cause markers comprising markers associated with each of said root causes;

determining, by said computer processor based on said incident symptom markers and said root cause markers, a level of dependency between said endpoint hardware components;

generating, by said computer processor based on said categorizing, aggregated metrics from said metrics with respect to said plurality of endpoint hardware components;

generating, by said computer processor, additional aggregated metrics from metrics associated with additional accounts of said customer, wherein said additional aggregated metrics are aggregated with respect to additional endpoint hardware components, and wherein said additional aggregated metrics identify root causes for additional unresolved incidents and events affecting said additional endpoint hardware components;

storing, by said computer processor within a repository data storage warehouse as a time series comprising values occurring at a time of each of said events, said aggregated metrics and said additional aggregated metrics with respect to a specified technology, a database, and a storage system, wherein said repository data storage warehouse stores said aggregated metrics and said additional aggregated metrics in accordance with an overall view presentation with respect to said specified technology, said database, and said storage system;

retrieving, by said computer processor, said aggregated metrics and said additional aggregated metrics;

applying, by said computer processor executing a weighting engine, weighting factors to said aggregated metrics and said additional aggregated metrics, wherein said weighting factors are associated with criticality and importance factors;

calculating, by said computer processor based on said weighting factors applied to said aggregated metrics and said additional aggregated metrics, overall health and risk scores for said customer account and said additional accounts with respect to specified platforms and additional platforms, wherein said overall health and risk scores are associated with specified time periods;

determining, by said computer processor, incident markers for specified incidents and events affecting said plurality of endpoint hardware components, wherein said

specified incidents and events comprise hardware performance incidents and events and hardware monitoring incidents and events;

determining, by said computer processor, based on said incident markers, root causes of said specified incidents and events;

parsing, by said computer processor, said specified incidents and events with respect to a historical database;

automatically generating, by said computer processor based on said root causes and results of said parsing, technical remediation recommendations and actions for said specified incidents and events affecting said endpoint hardware components; and

providing, via said IT infrastructure and based on said technical remediation recommendations and actions, support, maintenance, and integration of said endpoint hardware components thereby implementing a health improvement process with respect to systems, subsystems, applications, middleware, and additional dependent components and subcomponents of said IT infrastructure, wherein said health improvement process comprises maintaining said databases, operating systems, middleware, virtual machines, hardware storage arrays, backup servers, and hardware network components.

Rejections on Appeal

Claims 1–8 and 10–20 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to patent ineligible subject matter. Final Action 11–19.

Claims 1, 7, 8, 10, 11, 13–15 and 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dutta (US Patent Application Publication 2011/0082719 A1; published April 7, 2011), Albrecht (US Patent Application Publication 2008/0109257 A1; published May 8, 2000), Sailer (US Patent Application Publication 2010/0318846 A1; published December

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16, 2010), Kloeffler (US Patent Application Publication 2007/0168874 A1; published July 19, 2007), Furem (US Patent 7,181,370 B2; issued February 20, 2007), Castellani (US Patent Application Publication 2014/0192970 A1; published July 10, 2014) and Zimmerman (US Patent Application Publication 2016/0012081 A1; published January 14, 2016). Final Action 20–52.

Claims 2–6, 12 and 16–19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Dutta, Albrecht, Sailer, Kloeffler, Furem, Castellani, Zimmerman and Kini (US Patent Application Publication 2012/0072781 A1; published March 22, 2012). Final Action 52–69.

ANALYSIS

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed September 8, 2017), the Reply Brief (filed March 5, 2018), the Final Action (mailed April 10, 2017) and the Answer (mailed January 4, 2018), for the respective details.

35 U.S.C. § 101 rejection

The Examiner determines that claims 1–8 and 10–20 are directed to patent ineligible subject matter because independent claims 1, 15 and 20 are “directed to a method and CRM for collecting and determining account risk and remediation information (analogous to collecting information, analyzing it, and displaying certain results of the collection and analysis).” Final Action 11; *see Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217 (2014) (describing the two-step framework “for distinguishing patents that

claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.”).

