Trials@uspto.gov
571-272-7822

Paper 10
Date: March 23, 2023

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

ROSEN TECHNOLOGIES LLC,
Patent Owner.

IPR2022-01402
Patent 7,156,318 B1

Before JEREMY M. PLENZLER, ERIC C. JESCHKE, and JASON W. MELVIN, *Administrative Patent Judges*.

MELVIN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Unified Patents LLC ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1, 3, 4, 14, and 16–20 of U.S. Patent No. 7,156,318 B1 (Ex. 1001, "the '318 patent"). Rosen Technologies LLC ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp."). As authorized, Petitioner filed a Preliminary Reply (Paper 7 (confidential); Paper 8 (redacted)). Pursuant to 35 U.S.C. § 314 and 37 C.F.R. § 42.4(a), we have authority to determine whether to institute review.

An *inter partes* review may not be instituted unless "the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a). For the reasons set forth below, we conclude that Petitioner has shown a reasonable likelihood it will prevail in establishing the unpatentability of at least one challenged claim, and we institute *inter partes* review.

A. REAL PARTIES IN INTEREST

Petitioner identifies itself as the real party in interest. Pet. 83–84. Patent Owner also identifies itself as the real parties in interest. Paper 4, 1 (Patent Owner's Mandatory Notices).

B. RELATED MATTERS

The parties identify the following related litigation: *Rosen Technologies LLC v. Ademco, Inc.*, Case No. 6:22-cv-00131 (W.D. Tex.)[1];

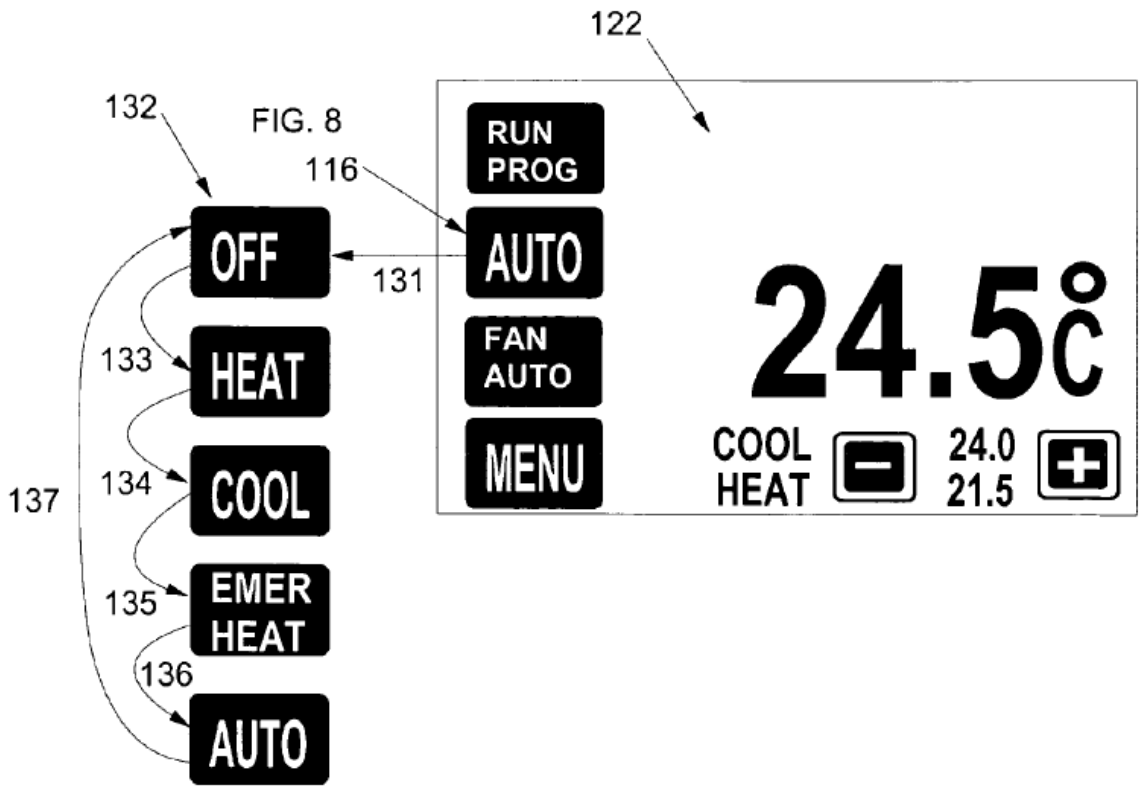
[1] Petitioner identifies the defendant in this litigation as Resideo Technologies, Inc. Pet. 84.

