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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SCOTT W. WOLCHOK, JONATHAN P. DANN, and NICHOLAS HAGE SCHROCK

Appeal 2018-004555
Application 13/601,666[1]
Technology Center 2100

Before JUSTIN BUSCH, JASON J. CHUNG, and BETH Z. SHAW, *Administrative Patent Judges*.

CHUNG, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Non-Final Rejection of claims 1–15. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

INVENTION

The invention relates to information management, including information storage, retrieval, and processing. Spec. ¶ 1.

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[1] According to Appellants, Facebook, Inc. is the real party in interest. App. Br. 3.

Claim 1 is illustrative of the invention and is reproduced below:

1. A method by one or more computing systems of an online social network, comprising:

receiving, at the one or more computing systems from a third-party system, a call to a self-documenting API comprising a query for a data structure of a specific data type to be retrieved from one or more graphs associated with a social-networking system stored in one or more data stores, each of the graphs comprising a plurality of nodes arranged in a hierarchical structure, the plurality of nodes corresponding to a plurality of data items, respectively, the plurality of data items being of a plurality of data types;

retrieving, by the one or more computing systems, a definition for the specific data type, the definition specifying the data structure for the specific data type, the data structure including (1) a name of the specific data type, and (2) for each of one or more fields of the data structure, a name and a description of the field;

sending, from the one or more computing systems to the third-party system, instruction for presenting the retrieved data structure at the third-party system in response to the call, wherein all fields of the retrieved data structure are presented in a hierarchical list arranged in a specific hierarchical format with notations corresponding to (1) the name of the specific data type and (2) the names and the descriptions of the fields of the data structure, and wherein the specific hierarchical format corresponds to the query of the data structure;

receiving, at the one or more computing systems from the third-party system, a data query expressed in a format corresponding to the data structure specified in the definition, the data query requesting one or more of the data items of the plurality of data items;

retrieving, by the one or more computing systems using the data query, the requested data items from the graphs; and

sending, from the one or more computing systems to the third-party system, the one or more of the retrieved data items in response to the data query.

REJECTIONS AT ISSUE[2]

Claims 1–15 stand rejected under 35 U.S.C. § 101 as being directed to ineligible subject matter. Non-Final Act. 6–11.

Claims 1, 3, 5, 7, 9, 11 and 13–15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Fisher (US 2012/0110560 A1; published May 3, 2012) and Shrufi (US 2007/0174304 A1; published July 26, 2007). Non-Final Act. 11–18.

Claims 2, 6 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Fisher, Shrufi and Gawlick (US 6,377,953 B1; published April 23, 2002). Non-Final Act. 18–19.

Claims 4, 8 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Fisher, Shrufi and Champion (US 2009/0006429 A1; published January 1, 2009). Non-Final Act. 19–20.

ANALYSIS

I. Claims 1–15 Rejected Under 35 U.S.C. § 101

A. The Examiner's Conclusions and Appellants' Arguments

The Examiner concludes the present claims are directed to mental processes—namely, "collecting, recognizing and storing data" and more specifically using a mental process to "(1) create an index . . . (2) use the index to search for and retrieve data." Non-Final Act. 7–9, 20–23; Ans. 3–9. The Examiner also determines the present claims do not amount to significantly more than an abstract idea because the Examiner finds the abstract idea is implemented on a computer using generic components that

[2] The double patenting rejection is withdrawn. Ans. 3.

are well-understood, routine, and conventional activities previously known to the industry. Non-Final Act. 7–11, 20–23; Ans. 9–12.

Appellants argue the claims are directed to a specific improvement in computer capabilities because they recite a particular technical solution for dealing with an unknown application programming interface ("API") of an online social network and unknown methods of calling the particular data structures of the online social network through the application programming interface. App. Br. 10–12; Reply Br. 1–4. Citing the six step process recited in claim 1, Appellants argue the steps require that a machine plays "a significant part in permitting the claimed method to be performed" that distinguish the claims from abstract ideas identified by the Supreme Court in *Alice* (i.e., a fundamental economic practice, a method of organizing human activity, an idea of itself, or a mathematical relationship or formula). App. Br. 11–12.

