

Petitioner's Demonstratives

Tesla, Inc. v. Graphite Charging Co. LLC
IPR2024-00388 (U.S. Patent No. 8,291,243)

Oral Argument Agenda

- Overview of the '243 Patent
- Grounds for unpatentability
 - Ground 1: Wang
 - Ground 2: Wang and the AESO Report
 - Ground 3: Cooley
- Patent Owner's motions
- Conclusion

Overview of the '243 Patent



US008291243B2

(12) **United States Patent**
Castelli et al.

(10) **Patent No.:** **US 8,291,243 B2**
(45) **Date of Patent:** **Oct. 16, 2012**

(54) **ADAPTIVE COMPUTING RESPONSE TO ENVIRONMENTAL CONDITIONS**

(56) **References Cited**

(75) Inventors: **Vittorio Castelli**, Croton on Hudson, NY (US); **Rick A. Hamilton, II**, Charlottesville, VA (US); **Brian M. O'Connell**, Cary, NC (US); **Clifford A. Pickover**, Yorktown Heights, NY (US); **Keith R. Walker**, Austin, TX (US)

U.S. PATENT DOCUMENTS

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6,859,882 B2 *	2/2005	Fung	713/300
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7,349,828 B1 *	3/2008	Ranganathan et al.	702/186
7,353,413 B2 *	4/2008	Dunstan	713/320
7,533,283 B2 *	5/2009	Fung	713/322
2008/0077355 A1	3/2008	Casler et al.	

* cited by examiner

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 897 days.

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(21) Appl. No.: **12/257,627**

(22) Filed: **Oct. 24, 2008**

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US 2010/0106982 A1 Apr. 29, 2010

(51) **Int. Cl.**
G06F 1/00 (2006.01)
G06F 1/26 (2006.01)
G06F 1/32 (2006.01)

(52) **U.S. Cl.** **713/320; 713/323; 713/324; 713/340**

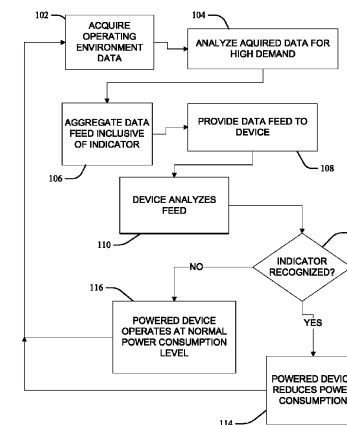
(58) **Field of Classification Search** **713/320, 713/323, 324, 340**

See application file for complete search history.

(57) **ABSTRACT**

Methods, including service methods, articles of manufacture, systems, articles and programmable devices are provided for adapting the power consumption of a computational device in response to environmental conditions. Operating environmental condition data relevant to the generation of electric power is acquired from an operating environment feed and analyzed to determine a high electric power demand indication. If the analyzing determines a high electric power demand indication, then a computational device automatically reduces an amount of electric power consumption.

20 Claims, 3 Drawing Sheets



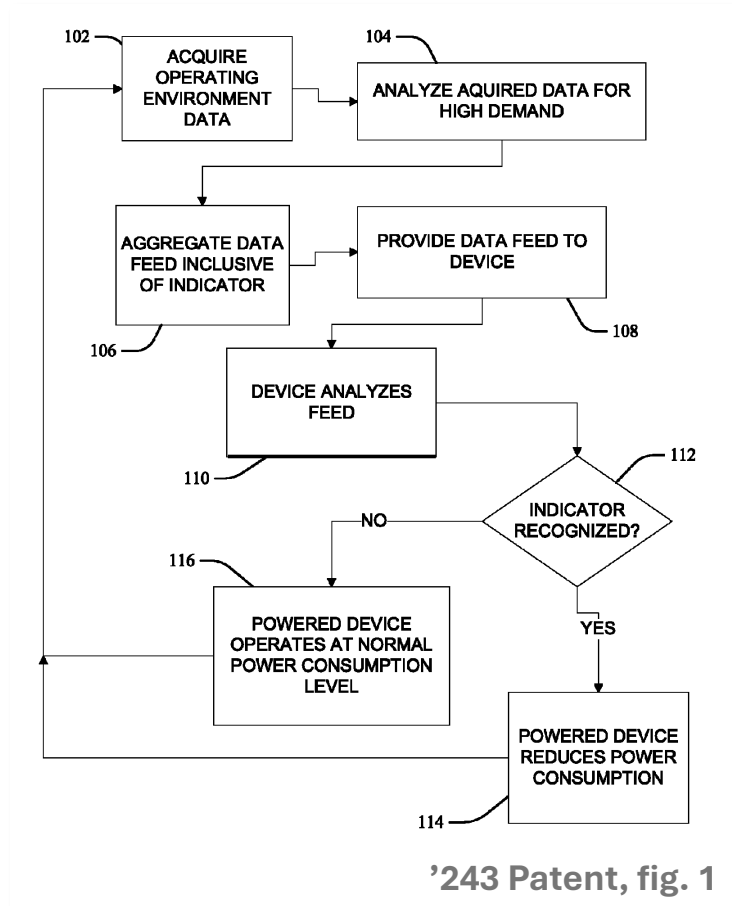
The '243 Patent Subject Matter

(57)

ABSTRACT

Methods, including service methods, articles of manufacture, systems, articles and programmable devices are provided for adapting the power consumption of a computational device in response to environmental conditions. Operating environmental condition data relevant to the generation of electric power is acquired from an operating environment feed and analyzed to determine a high electric power demand indication. If the analyzing determines a high electric power demand indication, then a computational device automatically reduces an amount of electric power consumption.

'243 Patent (Ex-1001), Abstract



'243 Patent, fig. 1

The '243 Patent

Independent Claim 1

Claim	Limitation(s)
1[P]	A method for adapting the power consumption of a computational device in response to environmental conditions, comprising:
1[A]	acquiring operating environmental condition data relevant to the generation of electric power in a power grid system from an operating environment feed input;
1[B]	analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and
1[C]	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.

'243 Patent, 10:59-11:5

The '243 Patent

Data Examples

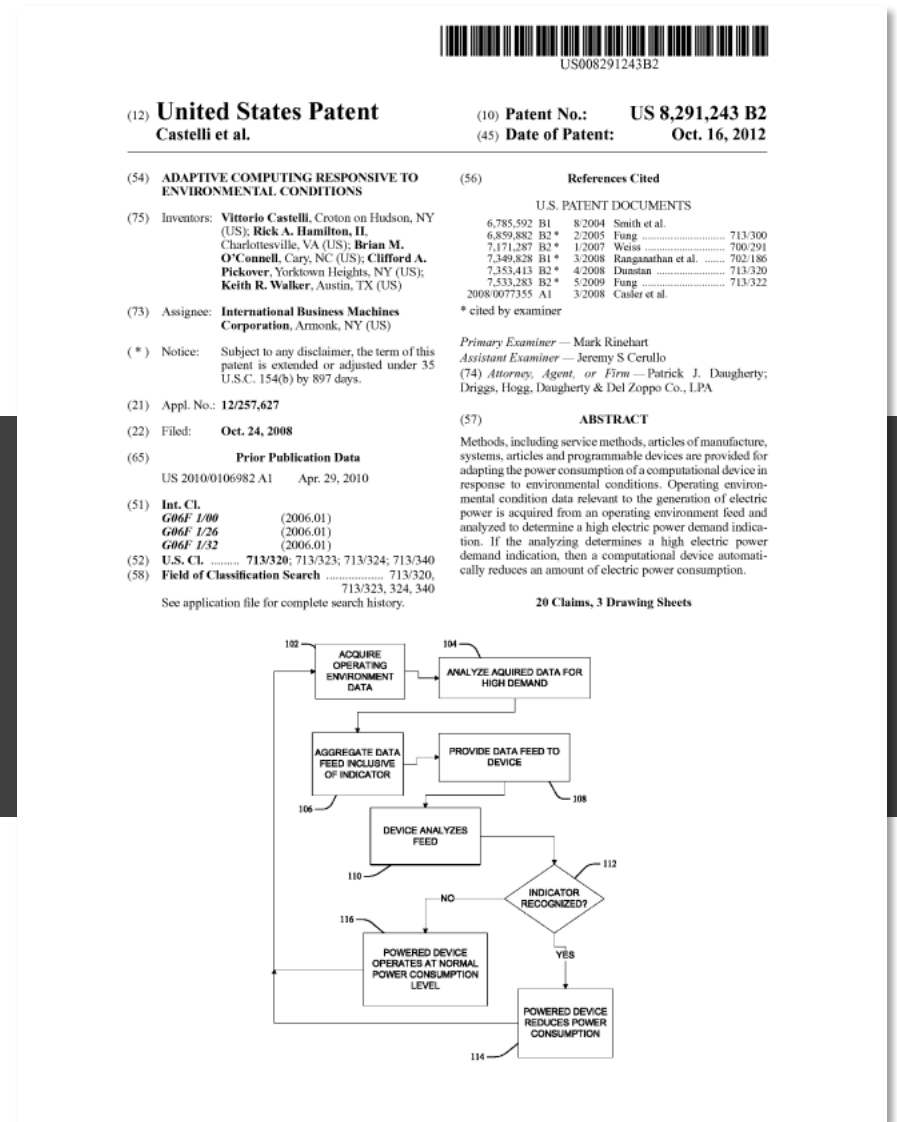
Examples of feeds, information and data appropriate to function as environmental data inputs (for example at **102** of FIG. 1 above) or as power-setting indicators (for example at **108** of FIG. 1 above) include a spot price of electricity, a rate of change of price of electricity, weather conditions, time of day, a facility (e.g. a household, building or company) energy use, census data associated with a specified energy use or demand, as well as other data relevant to energy costs. In

'243 Patent, 4:50-57

The '243 Patent Grounds for Unpatentability

Ground	Prior Art	Basis	Claims
1	Wang	Obviousness	1 to 20
2	Wang and AESO Report	Obviousness	2, 12 to 14, and 20
3	Cooley	Anticipation	1, 3, 11, 15, and 18

Ground 1: Wang (Claim 1)

