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United States District Court, N.D. California.

SONOS, INC., Plaintiff,
v.
GOOGLE LLC, Defendant.

No. C 20-06754 WHA, No. C 21-07559 WHA
|
Signed October 6, 2023

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ORDER RE PROSECUTION LACHES AND POST-TRIAL MOTIONS

WILLIAM ALSUP, United States District Judge

INTRODUCTION

*1 In the lead-up to trial, all agreed that any remaining affirmative defenses would be decided by the judge after the jury verdict. Following a verdict in favor of the patent holder, the judge has now considered those defenses. Under the doctrine of prosecution laches, this order finds and holds that the patents in suit are **UNENFORCEABLE**.

The essence of this order is that the patents issued after an unreasonable, inexcusable, and prejudicial delay of *over thirteen years* by the patent holder, Sonos, Inc. Sonos filed the provisional application from which the patents in suit claim priority in 2006, but it did not file the applications for these patents and present the asserted claims for examination until

2019. By the time these patents issued in 2019 and 2020, the industry had already marched on and put the claimed invention into practice.

In fact, in 2014, five years before Sonos filed the applications and presented the claims, accused infringer Google LLC shared with Sonos a plan for a product that would practice what would become the claimed invention. The parties were exploring a potential collaboration, but it never materialized. Google then began introducing its own products that practiced the invention in 2015. Even so, Sonos waited until 2019 to pursue claims on the invention (and until 2020 to roll out the invention in its own product line). Because Sonos's applications for the patents in suit ostensibly descended from the 2006 provisional application, Sonos claimed a priority date before Google's disclosures and product releases. Once the patents in suit issued, Google's work putting the invention into practice fell under a cloud of infringement.

Trial brought to light what happened here. This was not a case of an inventor leading the industry to something new. This was a case of the industry leading with something new and, only then, an inventor coming out of the woodwork to say that he had come up with the idea first — wringing fresh claims to read on a competitor's products from an ancient application.

Even if the provisional application Sonos filed in 2006 or the corresponding non-provisional application Sonos filed in 2007 had actually disclosed the invention, that would be all the more reason to hold Sonos waited too long to claim it, to the prejudice of Google, not to mention other companies and consumers. But, as will be shown below, those applications failed to disclose the invention. What's more, in 2019, during the prosecution of the applications for the patents in suit, Sonos amended the specification to insert new matter, despite telling the patent examiner the inserted matter was not new. Under black letter patent law, that new matter necessarily sunk any claim of priority.

STATEMENT

This order constitutes findings of fact and conclusions of law, the affirmative defense of prosecution laches having been tried to the bench. All declarative statements herein are findings of fact.

The patents in suit are 🚩United States Patent Nos. 10,848,885 and 🚩10,469,966. They generally concern managing groups of multimedia players (*e.g.*, "smart speakers") in a multiroom system. Much like how one can customize, save, and invoke groups of email addresses from selected contacts with a name like "Ball Team" or "Band," the patents contemplate customizing, saving, and invoking groups of multimedia players from selected rooms with a name like "Morning" or "Downstairs." They refer to the multimedia players as "zone players" and the customized, saved groups of zone players that can be invoked on demand as "zone scenes." Specifically, the patents in suit claim devices that implement *overlapping* zone scenes, which share one or more zone players. Just as a single email address can be a member of "Ball Team" *and* "Band," a single zone player can be a member of "Morning" *and* "Downstairs."

*2 This order will now walk through the relevant history, but a short synopsis helps.

Seeking to improve upon the wireless multiroom audio system it released in 2005, Sonos set out to patent zone scenes, *i.e.*, customized, saved groups of zone players that could be invoked on demand. Sonos filed a provisional application in 2006, a corresponding non-provisional application in 2007, and a daisy chain of continuation applications over the next decade. During the prosecution of those applications, however, the patent examiner insisted that the prior art had already disclosed this idea. Sonos's applications were repeatedly rejected, and Sonos only secured zone scene claims with variations of little consequence.