After the mailing of the Answer and the filing of the Briefs in this case, the USPTO published revised guidance on the application of § 101. 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (January 7, 2019) (hereinafter “Memorandum”). Under the Memorandum, the Office first looks to whether the claim recites:

(1) any judicial exceptions, including certain groupings of abstract ideas (i.e., (a) mathematical concepts, (b) certain methods of organizing human activity such as a fundamental economic principles and practice, commercial or legal interactions, managing personal behavior, relationships, interpersonal interactions, (c) mental processes; and

(2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h) (9th ed. 2018)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, does the Office then 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.

See Memorandum.

We are not persuaded the Examiner’s rejection is in error. Unless otherwise indicated, we adopt the Examiner’s findings and conclusions as

our own, and we add the following primarily for emphasis and clarification with respect to the Memorandum.

Alice/Mayo—Step 1 (Abstract Idea)

Step 2A—Prongs 1 and 2 identified in the Revised Guidance

Step 2A, Prong One

“Appellants assert that claims 1, 15, and 20 are **directed to** ‘A hardware component health improvement method’ (A) as recited in the preamble of claims 1, 15, and 20; and (B) as expressed in the body of claims 1, 15 and 20.” Appeal Brief 15. Appellants’ arguments are not persuasive. Instead, we agree with the Examiner’s determination that the claims are directed to an abstract idea. Final Action 11–16. Appellants’ Abstract states, “A method and system for determining account health, identifying and rating hidden and visible risks, and identifying remediation actions in response to identified risks and as a means to improve account health scores is provided. The method includes retrieving metrics associated with a customer account of a customer.”

The Specification discloses:

System 100 enables a method for providing a consolidated account health assessment involving a combination of root cause analysis, a risk assessment, skill gap identification, and remedial action recommendation with respect to large scale data. The method for providing a consolidated account health assessment and risk identification includes performing a consolidated assessment comprising a combination of root cause analysis, risk assessment, skill gap identification, and remedial action recommendation on large scale data by collecting metrics during the occurrence of events across multiple services and identifying matching metrics across the events to provide suitable solutions. Specification 4–5.

Claim 1 recites a “hardware component health improvement method” wherein:

1. retrieving, by a computer processor of an integrated mechanism computing system of an IT infrastructure from a plurality of endpoint hardware components of said IT infrastructure, metrics associated with a customer account of a customer, wherein said metrics identify root causes for unresolved incidents and events affecting said endpoint hardware components;
2. categorizing, by said computer processor, a performance, an availability, monitoring, capacity management, and component hygiene of said metrics for said endpoint hardware components;
3. identifying, by said computer processor, incident symptom markers comprising unique markers associated with each of said unresolved incidents;
4. identifying, by said computer processor, root cause markers comprising markers associated with each of said root causes;
5. determining, by said computer processor based on said incident symptom markers and said root cause markers, a level of dependency between said endpoint hardware components;
6. generating, by said computer processor based on said categorizing, aggregated metrics from said metrics with respect to said plurality of endpoint hardware components;
7. generating, by said computer processor, additional aggregated metrics from metrics associated with additional accounts of said customer, wherein said additional aggregated metrics are aggregated with respect to additional endpoint hardware components, and wherein said

- additional aggregated metrics identify root causes for additional unresolved incidents and events;
8. applying, by said computer processor executing a weighting engine, weighting factors to said aggregated metrics and said additional aggregated metrics, wherein said weighting factors are associated with criticality and importance factors;
 9. calculating, by said computer processor based on said weighting factors applied to said aggregated metrics and said additional aggregated metrics, overall health and risk scores for said customer account and said additional accounts with respect to specified platforms and additional platforms, wherein said overall health and risk scores are associated with specified time periods;
 10. determining, by said computer processor, incident markers for specified incidents and events affecting said plurality of endpoint hardware components, wherein said specified incidents and events comprise hardware performance incidents and events and hardware monitoring incidents and events;
 11. determining, by said computer processor, based on said incident markers, root causes of said specified incidents and events;
 12. parsing, by said computer processor, said specified incidents and events with respect to a historical database;
 13. automatically generating, by said computer processor based on said root causes and results of said parsing, technical remediation recommendations and actions for said specified incidents and events affecting said endpoint hardware components; and

