

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,

Petitioner,

v.

ROSEN TECHNOLOGIES LLC,

Patent Owner

Case No. IPR2022-01402

U.S. Patent No. 7,156,318

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	NDTX – Scheduling Order
2002	NDTX – Rosen’s Infringement Contentions
2003	NDTX - Lennox’s Motion to Dismiss
2004	NDTX - Lennox’s Invalidity Contentions
2005	Unified Patents Public Member List
2006	Correspondences with Ecobee

* * * *

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. §§ 102 and 103 are to the Pre-AIA versions applicable to the ’318 Patent.

I. INTRODUCTION

Petitioner Unified Patents, LLC (“Unified”) challenges claims 1, 3, 4, 14, and 16-20 (the “Challenged Claims”) of Patent Owner Rosen Technologies LLC (“Rosen”)’s U.S. Patent No. 7,156,318 (the “’318 Patent”).

However, both Grounds 1-2 asserted by Petitioner fails as the petition relies on prior art that does not include each and every element of the Challenged claims of the ’318 Patent. The petition is insufficient on the merits, as Petitioner fails to demonstrate in Ground 1 that *Geiwitz*’s¹ teachings render obvious at least these elements of each independent claim: a) first legend indicative of a first control function of the thermostat...which first control function is active when the first legend is viewable, and b) second legend indicative of the second control function of the thermostat...which second control function is active when the second legend is viewable. Furthermore, Ground 2 with *Geiwitz* in combination with *Cardio Manual* also fails to teach a first virtual button having been touched a predetermined number of times nor displaying a second legend indicative of the second control function of preventing controlling of any space conditioning equipment components.

¹ Petitioner also incorrectly relies on the ’551 Provisional Application (Ex-1005) for the priority date for *Geiwitz* (Ex-1004), but the ’551 Provisional Application does not actually support a claim of *Geiwitz*.

Furthermore, given that the unchallenged claims of the '318 Patent as well as 4 other unchallenged patents are currently being asserted in a litigation against Lennox Industries, Inc., the *Fintiv* factors also weigh heavily in favor of discretionary denial.

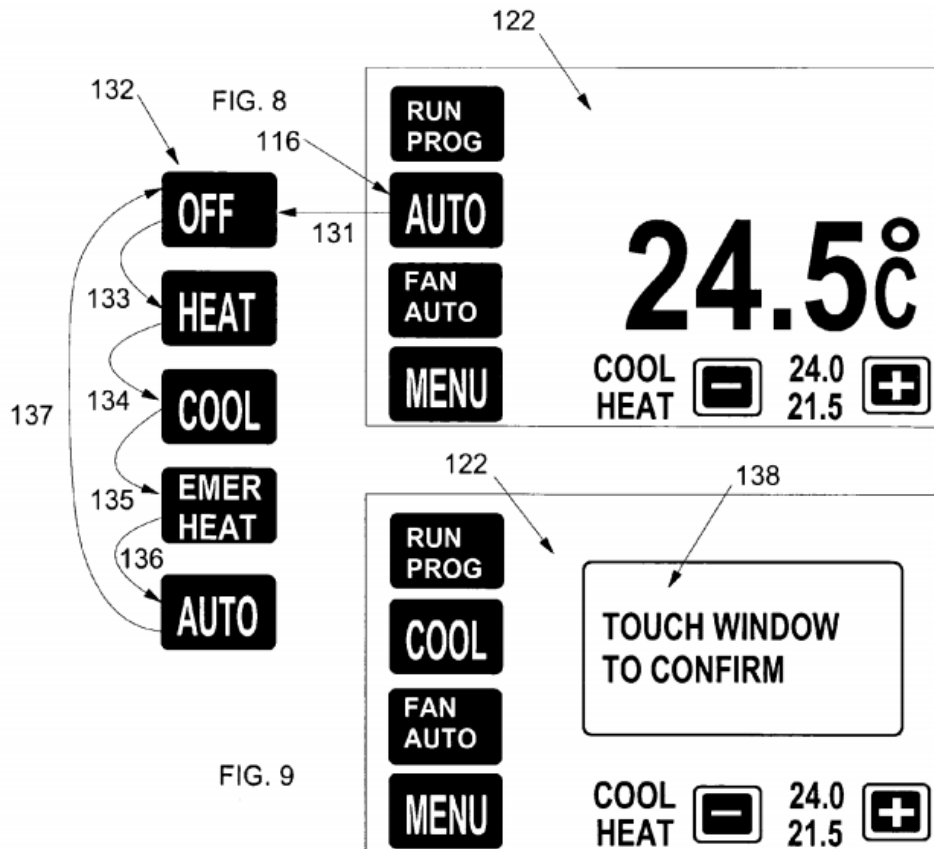
Accordingly, Patent Owner Rosen Technologies LLC respectfully requests that the Board deny the petition for *inter partes* review of claims 1, 3, 4, 14, and 16-20 of the '318 Patent on the merits and/or under §314(a).

