

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Vinod Gopinath

Shareth Hariharpur Satheesh, Neha Mittal,
Siddharth Kumar, Bitto Niclavose,
and
Ashish Aggarwal,
Junior Party
(Patent 9,749,552)

v.

Paul D. Arling

Senior Party
(Application 15/899,971).

Patent Interference No. 106,114 (JTM)
(Technology Center 2600)

Before SALLY GARDNER LANE, JAMES T. MOORE, and DEBORAH KATZ
Administrative Patent Judges.

LANE, *Administrative Patent Judge.*

Decision on Motions- Bd. R. 121(a)

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I. Introduction

The interference was declared under 35 USC 135(a)¹ on July 30, 2019 between junior party Vinod Gopinath, Shareth Hariharpur Satheesh, Neha Mittal, Siddharth Kumar, Bitto Niclavose, and Ashish Aggarwal (Gopinath)² and senior party Paul D. Arling (Arling).^{3,4} (Declaration, Paper 1). In its Motion 3, junior party Gopinath moves for judgment of no interference-in-fact. (Gopinath Motion 3, Paper 54).⁵ Arling does not oppose this motion. No interference-in-fact is a threshold issue under 37 C.F.R. 41.201(providing that interference-in-fact is a threshold issue that, if resolved in favor of the movant, deprives the opposing party of standing in the interference.). We exercise discretion to consider this motion prior to the other filed motions. Bd. R 125(a) (“The Board may take up motions for decision in any order....and may take such other action appropriate to secure the just, speedy and inexpensive determination of the proceeding”).

In addition to Gopinath Motion 3 we have before us a motion from each party asking that we dismiss the interference for lack of subject matter

1 Any reference to a statute in this decision is to the statute that was in effect on March 15, 2013 unless otherwise indicated. See Pub. L. 112-29, § 3(n), 125 Stat. 284, 293 (2011).

2 Gopinath identifies its real party-in-interest as Caavo Inc. (Gopinath Notice, Paper 6).

3 Arling identifies its real party-in-interest as Universal Electronics Inc. (Arling Notice, Paper 10).

4 Interference 106,113 involves the same parties and related subject matter. A judgment of no interference-in-fact was entered in that interference on January 27, 2020. (Interference 106,113, Judgment, Paper 75).

5 Gopinath first filed the motion as Paper 53 and then filed a corrected version of the motion as Paper 54. We refer to the latter in this decision.

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jurisdiction.⁶ (Arling Motion 1, Paper 19; Gopinath Motion 2, Paper 39). Because we grant the Gopinath motion for a judgment of no interference-in-fact and terminate the interference on that basis, we need not and do not reach either of these other filed motions. Bd. R. 201; 125(a).

II. Discussion

A. Gopinath Motion 3

Legal Principles

To be sufficient, a motion must provide a showing supported with appropriate evidence such that, if unrebutted, it would justify the relief sought. The Board may not rely upon its own expertise as a substitute for the evidence of record in support of factual findings. *Brand v. Miller*, 487 F.3d 862, 869–70 (Fed. Cir. 2007) (reversing the Board's decision to “reject[] as unconvincing the only relevant testimony” and reach the opposite conclusion without citing to supporting evidence). The burden for the moving party remains the same even when the motion is unopposed. Bd. R. 208(b); *GN v. SW*, 57 USPQ2d 1073 (BPAI 2000).

Any finding of fact in this decision is supported by a preponderance of the evidence. *See Bilstad v. Wakalopulos*, 386 F.3d 1116, 1121 (Fed. Cir. 2004) (the burden of proof for challenging the declaration of an interference is preponderance of the evidence).

An interference exists if the subject matter of a claim of one party would, if

⁶ The Board authorized expedited briefing for each of these motions. (Order Authorizing Motions, Paper 18, 2-3).

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prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing party and vice versa. Bd. R. 203(a). We give claims their broadest reasonable interpretation by considering not only the claim language but also how one skilled in the art would understand the claim in view of the specification. *Phillips v. AWH*, 415 F.3d 1303, 1316, (Fed. Cir. 2005). Because of this principle, even where parties use the same claim language, it is possible that the claims do not interfere.⁷

To anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either expressly or inherently. *Verdegaal Bros. v. Union Oil Co.*, 814 F.2d 628, 631, (Fed. Cir. 1987). A claim is rendered obvious if the differences between the subject matter sought to be patented and the prior art are

7 Gopinath directs us to MPEP 2301.03, which states in part that:

Identical language in claims does not guarantee that they are drawn to the same invention. Every claim must be construed in light of the application in which it appears for purpose of evaluating whether there is interfering subject matter, unlike when evaluating whether copied claims comply with the written description requirement where the originating disclosure is consulted. See *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1375, 91 USPQ2d 1161, 1167 (Fed. Cir. 2009) (when a party challenges written description support for a copied claim in an interference, the originating disclosure provides the meaning of the pertinent claim language). Claims reciting means-plus-function limitations, in particular, might have different scopes depending on the corresponding structure described in the written description.

