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Title : ADAPTIVE COMPUTING RESPONSIVE TO ENVIRONMENTAL CONDITIONS

Mail Stop *Ex Parte* Reexam
Central Reexamination Unit
Commissioner of Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION

Dear Sir:

This Response is in reply to the Office Action dated April 11, 2024. Patent Owner's request for a one-month extension of time was granted on June 5, 2024, extending the time for response to July 11, 2024. Accordingly, this paper is being timely filed in conformance with 37 C.F.R. § 1.550. Please consider the following:

Notification of Concurrent Proceedings beginning on page 2 of this paper;

Listing of Claims beginning on page 3 of this paper;

Patent Owner's Statement of the Interview beginning on page 19 of this paper; and

Remarks beginning on page 20 of this paper.

**37 CFR §1.8
CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being transmitted via the Office electronic filing system, EFS-Web, addressed to Mail Stop Ex Parte Reexam, Central Reexamination Unit, Commissioner of Patents, United States Patent and Trademark Office, PO Box 1450, Alexandria, Virginia 22313-1450 on the date indicated below.

/Jennifer Picini/
Jennifer Picini

July 11, 2024
Date

NOTIFICATION OF CONCURRENT PROCEEDINGS

Pursuant to 37 C.F.R. § 1.565(a), Patent Owner identifies the following concurrent proceedings involving U.S. Patent No. 8,291,243:

- 1) *Graphite Charging Co., LLC v. Tesla, Inc.*, Case No. 3:24-cv-02717-VC (N.D. Ca.)

Status: This district court litigation was recently transferred from the W.D. Texas to the N.D. California and is currently stayed; and

- 2) *Tesla, Inc. v. Graphite Charging Co., LLC*, *Inter Partes* Review No. IPR2024-00388

Status: A Petition for *Inter Partes* Review was filed on February 14, 2024. Patent Owner filed a Patent Owner Preliminary Response (“POPR”) on May 28, 2024. Petitioner filed a Reply to the POPR on June 17, 2024, and Patent Owner filed a Sur-Reply in response thereto on June 28, 2024. A decision on whether to institute *inter partes* review has not yet been made.

LISTING OF CLAIMS

This listing of claims will replace all prior versions and listings of claims:

1. (Original-Amended) A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:

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

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

causing a computational device to automatically ~~reducing~~ 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.

2. (Original-Unamended) The method of claim 1,

wherein the analyzing the operating environmental condition data determines the indication of the high demand for electric power from the power grid system if the operating environmental condition data indicates that a small size fossil fuel plant is coming on-line to provide power to the power grid system in response to a power demand on the power grid system.

3. (Original-Unamended) The method of claim 1, further comprising the computational device automatically increasing the current amount of consumption of electric power from the power grid system by the computational device from a current reduced electric power consumption level in response to not determining the indication of the high demand for electric power from the power grid system by analyzing the operating environmental condition data.

4. (Original-Unamended) The method of claim 1, wherein the operating environment feed is a really simple syndication feed from at least one of an electricity plant and a weather service.

5. (Original-Unamended) The method of claim 1,
wherein the analyzing the operating environmental condition data determines indication of the high demand for electric power if the operating environmental condition data indicates an unusual weather condition that may result in heavy demand for power from the power grid system.

6. (Original-Unamended) The method of claim 3, further comprising:
regularly updating the acquired the operating environmental condition data;
if changes are found in the updated environmental condition data, updating an internal state table with new downloaded data from the operating environment feed input; and
automatically reducing a present amount of consumption of electric power from the power grid system by the computational device if analyzing the updated state table data determines a high electric power demand indication, or increasing the present amount of consumption of electric power from the power grid system by the computational device if analyzing the updated state table data does not determine a high electric power demand indication.

7. (Original-Unamended) The method of claim 1, wherein the operating environmental condition data feed comprises information describing an output capacity and a current output of each of plurality of potential energy producers of the power grid system; and

wherein the analyzing the operating environmental condition data determines the indication of the high demand for electric power from the power grid system if the operating environmental condition data feed information indicates a relatively environmentally-friendly energy producer is near its output capacity.

