

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LINKPLAY TECHNOLOGY INC.,
Petitioner,

v.

SONOS, INC.,
Patent Owner.

Case No. IPR2025-00510
U.S. Patent No. 10,541,883

PATENT OWNER SONOS, INC.'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	OVERVIEW OF THE '883 PATENT AND FILE HISTORY.....	2
	A. The '883 Patent.....	2
	B. The File History of the '883 Patent.....	5
	C. Level of Skill of a POSITA.....	6
III.	OVERVIEW OF THE PETITION.....	7
IV.	THE RECTOR GROUNDS.....	8
	A. Overview of Rector.....	8
	B. The Petition Does Not Establish that Rector Anticipates or Renders Obvious the “ <i>First Message</i> ” of Limitation [1.e.1].....	10
	1. Linkplay’s Bluetooth Theory.....	13
	2. Linkplay’s Infrared Theory.....	14
	C. The Petition Does Not Establish that Rector Anticipates or Renders Obvious the “ <i>Response</i> ” of Limitation [1.e.2].....	17
V.	THE GASSHO GROUNDS.....	23
	A. Overview of Gassho.....	23
	B. The Petition Does Not Establish that Gassho Anticipates or Renders Obvious the “ <i>First Message</i> ” of Limitation [1.e.1].....	26
	C. The Petition Does Not Establish that Gassho Anticipates or Renders Obvious the “ <i>Response</i> ” of Limitation [1.e.2].....	33
VI.	THE SPURGAT GROUND.....	41
	A. Overview of Spurgat.....	42
	B. The Spurgat Ground Relies on Gassho for Limitations [1.e.1] and [1.e.2] and Thereby Fails for at Least the Same Reasons as the Gassho Grounds.....	43
	C. The Petition Does Not Establish that Spurgat Anticipates or Renders Obvious the “ <i>First Message</i> ” of Limitation [1.e.1] or the “ <i>Response</i> ” of Limitation [1.e.2].....	44
VII.	CONCLUSION.....	46

TABLE OF AUTHORITIES

<i>Abiomed, Inc. et al. v. Maquet Cardiovascular, LLC</i> , IPR2017-01204, IPR2017-01205, 2017 WL 4804523, (PTAB Oct. 23, 2017)	34
<i>ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.</i> , 694 F.3d 1312 (Fed. Cir. 2012).....	21, 34, 41
<i>Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.</i> , 344 F.3d 1186 (Fed. Cir. 2003).....	11, 38
<i>Apple Inc. et al. v. Memory Integrity, LLC</i> , IPR2015-00159, 2015 WL 4481557 (PTAB July 21, 2015).....	12, 38
<i>Arendi S.A.R.L. v. Apple Inc.</i> , 832 F.3d 1355 (Fed. Cir. 2016).....	23
<i>Ariosa Diagnostics v. Verinata Health, Inc.</i> , IPR 2013-00276, IPR2013-00277, 2016 WL 8944596 (PTAB Aug. 15, 2016)	21, 35, 41
<i>Belden Inc. v. Berk-Tek LLC</i> , 805 F.3d 1064 (Fed. Cir. 2015)	21, 34, 41
<i>Blast Motion, Inc. v. Newspin Sports, LLC</i> , No. IPR2019-00536, 2019 WL 2929978 (PTAB July 8, 2019).....	14
<i>Cont'l Can Co. USA, Inc. v. Monsanto Co.</i> , 948 F.2d 1264 (Fed. Cir. 1991)..	12, 38
<i>DSS Tech. Mgmt. Inc. v. Apple Inc.</i> , 885 F.3d 1367 (Fed. Cir. 2018).....	23, 42
<i>In re Stepan Co.</i> , 868 F.3d 1342 (Fed. Cir. 2017).....	29, 33
<i>Juniper Networks, Inc. v. Correct Transmission, LLC</i> , IPR2021-00984, 2021 WL 6339594 (PTAB Nov. 19, 2021)	24, 43
<i>Microsoft Corp. v. Biscotti, Inc.</i> , 878 F.3d 1052 (Fed. Cir. 2017)	29
<i>Microsoft Corp. v. LiTL LLC</i> , IPR2024-00457, 2024 WL 4044511 (PTAB Sept. 4, 2024).....	24, 43
<i>Motorola Mobility LLC v. Largan Precision Co. Ltd.</i> , IPR2024-00689, 2025 WL 26137 (PTAB Jan. 3, 2025)	23, 42
<i>Personal Web Techs., LLC v. Apple, Inc.</i> , 848 F.3d 987 (Fed. Cir. 2017).	21, 34, 41

<i>Polaris Indus., Inc. v. Arctic Cat, Inc.</i> , 882 F.3d 1056 (Fed. Cir. 2018).....	33
<i>Tiktok Inc. v. Ntech Props., Inc.</i> , No. IPR2024-01339, 2025 WL 607860 (PTAB Feb. 25, 2025).....	13
<i>Transclean Corp. v. Bridgewood Servs., Inc.</i> , 290 F.3d 1364 (Fed. Cir. 2002)11,	38

I. INTRODUCTION

The numerous holes in Linkplay Technology Inc.’s (“Petitioner” or “Linkplay”) Petition run deep. Despite asserting six grounds (Grounds 1-6) premised on three different primary prior art references, Linkplay acknowledges that the prior art fails to expressly disclose many limitations of the challenged claims of U.S. Patent No. 10,541,883 (the “’883 Patent”). This lack of disclosure is not surprising given that two of the three primary references, including the lead primary reference for Grounds 1-3, were already considered by the Office during prosecution of the ’883 Patent.

To try to fill in the gaps in the prior art, Linkplay throws out a smattering of different arguments. For some gaps, Linkplay relies heavily on alleged knowledge of a POSITA to argue that the missing limitations are inherent or obvious. For other gaps, Linkplay mixes and matches separate and distinct embodiments in the prior art to shore up their deficiencies. But Linkplay’s analysis is flawed – both legally and factually – and does not establish that the missing limitations are anticipated or obvious.

This Patent Owner Preliminary Response (POPR) addresses several examples of these deficiencies. Specifically, as set forth below, none of the six grounds asserted in the Petition establishes that the prior art anticipates or renders obvious at least the claimed *“first message indicating that the playback device is available for*

setup”¹ or the claimed “*response to the first message that facilitates establishing an initial communication path with a computing device,*” as required by each of independent claims 1, 14, and 20 of the ’883 Patent. Thus, the Petition should be denied because it fails to establish a reasonable likelihood that Linkplay would prevail with respect to at least one claim of the ’883 Patent.

II. OVERVIEW OF THE ’883 PATENT AND FILE HISTORY

Below is brief overview of the ’883 patent and its file history as it relates to this POPR.

A. The ’883 Patent

The ’883 Patent was filed on March 11, 2019 and issued on January 21, 2020. The ’883 Patent claims priority to U.S. Patent Application No. 15/091,113, filed on April 5, 2016 (issued as U.S. Patent No. 10,979,310), U.S. Patent Application No. 14/486,667, filed on September 15, 2014 (issued as U.S. Patent No. 9,866,447), U.S. Patent Application No. 13/618,829, filed on September 14, 2012 (issued as U.S. Patent No. 8,868,698), U.S. Patent No. 11/147,116, filed on June 6, 2005 (issued as U.S. Patent No. 8,326,951), and U.S. Provisional Patent Application No. 60/577,284, filed on June 5, 2004.

¹ For clarity, claim language is in italics and within quotation marks throughout.