14. providing, via said IT infrastructure and based on said technical remediation recommendations and actions, support, maintenance, and integration of said endpoint hardware components thereby implementing a health improvement process with respect to systems, subsystems, applications, middleware, and additional dependent components and subcomponents of said IT infrastructure, wherein said health improvement process comprises maintaining said databases, operating systems, middleware, virtual machines, hardware storage arrays, backup servers, and hardware network components.

The claim recites the abstract idea of employing mental processes — concepts performed in the human mind including observance and evaluation. *See* Memorandum, Section I (Groupings of Abstract Ideas); Final Action 12; *see also* Specification 5 (“The method for providing a consolidated account health assessment and risk identification includes performing a consolidated assessment comprising a combination of root cause analysis, risk assessment, skill gap identification, and remedial action recommendation . . . identifying matching metrics across the events to provide suitable solutions.”); *see also Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1318 (Fed. Cir. 2016) (“[W]ith the exception of generic computer implemented steps, there is nothing in the claims themselves that foreclose them from being performed by a human, mentally or with pen and paper.”).

Therefore, we conclude the claims recite an abstract idea pursuant to Step 2A, Prong One of the guidance. *See* Memorandum, Section III(A)(1) (Prong One: Evaluate Whether the Claim Recites a Judicial Exception).

Step 2A, Prong Two

Under Prong Two of the Revised Guidance, we must determine “whether the claim as a whole integrates the recited judicial exception into a practical application of the exception” it is noted that a “claim that integrates a judicial exception into a practical application will apply, rely on, or use 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.” Memorandum, Section III(A)(2).

Appellant lists a multitude of claim 1’s limitations (steps) and argue that the steps, “**improve** the [recited hardware] components and [the] IT system [that] pertains to what claims 1, 15, and 20 are **directed to**; the other steps pertain to what claims 1, 15, and 20 **involve** and is thus irrelevant to the issue of whether the claims 1, 15, and 20 are directed to an abstract idea, based on *Enfish*.” Appeal Brief 18. Appellant argues, “that claims 1, 15, and 20 do not merely recite collecting, analyzing, and displaying information (as alleged by the Examiner)” and “contend that the claimed component health improvement process (of Appellant’s claims) that results in an IT system technology improvement that includes: identifying incidents, events, and associated unique (digital) markers affecting endpoint hardware components; specialized repository view based storage; and a hardware component maintenance process does not involve any type of process for merely collecting, analyzing, and displaying information.” Appeal Brief 19–20; *see* Final Action 11–12.

Appellant further contends:

[T]he Examiner has incorrectly concluded that “the term “health” is unclear. Given the broadest reasonable interpretation, improving health can be towards improving the business process rather than any physical improvement” as Appellants argue that the claims as amended clearly describe a fully supported health improvement process for maintaining hardware components and not a business process as alleged by the Examiner as supported on page 8 of the specification as follows: “end point components contracted by the IT infrastructure services provider to support and maintain”. Appellants contend that the term “maintenance” with respect to hardware comprises a modification of software or hardware to correct faults to improve performance to adapt to a changed environment.

Appeal Brief 21 (emphasis added).

We do not find Appellant’s arguments persuasive. The recited limitations do not reflect an improvement in the functioning of a computer or other technology or technical field. *See* Memorandum, 84 Fed. Reg. at 55; *cf. Trading Techs. Int’l, Inc. v. IBG LLC*, No. 2017-2257, 2019 WL 1716242, at *3 (Fed. Cir. Apr. 18, 2019) (“This invention makes the trader faster and more efficient, not the computer. This is not a technical solution to a technical problem.”). Further, as the Federal Circuit has explained, a “claim for a *new* abstract idea is still an abstract idea.” *Synopsis, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). Even assuming the technique claimed was “[g]roundbreaking, innovative, or even brilliant,” that would not be enough for the claimed abstract idea to be patent eligible. *See Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 591 (2013).