8. (Original-Unamended) The method of claim 1 wherein the analyzing the operating environment feed data to determine a high electric power demand indication comprises:

applying a weighted function comprising a linear combination of values obtained from a plurality of different feeds, each of the different feeds having a weight; and

if the linear combination is above a certain threshold, including the high demand indicator in the aggregate feed.

9. (Original-Unamended) The method of claim 1, further comprising determining the indication of the high demand for electric power from the power grid system in response to data in the operating environmental condition data that comprises at least one of:

a spot price value of electricity; and

a rate of change of a price of electricity.

10. (Original-Unamended) The method of claim 9 wherein the step of the computational device automatically reducing the current amount of consumption of electric power from the power

grid system by the computational device comprises running nonessential services only when the spot price value of electricity is low.

11. (Original-Amended) A ~~service~~ method for adapting the power consumption of a computational device in response to environmental conditions, comprising:

providing a computer infrastructure configured to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, 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 the operating environmental condition data into a weighting function; and

cause 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.

12. (Original-Amended) The ~~service~~ method of claim 11, wherein the computer infrastructure is further configured to:

determine the indication of the high demand for electric power from the power grid system if the operating environmental condition data indicates that a small size fossil fuel plant is coming on-line to provide power to the power grid system in response to a power demand on the power grid system.

13. (Original-Amended) The ~~service~~ method of claim 12, wherein the computer infrastructure is further configured to determine the indication of the high demand for electric power from the power grid system if the operating environmental condition data indicates an unusual weather condition that may result in heavy demand for power from the power grid system.

14. (Original-Amended) The ~~service~~ method of claim 12, wherein the computer infrastructure is further configured to determine the high electric power demand indication in response to data in the operating environmental condition data that comprises at least one of:

- a spot price value of electricity; and
- a rate of change of a price of electricity.

15. (Original-Amended) An article of manufacture, comprising:

a computer readable tangible storage medium having computer readable program code embodied therewith, the computer readable program code comprising instructions which, when executed on a computer system, cause the computer system to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, 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 the operating environmental condition data into a weighting function; and

cause 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.

16. (Original-Unamended) The article of manufacture of claim 15, the program code comprising instructions which, when executed on the computer system, causes the computer system to:

regularly update the acquired the operating environmental condition data;

if changes are found in the updated environmental condition data, update an internal state table with new downloaded data from the operating environment feed input; and

automatically reduce a present amount of consumption of electric power from the power grid system by the computational device if analyzing the updated state table data determines a high electric power demand indication.

17. (Original-Unamended) The article of manufacture of claim 15, the program code comprising instructions which, when executed on the computer system, causes the computer system to analyze the operating environment feed data to determine the high electric power demand indication if the operating environmental condition data feed information indicates a relatively environmentally-friendly energy producer is near its output capacity.

18. (Original-Amended) A programmable device comprising:

a processing means;

a memory in communication with the processing means comprising a logic component;

and

a network interface in communication with the processing means and the memory;

wherein the processing means is configured to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, 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 the operating environmental condition data into a weighting function; and

cause 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.

19. (Original-Unamended) The programmable device of claim 18, wherein processing means is configured to:

regularly update the acquired the operating environmental condition data;

if changes are found in the updated environmental condition data, update an internal state table with new downloaded data from the operating environment feed input; and

automatically reduce a present amount of consumption of electric power from the power grid system by the computational device if analyzing the updated state table data determines a high electric power demand indication.

20. (Original-Unamended) The programmable device of claim 18, wherein processing means is configured to analyze the operating environment feed data to determine a high electric power demand indication by:

determining the indication of the high demand for electric power if the operating environmental condition data indicates that a small size fossil fuel plant is coming on-line to provide power to the power grid system in response to a power demand on the power grid system.