The '883 Patent discloses a network audio system comprising “zone players” 102, 104, and 106 and “controllers” 140, 142 that are connected to a “data network” 108. *See, e.g.*, Ex.1001, 5:59-62, 6:36-52, FIG. 1; *see also id.*, FIG. 3A. As set forth in the '883 Patent, the “controllers” can be used to, among other things, set up “zone players” on a secure wireless data network that is defined by an access point. *See, e.g., id.*, 9:1-17:38, FIGS. 3A-4B. The '883 Patent provides details of such a setup procedure, including the specific messages that can be exchanged between a “controller” and a “zone player,” as well as the manner in which the messages are exchanged. *Id.*

In this respect, the asserted claims of the '883 Patent are generally directed to a “*playback device*” that can be set up to operate on a secure wireless local area network (“WLAN”) defined by an access point. *See, e.g.*, Ex.1001, claim 1. For purposes of illustration and to help guide the discussion herein, asserted claim 1 of the '883 Patent is reproduced below with the addition of brackets to identify claim limitations according to the naming convention used by Linkplay in the Petition:

[1.P] A playback device comprising:

[1.a] a network interface that is configured to provide an interconnection with at least one data network;

[1.b] at least one processor;

[1.c] a non-transitory computer-readable medium; and

[1.d] program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the playback device to perform functions comprising:

[1.e.1] detecting a triggering event that causes the playback device to enter a setup mode in which the playback device transmits at least a first message indicating that the playback device is available for setup;

[1.e.2] while in the setup mode, receiving a response to the first message that facilitates establishing an initial communication path with a computing device that is installed with an application for controlling the playback device, wherein the computing device is operating on a secure wireless local area network (WLAN) that is defined by an access point, wherein the initial communication path with the computing device does not traverse the access point;

[1.e.3] receiving, from the computing device via the initial communication path, at least a second message containing network configuration parameters for the secure WLAN, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN;

[1.e.4] using the network configuration parameters to connect to the secure WLAN that is defined by the access point; and

[1.e.5] transitioning from communicating with the computing device via the initial communication path to communicating with the computing device via the secure WLAN that is defined by the access point.

Ex.1001, claim 1.

B. The File History of the '883 Patent

As noted above, the '883 Patent was filed on March 11, 2019 and issued on January 21, 2020. During prosecution, Rector, the lead primary reference for Grounds 1-3 of the Petition, and Spurgat, the primary reference for Ground 6 of the Petition, were considered by the Office, as confirmed by the fact that these two references are cited on the face of the '883 Patent:

2002/0165721	A1	11/2002	Chang et al.
2002/0165921	A1	11/2002	Sapieyevski
2002/0168938	A1	11/2002	Chang
2002/0173273	A1	11/2002	Spurgat et al.
2002/0177411	A1	11/2002	Yajima et al.
2002/0181355	A1	12/2002	Shikunami et al.
2002/0184310	A1	12/2002	Traversat et al.
2002/0188762	A1	12/2002	Tomassetti et al.

2003/0200001	A1	10/2003	Goddard et al.
2003/0204273	A1	10/2003	Dinker et al.
2003/0204509	A1	10/2003	Dinker et al.
2003/0210796	A1	11/2003	McCarty et al.
2003/0212802	A1	11/2003	Rector et al.
2003/0219007	A1	11/2003	Barrack et al.
2003/0227478	A1	12/2003	Chatfield
2003/0229900	A1	12/2003	Reisman

Ex.1001, 6; *see also* Ex.1002, 243 (considering Rector), 328 (considering Spurgat). Not only did the Examiner correctly allow the '883 Patent over Rector and Spurgat, but the Office did not even think these references were close enough to warrant a rejection. *See* Ex.1002.

To be clear, the same Rector reference asserted in the Petition was submitted by Sonos on an IDS during prosecution. *Compare* Ex.1001, 6 *with* Pet., 2 (listing same Rector publication numbers). And the Spurgat reference asserted in the

Petition (2002/0174243) is virtually identical to the Spurgat reference that was also submitted by Sonos on an IDS (2002/0173273). In this respect, other than their Abstracts, Cross-Reference to Related Applications paragraphs, Field of Invention paragraphs, and Summary of the Inventions paragraphs, the remainder of the disclosures and figures in the Spurgat references are the same (minus a few formatting and spelling differences). *See* Ex.2119 (comparing the two Spurgat references). Thus, for all intents and purposes, the same (or, at least, substantially the same) Spurgat reference asserted in the Petition was previously presented to and considered by the Office.

C. Level of Skill of a POSITA

Linkplay contends a “[POSITA] at the time of the claimed invention would have had a Bachelor’s degree in electrical engineering, computer engineering, computer science, information technology, or a related field, along with at least two years of experience in the design or development of connected consumer electronics, networked engineering, or the equivalent.” Pet., 8. Sonos disagrees at least because it is unclear what Linkplay means by a degree in “information technology” and the phrase “connected consumer electronics” (e.g., if this phrase intends to cover non-networked consumer electronics).

Instead, a POSITA would have had a Bachelor’s degree in computer science, computer engineering, electrical engineering, or an equivalent thereof, and 2-4 years

of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience. Regardless, the Petition fails under both Sonos's and Linkplay's definition of a POSITA.

III. OVERVIEW OF THE PETITION

As noted above, the Petition advances six grounds:

Ground	Claims	Basis	References
1	1-8, 10-12, 14-20	§ 102	Rector
2	1-8, 10-12, 14-20	§ 103	Rector
3	3, 7-11, 13, 19	§ 103	Rector in view of Richenstein
4	1-8, 12, 14-20	§ 102	Gassho
5	1-8, 12, 14-20	§ 103	Gassho
6	1-20	§ 103	Spurgat in view of Gassho

Pet., 2. Claims 1, 14, and 20 are independent and claims 2-13 and 15-19 are dependent. As shown, Grounds 1-2 allege anticipation or obviousness based on Rector, Ground 3 alleges obviousness based on Rector in view of Richenstein, Grounds 4-5 allege anticipation or obviousness based on Gassho, and Ground 6 alleges obviousness based on Spurgat in view of Gassho.

Ground 3, which only challenges certain dependent claims, relies on Rector (as set forth in Grounds 1-2) for the independent claims. Thus, if Grounds 1-2 fail because Rector does not anticipate or render obvious the independent claims, Ground 3 also fails.

IV. THE RECTOR GROUNDS

For Grounds 1-3 (the “Rector grounds”), focusing just on the independent claims of the ’883, the Petition fails to show a reasonable likelihood of prevailing on at least limitations [1.e.1] and [1.e.2]. This is not surprising given that Rector was already considered by the Office during prosecution of the ’883 Patent, as explained above.

As in Linkplay’s Petition, Sonos will discuss the deficiencies of the Rector grounds with respect to the independent claims using independent claim 1 as being representative.

A. Overview of Rector

U.S. Patent Application Publication No. 2003/0212802 (“Rector”) was filed on May 9, 2002 and published on November 13, 2003.

Rector “relates to networks and in particular to setup of network elements on a network.” Ex.1004, ¶1. In this regard, Rector discloses:

FIG. 2 illustrates the operation of the system when network device 112 is brought within proximity boundary 130. Proximity setup component 108 detects the presence of network device 112. In one embodiment, Bluetooth technology is used by proximity setup component 108 and network device 112 in order to determine that the network device is in proximity to setup component 108. Upon detecting that network device 112 is in proximity, proximity setup component 108 establishes a network connection 202 with network device 112. Network connection

202 can be a wireless connection, as illustrated, or it can be a wired connection. As discussed above, it is desirable for network connection 202 to be an infra-red wireless connection. However, the invention is not limited to any particular type of connection.

Once a connection 202 has been established, proximity setup component 108 can provide configuration and setup data to network element 112. As discussed above, this data includes the SSID, wireless channel, and encryption keys necessary to allow network device 112 to communicate on network 120.

Ex.1004, ¶¶23-24. For reference, FIG. 2 of Rector is shown below.