Appellants argue the present claims are directed to providing a specific technological improvement to the use of an API using social networking services. App. Br. 12–17; Reply Br. 3–4. Additionally, Appellants argue that the present claims are patent eligible because they do not preempt any abstract idea. App. Br. 16–17. In addition, Appellants argue that the Examiner failed to provide any factual support for the finding that the abstract idea is implemented on a computer using generic computers that are well-understood, routine, and conventional activities previously known to the industry. Reply Br. 4–5 (citing *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018)). We are not persuaded by these arguments.

B. Legal Principles

An invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. However, the Supreme Court has long interpreted 35 U.S.C. § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *E.g.*, *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

In determining whether a claim falls within an excluded category, we are guided by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 217–18 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012)). In accordance with that framework, we first determine what concept the claim is "directed to." *See Alice*, 573 U.S. at 219 ("On their face, the claims before us are drawn to the concept of intermediated settlement, i.e., the use of a third party to mitigate settlement risk."); *see also Bilski v. Kappos*, 561 U.S. 593, 611 (2010) ("Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk.").

Concepts determined to be abstract ideas, and thus patent ineligible, include certain methods of organizing human activity, such as fundamental economic practices (*Alice*, 573 U.S. at 219–20; *Bilski*, 561 U.S. at 611); mathematical formulas (*Parker v. Flook*, 437 U.S. 584, 594–95 (1978)); and mental processes (*Gottschalk v. Benson*, 409 U.S. 63, 69 (1972)). Concepts determined to be patent eligible include physical and chemical processes, such as "molding rubber products" (*Diamond v. Diehr*, 450 U.S. 175, 191 (1981)); "tanning, dyeing, making water-proof cloth, vulcanizing India rubber, smelting ores" (id. at 182 n.7 (quoting *Corning v. Burden*, 56 U.S.

(15 How.) 252, 267–68 (1854))); and manufacturing flour (*Benson*, 409 U.S. at 69 (citing *Cochrane v. Deener*, 94 U.S. 780, 785 (1876))).

In *Diehr*, the claim at issue recited a mathematical formula, but the Supreme Court held that "[a] claim drawn to subject matter otherwise statutory does not become nonstatutory simply because it uses a mathematical formula." *Diehr*, 450 U.S. at 187; *see also id.* at 191 ("We view respondents' claims as nothing more than a process for molding rubber products and not as an attempt to patent a mathematical formula."). Having said that, the Supreme Court also indicated that a claim "seeking patent protection for that formula in the abstract . . . is not accorded the protection of our patent laws, . . . and this principle cannot be circumvented by attempting to limit the use of the formula to a particular technological environment." *Id.* (citing *Benson* and *Flook*); *see, e.g.*, *id.* at 187 ("It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection.").

If the claim is "directed to" an abstract idea, we turn to the second step of the *Alice* and *Mayo* framework, where "we must examine the elements of the claim to determine whether it contains an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." *Alice*, 573 U.S. at 221 (quotation marks omitted). "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Id.* (quoting *Mayo*, 566 U.S. at 77). "[M]erely requir[ing] generic computer implementation[] fail[s] to transform that abstract idea into a patent-eligible invention." *Id.*

The PTO recently published revised guidance on the application of § 101. USPTO's January 7, 2019 Memorandum, *2019 Revised Patent Subject Matter Eligibility Guidance* ("Memorandum"). 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, certain methods of organizing human activity such as a fundamental economic practice, or mental processes); and
>
> (2) additional elements that integrate the judicial exception into a practical application (*see* MPEP § 2106.05(a)–(c), (e)–(h)).

Only if a claim (1) recites a judicial exception and (2) does not integrate that exception into a practical application, do we then look to whether the claim:

> (3) adds a specific limitation beyond the judicial exception that are 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 have only considered those arguments that Appellants actually raised in the Briefs. Arguments Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

C. Discussion

1. Step 2A, Prong 1 (Alice Step 1)

We consider claim 1 (with emphasis), reproduced below.