Then, in 2019, Sonos filed continuation applications for the patents in suit. To get around the prior art, Sonos sought to patent zone scenes with a new twist: overlap. With overlap, a zone player could be a member of more than one zone scene at the same time. This was thirteen years after Sonos filed the provisional application, but also five years after Google had *itself* disclosed overlapping zone scenes to Sonos, and four years after Google had released products that implemented the feature. Initially, Sonos's applications for the patents in suit were rejected on obviousness grounds. Yet after Sonos amended the applications to incorporate new specification language (with new matter) and narrowed claim language (with "standalone mode" limitations), they issued as patents. Sonos promptly asserted these patents against Google.

1. THE SONOS 2005 PRIOR ART SYSTEM.

At the turn of the century, home audio typically involved radios, turntables, and CD players in individual rooms. Although a lucky few had multiroom systems that allowed them to play the same music in more than one room, those systems required installers to pull wires through the walls and ceilings.

Founded in Santa Barbara in 2002, Sonos set out to make multiroom audio higher tech, lower cost, and more accessible by creating a wireless system built on computer networks and processors. It envisioned placing devices, called "zone players," in various rooms of the home to provide music for those rooms, or "zones." Each zone player would be connected to other zone players and to the internet using network technology, not wires, and operated using a hand-held controller with a screen, not an infrared remote control. A key feature of Sonos's vision was the ability to group zone players in different zones to play music in synchrony.

In 2003, as Rincon Networks, Sonos began designing hardware and writing software for its first wireless multiroom audio system. By summer 2004, it demoed product prototypes at the All Things Digital conference. And, by January 2005, Sonos shipped its first commercial wireless multiroom audio system. All agree that the system was prior art for our purposes. This order will refer to it as the Sonos 2005 prior art system. It consisted of the ZonePlayer 100 ("ZP100") and the Controller 100 ("CR100").

Readers familiar with Sonos's contemporary products should be mindful that these earlier products were different. The ZP100 was a wireless internet-connected "smart amplifier" rather than a smart speaker. Sonos's first zone players were wirelessly connected to other zone players and to the internet, but each one was still hard-wired to the speaker(s) it powered. Sonos released its first wireless internet-connected smart speaker in September 2014 (which, incidentally, did not practice the claimed invention; that did not occur until June 2020). Moreover, the CR100 was a discrete hand-held controller rather than an app on a mobile device. Recall, in 2005, the iPhone was still two years in the future. Sonos's first controller was its own hardware product with a non-touch screen and buttons that allowed a user to manage zone players and music playback. Sonos released its first controller app for mobile devices (the iPhone and iPod Touch) in October 2008.

*3 The Sonos 2005 prior art system made waves, drawing attention from the likes of Microsoft Cofounder Bill Gates at the flagship Consumer Electronics Show that year.

Importantly, this first commercial wireless multiroom system allowed for grouping zone players in different zones to play music in synchrony. However, as Sonos Chief Innovation Officer Nicholas Millington and Sonos Director of User Experience Robert Lambourne both testified, this system had limitations in terms of how zone players could be grouped. Lambourne went on to be listed as the named inventor on the applications for the patents in suit and the applications from which they descend.

As stated, a key feature of Sonos's vision was the ability to group zone players in different zones to play music in synchrony. The Sonos 2005 prior art system achieved this using "ad hoc grouping," in which zone players were grouped on the fly. For a user to create a "zone group" in which selected zone players would play the same music at the same time, that user had to link a first zone player to one or more additional zone players, one at a time. The linked additional zone player(s) would be instantly configured to play music in synchrony with the first zone player as soon as the linking occurred. If a user then wanted to play music on a zone player within that zone group separately or in a new zone group, that user had to destroy the existing zone group by dropping one or more linked additional zone players, one at a time.

Significantly, "zone groups" were not "zone scenes." They did not allow a user to customize and save groups of zone players that could be invoked on demand. Nor did they allow a user to create a group of zone players that included one or more zone players from an existing group without destroying the existing group. In other words, zone groups could play different music simultaneously in different sets of zone players, but zone players could be members of only one zone group. Zone groups could not *overlap*.