Rosen Technologies LLC v. Lennox International Inc., Case No. 3:22-cv-00732 (N.D. Tex.). Paper 4, 1; *see* Pet. 84.

C. THE '318 PATENT

The '318 patent is titled "Programmable Thermostat Incorporating a Liquid Crystal Display Selectively Presenting Adaptable System Menus Including Changeable Interactive Virtual Buttons." Ex. 1001, code (54). It issued from an application filed Sept. 3, 2003. *Id.*, code (22).

The '318 patent relates to programmable thermostats using an interactive liquid crystal display (LCD) that selectively presents adaptable menus, including variable representations of virtual buttons. *Id.* at 1:25–31. According to the Specification, "an image representative of a first virtual button may be shown on the touch screen display with graphics (alphanumeric characters and/or icons) on or closely associated with the first virtual button." *Id.* at 3:53–56. Figure 8 is reproduced below:



Id., Fig. 8. Figure 8 depicts an exemplary interactive interface in which step 131 reflects a change to virtual button 116 in response to a user touch, such that the legend associated with virtual button 116 changes to produce one of the virtual buttons in column 132. *Id.* at 4:53–56, 8:21–50.

D. Challenged Claims

Challenged claim 1 is independent and is reproduced below:

1. A programmable thermostat system for controlling space conditioning equipment comprising:

   A) at least one environmental condition sensor providing an electrical signal indicative of the ambient temperature of a conditioned space in which said environmental condition sensor is situated;

B) a transparent touchpad juxtaposed with a liquid crystal display to constitute a touch screen for interactive interface with a user;

C) a processor, said processor including:

1) a central processing unit;

2) a real time clock;

3) a memory coupled to said central processing unit for storing program and data information; and

4) an input/output unit coupled between said processor and said touch screen for carrying out information transfer therebetween, said input/output unit further including:

a) a sensor input coupled to each said environmental condition sensors for receiving said electrical signal therefrom; and

b) a control output coupled to the space conditioning equipment for issuing control signals thereto; and

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.

Id. at 13:5–58. Claims 3, 4, and 14 depend, directly or indirectly, from claim 1. *Id.* at 13:64–14:8, 14:38–39. Claim 16 is independent and recites limitations similar to claim 1's. *Id.* at 14:42–15:30. Claims 17 and 18 depend from claim 16. *Id.* at 15:31–36. Claim 19 is independent and recites limitations similar to claim 16's. *Id.* at 15:37–16:42. Claim 20 depends from claim 19. *Id.* at 16:43–44.

E. Prior Art and Asserted Grounds

Petitioner asserts the following ground of unpatentability:

Claims Challenged	35 U.S.C. §	References/Basis
1, 3, 4, 14, 16–20	103	Geiwitz[2]
19, 20	103	Geiwitz, Cardio Manual[3]

[2] WO 2003/040839 A1 (Ex. 1004).

[3] Cardio Manual, Domotique Secant Inc., 1995 (Ex. 1007, 12–66) (Cardio Manual appears as part of a statutory disclaimer for U.S. Patent No. 6,824,069, identified to the Office during prosecution of the '318 patent).

Pet. 1. Petitioner also relies on the Declaration of Mr. Rafael Betancourt. Ex. 1003.

II. ANALYSIS

A. DISCRETIONARY DENIAL UNDER § 314(a)

Patent Owner argues we should exercise our discretion to decline institution under § 314(a) according to the framework in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB March 20, 2020) (precedential), 2020 WL 2126495, *2–3; Prelim. Resp. 9–17. We do not agree.

Patent Owner relies on the litigation against Lennox Industries, in which Patent Owner asserts the '318 patent, but that litigation does not involve Petitioner. Ex. 2002 (infringement contentions from *Rosen Technologies LLC v. Lennox International Inc.*, Case No. 3:22-cv-00732 (N.D. Tex.)). As *Fintiv* notes, the Board generally disfavors discretionary denial when litigation did not involve the petitioner, unless "the issues are the same as, or substantially similar to those already or about to be litigated, or other circumstances weigh against redoing the work of another tribunal." *Fintiv*, IPR2020-00019, Paper 11, 13–14. We consider the *Fintiv* factors. *Id.* at 6.

We have no indication the litigation is or will be stayed pending an IPR, and we decline to speculate as to the possibility of a stay. That factor is neutral as to discretionary denial.

Patent Owner agrees that the final written decision in an instituted review "is likely six months before the scheduled trial timeline" (Prelim. Resp. 12), thus the timing of the two proceedings weighs strongly against discretionary denial.

