

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LENNOX INDUSTRIES INC.,

Petitioner,

v.

ROSEN TECHNOLOGIES LLC,

Patent Owner

Case No. IPR2023-00718

U.S. Patent No. 7,185,825

PATENT OWNER'S PRELIMINARY RESPONSE

USE OF EMPHASIS IN QUOTATIONS

All emphases in quotations and exhibit citations have been added, unless otherwise indicated.

APPLICABLE STATUTES

References to 35 U.S.C. § 103 are to the Pre-AIA versions applicable to the '825 Patent.

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I. INTRODUCTION

Petitioner Lennox Industries Inc., (“Petitioner”) challenges claims 1, 4, and 11-16 (the “Challenged Claims”) of Patent Owner Rosen Technologies LLC (“Rosen”)’s U.S. Patent No. 7,185,825 (the “’825 Patent”).

However, all grounds asserted by Petitioner fail as the petition relies on prior art that does not include each and every element of the Challenged Claims of the ’825 Patent. The petition is insufficient on the merits, as Petitioner fails to demonstrate in Ground 1 and Ground 4 that the combination of references render obvious at least these elements of each independent claim: a) a non-volatile random access memory; and a control program stored in said first memory directing: b) said real time clock to periodically read its current time and date information into said non-volatile memory; and c) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock.

Furthermore, Ground 2 (Rosen in view of Cacciatore, and Carey), Ground 3 (Rosen in view of Cacciatore, and Williamson), Ground 6 (Shamoon in view of Cacciatore, and Carey) and Ground 8 (Shamoon in view of Cacciatore, and Williamson) also fails to teach all of the elements of the of independent claims, *i.e.*, a) a non-volatile random access memory; and a control program stored in said first memory directing: b) said real time clock to periodically read its current time and

date information into said non-volatile memory; and c) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock.

Furthermore, Ground 5 (Shamoon in view of Cacciatore, Shigeaki, and Toth), Ground 7 (Shamoon in view of Cacciatore, Carey, and Toth), and Ground 9 (Shamoon in view of Cacciatore, Williamson, and Toth) depends upon the above Grounds 1, 2, 3, 4, 6, and 8. So, as above Grounds 5, 7, and 9 also fails with respect to independent claims 1 and dependent claims 4, and 12-16.

Accordingly, Patent Owner Rosen Technologies LLC respectfully requests that the Board deny the petition for *inter partes* review of claims 1, 4, and 11-16 of the '825 Patent on the merits and/or under §314(a).

II. THE '825 PATENT DISCLOSES A NOVEL PROGRAMMABLE THERMOSTAT FOR CONTROLLING SPACE CONDITIONING EQUIPMENT.

Thermostats have long served as temperature-sensitive switches controlling heating/cooling equipment to condition a space where they are placed. They can be adjusted to a set temperature, triggering heating/cooling action. Modern thermostats utilize electronic tech for precise temperature management. They feature real-time clocks, memory, and processors for accurate temperature sensing and space conditioning equipment control. Programmable thermostats minimize temperature fluctuations and allow different settings at different times. Many modern thermostats

also include a “Vacation” mode that maintains cost-effective yet safe temperatures during unoccupied periods. EX-1001, 1:15-67.

Modern thermostats are user-programmable with buttons or touch screens. A vacation mode conserves energy without damaging the space. Dates/times of return can be stored for a smooth transition back to normal mode.

Thermostat power usually comes from the space conditioning equipment with backup from batteries or “supercaps,” but these are not foolproof. Supercaps leak over time. Outages can also affect the clock, causing inconveniences. Restarting in operational mode may not work if the clock is incorrect. As such, a fail-safe real-time clock is crucial for programmable thermostats. EX-1001, 2: 1-60.

To overcome the above limitation, the inventions disclose in the '825 Patent disclose a thermostat with a real-time clock and a non-volatile random-access memory. In this configuration, the current time and date are regularly extracted from the real-time clock and stored in the random-access memory. This ensures that in the event of a power outage, the most recent time and date information stored in the non-volatile random-access memory can be retrieved upon power restoration. This information is then used to reset the real-time clock, allowing it to resume operation in the mode it was running at the time of the outage. EX-1001, 2: 1-60.

In an alternative, another specific objective of this invention is to periodically update the real-time clock. Furthermore, after a power outage, the real-time clock is

also initialized by a signal originating from the National Institute of Standards and Technology or another source of precision time. EX-1001, 3: 18-43.

III. CLAIM CONSTRUCTION

Rosen and Petition submitted extensive claim construction briefing in the related litigation in *Rosen Technologies v. Lennox Industries, Inc.*, No. 2:23-cv-732, (N.D. Tex. April 4, 2023). The standard for claim construction in an *inter partes* review proceeding is the same as that for a district court. 37 C.F.R. § 42.100(b).

Petitioner and Rosen both agree that element 1[a] of Claim 1 is governed by 35 U.S.C. § 112, ¶ 6. Petitioner and Rosen also agree that the function is “coupling suitable power for energizing said thermostat from said space conditioning equipment to said thermostat” and Petitioner has agreed to apply Rosen’s proposed structure as “a (power) line and any equivalents.” Petitioner has also applied the plain and ordinary meaning for claim elements 1[h], 1[i] and 11[h] and 11[i]. Plaintiff agrees with Petitioner’s applied constructions.

A. LEVEL OF ORDINARY SKILL IN THE ART

Plaintiff contends that a person having ordinary skill in the art of the inventions of the Patents-in-Suit (a “POSITA”) would have at a bachelor’s degree in engineering, computer science, or a comparable field, with at least 2 years’ experience in temperature controls, embedded control systems, electronic thermostats, or

HVAC controls, or similarly relevant industry experience, with relevant experience substituting for education and vice versa.

I. THE *FINTIV* FACTORS FAVOR DISCRETIONARY DENIAL UNDER § 314(A).

The Board may also exercise its §314(a) discretion to deny institution because this proceeding would not promote the efficient and conclusive resolution of the pending litigation dispute regarding the '825 Patent. Lennox is the real party in interest and the litigation is ongoing.

The Director has discretion to deny institution under 35 U.S.C. § 314(a). The Board's precedential decisions in *NHK Spring Co., Ltd. v. Intri-Plex Technologies, Inc.* and *Apple Inc. v. Fintiv Inc.* explain that the Board should consider "whether efficiency, fairness, and the merits support the exercise of authority to deny institution."¹ As shown below, a majority of *Fintiv*'s factors support the Board's exercise of discretionary denial because efficiency, fairness, and the merits don't support institution.