Furthermore, we do not find Appellant’s arguments persuasive because the claimed method merely identifies incidents and events that occur within the claimed components and subsequently provides

maintenance of the claimed components based upon technical remediation recommendations and generated actions. *See* Appeal Brief 23²; *see also* *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335–36 (Fed. Cir. 2016) (“[W]e find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea . . . the focus of the claims is on the specific asserted improvement in computer capabilities (i.e., the self-referential table for a computer database) or, instead, on a process that qualifies as an ‘abstract idea’ for which computers are invoked merely as a tool.”).

Subsequently, we find the claim in the instant application is more akin to the claims the Federal Circuit found ineligible in *OIP Technologies*³ than

² “[T]hat a component health improvement method that includes identifying incidents, events, and associated unique (digital) markers or keys (not able to be performed on the human mind) affecting endpoint hardware components; enabling specialized repository view based storage; and maintaining hardware components based on generated actions does not merely comprise collecting, analyzing, and displaying certain results of the collection and analysis of data as alleged by the Examiner.”
Appeal Brief 23.

³ Like the claims in *Mayo*, which added only the routine steps of administering medication and measuring metabolite levels for the purposes of determining optimal dosage, here the addition of steps to test prices and collect data based on customer reactions does not add any meaningful limitations to the abstract idea. *Mayo*, 132 S. Ct. at 1297–98; *see also* *Alice*, 134 S. Ct. at 2357 (“‘Simply appending conventional steps, specified at a high level of generality,’ was not ‘enough’ to supply an ‘inventive concept.’”) (quoting *Mayo*, 132 S. Ct. at 1300, 1297, 1294); *see also* *Ultramercial*, 772 F.3d at 716 (“[T]he steps of consulting and updating an activity log represent insignificant ‘data-gathering steps,’ ... and thus add nothing of practical significance to the underlying abstract idea.”) (Citations

the claims found eligible in *Classen*⁴ because the claim merely gathers and collect information in a well-known manner thus failing to provide a meaningful limitation on the abstract idea. *See OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363–1364 (Fed. Cir. 2015); *see also* M.P.E.P 2106.05 (e).

Consequently, we detect no additional element (or combination of elements) recited in Appellant’s representative claim 1 that integrates the judicial exception into a practical application. *See* Memorandum, Section III(A)(2). For example, Appellant’s claimed additional elements (e.g., endpoint hardware components) do not: (1) improve the functioning of a computer or other technology; (2) are not applied with any particular machine (except for a generic IT infrastructure); (3) do not effect a transformation of a particular article to a different state; and (4) are not applied in any meaningful way beyond generally linking the use of the judicial exception to a particular technological environment, such that the claim as a whole is more than a drafting effort designed to monopolize the exception. *See* MPEP §§ 2106.05(a)-(c), (e)-(h); *see also* Memorandum 55, notes 25, 27, 28, 29, 30, 31 and 32; *see also* *Alice*, 573 U.S. at 226 (“Nearly every computer will include a ‘communications controller’ and ‘data storage

omitted).

⁴ *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057 (Fed. Cir. 2011) (decision on remand from the Supreme Court, which had vacated the lower court’s prior holding of ineligibility in view of *Bilski v. Kappos*, 561 U.S. 593 (2010)).

unit’ capable of performing the basic calculation, storage, and transmission functions required by the method claims”).

Accordingly, we determine the claim does not integrate the recited judicial exception into a practical application. *See* Memorandum, Section III(A)(2) (Prong Two: If the Claim Recites a Judicial Exception, Evaluate Whether the Judicial Exception Is Integrated Into a Practical Application).

Alice/Mayo—Step 2 (Inventive Concept)
Step 2B identified in the Revised Guidance

Step 2B

Next, we determine whether the claim includes additional elements that provide significantly more than the recited judicial exception, thereby providing an inventive concept. *Alice*, 573 U.S. at 217–18 (quoting *Mayo*, 566 U.S. at 72–73).