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

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

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

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.

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

providing a computer infrastructure configured to:

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

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

cause 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.

23. (New) An article of manufacture, comprising:

a computer readable tangible storage medium having computer readable program code
embodied therewith, the computer readable program code comprising instructions which, when
executed on a computer system, cause the computer system to:

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

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

cause 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 the analysis of 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.

24. (New) A programmable device comprising:

a processing means;

a memory in communication with the processing means comprising a logic component;

and

a network interface in communication with the processing means and the memory;

wherein the processing means is configured to:

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

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

cause 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 the analysis of 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.

25. (New) The method of claim 1, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

26. (New) The method of claim 25, 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 multiple thresholds are exceeded.

27. (New) The method of claim 1, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

28. (New) The method of claim 27, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

29. (New) The method of claim 28, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

30. (New) The method of claim 29, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

31. (New) The method of claim 30, wherein the machine learning comprises use of a statistical classifier.

32. (New) The method of claim 11, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

33. (New) The method of claim 32, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

34. (New) The method of claim 11, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein

analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

35. (New) The method of claim 34, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

36. (New) The method of claim 35, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

37. (New) The method of claim 36, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

38. (New) The method of claim 37, wherein the machine learning comprises use of a statistical classifier.

39. (New) The article of manufacture of claim 15, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

40. (New) The article of manufacture of claim 39, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

41. (New) The article of manufacture of claim 15, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

42. (New) The article of manufacture of claim 41, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

43. (New) The article of manufacture of claim 42, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

44. (New) The article of manufacture of claim 43, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

45. (New) The article of manufacture of claim 44, wherein the machine learning comprises use of a statistical classifier.

46. (New) The programmable device of claim 18, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

47. (New) The programmable device of claim 46, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

48. (New) The programmable device of claim 18, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

49. (New) The programmable device of claim 48, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

50. (New) The programmable device of claim 49, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

51. (New) The programmable device of claim 50, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

52. (New) The programmable device of claim 51, wherein the machine learning comprises use of a statistical classifier.

PATENT OWNER'S STATEMENT OF THE INTERVIEW

Patent Owner's undersigned attorney conducted a video conference interview with Examiners Worjloh, Reichle, and Fuelling on July 9, 2024. During the interview, Patent Owner's attorney provided an overview of the '243 patent, summarized proposed amendments to independent claims 1, 11, 15, and 18 and proposed new independent claims 21-24 that were sent to the Examiners with the interview agenda in advance of the interview (attached hereto as Exhibit A), and explained how the amended independent claims 1, 11, 15, and 18 and new independent claims 21-24 distinguish over the cited art. Patent Owner's attorney also provided citations to the '243 patent that support the proposed claim amendments and new independent claims. While the Examiners did not offer an opinion on whether the amended claims and newly added claims overcome the rejections, various suggestions were offered by the Examiners for improving the claims. Patent Owner's attorney thanks Examiners Worjloh, Reichle, and Fuelling for the courtesies extended during the interview.

REMARKS

Claims 1, 3-6, 9-11, 15-16 and 18-19 of U.S. Patent No. 8,291,243 (“the ‘243 patent”) are subject to reexamination and stand rejected. Original claims 2, 7-8, 12-14, 17, and 20 of the ‘243 patent are not subject to reexamination. By amendment above, Patent Owner proposes to amend original claims 1, 11-15 and 18, and to add new claims 21-52. No claims have been cancelled. Accordingly, claims 1-52 are pending. Applicant respectfully requests entry of the above amendments, reconsideration of the rejections, and a finding that the pending claims are patentable in view of the amendments and these remarks.

I. Support for Claim Amendments

Independent claims 1, 11, 15, and 18 have each been amended to include the following limitation (“the weighting function limitation”):

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 the operating environmental condition data into a weighting function*.

Support for the weighting function limitation can be found in the ‘243 patent at Col. 6, lines 27-33 and Col. 7, lines 51-59.