1. A method by one or more computing systems of an online social network, comprising:

receiving, at the one or more computing *systems from a third-party system*, *a call* to a self-documenting API *comprising a query for a data structure of a specific data type to be retrieved from one or more graphs associated with a social-networking system stored in one or more data stores, each of the graphs comprising a plurality of nodes arranged in a hierarchical structure, the plurality of nodes corresponding to a plurality of data items, respectively, the plurality of data items being of a plurality of data types;*

retrieving, by the one or more computing systems, *a definition for the specific data type, the definition specifying the data structure for the specific data type, the data structure including (1) a name of the specific data type, and (2) for each of one or more fields of the data structure, a name and a description of the field;*

sending, from the one or more computing systems *to the third-party system, instruction for presenting the retrieved data structure at the third-party system in response to the call, wherein all fields of the retrieved data structure are presented in a hierarchical list arranged in a specific hierarchical format with notations corresponding to (1) the name of the specific data type and (2) the names and the descriptions of the fields of the data structure, and wherein the specific hierarchical format corresponds to the query of the data structure*;

receiving, at the one or more computing systems *from the third-party system, a data query expressed in a format corresponding to the data structure specified in the definition, the data query requesting one or more of the data items of the plurality of data items*;

retrieving, by the one or more computing systems *using the data query, the requested data items from the graphs*; and

sending, from the one or more computing systems *to the third-party system, the one or more of the retrieved data items in response to the data query*.

We conclude the emphasized text above recites concepts performed in the human mind (including an observation, evaluation, judgment, opinion). These concepts performed in the human mind are mental processes. *See* Memorandum. These mental processes are an abstract idea. *See id.*

> Moreover, we conclude the claims at issue here are directed to
>
> receiving a first query for a data structure through use of an API, retrieving and sending the data structure, the data structure including a name and description of the data type, receiving a subsequent query corresponding to the data structure, and ultimately retrieving and sending the appropriate data item in response to the second query,

which Appellants also admit (App. Br. 13). The claims at issue are analogous to the claims in *Intellectual Ventures I LLC v. Erie Indemnity Co.*, 850 F.3d 1315, 1327 (Fed. Cir. 2017). In *Intellectual Ventures*, the court held that the claims were drawn to "creating an index, and using that index to search for and retrieve data," which is similar to the present claims. *Id.* at 1327. In both cases, they are drawn to mental processes, which is an abstract idea.

Because we conclude the independent claims recite an abstract idea, we proceed to Prong Two to determine whether the claims are "directed to" the judicial exception.

2. Step 2A, Prong 2 (Alice Step 1)

Claim 1 does not integrate the abstract idea into a practical application because it does not impose any meaningful limits on practicing the abstract idea. In particular, the claim does not recite improvements to the functioning of a computer or to any other technology or technical field.

Unlike the claims of *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016), the present claims are not directed to "a specific improvement to the way computers operate, embodied in the self-referential table." *Id.* at 1336. Instead, as described by the Specification (Spec. ¶¶ 22, 39, 45–56), the present claims focus on abstract ideas that merely use computers as tools.

In particular, Appellants' argue that the claims recite a particular technical solution for dealing with an unknown API of an online social network and unknown methods of calling the particular data structures of the online social network through the API. App. Br. 10–12; Reply Br. 1–4. This argument is unpersuasive because "a claim for a *new* abstract idea is still an abstract idea." *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016). "[U]nder the *Mayo/Alice* framework, a claim directed to a newly discovered law of nature (or natural phenomenon or abstract idea) cannot rely on the novelty of that discovery for the inventive concept necessary for patent eligibility . . . ." *Genetic Techs. Ltd. v. Merial L.L.C.*, 818 F.3d 1369, 1376 (Fed. Cir. 2016) (citations omitted). Contrary

to Appellants' arguments (App. Br. 10–12; Reply Br. 1–4), claim 1 is directed to an abstract idea—not an improvement to computer functionality.

Additionally, our reviewing court in *Intellectual Ventures I* distinguished the claims in that case from *Enfish* because those claims were "not focused on *how* usage of the XML tags alters the database in a way that leads to an improvement in technology of computer databases. Instead, the claims simply call for XML-specific tags in the index without further detail." *Intellectual Ventures I* at 1327.

We disagree with Appellants' argument that the fact the claim requires a machine to perform the steps renders the claim eligible (App. Br. 11–12) because, in this case, claim 1 recites generic computer components such as "one or more computer systems" at a high level of generality. *See* Spec. ¶¶ 9, 10 ("the API may have any number of versions"), 22 ("a computing system (e.g., server)"), 45–56 ("this disclosure contemplates any suitable number of computer systems").

