NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

IN RE: GEOFFREY B. RHOADS, NICOLE RHOADS,
Appellants

2015-1972

Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. 12/498,709.

Decided: May 4, 2016

WILLIAM CONWELL, Digimarc Corp., Beaverton, OR, for appellants.

THOMAS W. KRAUSE, Office of the Solicitor, United States Patent and Trademark Office, Alexandria, VA, for appellee Michelle K. Lee. Also represented by AMY J. NELSON, BRIAN RACILLA, LORE A. UNT.

Before O'MALLEY, CLEVENGER, and BRYSON, *Circuit Judges.*

CLEVENGER, *Circuit Judge*.

Geoffrey and Nicole Rhoads (collectively "Rhoads") appeal the decision of the Patent Trial and Appeal Board ("the Board") affirming the Examiner's rejection of claim 8

of Rhoads' U.S. Patent Application No. 12/498,709 ("the '709 Application"). For the reasons below, we affirm.

BACKGROUND

Rhoads' '709 Application, titled "Methods and systems for cell phone interactions," was filed July 7, 2009 and claims priority to a provisional application filed April 14, 2009. The '709 Application is directed to methods and systems for implementing cell phone control over various external devices such as thermostats or parking meters. The invention allows a user to take a picture with their cell phone camera of a device they would like to control. After the device is identified by information captured in the picture (such as a digital watermark), the user can control the device via an interface on their cell phone that uses the picture of the device as a graphical user interface ("GUI"). For example, Figure 6 shows a captured image of a thermostat displayed on the screen of a cell phone:

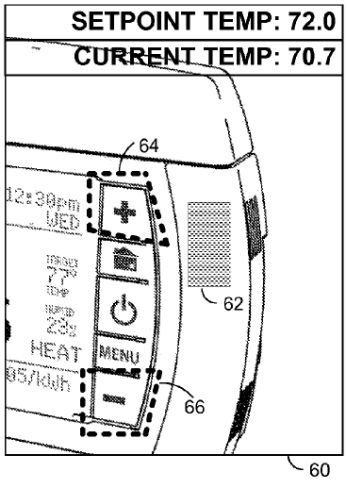

FIG. 6

'709 Application at Figure 6.

When the user touches the region of the screen 64 or 66, the cell phone transmits commands to the thermostat to increment or decrement, respectively, the temperature.

'709 Application at ¶ 44. In this example, a "SET TEMPERATURE" graphic is also displayed while the command to the thermostat is pending, to be replaced by a "confirmatory message" when the command has been successfully completed. *See id.*

The only claim at issue in this appeal is claim 8.[1] Claim 8 reads as follows (bracketed letters added for ease of reference):

> 8. A method comprising:
>
> > [a] through a user interface on a user's cell phone, receiving an instruction relating to control of a device, the user interface being presented on a screen of the cell phone in combination with a cell phone-captured image of the device;
> >
> > [b] transmitting electronic information from the cell phone, destined for the device, to cause the device to execute said instruction;
> >
> > [c] signaling information corresponding to the instruction, to the user, in a first fashion while the instruction is pending; and
> >
> > [d] signaling information corresponding to the instruction, to the user, in a second, different fashion once the cell phone receives a signal sent by the device, said signal indicating that the instruction has been successfully performed.

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[1] Rhoads challenges only the rejection of claim 8, and does not challenge the rejection below of claims 1-7 or 25. Appellant's Br. at 3.

During prosecution of the '709 Application, on November 22, 2011, the Examiner issued a final office action rejecting claim 8 under 35 U.S.C. § 103 as obvious over U.S. Patent Publication 2009/0237546 to Bloebaum et. al. ("Bloebaum") in view of U.S. Patent Publication 2007/0108287 to Davis ("Davis")[2] and in further view of U.S. Patent Publication 2003/0073412 to Meade ("Meade").