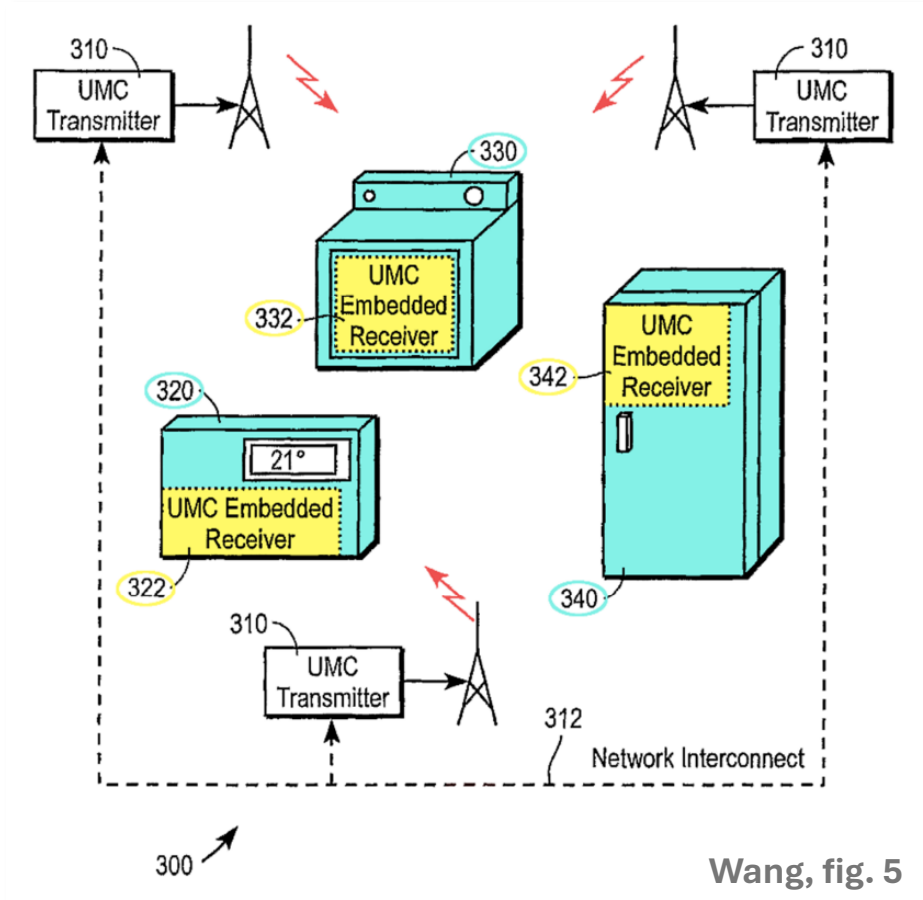


Ground 1: Wang

Overview of Wang

Referring now to Fig. 5, a utility message channel (UMC) system 300 for disseminating utility information, at the appliance level, within a geographic region, is disclosed. UMC system 300 includes one or more transmitters 310 that wirelessly broadcast tariff information directly to receivers 322, 332, 342 embedded within energy consuming appliances 320, 330, 340, respectively. In a preferred embodiment,

Wang, 41:23-24



Ground 1: Wang (Claim 1)

Disputed Elements

Patent Owner's Response—

The only disputes regarding whether Wang renders claim 1 obvious involve elements 1[B] and 1[C].

Response (Paper 24) at 13-19

Claim	Limitation(s)
1[B]	analyzing the operating environmental condition data to determine an indication of a high demand for electric power from the power grid system; and
1[C]	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.

'243 Patent, 10:65-11:5

Ground 1: Wang (Claim 1)

Issues with PO's Arguments

- Wang's express teachings are sufficient for rendering elements 1[B] and 1[C] obvious
- Patent Owner has no response to Wang's inherent teachings
- Petitioner's arguments regarding Wang's non-tariff examples remain unrebutted

Ground 1: Wang (Claim 1)

The User's Role in Wang

Patent Owner's position—

“Petitioner’s intentional editing omits that it is the **human user**—not the appliance—that does any regulating”

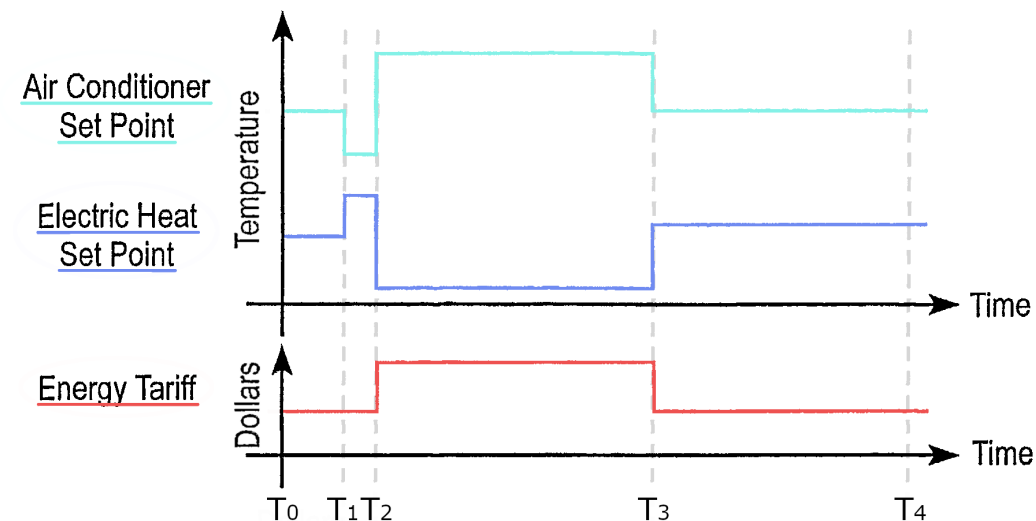
Response at 15

period of time equal to the duration of the higher tariff rates. In some embodiments the high and low tariff temperature set points for both the air conditioner and heater on either side of the low-to-high tariff transition are consumer configurable.

Wang, 52:3-5

components. In the summer months application processor 416 controls the air conditioner relay, and in the winter months application processor 416 controls the electric heater.

Wang, 52:18-20



Wang, fig. 10

Ground 1: Wang (Claim 1)

Wang's Override of Settings

In some embodiments, the MMI allows for the **temporary override of user programmed settings**. Such a feature is desirable to have, for example, in clothes dryers ... from time to time, an emergency may come up in which clothing needs to be dried as soon as possible. In such instances, the override can be used to power the elements at full power, thus consuming more energy per unit time in order to satisfy the immediate needs of the user. Such override flexibility is an important feature of the present invention.

“In optional embodiments, appliances are equipped with a **user activated override** feature that permits the bypass of load shed operation.”

Wang, 52:10-13; id. at 16:16-17

To the extent PO's position is that the claims do not permit any manual user input in the claimed load-shedding process, they simply do not require an absence of manual user input.

Reply at 11



Dr. Cameron—

“Reducing a waiting time before disks of the computer system are suspended. Can it be done by a user? ...

I mean, we have that capability in a laptop, so it can be...

So, it's not always precise, that a user is saying, "Hey, turn my disks off." It's more like I'm selecting an option that includes that.”

Ex-1025, 324:12-325:22

Ground 1: Wang (Claim 1)

High Demand “Indication”

Patent Owner’s position—

“[T]ariff rate data is not a high electric power demand indication—it is data that may be used to determine a high electric power demand indication.”

Response at 18

PO seems to be arguing that this indication must only indicate one thing, i.e., high demand for electric power from the power grid system. However, the claims do not say that and do not require that either.

Reply at 13



Dr. Cameron—

“[Spot prices] don’t directly correlate always to – high demand, ... there’s a lot of reasons that the price could increase that have **nothing to do with the demand** for power.”

Ex-1025, 260:2-261:14

Ground 1: Wang (Claim 1) High-Demand “Indication” in view of Claim 5

Claim	Limitation(s)
5	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.



Dr. Cameron—

“[W]eather can be a reason for power demand to increase, but it may not be the only reason, right, or it may not be – it may not track exactly.”

Ex-1025, 262:1-24

Ground 1: Wang (Claim 1) High-Demand “Indication” in view of Claim 7

Claim	Limitation(s)
7[A]	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
7[B]	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.

Claim 7 does not require that this relatively environmentally friendly energy producer be near its output capacity solely because there is a high demand for electric power. Instead, this data point is sufficient to indicate a possibility of high demand for electric power, but it could also indicate other things. PO’s own expert also confirmed as much.

Reply at 13



Dr. Cameron—

So, if I had, you know, you know, data with one among many being at capacity, it doesn't really tell me anything about whether I'm under a high demand condition or not.

Ex-1025, 276:20-277:13

Ground 1: Wang (Claim 1) High Demand “Indication”

Patent Owner’s position—

“Petitioner’s argument that ‘[c]laim 1 merely requires *an indication* not a correct determination of high demand for electric power,” (Reply 13), misses the point because the claimed ‘**indication**’ is a **determination** of high electric power demand—not data that *may* indicate same.”

Sur-Reply at 10

Examples of feeds, information and **data** appropriate to function as environmental data inputs (for example at **102** of FIG. 1 above) or as **power-setting indicators** (for example at **108** of FIG. 1 above) include a spot price of electricity, a rate of change of price of electricity, weather conditions, time of day, a facility (e.g. a household, building or company) energy use, census data associated with a specified energy use or demand, as well as other **data** relevant to energy costs. In

’243 Patent, 4:50-57

Ground 1: Wang (Claim 1)

Autonomy

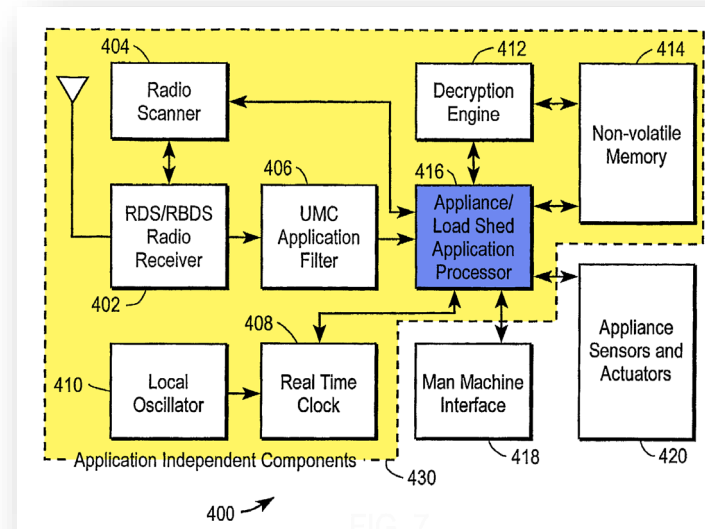
Patent Owner's position—

The fact that an appliance may do something “autonomously” as repeated several times by Petitioner does not mean that the appliance is analyzing the data to determine an indication of high demand or automatically reducing a current amount of power consumed by the appliance

Response at 16

“[E]ach such appliance is configured to use such information in an **autonomous** manner. in embodiments where inter-appliance communication is possible in order to produce an aggregate load shedding response, **each appliance is capable of independent load-shedding decisions** ...