A. Factor 1 –The District Court is Has Not Stayed the Parallel Litigation.

As mentioned earlier, there is a pending District Court litigation involving the '825 Patent as well as 4 other patents asserted by Patent Owner against Lennox

¹ IPR2018-00752, Paper 8 (P.T.A.B. Sept. 12, 2018) (designated precedential); IPR2020-00019, Paper 11 at 5 (P.T.A.B. Mar. 20, 2020) (designated precedential).

(“Lennox Litigation”). Lennox initially filed a Motion to Stay Pending IPR, this was denied by the Court in the Pending. Subsequently, the Parties jointly filed a Motion to Stay, however, as of the date of this POPR, the Court has not stayed the litigation.

B. Factor 2 – The Expected Trial Date Is Neutral.

This factor is neutral. The Board is unlikely to issue a final written decision for this proceeding before April 2024. The district court, however, has scheduled the parallel litigation’s final pretrial materials due by May 13, 2024.²

Accordingly, because the deadline for the Board’s final written decision is right before the scheduled trial timeline, this factor is neutral.

C. Factor 3 – The Northern District of Texas, Patent Owner and Lennox Have Significantly Invested in the Parallel Litigation, Favoring Denial.

This factor weighs in favor of discretionary denial. Rosen submitted infringement contentions November 21, 2022 and Lennox submitted their invalidity contentions on December 15, 2022. All claim construction briefing were submitted, and a claim construction ruling is expected shortly.

This expenditure of resources was avoidable. Patent Owner filed the complaint in the parallel litigation on March 31, 2022. Petitioner waited 363 days from the filing of the Lennox Complaint to file this Petition on March 29, 2023.

² Ex-1016 (NDTX Scheduling Order).

During that year, Rosen and Lennox expended significant resources (and continue to do so). The Board has found that this weighs in favor of discretionary denial.³

Even if Petitioner had diligently filed its petition in a timelier manner, this factor would still weigh in favor of discretionary denial. As explained, diligence in filing the petition does not overcome the concern over expended resources in the parallel litigation.⁴ And even the remaining work before trial isn't significant enough to overcome the extensive efforts already exerted by the parties and the court.⁵

Accordingly, because Patent Owner, Petitioner and the district court have expended significant resources in the parallel litigation, this factor weighs against institution.

D. Factor 4 – The Significant Overlap Between Issues Raised in this Proceeding and the Parallel Litigation Favors Denial.

This factor weighs in favor of discretionary denial. If the Board institutes this proceeding, significant overlap will occur. For example, as Lennox's invalidity

³ *Immersion Sys. LLC v. Midas Green Techs., LLC*, PGR2021-00104, Paper 15 at 10 (P.T.A.B. Jan. 31, 2022) (internal quotation and citation omitted).

⁴ *Verizon Business Net. Servs. LLC v. Huawei Techs. Co. Ltd.*, IPR2020-01278, Paper 12 at 11 (P.T.A.B. Jan. 26, 2021) (weighing claim construction and Markman hearing favored exercise discretion despite Petition's filing date only 2 months after service) (internal citations omitted).

⁵ *NXP USA, Inc. v. Impinj, Inc.*, IPR2021-01556, Paper 10 at 8-9 (P.T.A.B. Apr. 21, 2022) (internal citations omitted).

contentions show, the parties will still be expending efforts to address the following overlapping obviousness arguments in the parallel litigation that are based on Grounds 1-3

- Petitioner has cited Rosen and Cacciatore and Shigeaki against the '825 Patent in the Lennox Litigation
- Petitioner has cited Carey against the '825 Patent in the Lennox Litigation
- Petitioner has cited Williamson against the '825 Patent in the Lennox Litigation
- Petitioner has cited Shamoon against the '825 Patent in the Lennox Litigation
- Petitioner has cited Shigeaki against the '825 Patent in the Lennox Litigation
- Petitioner has cited Toth against the '825 Patent in the Lennox Litigation

Further, institution would open the door to conflicting and inefficient rulings regarding validity. Accordingly, because of the significant overlap and duplicative rulings, this factor weighs against institution.

E. Factor 5 – The Patent Owner and Petitioner Are Parties to the Parallel Litigation.

The Board has consistently found parallel proceedings with the same parties to weigh in favor of exercising discretion to deny institution.⁶ There is no dispute that Petitioner and Patent Owners are the only parties to the parallel litigation.

As such, this factor weighs in favor of denial.

F. Factor 6 – Additional Circumstances Favor Discretionary Denial.

This factor favors discretionary denial. Among the additional factors considered are the merits of the proposed grounds and the necessity for third party discovery. Both considerations favor discretionary denial.

i. The Weakness of Grounds 1-2 Weighs Against Institution.

“Although we need not undertake a full merits analysis when evaluating *Fintiv* Factor 6, we consider the strengths and weaknesses of Petitioner’s case, where stronger merits may weigh against discretionary denial and weaker merits may favor

⁶ *Immersion Systems LLC v. Midas Green Technologies, LLC*, PGR2021-00104, Paper 15 at 15 (P.T.A.B. Jan. 31, 2022); *eClinicalWorks, LLC, Medical Software Solutions, Inc., and NextGen Healthcare, Inc. v. Decapolis LLC*, IPR2022-00229, Paper 10 (P.T.A.B. Apr. 13, 2022) (weighing even only two of three petitioner’s status in parallel proceeding as favoring discretionary denial); *NXP USA, Inc. v. Impinj, Inc.*, IPR2021-01556, Paper 10 at 10 (P.T.A.B. Apr. 21, 2022); *cf. TCO AS v. NCS Multistage Inc.*, PGR2020-00078, Paper 16 at 11 (P.T.A.B. Feb. 18, 2021) (weighing petitioner’s absence from parallel proceedings against discretion).

exercising discretion to deny institution.”⁷ “[I]f the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present.”⁸

As discussed above in Section III, the three proposed grounds fail to disclose at least “program stored in said memory for displaying messages received from said remote correspondent.”

Accordingly, the merits of the proposed grounds are not “sufficiently strong to override the concerns about duplication of effort by the Board and the district court.”⁹ As a result, this factor weighs heavily against institution.

⁷ *Immersion Systems LLC v. Midas Green Technologies, LLC*, PGR2021-00104, Paper 15 at 16 (P.T.A.B. Jan. 31, 2022) (weighing weak disclosures and lack of motivation to combine for exercising discretion to deny); *TCO AS v. NCS Multi-stage Inc.*, PGR2020-00078, Paper 16 at 22-27 (P.T.A.B. Feb. 18, 2021) (weighing failure to map prior art disclosures to claims sufficiently and weak proposed grounds weighed in favor of exercising discretion).