Bloebaum discloses a system in which a cell phone captured image of a device is sent to a server for identification, after which the server returns to the cell phone a series of possible actions or tasks that may be performed on or with that device. Bloebaum at ¶ 56. The user can then select an action or task, causing the server to return to the cell phone a list of steps or actions required to complete the task. For example, Figure 4 of Bloebaum depicts an embodiment wherein the user (1) took a picture of car tire, (2) the server returned a series of tasks such as "change the tire, check tire inflation, etc.," (3) the user selected "change the tire," and (4) the server returns a list of tasks associated with changing a tire that are displayed on the user's cell phone (*e.g.* "Remove jack from trunk," "Loosen lugnuts [sic]"). *See* Bloebaum at ¶¶ 69-70.

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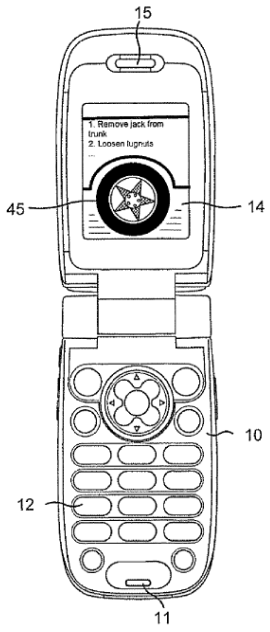
[2] Appellant and '709 Application co-inventor Geoffrey B. Rhoads is one of the named inventors of Davis.



Bloebaum, Fig. 4.

Bloebaum describes other examples of "objects" that Bloebaum's system can identify by various means and provide instructions for, including a faucet, a cake (*i.e.* to provide baking instructions), and a car radio or other appliance. *See* Bloebaum at ¶¶ 64-66, 73-74. Bloebaum however does not disclose sending information from a cell phone to a device to control the device, instead relying on the user to complete the tasks. Bloebaum also does not disclose signaling to the user that an action performed on a device has been successfully completed.

For those features of claim 8, the Examiner relied on Davis and Meade. Davis discloses a system in which a reader device (such as a camera-equipped phone) uses images or other digital watermark information to identify a device, receive control instructions for the device from a server, and then remotely control the device with instructions issued by the reader device. *See* Davis at ¶¶ 97-99. Meade discloses a system in which a mobile computing device, such as a cell phone or PDA, can be used to re-

motely control various other devices. *See* Meade at Abstract. The cell phone in Meade stores content (*e.g.* music or video files) and user preferences about a device (*e.g.* favorite TV or radio stations) that can be manually or automatically transmitted to and from devices (such as a TV or radio) via a wireless connection between them. *See e.g.* Meade at ¶¶ 31-35.

The Examiner further found that a person of ordinary skill would be motivated to modify Bloebaum to receive electronic device control instructions per Davis, and transmit electronic device control instructions per Meade, thereby providing a system in which a cell phone could be used to control various appliances. The Examiner also reasoned that "the combination of Bloebaum with Davis and Meade as described is a combination of known elements by known methods with no change in respective function, and the combination would have yielded nothing more than predictable results." J.A. 125.

Rhoads appealed the final rejection of claim 8 to the Board, providing three reasons they believed the Examiner's findings were wrong. First, Rhoads argued that the "instruction" limitation in claim 8 requires that the "instruction" is a command sent to and executed by the external device, whereas the "instruction" in Bloebaum is performed manually by the user. Second, Rhoads argued that Bloebaum failed to teach the "signaling" limitations (*i.e.* limitations [c] and [d]) because Bloebaum did not disclose two different fashions of signaling indicating that an instruction was pending or performed. Finally, Rhoads took issue with the Examiner's explanation for the reason to combine the references, arguing that Meade alone met the "stated ambition" provided by the Examiner and thus there would be no need to combine Meade with the other references. Rhoads also argued that the Examiner's recitation that "the combination involves known elements, with no change in function, and with nothing more than predictable results" was unsupported by facts.

The Board however adopted and affirmed the Examiner's findings and reasoning on claim 8 without further explanation. J.A. 005. On request for rehearing, the Board rejected Rhoads' contention that Bloebaum failed to teach the "signaling" limitations of claim 8 (*i.e.* elements [c] and [d]), finding no error in the Examiner's holding that Bloebaum, Davis, and Meade met those limitations. J.A. 012. This appeal followed, and we have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

STANDARD OF REVIEW

The Board's conclusions of law are reviewed de novo and its findings of fact are reviewed for substantial evidence. *See Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1297 (Fed. Cir. 2015) (citing *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000)). Substantial evidence is such relevant evidence as a reasonable mind might accept as adequate to support a conclusion. *See In re Applied Materials, Inc.*, 692 F.3d 1289, 1294 (Fed. Cir. 2012). "[T]he possibility of drawing two inconsistent conclusions from the evidence does not prevent an administrative agency's finding from being supported by substantial evidence." *Id.* (quoting *Consolo v. Fed. Mar. Comm'n*, 383 U.S. 607, 620 (1966)).