II. THE '318 PATENT DISCLOSES A NOVEL PROGRAMMABLE THERMOSTAT FOR CONTROLLING MULTIPLE SPACE CONDITIONING (HVAC) EQUIPMENT.

At the time of the filing of the '318 Patent, traditional programmable thermostat systems, fixed position, button-actuated switches were to be depressed in a precise sequence to program set points for programmable time periods. Ex-1001, 1:67-2:3. The '318 Patent notes that “[i]n some modern thermostats, ‘virtual’ buttons are presented on the LCD itself which is juxtaposed with a touch pad to effect the interactive touch screen.” Ex-1001, 2:7-9. However, prior art programmable thermostat systems are difficult to program and a user must usually refer to and attempt to decipher a programming manual as the programming proceeds. Ex-1001, 2:10-22. The use of dot matrix LCD screens in the '318 Patent allowed for an extended functionality to simplify user programming and to relieve the manufacturer of the necessity to fabricate variants of the thermostat to suit the

control and display aspects of various heating and/or cooling environments. Ex-1001, 2:53-58.

More specifically, the '318 Patent disclosed the use of legends along with non-static virtual buttons to allow for an easily understandable thermostat programming.



For example, virtual button 116 changes the legend on the virtual button 116 in response to a user touch which also causes a change in the operating state of the thermostat. Ex-1001, 8:22-30 The legend of virtual button 116 may change it one of the virtual buttons in column 132. Ex-1001, 8:22-30 The ability of the non-static virtual buttons to change its legend and effect the operation of the environmental equipment connected with the thermostat provides an intuitive and novel way of

programming the thermostat for a user. Furthermore, if fewer than or more than the virtual buttons of virtual buttons column 132 are available to the user, appropriate fewer or more touching steps will be required to cycle through the functions of thermostat 110 and the corresponding legends...” Ex-1001, 9:25-30. The virtual buttons of column 132 may, of course, have a different sequence and also reflect various space conditioning equipment components which may be installed...” Ex-1001, 9:34-37.

Additionally, the '318 Patent discusses other legends used on other virtual buttons to control kilowatts per hour. Ex-1001, 11:8-11 (“Touching button 172 changes the numerical legend in increments to indicate kilowatts per hour required of a compressor if air conditioning equipment is present.”) The use of these non-static virtual buttons with its associated legend allows for a single virtual button to be programmed to have multiple cycle throughs which are intuitive for the user improving over prior art thermostats.

III. CLAIM CONSTRUCTION

There has been no claim construction briefing in any of the district court cases. 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). Claim construction is “simply a way of elaborating the normally terse claim language in order to understand and explain, but not to change, the scope of the claims.” *DeMarini Sports, Inc. v. Worth*,

Inc., 239 F.3d 1314, 1322-23 (Fed. Cir. 2001) (quoting *Embrex, Inc. v. Serv. Eng'g Corp.*, 216 F.3d 1343, 1347 (Fed. Cir. 2000); *see also Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996)). An inventor particularly points out and distinctly identifies the subject matter of the invention in the claims, and no one, including the Court, can change the invention through claim construction. *See K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1365 (Fed. Cir. 1999) (citing *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 396 (Ct. Cl. 1967); *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1344 (Fed. Cir. 1998)).

A. Level of Ordinary Skill in the Art

One of ordinary skill in the art would have had a bachelor's degree in electrical engineering or a related field, and at least two years of experience in working with HVAC systems or thermostat systems, with additional experience substituting for education and vice versa

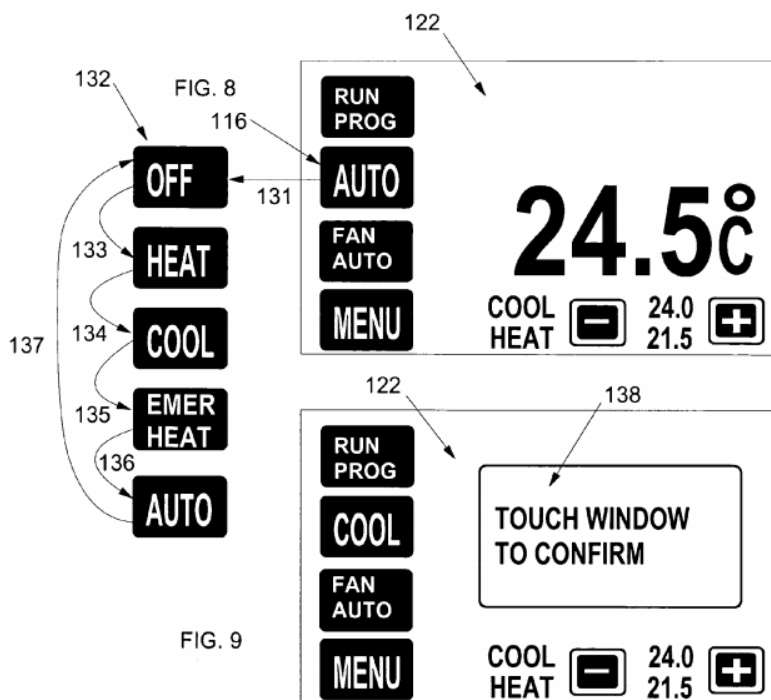
**B. “A First Legend Indicative of a First Control Function” &
“A Second Legend Indicative of Said Second Control Function”**