Wang, 15:13-27



Wang, fig. 7



Dr. Cameron—

“Automatic” is a bit more precise because it describes something that is an automated process, meaning it **takes place typically without user intervention.**

Ex-1025, 254:19-255:14

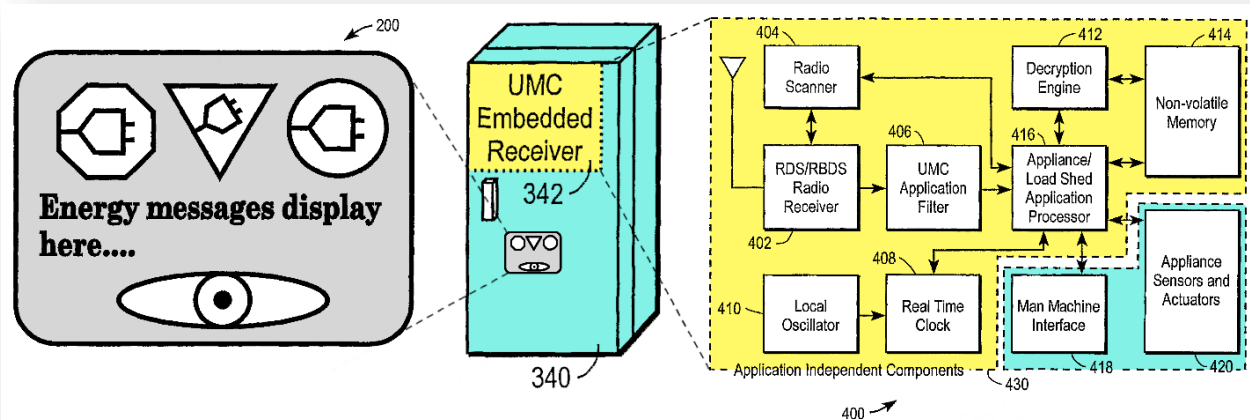
Ground 1: Wang (Claim 1)

Decision Engine

Patent Owner's position—

[T]here is no evidence that the Wang appliances have a **decision engine** that can analyze data and determine an indication of high demand

Response at 16



Claim

Limitation(s)

1[B]

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

Decision Engine?



Q. Is a **processor** capable of functioning as an **analytic decision engine**?

[PO's Expert]. Let me describe what an analytic decision engine is, and then I'm going to say that, basically, **you can implement it in software or hardware, including a microprocessor**. ... So, **it could be a microprocessor, sure.**

Ex-1025, 239:20-240:11

Ground 1: Wang (Claim 1)

Wang's Inherent Teachings

“Analyzing operating **environmental condition data is necessary** for autonomous operation and independent load-shedding based on that data.”

Petition at 24

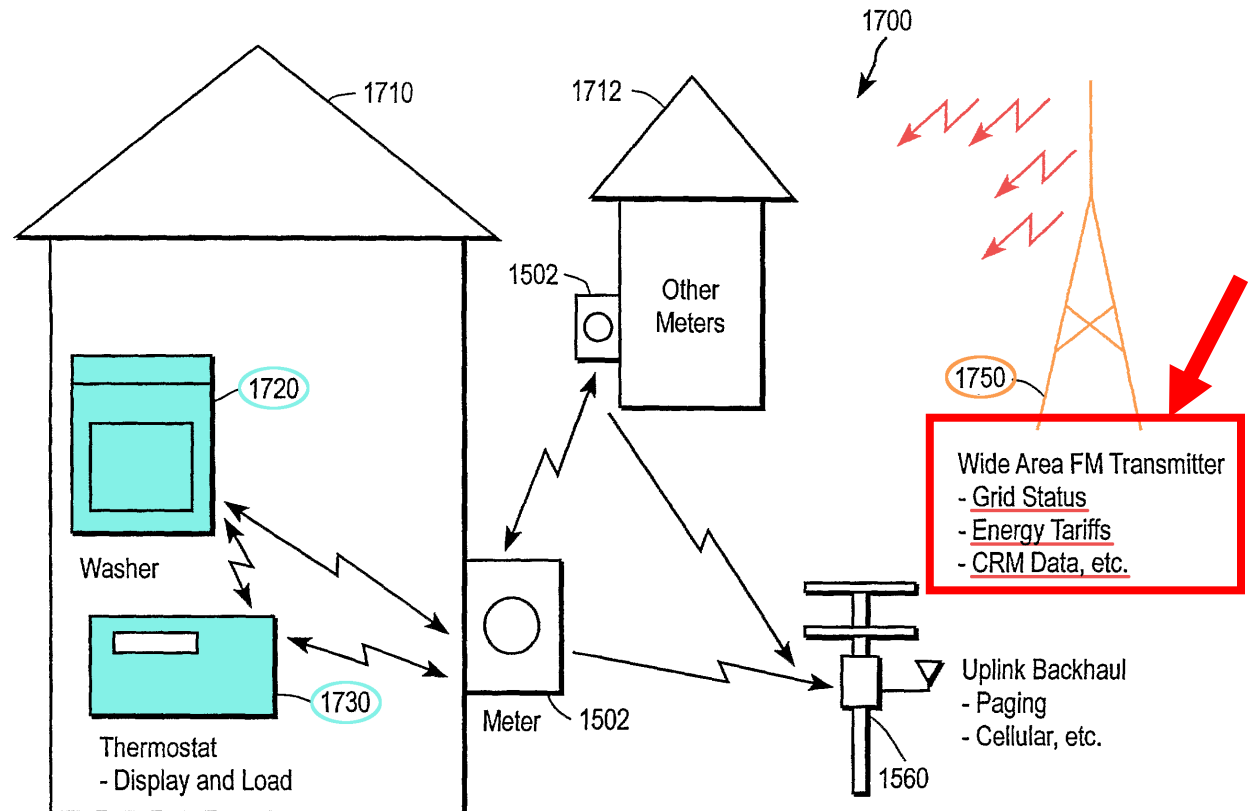
accordance with consumer lifestyle choices. For example, each appliance can have its own integrated RDS/RBDS or IBOC wireless receiver capable of independent receipt of real time utility tariffs, standards-based clock time, and grid status information broadcasted directly from a wide area network (*e.g.* using a network of FM radio stations that broadcast subsidiary communications multiplex operation sub-carriers). In some embodiments, each such appliance is configured to use such information in an autonomous manner. No local intercommunication among residential appliances is necessary in such embodiments. In some embodiments, a local area network (*e.g.* Zigbee) is optionally used to facilitate inter-appliance communication. Such communication can be used to provide an aggregate load shedding response that improves overall load shedding performance. However, even in embodiments where inter-appliance communication is possible in order to produce an aggregate load shedding response, each appliance is capable of independent load-shedding decisions when the local area network is not present or otherwise functioning improperly. This

Wang, 15:14-27

Ground 1: Wang (Claim 1)

Non-Tariff Examples

Wang describes various types of operating environmental condition data, including data regarding power pricing and availability, grid status and reliability, critical weather events, and CRM. Ex1005, 41:5-10 (mentioning “power tariff information”), 16:26-30 (mentioning “grid status,” “an energy tariff,” and “[CRM] data”), 35:31-36:2 (mentioning “overall utility load” and “availability of alternative electrical energy supplies”), and 39:19-26 (mentioning “critical price points ... for energy,” “a grid reliability warning,” and “critical weather warning[s]”).



Ground 1: Wang (Claim 1)

Non-Tariff Examples

Table 1 juxtaposes net energy generated (green) with internal demand (red) and load responsibility (purple). Id., 36:2-7. ...

Comparing these values allows for determining whether a particular generator – and, collectively, the entire grid – is experiencing high demand. Declaration ¶ 80.

Wang's application processor 416 processes such data and adjusts appliance power consumption accordingly. Wang, 47:33-48:6 and 51:10-55:6.

Petition at 25-26

Table 1 - Utility information for the AESO electric grid on March 7, 2005

<u>Alberta Total Net Generation</u>	7993
Interchange	15
<u>Alberta Internal Demand</u>	7978
<u>Alberta Load Responsibility</u>	7262
Contingency Reserve Required	498
Dispatched Contingency Reserve (DCR)	502
Dispatched Contingency Reserve –Gen	345
Dispatched Contingency Reserve –Other	157

Table 3 - Utility information for AESO hydroelectric generators on March 7, 2005

HYDRO			
UNIT	<u>MCR</u>	<u>TNG</u>	DCR
▶Bighorn Hydro	120	34	10
▶Bow River Hydro	319	165	26
▶Brazeau Hydro	350	43	128
▶CUPC Oldman River	32	7	0
▶Chin Chute	11	0	0
▶Irrican Hydro	7	0	0
▶Raymond Reservoir	18	0	0
▶Taylor Hydro	12	0	0

Ground 1: Wang (Dep't)

(12) **United States Patent**
Castelli et al.

(10) **Patent No.:** US 8,291,243 B2
(45) **Date of Patent:** Oct. 16, 2012

(54) **ADAPTIVE COMPUTING RESPONSIVE TO ENVIRONMENTAL CONDITIONS**

(56) **References Cited**

(75) **Inventors:** Vittorio Castelli, Croton on Hudson, NY (US); Rick A. Hamilton, II, Charlottesville, VA (US); Brian M. O'Connell, Cary, NC (US); Clifford A. Pickover, Yorktown Heights, NY (US); Keith R. Walker, Austin, TX (US)

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7,349,828 B1* 3/2008 Ranganathan et al. 713/320
7,533,413 B2* 4/2008 Dunstan 713/320
7,533,283 B2* 5/2009 Fung 713/322
2008/0077355 A1 3/2008 Casler et al.

(73) **Assignee:** International Business Machines Corporation, Armonk, NY (US)

* cited by examiner

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 897 days.