⁸ *Fintiv* at 15.

⁹ *Immersion Systems LLC v. Midas Green Technologies, LLC*, PGR2021-00104, Paper 15 at 16 (P.T.A.B. Jan. 31, 2022) (weighing weak disclosures and lack of motivation to combine for exercising discretion to deny); *TCO AS v. NCS Multi-stage Inc.*, PGR2020-00078, Paper 16 at 22-27 (P.T.A.B. Feb. 18, 2021) (weighing failure to map prior art disclosures to claims sufficiently and weak proposed grounds weighed in favor of exercising discretion).

* * * *

In sum, five of the six *Fintiv* factors (Factors 1, 3-6) weigh against institution, one factor (Factor 2) is neutral. Accordingly, Patent Owner respectfully requests that the Board discretionarily deny this petition under §314(a).

IV. PETITIONER’S GROUND 1 FAILS TO ESTABLISH ROSEN IN VIEW OF CACCIATORE AND SHIGEAKI, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 1 AND 4.

A. Overview of Rosen (Ex-1004)

Rosen is a published application titled “Programmable thermostat system employing a touch screen unit for intuitive interactive interface with a user.” *Rosen* is directed primarily to building a programmable thermostat system for controlling space conditioning equipment but also includes an HVAC control. Ex-1004, Abstract.

Rosen was primarily concerned with the programmable thermostat system for controlling space conditioning equipment includes: a transparent touch pad juxtaposed over a liquid crystal display to constitute a touch screen for interactive interface with a user Ex-1004, Pg. 8. *Rosen* generally disclosed a programmable thermostat system incorporating an integrated liquid crystal display/touch pad unit, constituting a touch screen, for interactive intuitive interface with a user to facilitate programming the thermostat system, but as discussed in detail below, *Rosen* failed to disclose or render obvious elements of the Challenged Claims.

B. Overview of Cacciatore (Ex-1005)

Cacciatore is a patent titled “Electronic digital thermostat.” *Cacciatore* is directed primarily to building a programmable electronic digital thermostat provides improved control of a temperature conditioning system for varying load conditions in order to maintain the ambient temperature within a predefined range of a scheduled set temperature while minimizing ambient temperature overshoots and undershoots. Ex-1005, Abstract.

Cacciatore was primarily concerned with the programmable electronic digital thermostats for use with heating and cooling systems. An improved programmable electronic digital thermostat that provides improved control of the heating and cooling system for varying load conditions in order to maintain the ambient temperature within a predetermined range of the scheduled set temperature while minimizing ambient temperature overshoots and undershoots and that includes an improved power supply circuit for simply and effectively providing its operating power utilizing conventional existing wiring. Ex-1005, Pg. 9. But as discussed in detail below, *Cacciatore* failed to disclose or render obvious elements of the Challenged Claims.

C. Overview of Shigeaki (Ex-1006)

Shigeaki is a patent titled “Clock Apparatus.” *Shigeaki* is directed primarily to building a service-interruption detecting means provided in a control circuit that detects the service interruption of a commercial power supply system based on the

drop of a voltage-divided output of a rectifying voltage detecting circuit. The fact of the occurrence of the service interruption are stored into EEPROM as the present time data and the service interruption data. The primary objective of *Shigeaki* was not HVAC control but related to clock device. Ex-1006, Abstract.

Shigeaki was primarily concerned with the clock device employed in the gas hot air heater includes a control circuit having a microcomputer, an EEPROM which is a semiconductor nonvolatile memory, a display, and a power failure occurrence confirmation means. A clock setting switch and a rectified voltage detection circuit are provided. Ex-1006. But as discussed in detail below, *Shigeaki* failed to disclose or render obvious elements of the Challenged Claims.

D. Rosen in view of Cacciatore, and Shigeaki Does not Teach or Render Obvious at Least Element L, M and N of Claim 1.

Elements L, M and N of claim 1 recites the following:

L) a control program stored in said first memory directing: 1) establish on said liquid crystal display:

M) a) said real time clock to periodically read its current time and date

N) b) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock.

Although Ground 1 is based on Rosen in view of Cacciatore, and Shigeaki, the Petition relies heavily on this combination for the alleged support that these

elements are disclosed or rendered obvious. However, as shown below this combination does not disclose a) real time clock to periodically read its current time and date, b) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock as claimed in Element L, M and N.

Independent claim 1 recites two distinct memory types: a first memory storing program and data information and a dedicated non-volatile memory storing time and date information. The first memory is interconnected with a central processing unit (CPU) to store program and data information, as stated in EX-1001, 4:22-35. Furthermore, a separate non-volatile memory is provided, designed for the storage of alterable information, such as the last time and date in the event of power outage, with the capability to initiate a restart of the real-time clock function as stated in EX-1001, 3:1-9. Additionally, a governing program, resident within the first memory, directs the real-time clock mechanism to recurrently acquire current time and date data and deposit it into the non-volatile memory. EX-1001, 5:64-67, 6:1-11. Neither Rosen, Cacciatore, nor Shigeaki alone or in combination teach or suggest the claimed elements L, M and N.

While Rosen discloses supplying power to its thermostat system from space conditioning equipment (EX-1004, ¶104; EX-1004, ¶0020) Rosen do not teach or suggest a) said real time clock to periodically read its current time and date, b) upon

restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock as stated in claimed element L, M and N.

Similarly, Cacciatore also fails to disclose elements L, M, and N. Cacciatore discloses a digital thermostat with programmable settings that improves temperature control in varying conditions, including maintaining ambient temperature within a predefined range. It minimizes temperature overshoots and undershoots using a microprocessor and PWM temperature sensing circuit. Its enhanced power supply efficiently utilizes external AC power and existing wiring. EX-1005. Cacciatore does not disclose the limitations of Claim 1 concerning the storage of time in a non-volatile memory and putting that stored time into the real time clock after power is restored.

Shigeaki also fails to disclose elements L, M, and N. Petitioner argues that Shigeaki discloses a method involving the setup of a real-time clock to regularly obtain and store its current time and date information into non-volatile memory. However, this misses the mark. Shigeaki discloses a single type of memory, namely EEPROM. In the event of a power failure, the EEPROM stores time-related data to the current time. Subsequently, upon power recovery, the stored time data is retrieved from EEPROM. However, it is noteworthy that none of the methods detailed by Shigeaki pertain to the approach of placing a control program within the

first memory. This control program's role is to direct a real-time clock to periodically collect its current time and date details.