These terms should be construed as “a first content displayed on a virtual button indicative of a first control function,” and “a second content displayed on a virtual button indicative of a second control function,” respectively.

The '318 Patent recognized that fixed position buttons and static virtual buttons “employed in prior art thermostat interfaces are not highly intuitive.” Ex-1001, 2:13-15. As such, the '318 Patent disclosed the novel non-static virtual

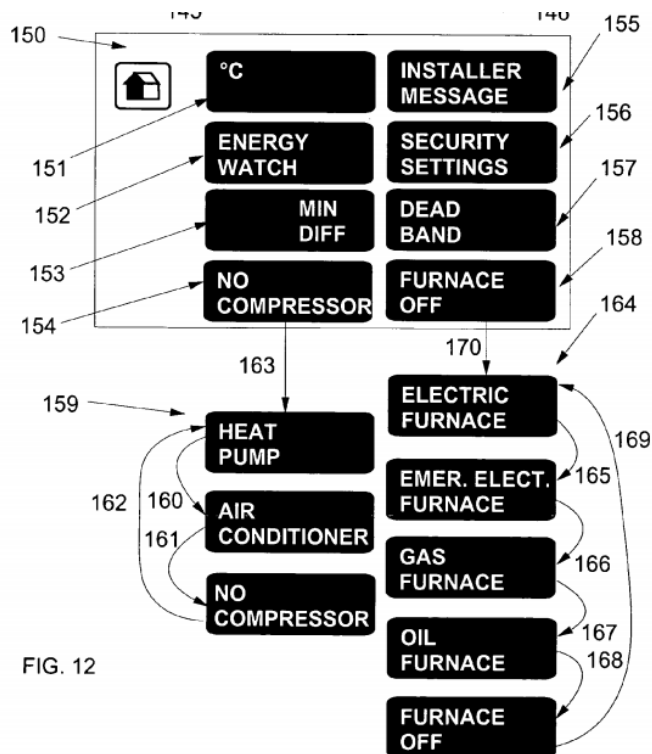
buttons having legends for the virtual button. This was possible due to the use of dot matrix LCDs as opposed to the “less expensive LCDs without dot matrix capability.” Ex-1001, 2:46. However, the use of the more expensive dot matrix LCDs places a premium for real estate on the display and as such having non-static virtual buttons which can change the content displayed within the virtual button allows for the use of smaller dot matrix LCDs and “exploit the extended functionality capability of those devices.” Ex-1001, 2:51-53.

In describing the invention as shown the below figures:



The '318 Patent states “FIG 8 illustrates that virtual button 116 can undergo step 141 in response to a user touch which also causes a change in the operating state of thermostat 110 and a *change of the legend associated with virtual button 116 to*

one of the virtual buttons in column 132.” Ex-1001, 8:22-25. As used in the ’318 Patent, “legend” is the content on the non-static virtual button 116 from which changes from “AUTO” to “COOL.” The ’318 Patent further describes a change of the legend on the virtual button 116 from “AUTO” to “OFF” at step 137; changing the legend on the virtual button 116 from “OFF” to “HEAT” at step 133; changing the legend on the virtual button 116 from “HEAT” to “COOL” at step 134; changing the legend on the virtual button 116 from “COOL” to “EMER HEAT” at step 135; and finally changing the legend on the virtual button 116 from “EMER HEAT” to “AUTO” at step 136. Ex-1001, 8:31-50.



With respect to Fig. 12, the ’318 Patent states “invoking steps 160, 161 and 162 respectively cause a *change in the function and legend appearing at button*

154 from ‘heat pump’ mode to ‘air conditioner’ mode, from ‘air conditioner’ mode to ‘no compressor’ mode (no air conditioning equipment), and from ‘no compressor’ mode to “heat pump” mode.” Ex-1001, 10:37-42. (emphasis added). This further shows that the legend is the content appearing on the virtual button indicative of a control function.