In the litigation, the parties have submitted infringement and invalidity contentions, and a claim-construction hearing is scheduled for May 20, 2023. *Id.* We view that stage of litigation as only a moderate investment by the parties. Patent Owner asserts that Petitioner could have filed earlier than five months after the litigation commenced (Prelim. Resp. 13), but we determine that Petitioner's timing was reasonable. We conclude this factor is neutral.

Although the Petition's grounds are part of the litigation defendant's invalidity contentions (Ex. 2004, 321, 503; Prelim. Resp. 14), that does not mean the litigation will necessarily resolve those assertions at trial. Moreover, as Petitioner points out, the references at issue here are asserted in litigation against only claims 1, 3, and 4. Prelim. Reply 5. That said, the overlap between the litigation and the Petition weighs in favor of discretionary denial.

Because the litigation does not involve Petitioner as a party, the identity of the parties here as compared to the litigation weighs strongly against discretionary denial. Patent Owner has not established a substantial relationship between Petitioner as the litigation party. Although Patent Owner asserts a relationship (*see* Prelim. Resp. 15), we do not find those assertions sufficient to weigh in favor of discretionary denial.

The merits of Petitioner's challenge appear strong based on the present record. Patent Owner asserts that the merits are weak based on arguments made in the Preliminary Response (Prelim. Resp. 16–17), but we do not agree, as discussed below. If anything, the merits of Petitioner's challenge weigh against discretionary denial.

In sum, we conclude that the *Fintiv* factors weigh against discretionary denial here, and we therefore decline to exercise our discretion as Patent Owner seeks.

B. Real Party in Interest

Patent Owner asserts that Petitioner fails to name Lennox and Ecobee, the litigation parties, as real parties in interest. Prelim. Resp. 26–27. Because no time bar would apply to either allegedly unnamed real party in interest (*see* Prelim. Reply 1), we decline to address Patent Owner's assertions at this stage. *See SharkNinja Operating, LLC v. iRobot Corp.*, IPR2020-00734, Paper 11, 18 (Oct. 6, 2020) (precedential).

C. Level of Skill in the Art

Petitioner asserts skilled artisans "would have had at least a Bachelor's degree in Electrical Engineering or a similar degree and at least two years of professional experience," and would have been "familiar with the circuitry and operation of programmable, touchscreen thermostats having liquid crystal displays." Pet. 7 (citing Ex. 1003 ¶ 48). Patent Owner does not dispute that definition, and offers that skilled artisans "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." Prelim. Resp. 5. We perceive no distinction between how the two definitions might affect our analysis. We adopt Petitioner's definition, as it is supported by expert testimony.

D. Claim Construction

Petitioner asserts no claim requires express construction. Pet. 6. Patent Owner asserts that a "legend" means "content displayed on a virtual button." Prelim. Resp. 5.[4]

According to Patent Owner, the Specification demonstrates that a legend must appear on the button itself. *Id.* at 5–9. But all of Patent Owner's arguments relate to depicted and described embodiments. On the present record, we do not agree that the construction is correct, and consider two factors decisive.

First, the claim language requires that the control program establish on the liquid crystal display both "a representation of a first virtual button" and "a first legend indicative of a first control function of said thermostat." Ex. 1001, 13:28–39 (claim 1), 15:1–9 (claim 16), 16:18–26 (claim 19). The claims do not require that the legend is part of the button, or any other specific relationship between the legend and button. Thus, the claim language does not support the construction Patent Owner seeks.

Second, the Summary of the Invention states that "an image representative of a first virtual button may be shown on the touch screen display with graphics (alphanumeric characters and/or icons) on or closely associated with the first virtual button." *Id.* at 3:53–56. By using a disjunctive, "or," the Specification establishes that the legend (e.g.,

[4] Although Patent Owner seeks construction of "a first legend indicative of a first control function," its proposed construction only addresses "legend," while maintaining the other claim language. Prelim. Resp. 5–9. We address "legend" in the context of the other claim language and therefore need not address the full phrase.

alphanumeric characters) need not be located *on* the button to which it corresponds.

Accordingly, we decline to adopt Patent Owner's asserted construction at this stage. No other aspect of the challenged claims requires construction for purposes of institution. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) ("The Board is required to construe 'only those terms that . . . are in controversy, and only to the extent necessary to resolve the controversy.'") (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

E. Obviousness over Geiwitz

Geiwitz discloses a "programmable and expandable building automation and control system" including a "touchscreen user interface." Ex. 1004, code (57). Geiwitz claims the benefit of and incorporates by reference a provisional application, which discloses additional details of the system. *Id.* at 1:8–10; Ex. 1005.