Shigeaki has failed to disclose a control program stored in the first memory, which directs a real-time clock to periodically retrieve its current time and date information and store it in non-volatile memory, as stated in claimed element M. Additionally, Shigeaki has also omitted the disclosure of the first memory, which is coupled to a central processing unit for the storage of program and data information.

In view of the foregoing, the Patent Owner respectfully submits that neither Rosen, Cacciatore, nor Shigeaki alone or in combination teach or suggest the method of claim 1.

E. Rosen In View Of Cacciatore And Shigeaki Doesn't Teach or Render Obvious of dependent of Claim 4.

Parroting the obvious, since Rosen in View of Cacciatore and Shigeaki fails with respect to independent claim 1, Rosen in View of Cacciatore and Shigeaki also fails with respect to dependent claim 4.

V. PETITIONER'S GROUND 2 FAILS TO ESTABLISH ROSEN IN VIEW OF CACCIATORE AND CAREY, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 11, 12, 13 AND 16.

A. Overview of Carey (Ex-1007)

Carey is directed primarily to building a digital programmable thermostat includes buttons for adjusting temperature upwards and downwards, an LCD display, and a Program button. The user can press the Program button once to start

a single setback program. This program adjusts the temperature to the previously selected setting for a predetermined period of time. Additionally, the thermostat can automatically set the current time and date. This feature enables the user to initiate the program without the need to manually set the time and date. Ex-1007, Abstract.

Carey was primarily concerned with the thermostat that is designed to automatically configure the current time and date, simplifying the process for users to start a single setback program without manually adjusting the time and date. This automation is achieved by utilizing data transmitted by WWVB station, managed by the National Institute of Standards and Technology, to accurately establish the current time and date. The thermostat conveniently exhibits the local time on an LCD screen as stated in Ex-1007: 0004. However, *Carey* fails to disclose or render obvious elements of the Challenged Claims.

B. Rosen in view of Cacciatore, and Carey Doesn't Teach or Render Obvious at Least Element K of Claim 11.

Element K of claim 11 recites the following:

K) a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being coupled to said real time clock such that the time and date information thereof is updated from said receiver.

The combination of Rosen in view of Cacciatore, and Carey does not disclose a receiver adapted to receive current time and date information from an external

source of the current time and date, the receiver being coupled to real time clock such that the time and date information thereof is updated from the receiver as claimed in Element K.

Independent claim 11 recites a programmable thermostat which controls space conditioning equipment through various components including power coupling, user interface, temperature sensor, processor with memory and input/output units, real-time clock, and an external time/date receiver for accurate time updates. EX-1001, 4:22–46. It also includes a receiver adapted to receive current time and date information from an external source and date. Further the receiver is coupled to the real time clock such that the time and date information thereof is updated from receiver. Neither Rosen, Cacciatore nor Carey alone or in combination teach or suggest the claimed element K.

Rosen do not teach or suggest a receiver adapted to receive current time and date information from an external source. Further, the receiver being coupled to a real time clock such that the time and date information thereof is updated from the receiver as stated in claimed element K.

Cacciatore does not overcome the above-noted deficiencies of Rosen. Cacciatore is a digital thermostat with programmable settings which improves temperature control in varying conditions, including maintaining ambient

temperature within a predefined range. It minimizes temperature overshoots and undershoots using a microprocessor and PWM temperature sensing circuit. Its enhanced power supply efficiently utilizes external AC power and existing wiring. EX-1005. Cacciatore does not disclose the limitations of Claim 11 concerning the receiver that is designed to receive current time and date information from an external source with the receiver being coupled to a real-time clock.

Carey fails to overcome the above-noted deficiencies of Rosen and Cacciatore. Petitioner suggests that Carey discloses a thermostat that automatically set[s] the current time and date using information broadcasted by station WWVB. EX1007, 0004; see also EX-1007, Abstract. Carey's thermostat includes an antenna tuned to receive a 60 kHz time code signal broadcast and a receiver integrated circuit that detects and amplifies the time code signal. EX1007, 0008-0009. Once Carey's system receives a time signal, "the minutes, hours, day, and year information are stored into the RAM memory." Carey's system then "loads the information from RAM memory into the local clock controlled by the microprocessor." Furthermore, the microprocessor controls the local clock and "includes a digital input port pin, for decoding the time signal from the receiver," such that the receiver is coupled to the clock. EX1007, 0008-0009. As such, the "receiver" that Carry discloses is coupled to the memory rather than the real time clock. As such it fails to disclose this element of claim 11.

Carey discloses a user can sequentially press the "up" button to switch between default "ET" eastern time, "CT" central time, "MT" mountain time, or "PT" pacific time. Once the user sets the desired time zone by pressing the temperature down button, the subroutine saves this zone in the microprocessor EEPROM memory. The subroutine monitors the microprocessor's input port pin for a signal from receiver. If no signal is received, the microprocessor restores default time and date settings. If a signal is received, the microprocessor successfully decodes a WWVB broadcasted time code signal. The microprocessor stores minute, hour, day, and year data in its RAM memory. Notably, the subroutine transfers the current time details from RAM memory to the microprocessor-controlled local clock, adjusting the hour to align with the time zone stored in EEPROM memory. EX-1007, 0009. However, it is important to note that the receiver is not directly coupled to the local clock, as required in the claim. The receiver facilitates the transfer of the current date and time from an external source i.e., WWVB to the Random Access Memory (RAM). It is pertinent to highlight that RAM is a volatile memory. This is contrary to the invention of claim 11 wherein the current date and time are stored in a non-volatile memory, thereby ensuring data preservation in the event of a power outage.

Furthermore, in the event of a power interruption during the data storage process within the RAM, the subsequent retrieval of newly generated data shall be necessitated from the external source upon restoration of power. As a result, the local

clock's dependence for data retention shifts to the RAM, diverging from its reliance on the external source. This operational configuration is contrary to the invention of claim 11.

In view of the foregoing, the Patent Owner respectfully submits that neither Rosen, Cacciatore, nor Carey alone or in combination teach or suggest the method of claim 11.

C. Rosen In View Of Cacciatore And Carey Doesn't Teach or Render Obvious of dependent of Claim 12, 13, and 16.

Parroting the obvious, since Rosen in View of Cacciatore and Carey fails with respect to independent claim 11, Rosen in View of Cacciatore and Carey also fails with respect to dependent claims 12, 13, and 16.