(Gopinath Motion 3, 15:9-12).

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art. 35 USC § 103. The legal question of obviousness is resolved on the basis of certain underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). The obviousness inquiry requires consideration of whether the skilled artisan would have had a reasonable expectation of success in making modifications to the prior art to arrive at the claimed invention. *Personal Web Technologies, LLC v. Apple, Inc.*, 848 F.3d 987, 991 (Fed. Cir. 2017).

A person having ordinary skill in the art is presumed to know the relevant prior art. *In re GPAC*, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995). We agree with Gopinath’s assertion, uncontested by Arling, that such a person may have “at least a Bachelor’s degree in Computer Engineering, Electrical Engineering, Computer Science, Physics, or equivalent training, and would have roughly two years of experience with home entertainment systems, consumer electronic devices, or a related field, like signal processing.” (Lipoff Declaration, Ex. 2018, ¶ 59).

Testimony

In support of its position, Gopinath directs us to the declaration testimony of

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Mr. Stuart Lipoff. (Lipoff Declaration, Ex. 2018).⁸ Mr. Lipoff's testimony and Gopinath's arguments relying upon this testimony, as both pertain to the issue of whether the parties' claims interfere-in-fact, are uncontested on the record before us. For reasons discussed below, and in the absence or evidence to the contrary, we are persuaded by Mr. Lipoff's testimony on this issue.

Claimed subject matter

The parties' claims generally are directed to methods for automatic identification and mapping of consumer electronic devices to ports on a high definition media interface (HDMI) switch. ('552 patent, Ex. 2001, 1:29-31; '971 application, Ex. 2006⁹, ¶¶ 5-9).

Gopinath claim 1, below, is representative of the Gopinath claims:

1. A method for automatic identification and mapping of an electronic device to a port on a high-definition media interface (HDMI) switch, the method comprising:

receiving a signal from the electronic device at a port of the HDMI switch;

determining whether the electronic device is an HDMI sink or an HDMI source based at least in part on the received signal;

in response to determining that the electronic device is an HDMI sink:

identifying the electronic device based on identification data in the signal, and

⁸ We have reviewed Mr. Lipoff's qualifications set out in his declaration. (Lipoff Declaration, Ex. 2018, ¶¶ 2-10, curriculum vitae attached as Appendix A). We find Mr. Lipoff qualified to testify about the subject matter at hand.

⁹ Gopinath cites to Exhibit 2006 that is the publication of the involved Arling application, i.e., U.S. Publication No. 2018/0174436 of June 21, 2018.

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mapping the electronic device to the port and setting the port as an output port of the HDMI switch based on the identifying the electronic device based on the identification data; and

in response to determining that the electronic device is an HDMI source:

receiving an audio/video stream from the electronic device, identifying the electronic device based on data in the audio/video stream, and

mapping the electronic device to the port and setting the port as an input port of the HDMI switch based on the identifying the electronic device based on data in the audio/video stream.

(Gopinath clean copy of claims, Paper 7, indentations added, relevant limitations emphasized).

Arling claim 2, below, is representative of the Arling claims:

2. A method for automatic identification and mapping of an electronic device to a port on a high-definition media interface (HDMI) switch, the method comprising:

receiving a signal from the electronic device at the port of the HDMI switch;

determining whether the electronic device is a video rendering device or a video source device based at least in part on the received signal;

in response to determining that the electronic device is a video rendering device:

identifying the electronic device based on identification data in the signal, and

mapping the electronic device to the port and setting the port as an output port of the HDMI switch based on the identifying the electronic device based on the identification data; and

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in response to determining that the electronic device is a video source device:
receiving a video stream from the electronic device,
identifying the electronic device based on data in the video stream, and
mapping the electronic device to the port and setting the port as an input port of the HDMI switch based on the identifying the electronic device based on data in the video stream.

(Arling clean copy of claims, Paper 12, indentations added, relevant limitations emphasized).