Independent claim 1 has also been amended at line 10 to change “a computational device automatically reducing a current amount of consumption of electric power . . .” to “causing a computational device to automatically reduce a current amount of consumption of electric power” in view of suggestions offered by the Examiners during the interview. Support for this amendment can be found in the ‘243 patent at Col. 4, lines 41-49; Col. 6, lines 14-20, FIG. 1, and in claim 11 as originally filed in the application that issued as the ‘243 patent.

Independent claim 11 and claims 12-15 have also been amended to change the term “service” to “method” in the preamble in view of suggestions offered by the Examiners during

the interview. Support for this amendment can be found in the '243 patent at Col. 1, lines 59-67; Col. 2, line 66-Col. 3, line 20; Col. 4, lines 32-49; Col. 9, lines 47-49; Col. 10, lines 22-24; FIG. 1; and claim 1 as originally filed in the application that issued as the '243 patent.

Newly added independent claims 21, 22, 23, and 24 include all of the limitations of original independent claims 1, 11, 15, and 18, respectively, and the following additional limitation ("the multiple thresholds-progressive triggering limitation"):

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*.

Support for the multiple thresholds-progressive triggering limitation can be found in the '243 patent at Col. 8, lines 64-67.

Newly added dependent claims 25, 32, 39 and 46 depend from independent claims 1, 11, 15, and 18, respectively, and recite:

wherein *inputting the operating environmental condition data into a weighting function produces a value*, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises *comparing the value to a threshold which denotes the high demand for electric power from the power grid system*.

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 27-33 and Col. 7, lines 51-59.

Newly added dependent claims 26, 33, 40, and 47 depend from new dependent claims 25, 32, 39, and 46, respectively, and recite:

progressively triggering additional power saving actions if multiple thresholds are exceeded.

Support for these new dependent claims can be found in the '243 patent at Col. 8, lines 64-67.

Newly added dependent claims 27, 34, 41, and 48 depend from original independent claims 1, 11, 15, and 18, respectively, and further recite:

wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises *acquiring environmental condition data from a plurality of operating environment feed inputs*, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises *assigning a respective weight to each of the operating environment feed inputs*.

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 27-33 and Col. 7, lines 51-59.

Newly added dependent claims 28, 35, 42, and 49 depend from new dependent claims 27, 34, 41, and 48, respectively, and further recite:

wherein *the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs*.

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 27-33 and Col. 7, lines 51-59.

Newly added dependent claims 29, 36, 43, and 50 depend from new dependent claims 28, 35, 42, and 49, respectively, and further recite:

wherein automatically *reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.*

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 27-33 and Col. 7, lines 51-59.

Newly added dependent claims 30, 37, 44, and 51 depend from new dependent claims 29, 36, 43, and 50, respectively, and further recite:

determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 33-35.

Newly added dependent claims 31, 38, 45, and 52 depend from new dependent claims 30, 37, 44, and 51, respectively, and further recite:

wherein the machine learning comprises use of a statistical classifier.

Support for these new dependent claims can be found in the '243 patent at Col. 6, lines 33-35.

In view of the above, Patent Owner respectfully submits that there is full support for the amendments herein, and that no new matter has been introduced. Patent Owner further submits that the amendments herein do not enlarge the scope of the original patent claims and therefore satisfy 37 C.F.R. § 1.552(b).

II. Claim Rejections - 35 U.S.C. § 102(b)

Claims 1, 3, 5, 9-11, 15 and 18 are rejected under pre-AIA 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 7,274,975 to Miller ("Miller"). Patent Owner respectfully traverses this rejection.

Original claim 1 recites a method for adapting the power consumption of a computational device in response to environmental conditions comprising the following steps:

acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;
analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and
a computational device automatically reducing 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.

Original independent claims 11, 15, and 18 are “service,” “article of manufacture,” and “programmable device” claims with substantially similar limitations.