D. Since Rosen in view of Cacciatore, and Carey Does Not Teach or Render Obvious the Independent Claims, Rosen in view of Cacciatore, and Carey fails to Teach or Render Obvious the Dependent Claims

Parroting the obvious, since Rosen in view of Cacciatore, and Carey fails with respect to independent claim 11, Rosen in view of Cacciatore, and Carey also fails with respect to dependent claims 12, 13, and 16.

VI. PETITIONER’S GROUND 3 FAILS TO ESTABLISH ROSEN IN VIEW OF CACCIATORE AND WILLIAMSON, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 11, 14, 15 AND 16.

The analysis for elements 11[pre]-11[j] is identical to the analysis for Ground 2 as set forth in Section VI.

A. Overview of Williamson (Ex-1010)

Williamson is directed primarily a microwave oven that receives multiple program recipes from a network, which shall be executed through the scanning of a symbol using a scanner, thereby associating the scanned symbol with one of the aforementioned program recipes. Concurrently, the microwave oven shall maintain a real-time clock, ensuring synchronization and accurate configuration through the reception of periodic time synchronization messages. This invention is not related an HVAC control. Ex-1010, Abstract. *Williamson* failed to disclose or render obvious elements of the Challenged Claims.

B. Rosen in View of Cacciatore and Williamson Doesn’t Teach or Render Obvious at Least Element K of Claim 11.

Element K of claim 11 recites the following:

K) a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being coupled to said real time clock such that the time and date information thereof is updated from said receiver.

Although Ground 3 is based on Rosen in view of Cacciatore and Williamson, the Petition relies heavily on this combination for the alleged support that these elements are disclosed or rendered obvious. However, as shown below this combination does not disclose a receiver adapted to receive current time and date information from an external source of the current time and date, the receiver being coupled to real time clock such that the time and date information thereof is updated from the receiver as claimed in Element K.

Independent claim 11 recites a programmable thermostat controls space conditioning equipment through various components including power coupling, user interface, temperature sensor, processor with memory and input/output units, real-time clock, and an external time/date receiver for accurate time updates. EX-1001, 4:22–46. The receiver adapted to receive current time and date information from an external source and date. Further the receiver being coupled to a real time clock such that the time and date information thereof is updated from the receiver. Neither Rosen, Cacciatore nor Williamson alone or in combination teach or suggest the claimed element K.

Rosen does not teach or suggest a receiver adapted to receive current time and date information from an external source. Neither does Rosen disclose the receiver being coupled to real time clock such that the time and date information thereof is updated from the receiver as stated in claimed element K.

As discussed above Cacciatore also fails to disclose element K of claim 11. Again, the receiver of Cacciatore is not coupled to the real time clock.

Williamson does not overcome the above-noted deficiencies of Rosen and Cacciatore. Petitioner suggests that Williamson discloses an appliance network” such that a “synchronization automatically ... assures all clocks report the correct time.” EX1010, 1:16-19, 2:12-13. The Williamson system discloses a receiver: an intelligent controller that receives time messages from a web server. EX1010, 2:8-12. Williamson’s intelligent controller is “in communication with a web server via a modem (or via a broadband connection)” and may “connect through an internet service provider and may even use a cable modem or DSL router to connect with the Internet” such that the intelligent controller receives information from an external source. EX1010, 4:4-6, 4:37-40. Williamson explains that time messages are specifically received at the modem. EX1010, 8:36-40. The intelligent controller includes a controller, a real-time clock, and a modem all coupled to each other. EX1010, Figure 3, 8:36-37. The real-time clock “receives time messages from the information controller 102, periodically ... [and] then synchronizes to the time maintained by the intelligent controller 102.” EX1010, 24:10-15.

Williamson disclose a receiver (e.g., intelligent controller 102 including modem 206) adapted to receive current time and date information (e.g., time messages received at intelligent controller) from an external source of the current

time and date (e.g., the Internet), said receiver (e.g., intelligent controller 102 including modem 206) being coupled to said real time clock (e.g., real-time clock 308) such that the time and date information thereof is updated from said receiver (the real-time clock is programmed in response to the time messages so that time is correctly maintained). Compare EX1010 and EX1001, Claim 11. On the contrary, Williamson's do not teach or suggest this language as recited in claim 11. The receiver (modem 206) is not directly coupled to the real-time clock 308, as required in the claim. Modem 206 facilitates the transfer of the current date and time from an external source i.e., website/Internet to the controller 210 as seen in annotated Figure 3. EX-1010. It is pertinent to highlight that controller 210 is not a non-volatile memory. This is contrary from our invention wherein the current date and time are stored in a non-volatile memory, thereby ensuring data preservation in the event of a power outage.

Furthermore, in the event of a power interruption during the data storage process within the controller, the subsequent retrieval of newly generated data shall be necessitated from the external source upon restoration of power. As a result, the real-time clock dependence for data retention shifts to the controller, diverging from its reliance on the external source. This operational configuration is contrary from the envisaged objective of our invention.

In view of the foregoing, the Patent owner respectfully submits that neither Rosen, Cacciatore, nor Williamson alone or in combination teach or suggest the method of claim 11.

C. Rosen In View Of Cacciatore And Williamson's Doesn't Teach or Render Obvious of dependent of Claim 14, 15 and 16.

Parroting the obvious, since Rosen in View of Cacciatore and Carey fails with respect to independent claim 11, Rosen in View of Cacciatore and Carey also fails with respect to dependent claims 14, 15, and 16.

D. Since Rosen in view of Cacciatore, and Williamson's Does Not Teach or Render Obvious the Independent Claims, Rosen in view of Cacciatore, and Williamson fails to Teach or Render Obvious the Dependent Claims

Parroting the obvious, since Rosen in view of Cacciatore, and Williamson fails with respect to independent claim 11, Rosen in view of Cacciatore, and Williamson also fails with respect to dependent claims 14, 15, and 16.

VII. PETITIONER’S GROUND 4 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE AND SHIGEAKI, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 1.

A. Overview of Shamoons (Ex-1008)

Shamoons is a patent titled “Thermostat and remote control system and method.” *Shamoons* is directed primarily to building a thermostat and remote control device comprise a housing, an interface, multiple icons present on the interface representing controls for various items, a display screen illustrating the current temperature configuration, as well as the prevailing time and date. The device further encompasses an inset program and input button, specifically designed for inputting temperature configurations into the thermostat, and a distinct button to erase any previously entered data. Additionally, a charging cradle is provided for recharging the device, along with a Universal Serial Bus (USB) port that facilitates connection between a computerized device and the apparatus. Ex-1008, Abstract.