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(21) **Appl. No.:** 12/257,627

(57) **ABSTRACT**

(22) **Filed:** Oct. 24, 2008

Methods, including service methods, articles of manufacture, systems, articles and programmable devices are provided for adapting the power consumption of a computational device in response to environmental conditions. Operating environmental condition data relevant to the generation of electric power is acquired from an operating environment feed and analyzed to determine a high electric power demand indication. If the analyzing determines a high electric power demand indication, then a computational device automatically reduces an amount of electric power consumption.

(65) **Prior Publication Data**
US 2010/0106982 A1 Apr. 29, 2010

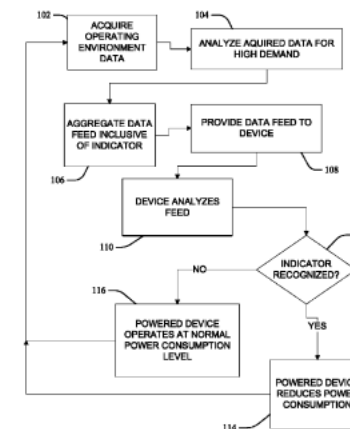
(51) **Int. Cl.** (2006.01)
G06F 1/00 (2006.01)
G06F 1/26 (2006.01)
G06F 1/32 (2006.01)

(52) **U.S. Cl.** 713/320; 713/323; 713/324; 713/340

(58) **Field of Classification Search** 713/320, 713/323, 324, 340

See application file for complete search history.

20 Claims, 3 Drawing Sheets



Ground 1: Wang (Claim 2)

Supporting Evidence



Dr. MacCarley—

“[A] POSA would have understood that power grids commonly use ‘peaking plants’ ... during periods of high (read: peak) demand. For example, an article published by Power Magazine describes [the] use of peaking plants in the early 1900s.”

Declaration ¶ 98

In addition to overall electric grid properties, AESO publishes status of energy generation from specific types of resources such as wind (Table 2) and hydroelectric power (Table 3). Such information can be communicated using the systems and methods of the present invention to displays 200 so that utility customers can make informed decisions on when to use power. Typically, such users would postpone energy consuming tasks to those points in time when more renewable energy resources were being using to generate power (*e.g.*, wind and hydroelectric power as opposed to coal and gas). In Tables 2 and 3, the term MCR means maximum

Wang, 36:11-19

+

effects. Smaller power plants, such as hydroelectric plants and small size fossil fuel plants, can be brought on-line quickly, and are often used to meet peak power demand. However, smaller fossil fuel power plants are typically much more inefficient and less clean than larger power plants, and

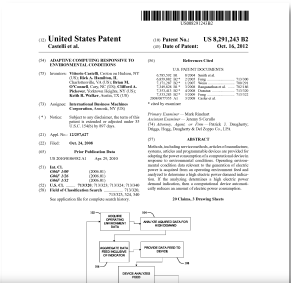
'243 Patent, 3:58-62

red an invention of a different turbine to the General Electric Co. (GE). By 1901, GE had successfully developed a vertical-shaft, low-speed, high-torque, horizontal-shaft-mounted disk, and by 1903, it delivered the world's first 5-MW steam turbine to the Commonwealth Edison Company. These turbines were used mostly as mechanical drives or as peaking units.

Ex-1015 at 2

Ground 1: Wang (Claim 2)

Incorrect Standard



'243 Patent

Claim	Limitation(s)
2	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.

Patent Owner's position—

AESO does not provide any disclosure that is related to a small-size fossil fuel plant **coming on-line**.

Response at 45-46



Federal Circuit—

PO's positions demand the type of rigid obviousness analysis that was eliminated long ago. *KSR v. Teleflex*, 550 U.S. 398, 415 (2007). “A person of ordinary skill is also a person of ordinary creativity, not an automaton,” *Fleming v. Cirrus Design*, 28 F.4th 1214, 1223 (Fed. Cir. 2022) (citing *KSR*, 550 at 421), and assembling those well-known elements together is fundamentally obvious, particularly to the ordinarily creative POSA.

Ground 1: Wang (Claim 2)

PO's Expert: "it's ... subjective"



Dr. Cameron—

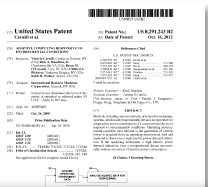
“Well, I mean, in this case, I assume—there’s **no** good definition. I thought we talked about small power plants earlier or **small-sized fossil fuel plants** and stuff like that, that they’re pretty subjective—it’s pretty **subjective** terminology.”

Ex-1025, 378:3-7

Claim	Limitation(s)
2	... 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. <p>Ex-1001, 11:6-14</p>

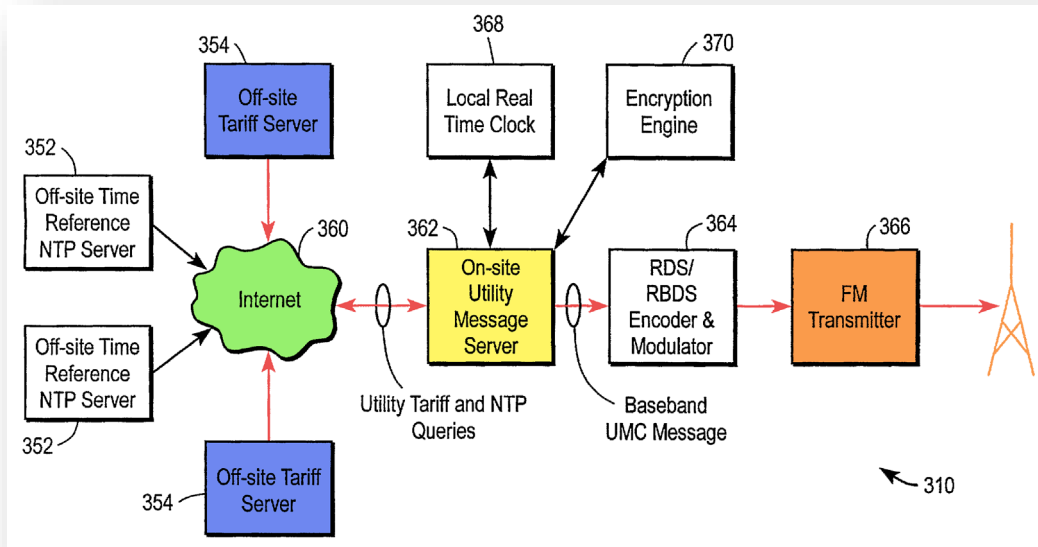
Ground 1: Wang (Claim 4)

Mischaracterizing the Petition



'243 Patent

Claim	Limitation(s)
4	wherein the operating environment feed is a really simple syndication feed from at least one of an electricity plant and a weather service.



Dr. MacCarley—

Wang's feeds involves servers 354 (purple) that publish tariff information via the internet 360 (green). The off-site tariff servers 354, Wang explains, can each be "realized as an XML or [an] HTML web server." *Id.*, 46:12-13.

Declaration ¶ 115

Ground 1: Wang (Claim 4)

PO Mischaracterizes Petition



'243 Patent

Claim	Limitation(s)
4	wherein the operating environment feed is a really simple syndication feed from at least one of an electricity plant and a weather service.

Patent Owner's position—

[A] POSITA would understand that a reference to XML does not imply that an RSS feed is being used because there are many uses of XML that do not require RSS.

Response at 36-37

By only arguing whether XML implies use of RSS (which was not argued), PO overlooks what the Petition did argue.

Reply at 41-42

Since RSS is simply XML-formatted plain text, a POSA would have understood an RSS feed as one of a finite number of known protocols for communication of XML or HTML web server data. Declaration ¶ 116. Moreover, a POSA would have been motivated by Wang's description of the servers 354 transmitting XML data over the internet to at least try using a well-known technique like RSS.

Petition at 40-41

Ground 1: Wang (Claim 4)

“Tak[ing] the Web by storm”

Ajax (Asynchronous JavaScript And XML) and RSS (Really Simple Syndication) are two technologies that have taken the Web by storm. Most commonly, RSS is used to provide news to either people or other organizations. This is done by serving an "RSS feed" from a website. An RSS feed is simply a link to an XML file that is structured in a certain way. The RSS specification tells us the expected structure of the XML file. For example, the title, author, and description tags are required, and so all RSS XML files will have at least these three tags.

Ex-1014 at 1



Dr. Cameron—

“Q. Okay. So, **some POSAs would have been familiar with RSS** before the [’243 P]atent, but some would not have been? That’s your testimony? A. **Yeah.**”

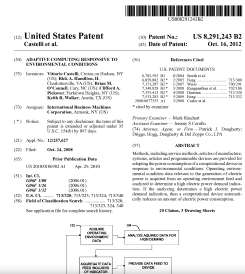
Ex-1025, 409:12-15

Ground 1: Wang (Claim 5)

Petition's Use of Wang's Critical Weather Warning

Wang describes operating environmental condition data that includes grid reliability and critical weather warnings (i.e., regarding unusual weather conditions). Section 9.1.2; Ex-1005, 39:22-26. A POSA would have been familiar with the relationship between grid reliability and weather conditions, with unusual weather having a well-known association with heavy demand for power (e.g., due to extreme temperatures). Ex-1003 ¶120. Given Wang teaches providing smart appliances with data related to these critical weather warnings, it would have been obvious for a POSA to use that information in connection with the load-shedding decisions Wang describes. *Id.*

Ground 1: Wang (Claim 5) PO Ignores the Petition



'243 Patent

Claim	Limitation(s)
5	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.

Patent Owner's position—

Wang does not provide any disclosure that is related to determining a high power demand indicator based on unusual weather conditions, much less automatically reducing a current amount of power consumption based on unusual weather conditions.

Response at 23

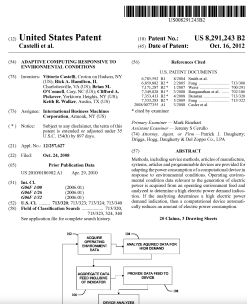


I mean, again, based on my own personal experience, you know, if you have a – everyone has been in a big storm or a hurricane or something, and, you know, like trees fall on lines, and we lose power and everything. So, I think the fact that it causes stress on the power grid is pretty commonly known, beyond the POSITAs, yeah.

Ex-1025, 254:19-255:14

Ground 1: Wang (Claim 7)

PO Ignores Wang's Teachings



'243 Patent

Claim	Limitation(s)
7[A]	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
7[B]	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.

Patent Owner's position—

Wang merely discloses that the AESO information can be published to the user display 200 so that the user 'can make informed decisions on when to use power.