Additionally, the ’318 Patent further states that “[c]ycling through steps 165, 166, 167, 168 and 169 respectively cause a *change in the function and legend at button 158* from ‘electric furnace’ mode (presence in the given system of an electric powered furnace) to ‘emer. elect. Furnace’ mode (additional presence of an emergency electric furnace), from ‘emer. elect. Furnace’ mode to ‘gas furnace’ mode (presence of a gas furnace), from ‘gas furnace’ mode to ‘oil furnace’ mode (presence of an oil furnace), from ‘oil furnace’ mode to ‘furnace off’ mode (lack of heating equipment) and from ‘furnace off’ mode to ‘electric furnace’ mode.” Ex-1001, 10:48-58. (emphasis added)

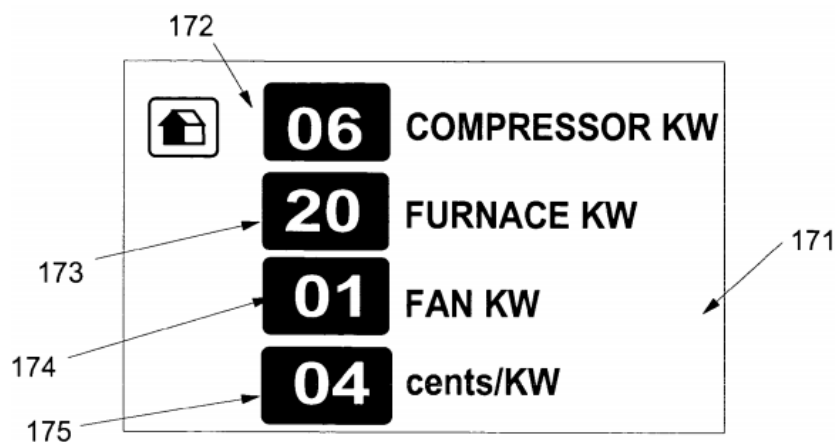


FIG. 13

In explaining the invention further, the '318 Patent describes with respect to Fig. 13, “[t]ouching button 172 changes the numerical legend in increments to indicate kilowatts per hour required of a compressor if air conditioning equipment is present.” Ex-1001, 11:8-11. Here, the '318 Patent explains that the legend or content on the non-static virtual button may be numerical rather than text.

Throughout the '318 Patent, the inventor uses the term “legend” for the content (e.g., text or numerical) displayed on the non-static virtual button which is changed by a touching of the virtual button. In keeping with the spirit of the invention, having the text or content displayed on the virtual button makes the virtual button non-static and intuitive to a user.

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

The Board should exercise its §314(a) discretion to deny institution because this proceeding wouldn't promote the efficient and conclusive resolution of the pending litigation dispute regarding the '318 Patent, especially given that a pending district court litigation, a number of claims from the '318 Patent were asserted but are not challenged by Grounds 1-2 in this petition.

Furthermore, although Unified contends that it is the real party in interest, the facts and circumstances surrounding Lennox Industries Inc. (“Lennox”) and/or Unified's member Ecobee along with Unified's historical track record of filing IPRs

only when its members are affected suggest otherwise. Depending on this result, it affects one of the *Fintiv* factors.

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.”² 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 Very Unlikely to Stay the Parallel Litigation.

As mentioned earlier, there is a pending District Court litigation involving the ’318 Patent as well as 4 other patents asserted by Patent Owner against Lennox (“Lennox Litigation”). However, in the District Court, Patent Owner has asserted claims 1, 3, 4, 5, 7, 9, and 11. *See* Ex-2002, pg. 1 – Infringement Contentions. Here, the Petitioner has challenged claims 1, 3, 4, 14, and 16-20. Even if the IPR was instituted, asserted claims 5, 7, 9 and 11 would not be subjected to the IPR which weighs heavily against a stay in the District Court. It makes far more sense for the

² 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).

district court to weigh in on the validity of all the asserted claims than to consider claims piecemeal here.

Furthermore, given that there are 5 patents asserted in the Lennox Litigation and only the '318 Patent was challenged in the PTAB, a stay is very unlikely to occur for this additional reason. The Board, however, has consistently declined to speculate on the possibility of stays in district court proceedings: "Petitioner's assertion aside, we will not speculate as to whether the related district court litigation will be stayed, as the evidence is inconclusive concerning this factor."³ Patent Owner has asserted four unrelated patents in the parallel litigation.⁴ No evidence suggests the district court would stay the parallel litigation if one of the three patents is subject to an IPR.