To demonstrate, imagine a user of the Sonos 2005 prior art system had four zone players in four zones: one in her dining room, one in her living room, one in her bedroom, and one in her bathroom. Let's say she started out playing Joan Baez in her dining room. If she wanted to play Joan Baez in her dining room *and living room* simultaneously, she would create a zone group by linking those zone players on her controller, selecting "Dining Room," then "Link Zone," and then "Living Room." "Living Room" would be instantly configured to play Joan Baez in synchrony with "Dining Room." If she paused, resumed, or changed the music, the music would be paused, resumed, or changed in the dining room and living room.

In the meantime, our user could play Bob Dylan in her bedroom. She could also play Bob Dylan in her bedroom *and bathroom* simultaneously, creating another zone group by linking those zone players on her controller, selecting "Bedroom," then "Link Zone," and then "Bathroom." "Bathroom" would be instantly configured to play Bob Dylan in synchrony with "Bedroom." At this point, our user would have two distinct zone groups: one composed of "Dining Room" and "Living Room" playing Joan Baez, the other composed of "Bedroom" and "Bathroom" playing Bob Dylan.

Say our user now wanted to listen to Joan Baez in her bedroom as well. She would first destroy the zone group composed of the zone players in her bedroom and bathroom by unlinking those zone players using her controller, selecting that zone group, then "Drop Zone," and then "Bathroom." She would then link the zone player in her bedroom to the zone group composed of the zone players in her dining room and living room by selecting that zone group, then "Link Zone," and then "Bedroom." "Living Room" *and* "Bedroom" would be instantly configured to play Joan Baez in synchrony with "Dining Room." This would create a *new, real-time* zone group composed of the zone players in her dining room, living room, and bedroom. The zone group composed of just the zone players in her dining room and living room would *no longer exist*.

 *4 Note the Sonos 2005 prior art system did not allow users to select multiple zone players and link or unlink them simultaneously. Users had to select individual zone players and link or unlink them one at a time. There was a way to link multiple zone players simultaneously in the Sonos 2005 prior art system, however. This was done using the built-in "All Zones-Party Mode" feature, "party mode" for short.

In the Sonos 2005 prior art system, "All Zones-Party Mode" was listed alongside available zone players under "Link Zone." When selected, it simultaneously linked *all* of the zone players in a given system (thereby destroying any ad hoc zone group). So, if our user was playing Joan Baez in her dining room and wanted to play Joan Baez throughout, she would simultaneously link all of the zone players in her system on her controller, selecting "Dining Room," then "Link Zone," and then "All Zones-Party Mode." "Living Room," "Bedroom," and "Bathroom" would be instantly configured to play Joan Baez in synchrony with "Dining Room." As explained by Inventor Lambourne, "[i]t was sort of a shortcut to grouping all of the rooms together" that "was

baked into the product" (Tr. 420:9–10, 15). After selecting party mode, however, if a user wanted to play music on fewer than all of the zone players, there was no shortcut. That user would have to unlink individual zone players, one at a time. Thus, if our user wanted to play Joan Baez only in the dining room after selecting party mode, she would have to drop the zone players in the living room, bedroom, and bathroom, one by one.

Putting it all together, in the Sonos 2005 prior art system, the only way to link zone players simultaneously was using party mode, which linked all of the zone players. A user of the Sonos 2005 prior art system could not customize and save a group of zone players to invoke on demand, much less customize and save *multiple* groups of zone players *with one or more overlapping zone players* to invoke on demand.

2. THE IDEAS OF ZONE SCENES AND OVERLAPPING ZONE SCENES.

The grouping limitations of the Sonos 2005 prior art system led Sonos customers and employees to explore potential improvements.

A. CUSTOMER COMMENTS AND INVENTOR SKETCHES.

Not long after Sonos first shipped the Sonos 2005 prior art system, customers began posting comments on Sonos's own online forums calling for more advanced grouping functionalities.

On February 27, 2005, in a forum post titled "Virtual Zones and Zone Grouping," a customer going by the name of "theboyg" observed, "[t]his 'link/unlink' business is really cumbersome," and asked, "[w]hy can't I have a virtual zone — ie a zone called 'Downstairs' " so that "I can group all my downstairs zones into this" and "I don't have to keep manually linking/unlinking multiple zones everytime" (TX2424). In other words, back in 2005, theboyg requested a customized, saved group of zone players that could be invoked on demand.