With respect to claim construction, intrinsic evidence and the ultimate construction of the claim are reviewed de novo. *See Teva Pharmaceuticals U.S.A., Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). Underlying factual determinations concerning extrinsic evidence are reviewed for substantial evidence. *Id.* In patent examinations, claims in an application are to be given their broadest reasonable interpretation consistent with the specification. *See In re Bond*, 910 F.2d 831, 833 (Fed. Cir. 1990).

While the ultimate determination of obviousness under 35 U.S.C. § 103 is a question of law, it is based on several underlying factual findings, including the differ-

ences between the claimed invention and the prior art. *See In re Baxter Int'l, Inc.*, 678 F.3d 1357, 1361 (Fed. Cir. 2012) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)). The scope and content of the prior art, and the existence of a reason for a person of ordinary skill to combine references, are determinations of fact that we review for substantial evidence. *See In re Mouttet*, 686 F.3d 1322, 1330 (Fed. Cir. 2012); *In re Constr. Equip. Co.*, 665 F.3d 1254, 1255 (Fed. Cir. 2011).

DISCUSSION

On appeal, Rhoads generally raises the same three arguments that were raised to the Board. The PTO responds that the Board's conclusion that claim 8 would have been obvious is supported by substantial evidence and correct as a matter of law. As addressed below, we find Rhoads' arguments unpersuasive and thus affirm the decision of the Board finding claim 8 obvious over the combination of Bloebaum, Davis, and Meade.

A

Rhoads argues that the "instruction[s]" in Bloebaum are instructions *to the user* about how to control a device (*e.g.* instructions for changing a tire might begin with "Remove jack from trunk"). But according to Rhoads, the "instruction[s]" in claim 8 are defined as instructions *to a device* that control said device (*e.g.* an "increase temperature" instruction sent to a thermostat). Rhoads thus argues that Bloebaum cannot support a *prima facie* case of obviousness.

We disagree. Rhoads points to elements [b], [c], and [d] of the claims as evidencing a narrow construction of the term "instruction" that limits the "instruction" to only data that a device can execute. But a plain reading of element [b] suggests otherwise: "transmitting ***electronic information*** from the cell phone, destined for the device, to cause the device to execute said instruction." The claim

language thus suggests that the "instruction" can be a more abstract construct used to represent control of a device (*e.g.* "turn up the volume," "turn down the temperature," etc.), which is then converted or instantiated into "electronic information" for transmission to the device. Nothing in the claim language requires or even suggests that the "instruction" is itself limited to the electronic information.

Moreover, the specification broadly uses the term "instruction" to refer both to electronic commands sent to a device and to human-readable interface elements. *Compare* '709 Application at ¶ 50 ("After the user has issued an instruction via the cell phone, the command is relayed to the thermostat as described above") *with* ¶ 52 ("The server returns UI instructions, optionally with status information for that meter (e.g., time remaining; maximum allowable time). These data are displayed on the cell phone UI, e.g., overlaid on the captured image of the cell phone, together with controls/instructions for purchasing time"). Thus, the broadest reasonable construction, consistent with the specification, of the term "instruction" in claim 8 includes both electronic commands sent to a device and human-readable commands shown on a user interface.

With that understanding of "instruction," we turn to Rhoads' argument about Bloebaum. We agree with the PTO that Rhoads' argument misconstrues the basis for the Examiner's (and thus the Board's) holding. The Examiner found that while Bloebaum disclosed receiving and displaying "instruction[s]" relating to a device, Bloebaum failed to disclose transmitting electronic information to the device to execute those "instruction[s]." Contrary to Rhoads' argument however, that does not end the inquiry and require reversal, because the Examiner made clear that he relied on Davis and Meade for transmitting electronic information to the device to cause the device to execute the "instruction." Rhoads does not

appear to dispute that holding at least with respect to Meade. *See* Appellant's Br. at 23.[3] Thus, Bloebaum's lack of ability to transmit and execute "instructions" on a remote device does not undermine the Board's conclusion.