Patent Owner submits that the § 102(b) rejection of original independent claims 1, 11, 15, and 18 is deficient because the Office Action fails to clearly identify elements in Miller that correspond to the limitations of claims 1, 11, 15, and 18. *See* M.P.E.P. § 2262 (“The first Office action must be sufficiently detailed that the pertinency and manner of applying the cited prior art to the claims in each rejection is clearly set forth therein.”) For example, the Office Action fails to clearly identify “a computational device” in Miller. The Office Action cites to paragraph [0006] of Miller (which Patent Owner presumes is meant to refer to Col. 1, line 63 – Col. 2, line 3 of Miller) but misquotes the paragraph. Instead of “computation devices,” as alleged in the Office Action, the paragraph actually refers to “consumption devices.” Similarly, with respect to the other paragraphs in Miller cited for this limitation, the Office Action fails to identify what is considered “a computational device” or explain why it’s properly considered “a computational device.”

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Since the Office Action fails to

clearly establish that all of the elements of the original independent claims are found in Miller, Patent Owner submits that the rejection of the original independent claims under 35 U.S.C. § 102(b) is improper.

Moreover, to expedite prosecution, Patent Owner has amended each of the original independent claims to include the following additional limitation (“the weighting function limitation”) that is not found in Miller:

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 the operating environmental condition data into a weighting function*.

While Miller discloses taking into account a number of factors, such as the supply of charge on batteries, the dynamic price of electricity, and weather forecasts, to schedule and activate energy supplies and consumption devices, (Miller at Col. 1, line 63 – 67), there is no disclosure of inputting operating environmental condition data into a weighting function as set forth in amended independent claims 1, 11, 15, and 18.

Furthermore, U.S. Patent No. 7,246,014 to Forth et al. (“Forth”), which is relied on as a secondary reference in another rejection, fails to remedy the above-noted deficiency in Miller. Forth discloses an energy management software system that displays energy management data and allows a user to interact with the data to better manage their energy system. *See, e.g.*, Forth at Abstract. The Office Action relies on Forth for disclosure of an RSS feed and an internal state table. There is no disclosure in Forth of inputting operating environmental condition data into a weighting function.

Since the weighting function limitation is not found in the cited art, Patent Owner submits that amended independent claims 1, 11, 15, and 18 are further patentable over the cited art for this additional reason.

Claims 3, 5, 9, and 10 depend directly or indirectly from claim 1 and include all of the limitations of claim 1 which are not disclosed by the cited art, including the weighting function limitation. Therefore, dependent claims 3, 5, 9, and 10 are submitted to be patentable over the cited art for at least the same reasons as claim 1.

For at least the above reasons, Patent Owner respectfully requests that claims 1, 3, 5, 9-11, 15, and 18 be found patentable.

III. Claim Rejections - 35 U.S.C. § 103(a)

Claims 4, 6, 16, and 19 stand rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Miller in view of Forth. Patent Owner respectfully traverses this rejection.

Claims 4 and 6 depend directly or indirectly from claim 1 and include all of the limitations of claim 1 which are not disclosed by Miller and Forth, including the weighting function limitation. Accordingly, claims 4 and 6 are submitted to be patentable over Miller in view of Forth for at least the same reasons as claim 1.

Claims 16 and 19 depend from independent claims 15 and 18, respectively, and include all of the limitations of the independent claims which are not disclosed by Miller and Forth, including the weighting function limitation. Therefore, claims 16 and 19 are submitted to be patentable over Miller in view of Forth for at least the same reasons as claims 15 and 18.