³ *Immersion Systems LLC v. Midas Green Techs., LLC*, PGR2021-00104, Paper 15 at 10 (P.T.A.B. Jan. 31, 2022); *see also eClinicalWorks, LLC, Medical Software Solutions, Inc., and NextGen Healthcare, Inc. v. Decapolis LLC*, IPR2022-00229, Paper 10 (P.T.A.B. April 13, 2022); *TCO AS v. NCS Multistage Inc.*, PGR2020-00078, Paper 16 at 11 (P.T.A.B. Feb. 18, 2021); *NXP USA, Inc. v. Impinj, Inc.*, IPR2021-01556, Paper 10 at 7 (P.T.A.B. Apr. 21, 2022); *Google LLC v. EcoFactor Inc.*, IPR2021-00982, Paper 12 at 10-11 (P.T.A.B. Nov. 9, 2021).

⁴ Ex-2002 (NDTX Infringement Contentions).

B. Factor 2 – The Expected Trial Date Weighs Against Denial.

This factor weighs against discretionary denial. The Board is unlikely to issue a final written decision for this proceeding before September 2023. The district court, however, has scheduled the parallel litigation's final pretrial conference for April 10, 2023.⁵

Accordingly, because the deadline for the Board's final written decision is likely six months before the scheduled trial timeline, this factor weighs against discretionary denials.

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, 2022⁶ and Lennox submitted their invalidity contentions on December 15, 2022.⁷ The Markman hearing will occur on May 20, 2023.⁸

⁵ Ex-2001 (NDTX Scheduling Order).

⁶ Ex-2002 (NDTX Infringement Contentions)

⁷ Ex-2003 (NDTX Invalidity Contentions with Exhibits C-1 and C-7).

⁸ Ex-2001 at 2-3 (NDTX Scheduling Order).

This expenditure of resources was avoidable. Patent Owner filed the complaint in the parallel litigation on March 31, 2022. Patent Owner asserted infringement of its patents to Ecobee on April 28, 2022.⁹

Petitioner waited five months from the filing of the Lennox Complaint and four months from when its member Ecobee was contacted for infringement to file its petition on August 29, 2022. During those five months, the Rosen and Lennox expended significant resources (and continue to do so). The Board has found that this weighs in favor of discretionary denial.¹⁰

Even if Petitioner had diligently filed its petition in a more timely manner, this factor would still weigh in favor of discretionary denial. As explained, diligence in filing the petition doesn't overcome the concern over expended resources in the parallel litigation.¹¹ And even the remaining work before trial isn't significant

⁹ Ex-2006 – Letter from Rosen to Ecobee's Counsel.

¹⁰ *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).

¹¹ *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).

enough to overcome the extensive efforts already exerted by the parties and the court.¹²

Accordingly, because Rosen, Lennox 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 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 1-2 Geiwitz and Cardio Manual:

- Whether Geiwitz anticipates or renders obvious claims 1, 3-5, 7, 9 and 11¹³; and
- Whether Cardio Manual renders obvious claims 1, 3-5, 7, 9 and 11¹⁴;

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

¹² *NXP USA, Inc. v. Impinj, Inc.*, IPR2021-01556, Paper 10 at 8-9 (P.T.A.B. Apr. 21, 2022) (internal citations omitted).

¹³ Ex-2004 – Pg. 321 - Exhibit C-1

¹⁴ Ex-2004 – Pg. 503 - Exhibit C-7

E. Factor 5 – It’s Unclear if the “Real Party-in-Interest” and Patent Owner 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.¹⁵ Here, based on Unified’s alleged disclosures, Lennox is not a real party in interest. However, numerous facts contradict this disclosure. Tellingly, of the 5 patents asserted by Patent Owner against Lennox, Unified challenged the only patent that Lennox did not file a motion to dismiss against. In sum, Lennox challenged 4 of the 5 asserted patents by a motion on some grounds, with the exception of the ’318 Patent, the sole patent challenged by Petitioner here. Therefore, significant questions exist regarding the “Real Party-in-Interest” in this proceeding.

As such, this factor is neutral.

¹⁵ *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).

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 exercising discretion to deny institution.”¹⁶ “[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.”¹⁷

As discussed above in Section III, the two proposed grounds fail to disclose novel limitations. Petitioner primarily relies on a POSA to make self-serving obviousness arguments to overcompensate for the elements lacking in the prior art.

¹⁶ *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).

¹⁷ *Fintiv* at 15.

Accordingly, the merits of the proposed grounds aren't "sufficiently strong to override the concerns about duplication of effort by the Board and the district court."¹⁸ As a result, this factor weighs heavily against institution.

* * * *

In sum, four of the six *Fintiv* factors (Factors 1, 3-4, and 6) weigh against institution, one factor (Factor 2) weighs for institution and one factor (Factor 5) is neutral. Accordingly, Patent Owner respectfully requests that the Board discretionarily deny this petition under §314(a).