Response at 25

Wang notes the AESO data can be used to “get such information in front of people and their appliances.” Wang, ¶0113. Wang also describes how the information would typically be interpreted, noting that “users would postpone energy consuming tasks to those points in time when more renewable energy resources were used to generate power.”

Reply at 25

Ground 1: Wang

Claim 8

Claim	Limitation(s)
8	<p>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.</p> <p>'243 Patent, 11:59-67</p>

Ground 1: Wang (Claim 8)

“[T]he aggregate feed”

Claim	Limitation(s)
8	<p>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.</p> <p>'243 Patent, 11:59-67</p>

Patent Owner's construction—

Aggregate feed means “a feed combining data from a plurality of other feeds.”

Paper 24 at 11

Plain and ordinary meaning—

“Petitioner assumes that ‘aggregate feed’ simply refers to a feed for delivery of the high demand indicator, as well as other information.”

Petition at 56

Ground 1: Wang (Claim 8)

PO Omits “Indicator”

Claim	Limitation(s)
8	<p>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.</p> <p>'243 Patent, 11:59-67</p>

Ground 1: Wang (Claim 8)

Different Feeds; Not Other

Claim	Limitation(s)
8	<p>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.</p> <p>'243 Patent, 11:59-67</p>

Ground 1: Wang (Claim 8)

Excluded Embodiments

Patent Owner's construction—

Aggregate feed means “a feed combining data from a plurality of other feeds.”

Paper 24 at 11

instead update XML files using standard RSS notations. The service provider publishes or pushes an aggregated data feed (for example at 108 of FIG. 1 above), including aggregating feeds or data from any individual service providers, to a computational device, wherein one or more components within the receiving computational device are configured to await instructions to cause an element in the computational device to enter a power-reduction mode in response to an indicator within the aggregate feed. '243 Patent, 4:41-49



Federal Circuit—

A claim construction that excludes preferred embodiments “is rarely, if ever, correct and would require highly persuasive evidentiary support”

Vitronics, 90 F.3d at 1583



Dr. Cameron—

“Q. And what does ‘or’ mean in [feeds or data] ...? ... [A.] ... it could be only feeds; it could be only data; it could be both. ... [I]t’s aggregating these feeds or sets of data” Ex-1025, 251:5-252:8

Ground 1: Wang (Claim 8)

Wang's Visible Feed

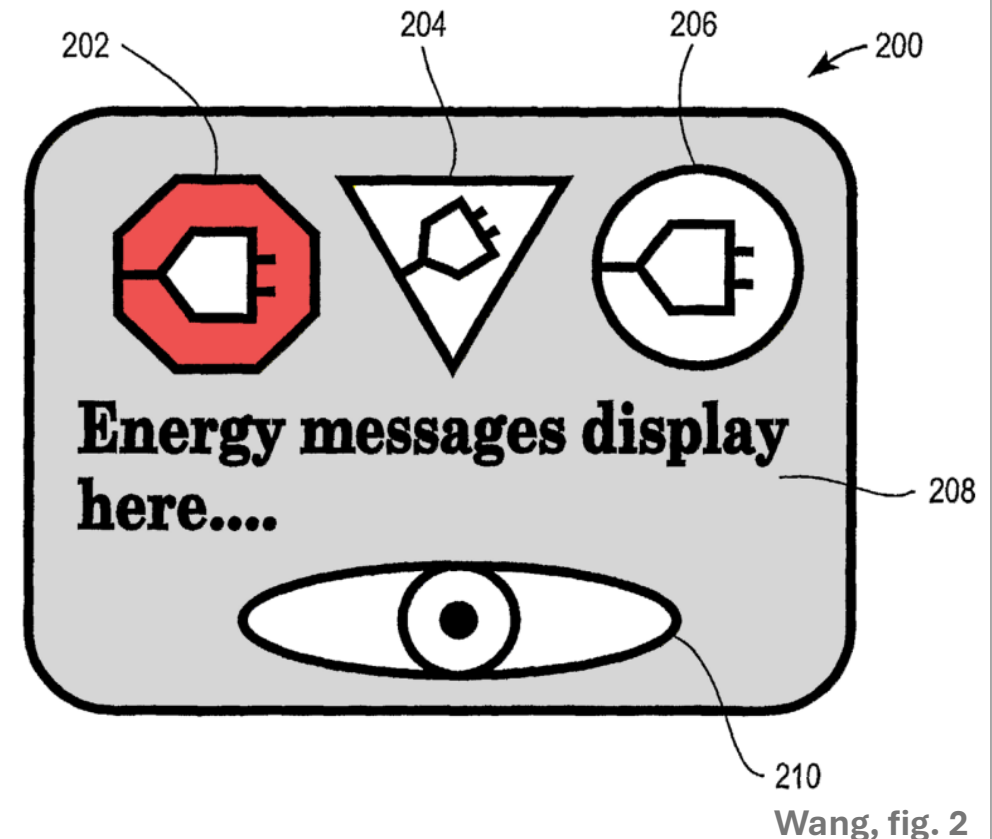
From the Petition—

Wang describes another aggregate feed for Figure 17, which illustrates “an advanced [power] meter infrastructure topology” that includes multiple appliances 1720 and 1730 and meters 1502.”

Petition at 58

In typical embodiments, display 200 is a battery operated RDS or subsidiary communications authorization (SCA) radio receiver that includes a minimal number of symbols (*e.g.*, symbols 202 through 206), an optional text message output 208, and an optional compliance button 210. In one embodiment in accordance with Fig. 2, symbol 202 is lit when the power grid is experiencing overloaded conditions. In some embodiments, symbol 202 is a red filter and, accordingly, symbol 202 lights up in red when activated. In some embodiments, symbol 202 will flash with an intensity that is proportional to a function of the extent to which the power grid is overloaded.

Wang, 22:20-27



Wang, fig. 2

Ground 1: Wang (Claim 8)

Wang's Other Feed

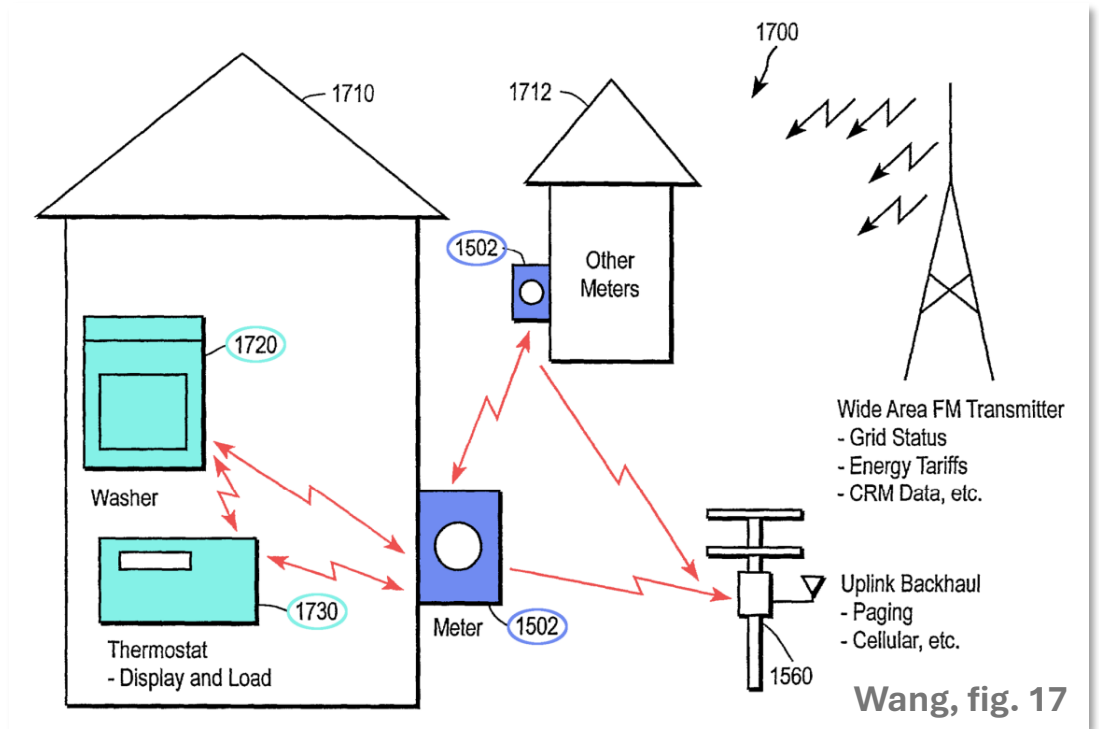
From the Petition—

Wang describes another aggregate feed for Figure 17, which illustrates “an advanced [power] meter infrastructure topology” that includes multiple **appliances** ... and **meters**”

Petition at 58

example, each node 1710 includes appliances, e.g., washer 1720 and thermostat 1730, having embedded transceivers for receiving broadcast UMC messages from a wide area transmitter, such as, for example, a wide area FM transmitter 1750. As described in more detail above, the broadcast signals may include data such as power grid status, energy tariff information, and customer relationship management (CRM) data, etc. and for two-way local area communication with other appliances and with meter 1502 of node 1710. Meters 1502 preferably each have transceivers that are capable of receiving data from appliances 1720, 1730 and transmitting appliance and meter usage data, for example, between meters 1502 and to uplink gateway 1560.

Wang, 60:13-21



Ground 1: Wang (Claim 8)

Other Possible Combinations

Patent Owner—

“[T]here were numerous possible alternatives for analyzing data, such as other linear methods ..., non-linear methods ..., analysis of variants ..., matrix decomposition, The fact that there were **numerous possible alternatives** undermines Petitioner’s obvious to try argument.”

Paper 24 at 30



Dr. MacCarley—

“[W]eighted functions of linear combinations are one of a finite number of known methods of correlating and analyzing data. ... I believe a POSA could have weighed [the] data in a linear combination to further improve Wang’s system with a reasonable expectation of success.”

Declaration ¶ 146



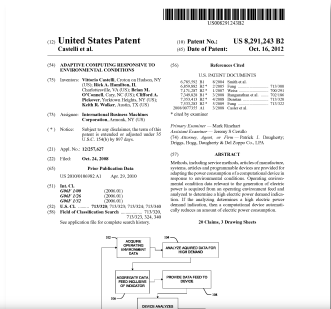
PTAB—

The existence of “**other possible combinations ... does not negate obviousness.**”

Dexcom, IPR2022-00605, Paper 29 at 57-58

Ground 1: Wang (Claim 9)

PO Only Addresses 2nd Branch



'243 Patent

Claim	Limitation(s)
9	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.