Additionally, we are not persuaded by Appellants' argument that the present claims are patent eligible because they do not preempt any abstract idea (App. Br. 16–17); while preemption may denote patent ineligibility, its absence does not demonstrate patent eligibility. *See FairWarning, IP, LLC v. Iatric Sys., Inc.*, 839 F.3d 1089, 1098 (Fed. Cir. 2016). For claims covering a patent-ineligible concept, preemption concerns "are fully addressed and made moot" by an analysis under the *Mayo/Alice* framework. *Ariosa Diagnostics, Inc. v. Sequenom, Inc.,* 788 F.3d 1371, 1379 (Fed. Cir. 2015).

Nor are we persuaded by Appellants' argument that the present claims are directed to providing a specific technological improvement to the use of

an API using social networking services (App. Br. 12–17; Reply Br. 3–4) because the present claims do not recite other meaningful limitations that describes a process or product that applies the exception in a meaningful way. Rather, we conclude, and Appellants concede (App. Br. 13), the present claims are directed to

> receiving a first query for a data structure through use of an API, retrieving and sending the data structure, the data structure including a name and description of the data type, receiving a subsequent query corresponding to the data structure, and ultimately retrieving and sending the appropriate data item in response to the second query requires.

Moreover, we determine the additional elements in claim 1 (e.g., "one or more computing systems" and "self-documenting API") are merely generic components insufficient to integrate the abstract idea into a practical application. These additional elements in claim 1 are described in the Specification at a high level of generality insufficient to integrate the abstract idea into a practical application. Spec. ¶¶ 9, 10 ("the API may have any number of versions"), 22 ("a computing system (e.g., server)"), 27, 45–56 ("this disclosure contemplates any suitable number of computer systems").

Appellants do not make any other arguments pertaining to step 2A, prong 2. Because the present claims are directed to an abstract idea, we proceed to Step 2B.

3. Step 2B (Alice Step 2)

We are not persuaded by Appellants' argument that the Examiner fails to provide factual support for the determination that the abstract idea is

implemented on a computer using generic components that are well-understood, routine, and conventional activities previously known to the industry. Reply Br. 4–5. The Examiner supports the determination that the abstract idea is implemented on a computer using generic components that are well-understood, routine, and conventional activities. Ans. 9 (citing *Content Extraction & Transmission v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1359 (Fed. Cir. 2014)); Non-Final Act. 7–11, 20–23. According to MPEP 2106.05(d), *Content Extraction* is one of the cases that the Examiner may use to support a determination of well-understood, routine, and conventional activities.

Additionally, we determine the additional elements in claim 1 (e.g., "one or more computing systems" and "self-documenting API") are merely generic components. Spec. ¶¶ 9, 10 ("the API may have any number of versions"), 22 ("a computing system (e.g., server)"), 27, 45–56 ("this disclosure contemplates any suitable number of computer systems"). Appellants' Specification itself demonstrates the well-understood, routine, and conventional nature of these additional elements because the Specification describes the additional elements in a manner that indicates the additional elements are sufficiently well-known.

Appellants do not argue separately claims 2–15 with particularity, but assert the rejections of those claims should be withdrawn for at least the same reasons as argued for independent claim 1. App. Br. 7–19; Reply Br. 1–5. Accordingly, we sustain the Examiner's rejection of: (1) independent claims 1, 5, and 9; and (2) dependent claims 2–4, 6–8, and 10–15 under 35 U.S.C. § 101.

II. Claims 1–15 Rejected Under 35 U.S.C. § 103

A. Does the combination of Fisher and Shrufi teach receiving a call to an API from a third party system, sending anything in response to the call, and sending queries related to a particular data of a social graph?