Appellant contends, “[T]hat a person cannot determine a level of dependency between hardware/software components as Appellants argue that determining hardware component dependencies involves the use of complex machine implemented algorithms” and therefore “Appellants contend that the claimed hardware component health improvement method does not merely comprise an idea of itself and therefore does amount to significantly more than an abstract idea.”

Appeal Brief 21–22.

The Examiner finds, “[I]mproving health can be towards improving the business process rather than any physical improvement, which would not constitute as ‘significantly more.’” Final Action 17.

We find that claim 1 does not include a specific limitation or a combination of elements that amounts to significantly more than the judicial exception itself. *See* Memorandum, Section III(B)(Step 2B: If the Claim Is Directed to a Judicial Exception, Evaluate Whether the Claim Provides an Inventive Concept); *see also Aatrix Software, Inc. v. Green Shades Software, Inc.*, 890 F.3d 1354, 1359 (Fed. Cir. 2018) (“the ‘inventive concept’ cannot be the abstract idea itself”). Other than the abstract idea itself, the remaining claim elements only recite generic computer components that are well-understood, routine and conventional. *See* Final Action 17 (“The method and system, as claimed by the [Appellant], is no more than a general linking of the use of the abstract idea (using generic computers to implement an idea of itself) to a particular technological environment (the use of computers to organize and determine data). The recitation of well-known computer functions does not meet the ‘significantly more’ threshold.”); *see also Alice*, 573 U.S. at 226.

Accordingly, we conclude claims 1–8 and 10–20 are directed to the abstract idea of employing mental processes to observe, evaluate and render a judgment/opinion; and further conclude, the claims do not recite limitations that amount to significantly more than the abstract idea itself. We sustain the Examiner’s § 101 rejection of claims 1–8 and 10–20.

35 U.S.C. § 103 rejection

Appellant argues, “[T]he Examiner has not provided a location in any of the cited prior art that illustrates Appellants claimed feature of: markers associated with root causes and/or incidences affecting hardware and software components” and Appellant further asserts the Examiner’s reliance

upon Sailer’s paragraphs 9–13 is not proper because “Sailer mentions a true root but is totally silent with respect to incident markers for endpoint hardware components.” Appeal Brief 44. We do not find Appellant’s arguments persuasive because the arguments are not commensurate with the scope of the claims.

Claim 1 recites, “identifying, by said computer processor, incident symptom markers comprising unique markers associated with each of said unresolved incidents; identifying, by said computer processor, root cause markers comprising markers associated with each of said root causes.” Appellant’s Specification discloses, “Internal functional view 200 comprises the following markers: an incident symptom marker and a root cause marker. An incident symptom marker comprises a unique marker associated with each incident. A root cause marker of an incident is expressed as a non-linear model depending on a number of variants.” Specification 10; *see* Appeal Brief 2–3. Sailer discloses in the Abstract, “Historical problem data is labeled with the cause of that problem and is analyzed to learn problem patterns. The historical problem data is classified into a predefined hierarchical structure of taxonomies by using an incremental online learning algorithm.” Sailer further discloses:

Problem determination and resolution (PDR) is the process of detecting anomalies in a monitored system, locating the problems responsible for the issue, determining the root cause of the problem and fixing the cause of the problem. Thus, identifying the type of problem and the cause of the problem are important aspects in searching for the relevant fix.
Sailer, paragraph 4.

We agree with the Examiner’s findings that Sailer discloses the markers as claimed because neither the Specification nor the disputed claim

limitations distinguishes the markers from Sailer's markers. *See* Final Action 27–30.