Claim 4 is also patentable because it calls for the operating environment feed to be a really simple syndication (RSS) feed from at least one of an electricity plant and a weather service, and neither Miller nor Forth disclose this limitation. The Office Action acknowledges that Miller does not expressly disclose the operating environment feed is a really simple syndication (RSS), but alleges that it would have been obvious to modify Miller to obtain operating environment data as an RSS feed in view of Forth's disclosure of RSS. Patent Owner respectfully disagrees. Forth discloses how an Aggregation GUI may subscribe to feeds, such as

RSS feeds, which provide summaries of recent changes on sites or loads the user is interested in. Forth at Col. 18, lines 43-45. The aggregator in Forth generates a single summary view that allows the user to view summaries of what is new or changed on all the sites they have subscribed to in one place. *Id.* at Col. 18, lines 47-54. Generating a summary viewable by a user is very different than analyzing an RSS feed to determine an indication of high demand for electrical power. The Office Action fails to address this distinction. Therefore, Patent Owner submits that claim 4 is also patentable over the cited art for this additional reason.

Claims 6, 16, and 19 are also patentable because they call for updating an internal state table if changes are found in updated environmental condition data and automatically reducing a present amount of consumption of electric power by the computational device if analyzing the updated state table data determines a high electric power demand. Neither Miller nor Forth disclose this limitation. The Office Action acknowledges that Miller does not expressly disclose an internal state table, but alleges that it would have been obvious to modify Miller to update an internal state table as claimed in view of Forth's disclosure of a table 119 at Col. 7, lines 1-12. Patent Owner respectfully disagrees. The table described in Forth is displayed to a user. See Forth at Col. 6, line 49 – Col. 7, line 44. There is no indication in Forth that table 119 is an internal state table, capable of being analyzed to automatically reduce power consumption, nor does the Office Action address this deficiency in Forth. Therefore, Patent Owner submits that claims 6, 16, and 19 are also patentable over the cited art for this additional reason.

For at least the above reasons, Patent Owner respectfully requests that claims 4, 6, 16, and 19 be found patentable.

IV. New Claims 21-52

Claims 21-24 are newly added independent claims that include all of the limitations of original independent claims 1, 11, 15, and 18, respectively, but also include the following additional limitation (“the multiple thresholds-progressive triggering limitation”):

wherein the analysis of 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*.

While Miller discloses “storage devices 105 and 106 may provide power to various devices . . . during periods where electrical grid costs exceed certain thresholds,” (Miller at Col. 2, lines 61 – 67), there is no disclosure of progressively triggering additional power saving actions if multiple thresholds are exceeded, as set forth in newly added independent claims 21-24.

Forth fails to remedy the above-noted deficiency in Miller. As noted previously, Forth discloses an energy management software system that displays energy management data and allows a user to interact with the data to better manage their energy system. *See, e.g.*, Forth at Abstract. The Office Action relies on Forth for disclosure of an RSS feed and an internal state table. There is no disclosure in Forth of progressively triggering additional power saving actions if multiple thresholds are exceeded.

Accordingly, Patent Owner submits that newly added independent claims 21-24 are patentable over the cited art.

Claims 25-52 depend directly or indirectly from one of independent claims 1, 11, 15, or 18, respectively, and include all of the limitations of the independent claims which are not disclosed by the cited art, including the weighting function limitation. Therefore, dependent

claims 25-52 are submitted to be patentable over the cited art for at least the same reasons as the independent claims.

Dependent claims 25-52 are also submitted to be patentable over the cited art because they recite additional limitations that are not found in the cited art, such as using a weighting function to produce a value and comparing the value to a threshold (claims 25, 32, 39, and 46), progressively triggering additional power saving actions if multiple thresholds are exceeded (claims 26, 33, 40, and 47), assigning respective weights to a plurality of operating environment feed inputs (claims 27, 34, 41, and 48), the weighting function comprising a linear combination of values obtained from the plurality of weighted operating environment feed inputs (claims 28, 35, 42, and 49), reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold (claims 29, 36, 43, and 50), determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs (claims 30, 37, 44, and 51), and the machine learning comprising use of a statistical classifier (claims 31, 38, 45, and 52).

For at least the above reasons, Patent Owner respectfully requests that newly added claims 21-52 be found patentable.