According to Gopinath switch devices were developed so that users could more easily switch between source devices (e.g., a DVD player) and sink devices (e.g., a television). According to Gopinath both parties claim a way to address shortcomings with typical switch devices but in materially different ways. (Gopinath Motion 3, Paper 54, 12:14-17). Gopinath describes Arling's claims as directed to a system that uses a Universal Control Engine ("UCE") programmed to communicate with a universal remote control through HDMI messaging¹⁰ only. (Gopinath Motion 3, Paper 54, 10:5-11, citing, *inter alia*, Lipoff Decl. ¶¶ 50-58; '971 application, Ex. 2006, ¶¶ 7, 8, 25; '072 specification, Ex. 2012, ¶¶ 5,14,17). Gopinath urges that its claims, on the other hand, are directed to a system that uses an automatic switching device with customizable ports which can be dynamically configured as inputs or outputs based on the connected device where a source

10 Mr. Lipoff's testimony refers to "HDMI messaging like consumer electronics control (CEC), Source Product Description (SPD), or extended display identification data (EDID)." (Lipoff Declaration, Ex. 2018, ¶ 35).

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device is identified by actual audio/visual content and optionally certain HDMI messaging. (Gopinath Motion 3, Paper 54, 12:14-17, citing Lipoff Declaration, Ex. 2018, ¶¶ 33-34; '552 patent, Ex. 2001 9:18-20).

Summary of Gopinath argument

Gopinath argues that its claims are not anticipated, and would not have been rendered obvious, in view of Arling's involved claims. This is so, according to Gopinath, because each of Gopinath's involved claims recites, *inter alia*, the limitation "in response to determining that the electronic device is an HDMI source...identifying the electronic device based on data in the audio/video stream." Gopinath asserts that, although the parties use very similar language, the claims, when construed in view of their respective underlying specifications, would be understood by one skilled in the art to define distinct inventions that do not interfere-in-fact. (Gopinath Motion 3, Paper 54, 2:1-9; 15:13-19).

Analysis of Argument

Gopinath must show, by a preponderance of the evidence, either that none of Arling's involved claims would have anticipated or rendered obvious any of Gopinath's involved claims or vice versa. Bd. R. 203(a). In its Motion 3, Gopinath argues the former. (Gopinath Motion 3, Paper 54, 1:6-8).

The focus of Gopinath's argument is the claimed step of the method where, in response to determining that the electronic device is a "video" (Arling), or "an HDMI" (Gopinath), source device, a "video" (Arling) or "audio/video" (Gopinath) stream is received and the electronic device is then identified based on data in the stream. Gopinath refers to this as the "identifying the source" limitation. (Gopinath Motion 3, Paper 54, 2:1-9; Lipoff Declaration, Ex. 2018, ¶ 62).

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Gopinath urges that, despite the close similarity in claim language, the parties' claims are drawn to distinct subject matter. This is because, according to Gopinath, one skilled in the art would have understood the Gopinath claims to require the "unconventional approach" of analyzing actual audio or video content (e.g., logos, text, images, audio segments) transmitted in the "audio/video stream", i.e., the underlying content that is provided to and displayed or broadcast by the source device. (Gopinath Motion 3, Paper 54, 20:9-14; Lipoff Declaration, Ex. 2018, ¶¶ 35, 63, 71). According to Gopinath HDMI messaging, e.g., CEC and SPD messaging, may optionally be analyzed as well.¹¹ (Gopinath Motion 3, Paper 54, 14:16-20; Lipoff Dec, Ex. 2018, ¶¶ 23, 24, 26, 28, 46, referring to Gopinath '552, Ex. 2001, 12:41-51).

Gopinath, and Mr. Lipoff's testimony, indicate that the Arling claims, when read in view of the Arling specification, do not use actual "audio/video" content as in the Gopinath claims. According to Mr. Lipoff, the Arling involved specification "fails to provide meaningful detail in terms of the type or the kind of identifying information that is usable" within the specification itself but does reference another Arling application, US 13/198,072, which published as US 2011/0289113 ('113 application, Ex. 2012).¹² Mr. Lipoff testified that to the extent such information

11 Based on this, we understand Gopinath's position to be that its claim 2, for example, is directed to the optional embodiment where HDMI messaging data is also analyzed and in particular CEC data. (Gopinath Motion 3, Paper 54, 14:16-20; '552 patent, Ex. 2001, 12:41-51).