Patent Owner's position—

the fact that **Wang receives tariff information over time**, and the fact that **a rate of change may be calculated using tariff information over time**, does not imply that it would have been obvious to modify Wang to calculate a rate of change of a price of electricity.

Response at 36-37

“the meter, as well as each load would receive **real time energy tariff data** directly from the utilities ...

This feature would be **particularly useful in SPOT energy markets** where energy prices continually change. The loads could use this information to reduce energy consumption during high price periods, or grid stress.”

Wang, 61:2-4, 61:4-9

AESO Report (Ex-1006) at 1

The Wayback Machine - <https://web.archive.org/web/20050217150649/http://ets.aeso.ca:80/Market/Reports/CSDReportServlet>
Current Supply Demand Report

Legend

DOR - Dispatched (and Accepted) Contingency Reserve

MCR - Maximum Continuous Rating

TNG - Total Net Generation

* Indicates that the value listed is, at this time, net to grid rather than Total Net Generation

All values listed are in MW

Rest pointer on ► to display Unit ID

Last Update - Feb 17, 2005 08:00

SUMMARY		GENERATION				INTERCHANGE	
		Coal	Nat	Hydro	Other	From	Actual to Plan
Alberta Total Net Generation	7645						
Interchange	-245					British Columbia	-245
Alberta Internal Demand	8090					Saskatchewan	
Alberta Lost Responsibility	7089					TOTAL	-245
Contingency Reserve - Regional	400						
Dispatched Contingency Reserve - Other	379						
Dispatched Contingency Reserve - Other	161						

COAL				
	year	price	usage	cost
Battle River #1	148	150	0	
Battle River #2	148	150	0	
Battle River #3	369	383	0	
Genesee #1	394	383	0	
Genesee #2	394	383	0	
Genesee #3	491	493	0	
H.R. Minor	135	140	0	
Kepkips #1	331	376	0	
Kepkips #2	331	355	0	
Sheerness #1	376	393	0	
Sheerness #2	376	0	0	
Sheerness #3	280	260	0	
Sundance #1	280	272	0	
Sundance #2	353	344	0	
Sundance #3	353	348	0	
Sundance #4	353	343	0	
Sundance #5	356	0	0	
Wabamun #1	278	270	0	

GAS				
	year	price	usage	cost
ATCO Scotland Upgrd	154	160	15	
Ar Liquefied Scotland #1	34	33	0	
Bear Creek #1	8	0	0	
Buckskin #1	6	0	0	
Calpine Calgary Energy Central	250	231	0	
Carleton Place	39	0	0	
Calathena	20	0	0	
Clower Bar #1	158	0	0	
Clower Bar #2	158	0	0	
Clower Bar #3	158	0	0	
Clower Bar #4	158	0	0	
Dow Hydrocarbon	311	164	0	
Elywood	9	0	0	
Elmworth-Northern Power	9	0	0	
Enbridge	120	95	0	
Enbridge Foster Creek	88	81	0	
Fort Nelson	29	0	0	
Gold Creek Facility	7	0	0	
Maple River	474	300	68	
Mackay River	108	101	0	
Milnesien	188	189	0	
Mosim #1	8	0	0	
Mosim #2	7	0	0	
Mosim #3	7	0	0	
Mosim #4	8	0	0	
Medicine Hat #1	205	96	0	
Muskeg River	200	130	20	
Nelson #1	120	0	0	
Poplar Hill #1	41	21	15	
Primrose #1	85	87	0	
Primrose #2	20	0	0	
Primrose #3	48	55	0	
Primrose #4	25	0	0	
Primrose #5	47	11	0	
Rainbow Lake #1	47	11	0	
Reckwiler Cogent	40	40	0	
Rosspole #1	75	0	0	
Rosspole #2	67	0	0	
Rosspole #3	71	0	0	
Sard	5	0	0	
Sturgeon #1	10	0	0	
Sturgeon #2	48	0	0	
Suncor #1	445	467	0	
Suncor #2	345	200	0	
Talisman EOR #1	11	0	0	
University of Alberta	236	14	0	
Valley View	45	0	49	
Wainwood	50	40	0	

HYDRO				
	year	price	usage	cost
Bighorn Hydro	120	53	0	
Bow River Hydro	314	177	28	
Brabham Hydro	359	386	145	
C.L.P.C. Odman Hydro	324	119	0	
Chen Chapel	11	0	0	
Imperial Hydro	7	0	0	
Raymond Reservoir	18	0	0	
Taylor Hydro	24	0	0	

WIND AND OTHER				
	year	price	usage	cost
ARC Edmonton	0	0	0	
Big Horn	0	0	0	
Cogline River #1	49	0	0	
Cowley Ridge	38	0	0	
Dayton Valley	11	7	0	
Grande Prairie Redwood	29	0	0	
McBride Lake Windfarm	75	0	0	
Sarnawana	64	4	0	
Suncor Magdalen	30	0	0	
Westford	17	0	0	
Whitcreek Power	25	20	0	

Report Disclaimer:
The above information is presented as a reasonable estimate of the Alberta Supply & Demand status at the time indicated (data presented are instantaneous measurements, not integrated values).

Ground 2: Wang + AESO (Claim 2)

“[A] ... plant coming on-line”

Patent Owner's position—

AESO does not provide any disclosure that is related to a small-size fossil fuel plant ***coming on-line***.

Response at 45-46

Further, the TNG values for H.R. Milner and/or other units identifiable as small-scale fossil fuel plants could be used to determine that such a plant is coming on-line to provide power to the grid system (e.g., a TNG value for the respective unit changing from zero to a non-zero value).

Petition at 81

COAL			
UNIT	MCR	TNG	DCR
Battle River #3	148	0	0
Battle River #4	148	152	0
Battle River #5	368	383	0
Genesee #1	384	382	0
Genesee #2	384	383	0
Genesee #3	450	458	0
H.R. Milner	143	140	0
Keephills #1	381	376	0
Keephills #2	381	353	0
Sheerness #1	378	393	0
Sheerness #2	378	0	0
Sundance #1	280	280	0
Sundance #2	280	272	0
Sundance #3	353	344	0
Sundance #4	353	348	0
Sundance #5	353	343	0
Sundance #6	399	0	0
Wabamun #4	279	210	0

Ground 2: Wang + AESO (Claims 12 to 14) “[R]espectively”

Claims 12-14 depend (directly or indirectly) from obvious Claim 11. Section 9.11. Claims 12-14 are otherwise analogous to Claims 2, 5, and 9, respectively, and are obvious for similar reasons. Declaration ¶¶ 180-81; cf. Sections 9.2, 9.5, and 9.9.

Petition at 68-69



Dr. Cameron—

“respectively” usually means you’re referring back to something, right? So, I’m trying to figure out what it’s referring back to, because it’s in your declaration ...

12 corresponds to 2, right; 13 corresponds to 5, and 9 corresponds to -- I’m sorry, 14 corresponds to 9. I hope I got that right.

Ex-1025, 320:21-321:6



PTAB (on repeating arguments)—

[Petitioner’s arguments for claims 11 and 12] sufficiently demonstrates that claims 13 and 14 are obvious in view of Wang-AESO.

Tesla v. Autonomous Devices, IPR2023-01055, Paper 47, 79 (finding that when a Petitioner has provided “sufficiently specific arguments for a claim in a previous ground,” they need not “repeat its arguments” for the same claim in a later ground).

Reply at 31-32

Ground 3: Cooley


US009052904B1

(12) **United States Patent**
Cooley et al.

(10) **Patent No.:** **US 9,052,904 B1**
(45) **Date of Patent:** **Jun. 9, 2015**

(54) **SYSTEM AND METHOD FOR DETERMINING WHETHER TO RESCHEDULE MALWARE SCANS BASED ON POWER-AVAILABILITY INFORMATION FOR A POWER GRID AND POWER-USAGE INFORMATION FOR THE SCANS**

(75) Inventors: **Shaun Cooley**, El Segundo, CA (US);
Keith Newstadt, Newton, MA (US)

(73) Assignee: **Symantec Corporation**, Mountain View, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 1261 days.

(21) Appl. No.: **12/204,893**

(22) Filed: **Sep. 5, 2008**

(51) **Int. Cl.**
G06F 1/32 (2006.01)
G06Q 50/06 (2012.01)
G06Q 10/06 (2012.01)

(52) **U.S. Cl.**
CPC *G06F 1/329* (2013.01); *G06Q 10/06312* (2013.01); *G06Q 50/06* (2013.01); *Y04S 20/222* (2013.01)

(58) **Field of Classification Search**
CPC 1/022 3/14; Y04S 20/222; Y02B 70/3225; G06Q 10/06312; G06Q 50/06; G06F 1/32; G06F 1/3203; G06F 1/3234; G06F 1/329; G06F 9/5094
USPC 700/295; 705/7.22, 412; 713/300, 310, 713/320, 340; 718/102
See application file for complete search history.

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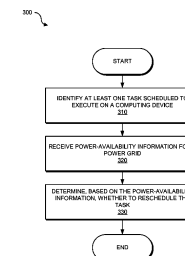
(Continued)

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(Continued)

Primary Examiner — David J Huisman
(74) Attorney, Agent, or Firm — ALG Intellectual Property, LLC

(57) **ABSTRACT**
A computer-implemented method for determining whether to reschedule tasks on computing devices based on power-availability information for a power grid may comprise: 1) identifying at least one task scheduled to execute on a computing device; 2) receiving power-availability information for the power grid; and then 3) determining, based on the power-availability information, whether to reschedule the task. Corresponding systems and computer-readable media are also disclosed.

