UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/840,482	08/17/2007	Richard Sandor	CCX-10-1424CIP-CON	1411

35811 7590 01/03/2019

IP GROUP OF DLA PIPER LLP (US)
ONE LIBERTY PLACE
1650 MARKET ST, SUITE 4900
PHILADELPHIA, PA 19103
UNITED STATES OF AMERICA

EXAMINER
BORISSOV, IGOR N

ART UNIT	PAPER NUMBER
3649	

NOTIFICATION DATE	DELIVERY MODE
01/03/2019	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

pto.phil@dlapiper.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte RICHARD SANDOR, MICHAEL WALSH, and MURALI KANAKASABAI

Appeal 2017-001894
Application 11/840,482[1]
Technology Center 3600

Before BIBHU R. MOHANTY, MICHAEL W. KIM, and BRADLEY B. BAYAT, *Administrative Patent Judges*.

BAYAT, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 1 and 36–46, which are all the pending claims in the application.[2] Final Act. 2–33 (mailed Feb. 11, 2016). We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

---

[1] Appellants identify the real party in interest as "Chicago Climate Exchange." Appeal Br. 1 (filed April 11, 2016).
[2] Claims 2–35 have been canceled. *Id.* at 26.

STATEMENT OF THE CASE

Appellants' invention relates to systems and methods for "facilitating trade of emission allowances and offsets among participants, which includes establishing an emission reduction schedule for certain participants based on emissions information provided by those participants and determining debits or credits for each certain participant in order to achieve the reduction schedule." Spec. 4:10–14.

Claimed Subject Matter

Claims 1, 37, and 39 are the only independent claims on appeal and recite substantially similar subject matter. *See* Appeal Br., Claim App. Claim 1, reproduced below, is illustrative of the subject matter on appeal.

> 1. A computer-implemented method of promoting a reduction of emissions of greenhouse gases (GHGs) wherein all steps are performed by at least one computer, the computer-implemented method comprising:
>
> registering, by a computing system, participants on a registry database, the computing system comprising the at least one computer, the registry database and an electronic trading platform;
>
> establishing, by the computing system, a respective emission reduction schedule for emission of the GHGs for a set future period of time of greater than one year for each of the registered participants that produces emissions ("emitting participants") based on emissions information over previous years provided by the emitting participants, wherein each emission reduction schedule sets limits on GHG emissions during the set future period of time for a particular one of the emitting participants;
>
> establishing, by the computer system, tradable financial instruments representing an amount of emission reduction equivalents comprising emission allowances, emission offsets, and early action credits;

establishing, by the computer system, a maximum emission mitigation quantity that represents a maximum quantity of emission reduction credits that a particular registered participant must obtain in order to achieve compliance with said participant's respective emission reduction schedule;

crediting, by the computer system, the emission allowances to each of the emitting participants based on the respective emission reduction schedules by transmitting a signal over a communications network to the registry database, the signal causing the registry database to transfer an amount of available emission allowances into the respective accounts of the emitting participants;

crediting, by the computer system, a quantity of the early action credits to those emitting participants that undertake at least one emission-reduction project or activity prior to establishment of their respective emission reduction schedules by transmitting a signal over the communications network to the registry database, the signal causing the registry database to transfer the quantity of the early action credits into the respective accounts of the emitting participants that undertake said at least one emission-reduction project or activity;

interrogating, by the computing system, each of the emitting participants over a communications network to collect emissions data over the set future period of time for each of the emitting participants;

comparing, by the computing system, for each of the emitting participants, the respective collected emissions data with corresponding data in the respective established reduction schedule;

determining, by the computing system, for each of the emitting participants, whether said collected emissions data exceeds or does not exceed the corresponding data in the established reduction schedule of the respective emitting participant based on the comparison; and

converting, by the computing system, for the respective emitting participant, the determination into a debit or a credit,

wherein the converting of the determination into the debit includes debiting the respective emitting participant a quantity

of the tradable financial instruments by transmitting a signal over the communications network to the registry database that causes the registry database to transfer the quantity of the tradable financial instruments out of the respective account of the emitting participant, thereby penalizing said emitting participant, when the collected emissions data exceeds the corresponding data in the established reduction schedule of said emitting participant,

said emitting participant achieving compliance with the established reduction schedule by obtaining an additional quantity of at least one of the financial instruments and the emission reduction equivalents responsive to the debiting of the quantity of the financial instruments, said achieving compliance further comprising transmitting a signal over the communications network to the registry database to cause the registry database to transfer the obtained additional quantity into the respective account of the respective emitting participant, the obtained additional quantity being selected from a lesser one of the established maximum emission mitigation quantity and a difference quantity associated with a difference between the collected emissions data and the corresponding data in the established reduction schedule of the respective emitting participant; and

wherein the converting of the determination into the credit includes crediting the respective emitting participant at least one of additional financial instruments and additional emission reduction equivalents by transmitting a signal over the communications network to the registry database that causes the registry database to transfer the at least one of the additional financial instruments and the additional emission reduction equivalents into the respective account of the emitting participant, thereby rewarding the respective emitting participant, when the collected emissions data does not exceed the corresponding data in the established reduction schedule of said emitting participant,

said emitting participant, responsive to the crediting, executes at least one of trading via the electronic trading platform and banking via the registry database of at least one of

> the additional financial instruments and the additional emission reduction equivalents.