12 Gopinath states that it does not concede that the '072 application is properly incorporated by reference. Mr. Lipoff testified that he "ha[s] no opinion regarding whether this application and its disclosure are properly incorporated by reference"

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could be identified in the Arling specification by consulting the '072 specification, it is limited to using conventional HDMI messaging, like CEC, SPD, and EDID data. (Lipoff Declaration, Ex. 2018, ¶ 55, referring to '971 application, Ex. 2006, ¶40; '113 application, Ex. 2012, ¶¶ 5, 14, 17). Gopinath urges therefore that Arling's "video stream" would not be understood by one skilled in the art to contain any actual video content but instead would be understood as limited only to conventional HDMI messaging as the "data in the video stream" that is used to "identify the electronic [video source] device". Gopinath urges that "[t]he data examined in the audio/video stream [of the Gopinath claims] is the audio and video content transmitted over the multiplexed TMDS¹³ line" and that "this audio and video content is distinct from the CEC, EDID, and SPD information" of the claimed Arling "video stream". (Gopinath Motion 3, Paper 54, 16:17-22; Lipoff Decl. ¶¶ 24-28, 45, 48, 63-66, 71-72). Thus, Gopinath asserts one skilled in the art would have understood that the Arling claims do not anticipate the "identifying the source" limitation of the Gopinath claims.

Gopinath, relying upon Mr. Lipoff's testimony, asserts further that one of ordinary skill would have recognized that examining HDMI messaging data (such as CEC or SPD information) as Arling claims does not inherently require

but that he considered them in forming his opinion regarding the scope of the Arling claims. (Lipoff Declaration, Ex. 2018, ¶ 54).

13 Transition Minimized Differential Signaling (TMDS) channels are described by Mr. Lipoff as transmitting video content, audio content, and auxiliary information over the same channels, but sent during different time periods and sent using different data structures. (Lipoff Declaration, Ex. 2018, ¶ 25, referring to HDMI specification, Ex. 2011, 71).

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analyzing audio or video content “in an audio/video stream.” (Gopinath Motion 3, Paper 54, 22:13-23). Gopinath asserts, relying upon Mr. Lipoff’s testimony, that one skilled in the art would understand its claimed method and system to use different data sent at different times and residing in different data packets to make identifications nowhere claimed or suggested in Arling’s claims or disclosure. (Lipoff Declaration, Ex. 2018, ¶¶ 55, 63-72; HDMI specification, Ex. 2011,¹⁴ 24, 71, 79, 128). This is so, according to Gopinath, since the HDMI data resides on an entirely different communication line (CEC) from audio/video content (TMDS) and SPD data exists in distinct data transmission periods and distinct data packets from audio/video content. (Gopinath Motion 3, Paper 54, 22:13-16; Lipoff Declaration, Ex. 2018, ¶¶ 24-28; 65-66, 70-72; HDMI specification, Ex. 2011, 24, 71, 79, 128). Thus, Gopinath asserts, analyzing CEC or SPD data “in the video stream,” that Arling claims, does not inherently require or include analyzing audio/video content “in an audio/video stream,” as Gopinath claims.

In summary Gopinath argues that Arling’s involved claims would not have anticipated Gopinath’s claims since Arling’s claims do not anticipate the “identifying the source” limitation of Gopinath when the parties’ claims are construed in view of their underlying specifications. Mr. Lipoff’s testimony indicates that he also considered the parties’ dependent claims in evaluating anticipation and determined that none of the Arling claims would have anticipated any of the Gopinath claims. (Gopinath Motion 3, Paper 54, 23:1-14; Lipoff

14 In support of his opinions, Mr. Lipoff refers to, *inter alia*, this document entitled *High-Definition Multimedia Interface, Specification Version 1.3a* which is dated November 10, 2006 and filed as Exhibit 2011.

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Declaration, Ex. 2018, ¶ 68). Mr. Lipoff's testimony and the other evidence cited in Gopinath Motion 3, is uncontested by Arling. We have not been directed to evidence that contradicts Mr. Lipoff's testimony or the evidence he relies upon in support of his opinions. Accordingly, on this record in the absence of evidence to the contrary, we find that Gopinath has met its burden of proving that the Arling claims do not anticipate the Gopinath claims when we construe the claims, as we must, by considering not only the claim language but also how one skilled in the art would understand the claim in view of the specification. *Phillips v. AWH*, 415 F.3d at 1316.