B

Rhoads argues that neither Bloebaum nor Meade discloses elements [c] or [d], which Rhoads refers to as the "signaling" limitations. Specifically, Rhoads argues that Bloebaum fails to disclose element [c], "signaling" to the user "in a first fashion while the instruction is pending,"[4] and Meade fails to disclose element [d], signaling to the user in a "second, different fashion" when the "instruction has been successfully performed."

With respect to Bloebaum and element [c], Rhoads simply asserts in a conclusory fashion that nothing in Bloebaum teaches that limitation but fails to provide any further argument or explanation. *See* Appellant's Br. at

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[3] Rhoads uses a somewhat misleading ellipsis to suggest that the Examiner conceded that Davis did not transmit electronic information to the device to cause the device to execute an instruction. *See* Appellant's Br. at 22. That is not accurate. The Examiner found that Davis did disclose that function, but that Davis did not disclose signaling to the user that an instruction had been successfully performed. A123; *see also* Davis at ¶ 97 ("In applications where the object is a machine, the object reference may also facilitate remote control and remote updating of control instructions for the machine.").

[4] Rhoads also argues that Bloebaum does not disclose element [d], which the PTO appears to concede by noting that the Board's conclusion was based only on Bloebaum disclosing element [c]. Appellee's Br. at 21-22. We thus assume for the sake of argument that the Board relied on Bloebaum only for element [c].

18, 22. Assuming for the sake of argument that Rhoads did not waive this argument for failure to sufficiently develop it on appeal,[5] we would still affirm the Board's holding on this point. The Examiner found this limitation met by Bloebaum's disclosure that in response to the selection of a particular action from the displayed list of possible tasks, the server in Bloebaum will return to the cell phone a list of steps and/or items needed to complete the task, *i.e.* "instruction[s]," which are displayed to the user while the user is performing the task, *i.e.* while the "instruction" is pending. J.A. 191. Rhoads does not provide any explanation for why a reasonable mind might not accept as adequate this support for the conclusion that Bloebaum discloses element [c]. Thus, substantial evidence supports the Board's finding with respect to Bloebaum and element [c].

Turning to element [d], Rhoads argues that Meade does not teach signaling to the user that an instruction has been successfully performed. Rhoads agrees that Meade discloses two-way bi-directional communication between a cell phone and a device, but argues that Meade fails to disclose a specific signal that an instruction to a device has been successfully executed. Appellant's Reply Br. at 13.

We disagree. As an initial matter, it is of course the case that a "reference must be considered not only for what it expressly teaches, but also for what it fairly suggests." *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994) (quoting *In re Burckel*, 592 F.2d 1175, 1179 (CCPA 1979)).

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[5] *See e.g. SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1320 (Fed. Cir. 2006) (holding an argument waived because "mere statements of disagreement with the district court as to the existence of factual disputes do not amount to a developed argument.")

Here, even Rhoads does not dispute that "[t]here's no theoretical limit to the sorts of information that might be conveyed" by the bi-directional communications link in Bloebaum. We are thus skeptical of Rhoads' suggestion that a skilled artisan in 2009 would not understand to implement a confirmation message when a remote command has been successfully executed, a common feature of two-way bi-directional computer communications long before the filing of the '709 Application. *See e.g.* Christopher S. Yoo, *Protocol Layering and Internet Policy*, 161 U. Pa. L. Rev. 1707, 1743 (2013) (noting that the Internet's primary transport protocol since 1983, "Transmission Control Protocol" or "TCP," expects a confirmation message for every packet sent). After all, "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

We find the disclosures in Meade sufficient to support the examiner's conclusion. The Examiner found that Meade discloses embodiments where the cell phone shows the content available to be played on a device (*e.g.* a list of songs or videos), and further found that the cell phone can send an instruction to the remote device to play a particular piece of content. *See e.g.* Meade at ¶¶ 49, 70-71. Meade further discloses an embodiment where a user selects from their cell phone a radio program they wish to play on an audio device; if the program is not available, the cell phone informs the user when the program will be available. *Id.* at ¶ 61. We agree with the PTO that the disclosure in Meade would fairly suggest to one of skill in the art that "signals are sent between the cell phone and the device, and that the cell phone monitors performance by the device and receive [sic] signals regarding the same." Appellee's Br. at 22. Based on these disclosures, we conclude that substantial evidence supports the Board's finding that Meade discloses element [d] of claim 8.