Appeal Br. 24–26, Claims App.

Rejections[3]

Claims 1 and 36–46 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acid Rain Program, SO<INF>2 Allowance Auction and Electronic Allowance Transfer; Federal Register: June 6, 1996, 6 pages (EPA Notice) in view of Soestbergen et al. (US 2002/0143693 A1, published Oct. 3, 2002), and further in view of Bartels et al. (US 2009/0070252 A1, published Mar. 12, 2009).

Claims 1, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acid Rain Program, SO<INF>2 Allowance Auction and Electronic Allowance Transfer; Federal Register: June 6, 1996, 6 pages (EPA Notice) in view of Soestbergen, and further in view of Parry et al. (Greenhouse Gas "Early Reduction" Programs: A Critical Appraisal; July 2000, 14 pages).

Claims 39, 40, 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, and further in view of Togher et al. (US 6,014,627, issued Jan. 11, 2000).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, further in view of Bartels, and further in view of Togher.

---

[3] Ans. 3–4 (mailed Sept. 20, 2016).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, further in view of Parry, and further in view of Togher.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, further in view of Togher, and further in view of EPA: Programs & Regulations; Acid Rain Program; 2001 (Acid Rain Program).

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, further in view of Togher, and further in view of Sharp et al. (US 2002/0111892 A1, published Aug. 15, 2002).

Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over EPA Notice in view of Soestbergen, further in view of Togher, and further in view of Rosenberg (Emissions Credit Futures Contracts on the Chicago Board of Trade: and Rational Challenges to the Right to Pollute; Introduction; Spring, 1994).

ANALYSIS

Non-Statutory Subject Matter

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101 to include an implicit exception: "[l]aws of nature, natural phenomena, and abstract ideas" are not patentable. *See, e.g.*, *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 215–17(2014) (internal quotation marks and citation omitted).

The Supreme Court, in *Alice*, reiterated the two-step framework previously set forth in *Mayo Collaborative Services v. Prometheus Laboratories, Incorporated*, 566 U.S. 66, 82–84 (2012), "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice*, 573 U.S. at 2. The first step in that analysis is to "determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* If the claims are not directed to a patent-ineligible concept, e.g., to an abstract idea, the inquiry ends. Otherwise, the inquiry proceeds to the second step where the elements of the claims are considered "individually and 'as an ordered combination"' to determine whether there are additional elements that "'transform the nature of the claim' into a patent-eligible application." *Id.* (quoting *Mayo*, 566 U.S. 66, 78–79).

Under *Alice* step one, the Examiner determines "claims 1 and 36–46 describe the concept of establishing an emission reduction schedule, comparing the determined emissions data with the corresponding data in the established reduction schedules, and debiting or crediting a trading participant's account based on said 'comparing' . . . similar to the concepts involving human activity relating to commercial practices *(e.g.,* hedging in Bilski) that have been found by the courts to be abstract ideas." Final Act. 3; *id.* at 3–4 (the Examiner reproduces all the recited steps of claim 1, sans the computing system, as encompassing the abstract idea.). Additionally, the Examiner determines "[t]he recited steps merely employs mathematical relationships to manipulate existing information to generate additional information in the form of a *'determining whether a participant's account should be debited or credited,'* and outputting said determined data. This

idea is similar to the basic concept of manipulating information using mathematical relationships (*e.g.,* converting numerical representation in Benson), which has been found by the courts to be an abstract idea." Ans. 5.

Appellants argue claims 1 and 36–46 as a group. *See* Appeal Br. 9–18. We select independent claim 1 as the representative claim for this group, and, thus, claims 36–46 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

Alleging error in the rejection, Appellants argue

> the claims are not directed to "a basic economic practice." Instead, the claims recite very specialized computer-centric methods and systems that include, among other things, features such as generating and transmitting control signals that automatically cause *another* computer component to transfer financial instruments, early action credits, allowances, etc. into and out of participant accounts based on their respective emissions activities.