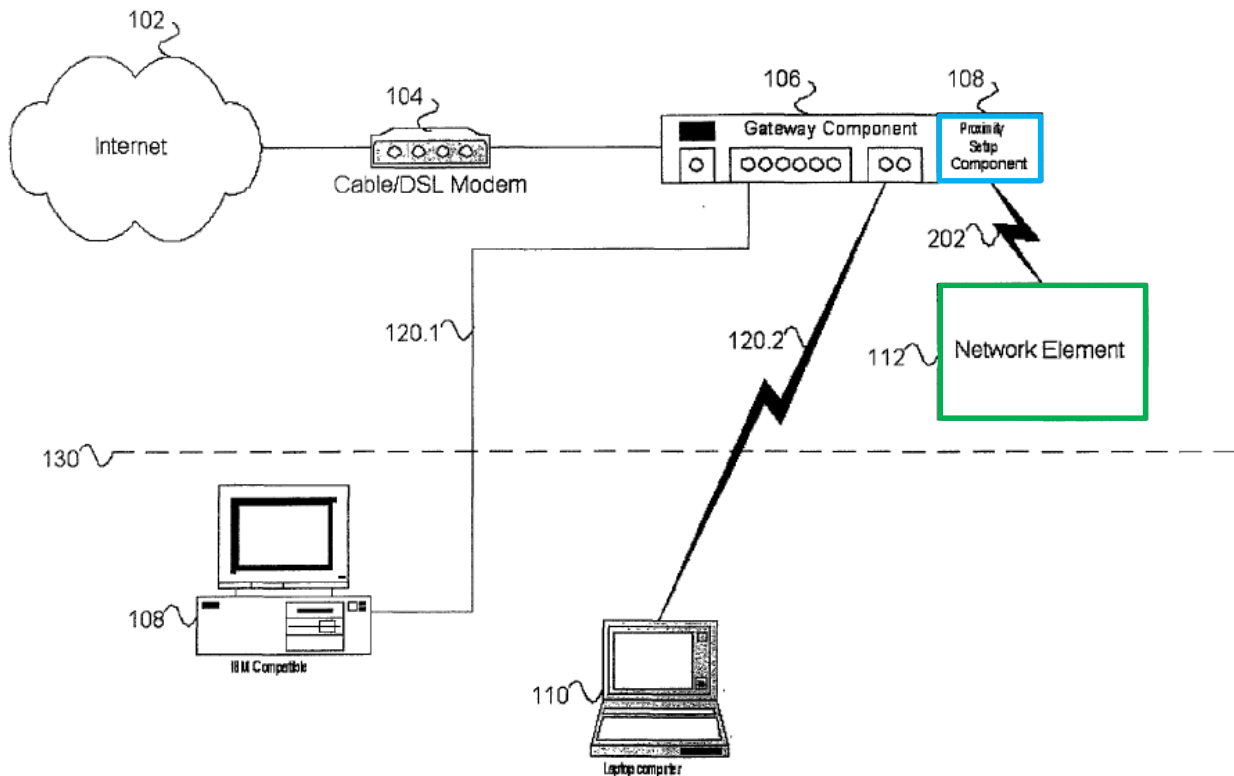


FIG. 2

Id., FIG. 2 (annotated).

For the Rector grounds, Linkplay maps Rector’s “network device 112” (shown above in green) to the “*playback device*” of claim 1 of the ’883 Patent and Rector’s “proximity setup component 108” (shown above in blue) to the “*computing device*” of claim 1 of the ’883 Patent. *See* Pet., 12-22.

B. The Petition Does Not Establish that Rector Anticipates or Renders Obvious the “*First Message*” of Limitation [1.e.1]

As one example of the cracks in the Petition’s anticipation analysis, there is no dispute that Rector does not expressly disclose a “*playback device*” that transmits “*a first message indicating that the playback device is available for setup,*” as required by limitation [1.e.1] of independent claim 1 and the corresponding limitations of independent claims 14 and 20. *See* Pet., 14-16; *see also id.*, 59, 60. In an attempt to patch this crack, Linkplay advances only a single argument—namely, that Rector inherently discloses the claimed “*first message.*” *Id.* But Linkplay has not established that the “*first message*” is *necessarily* present in Rector, as inherent anticipation demands. *See, e.g., Akamai Techs., Inc. v. Cable & Wireless Internet Servs., Inc.*, 344 F.3d 1186, 1192 (Fed. Cir. 2003) (“A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly present.”); *Transclean Corp. v. Bridgewood Servs., Inc.*, 290 F.3d 1364, 1373 (Fed. Cir. 2002) (same).

As the Federal Circuit has explained, inherency is a high bar that “may not be established by probabilities or possibilities” and “[t]he mere fact that a certain thing

may result from a given set of circumstances is not sufficient.” *Cont’l Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1269 (Fed. Cir. 1991) (internal quotation marks and citations omitted); *see also Apple Inc. et al. v. Memory Integrity, LLC*, IPR2015-00159, 2015 WL 4481557, at *4 (PTAB July 21, 2015) (rejecting IPR Petitioner’s inherency argument where “[expert’s] testimony on this point is conclusory and is insufficient to show inherency” as it “does not sufficiently exclude other possible means of programming processors in [the prior art]--as required for inherency.”). Linkplay has not hurdled this bar.

In addressing the “*first message*” of limitation [1.e.1], Linkplay points to paragraphs [0022], [0023], and [0028] of Rector, which, according to Linkplay, disclose a network device 112 (the alleged “*playback device*”) and a proximity setup component 108 (the alleged “*computing device*”) establishing a Bluetooth or infrared network connection 202. *See* Pet., 14-16. However, these paragraphs of Rector do not discuss any message(s) being sent or received by network device 112 or proximity setup component 108.

Acknowledging this deficiency, Linkplay attempts to use the doctrine of inherency to supply the missing “*first message*” based on alleged knowledge of a POSITA (Ex.1003; “Declaration of Dr. Bruce Hartpence”) that is supposedly supported by other references that are not part of the Rector grounds, *i.e.*, a reference titled “Specification of the Bluetooth System: Covered Core Package version: 1.2”

(Ex.1009; “Bluetooth Specification”) and another reference titled “Infrared Data Association: Plug and Play Extensions to Link Management Protocol Version 1.1” (Ex.1010; “Infrared Plug and Play Protocol”). *See* Pet., 15-16. Specifically, Linkplay asserts:

Regardless of which protocol is used for connection 202, a POSITA would have understood that network device 12 ***has to*** send an inquiry request (Bluetooth) or a “status” message (infra-red) (each “*first message*”) to the proximity setup component 108 to indicate network device 112 “*is available for setup.*”

Id. (citing Ex.1003, ¶¶120-27; EX1004, [0023]; Ex.1009, 111, 127; Ex.1010, 5, 9).^{2,3}

But Linkplay’s inherency argument fails because Linkplay has not established that

² Emphasis herein has been added unless noted otherwise.

³ Notably, while the Petition does cite to Petitioner’s expert’s testimony for this and other invalidity arguments addressed herein, the Petition fails to explain the content or pertinence of the testimony, and that testimony largely lacks supporting reasoning or evidence and is often contradicted by the documentary evidence. As such, it should be disregarded, even at this pre-Institution stage. *See, e.g., Tiktok Inc. v. Ntech Props., Inc.*, No. IPR2024-01339, 2025 WL 607860, at *7 (PTAB Feb. 25, 2025) (according expert “testimony little or no weight” since it was conclusory and Petition did not explain its “content or pertinence”); *Blast Motion, Inc. v. Newspin*

Rector's network device 112 *necessarily* transmits a Bluetooth "inquiry request" or an infrared "'status' message" (each an alleged "*first message*") indicating that network device 112 is available for setup.

1. Linkplay's Bluetooth Theory

With respect to Bluetooth and the purported inherent Bluetooth "inquiry request" (alleged "*first message*"), Linkplay relies on disclosure in the Bluetooth Specification that describes an "inquiry procedure" for discovery between a Bluetooth "inquiring device" that sends "inquiry requests" and a Bluetooth "discoverable device" that listens for "inquiry requests" and sends "responses":

Bluetooth devices use the inquiry procedure to discover nearby devices, or to be discovered by devices in their locality. The inquiry procedure is asymmetrical. A Bluetooth device that tries to find other nearby devices is known as an inquiring device and actively sends inquiry requests. Bluetooth devices that are available to be found are known as discoverable devices and listen for these inquiry requests and send responses. The inquiry procedure uses a special physical channel for the inquiry requests and responses.

Sports, LLC, No. IPR2019-00536, 2019 WL 2929978, at *5 (PTAB July 8, 2019) (disregarding expert testimony that was conclusory and contradicted by documentary evidence).

Ex.1009, 127. But even if Rector's network device 112 and proximity setup component 108 necessarily used this "inquiry procedure," which Linkplay has not established, such a use would not *necessarily* require Rector's network device 112 to be a Bluetooth "inquiring device" that sends "inquiry requests," as Linkplay asserts. Instead, that's just how Linkplay chose to map this Bluetooth inquiry procedure to try to recreate limitation [1.e.1] of Sonos's claim 1 with impermissible hindsight. It is equally possible that network device 112 of Rector could instead be a Bluetooth "discoverable device" that listens for "inquiry requests" and sends "responses." Ex.1009, 127. But Linkplay improperly ignores this possibility because it does not fit Linkplay's invalidity theory for limitations [1.e.1] and [1.e.2]. And this alternative possibility certainly destroys any potential for inherency here.

For at least these reasons, Linkplay's inherency argument fails because Linkplay has not established that Rector's network device 112 *necessarily* transmits a Bluetooth "inquiry request" indicating that network device 112 is available for setup.