Regarding whether Arling's involved claims would have rendered obvious Gopinath's involved claims, Gopinath asserts that one of ordinary skill in the art would not have sufficient reason for, or a reasonable expectation of success in, modification of the Arling "identifying the source" limitation to arrive at the Gopinath one. (Gopinath Motion 3, Paper 54, 23:17-21; 24:4-10; 25:7-8).

Gopinath urges that Arling's and Gopinath's respective switching devices are different in structure, function, and purpose. As discussed above, according to Mr. Lipoff, Arling's UCE reflects conventional switching technology using fixed ports and conventional HDMI messaging to identify only devices providing HDMI messaging. Mr. Lipoff opines that, in contrast, Gopinath's claimed switch identifies source devices using actual audio/video content to set configurable ports. (Lipoff Declaration, Ex. 2018, ¶¶ 55, 70-72; ¶¶ 74-76). Gopinath urges that, because Arling's UCE identifies sources merely to retrieve command data and protocol (codesets) so that Arling's universal remote and UCE can control the connected devices, Arling lacks the capability, or need, to adjust configurable

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ports, as well as the capability, or need, to examine actual audio and video content to identify sources. (Lipoff Declaration, Ex. 2018, ¶¶55, 76, referring to '113 application, Ex. 2012 at ¶¶4, 13). Therefore, argues Gopinath, one skilled in the art would have had no reason or motivation to modify Arling's system to (1) analyze entirely different types of data using (2) entirely different processes, to (3) configure custom ports that Arling's switch does not possess. (Gopinath Motion 3, Paper 54, 24:11-25:1, Lipoff Declaration, Ex. 2018, ¶¶ 38, 51, 69-72, 76).

Gopinath, relying upon Mr. Lipoff's testimony, urges that one of ordinary skill would have appreciated that modifying Arling to contain Gopinath's "identifying the source" limitation would involve substantially redesigning Arling's system. This is so, Gopinath asserts, because rather than relying on simple CEC or SPD data, an artisan would have to modify Arling's switch to examine different types of data (audio and video content) using markedly different methods and maintain databases of recognized "signatures" to identify sources. (Gopinath Motion 3, Paper 54, 25:1-7; Lipoff Declaration, Ex. 2018, ¶ 76). Further Gopinath argues, and Mr. Lipoff opines, one skilled in the art would not have had a reasonable expectation of success in making such a modification. (Gopinath Motion 3, Paper 54, 25:7-8; Lipoff Declaration, Ex. 2018, ¶¶ 73-76). Mr. Lipoff notes that divergent architecture of the switching devices of each party. According to Mr. Lipoff, given the architecture of the device used by Arling, one skilled in the art would not have had reason to look beyond the use of HDMI messaging as a basis for identifying a source device nor would one have had an expectation of success in doing so. (Gopinath Motion 3, Paper 54, 25:7-8; Lipoff Declaration, Ex. 2018, ¶¶ 73-76).

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Mr. Lipoff's testimony demonstrates that he considered the involved specification of each party as well as the state of the prior art and relevant technology in forming his opinions. (Lipoff Declaration, Ex. 2018, ¶¶ 22-28). Mr. Lipoff's testimony indicates that he also considered the parties' dependent claims in evaluating whether one skilled in the art would have had a reason for, or reasonable expectation of success in, modification of the Arling claims to arrive at the Gopinath claims. (Gopinath Motion 3, Paper 54, 25:9-11; Lipoff Declaration, Ex. 2018, ¶ 77).

We find Mr. Lipoff's testimony, uncontested on the record before us, to be convincing in the absence of evidence to the contrary. Accordingly, on this record, we conclude that Gopinath has shown a lack of obviousness of its involved claims over those of Arling.

For reasons given above Gopinath has met its burden of proving a lack of interference-in-fact by a preponderance of the evidence. Bd. R. 208(b). No contrary evidence or argument has been presented.

We GRANT Gopinath Motion 3 for judgment of no interference-in-fact.

B. Remaining Motions

Because we conclude that there is not interfering subject matter between the parties it is appropriate to terminate the interference at this time. We therefore need not, and do not, consider the other motions before us and DISMISS those motions as moot.

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III. Order

It is

ORDERED that Gopinath Motion 3 seeking a determination of no interference-in-fact is GRANTED;

FURTHER ORDERED that Gopinath Motion 2 and Arling Motion 1 are DISMISSED as moot; and

FURTHER ORDERED that a judgment of no interference-in-fact shall be entered in a separate paper.

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