Appeal Br. 10. This argument fails to show error in the rejection because the Examiner did not characterize the abstract idea as "a basic economic practice." As discussed above, the Examiner determines the claims are similar to concepts involving certain methods of organizing human activity relating to commercial practices. *See* Final Act. 4.

We disagree with Appellants' contention that the claims are patent-eligible in view of *Enfish* and *McRO*. *See* Reply Br. 2–4, 5–8. Appellants have not offered any persuasive evidence or technical reasoning that the computer implementation improves the functioning of the computing system itself. "[F]aster and more efficient retrieval of information provided by the indexed registry database . . . [may be] important for the debiting and crediting of respective emitting participant accounts" (*id.* at 3), but this does

not reflect an improvement to the functioning of the claimed computing system. There is a fundamental difference between computer functionality improvements, on the one hand, and uses of existing computers as tools to perform a particular task, on the other. In *Enfish*, for example, the court noted that "[s]oftware can make non-abstract improvements to computer technology just as hardware improvements can." *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). The court asked "whether the focus of the claims is on [a] specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Id.* at 1335–36. The court found that the "plain focus of the claims" there was on an improvement to computer functionality itself (a self-referential table for a computer database, designed to improve the way a computer carries out its basic functions of storing and retrieving data), not on economic or other tasks for which a computer is used in its ordinary capacity. *Id.* Thus, we determine whether the claim as a whole "focus[es] on a specific means or method that improves the relevant technology" or is "directed to a result or effect that itself is the abstract idea and merely invoke[s] generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314–15 (Fed. Cir. 2016) (claims determined not abstract because they "focused on a specific asserted improvement in computer animation."). Unlike *Enfish* and *McRO*, we find the focus of the claim as whole here on is on the latter, because the claimed computing system is merely invoked as a tool for trading emission reductions in a technological environment.

Under *Alice* step two, the Examiner determines the additional elements such as using a computer fail to transform the nature of the claim

into a patent-eligible application because "the generic computing elements recited are known and conventional. Final Act. 5. According to the Examiner,

> [n]one of the hardware recited "offers a meaningful limitation beyond generally linking 'the use of the [method] to a particular technological environment,' that is, implementation via computers." . . . As per "transmitting a signal over a communications network to the registry database, the signal causing the registry database to transfer an amount of available emission allowances into the respective accounts of the emitting participants;" and "transmitting a signal over the communications network to the registry database, the signal causing the registry database to transfer the quantity of the early action credits into the respective accounts of the emitting participants that undertake said at least one emission-reduction project or activity;" recitation, these limitations do not add significantly more because they are simply an attempt to limit the abstract idea to a particular technological environment, that is, implementation via computers."

Id. at 5–6.

Appellants argue the claims include elements that amount to significantly more than the abstract idea because: (i) the claims effect a transformation of a particular article to a different state or thing, (ii) the claims provide an improvement to another technology/technical field, (iii) the claims include features such as activating separate computer components to cause particular functions to occur only when certain conditions are met, which is patent-eligible under *Diehr*,[4] (iv) the claims include features that are comparable to patent-eligible Example 21 from the July 2015 Update on Subject Matter Eligibility, (v) the limitations of the claims prevent the

[4] *Diamond v. Diehr*, 450 U.S. 175 (1981).

claims from preempting all methods and systems for gathering and combining data, (iv) the elements of the claims are applied by use of a particular machine provides improvements to the functioning of the computer itself, and (vii) the claims recite specific limitations other than what is well-understood, routine, and conventional in the field. Appeal Br. 11–17.

We have considered Appellants' arguments, but we are not persuaded the Examiner erred in concluding that the additional elements fail to transform the nature of the claim into a patent-eligible application. We agree with the Examiner's rationale and response to arguments set forth on pages 7–22 of the Answer as fully responsive to Appellants' arguments. As such, we adopt them as our own. We add the following for emphasis.

In the Reply Brief, Appellants contend that the Examiner is oversimplifying the claims and argue the "claims are directed to a computer system with a novel system topography, including a uniquely-configured registry database that improves upon the efficiency and speed of storing and retrieving data when compared to conventional systems in this art. As such, the focus of claims is in fact on the improvements to the existing technological processes and functioning of the computing system and software." Reply Br. 9. According to Appellants, the claims do effect a transformation because they "recite that a first component (e.g., a computer) transmits control signals to a second component (e.g., a registry database). In this manner the first computer is controlling the actions of a technology (e.g., the registry database) and technological process such as transferring of credits and allowances into and out of the respective accounts of the registry database." *Id.* at 10.