2. Linkplay's Infrared Theory

Linkplay's theory based on infrared and the purported inherent infrared "status" message" (alleged "*first message*") suffers from the same malady. Linkplay relies on disclosure in the Infrared Plug and Play Protocol that describes a

“status” attribute of an infrared “PnP device” that is “convey[ed]” to an infrared “host” device during discovery:

Status

This is a bit field that is used by a device to convey status to the host at discovery time. This is the only mechanism defined to acquire this type of device status. Therefore, in order for a host to determine if a PnP device’s status has changed the host must request the IAS PnP Class information.

Ex.1010, 9 (emphasis in original). But, like Linkplay’s reliance on the Bluetooth Specification, Linkplay’s reliance on the Infrared Plug and Play Protocol is flawed for several reasons.

To start, the Infrared Plug and Play Protocol “focuses on Plug and Play [(PnP)] issues pertaining to host and peripheral inter-operability” where “an IR peripheral is logically a part of the host (as far as the user is concerned).” *Id.*, 2; *see also id.*, 2-3 (confirming that the Infrared Plug and Play Protocol does not address the scenario where there is “[c]ommunication between two hosts” as “Plug and Play issues between two hosts will be addressed at a later time.”). However, nothing in Rector teaches or suggests that network device 112 and/or proximity setup component 108 are infrared “Plug and Play” devices where one device would operate as a “peripheral” and the other a “host,” let alone where the “peripheral is logically a part of the host.” For this reason alone, Linkplay’s inherency argument fails because

Linkplay has not even established that the Infrared Plug and Play Protocol is applicable to Rector's system.

Moreover, even if network device 112 and proximity setup component 108 of Rector were "Plug and Play" devices that operated in accordance with the Infrared Plug and Play Protocol (which they are not), the discovery process in the Infrared Plug and Play Protocol does not require Rector's network device 112 to be an infrared "peripheral" device that sends a "'status' message," as Linkplay asserts. Again, that's just how Linkplay chose to map this infrared discovery process to attempt to recreate limitation [1.e.1] of Sonos's claim 1, again using impermissible hindsight. It is equally possible that Rector's network device 112 could instead be an infrared "host" device that receives the "status" of an infrared "peripheral" device and sends "request[s]" for such status information to determine if the status has changed (Ex.1010, 9), but Linkplay improperly ignores this possibility as well because it would dismantle Linkplay's invalidity theory for limitations [1.e.1] and [1.e.2]. Thus, for this additional reason, Linkplay's inherency argument fails because, even if the Infrared Plug and Play Protocol did apply to Rector's system (which it does not), Linkplay has not established that Rector's network device 112 *necessarily* transmits an infrared "'status' message" indicating that network device 112 is available for setup.

In sum, Linkplay’s inherent infrared theory fails to meet the high bar required for inherency for at least two independent reasons: (1) it relies on a specialized infrared “Plug and Play” protocol that is inapplicable to Rector’s system, and (2) even within that protocol, the outcome Linkplay asserts is not guaranteed.

C. The Petition Does Not Establish that Rector Anticipates or Renders Obvious the “*Response*” of Limitation [1.e.2]

As explained above, the Petition does not establish that Rector anticipates or renders obvious the “*first message*” of limitation [1.e.1] and the corresponding limitations of independent claims 14 and 20. It therefore follows that the Petition also does not establish that Rector anticipates or renders obvious “*a response to the first message that facilitates establishing an initial communication path with a computing device,*” as recited in limitation [1.e.2] and the corresponding limitations of independent claims 14 and 20. Putting that aside, the Petition fails to establish that Rector anticipates or renders obvious the claimed “*response*” of limitation [1.e.2].

As with the missing “*first message*” of limitation [1.e.1], there is no dispute that Rector also does not expressly disclose a “*playback device*” that receives the claimed “*response*” of limitation [1.e.2]. *See* Pet., 17-18; *see also id.*, 59, 60. To fill this gap, Linkplay again resorts to the doctrine of inherency and argues that Rector inherently discloses the missing “*response*” of limitation [1.e.2]:

Again, regardless whether Bluetooth or infra-red protocol is used for connection 202, both protocols require proximity setup component 108 to send a response to the inquiry request or the status message (“*a response to the first message*”), either using Bluetooth or infra-red, so that the network connection 202 can be established (“*facilitating an initial communication path*”). Thus, Rector discloses [1.e.2] at least ***inherently***.

Pet., 17 (citing Ex.1003, ¶¶130-31; Ex.1009, 111, 127; Ex.1010, 5, 9). But Linkplay’s inherency argument here relies on the same analysis/mapping of the same “inquiry procedure” disclosure in the Bluetooth Specification and the same “status” attribute disclosure in the Infrared Plug and Play Protocol that Linkplay relies on for the “*first message*” of limitation [1.e.1]. Thus, Linkplay’s inherency argument for the “*response*” of limitation [1.e.2] fails for at least the same reasons that its inherency argument for the “*first message*” of limitation [1.e.1] fails, as explained above in Section IV.B. That is, Linkplay’s inherency argument fails for at least the reason that its mapping of devices to the Bluetooth Specification and the Infrared Plug and Play Protocol fails because the mapping is arbitrarily chosen from among multiple alternative possible mappings based on the use of impermissible hindsight.

Moreover, with respect to Linkplay’s infrared theory, it is not even clear what exactly Linkplay is alleging to be the claimed “*response*” of limitation [1.e.2]. In this regard, as shown in the block quote above, Linkplay alleges that the Infrared Plug and Play Protocol discloses “a response to ... the status message (*a response*

to the first message’) ... so that the network connection 202 can be established (“facilitating an initial communication path”),” but the cited disclosure in the Infrared Plug and Play Protocol does not mention a “response” or describe any message that is sent “so that [an infrared connection] can be established.” See Ex.1010, 5, 9. Thus, Linkplay’s inherent infrared “*response*” theory fails for this additional reason.

Recognizing the weakness in its inherency position, Linkplay then asserts that the claimed “*response*” of limitation [1.e.2] would have been obvious over Rector alone:

To the extent the Board does not find the disclosure inherent, a POSITA would have found it obvious to transmit a response to network device 112, in light of the communication protocol Rector expressly references for establishing connection 202, because doing so would allow device 112 to obtain information regarding the device that detects it and will establish a direct connection with it, to further improve security in transmitting the network configuration parameters, a stated goal of Rector.

Pet., 18 (citing EX1003, ¶132; EX1004, [0004]). But this statement fails to establish obviousness.

First, this generic and conclusory statement fails to adequately explain how or why a POSITA would have modified Rector to achieve the claimed “*response*.” See, e.g., *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017)

(“[A] clear, evidence-supported account of the contemplated workings of the combination is a prerequisite to adequately explaining and supporting a conclusion that a [POSITA] would have been motivated to make the combination and reasonably expect success in doing so.”); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (emphasis original); *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012) (finding evidence insufficient to support obviousness where it “fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*”) (emphasis in original); *Ariosa Diagnostics v. Verinata Health, Inc.*, IPR 2013-00276, IPR2013–00277, 2016 WL 8944596, *10 (PTAB Aug. 15, 2016) (finding that Petitioner failed to prove obviousness where “virtually no effort is made to explain how or where the references differ from the challenged claims, how one of ordinary skill in the art would go about combining their disparate elements, or what modifications one of ordinary skill in the art would necessarily have made in order to combine the disparate elements.”) (citation omitted).

As one example, this statement does not even explain the nature of the alleged “response” being added to Rector or provide any evidence to support a POSITA’s

knowledge of such a “response.” While this statement does mention “the communication protocol Rector expressly references,” it does not specify what communication protocol it is referring to despite the Petition elsewhere alleging that either Bluetooth or infrared could be used for connection 202. *See* Pet., 15-16.

As another example, while this statement appears to suggest that a POSITA would have been motivated to modify Rector because adding a “response” would allegedly provide Rector’s network device 112 with information about proximity setup component 108 to “further improve security in transmitting the network configuration parameters” from proximity setup component 108 to network device 112, the Petition does not explain how that would be the case. To the contrary, merely providing *network device 112* with information about proximity setup component 108 would not improve security with respect to network configuration parameters that are transmitted from *proximity setup component 108* to network device 112. To improve security with respect to network configuration parameters that are transmitted from *proximity setup component 108* to network device 112, *proximity setup component 108* would need information about network device 112, not the other way around.