1. Applicable priority date

Petitioner asserts Geiwitz is entitled to the benefit of the October 22, 2001, filing date of its provision application (US 60/339,511 (Ex. 1005)[5]). Pet. 14. To rely on Geiwitz's Provisional-application date, Petitioner must show that the Provisional supports at least one of Geiwitz's claims. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1379–81 (Fed. Cir. 2015). Petitioner provides a chart indicating where Geiwitz's Provisional application supports Geiwitz's claim 1. Pet. 14–15.

[5] Patent Owner refers to Geiwitz's provisional application as the '511 application. *E.g.*, Prelim. Resp. 18–21.

Patent Owner contests whether Geiwitz's Provisional application supports the later claim limitation "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." Prelim. Resp. 19–21.

We determine that Petitioner has made an adequate showing at this stage. Geiwitz's Provisional describes its system components, including a "System Back Plane" including a "Platform," which is depicted in Figure 383. Ex. 1005, 7 ("**Platform** (figure 383)"), 945 (Fig. 383). The Platform includes "Processor module header ports," which are depicted in Figures 426–431. *Id.* at 7 ("Processor module header ports (figure 426 – 431)"). The system components further include "System Expansion Modules," which include a "Processor Module," depicted in Figures 450–455. *Id.* at 9 ("Processor Module (figure 450 – 455)"). The Provisional describes that the Processor Module plugs into the platform and provides "processing power." *Id.* at 170. The Provisional's Figure 383, depicting the "Platform," indicates a section labeled "SMART CARD." *Id.* at 945 (Fig. 383). Figure 428, depicting part of the Processor module header ports, is labeled "Smart Card Connector." *Id.* at 1001 (Fig. 428). And Figure 450, depicting the "Processor Module," shows a circuit board labeled "Smart Systems Technologies." *Id.* at 1031 (Fig. 450). In sum, those disclosures in Geiwitz's Provisional support a claim to a smart card comprising a programmable microprocessor.

We conclude, at this stage of the proceeding, that Petitioner has adequately shown that Geiwitz is entitled to an effective date as of its Provisional application.

2. *Geiwitz's disclosures*

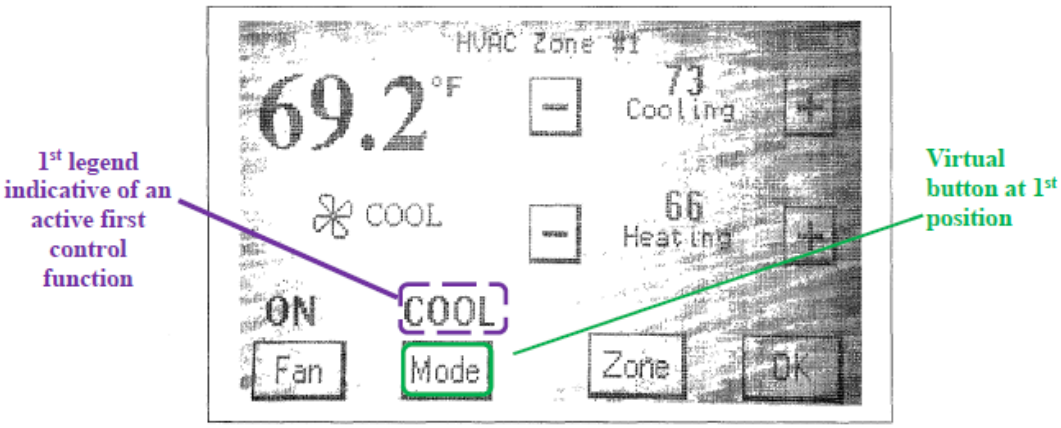
Petitioner provides contentions asserting how Geiwitz and its Provisional application disclose the elements of claims 1, 3, 4, 14, and 16–20.[6] Pet. 17–76. At this stage, Patent Owner disputes only one aspect of those contentions.

Patent Owner contends that Geiwitz's Provisional does not disclose "non-static virtual button indicative of a control function as claimed in Element D." Prelim. Resp. 22. Although the claim language does not refer to a "non-static" button, Patent Owner appears to focus on the claimed "legend."

Petitioner asserts that Geiwitz teaches a "Mode" icon on its touchscreen, with a legend such as "COOL" (indicating a cooling mode of operation) that changes when the Mode icon is pressed to cycle through operational modes (cool, heat, and auto). Pet. 51–55. Petitioner provides an annotated version of Geiwitz Provisional's Figure 84, reproduced below:

[6] Because Geiwitz expressly incorporated by reference its entire provisional application (Ex. 1004, 1:8–10), the provisional's disclosures are part of "Geiwitz" as asserted by Petitioner.