V. PETITIONER'S GROUND 1 FAILS TO ESTABLISH GEIWITZ RENDERS OBVIOUS LIMITATIONS OF CLAIMS 1, 3, 4, 14 AND 16-20.

A. Overview of Geiwitz (Ex-1004)

Geiwitz is a published international application titled "Programmable and Expandable Building Automation and Control System." *Geiwitz* is directed primarily to a building control system but also includes an HVAC control. The primary objective of *Geiwitz* was not HVAC control but related to any number of

¹⁸ *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).

building control systems including building security, telephone, smoke detectors, sirens, and peripheral power supply among others. Ex-1004, Abstract.

Geiwitz was primarily concerned with the integration of those various systems in a building and using an open architecture to allow for modification or expansion. Ex-1004, Pg. 6. *Geiwitz* generally disclosed a touchscreen having static virtual buttons to be used with an HVAC system, but as discussed in detail below, *Geiwitz* failed to disclose or render obvious elements of the Challenged Claims.

B. *Geiwitz* (EX-1004) is not Entitled to the Priority Date of the '511 Provisional Application (Ex-1005)

Petitioner asserts *Geiwitz* is entitled to the benefit of the October 22, 2001, filing date of provisional application 60/339,511 (“the '511 Provisional” Ex-1005).¹⁹ Petition does so because *Geiwitz* was published outside the United States under Pre-AIA rules. The WIPO application that published as *Geiwitz* was published May 15, 2003.²⁰

Petitioner bears that burden to establish *Geiwitz* is entitled to the benefit of the earlier '511 Provisional filing date.²¹ Petitioner failed to establish that *Geiwitz* is

¹⁹ Petition at 14.

²⁰ *Geiwitz* at cover (data field 43).

²¹ *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379 (Fed. Cir. 2015).

entitled to a date that predates *Geiwitz*'s publication date based on its claim of priority to the '511 Provisional.²²

Petitioner's analysis that *Geiwitz* is entitled to the priority date of the '511 Application fails to establish that at least one claim of *Geiwitz* is entitled to the benefit of the filing date of any parent application. As a result, Petitioner fails to satisfy its burden of establishing *Geiwitz* is entitled to the '511 Application priority date.

Petitioner alleges the following (quoted below)(emphasis added):

<i>Geiwitz Claim 1 (Ex-1004) 40:4-10</i>	<i>Provisional Support (Ex-1005)</i>
<i>1. A building automation and control system comprising:</i>	Title, p. 0004
<i>an open architecture system platform in direct communication with a plurality of subsystems or devices located in proximity to a building;</i>	pp. 0004, 0010-13, 0413, Figure 383.
<i>A smart card in communication with said system platform for control of said system platform, subsystems or devices, said smart card comprising a programmable microprocessor; and</i>	pp. 0007, 0009, 0170-71, 413; Figures 383, 428, 450-455.

²² Petition at 14-15.

<i>A touchscreen for user-interface with said system platform.</i>	pp. 0008, 0014-16, 0020-22, 0056-58, 0413; Figures 1-3, 80-85, 125, 200-208, 249, 436-440.
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Petition 14-15. However, as highlighted above, the portions cited by Petitioner in the '511 Application do not provide any support for the element “*A smart card in communication with said system platform for control of said system platform, subsystems or devices, said smart card comprising a programmable microprocessor.*” In fact, in the '511 Application, pages 7 and 9 make clear that Figures 383, 428, 450-455 are for the platform, processor module header ports, and processor module, respectively. Ex-1005, pgs. 7, 9. Furthermore, pages 170-71, and 413 make no discussion of a smart card in communication with the system platform, and with a programmable microprocessor. Ex-1005, pgs. 170-171

It is only in the international application that *Giewitz* explicitly discloses “The present invention is a programmable and expandable building automation system. The system comprises an open architecture system platform for control and support of interchangeable cards including a security card, power supply card, telephone/voice/modem card, smart card, and a variety of expansion modules. The smart card comprises an embedded high-speed programmable 10 microprocessor for control of building subsystems and devices.” Ex-1004 at Pg. 006.

Thus, Petitioner has failed to establish that *Giowitz* is entitled to the priority date of the '511 Application. Thus, *Giowitz* is only entitled to its publication date of May 15, 2003.