Second, Linkplay’s attempt to supply the missing “*response*” of limitation [1.e.2] by invoking alleged knowledge of a POSITA (as opposed to asserting actual prior art combinations) is contrary to prior decisions of the Federal Circuit and Board

explaining that such arguments are rarely accepted and only when the missing limitation is “unusually simple” and the technology “particularly straightforward,” which is not the case here. *See, e.g., DSS Tech. Mgmt. Inc. v. Apple Inc.*, 885 F.3d 1367, 1374 (Fed. Cir. 2018) (rejecting Board’s reliance on “common knowledge” to “supply a missing limitation” related to wireless communication network technology); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1362 (Fed. Cir. 2016) (rejecting Board’s reliance on “common sense” to “supply a missing limitation” related to computer-implemented searching technology); *Motorola Mobility LLC v. Largan Precision Co. Ltd.*, IPR2024-00689, 2025 WL 26137, *10 (PTAB Jan. 3, 2025) (denying institution where Petitioner tried to rely on “general knowledge to supply missing claim limitation” related to lens technology and explaining that “given that Petitioner relies on a single reference to argue obviousness, its reliance on numerous additional texts, articles and patent publications — purportedly used to establish the state of the art as of the August 2014 priority date of the ’845 patent — but actually used to fill in missing claim requirements absent from Fukaya — is not appropriate”); *Microsoft Corp. v. LiTL LLC*, IPR2024-00457, 2024 WL 4044511, *9-10 (PTAB Sept. 4, 2024) (denying institution where Petitioner tried to rely on “common sense” to “fill in a missing limitation” related to computer display technology); *Juniper Networks, Inc. v. Correct Transmission, LLC*, IPR2021-00984, 2021 WL 6339594, *9 (PTAB Nov. 19, 2021) (denying institution where “Petitioner

improperly fills a gap in its mapping to a claim limitation [related to data transmission technology] based on [] attorney argument and unsupported [expert] testimony”).

Linkplay’s attempt to avoid asserting actual prior art combinations and instead rely on alleged knowledge of a POSITA to supply the missing “*response*” of limitation [1.e.2] is legal error.

* * *

Thus, for at least these reasons, the Petition fails to show a reasonable likelihood of prevailing on the Rector grounds.

V. THE GASSHO GROUNDS

For Grounds 3-4 (the “Gassho grounds”), again focusing just on the independent claims of the ’883, the Petition fails to show a reasonable likelihood of prevailing on at least limitations [1.e.1] and [1.e.2].

As with the deficiencies of the Rector grounds, Sonos will discuss the deficiencies of the Gassho grounds with respect to the independent claims using independent claim 1 as being representative.

A. Overview of Gassho

U.S. Patent Application Publication No. 2003/009239 (“Gassho”) was filed on November 7, 2002 and published on May 15, 2003. Gassho purports to claim

priority to Japanese Patent Application No. 2001-348240(P) filed on November 14, 2001.

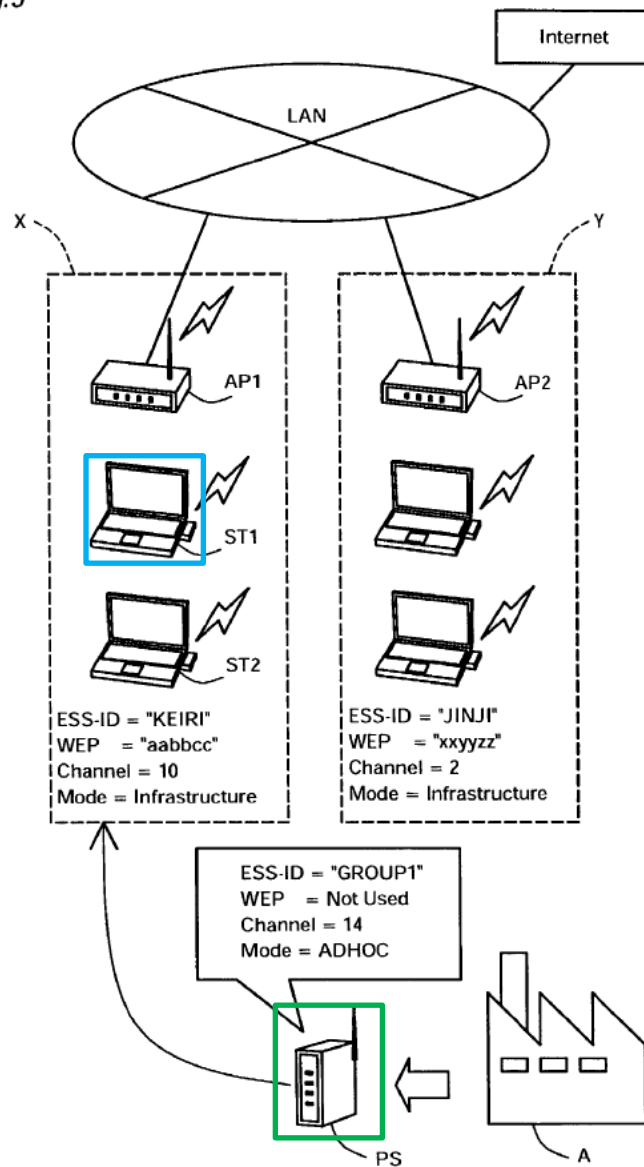
Gassho “pertains to a technique of carrying out settings for establishment of communication between wireless communication devices.” Ex.1006, ¶2. In this regard, Gassho discloses two separate and distinct embodiments where the “first embodiment regards the arrangement of utilizing the station ST to carry out the settings in another wireless communication device” and where the “second embodiment [] utilizes an access point to carry out the settings in another wireless communication device.” Ex.1005, ¶61.

With respect to the “first embodiment” shown in FIGS. 1-4, Gassho discloses:

In order to establish communication at least between the Station ST1 and the radio print server PS, the user sets the radio channel of the station ST1 to the channel 14, specifies the ADHOC mode for the communication mode, and selects the non-use setting of the WEP. These settings are identical with the setting in the radio print server PS and enable direct communication between the station ST1 and the radio print server PS. The user then uses the GUI shown in FIG. 2 and inputs the settings for the wireless network group X into the station ST1 (step S100). On completion of the input, the user clicks the ‘Set’ button to give the setting instruction (Step S101). The station ST1 activates the short distance communication module 11 in response to the setting instruction (step S102) and transmits the input setting parameters to the radio print server PS (step S103).

Id., ¶55. For reference, FIG. 3 of Gassho is shown below:

Fig.3



Id., FIG. 3 (annotated).

With respect to the “second embodiment” shown in FIGS. 5-6, Gassho explains that, unlike the “first embodiment,” the “second embodiment” relies on an access point AP receiving a “setting requirement signal” from a station ST in order

to carry out the settings in the station ST. *Id.*, ¶65. In this regard, Gassho explains that in the “second embodiment” “[t]he access point AP receives a predetermined setting requirement signal from the station (step S200), activates the short distance communication module 28 (step S201), and transmits the setting parameters, which have been input via the parameter input module 21 (step S202).”

Id., ¶70.

For the Gassho grounds, Linkplay relies primarily on Gassho’s first embodiment and maps the “print server PS” (shown above in green) of Gassho’s first embodiment to the “*playback device*” of claim 1 of the ’883 Patent and the “station ST1” (shown above in blue) of Gassho’s first embodiment to the “*computing device*” of claim 1 of the ’883 Patent. Pet., 45-55. However, as explained below, the Gassho grounds also rely on the “setting requirement signal” of Gassho’s second embodiment. In this regard, Linkplay attempts to combine Gassho’s first and second embodiments to arrive at claim 1 of the ’883 Patent.

B. The Petition Does Not Establish that Gassho Anticipates or Renders Obvious the “*First Message*” of Limitation [1.e.1]

To fill in the missing gaps for the Gassho grounds, Linkplay relies on two separate and distinct embodiments of Gassho to argue that Gassho anticipates or renders obvious a “*playback device*” that transmits “*a first message indicating that the playback device is available for setup,*” as required by limitation [1.e.1] of independent claim 1 and the corresponding limitations of independent claims 14 and

20. *See* Pet., 47; *see also id.*, 42, 59, 60. But Linkplay’s attempt to combine these two separate and distinct embodiments is impermissible because Gassho does not teach that these two embodiments can be combined in the manner proposed by Linkplay. *See Microsoft Corp. v. Biscotti, Inc.*, 878 F.3d 1052, 1063 (Fed. Cir. 2017) (explaining that “anticipation is not proven by multiple, distinct teachings that the artisan might somehow combine to achieve the claimed invention.”) (internal quotation marks and citation omitted). Linkplay also fails to provide a sufficient obviousness analysis to support the proposed combination. As required under Federal Circuit law:

Whether a rejection is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination.