Appellant argues, “Castellani (paragraph 0063) merely teaches dependencies between KPI [Key Performance Indicators] data and therefore the aforementioned specialized hardware component dependency levels of Appellants claims patentable distinguish Appellants claims from the cited prior art.” Appeal Brief 46. Claim 1 recites, “determining, by said computer processor based on said incident symptom markers and said root cause markers, a level of dependency between said endpoint hardware components.” Appellant contends support for the recited limitation can be found on pages 12 (“3. Level of dependency between an affected end point and related end points (d).”) and 13 (“B. Allocating importance factors to the metrics from dependent end points depending on an end point type a level of dependency.”) of the Specification. Appeal Brief 3.

We do not find Appellant's arguments persuasive because the arguments are not commensurate with the scope of the claims. We agree with the Examiner's findings that Castellani discloses the claimed dependencies because neither the Specification nor the disputed claim limitations distinguishes the claimed dependencies from Castellani's dependencies. *See* Final Action 38–39.

Appellant contends the combination of references “does not even suggest any time related functions associated with any type of events” and argues:

[T]hat Zimmerman merely teaches metadata snapshots (of an IT environment) with time record storage (i.e., differing from aggregated metrics being stored as a time series associated with hardware component event times) and therefore the

aforementioned aggregated metrics being stored as a time series of Appellants claims patentable distinguish Appellants claims from the cited prior art.

Appeal Brief 53.

Appellant discloses support for the claimed time related functions are found on page 9 of the Specification, lines 1–10. Appeal Brief 2 (“The aggregated metrics and the additional aggregated metrics are stored within a repository data storage warehouse as a time series comprising values occurring at a time of each of the events.”). The Specification discloses:

The dashboards are based on actual statistical and point-in time data stored in metrics warehouse repository 110 to determine exact underlying metrics that contributed to an associated rating thereby providing the ability to generate informed metric-based decisions as where to direct remedial actions and resources to achieve greatest overall rating improvements.

Specification, lines 6–9.

We do not find Appellant’s arguments persuasive. Claim 1 recites, “storing, by said computer processor within a repository data storage warehouse as a time series comprising values occurring at a time of each of said events.” Zimmerman discloses:

For example, the system may take multiple snapshots of metadata in the local IT environment at different points in time and thereby derive multiple instances of the relationship model at different points in time. The system may store a record the time at which each snapshot was taken so that the time of each snapshot may be used in subsequent processing.

Zimmerman ¶ 28.

We agree with the Examiner’s findings that Zimmerman discloses the claimed time related functions because neither the Specification nor the

disputed claim limitation distinguishes the claimed time related functions from Zimmerman's time related functions. *See* Final Action 40.

Appellant contends that:

Dutta in view of Albrecht, Sailer, Kloeffler, Furem, Castellani, and Zimmerman does not even suggest maintaining any specific types of components such as operating systems, middleware, virtual machines, storage arrays and/or network components (as claimed by Appellants) as Appellants contend that Zimmerman (i.e., as per Examiner's rejection with respect to Applicant's "health improvement" and "maintenance" limitation) does not specify maintaining or performing actions to any type of specified components.

Appeal Brief 54.

"Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references." *In re Merck*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (Fed. Cir. 1981)).

Accordingly, we do not find Appellant's arguments persuasive and agree with the Examiner's findings that Zimmerman discloses a variety of components. *See* Final Action 42–43 (*citing* Zimmerman, paragraph 64). Further, the Examiner relied upon other references such as Dutta, Albrecht and Sailer to disclose the health improvement and maintenance aspect of the claimed invention and not Zimmerman. *See* Final Action 20–34.

We sustain the Examiner's obviousness rejections of independent claims 1, 15 and 20, as well as, dependent claims 2–7, 10–14 and 16–19, not argued separately with distinction.

CONCLUSION

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-8, 10-20	101		1-8, 10-20	
1, 7, 8, 10, 11, 13-15, 20	103	Dutta, Albrecht, Sailer, Kloeffler, Furem, Castellani, Zimmerman	1, 7, 8, 10, 11, 13-15, 20	
2-6, 12, 16-19	103	Dutta, Albrecht, Sailer, Kloeffler, Furem, Castellani, Zimmerman, Kini	2-6, 12, 16-19	
Overall Outcome			1-8, 10-20	

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). *See* 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED