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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CHEE WE NG

Appeal 2016-001250[1]
Application 13/746,662 [2]
Technology Center 3600

Before BRADLEY B. BAYAT, TARA L. HUTCHINGS, and MATTHEW S. MEYERS, *Administrative Patent Judges*.

MEYERS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's Non-final Rejection of claims 9–20. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

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[1] Our decision references Appellant's Appeal Brief ("Appeal Br.," filed March 22, 2015), Supplemental Appeal Brief ("Supp. Appeal Br.," filed June 4, 2015), and Reply Brief ("Reply Br.," filed October 30, 2015), the Examiner's Answer ("Ans.," mailed October 23, 2015), and Final Office Action ("Non-Final Act.," mailed November 20, 2014).

[2] Appellant identifies "Chee We Ng" as the real party in interest (Appeal Br. 1). However, we note that "OPEN FINANCIAL ANALYTICS PTE LTD" is the assignee recorded (January 23, 2013) with the USPTO as per reel/frame number 029680/0198.

CLAIMED INVENTION

Appellant's claims relate to a method and system for analyzing stock or security prices going forward (Spec. ¶ 4).

Claims 9 and 14 are the independent claims on appeal. Claim 14 reproduced below, with minor formatting changes and added bracketed notations, is illustrative of the subject matter on appeal:

> 14. A method of analyzing a security, the method comprising:
>
> [a] rendering a graphical user interface on a user's client device, the interface including no more than three sliders which a user can adjust to adjust the values of respective inputs affecting value of a security, including an input for expected earnings growth rate during a first period, an input for expected return on incremental equity, incremental equity being equity growth over the first period, and an input for expected earnings growth rate during a second period after the the [sic] first period;
>
> [b] forecasting, using a processor, net income for a time in the future, return on equity, for a time in the future, price to earnings ratio, fair value components including at least current earnings, short term earnings growth, and long term earnings growth, and expected return components including at least yield, capital needs, growth, and price to earnings ratio change;
>
> [c] drawing a first chart, on the user's client device, showing a graph of both historical and forecast net income for the security versus time;
>
> [d] drawing a second chart, on the user's client device, showing a graph of both historical and forecast return on equity for the security versus time;
>
> [e] drawing a third chart, on the user's client device, showing both current and projected price to earnings ratios for the security;
>
> [f] drawing a fourth chart, on the user's client device, showing fair value for the security, broken down into multiple separate components for current earnings, earnings growth over a first period, and earnings growth over a second period after the first period; and

> [g] drawing a fifth chart, on the user's client device, showing expected return for the security, broken down into multiple separate components for yield, capital needs, growth, and price to earnings ratio change.

Supp. Appeal Br. 3–4 (Claims App.).

REJECTIONS

Claims 9–20 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter.

Claims 9–20 are rejected under 35 U.S.C. § 103(a) as unpatentable over Dainoff (US 2004/0220868 A1, pub. Nov. 4, 2004) and Henninger (US 2007/0294154 A1, pub. Dec. 20, 2007).

ANALYSIS

Non-statutory subject matter

In rejecting independent claims 9–20 as being directed to an abstract idea, the Examiner determines the claims as a whole are "directed to the abstract idea of analyzing securities," and finds that the claims do not include additional elements or a combination of elements that amount to significantly more than the abstract idea itself (Non-Final Act. 3–4; Ans. 2–3).

Appellant argues that the Examiner improperly rejected independent claims 9 and 14 as being directed to non-statutory subject matter because independent claims 9 and 14 are directed to "an operator interface" in addition to being "relate[d] to analyzing a security," and as such, are not directed to an abstract idea (Appeal Br. 6–9).

Although we agree with Appellant that an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter" (35 U.S.C. § 101) and independent claims 9 and 14 are directed to a system and method (*see. e.g.*, Appeal Br. 6), the Supreme Court has long interpreted § 101 to include implicit exceptions: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See, e.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2354 (2014) (internal quotation and citation omitted). And, in determining whether independent claims 9 and 14 fall within the excluded category of abstract ideas, we are guided in our analysis by the Supreme Court's two-step framework, described in *Mayo* and *Alice*. *Id.* at 2355 (citing *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71–73 (2012)).

In accordance with that framework, we first must determine whether the claim is "directed to" a patent-ineligible abstract idea. If so, we then consider the elements of the claim — both individually and as an ordered combination — to assess whether the additional elements transform the nature of the claim into a patent-eligible application of the abstract idea. *Id.* This is a search for an "inventive concept" — an element or combination of elements sufficient to ensure that the claim amounts to "significantly more" than the abstract idea itself. *Id.* (internal quotation and citation omitted).

Here, we agree with the Examiner that the focus of independent claims 9 and 14 as a whole are directed to "the abstract idea of analyzing securities" (Non-Final Act. 3), and is similar to certain fundamental economic and conventional business practices that our reviewing courts have found patent ineligible, like intermediated settlement (*see Alice*, 134 S. Ct. at 2356–57), creating a contractual relationship in guaranteeing performance of an online transaction (*see buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1352, 1355 (Fed. Cir. 2014)), "verifying the validity of a credit card transaction over the Internet" (*CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1370 (Fed. Cir. 2011)), and using advertising as a currency on the Internet (*Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014)). Thus, independent claims 9 and 14 are directed to a patent-ineligible abstract idea.

We next consider whether additional elements transform the nature of the claim into a patent-eligible application of the abstract idea, e.g., whether the claim does more than simply instruct the practitioner to implement the abstract idea on generic computer components. We agree with the Examiner that independent claim 9 is performed using a "standard and conventional computer system" (Ans. 21–22 (citing Spec. ¶¶ 24, 88, 89, 91, 92; Fig. 1)), and as such, is directed to an abstract idea without some element or combination of elements sufficient to ensure that the claim in practice amounts to significantly more than the abstract idea itself, and as such, is not patent-eligible under § 101. Similarly, independent method claim 14 is performed using a conventional "graphical user interface on a client device" and "processor." *See* Spec. ¶¶ 88 ("[t]he implementation of the front-end user interface . . . is done in Javascript running on a browser, with chart libraries from Dojo, a Javascript framework"); 89 ("[t]he user interface can run on a web-browser"). But claim 14 does not, for example, purport to improve the functioning of the computer, "processor," or graphical user interface itself. Nor are we apprised of an improvement in any other technology or technical field. Here, as the Examiner points out, "[t]he [S]pecification and drawings note that the method is performed by a generic computer" (Ans. 22 (citing Spec. ¶¶ 24, 88, 89, 91, 92; Fig. 1)), and as such, we find independent method claim 14 amounts to nothing significantly more than an instruction to apply the abstract idea of analyzing securities using some unspecified, generic processor and client device, which is not enough to transform an abstract idea into a patent-eligible invention. *See Alice,* 134 S. Ct. at 2360.

We also cannot agree with Appellant that there is any parallel between the present claims and those at issue in *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014). The claims in *DDR Holdings* were directed to retaining website visitors, and in particular to a system that modified the conventional web browsing experience by directing a user of a host website, who clicks an advertisement, to a "store within a store" on the host website, rather than directing the user to the advertiser's third-party website. *DDR Holdings*, 773 F.3d at 1257–58. The court, thus, determined that the claims were directed to statutory subject matter because they claim a solution "necessarily rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks," and that the claimed invention did not simply use computers to serve a conventional business purpose. *Id.* Rather, there was a change to the routine, conventional functioning of Internet hyperlink protocol. *Id.*

Appellant argues here that the present claims are patent-eligible for similar reasons as those in *DDR Holdings* (Appeal Br. 6–8), i.e., for example, the claims address a problem that "[w]ith computerized tools it is all too common that so many inputs are available, a user just does not know which ones are really important" (*id.* at 7). However, we agree with the Examiner that "a user not knowing which inputs are important for analyzing securities is not a computer technology problem, but rather a business problem to which Appellant is attempting to provide a business solution"

(Ans. 17). And, although Appellant argues that independent claims 9 and 14 recite "an invention that is not merely the routine or conventional use of computers or the Internet" (Appeal Br. 7–8), we find no indication in the record that the Internet is used in any way other than its normal, expected, and routine manner, nor any aspect in the pending claims that represents more than the conventional use of a computer or the Internet.

The court cautioned in *DDR Holdings* that "not all claims purporting to address Internet-centric challenges are eligible for patent." *DDR Holdings*, 773 F.3d at 1258. Thus, in *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014), although the patentee argued that its claims were "directed to a specific method of advertising and content distribution that was previously unknown and never employed on the Internet before," *id.* at 714, the court found that this alone could not render its claims patent-eligible where the claims merely recited the abstract idea of "offering media content in exchange for viewing an advertisement," along with "routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet." *Id.* at 715–16.

Similarly here, we find that the invocation of the Internet is not sufficient to transform Appellant's otherwise patent-ineligible abstract idea into patent-eligible subject matter. We agree with the Examiner that independent claims 9 and 14 are directed to the abstract idea of analyzing securities, and using a graphical user interface on a client device to display securities related charts. And, as discussed above, there is no indication here that the invocation of the Internet adds any inventive concept or requires any specialized hardware (*see* Ans. 16–22). None of the components or steps recited in independent claims 9 and 14, whether viewed individually or as an ordered combination, transforms the nature of the claims into patent-eligible subject matter. Instead, as the Examiner points out, "[t]he claims, as presented, use generic computer systemization to display" (*id.* at 17) — none of which add inventiveness because they merely require the application of conventional, well-known analytical steps. *See Ultramercial*, 772 F.3d at 716 ("[T]he claimed sequence of steps comprises only 'conventional steps, specified at a high level of generality,' which is insufficient to supply an 'inventive concept'") (citing *Alice*, 134 S. Ct. at 2357).

In view of the foregoing, we sustain the Examiner's rejection under 35 U.S.C. § 101 of independent claims 9 and 14, and dependent claims 10–13 and 15–20, which are not argued separately.

Obviousness

Independent claim 9 and dependent claims 10–13

We are not persuaded by Appellant's argument that the Examiner erred in rejecting independent claim 9 under 35 U.S.C. § 103(a) because the combination of Dainoff and Henninger does not disclose or suggest "a forecast valuation module configured to forecast net income," "return on equity," "price to earnings ratio," "fair value," and "expected return for the security," as recited by limitation [c] of independent claim 9 (Appeal Br. 10–12). More particularly, Appellant argues that Dainoff uses seven valuation metrics, but there is nothing in Dainoff or Henninger "about forecasting of net income or fair value" (*id.* at 10). However, we agree with the Examiner that the combination of Dainoff and Henninger discloses the argued limitation (*see* Final Act. 4–6; *see also* Ans. 22–24).

In this regard, we note that Dainoff is directed to "a financial information display system that permits users to view and understand financial information related to securities to thereby facilitate making investment decisions related to the securities" (Dainoff ¶ 5). Dainoff discloses that its system evaluates securities using

> seven valuation metrics are discussed in more detail below and include a Dividend Discount Model valuation, a Free Cash Flow to Equity valuation, a Free Cash Flow to the Firm valuation, a Price Per Earnings valuation, a Price Per Cash Flow valuation, a Price Per Book Value valuation, and a Price Per Sales valuation.

(*Id.* ¶ 16; *see also id.* ¶¶ 18–21). Dainoff acknowledges that "[f]ormulas for calculating these various valuations are well known in the art and the values which may be entered into the formulas for a particular publicly traded security are available" (*id.* ¶ 17).

We also note that Henninger is directed to a financial recommendation system which provides predicted values for each of a plurality of financial categories related to "spending, debt, revenue, profit, taxes, etc." for at least a portion of a business cycle (Henninger ¶¶ 6, 16). Based on the predicted values, Henninger discloses that "at least one financial indicator value associated with at least one period of the business cycle is calculated" (*id.* ¶ 6). Henninger further discloses that its system can predict values for

> additional financial categories such as profit after tax, depreciation and amortization, undistributed earnings from subsidiaries, cash flow from operations, capital expenditures, net free cash flow, long term debt paid, long term debt issued, net short term borrowings, change in cash, long term debt outstanding, short term debt outstanding, ending cash balance, change in stock price, dividend payout ratio, average stock price, stock price per earnings ratio, dividend yield, shares outstanding, and/or any combination of categories.

(*Id.* ¶ 17; *see also id.* ¶¶ 18–24).

We also are not persuaded by Appellant's argument that "it is not permissible to combine Henninger with Dainoff because doing so require impermissible hindsight reconstruction" (Appeal Br. 11). Instead, we find the Examiner provided articulated reasoning with some rational underpinning to support the obviousness conclusion at pages 5–6 of the Final Office Action. The Examiner's rejection also appears clearly based on the disclosures of the Henninger with Dainoff, and does not rely on Appellant's claims as a temple (*see* Appeal Br. 11). Here, we agree with the Examiner that

> [o]ne of ordinary skill in the art would not have to use any hindsight to combine a financial display system used to make investment decisions related to securities with a method that can be used to achieve optimal financial growth as any investor seeks to use information to make decisions regarding purchasing securities that result in optimal financial growth.