In re Stepan Co., 868 F.3d 1342, 1346 n.1 (Fed. Cir. 2017).

In addressing the “*first message*” of limitation [1.e.1], Linkplay admits that it relies on the combination of two separate and distinct embodiments of Gassho:

Gassho discloses that a radio print server (PS) for setup is “in an initial factory state,” and ST1 needs to be set to the initial settings of the PS to “enable direct communication between the station ST1 and the radio print server PS.” EX1006, [0054]-[0055]; EX1003, ¶232. As to how

these initial settings are received by ST1, Gassho discloses that the user can obtain them from an instruction manual (*in the first embodiment*), or the wireless communication device sends a “setting requirement signal” that includes the device’s own factory setting parameters (*in the second embodiment*). EX1006, [0065], FIG. 6 (step S200). This setting requirement signal is a “request signal that requires the setting parameters,” thus indicating that the wireless communication device is available for setup and thus constitutes the “*first message*.” EX1003, ¶232.

Pet., 47; *see also* Pet., 42 (“Gassho provides *two embodiments*: a *first embodiment* In the *second embodiment*, ...”). However, as support for this combination of separate and distinct embodiments, Linkplay offers only a single conclusory sentence: “Gassho suggests the features of the two embodiments are compatible and a POSITA would understand that Gassho discloses or at least suggests that the first embodiment can have PS send the ‘setting requirement signal.’” Pet., 47-48. But Linkplay is wrong.

While Gassho does reference the first embodiment when describing certain aspects of the second embodiment, Gassho does not teach (or even suggest) that the “setting requirement signal” of the second embodiment can be used with the first embodiment. *See* Ex.1006, [0066] (“The parameter input module 21 inputs the setting parameters in the access point AP. The setting parameters may be input from the station ST by radio, as in the case of the first embodiment.”), [0068] (“The

following describes a process of transmitting the setting parameters, which is executed by the access point AP. In this embodiment, the setting parameters are transmitted to a station. Here the station may be the station ST or the radio print server PS discussed in the first embodiment”). Tellingly, after describing the first and second embodiments, Gassho also describes “Modifications” to the disclosed embodiments, but again does not mention anything about using the “setting requirement signal” of the second embodiment with the first embodiment. Ex.1006, [0073]-[0074]. Instead, Gassho clearly explains that the “setting requirement signal” is only used in connection with the second embodiment, which utilizes an access point AP to carry out the settings in station ST, and not with the first embodiment, which utilizes a station ST1 to carry out the settings in print server PS. *Compare* Ex.1006, [0060]-[0072], FIG. 4 (describing second embodiment) *with* [0038]-[0059], FIG. 6 (describing first embodiment). And it is indisputable that the access point AP of the second embodiment is a completely different type of device with different capabilities than the station ST1 of the first embodiment. *See, e.g., id.; compare also* Ex.1006, FIGS. 1-3 (showing station ST1) *with* FIGS. 3 and 5 (showing access point AP). As such, it is clear that Gassho deliberately limited the “setting requirement signal” to the second embodiment, which utilizes access point AP (not station ST1) to carry out the settings in station ST.

Moreover, Linkplay's attempt to use the "setting requirement signal" of Gassho's second embodiment with Gassho's first embodiment is nonsensical. Under Linkplay's invalidity theory, print server PS of the first embodiment would send the "setting requirement signal" of the second embodiment to station ST1 of the first embodiment in order to provide station ST1 with print server PS's initial factory network settings. *See* Pet., 47-49. But as Gassho explains, in the first embodiment, station ST1 and print server PS cannot communicate until *after* a user manually sets the network settings in station ST1 to match the initial factory network settings in print server PS. *See* Ex.1006, [0055] ("In order to establish communication at least between the Station ST1 and the radio print server PS, the user sets the radio channel of the station ST1 to the channel 14, specifies the ADHOC mode for the communication mode, and selects the non-use setting of the WEP. These settings are identical with the setting in the radio print server PS and enable direct communication between the station ST1 and the radio print server PS."); *see also id.* [0054] (explaining how the station ST1 and print server PS initially have different network settings). Thus, according to Gassho, print server PS of the first embodiment would not even be able to send a "setting requirement signal" to station ST1 of the first embodiment with print server PS's initial factory network settings until *after* a user has already manually set the network settings in station ST1 to match the initial factory network settings in print server PS. But this does not make

sense as there would be no need for print server PS to send such a “setting requirement signal” to station ST1 at that point because station ST1 would already have print server PS’s initial factory network settings. In this regard, Gassho actually teaches away from using the “setting requirement signal” of the second embodiment with the first embodiment.

To the extent Linkplay is relying on some sort of obvious combination of Gassho’s first and second embodiments, the single conclusory sentence in the Petition—“Gassho suggests the features of the two embodiments are compatible and a POSITA would understand that Gassho discloses or at least suggests that the first embodiment can have PS send the ‘setting requirement signal’” (Pet., 47-48)— fails as a matter of law because it does not explain how or why a POSITA would have combined the admittedly different embodiments of Gassho to achieve the claimed “*first message*,” as required by the Federal Circuit. *See, e.g., In re Stepan*, 868 F.3d at 1346 n.1 (explaining that when “combining multiple embodiments from a single reference, ... there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination”); *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1068 (Fed. Cir. 2018) (vacating obviousness determination where “the Board focused on what a skilled artisan would have been able to do, rather than what a skilled artisan would have been motivated to do at the time of the

invention”); *Personal Web Techs.*, 848 F.3d at 994 (“[A] clear, evidence-supported account of the contemplated workings of the combination is a prerequisite to adequately explaining and supporting a conclusion that a [POSITA] would have been motivated to make the combination and reasonably expect success in doing so.”); *Belden*, 805 F.3d at 1073 (“[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (emphasis original); *ActiveVideo Networks*, 694 F.3d at 1328 (finding evidence insufficient to support obviousness where “[i]t also fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*”) (emphasis in original).

The Board has also found such sparse arguments for combining different embodiments insufficient. *See Abiomed, Inc. et al. v. Maquet Cardiovascular, LLC*, IPR2017-01204, IPR2017-01205, 2017 WL 4804523, at *4 (PTAB Oct. 23, 2017) (denying institution where Petitioner “fails to provide a sufficient rationale to combine the teachings of Aboul-Hosn’s different embodiments” and “fails to explain sufficiently *why* one skilled in the art would have found it obvious to combine those teachings.”) (emphasis in original); *see also Ariosa Diagnostics*, 2016 WL 8944596 at *10 (finding that Petitioner failed to prove obviousness where “virtually no effort is made to explain how or where the references differ from the challenged claims,

how one of ordinary skill in the art would go about combining their disparate elements, or what modifications one of ordinary skill in the art would necessarily have made in order to combine the disparate elements.”) (citation omitted).

C. The Petition Does Not Establish that Gassho Anticipates or Renders Obvious the “*Response*” of Limitation [1.e.2]

As explained above, the Petition does not establish that Gassho anticipates or renders obvious the “*first message*” of limitation [1.e.1] and the corresponding limitations of independent claims 14 and 20. It therefore follows that the Petition also does not establish that Gassho anticipates or renders obvious “*a response to the first message that facilitates establishing an initial communication path with a computing device,*” as recited in limitation [1.e.2] and the corresponding limitations of independent claims 14 and 20. Putting that aside, the Petition fails to establish that Gassho anticipates or renders obvious the claimed “*response*” of limitation [1.e.2].

As with the “*first message*” of limitation [1.e.1], Linkplay’s invalidity theory for the “*response*” of limitation [1.e.2] relies on the same untenable combination of Gassho’s first and second embodiments to try to supply Gassho’s first embodiment with the “setting requirement signal” of Gassho’s second embodiment. *See* Pet., 49-52 (“Gassho discloses [1.e.2] by disclosing that the wireless communication device receives a response to the “setting requirement signal” (*first message*) ...”). Thus, Linkplay’s invalidity theory for the “*response*” of limitation [1.e.2] fails for at least

the same reasons as its invalidity theory for the “*first message*” of limitation [1.e.1], as explained above in Section V.B.