The Examiner finds Fisher teaches a person using a development device to develop software with element 610 illustrating a self-documenting aspect of an API, which the Examiner maps to the limitation "receiving . . . from a third-party system, a call to a self-documenting API" recited in claim 1. Non-Final Act. 12 (citing Fisher ¶ 30) Ans. 18–19 (citing Fisher ¶ 2; Fig. 6A). In addition, the Examiner finds Fisher teaches querying a web-based semantic store ("WSS") for data identifiers corresponding to a received reference and method names are a translation of the data identifiers provided by the WSS in response to the query, which the Examiner maps to the limitation "sending . . . to the third-party system, instruction for presenting the retrieved data structure at the third-party system in response to the call" recited in claim 1. Non-Final Act. 14 (citing Fisher ¶¶ 7, 8, 65–67). Additionally, the Examiner finds Shrufi teaches modeling "persons and relations between them" as graphs with nodes. Non-Final Act. 16. These modeled graphs are social networks and Shrufi teaches querying the social networks, which the Examiner maps to the limitation

> a query for a data structure of a specific data type to be retrieved from one or more graphs associated with a social-networking system stored . . . the graphs comprising a plurality of nodes arranged in a hierarchical structure, the plurality of nodes corresponding to a plurality of data items, respectively

recited in claim 1. Non-Final Act. 16–17 (citing Shrufi ¶¶ 1, 17, 18, 21, 22, 40, 41, Fig. 1).

Appellants argue Fisher does not teach receiving a call to an API from a third party system, sending anything in response to the call, and sending queries related to a particular data of a social graph. App. Br. 24–25; Reply Br. 8. We disagree.

As an initial matter, Appellants' argument pertaining to Fisher failing to teach sending queries related to a particular data of a social graph (App. Br. 24–25; Reply Br. 8) is unpersuasive because one cannot show nonobviousness "by attacking references individually" where the rejections are based on combinations of references. *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425 (CCPA 1981)). In this case, the Examiner correctly points out that Fisher is not cited to disclose queries related to a particular data of a social graph because this feature was cited in the Non-Final Action as being disclosed by Shrufi. Ans. 17. In particular, as discussed above, the Examiner finds Shrufi's modeling of people and their relationships using nodes in graphs are social networks, and Shrufi teaches querying the graphs, which teaches the disputed portion of the limitation. Non-Final Act. 16–17 (citing Shrufi ¶¶ 1, 17, 18, 21, 22, 40, 41, Fig. 1). Moreover, Shrufi's title is "Querying Social Networks."

We also disagree that Fisher does not teach receiving a call to an API from a third party system and sending anything in response to the call. Fisher teaches a person (i.e., third party system) using a development device to develop software, with element 610 illustrating a self-documenting aspect of an API (i.e., call to a self-documenting API), which teaches the limitation "receiving . . . from a third-party system, a call to a self-documenting API" recited in claim 1. Non-Final Act. 12 (citing Fisher ¶ 30); Ans. 18–19

(citing Fisher ¶ 2; Fig. 6A). In addition, Fisher teaches querying the WSS for data identifiers corresponding to a received reference and method names are a translation of the data identifiers provided by the WSS in response to the query, which teaches the limitation "sending . . . to the third-party system, instruction for presenting the retrieved data structure at the third-party system in response to the call" recited in claim 1. Non-Final Act. 14 (citing Fisher ¶¶ 65–67).

Accordingly, we sustain the Examiner's finding that the combination of Fisher and Shrufi teaches the limitations discussed in this section.

B. Does the Combination of Fisher and Shrufi Teach Providing both: (1) a name of the specific data type, and (2) for each of one or more fields of the data structure, a name and a description of the field?

The Examiner finds that Fisher teaches schema corresponding to people, which the Examiner maps to the limitation "a name of the specific data type" recited in claim 1. Non-Final Act. 13 (citing Fisher ¶27). In addition, the Examiner finds that Fisher teaches field names 606 and an associated textual description 610 that appears in relation to field names 606, which the Examiner maps to the limitation "for each of one or more fields of the data structure, a name and a description of the field" recited in claim 1. Non-Final Act. 13–14 (citing Fisher ¶ 27; Fig. 6A).

Appellants argue the combination of Fisher and Shrufi does not teach a "description of the specific data type." However, as correctly noted by the Examiner, claim 1 does not require a "description of the specific data type." Ans. 15.

Appellants argue that the Fisher-Shrufi combination fails to teach providing both "(1) a name of the specific data type, and (2) for each of one or more fields of the data structure, a name and a description of the field," as recited in claim 1. App. Br. 21–22; Reply Br. 6–7. We disagree because Fisher teaches schema corresponding to people (i.e., a name), which teaches the limitation "a name of the specific data type" recited in claim 1. Fisher ¶ 27. In addition, Fisher teaches field names 606 (i.e., for each of one or more fields of the data structure, a name . . . of the field) and an associated textual description 610 (i.e., for each of one or more fields of the data structure . . . a description of the field) that appears in relation to field names 606, which the Examiner maps to the limitation "for each of one or more fields of the data structure, a name and a description of the field" recited in claim 1. Non-Final Act. 13–14 (citing Fisher ¶ 27; Fig. 6A).