V. Conclusion

Pursuant to 37 C.F.R. 1.550(f), the attached Certificate of Service indicates that copies of this Response to Office Action (including the Interview Agenda and Proposed Claim Amendments attached hereto as Exhibit A) and the Information Disclosure Statement (including references cited therein) filed concurrently herewith have been served in their entirety on the third party requester by first class mail at the address of record for the third party requester, in accordance with 37 C.F.R. 1.248.

The Commissioner is hereby authorized to charge any deficiency of fees submitted herewith, or credit any overpayment, to Deposit Account No. 601918. If the Examiner believes that a phone interview would be helpful, the Examiner is kindly requested to contact Patent Owner's undersigned attorney.

Date: July 11, 2024

Respectfully submitted,

By: /Jason M. Shapiro/
Jason M. Shapiro
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Wilmington, DE 19806
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Attorney for Patent Owner

EXHIBIT A

Jason Shapiro

From: Jason Shapiro
Sent: Monday, July 8, 2024 10:03 AM
To: Worjloh, Jalatee
Cc: Jennifer Picini
Subject: RE: Reexam Control No. 90/019,303
Attachments: 2024-07-08-90019303-Proposed Claim Amendments.docx

Dear Examiner Worjloh,

Thank you for scheduling an interview in the above-referenced *ex parte* reexamination. Patent Owner's proposed agenda for the interview is as follows:

1. Discussion of the proposed claim amendments attached to this email;
2. Discussion how the proposed claim amendments overcome the rejection of claims 1, 3, 5, 9-11, 15 and 18 as being anticipated by U.S. Patent No. 7,274,975 to Miller ("Miller") under 35 U.S.C. § 102(b); and
3. Discussion how the proposed claim amendments overcome the rejection of claims 4, 6, 16, and 19 as being obvious over Miller in view of U.S. Patent No. 7,246,014 to Forth under 35 U.S.C. § 103(a).

I look forward to speaking with you and your colleagues tomorrow.

Respectfully,
Jason M. Shapiro
Reg. No. 35,354
Attorney for Patent Owner



Jason M Shapiro
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Admitted in DE and MD
Not Admitted in CA

From: Worjloh, Jalatee <Jalatee.Worjloh@USPTO.GOV>
Sent: Thursday, June 27, 2024 2:06 PM
To: Jason Shapiro <jshapiro@devlinlawfirm.com>
Subject: RE: Reexam Control No. 90/019,303

Hello Mr. Shapiro,

Your interview is scheduled for Tuesday, July 9, 2024 from 11:00 AM to 12:00 PM EST. Please email a copy of the agenda and use the below information to join the meeting.

Thank you,
Jalatee

Microsoft Teams [Need help?](#)
[Join the meeting now](#)

Meeting ID: 225 615 548 966

Passcode: fQk9pX

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From: Jason Shapiro <jshapiro@devlinlawfirm.com>

Sent: Thursday, June 27, 2024 1:10 PM

To: Worjloh, Jalatee <Jalatee.Worjloh@USPTO.GOV>

Subject: Reexam Control No. 90/019,303

CAUTION: This email has originated from a source outside of USPTO. **PLEASE CONSIDER THE SOURCE** before responding, clicking on links, or opening attachments.

Dear Examiner Worjloh,

Thank you for returning my call earlier today. I am available before 2pm (Eastern) on Tuesday, July 2nd, Monday, July 8th, or Tuesday, July 9th.

Please let me know what day(s) and times work for you and your colleagues.

Respectfully,

Jason Shapiro

Reg. No. 35,354



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Admitted in DE and MD

Not Admitted in DE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No. : 8,291,243
Reexam Control No. : 90/019,303
Confirmation No. : 7420
Filed : Nov. 21, 2023
TC/A.U : 3992
Examiner : Worjloh, Jalatee
Docket No. : GRA2643
Customer No. : 134688
Title : ADAPTIVE COMPUTING RESPONSIVE TO ENVIRONMENTAL CONDITIONS

Mail Stop “*Ex Parte* Reexam”
Attn: Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PROPOSED CLAIM AMENDMENTS FOR DISCUSSION

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

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

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

a computational device automatically reducing 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.