Moreover, recognizing that Gassho does not expressly disclose the claimed “*response*” of limitation [1.e.2], Linkplay yet again invokes the doctrine of inherency to fill the gap:

Gassho discloses that the “setting requirement signal” may be “a beacon or any other signal that ... includes setting parameters” of the device ready for setup. For example, these initial setting parameters include the factory setting ESS-ID and communication channel of the PS, which ST1 adopts to “enable direct communication between the station ST1 and the radio print server PS” (“*response to first message*”).

The initial exchange facilitates wireless equipment setting device to activate short distance communication over the direct connection (“*establishing the initial communication path*”) to transmit setting parameters. It is commonly known in the art that an IP broadcast message, such as a beacon, ***requires*** the recipient to respond before a connection is made between the sender and the recipient. Indeed, Gassho’s use of its setting requirement signal and response would have been well-known to a POSITA at the time of the invention and is consistent with the same “standard IP broadcast” acknowledged by the ’883 patent (AAPA) and also implemented by Spurgat. Therefore, a POSITA would have understood that a response to the broadcast beacon is ***required*** for the disclosed “direct connection” to establish, and therefore ***inherent*** to Gassho.

Pet., 49-50 (citing Ex.1001, 2:30-35, 16:31-51; Ex.1003, ¶¶235-236; Ex.1006, [0054], [0055], [0065], [0070]; Ex.1007, [0093], [0107]; Ex.1011, 36, 75). But Gassho's inherency argument fails once again because even if print station PS (alleged "*playback device*") of Gassho's first embodiment did transmit the "setting requirement signal" (alleged "*first message*") of Gassho's second embodiment to station ST1 (alleged "*computing device*") of Gassho's first embodiment (which is not the case), Linkplay has not established that print server PS ***necessarily*** receives, from station ST1, a "response" (alleged "*response*") to the "setting requirement signal" that facilitates establishing an initial communication path with station ST1. Indeed, the Petition does not identify any evidence that teaches or suggests that such a "response" to Gassho's custom "setting requirement signal" is ***required***. See Pet., 49-50 (citing Ex.1011, 36, 75; Ex.1001, 2:30-35, 16:31-51; Ex.1007, [0093], [0107]). To the contrary, it is possible that station ST1 could receive the "setting requirement signal" from print server PS without ever sending a "response" to the "setting requirement signal" that facilitates establishing an initial communication path between print server PS station ST1. Linkplay improperly ignores this possibility because it destroys any potential for inherency here.

Thus, Linkplay's inherency argument must be rejected. See, e.g., *Akamai Techs.*, 344 F.3d at 1192 (Fed. Cir. 2003) ("A claim limitation is inherent in the prior art if it is necessarily present in the prior art, not merely probably or possibly

present.”); *Transclean Corp.*, 290 F.3d at 1373 (same); *Cont’l Can Co. USA*, 948 F.2d at 1269 (explaining that inherency “may not be established by probabilities or possibilities” and “[t]he mere fact that a certain thing may result from a given set of circumstances is not sufficient.”) (internal quotation marks and citations omitted); *Apple*, 2015 WL 4481557 at *4 (rejecting IPR Petitioner’s inherency argument where “[expert’s] testimony on this point is conclusory and is insufficient to show inherency” as it “does not sufficiently exclude other possible means of programming processors in [the prior art]--as required for inherency.”).

Recognizing the weakness in its inherency argument, Linkplay then presents an “alternative” anticipation theory as well as an obviousness theory. Linkplay’s alternative anticipation theory comprises a single sentence: “Alternatively, Gassho’s ST1 also sends a *response* when ‘the user clicks the ‘Set’ button to give the setting instruction,’ facilitating ‘station ST1 activates the short distance communication.’” Pet., 50-51 (emphasis in original). Although unclear, to the extent Linkplay is suggesting that clicking the “Set” button in Gassho causes station ST1 to send some sort of “response” message (the alleged “*response*”) that facilitates establishing a “short distance communication” path between station ST1 and print server PS, there is no such disclosure in Gassho. *See* Ex.1006, [0055].

First, Linkplay misleadingly omits “module 11” from the end of its Gassho quote to improperly suggest that this quote discloses a “short distance

communication” path being established between station ST1 and print server PS. *Compare* Pet., 50-51 *with* Ex.1006, [0055]. This is not correct. Instead, Gassho explains that when “the user clicks the ‘Set’ button,” station ST1 “activates” its “short distance communication ***module 11***”:

On completion of the input, the user clicks the ‘Set’ button to give the setting instruction (step S101). The station ST1 activates the short distance communication ***module 11*** in response to the setting instruction (step S102) and transmits the input setting parameters to the radio print server PS (step S103).

Ex.1006, [0055].

Second, as shown in the block quote above, when “the user clicks the ‘Set’ button,” the only thing that station ST1 transmits to print server PS is “the input setting parameters.” More specifically, when “the user clicks the ‘Set’ button,” station ST1 “activates” its “short distance communication module 11,” which it then uses to “***transmit[] the input setting parameters*** to the radio print server PS.” *Id.* The transmission of the input setting parameters from station ST1 to print server PS is not a “*response ... that facilitates establishing an initial communication path with [station ST1],*” as required by limitation [1.e.2]. According to Linkplay, the transmission of “the input setting parameters” constitutes the “*second message*” of limitation [1.e.3]—not the “*response*” of limitation [1.e.2]. *See* Pet., 52-53.

Similar to its obvious argument for the Rector grounds, Linkplay then makes an unsubstantiated assertion that if its anticipation arguments fail, the claimed “*response*” of limitation [1.e.2] would have been obvious over Gassho alone:

A POSITA would also have found it obvious to transmit a response to the “setting requirement signal” before establishing the direct connection, because doing so would provide the receiving device with information of the device that detects it and will establish a direct connection with it, to further improve security in transmitting the setting parameters. EX1003, ¶237; EX1006, [0006] (describing the importance to “keep the setting information in secrecy” while transmitting over the direct connection), [0057]. A POSITA would also have found it routine and straightforward to implement such a response, which yields a predictable result. EX1003, ¶237.

Pet., 51. But like Linkplay’s allegation of obviousness over Rector, this statement also fails to establish obviousness.

First, this generic and conclusory statement fails to adequately explain how or why a POSITA would have modified Gassho to achieve the claimed “*response*.” *See, e.g., Personal Web Techs*, 848 F.3d at 994 (“[A] clear, evidence-supported account of the contemplated workings of the combination is a prerequisite to adequately explaining and supporting a conclusion that a [POSITA] would have been motivated to make the combination and reasonably expect success in doing so.”); *Belden*, 805 F.3d at 1073 (“[O]bviousness concerns whether a skilled artisan

not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.”) (emphasis original); *ActiveVideo Networks*, 694 F.3d at 1328 (finding evidence insufficient to support obviousness where it “fails to explain why a person of ordinary skill in the art would have combined elements from specific references *in the way the claimed invention does.*”) (emphasis in original); *Ariosa Diagnostics*, 2016 WL 8944596 at *10 (finding that Petitioner failed to prove obviousness where “virtually no effort is made to explain how or where the references differ from the challenged claims, how one of ordinary skill in the art would go about combining their disparate elements, or what modifications one of ordinary skill in the art would necessarily have made in order to combine the disparate elements.”) (citation omitted).

As one example, this statement does not even explain the nature of the alleged “response” being added to Gassho or provide any evidence to support a POSITA’s knowledge of such a “response.”

As another example, while this statement appears to suggest that a POSITA would have been motivated to modify Gassho because adding a “response” would allegedly provide Gassho’s print server PS with information about Gassho’s station ST1 to “further improve security in transmitting the setting parameters” from station ST1 to print server PS, the Petition does not explain how that is the case. To the contrary, merely providing *print server PS* with information about station ST1

would not improve security with respect to setting parameters that are transmitted from *station ST1* to print server PS. To improve security with respect to setting parameters that are transmitted from *station ST1* to print server PS, *station ST1* would need information about print server PS, not the other way around.

