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EXAMINER
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ART UNIT	PAPER NUMBER
3992	

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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.

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EX PARTE REEXAMINATION COMMUNICATION TRANSMITTAL FORM

REEXAMINATION CONTROL NO. *90/019,303* .

PATENT UNDER REEXAMINATION *8291243* .

ART UNIT *3992* .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

EX PARTE FINAL REJECTION

This Office action is responsive to the communications filed July 11, 2024. Claims 1, 3-6, 9-16, 18, and 19 are subject to reexamination. Claims 21-52 were added. Claims 1, 11-15 and 18 were amended. Claims 1, 3-6, 9-16, 18, 19, and 21-52 are pending.

References Cited in Request

- U.S. Patent 7,274,975 to Miller/U.S. Publication No. 2006/0276938 ("Miller");
- U.S. Patent No. 7,246,014 to Forth et al. ("Forth");
- U.S. Publication No. 2003/0036820 to Yellepeddy ("Yellepeddy"); and
- U.S. Patent No. 7,177,728 to Gardner ("Gardner").

Amendments

The amendment filed July 11, 2024 proposes amendments to claims 1 and 11-14 that do not comply with 37 CFR 1.530(d)-(j), which sets forth the manner of making amendments in reexamination proceedings. Particularly, "the matter to be omitted by the reexamination proceeding must be enclosed in brackets." A supplemental paper correctly proposing amendments in the present *ex parte* reexamination proceeding is required.

A shortened statutory period for response to this letter is set to expire two months from the mailing date of this letter. If patent owner fails to timely correct this informality, the amendment will be held not to be an appropriate response, prosecution of the present *ex parte* reexamination proceeding will be terminated, and a reexamination certificate will issue. 37 CFR 1.550(d).

Response to Arguments

Patent Owner ("PO") arguments, see pages 25-26, filed July 11, 2024, with respect to the 35 U.S.C. 102 (b) rejection of claims 1,3,5,9-11,15, 18 and 35 U.S.C. 103(a) rejection of claims 4, 6, 16, and 19 have been fully considered and are persuasive. The rejection has been withdrawn.

Claim Interpretation

The following is a quotation of 35 U.S.C. 112(f):

> (f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The claims in this application are given their broadest reasonable interpretation using the plain meaning of the claim language in light of the specification as it would be understood by one of ordinary skill in the art. The broadest reasonable interpretation of a claim element (also commonly referred to as a claim limitation) is limited by the description in the specification when 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is invoked.

As explained in MPEP § 2181, subsection I, claim limitations that meet the following three-prong test will be interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph:

(A) the claim limitation uses the term "means" or "step" or a term used as a substitute for "means" that is a generic placeholder (also called a nonce term or a non-structural term having no specific structural meaning) for performing the claimed function;

(B) the term "means" or "step" or the generic placeholder is modified by functional language, typically, but not always linked by the transition word "for" (e.g., "means for") or another linking word or phrase, such as "configured to" or "so that"; and

(C) the term "means" or "step" or the generic placeholder is not modified by sufficient structure, material, or acts for performing the claimed function.

Use of the word "means" (or "step") in a claim with functional language creates a rebuttable presumption that the claim limitation is to be treated in accordance with 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. The presumption that the claim limitation is interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is rebutted when the claim limitation recites sufficient structure, material, or acts to entirely perform the recited function.

Absence of the word "means" (or "step") in a claim creates a rebuttable presumption that the claim limitation is not to be treated in accordance with 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. The presumption that the claim limitation is not interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, is rebutted when the claim limitation recites function without reciting sufficient structure, material or acts to entirely perform the recited function.

Claim limitations in this application that use the word "means" (or "step") are being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, except as otherwise indicated in an Office action. Conversely, claim limitations in this application that do

not use the word "means" (or "step") are not being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, except as otherwise indicated in an Office action.

Claim 24 recites processing means is configured to: acquire operating environment condition data…analyze the operating environment condition data…cause a computational device to automatically reduce a current amount of consumption of electric power from the power grid system. Upon review, the Examiner notes that the claimed phrase meets Prongs (A) and (B) as set forth in MPEP § 2181, subsection I. Additionally, the Examiner notes that processing means is not being modified by sufficiently definite structure, material, or acts for achieving the specified function; therefore, the claimed phrase meets Invocation Prong (C).