C. *Geiwitz* Doesn't Teach or Render Obvious at Least Element D of Claim 1.

Element D of claim 1 recites the following:

- D) a control program stored in said memory for causing said central processing unit to communicate through said input/output unit to selectively:
- 1) establish on said liquid crystal display:
 - a) a representation of a first virtual button at a first predetermined position on the liquid crystal display; and
 - b) a first legend indicative of a first control function of said thermostat, which first control function is for controlling a first space conditioning equipment component, which first control function is active when the first legend is viewable;
 - 2) read the position on the touch pad juxtaposed with said first predetermined position on said liquid crystal display to determine if the representation of said first virtual button has been touched;
 - 3) if the first virtual button has been touched:
 - a) determining that the thermostat has been directed to control a second space conditioning equipment component;
 - b) activating a second control function for controlling the second space conditioning equipment component; and
 - c) displaying on said liquid crystal display a second legend indicative of said second control function of said thermostat, which second control function is for controlling the second space conditioning equipment component, which second control function is active when the second legend is viewable.

Although Ground 1 is based on *Geiwitz*, the Petition relies heavily on the '551 Application for the alleged support that these elements are disclosed or rendered

obvious. However, as shown below the '551 Application does not disclose non-static virtual button indicative of a control function as claimed in Element D.

Figure 84

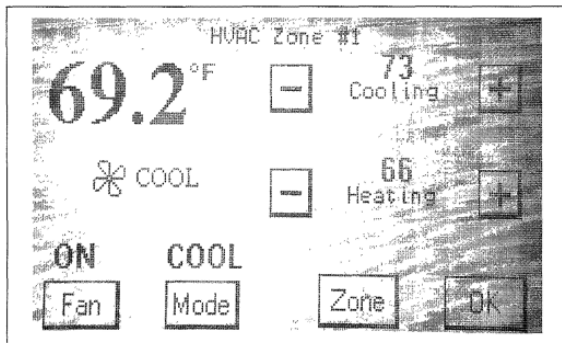
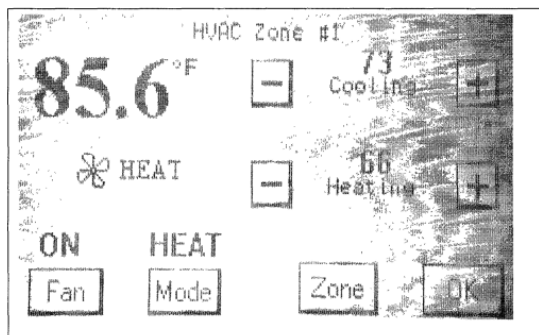


Figure 85



The button mode disclosed in the '551 Application is a static button. Regardless of how many times it is pressed, the static button does not change its legend and remains as “Mode.” The text that changes above the static “Mode” button does not disclose or render obvious the first legend indicative of a first control function of said thermostat nor the second legend indicative of said second control function which are the contents of a non-static virtual button which are intuitive to a user.

Furthermore, what's taught in the '551 Application has significant disadvantages compared to the '318 Patent and claim 1. The text above the static virtual buttons in the '551 Application requires additional real estate on the touchscreen display, wherein space is at a premium on the dot matrix LCD display, especially given the high cost of touchscreen display when the '318 Patent was filed.

D. *Geiwitz* Doesn't Teach or Render Obvious the Additional Limitations of Claim 3.

Likewise, dependent claim 3 further recites “changing a second legend to a third legend indicative of the third control function of the thermostat.” The static “Mode” virtual button of *Geiwitz* similarly fails to teach this element.

E. Like Claim 1, *Geiwitz* Does Not Teach or Render Obvious Claim Element D of Independent Claims 16 and 19.

Independent claims 16 and 19 recite identical language to independent claim 1 with respect to the first legend and second legend as shown below.

Claim 16	Claim 19
D) a program stored in said memory for causing said central processing unit to communicate through said input/output unit to selectively: 1) establish on said liquid crystal display: a) a representation of a first virtual button at a first predetermined position on the liquid crystal display; and b) <i>a first legend indicative of a first control function of said thermostat, which first control function is for controlling a first space conditioning equipment component, which first control function is active when the first legend is viewable;</i> 2) read the position on the touch pad juxtaposed with said first predetermined position on said liquid crystal display to determine if the representation of said first virtual button has been touched;	D) a program stored in said memory for causing said central processing unit to communicate through said input/output unit to selectively: 1) establish on said liquid crystal display: a) a representation of a first virtual button at a first predetermined position on the liquid crystal display; and b) <i>a first legend indicative of a first control function of said thermostat, which first control function is for controlling a first space conditioning equipment component, which first control function is active when the first legend is viewable;</i> 2) read the position on the touch pad juxtaposed with said first predetermined position on said liquid crystal display to determine if the representation of said first virtual button has been touched;

3) if the first virtual button has been touched a predetermined number of times: a) determining that the thermostat has been directed to control a plurality of space conditioning equipment components; b) activating a second control function for controlling the plurality of space conditioning equipment components; and c) displaying on said liquid crystal display <i>a second legend indicative of said second control function of said thermostat, which second control function is for controlling in coordination the plurality of space conditioning equipment component, which second control function is active when the second legend is viewable.</i>	3) if the first virtual button has been touched a predetermined number of times: a) determining that the thermostat has been directed to refrain from controlling any space conditioning equipment components; b) activating a second control function which prevents controlling any space conditioning equipment components; and c) displaying on said liquid crystal display <i>a second legend indicative of said second control function of said thermostat, which second control function is active when the second legend is viewable.</i>
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For the same reason that *Geiwitz* fails with respect to claim 1, it fails with respect to the similar claim elements of claims 16 and 19.