Furthermore, the device is equipped with an RS-232 port, which serves to standardize the transmission of serial data between the apparatus and any other compatible devices. Integral to the device is a microcontroller responsible for processing both information and data. The device employs infrared and radio frequency technologies to effectuate the transmission and reception of information from diverse items. Moreover, a regulated device incorporating a microprocessor

(for instance, a child monitor) is also disclosed. *Shamoon* failed to disclose or render obvious elements of the Challenged Claims.

B. Shamoon in view of Cacciatore, and Shigeaki Doesn't Teach or Render Obvious at Least Element L, M and N of Claim 1.

Element L, M and N of claim 1 recites the following:

L) a control program stored in said first memory directing: 1) establish on said liquid crystal display:

M) a) said real time clock to periodically read its current time and date

N) b) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock.

Although Ground 1 is based on Shamoon in view of Cacciatore, and Shigeaki, the Petition relies heavily on this combination for the alleged support that these elements are disclosed or rendered obvious. However, as shown below this combination does not disclose a) real time clock to periodically read its current time and date, b) upon restart after a loss and then return of power from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock as claimed in Element L, M and N.

Independent claim 1 recites two distinct memory types: a first memory and a dedicated non-volatile memory (NVRAM). The first memory is interconnected with a central processing unit (CPU) to store program and data information, as stated in

EX-1001, 4:22-35. Furthermore, a separate non-volatile random access memory is provided, designed for the storage of alterable information, such as the last time and date in the event of power outage, with the capability to initiate a restart of the real-time clock function as stated in EX-1001, 3:1-9. Additionally, a governing program, resident within the first memory, directs the real-time clock mechanism to recurrently acquire current time and date data and deposit it into the non-volatile memory. EX-1001, 5: 64-67, 6:1-11. Neither Shamoan, Cacciatore, or Shigeaki, alone or in combination, teach or suggest the claimed elements L, M and N.

Shamoan discloses the use of an X10 interface—a common home automation interface and therefore accesses home power. EX1008, ¶0071, Figure 6. Cacciatore teaches both connection via a power line (wiring) to space conditioning equipment and protecting a backup battery via an isolation diode. Shamoan discloses a “thermostat and remote control apparatus 10 [that] has [a] ‘Program\Enter’ button 130 that allows a user to enter and activate a setting on the touchpad 330 display such as temperature settings to the thermostat 260.” EX-1008, 0074; see also EX-1008, 0019. The thermostat system includes a “temperature probe 265” that “sends a signal to an analog to digital temperature converter 370, which sends a signal to the microcontroller 300.” EX1008, 0071.

However, Shamoan does not teach or suggest a) said real time clock to periodically read its current time and date, b) upon restart after a loss and then return of power

from said space conditioning equipment, read the time and date information stored in said non-volatile memory into said real time clock as stated in claimed element L, M and N.

Cacciatore does not overcome the above-noted deficiencies of Rosen. Cacciatore is a digital thermostat with programmable settings that improves temperature control in varying conditions, maintaining ambient temperature within a predefined range. It minimizes temperature overshoots and undershoots using a microprocessor and PWM temperature sensing circuit. Its enhanced power supply efficiently utilizes external AC power and existing wiring. EX-1005. Cacciatore does not disclose the limitations of Claim 1 concerning the storage of time in a non-volatile memory and putting that stored time into the real time clock after power is restored.

Shigeaki does not overcome the above-noted deficiencies of Rosen and Cacciatore. Petitioner suggests that Shigeaki discloses a method involving the setup of a real-time clock to regularly obtain and store its current time and date information into non-volatile memory. Additionally, upon restarting after a power interruption and subsequent recovery of power by the space conditioning equipment, the method involves retrieving the saved time and date information from the non-volatile memory and transferring it to the real-time clock. EX-1006, ¶0061. On the contrary, Shigeaki does not teach or suggest this language as recited in claim 1.

Shigeaki describes a single type of memory, namely EEPROM. In the event of a power failure, the EEPROM stores time-related data to the current time. Subsequently, upon power recovery, the stored time data is retrieved from EEPROM. However, it is noteworthy that none of the methods detailed by Shigeaki pertain to the approach of placing a control program within the first memory. This control program's role is to direct a real-time clock to periodically collect its current time and date details.

Shigeaki has failed to disclose a control program stored in the first memory, which directs a real-time clock to periodically retrieve its current time and date information and store it in non-volatile memory, as stated in claimed element M. Additionally, Shigeaki has also omitted the disclosure of the first memory, which is coupled to a central processing unit for the storage of program and data information.

In view of the foregoing, the Patent Owner respectfully submits that neither Shamoon, Cacciatore, nor Shigeaki alone or in combination teach or suggest the method of claim 1.

VIII. PETITIONER’S GROUND 5 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE, SHIGEAKI, AND TOTH RENDERS OBVIOUS LIMITATIONS OF CLAIMS 4.

A. Overview of Toth (Ex-1012)

Toth is directed primarily to building an electronic thermostat with various fan modes: auto, time, continuous. It also has a temporary fan-on mode to run the air fan for a set time. This temporary mode works during any other mode. Once the time is up, the thermostat goes back to its regular schedule. Picking a time activates the fan for that duration. Ex-1012, Abstract.

B. Shamoons in View Of Cacciatore, Shigeaki, and Toth Doesn’t Teach or Render Obvious of dependent of Claim 4.

Parroting the obvious, since Shamoons in View of Cacciatore and Shigeaki fails with respect to independent claim 1 in section VIII, Shamoons in View of Cacciatore, Shigeaki, and Toth also fails with respect to dependent claim 4.

IX. PETITIONER’S GROUND 6 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE AND CAREY, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 11 AND 12.

A. Shamoons in view of Cacciatore, and Carey Doesn’t Teach or Render Obvious at Least Element K of Claim 11.

Element K of claim 11 recites the following:

K) a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being coupled to said real time clock such that the time and date information thereof is updated from said receiver.

Although Ground 6 is based on Shamoon in view of Cacciatore, and Carey, the Petition relies heavily on this combination for the alleged support that these elements are disclosed or rendered obvious. However, as shown below this combination does not disclose a receiver adapted to receive current time and date information from an external source of the current time and date, the receiver being coupled to real time clock such that the time and date information thereof is updated from the receiver as claimed in Element K.

Independent claim 11 recites a programmable thermostat which controls space conditioning equipment through various components including a power coupling, user interface, temperature sensor, processor with memory and input/output units, real-time clock, and an external time/date receiver for accurate time updates. EX-1001, 4:22–46. The receiver is adapted to receive current time and date information from an external source and date. Further the receiver being coupled to a real time clock such that the time and date information thereof is updated from the receiver. Neither Shamoon, Cacciatore nor Carey alone or in combination teach or suggest the claimed element K.