11. (Amended) A service for adapting the power consumption of a computational device in response to environmental conditions, comprising:

providing a computer infrastructure configured to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system comprises inputting the operating environmental condition data into a weighting function; and

cause 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.

15. (Amended) An article of manufacture, comprising:

a computer readable tangible storage medium having computer readable program code embodied therewith, the computer readable program code comprising instructions which, when executed on a computer system, cause the computer system to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the

power grid system comprises inputting the operating environmental condition data into a weighting function; and

cause 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.

18. (Amended) A programmable device comprising:

a processing means;

a memory in communication with the processing means comprising a logic component;

and

a network interface in communication with the processing means and the memory;

wherein the processing means is configured to:

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

analyze the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system comprises inputting the operating environmental condition data into a weighting function; and

cause 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.

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

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

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

a computational device automatically reducing 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.

22. (New) A service for adapting the power consumption of a computational device in response to environmental conditions, comprising:

providing a computer infrastructure configured to:

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

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

cause 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 the analysis of 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.

23. (New) An article of manufacture, comprising:

a computer readable tangible storage medium having computer readable program code embodied therewith, the computer readable program code comprising instructions which, when executed on a computer system, cause the computer system to:

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

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

cause 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 the analysis of 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.

24. (New) A programmable device comprising:

a processing means;

a memory in communication with the processing means comprising a logic component;

and

a network interface in communication with the processing means and the memory;

wherein the processing means is configured to:

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

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

cause 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 the analysis of 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.

25. (New) The method of claim 1, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein analyzing the operating

environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

26. (New) The method of claim 25, 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 multiple thresholds are exceeded.

27. (New) The method of claim 1, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

28. (New) The method of claim 27, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

29. (New) The method of claim 28, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

30. (New) The method of claim 29, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

31. (New) The method of claim 30, wherein the machine learning comprises use of a statistical classifier.

32. (New) The service of claim 11, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

33. (New) The service of claim 32, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

34. (New) The service of claim 11, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

35. (New) The service of claim 34, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

36. (New) The service of claim 35, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

37. (New) The service of claim 36, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

38. (New) The service of claim 37, wherein the machine learning comprises use of a statistical classifier.

39. (New) The article of manufacture of claim 15, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

40. (New) The article of manufacture of claim 39, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

41. (New) The article of manufacture of claim 15, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system

comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

42. (New) The article of manufacture of claim 41, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

43. (New) The article of manufacture of claim 42, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

44. (New) The article of manufacture of claim 43, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

45. (New) The article of manufacture of claim 44, wherein the machine learning comprises use of a statistical classifier.

46. (New) The programmable device of claim 18, wherein inputting the operating environmental condition data into a weighting function produces a value, and wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric

power from the power grid system further comprises comparing the value to a threshold which denotes the high demand for electric power from the power grid system.

47. (New) The programmable device of claim 46, wherein the analysis of the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises utilizing multiple thresholds that progressively trigger additional power saving actions.

48. (New) The programmable device of claim 18, wherein acquiring operating environmental condition data relevant to the generation of electric power in a power grid system comprises acquiring environmental condition data from a plurality of operating environment feed inputs, and wherein analyzing the operating environment feed data to determine an indication of a high demand for electric power from the power grid system further comprises assigning a respective weight to each of the operating environment feed inputs.

49. (New) The programmable device of claim 48, wherein the weighting function comprises a linear combination of values obtained from the weighted operating environment feed inputs.

50. (New) The programmable device of claim 49, wherein automatically reducing a current amount of consumption of electric power from the power grid system is triggered or ended if the linear combination is above a certain threshold.

51. (New) The programmable device of claim 50, further comprising determining the weights and the threshold by machine learning based on historical data from the operating environment feed inputs.

52. (New) The programmable device of claim 51, wherein the machine learning comprises use of a statistical classifier.