Second, Linkplay's attempt to supply the missing "*response*" of limitation [1.e.2] by invoking alleged knowledge of a POSITA (as opposed to asserting actual prior art combinations) is contrary to prior decisions of the Federal Circuit and Board explaining that such arguments are rarely accepted and only when the missing limitation is "unusually simple" and the technology "particularly straightforward," which is not the case here. *See, e.g., DSS Tech. Mgmt.*, 885 F.3d at 1374 (rejecting Board's reliance on "common knowledge" to "supply a missing limitation" related to wireless communication network technology); *Arendi*, 832 F.3d at 1362 (rejecting Board's reliance on "common sense" to "supply a missing limitation" related to computer-implemented searching technology); *Motorola*, 2025 WL 26137 at *10 (denying institution where Petitioner tried to rely on "general knowledge to supply missing claim limitation" related to lens technology and explaining that "given that Petitioner relies on a single reference to argue obviousness, its reliance on numerous additional texts, articles and patent publications — purportedly used to establish the state of the art as of the August 2014 priority date of the '845 patent — but actually used to fill in missing claim requirements absent from Fukaya — is not

appropriate”); *Microsoft*, 2024 WL 4044511 at *9-10 (denying institution where Petitioner tried to rely on “common sense” to “fill in a missing limitation” related to computer display technology); *Juniper Networks*, 2021 WL 6339594 at *9 (denying institution where “Petitioner improperly fills a gap in its mapping to a claim limitation [related to data transmission technology] based on [] attorney argument and unsupported [expert] testimony”).

Linkplay’s attempt to avoid asserting actual prior art combinations and instead rely on alleged knowledge of a POSITA to supply the missing “*response*” of limitation [1.e.2] is legal error.

* * *

Thus, for at least these reasons, the Petition fails to show a reasonable likelihood of prevailing on the Gassho grounds.

VI. THE SPURGAT GROUND

For Ground 6 (the “Spurgat ground”), again focusing just on the independent claims of the ’883 Patent, the Petition fails to show a reasonable likelihood of prevailing on at least limitations [1.e.1] and [1.e.2]. This is not surprising given that Spurgat was already considered by the Office during prosecution of the ’883 Patent, as explained above.

As with the deficiencies of the Rector and Gassho grounds, Sonos will discuss the deficiencies of the Spurgat ground with respect to the independent claims using independent claim 1 as being representative.

A. Overview of Spurgat

U.S. Patent Application Publication No. 2002/0174243 (“Spurgat”) was filed on May 16, 2001 and published on November 21, 2002.

Spurgat “relates to a digital audio playback device and more particularly to a digital audio playback device that uses wireless communication to interact and synchronize with a computing platform as well as other mobile digital audio players and fixed digital audio players.” Ex.1007, ¶3. In this regard, Spurgat discloses:

Discovery of mobile digital audio players 115 and fixed digital audio players 116 within range of the audio gateway, on the wireless network or wireless communication platform 104, is an important capability with respect to this invention. FIG. 17 provides the flow diagram for discovery by the audio gateway of mobile digital audio players 115 and fixed digital audio players 116.... The step “Start” 220, represents the beginning of the discovery handling process. In order to get a message response from the mobile digital audio players 115 and fixed digital audio players 116, the discovery handler sends a broadcast for players message in step 221. The discovery handler then waits, with a timeout, for example, 5 seconds, for a broadcast response message from any players in step 222.... If there is a response, then the discovery handler sends a query player message to a responding player in step 224 to get information about the type of player that has responded. The discovery

handler then waits, with some timeout, for a player query response message in step 225 from the player that previously responded to the broadcast.... If there is a response, then the discovery handler checks the information returned in the query response message to see if the player is already known in step 227.... If the player is not already known, then the discovery handler adds the player to the list of players in proximity in step 228 of the audio gateway. Finally, the discovery handler flags the new player in proximity for playlist continuation in step 229 and for content synchronization in step 230. This allows the playlist continuation handler in the audio gateway to capture the current playlist and current selection from this new player for possible broadcast to other players. Also, this allows the content synchronization handler in the audio gateway to automatically download digital audio content and other information 101 cached on the audio gateway to the new player.

Id., ¶93.

For the Spurgat ground, Linkplay maps Spurgat’s “digital audio player” to the “*playback device*” of claim 1 of the ’883 Patent and, although unclear, Linkplay appears to map Spurgat’s “audio gateway” to the “*computing device*” of claim 1 of the ’883 Patent. Pet., 62-67.

B. The Spurgat Ground Relies on Gassho for Limitations [1.e.1] and [1.e.2] and Thereby Fails for at Least the Same Reasons as the Gassho Grounds

With respect to the Spurgat ground based on Spurgat in view of Gassho, while Linkplay discusses Spurgat in relation to limitations [1.e.1]-[1.e.5], Linkplay never

actually asserts that Spurgat teaches or suggests the specific requirements of these limitations, including the claimed “*first message*” of limitation [1.e.1] and the claimed “*response*” of limitation [1.e.2]. *See* Pet., 64-69. Nor could Linkplay make such an assertion because, unlike limitations [1.e.1]-[1.e.5], Spurgat does not concern the setup of a “*playback device*” to operate on a secure WLAN. *See* Ex.1007; Ex.1001, claim 1. Instead, with respect to the specific requirements of limitations [1.e.1]-[1.e.5] of independent claim 1 and the corresponding limitations of independent claims 14 and 20, the Petition relies solely on Gassho: “Gassho discloses or suggests all the recited features for reasons explained in Grounds 4-5.” Pet., 64, 77. Thus, with respect to limitations [1.e.1] and [1.e.2] and the corresponding limitations of independent claims 14 and 20, the Spurgat ground fails for at least the same reasons that the Gassho grounds fail, as explained above in Section V.

C. The Petition Does Not Establish that Spurgat Anticipates or Renders Obvious the “*First Message*” of Limitation [1.e.1] or the “*Response*” of Limitation [1.e.2]

To the extent Linkplay tries to pivot and argue that Spurgat does somehow teach or suggest the specific requirements of limitations [1.e.1]-[1.e.5], including the claimed “*first message*” of limitation [1.e.1] and the claimed “*response*” of limitation [1.e.2], such an argument would not only lack any support in the Petition,

but it would also lack merit and be contrary to the Petition's characterization of Spurgat.

With respect to the “*first message*” and “*response*” of limitations [1.e.1] and [1.e.2], Linkplay states that Spurgat discloses:

[A]n audio player discovery process where Spurgat's “discovery handler sends a broadcast for players message” and then receives “a message response from the mobile digital audio players,” (similar to the “*first message*” and “*response*” exchange using IP broadcast disclosed by Gassho), and finally adds the new device on a list of players among which playlist and content synchronization are performed.

Pet., 66-67. But the “discovery process” in Spurgat for adding “digital audio players” to a “list” for “playlist continuation” and “content synchronization” concerns the discovery of “digital audio players” 115, 116 that are *already* set up and operating on “wireless network or wireless communication platform” 104. See Ex.1007, [0093]; see also, *id.*, [0034], FIG. 1. Spurgat's “discovery process” does not concern the actual setup of digital audio players 115, 116 to operate on wireless network or wireless communication platform 104 whatsoever. Thus, Spurgat's “broadcast for players message” and “message response from the mobile digital audio players” do not teach or suggest the claimed “*first message indicating that the playback device is available for setup*” of limitation [1.e.1] and “*response to the first message that facilitates establishing an initial communication path with a computing*

device” of limitation [1.e.2], which are sent and received, respectively, by the “*playback device*” of claim 1 before the “*playback device*” connects to the secure WLAN in limitation [1.e.4]. Ex.1001, claim 1.

That Spurgat’s “broadcast for players message” and “message response from the mobile digital audio players” do not teach or suggest the claimed “*first message*” and “*response*” of limitations [1.e.1] and [1.e.2] is also confirmed by Linkplay’s own words, as it describes these Spurgat messages as only being “*similar*” to (not the same as) the claimed “*first message*” and “*response.*” Pet., 66-67 (emphasis added).

* * *

Thus, for at least these reasons, the Petition fails to show a reasonable likelihood of prevailing on the Spurgat ground.

VII. CONCLUSION

Given its weak merits, this Petition should be denied. None of the six grounds asserted in the Petition establishes that the prior art anticipates or renders obvious at least the claimed “*first message indicating that the playback device is available for setup*” or the claimed “*response to the first message that facilitates establishing an initial communication path with a computing device,*” as required by each of independent claims 1, 14, and 20 of the ’883 Patent.

Respectfully submitted,

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Dated: July 11, 2025

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CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE complies with the type-volume limits in 37 C.F.R. § 42.24(b)(1). According to the utilized word-processing system's word count, this paper—excluding the caption, table of contents, table of authorities, certificate of word count, and certificate of service—contains 10,202 words.

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