Because this/these claim limitation(s) is/are being interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, it/they is/are being interpreted to cover the corresponding structure described in the specification as performing the claimed function, and equivalents thereof.

In reviewing the original disclosure, the Examiner finds that U.S. Patent No. 8,291,243 ('243 patent) discloses the following at col. 5, ll. 13-19:

> The present module 200 and computational device 230 embodiments each comprise respective central processing unit (CPU) or other processing means 201/231 in communication with memories 203/233, the memories 203/233 comprising logic components that enable the CPU's 201/231 to perform processes and methods according to the present application.

Further, the corresponding structure of the processing means 201/301 is a processor (see Fig. 2) with the algorithm of Fig. 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-24 and 26 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims recite wherein analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system comprises using multiple thresholds, and wherein automatically reducing a current amount of consumption of electric power from the power grid system by the computational device comprises progressively triggering additional power saving actions if the multiple thresholds are exceeded. PO directed the Office to col. 8, lines 64-67 for supporting the multiple thresholds-progressive triggering limitation. Although this citation describes the multiple thresholds, it does not expressly state that the step/feature is being perform "if the multiple thresholds are exceeded."

Claim Rejections

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim(s) 21, 22, 23, are rejected under pre-AIA 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under pre-AIA 35 U.S.C. 103(a) as obvious over Miller.

21. A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:

Paragraph [0001] – systems and methods for optimizing the control of energy supply and demand in residences and businesses.

Paragraph [0005]- an integrated control device manages the supply of energy from various sources (e.g. electric grid, battery, photovoltaic cells, fuel cells) and the demand for energy from consumption devices (e.g. hot water heaters, HVAC systems, and appliances). An optimization algorithm determines based on various factors when to activate the energy sources and when to activate the consumption devices.

Paragraph [0006] – the algorithm takes into account such factors as the supply of charge on batteries, the dynamic price of electricity, weather forecasts, and others in order to schedule and activate energy supplies and computation devices. Devices that can be scheduled for flexible turn-on times (e.g. washing machine or dishwasher) are scheduled for periods in which cheap energy supply is projected to be available.

Paragraph [0026] – controller 104 may comprise a computer and memory programmed with computer software for controlling the operation of apparatus 101 in order to receive electrical power form power sources 109 through 115 and to distribute electrical power to devices 116 through 122.

Paragraph [0033]- One or more power-consuming devices 116 through 122 may also be controlled by and receive power from apparatus 101. These include one or more sensors 116 (e.g., thermostats, occupancy sensors, humidity gauges and the like); heating/ventilation/air conditioning units 117; hot water heaters 118; window shades 119; windows 120 (e.g. open/close and/or tint controls); and one or more appliances 121 (e.g. washing machines; dryers; dishwashers; refrigerators; etc.). Some appliances may be so-called smart appliances that can receive control signals directly from apparatus 101.

Also see paragraphs Abstract, [0024], [0102], [0108] and [0121].

acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;

Paragraph [0029]- control center 108 may transmit pricing information (e.g., current price of electricity) so that controller 104 may make decisions regarding the control and distribution of electricity according to various principles of the invention.

Paragraph [0043]- In step 312, external information regarding such variables as current grid prices; fuel prices; grid voltage; current/forecasted weather, demand-side management (DSM) requests (e.g., a request from a utility under an established demand 36 response program for subscribing customers to reduce demand or supply power from a user controlled source at a specific hour), and commands received from central control center 108 are monitored.

Also see Fig. 3 and related text.

analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system;

Paragraph [0043]- [0047]:

In step 312, external information regarding such variables as current grid prices; fuel prices; grid voltage; current/forecasted weather, demand-side management (DSM) requests (e.g., a request from a utility under an established demand 36 response program for subscribing customers to reduce demand or supply power from a user controlled source at a specific hour), and commands received from central control center 108 are monitored. The current energy source configuration is determined (step 313), including such things as what power sources are available and how much energy is stored in storage devices.... The baseline demand forecast 304 and baseline production capacity forecast 305 provide a detailed picture of the potential supply of power by source and demand by use of energy. Essentially these frame an optimization problem which can

be solved. Embodiments of the invention can determine how to modify demand by turning off unneeded services and/or delaying others, how to deploy various sources to meet demand, and how to distribute power to the grid to achieve the lowest possible cost of service (which may be negative if the home or business is able to produce more power than it consumes in a time period).