C

Finally, Rhoads argues that the Board failed to articulate a sufficient reason to combine Bloebaum, Davis, and Meade. We disagree.

First, Rhoads points to the Examiner's statement that a person of ordinary skill in the art would have been motivated to combine Bloebaum, Davis, and Meade and "thereby provid[e] an appliance control system in which a computing device is configured for controlling various appliances." J.A. 125. Rhoads argues that this "stated ambition" is flawed because Meade alone is capable of that functionality, and thus, there would be no reason to combine Bloebaum with Meade and Davis. Rhoads' argument however mischaracterizes the basis for the Examiner's conclusion.

The Examiner found that a skilled artisan would be motivated to modify Bloebaum with Meade and Davis so that the instructions shown on the cell phone in Bloebaum could be transmitted as electronic information to a device to cause the device to execute the instructions (rather than the user having to manually execute the instructions). J.A. 193. Indeed, Meade itself teaches that remote control of electronic devices is advantageous and thus provides a motivation to combine Davis and Meade with Bloebaum. *See e.g.* Meade at ¶ 138 ("Foremost, a mobile computing device becomes the master of appliances in its environment, controlling content and user preferences"); *see also In re Thrift*, 298 F.3d 1357, 1364 (Fed. Cir. 2002) (reason to combine references may be found within the references themselves). The phrase that Rhoads quotes as the "stated ambition" is simply a statement describing the system resulting from the combination, and not (as Rhoads contends) the Examiner's sole explanation of the reason to combine Bloebaum with Davis and Meade.

Second, Rhoads takes issue with the Examiner's finding that "the combination of Bloebaum with Davis and Meade as described is a combination of known elements by known methods with no change in respective function, and the combination would have yielded nothing more than predictable results." Rhoads argues in response to this statement that because the third and fourth claim elements are missing from the cited art, the art cannot be combined in the proposed fashion. Appellant's Br. at 33. As we have upheld the Board's holding that the prior art discloses each element of claim 8, we reject this argument as well.

Third, Rhoads argues that it would be impossible to modify Bloebaum with Davis and Meade because Bloebaum is limited to physical or manual control of devices. We disagree. Rhoads' argument is based on an overly narrow reading of Bloebaum's disclosure. The fact that Bloebaum discloses (as one example) instructions for fixing a faucet does not limit the disclosure of Bloebaum to only devices susceptible to manual control, because it is clear that Bloebaum "fairly suggests" more than that. *See Baird*, 16 F.3d at 383. Bloebaum consistently refers to the devices for which it provides instructions with the generic term "object," indicating that the invention is not limited in the manner suggested by Rhoads. *See e.g.* Bloebaum at Figure 1 & ¶ 49 ("Using the camera 13, the user of the wireless telephone 10 captures an image of an object 40"). For example, Bloebaum discloses providing instructions for control of a car radio (*id.* at ¶ 73), which is exactly the kind of electronic device that would be compatible with the Davis or Meade systems. *See e.g.* Davis at ¶ 97 ("Consider examples where the object is a robot, portable or desktop computer, consumer electronic device (e.g., television, stereo component, etc.), telephone, *embedded computer on board a vehicle* or some other machine, appliance, etc.") (emphasis added); Meade at ¶ 26 ("An appliance control system of the present invention

enables a mobile computing device, such as a personal digital assistant, to control appliances like televisions, *radios*, printers, etc.") (emphasis added).

Therefore, we find that substantial evidence supports the Board's conclusion that a skilled artisan would be motivated to combine Bloebaum, Davis, and Meade to achieve the invention of claim 8.

CONCLUSION

For the reasons above, we affirm the Board's conclusion that claim 8 would have been obvious over Bloebaum in light of Davis and Meade.

AFFIRMED

COSTS

No Costs.