Accordingly, we sustain the Examiner's finding that Fisher teaches the limitation "(1) a name of the specific data type, and (2) for each of one or more fields of the data structure, a name and a description of the field" recited in claim 1.

C. Did the Examiner Err in Combining Fisher and Shrufi?

The Examiner finds that it would have been obvious to apply the teachings of Fisher, including queries for specific data types, to Shrufi's specific data type, namely data types associated with a social network, in order to obtain the data found therein using Fisher's system. Non-Final Act. 17. The Examiner finds that one of ordinary skill in the art would have been motivated to expand the commercial use of Fisher by applying it to additional data types found in social networks. *Id.* The Examiner reasons

that applying a system such as Fisher, which has the stated purpose of querying for any available data, to a particular type of data, such as Shrufi's social networking data, would have been well within the grasp of one of ordinary skill in the art due to Fisher and Shrufi being overlapping and complementary technologies such that the resulting combination of known methods would yield predictable results. Ans. 20–21. Additionally, the Examiner determines Fisher provides a suggestion for querying social networking data in paragraphs 3, 27 and 32 because it was well known in the art that Freebase includes social network profile data and Fisher explicitly mentions retrieving hierarchical social networking data of a person with fields of data such as things, events and interests. *Id.*

Appellants argue the combination of Fisher and Shrufi is improper. App. Br. 26–28. Specifically, Appellants argue that because the "the Examiner failed to articulate a finding that there was both a reasonable expectation of success and a motivation to combine the references, 'th[e Examiner's] rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art.'" App. Br. 26–28 (citing M.P.E.P. § 2143(G)). Appellants further argue the combination uses improper hindsight (App. Br. 28) and the Examiner fails to show the combination would yield predictable results (Rep. Br. 10–11). We are not persuaded by Appellants' arguments.

First, all rejections do not require an explicit finding of a reasonable expectation of success. Although MPEP § 2143(G) cited by Appellants requires such a finding, it is only one of several exemplary rationales useable by an Examiner. For example, MPEP § 2143(D), "applying a known technique to a known device ready for improvement to yield predictable

results" has no such requirement. Under MPEP § 2143(D), the Examiner must articulate:

> (1) a finding that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement";
> (2) a finding that the prior art contained a known technique that is applicable to the base device (method, or product);
> (3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system; and
> (4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The Examiner articulates the required rationale by showing that Fisher is a base device directed to interfacing with and accessing the data of as many variant data stores and applications as possible to aid third party programmers and that Shrufi contained a known data type applicable to Fisher. Furthermore, the Examiner articulates a detailed rationale as to why applying Shrufi's known method to Fisher's data interface and access device would have yielded predictable results, including that both Shrufi's social graphs and Fisher's interface were well known, complementary technologies in the art of computer database access and storage. Ans. 20–21.

Additionally, Appellants' assertion that the conclusion of obviousness is based on improper hindsight is unavailing.

> Any judgment on obviousness is in a sense necessarily a reconstruction based on hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper.

In re McLaughlin, 443 F.2d 1392, 1395 (CCPA 1971). Here, as discussed by the Examiner, Fisher provides a suggestion for querying social networking data including a hierarchy of a data structure related to a "person" with branches of data related to the person including events and interests in paragraphs 3, 27 and 32. Ans. 20–21.

Appellants do not argue claims 2–15 separately with particularity, but assert the rejections of those claims should be withdrawn for at least the same reasons as argued for independent claim 1. App. Br. 19–29; Reply Br. 6–11. Accordingly, we sustain the Examiner's rejections of: (1) independent claims 1, 5, and 9; and (2) dependent claims 2–4, 6–8, and 10–15 under 35 U.S.C. § 103.

DECISION

We affirm the Examiner's decision rejecting claims 1–15 under 35 U.S.C. § 101.

We affirm the Examiner's decision rejecting claims 1–15 under 35 U.S.C. § 103(a).

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