Paragraph [0076] – the controller performs an instantaneous calculation of comparative cost and selects the optimal order of dispatch.

Paragraph [0057] – The time of day rates is designed to reflect the marginally higher cost of power production at the peak demand periods of morning and early evening. At these times utilities must dispatch power from their least efficient units, when cost is lower, they need power only from the most efficient units.

Also see Fig. 3 and 7.

As per the steps "**causing a computational device to automatically reduce a current amount of consumption of electric power from the power grid system by the computational device if the analyzing determines the high electric power demand indication; wherein analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system comprises using multiple thresholds, and wherein automatically reducing a current amount of consumption of electric power from the power grid system by the computational device comprises progressively triggering additional power saving actions if the multiple thresholds are exceeded,**" the claim recites the conditional/optional language "if." Although the conditional/optional language has been

considered, patent owner is reminded that optional or conditional elements do not narrow the claims because they can always be omitted. *See* MPEP §2111.04: "Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." As such, these steps do not patentable distinguish the claim from the prior art.

Claims 22 and 23 are rejected on the same rationale as claim 21 above.

STATEMENT OF REASONS FOR PATENTABILITY AND/OR CONFIRMATION

The following is an examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Claims 1,3-6,9-16,18-19, 25, and 27-52 are deemed patentable.

The closest prior art of record is Miller. Miller is directed to methods and systems for optimizing the control of energy supply and demand. In Miller, an integrated control device manages the supply of energy from various sources and demand for energy from consumption devices. Paragraph [0005]. Devices that can be scheduled for flexible turn-on times are scheduled for periods in which cheap energy supply is projected to be available. Paragraph [0006]. Power is provided when electrical grid costs exceed certain thresholds. However, the reference fails to teach "wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system comprises inputting environmental condition data into a weighting function" as recited in independent claims 1, 11, 15, and 18.

Any comments considered necessary by PATENT OWNER regarding the above statement must be submitted promptly to avoid processing delays. Such submission by the

patent owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

THIS ACTION IS MADE FINAL.

A shortened statutory period for response to this action is set to expire two months from the mailing date of this action.

Extensions of time under 37 CFR 1.136(a) do not apply in reexamination proceedings. The provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Further, in 35 U.S.C. 305 and in 37 CFR 1.550(a), it is required that reexamination proceedings "will be conducted with special dispatch within the Office."

Extensions of time in reexamination proceedings are provided for in 37 CFR 1.550(c). A request for extension of time must specify the requested period of extension and it must be accompanied by the petition fee set forth in 37 CFR 1.17(g). Any request for an extension in a third party requested ex parte reexamination must be filed on or before the day on which action by the patent owner is due, and the mere filing of a request will not effect any extension of time. A request for an extension of time in a third party requested ex parte reexamination will be granted only for sufficient cause, and for a reasonable time specified. Any request for extension in a patent owner requested ex parte reexamination (including reexamination ordered under 35 U.S.C. 257) for up to two months from the time period set in the Office action must be filed no later than two months from the expiration of the time period set in the Office action. A request for an extension in a patent owner requested ex parte reexamination for more than two months from the time period set in the Office action must be filed on or before the day on which action by the patent owner is due, and the mere filing of a request for an

extension for more than two months will not effect the extension. The time for taking action in a patent owner requested ex parte reexamination will not be extended for more than two months from the time period set in the Office action in the absence of sufficient cause or for more than a reasonable time.

The filing of a timely first response to this final rejection will be construed as including a request to extend the shortened statutory period for an additional two months. In no event, however, will the statutory period for response expire later than SIX MONTHS from the mailing date of the final action. See MPEP § 2265.

Extension of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexaminations proceeding. Additionally, 35 U.S.C. 305 requires that *ex parte* reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extensions of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Amendment in Reexamination Proceedings

Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR § 1.52(a) and (b), and must contain any fees required by 37 CFR § 1.20(c).

Service of Papers

After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parities where two or more third party requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550.

Notification of Concurrent Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 8,291,243 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceedings throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282, and 2286.

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

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For EFS-Web transmissions, 37 CFR 1.8(a)(1)(i) (C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the Office's electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the date of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Jalatee Worjloh/
Reexamination Specialist, Art Unit 3992

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