Additionally, Petitioner recognizes further weakness in its challenge to claim 19 based on *Geiwitz* and additionally challenges claims 19 and 20 under Ground 2 in combination with *Cardio Manual*. In short, Petitioner concedes that *Geiwitz* also does not disclose at least the following elements of claims 19 and 20:

- 3) if the first virtual button has been touched a predetermined number of times:
 - a) determining that the thermostat has been directed to refrain from controlling any space conditioning equipment components;
 - b) activating a second control function which prevents controlling any space conditioning equipment components; and

F. Since *Geiwitz* Does Not Teach or Render Obvious the Independent Claims, *Geiwitz* fails to Teach or Render Obvious the Dependent Claims

Parroting the obvious, since *Geiwitz* fails with respect to independent claims 1, 16, and 19, *Geiwitz* also fails with respect to dependent claims 3, 4, 14, 17-18, and 20.

VI. PETITIONER'S GROUND 2 FAILS TO ESTABLISH *GEIWITZ* IN VIEW OF *CARDIO MANUAL* RENDERS OBVIOUS LIMITATIONS OF CLAIMS 19 AND 20.

A. Overview of *Cardio Manual*.

The *Cardio Manual* reference was before the USPTO in the examination of the '318 Patent. The *Cardio Manual* related to a manual for a Secant product for controlling certain home functions including lighting, security, appliances, and temperature. Ex-1007, Pg. 12. The *Cardio Manual* likewise used static virtual buttons which were pre-programmed to control certain HVAC functions.

B. *Geiwitz* in combination with *Cardio Manual* Do Not Teach or Render Obvious Claim Element D of independent claim 19.

As discussed above in Section V.C. & V.E. above addressing Ground 1, *Geiwitz* failed to disclose various element D of independent claim 19.

In addition to those failures, the combination of *Geiwitz* and *Cardio Manual* also does not disclose

- 3) if the first virtual button has been touched a predetermined number of times:
 - a) determining that the thermostat has been directed to refrain from controlling any space conditioning equipment components;

- b) activating a second control function which prevents controlling any space conditioning equipment components; and
- c) displaying on said liquid crystal display a second legend indicative of said second control function of said thermostat, which second control function is active when the second legend is viewable

Cardio Manual discloses only there exists “[f]our mode of operation (none, heating only, cooling only and automatic) and fan control (automatic, manual).” Ex-1007, pg. 055. However, these are not akin to claim 19. The disclosure by *Cardio Manual* of a mode of operation entitled “none” does not disclose that a “first virtual button having been touched a predetermined number of times” nor does that disclose “displaying a second legend indicative of the second control function of preventing controlling of any space conditioning equipment components.” Nothing in *Geiwitz* or the *Cardio Manual* discloses a legend or content on the virtual button displaying “Off,” or some other legend showing the prevention of controlling the thermostat as used in claim 19 and the ’318 Patent. *See* Ex-1001, Figs 8, 12.

VII. PETITIONER HAS FAILED TO IDENTIFY REAL PARTIES IN INTEREST

A. Petitioner Challenges the Only Patent Not Challenged by Lennox in Motion Practice

Tellingly, of the 5 patents asserted in the Lennox Litigation, Lennox filed an early motion challenging 4 of the patents except for the ’318 Patent. Ex-2003. This is at least *prima facie* support of showing a potential coordination between Petitioner and Lennox.

B. Ecobee is a Member of Unified Patents and Likely Corresponded with Petitioner Regarding this Petition After Receiving Demand Letters.

Furthermore, Ecobee is another party interested in the outcome of this Petition decision. Ecobee has received notices from Patent Owner regarding infringement of Patent Owner's portfolio. Ex-2006. Unified publicly advertises that Ecobee is a member of Unified. Ex-2005. This provides at least a *prima facie* suggestion that coordination may have occurred between Unified and Ecobee. These are both ripe issues for this Petition.

VIII. CONCLUSION

The Board should exercise its discretion to deny the petition on the merits and/or *Fintiv* grounds. Accordingly, Patent Owner respectfully requests the Board deny institution of this petition as an IPR wouldn't serve the AIA goals of promoting efficient and conclusive rulings.

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 6,020 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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