Shamoon discloses the use of an X10 interface—a common home automation interface and therefore accesses home power. EX1008, ¶0071, Figure 6. Cacciatore teaches both connection via a power line (wiring) to space conditioning equipment and protecting a backup battery via an isolation diode. Shamoon discloses a

“thermostat and remote control apparatus 10 [that] has [a] ‘Program\Enter’ button 130 that allows a user to enter and activate a setting on the touchpad 330 display such as temperature settings to the thermostat 260.” EX-1008, 0074; see also EX-1008, 0019. The thermostat system includes a “temperature probe 265” that “sends a signal to an analog to digital temperature converter 370, which sends a signal to the microcontroller 300.” EX1008, 0071.

However, Shamoon does not teach or suggest a receiver adapted to receive current time and date information from an external source. Further, the receiver being coupled to real time clock such that the time and date information thereof is updated from the receiver as stated in claimed element K.

Cacciatore does not overcome the above-noted deficiencies of Shamoon. Cacciatore is a digital thermostat with programmable settings that improves temperature control in varying conditions, maintaining ambient temperature within a predefined range. It minimizes temperature overshoots and undershoots using a microprocessor and PWM temperature sensing circuit. Its enhanced power supply efficiently utilizes external AC power and existing wiring. EX-1005. Cacciatore does not disclose the limitations of Claim 11 concerning the receiver that is designed to receive current time and date information from an external source. Additionally, it is linked to a real-time clock, ensuring that its time and date information remains synchronized and updated.

Carey does not overcome the above-noted deficiencies of Rosen and Cacciatore. Petitioner suggests that Carey discloses a thermostat that automatically set[s] the current time and date using information broadcasted by station WWVB. EX1007, 0004 (emphasis added); see also *id.*, Abstract. Carey's thermostat includes an antenna tuned to receive a 60 kHz time code signal broadcast from station WWVB in Fort Collins and a receiver integrated circuit that detects and amplifies the time code signal. EX1007, 0008-0009. Once Carey's system receives a time signal, "the minutes, hours, day, and year information are stored into the RAM memory." Carey's system then "loads the information from RAM memory into the local clock controlled by the microprocessor." Furthermore, the microprocessor controls the local clock and "includes a digital input port pin, for decoding the time signal from the receiver," such that the receiver is coupled to the clock. EX1007, 0008-0009. On the contrary, Carey does not teach or suggest this language as recited in claim 11.

Carey describes a user can sequentially press the "up" button to switch between default "ET" eastern time, "CT" central time, "MT" mountain time, or "PT" pacific time. Once the user sets the desired time zone by pressing the temperature down button, the subroutine saves this zone in the microprocessor EEPROM memory. The subroutine monitors the microprocessor's input port pin for a signal

from receiver. If no signal is received, the microprocessor restores default time and date settings. If a signal is received, the microprocessor successfully decoding a WWVB broadcasted time code signal. The microprocessor stores minute, hour, day, and year data in its RAM memory. Notably, the subroutine transfers the current time details from RAM memory to the microprocessor-controlled local clock, adjusting the hour to align with the time zone stored in EEPROM memory. EX-1007, 0009. However, it is important to note that the receiver is not directly coupled to the local clock, as required in the claim. The receiver facilitates the transfer of the current date and time from an external source i.e., WWVB to the Random Access Memory (RAM). It is pertinent to highlight that RAM is a volatile memory. This is contrary to the invention of claim 11 wherein the current date and time are stored in a non-volatile memory, thereby ensuring data preservation in the event of a power outage.

Furthermore, in the event of a power interruption during the data storage process within the RAM, the subsequent retrieval of newly generated data shall be necessitated from the external source upon restoration of power. As a result, the local clock's dependence for data retention shifts to the RAM, diverging from its reliance on the external source. This operational configuration is contrary from the invention of claim 11.

Carey does not disclose a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being

coupled to said real time clock such that the time and date information thereof is updated from said receiver as stated in claimed element K.

In view of the foregoing, the Patent Owner respectfully submits that neither Shamoon, Cacciatore, nor Carey 'alone or in combination teach or suggest the method of claim 11.

B. Shamoon in View Of Cacciatore And Carey Doesn't Teach or Render Obvious of dependent of Claim 12.

Parroting the obvious, since Shamoon in View of Cacciatore and Carey fails with respect to independent claim 11, Shamoon in View of Cacciatore and Carey also fails with respect to dependent claim 12.

C. Since Shamoon in view of Cacciatore, and Carey Does Not Teach or Render Obvious the Independent Claims, Shamoon in view of Cacciatore, and Carey fails to Teach or Render Obvious the Dependent Claims

Parroting the obvious, since Shamoon in view of Cacciatore, and Carey fails with respect to independent claim 11, Shamoon in view of Cacciatore, and Carey also fails with respect to dependent claim 12.

X. PETITIONER’S GROUND 7 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE, CAREY, AND TOTH RENDERS OBVIOUS LIMITATIONS OF CLAIMS 13 AND 16.

A. Shamoon in View Of Cacciatore, Carey, and Toth Doesn’t Teach or Render Obvious of dependent of Claim 13 and 16.

Parroting the obvious, since Shamoon in View of Cacciatore and Carey, fails with respect to independent claim 11 in section X, Rosen in View of Cacciatore, Carey, and Toth also fails with respect to dependent claims13 and 16.

XI. PETITIONER’S GROUND 8 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE AND WILLIAMSON, RENDERS OBVIOUS LIMITATIONS OF CLAIMS 11 AND 14.

A. Shamoon in view of Cacciatore, and Williamson Doesn’t Teach or Render Obvious at Least Element K of Claim 11.

Element K of claim 11 recites the following:

K) a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being coupled to said real time clock such that the time and date information thereof is updated from said receiver.

Although Ground 8 is based on Shamoon in view of Cacciatore, and Williamson, the Petition relies heavily on this combination for the alleged support that these elements are disclosed or rendered obvious. However, as shown below this combination does not disclose a receiver adapted to receive current time and date information from an external source of the current time and date, the receiver

being coupled to real time clock such that the time and date information thereof is updated from the receiver as claimed in Element K.

Independent claim 11 recites a programmable thermostat controls space conditioning equipment through various components including power coupling, user interface, temperature sensor, processor with memory and input/output units, real-time clock, and an external time/date receiver for accurate time updates. EX-1001, 4:22–46. The receiver adapted to receive current time and date information from an external source and date. Further the receiver being coupled to a real time clock such that the time and date information thereof is updated from receiver. Neither Shamoon, Cacciatore nor Williamson alone or in combination teach or suggest the claimed element K.