18 Claims, 6 Drawing Sheets



Ground 3: Cooley

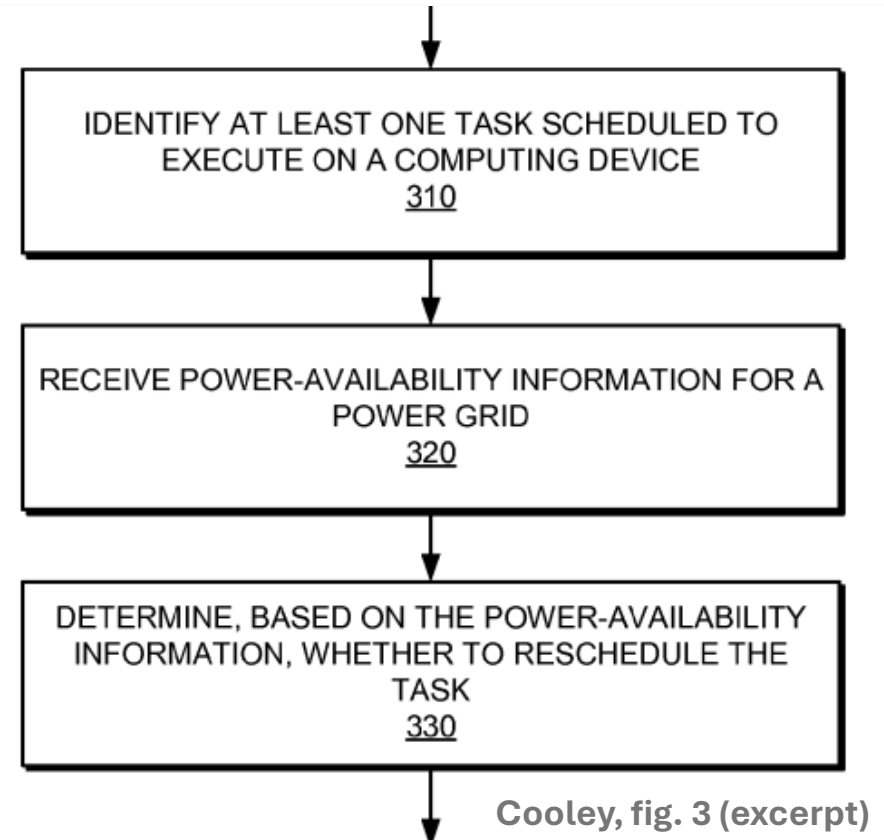
Overview of Cooley

(57)

ABSTRACT

A computer-implemented method for determining whether to reschedule tasks on computing devices based on power-availability information for a power grid may comprise: 1) identifying at least one task scheduled to execute on a computing device, 2) receiving power-availability information for the power grid, and then 3) determining, based on the power-availability information, whether to reschedule the task. Corresponding systems and computer-readable media are also disclosed.

Cooley, Abstract



Ground 3: Cooley

Shakey Ground

Claim	Limitation(s)
1[C]	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. <div>'243 Patent, 11:1-5</div>

Petitioner's Reply—

“[Patent Owner’s] positions against Ground 3 **rely entirely** on its faulty construction of *current* (POR 48-56). With that construction rejected ..., [Patent Owner] has nothing else to say against Cooley’s anticipation of **claims 1, 3, 11, 15, and 18.**”

Repy at 8

Ground 3: Cooley

“[A] current amount”

Claim	Limitation(s)
1[C]	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. ’243 Patent, 11:1-5

Patent Owner’s construction—

Current means “[the] reduction in power consumption ... takes place **in the present** as opposed to **some future time**.”

Paper 24 at 12

Ground 3: Cooley

“Present” Reductions?

Patent Owner—

“[T]he ’243 Patent ... includes numerous examples of power reductions that take place in the present (see Ex-1001 at ... 8:47-60)”

Paper 24 at 12

system 304 are suspended; reducing a waiting time before the computer system 304 enters a hibernation or a standby mode;

’243 Patent, 8:52-53



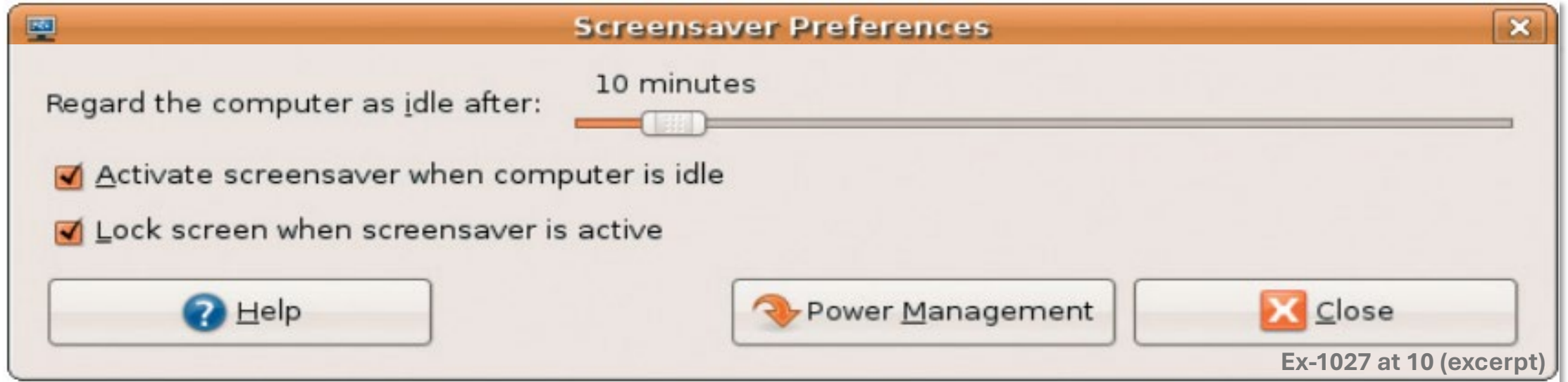
Dr. Cameron—

“[Q.] [W]hat would have been some of the options that a user could have configured ... for reducing this waiting time ...? ... [A.] [I]t wouldn’t have been uncommon for you to set up a setting to be minutes or an hour[.]”

Ex-1025, 326:4-8, 327:5-9

Ground 3: Cooley

“Present” Reductions?



Dr. Cameron—

“[Q.] [W]hat would have been some of the options that a user could have configured ... for reducing this waiting time ...? ... [A.] [I]t wouldn't have been uncommon for you to set up a setting to be minutes or an hour[.]”

Ex-1025, 326:4-8, 327:5-9

Ground 3: Cooley

“Future” Reductions?

Patent Owner—

“[T]he ’243 Patent ... includes numerous examples of power reductions that take place in the present ... and **one that takes place in the future** (see [’243 Patent] at **8:61-62**).”

Paper 24 at 12

scheduling nonessential operations at a different time (e.g., nonessential software or hardware upgrades); and still other

’243 Patent, 8:52-53

Claim	Limitation(s)
10	... 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.

’243 Patent, 12:7-11

Ground 3: Cooley

What; Not When

Claim	Limitation(s)
1[C]	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. '243 Patent, 11:1-5

Petitioner's Reply—

“The adjective current modifies amount of consumption; it does not modify the automatically reducing so the current adjective modifies **what** is being reduced **not when** the reduction happens.”
For example,

$$X \text{ mW} \rightarrow X/2 \text{ mW}$$

Reply at 6

Ground 3: Cooley

Specification Usage

device in response to environmental conditions. Moreover, systems, articles and programmable devices are also provided configured for performing one or more method and/or process elements of the current invention for adapting the power consumption of a computational device in response to environmental conditions, for example as described above.

'243 Patent, 2:13-18

RSS generally refers to a family of internet web feed formats used to publish frequently updated content, and in the present invention feed data acquired may include energy prices or current energy use in a company. Thus an RSS

'243 Patent, 5:44-47

Power units **205/235** are configured to provide operative power respectively to the module **200** and computational device **230**; examples include batteries and power components configured to receive alternating or direct current electrical power, and other appropriate power units **205/235** will be apparent to one skilled in the art. Communication ports or

'243 Patent, 5:20-25

An energy producer feed **280** appropriate for acquisition and analysis may contain information describing the output capacity and current output of potential energy producers.

'243 Patent, 5:58-60

Petitioner's Expert Witness

Curriculum Vitae

C. Arthur (Art) MacCarley, Ph.D. PE.
amaccarl@calpoly.edu, art1@loragen.com, <http://www.ee.calpoly.edu/faculty/amaccarl>, <http://www.loragen.com>

Specializations: Automotive electronics and control systems, electric and alternative fuel vehicles.

Employment

California Polytechnic State University, San Luis Obispo (1988-present)

Professor and former Department Chair, Electrical Engineering

Professor and former Program Director, Computer Engineering

Professor and former Department Head, BioResource and Agricultural Engineering

Director, Cal Poly Transportation Electronics Laboratory

Munich University of Applied Science (Germany)

Adjunct Professor, Mechanical & Electrical Engineering (Summer 2014, 16, 18, 19 and Winter semester 2017)

Registered Professional Engineer, Electrical and Mechanical (Colorado, 1981-present)

Education

Purdue University, West Lafayette, Indiana

Ph.D. Electrical Engineering (Computer Engineering Specialization), 1987. Thesis: Advanced Digital Control.

University of California, Los Angeles, California

M.S. Electrical Engineering, 1978. Thesis: Electronic Fuel Injection Techniques for Hydrogen IC Engines.

B.S. (Cum Laude) Engineering, Mechanical/Alternative Energy Specialization, 1976.

Employment

9/16-1/17 *Munich University of Applied Science (Germany), Adjunct Professor, Mechanical Engineering.* Teach and supervise projects in Electric and Alternative Fuel Vehicles, Solar PV Systems.

3/88 to present *California Polytechnic State University, Professor, Electrical Engineering.*

EE Department Chair 2007-2010, Computer Engineering Program Director 2000- 2003, Dept. Head BioResource and Agricultural Engineering 2014-2015.

Administrative and academic responsibilities, teaching undergraduate and graduate courses in control systems, computer engineering, automotive engineering and alternative energy.

Research funded by NSF, DOE, DOT, Caltrans, PG&E and five industrial firms on advanced highway monitoring and control systems, electric vehicles, electronic engine controls and alternative fuels.

1/11-5/11 *Franklin Olin College of Engineering (Mass), Adjunct Professor of ECE.* Taught multidisciplinary engineering lecture/lab and senior elective "Automotive Technologies for a Sustainable Future".

6/97 to 6/14 *Loragen Corporation, Advanced Technology Group, Principal Engineer*

Automotive and highway safety electronics R&D for US DOE, Caltrans, UC Berkeley, Hughes SBRC.

1/84 to 12/87 *Purdue University, School of Electrical Engineering, David Ross Fellow*

Research in microprocessor-based control systems and advanced indirect sensing methods. Lead teaching assistant for digital laboratory; instructor for two undergrad laboratories; teaching asst. for two grad courses.

8/82 to 9/83 *American Bosch Division of United Technologies, Springfield, MA., Senior Engineer*

Design and optimization of electronic diesel engine controls. Lead engineer, controls group, responsible for development and testing of electronic engine control algorithms.