The difficulty with Appellants' argument is that these alleged improvements are neither reflected in claim 1 nor supported by the Specification. For example, the Specification describes the computer implementation of claim 1 as "includ[ing] a personal computer, a computer workstation (e.g., Sun, Hewlett-Packard), a laptop computer, a server computer, a mainframe computer, a handheld device (e.g., a personal digital assistant, a Pocket Personal Computer (PC), a cellular telephone, etc.), an information appliance, and/*or another type of generic or special purpose, processor-controlled device capable of receiving, processing, and/or transmitting digital 30 data*." Spec. 40:25–30 (emphasis added). Further, the purportedly "uniquely-configured registry" is described as "be[ing] implemented using a database and computer software. . . [that] can also include information on retirement accounts for allowances and offsets and early action credits based on activities prior to establishment of the system." *Id.* 11:18–21. The Specification describes these additional elements as well-known conventional computing components that perform basic and routine computer functions, such as transmitting a signal. We are not apprised of any supporting disclosure for this alleged novel topography and its associated improvements to the functioning of the claimed computer system.

Contrary to Appellants' argument (Reply Br. 4–5), we disagree that the claims are patent-eligible in view of *Bascom*.[5] In *Bascom*, the Federal Circuit held that "[t]he inventive concept described and claimed in the '606 patent is the installation of a filtering tool at a specific location, remote from

[5] *Bascom Global Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016).

the end-users, with customizable filtering features specific to each end user." *Bascom*, 827 F.3d at 1350. The court explained that the remote location of a filtering tool having customizable user-specific filtering features provides the filtering tool both the benefits of a filter on a local computer and the benefits of a filter on the ISP server, which is a technical improvement over prior art ways of filtering content. *Id.* at 1350–51. Here, Appellants have not demonstrated any particular arrangement in the claim as providing an inventive concept parallel to *Bascom* in claiming a technology-based solution.

In view of the foregoing, we are not persuaded that the Examiner erred in concluding that claim 1 is directed to non-statutory subject matter. Accordingly, we sustain the Examiner's rejection of claim 1 under 35 U.S.C. § 101, and claims 36–46, which fall with claim 1.

Obviousness

We are persuaded by Appellants' arguments that EPA Notice, on which the Examiner relies, fails to disclose a maximum emission mitigation quantity, as required by independent claims 1, 37, and 39. *See* Appeal Br. 18–20.

During examination, claims are to be given their broadest reasonable interpretation consistent with the specification, and the language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (citations omitted).

Here, maximum emission mitigation quantity "represents a maximum quantity of emission reduction credits that a particular registered participant

must obtain in order to achieve compliance with said participant's respective emission reduction schedule." Claim 1. Maximum emission mitigation quantity is described "as the maximum quantity of purchases of [Carbon Financial Instruments] CFIs . . . participants undertake in order to achieve compliance with annual emission reduction commitments." Spec. 14:27–15:2. Figure 5 shows that the maximum quantity of emission mitigation required rises at a fixed rate over time, "such that the maximum amount of CO2 equivalent emissions recognized in determining the annual true-up for each member is 2% above that participant's baseline emission level during year 1 and year 2, and 3% above baseline during year 3 and year 4." *Id.* 14:23–25. For example, a participant with an emission target of 98% of the baseline with emissions of 106% would not have to purchase CFIs corresponding to the difference of 8%; "[r]ather, the claimed maximum emission mitigation quantity ensures that the participant only has to purchase CFIs corresponding to 4% of the baseline (i.e., the difference between the lesser of the maximum recognized emission increase of 102% of the baseline and the emissions of 106% of the baseline and the emission target of 98% of the baseline)." Reply Br. 12 (citing Spec., Figure 6). "In other words, the claimed maximum emission mitigation quantity caps the amount of CFIs a participant must purchase." *Id.*

Although EPA Notice teaches that the minimum number of allowances a participant purchases must be greater than the maximum total emissions that the participant emits, it does not place any cap or limit on the number of allowances that a participant must purchase to achieve compliance, as maximum emission mitigation quantity would have been understood by one of ordinary skill in the art. The Examiner's interpretation

"that the number of allowances *equal to total* emissions at that participant (unit) *corresponds* to the *maximum emission mitigation quantity*" (Ans. 23) is inconsistent with the Specification. Under the Examiner's interpretation, the participant in the above discussed example would be required to purchase CFIs equating at least 8% of the baseline target to be in compliance, whereas the claimed maximum emission mitigation quantity caps that purchase at 4% of the baseline.

Accordingly, we do not sustain the rejections of independent claims 1, 37, and 39 under 35 U.S.C. § 103(a). We also do not sustain the rejections of dependent claims 36, 38, and 40–46, which rely on the same erroneous interpretation as their corresponding independent claims.

DECISION

The Examiner's rejection under 35 U.S.C. § 101 is affirmed.

The Examiner's rejections under 35 U.S.C. § 103(a) are reversed.

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

AFFIRMED