Figure 84



Pet. 54 (quoting Ex. 1005, Fig. 84). Figure 84 depicts Geiwitz's primary navigation screen including a "Mode" button with the text "COOL" directly above the button. Petitioner's annotations designate the "Mode" button as a "Virtual button at 1st position" and the "COOL" text as the "1st legend indicative of an active first control function." *Id.*

Patent Owner asserts that "[t]he text that changes above the static 'Mode' button does not disclose or render obvious the first legend indicative of a first control function." Prelim. Resp. 22. But as discussed above, we do not construe "legend" to require the legend appear on a button; instead, the claims encompass a legend that is "closely associated with" a button as described in the Specification. *See supra* at 10–11, § II.D. Geiwitz's disclosures appear to satisfy the claim language as construed, because the asserted legend is indicative of a first control function of the thermostat.

Patent Owner does not otherwise contest Petitioner's contentions for claim 1. We have reviewed Petitioner's contentions and conclude they demonstrate Petitioner is reasonably likely to prevail with respect to obviousness of claim 1 over Geiwitz. Patent Owner raises the same

argument for claims 3, 16, and 19 (Prelim. Resp. 23–24), and we reach the same conclusion for the same reasons.

For the dependent claims, Patent Owner relies on its asserted deficiencies regarding Petitioner's showing discussed above. Prelim. Resp. 25. As discussed, we do not agree with those asserted deficiencies. We have reviewed Petitioner's contentions and determine they are sufficient for institution.

F. Obviousness over Geiwitz and Cardio Manual

Claim 19 recites limitations similar to claim 16's, but requires, "if the first virtual button has been touched a predetermined number of times," displaying "a second legend indicative of" "a second control function which prevents controlling any space conditioning equipment components."[7] Ex. 1001, 16:31–42. Petitioner asserts that Cardio Manual "teaches adding a 'none' mode of operation to the other modes taught by Geiwitz." Pet. 80 (citing Ex. 1007, 55). Petitioner asserts further that skilled artisans had reason to add Cardio Manual's "none" mode because it would have improved Geiwitz by adding the extra control of a "none" mode and for the "obvious benefit of preventing the thermostat from calling for heating or cooling when none is desired." Pet. 73–74 (regarding general motivation to add a "none" mode), 80–82 (regarding Cardio Manual's "none" mode). Petitioner asserts that Geiwitz teaches cycling modes as the Mode icon is pressed, such that the mode of operation depends on how many times the icon is pressed (i.e., a "predetermined number of times"). Pet. 81–82.

[7] Claim 19 further requires, *inter alia*, activating the second control function. Ex. 1001, 16:36–38.

Patent Owner asserts that Cardio Manual's four disclosed modes of operation—"none, heating only, cooling only and automatic" (Ex. 1007, 55)—"are not akin to claim 19." Prelim. Resp. 26. According to Patent Owner, the claim requires a virtual button "displaying 'Off,' or some other legend showing the prevention of controlling the thermostat as used in claim 19." *Id.*

Petitioner's showing is adequate. Nothing in the claim language requires an "off" legend as opposed to "none," and we conclude that Cardio Manual's "None" mode of operation indicates a control function that "prevents controlling any space conditioning equipment components" as claimed.

Patent Owner does not otherwise contest Petitioner's contentions for obviousness of claims 19 or 20 over Geiwitz and Cardio Manual. We have reviewed Petitioner's contentions and conclude they demonstrate Petitioner is reasonably likely to prevail with respect to obviousness of claims 19 and 20 over Geiwitz and Cardio Manual.

III. CONCLUSION

For the reasons discussed above, we conclude Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim. We have evaluated all of the parties' submissions and determine that the record supports institution.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

IV. ORDER

Accordingly, it is

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of claims 1, 3, 4, 14, and 16–20 of the '318 patent is instituted on the grounds set forth in the Petition;

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this decision.

PETITIONER:

John M. Baird
Patrick McPherson
Nicole Candelori
DUANE MORRIS LLP
jmbaird@duanemorris.com
pdmcpherson@duanemorris.com
ncandelori@duanemorris.com

Ellyar Y. Barazesh
Roshan Mansinghani
UNIFIED PATENTS, LLC
ellyar@unifiedpatents.com
roshan@unifiedpatents.com

PATENT OWNER:

Hao Ni
Neal Massand
NI, WANG & MASSAND, PLLC
hni@nilawfirm.com
nmassand@nilawfirm.com