5/82 to 8/82 *Consulting Engineer in Private Practice, Denver, CO.*

Designed, constructed and tested electronic fuel injection and ignition control system for natural gas fueled engines, for CNG Vehicle Equipment Co., Fort Collins, Colorado.

5/79 to 5/82 *Denver Research Institute, University of Denver, CO., Research Engineer*

Principle investigator on three programs involving the development and testing of alternative fuel engines and vehicles. Designed electronic engine controls and on-board metal-hydride hydrogen fuel storage systems.

9/77 to 5/79 *Hughes Aircraft Co. Digital Communications Lab, El Segundo, CA., Member of Technical Staff*

Design, analysis and computer optimization of circuits for NASA Space Shuttle, GMS2 and GOES satellites.

6/75 to 9/77 *Research Assistant, UCLA School of Engineering and Applied Science*

Designed electronic fuel injection and cryogenic hydrogen fuel storage system under US DOT grant.

Petitioner's Expert Witness

MacCarley's Experience



Dr. MacCarley—

“I received a **[B.S.] in Engineering** and a **[M.S.] in Electrical Engineering** from the University of California, Los Angeles Thereafter, I earned a **[Ph.D.] in Electrical Engineering** from Purdue University in 1987, with a specialty in Computer-Based Control Systems. While at Purdue, I was the recipient of the David Ross Fellowship for doctoral study and focused my research on microprocessor-based control systems and indirect sensing methods for automotive applications. I am currently an Emeritus Professor of Electrical and Computer Engineering at the California Polytechnic State University (Cal Poly) I served on the faculty of the California Polytechnic College of Engineering from 1988 to 2019, receiving tenure in 1994. Since 2019, I have continued to teach electronics, control systems, and automotive engineering courses part time at Cal Poly in addition to consulting in forensic automotive electronics. I also continue to teach mechanical engineering and electrical engineering courses as part of the International Summer School Program at the Munich University of Applied Sciences in München, Germany, as I have done every summer since 2014.”

Declaration ¶¶ 7-9

Petitioner's Expert Witness

MacCarley's Experience



Dr. MacCarley—

“I have published **95 technical papers and articles** in refereed journals, in conference proceedings, and as book chapters, all in the field of automotive and transportation electronics and control systems. My research activities have focused on electric vehicle power and control systems, as well as indirect sensing methods for low-emission engine control. ... Among my funded research projects was a feasibility study and a preliminary design of automated battery exchange and charging systems, resulting in two journal papers that have been recognized among the most downloaded publications by Research Gate and the CSU Digital Commons: (1) ‘Review and Assessment of Battery Interchange Methods for Electric Vehicles,’ Proc. SAE Future Car Conference 2000, Society of Automotive Engineers, Washington, DC. January 2000 and (2) ‘Battery Interchange Alternatives to In-Vehicle Charging: Technical, Safety and Economic Considerations,’ Proc. FISITA 2000 World Automotive Congress, Seoul, Korea, June 2000.”

Declaration ¶¶ 13-14

Petitioner's Expert Witness

MacCarley's Impartiality

Patent Owner's position—

“Dr. MacCarley's testimony should be given little—if any—weight due to bias because he has received material support for his academic activities and other benefits from [Petitioner]” Response at 56-57



Dr. MacCarley—

“My **compensation is not contingent** on the outcome of the IPR or on the substance of my opinions. I have **no financial interest** in the Petitioner or the Patent Owner.”

“Q: Do you recall receiving any other type of support from Tesla? ... A: **They didn't give us money**, nor did they offer to give us money.” Ex-2007, 79:7-8, 81:22-23 (emphasis added).

Declaration ¶¶ 4-5; Ex-2013, 79:7-8, 81:22-23



PTAB—

Even though the patent owner's expert was **a former member of patent owner's board**, the Board found that the witness was credible because he testified under oath and subject to cross examination.

XY, IPR2018-00250, Paper 35 at 10

Patent Owner's Two Motions

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

TESLA, INC.,
Petitioner

v.

GRAPHITE CHARGING COMPANY, LLC,
Patent Owner

Case No. IPR2024-00388
U.S. Patent No. 8,291,243

PATENT OWNER'S MOTION TO EXCLUDE

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
Submitted Electronically via PTAB E2E

Motion to Exclude

Overview of the Motion

Patent Owner's Motion—

Exhibits 1006, 1012 to 1018, and 1027, as well as **portions of other documents** pertaining the forgoing exhibits, namely portions of **Exhibit 1025**, the **Petition**, Petitioner's **Expert Declaration**, and Petitioner's **Reply**.

Paper 35 at 1-13

Petitioner's Opposition—

Each of the contested documents is admissible, and Patent Owner has failed to prove otherwise.

See generally Paper 38

Motion to Exclude Legal Standard



Federal Regulations—

“The moving party has the **burden of proof** to establish that it is entitled to the requested relief.”

37 C.F.R. § 42.20(c)



PTAB—

“A motion to exclude **must** state why the evidence is inadmissible ... and **explain the objection.**”

Veeam, IPR2013-00150, Paper 54 at 32-33

Motion to Exclude (Exhibit 1006)

Failure to Meet Burden

Patent Owner's Motion—

“Ex-1006 is hearsay under Fed. R. Evid. 801(c) and thus inadmissible under Fed. R. Evid. 802. For example, **Petitioner relies on Ex-1006 for the truth of the matter asserted therein.** (See Declaration ¶¶ 206, 210.) Yet Petitioner has not offered sufficient evidence that Ex-1006 falls within any exclusion or exception of the rule against hearsay under Fed. R. Evid. 803 or 804.”

Paper 35 at 2

Patent Owner's Motion—

“Ex-1006 is irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being confusing or a waste of time under Fed. R. Evid. 403 because Ex-1006 is inadmissible as explained above.”

Paper 35 at 3

Other examples—

For more examples of Patent Owner's threadbare attempts at exclusion, see Patent Owner's relevance arguments for Exhibits 1012 to 1014 and hearsay arguments for Exhibits 1013 to 1015, 1017, and 1027.

Motion to Exclude (Exhibit 1006)

Authenticity



PTAB—

Wayback Machine captures are “inherently reliable.”

Xilinx, IPR2020-01606, Paper 63 at 7-8

Additionally, Internet Archive affidavits are sufficient for authentication under Federal Rule of Evidence 901(b)(1).

Intellectual Ventures, IPR2015-00092, Paper 44 at 57

6. Attached hereto as Exhibit A are true and accurate copies of browser screenshots of the Internet Archive's records of the archived files for the URLs and the dates specified in the attached coversheet of each printout.
7. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Ex-1018 at 1-2

Motion to Strike

Overview of the Motion

Patent Owner's Motion—

Exhibits 1014, 1025, and 1027, as well as portions of Petitioner's **Reply**.

Paper 37 at 2-7

Petitioner's Opposition—

The Motion misunderstands Federal regulations and Federal Circuit precedent regarding a petitioner's right to respond to arguments raised after institution.

See generally Paper 39

Motion to Strike Legal Standard



Federal Regulations—

A petitioner's reply may "respond to arguments raised in ... [the] patent owner response

37 C.F.R. § 42.23(b)



Federal Circuit—

The Court vacated and remanded IPR decisions, holding that "the Board's refusal to consider **new arguments and evidence** was erroneous." In particular, the Court held that the Board "must give a petitioner **an opportunity to respond to [a] new [claim] construction**" and "[i]n particular, the petitioner must be afforded a reasonable opportunity in reply to present argument and evidence under that new construction."

Axonics, 75 F.4th at 1381

Motion to Strike

The Motion Is Duplicative



PTAB—

The Board indicated that Patent Owner’s Motion “is only to address matters **not** the subject of any forthcoming motion to exclude.”

Email from Tina Williams, PTAB (May 2, 2025 at 6:43a PT)

Note—

Notwithstanding explicit instructions from the Board, the Motion to Strike requests that the Board strike **Exhibit 1027**, as well as portions of **Exhibit 1014**, **Exhibit 1025**, and Petitioner’s **Reply**. Each of these documents is already addressed in Patent Owner’s Motion to Exclude.

Compare Paper 35 at i with Paper 37 at i

Motion to Strike

The Motion Is Untimely



Trial Practice Guide—

“Generally, authorization to file a motion to strike should be requested within one week of the allegedly improper submission[s].”

Trial Practice Guide at 81

Note—

The evidence at issue was filed along with Petitioner’s Reply, on February 26th. Accordingly, Patent Owner should have requested authorization to file a motion to strike by March 5th. But Patent Owner did not seek authorization until **April 25th**—more than **seven weeks too late**.

Conclusion

(12) **United States Patent**
Castelli et al.

(10) **Patent No.:** US 8,291,243 B2
Date of Patent: Oct. 16, 2012

(54) **ADAPTIVE COMPUTING RESPONSIVE TO ENVIRONMENTAL CONDITIONS**

(56) **References Cited**

U.S. PATENT DOCUMENTS

(75) **Inventors:** **Vittorio Castelli**, Cotton on Hudson (US); **Rick A. Hamilton, II**, Charlottesville, VA (US); **Brian M. O'Connell**, Cary, NC (US); **Jeffrey A. Pickover**, Yorktown Heights, NY (US); **Keith R. Walker**, Austin, TX (US)

7,353,413 B2 * 4/2008 O'Connell et al. 713/320
7,349,828 B1 4/2008 O'Connell et al. 713/320
7,343,283 B2 * 5/2009 Fung 713/322
2008/0071722 3/2008 Casler et al. 713/322

(73) **Assignee:** **International Business Machines Corporation**, Armonk, NY (US)

* cited by examiner

(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 897 days.

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(22) **Filed:** Oct. 24, 2008

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(51) **Int. Cl.**
G06F 1/00 (2006.01)
G06F 1/26 (2006.01)
G06F 1/32 (2006.01)

(52) **U.S. Cl.** 713/320; 713/323; 713/324; 713/340

(58) **Field of Classification Search** 713/320, 713/323, 324, 340
See application file for complete search history.

(57) **ABSTRACT**

Methods, including service methods, articles of manufacture, systems, articles and programmable devices are provided for adapting the power consumption of a computational device in response to environmental conditions. Operating environmental condition data relevant to the generation of electric power is acquired from an operating environment feed and analyzed to determine a high electric power demand indication. If the analyzing determines a high electric power demand indication, then a computational device automatically reduces an amount of electric power consumption.

20 Claims, 3 Drawing Sheets