Shamoon discloses the use of an X10 interface—a common home automation interface and therefore accesses home power. EX1008, ¶0071, Figure 6. For users where home automation is not desired, a POSITA would look to prior art methods that obtain power from the space conditioning equipment. Cacciatore is one such reference. Cacciatore teaches both connection via a power line (wiring) to space conditioning equipment and protecting a backup battery via an isolation diode. Shamoon discloses a “thermostat and remote control apparatus 10 [that] has [a] ‘Program\Enter’ button 130 that allows a user to enter and activate a setting on the touchpad 330 display such as temperature settings to the thermostat 260.” EX-1008,

0074; see also EX-1008, 0019. The thermostat system includes a “temperature probe 265” that “sends a signal to an analog to digital temperature converter 370, which sends a signal to the microcontroller 300.” EX1008, 0071.

However, Shamoon does not teach or suggest a receiver adapted to receive current time and date information from an external source. Further, the receiver being coupled to a real time clock such that the time and date information thereof is updated from the receiver as stated in claimed element K.

Cacciatore does not overcome the above-noted deficiencies of Shamoon. Cacciatore is a digital thermostat with programmable settings that improves temperature control in varying conditions, maintaining ambient temperature within a predefined range. It minimizes temperature overshoots and undershoots using a microprocessor and PWM temperature sensing circuit. Its enhanced power supply efficiently utilizes external AC power and existing wiring. EX-1005. Cacciatore does not disclose the limitations of Claim 11 concerning the receiver that is designed to receive current time and date information from an external source. Additionally, it is linked to a real-time clock, ensuring that its time and date information remains synchronized and updated.

Williamson does not overcome the above-noted deficiencies of Shamoon and Cacciatore. Petitioner suggests that Williamson discloses an appliance network” such that a “synchronization automatically ... assures all clocks report the correct

time.” EX1010, 1:16-19, 2:12-13. The Williamson system discloses a receiver: an intelligent controller that receives time messages from a web server. EX1010, 2:8-12. Williamson’s intelligent controller is “in communication with a web server via a modem (or via a broadband connection)” and may “connect through an internet service provider and may even use a cable modem or DSL router to connect with the Internet” such that the intelligent controller receives information from an external source. EX1010, 4:4-6, 4:37-40. Williamson explains that time messages are specifically received at the modem. EX1010, 8:36-40. The intelligent controller includes a controller, a real-time clock, and a modem all coupled to each other. EX1010, Figure 3, 8:36-37. The real-time clock “receives time messages from the information controller 102, periodically ... [and] then synchronizes to the time maintained by the intelligent controller 102.” EX1010, 24:10-15.

Williamson discloses a receiver (e.g., intelligent controller 102 including modem 206) adapted to receive current time and date information (e.g., time messages received at intelligent controller) from an external source of the current time and date (e.g., the Internet), said receiver (e.g., intelligent controller 102 including modem 206) being coupled to said real time clock (e.g., real-time clock 308) such that the time and date information thereof is updated from said receiver (the real-time clock is programmed in response to the time messages so that time is

correctly maintained). Compare EX1010 and EX1001, Claim 11. On the contrary, Williamson does not teach or suggest this language as recited in claim 11.

However, it is important to note that the receiver (modem 206) is not directly coupled to the real-time clock 308, as required in the claim. Modem 206 facilitates the transfer of the current date and time from an external source i.e., website/Internet to the controller 210 as seen in annotated Figure 3. EX-1010. It is pertinent to highlight that controller 210 is not a non-volatile memory. This is contrary the invention of claim 11 wherein the current date and time are stored in a non-volatile memory, thereby ensuring data preservation in the event of a power outage.

Furthermore, in the event of a power interruption during the data storage process within the controller, the subsequent retrieval of newly generated data shall be necessitated from the external source upon restoration of power. As a result, the real-time clock dependence for data retention shifts to the controller, diverging from its reliance on the external source. This operational configuration is contrary from the envisaged objective of the invention of claim 11.

Williamson has failed to disclose a receiver adapted to receive current time and date information from an external source of the current time and date, said receiver being coupled to said real time clock such that the time and date information thereof is updated from said receiver as stated in claimed element K.

In view of the foregoing, the Patent Owner respectfully submits that neither Shamoon, Cacciatore, nor Williamson's alone or in combination teaches or suggest the method of claim 11.

B. Shamoon in View Of Cacciatore And Williamson's Doesn't Teach or Render Obvious of dependent of Claim 14.

Parroting the obvious, since Shamoon in View of Cacciatore and Williamson's fails with respect to independent claim 11, Shamoon in View of Cacciatore and Williamson's also fails with respect to dependent claims 14.

C. Since Shamoon in view of Cacciatore, and Williamson Does Not Teach or Render Obvious the Independent Claims, Shamoon in view of Cacciatore, and Williamson's fails to Teach or Render Obvious the Dependent Claims

Parroting the obvious, since Shamoon in view of Cacciatore, and Williamson's fails with respect to independent claim 11, Shamoon in view of Cacciatore, and Williamson's also fails with respect to dependent claim 14.

XII. PETITIONER'S GROUND 9 FAILS TO ESTABLISH SHAMOON IN VIEW OF CACCIATORE, WILLIAMSON, AND TOTH RENDERS OBVIOUS LIMITATIONS OF CLAIMS 15 AND 16.

A. Shamoon in View Of Cacciatore, Williamson,, and Toth Doesn't Teach or Render Obvious of dependent of Claim 15 and 16.

Parroting the obvious, since Shamoon in View of Cacciatore and Williamson, fails with respect to independent claim 11 in section XII, Rosen in View of Cacciatore, Carey, and Toth also fails with respect to dependent claims 15 and 16.

XIII. CONCLUSION

The Board should deny the Petition as the proposed prior art reference and combinations thereof claim to render the claims of the '825 Patent obvious under 35 U.S.C. § 103. In the alternative, the Board should exercise its discretion to deny the petition on the merits and/or *Fintiv* grounds.

Respectfully Submitted,

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CERTIFICATE OF COMPLIANCE

Per 37 C.F.R. §42.24(a) and (d), the undersigned hereby certifies that the Petition complies with the type-volume limitation of 37 C.F.R. §42.24(a)(i) because, exclusive of exempted portions, it contains 10479 words as counted by the word-processing program used to prepare it.

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that the above-captioned Mandatory Notice was served on counsel of record for the Petitioner by filing this document through the Patent Review Processing System as well as by delivering a copy via electronic mail to:

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