(Ans. 24). We also agree with the Examiner that "Dainoff provides a financial information display system that permits [a] user to view and understand financial information related to securities to thereby facilitate making investment decisions related to securities" (*id.* (citing Dainoff ¶ 5), "Henninger discloses that his method may be used by individuals seeking to achieve optimal financial growth" (*id.* (citing Henninger ¶ 54), and "[t]he analysis of a number of spending categories referred to by Applicant is not disclosed to be the primary advantage, but one of several advantages" (*id.*). Therefore, absent specific, technical arguments as to why the motivation is insufficient or why the proposed combination is more than the simple substitution of one known element for another, we find Appellant's hindsight argument unpersuasive.

Equally unpersuasive is Appellant's argument that the Examiner's proposed combination is improper because "Henninger does not even relate to analyzing securities, but to analyzing one particular business," and as such, "[o]ne of ordinary skill in the art interested in stock valuation methods would not look to Henninger" (Appeal Br. 11). Instead, we find that Henninger is analogous prior art because it logically would have commended itself to a person skilled in the art considering the substantially similar issues of providing financial information. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (Even when prior art is not in the same field of endeavor as the claimed invention, it is still analogous prior art if it is "reasonably pertinent" to the particular problem with which the inventor is involved.).

In view of the foregoing, we sustain the Examiner's rejection of independent claim 1 under 35 U.S.C. § 103(a). We also sustain the Examiner's rejection of claims 10–13, which although addressed separately, do not rise to the level of a separate argument for patentability (*see* Appeal Br. 12–14). *See In re Lovin*, 652 F.3d 1349, 1357 (Fed. Cir. 2011) ("more substantive arguments in an appeal brief [are required] than a mere recitation of the claim elements and a naked assertion that the corresponding elements were not found in the prior art").

Independent claim 14 and dependent claims 15–20

We are not persuaded by Appellant's argument that the Examiner erred in rejecting independent claim 14 under 35 U.S.C. § 103(a) because the combination of Dainoff and Henninger does not disclose or suggest "user actuatable graphic items which a user can respectively actuate to adjust values of inputs relating to characteristics affecting valuation of a security, the number being not more than three," as called for by independent claim 14 (Appeal Br. 15). More particularly, Appellant argues that there is no teaching or suggestion in either of Dainoff or Henninger to support the Examiner's conclusion that it would have been obvious to eliminate inputs in Dainoff's system because "[a] high level of skill is required to know which inputs can be eliminated and still result in a valid evaluation" (Appeal Br. 15). We cannot agree.

In this regard, we note that the only thing that distinguishes the argued feature from Dainoff, is that Dainoff's display system, "allows users to selectively access and examine further detail of the seven valuation metrics" (Ans. 24–25 (citing Dainoff ¶ 22)), whereas claim 14 recites "the interface including no more than three sliders which a user can adjust to adjust the values of respective inputs affecting value of a security" (Supp. Appeal Br. 3 (Claims App.)). Thus, the difference between the argued limitation and the combination of Dainoff or Henninger, as proposed by the Examiner, is the number of inputs. Appellant argues that the Examiner does not identify "which inputs can be omitted such that a valid analysis can be performed" (Appeal Br. 16). In this regard, Appellant's Specification provides at paragraph 4, for example, that limiting the number of inputs to "no more than three" "helps an ordinary person, who doesn't want to be bogged with all the details, to do a quick calculation and understand the key drivers of the results," allowing the user to "focus on the main drivers instead of wasting time figuring out the results." Yet, Appellant has not pointed to any unexpected benefit or advantage achieved by limiting the number of inputs to three, or provided any reasoning as to why one of ordinary skill in the art would not have found any number of inputs to be obvious. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007); *see also Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1329 (Fed. Cir. 2009) ("while an analysis of obviousness always depends on evidence . . . it also may include recourse to logic, judgment, and common sense available to the person of ordinary skill that do not necessarily require explication in any reference").

In view of the foregoing, we sustain the Examiner's rejection of independent claim 14 under 35 U.S.C. § 103(a). We also sustain the Examiner's rejection of claims 15–20, which although addressed separately, do not rise to the level of a separate argument for patentability (*see* Appeal Br. 17–19). *See In re Lovin*, 652 F.3d at 1357.

DECISION

The Examiner's rejection of claims 9– 20 under 35 U.S.C. § 101 is affirmed.

The Examiner's rejection of claims 9–20 under 35 U.S.C. § 103(a) is affirmed.

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