On September 22, 2005, in a forum post titled "Macro / presets," a customer going by the name of "JeffT" took it a step further, suggesting "save[d] Zone links," such as "Morning mode for the units I want in the morning," and "2 party modes, Summer and Winter," in which "[t]he Summer mode would include the deck speakers and the Winter mode

would not" (TX3930). In other words, back in 2005, JeffT requested customized, saved, *overlapping* groups of zone players that could be invoked on demand.

*5 Sonos did not introduce such grouping functionalities to its products until June 2020. Contemporaneously with these Sonos forum posts, however, Inventor Lambourne set forth parallel ideas in his notebooks and correspondence.

In one notebook sketch, Inventor Lambourne depicted an alarm clock feature that would allow a user to select music to wake up to and rooms to play that music in — a customized, saved group of zone players that could be invoked on demand. This sketch was undated, but the date listed two pages later was February 28, 2005, one day after theboyg's request for a "Downstairs" group (TX8236 at 40, 42). Shortly thereafter, in another notebook sketch, Inventor Lambourne depicted permanently joining one or more zone players together. This sketch was also undated, but the date listed on the following page was March 2, 2005 (TX6539 at 2–3).

The following month, Inventor Lambourne traded emails with a Sonos colleague, Andrew Schulert, about the grouping limitations of their own home systems. They compared the merits of Inventor Lambourne's proposed "Permanent Zone Groups" approach, in which zones could be configured to always appear as one entity, and Inventor Lambourne's proposed "Zone Profiles" approach, in which zones could be put into different customized, saved groups that could be invoked on demand, such as "downstairs" and "mornings." Inventor Lambourne observed that "making the UI [*i.e.*, user interface] simple enough" was a problem with the proposed Zone Profiles approach. Colleague Schulert said his first reaction was that the Zone Profiles approach "would be the biggest bang for the buck" (TX0120 at 1).

And, on October 21, 2005, one month after JeffT's request for "Summer" and "Winter" groups, Inventor Lambourne sketched "Alarm Clock / Zone Profiles / Groups," with a circle that said, "group profiles," and text below it that said, "[p]ick a room group/profile, same room can be in two groups" (TX6539 at 24). That same day, he also sketched "Room Join Macros" illustrating "downstairs," "party mode," and "morning mode" alongside each other and a new group being formed, with text that explained "one room can be part of 2 sets" — customized, saved, *overlapping* groups of zone players that could be invoked on demand (TX6539 at 31).

B. THE UI DOCUMENTS.

On December 21, 2005, Inventor Lambourne wrote up a UI document setting out a path for new grouping functionality based on "zone scenes" (TX6545). He also wrote up another UI document focused on the alarm clock feature, which referred to "zone scenes" (TX6544 at 27). Although the UI documents look like user manuals, they were internal, exploratory documents, for Sonos use only. The UI documents were supplied to the jury and the judge as conception documents because the parties stipulated that they disclosed the claimed invention. This order accepts this stipulation without weighing in on the adequacy of the disclosure. As such, the stipulated conception date is December 21, 2005.

Relevant here, the zone scenes UI document offered two improvements to the grouping functionality of the Sonos 2005 prior art system. *First*, it described "zone scenes," *i.e.*, customized, saved groups of zone players that could be invoked on demand. *Second*, it described a nimbler form of ad hoc grouping.

*6 Let's start with "zone scenes." According to the zones scenes UI document, "[t]he Zone Scene feature" would "allow[ ] the user to arrange the zones into groups using one single command" (TX6545 at 2). "Simple Scenes" would allow a user to set up one group in a zone scene. The document gave the example of a "Morning Scene" that could group zone players in the bedroom, den, and dining room, while leaving the remaining zone players in the bathroom, family room, and foyer untouched (*id.* at 2). "Advanced Scenes" would allow a user to set up more than one group in a zone scene. The document gave the example of an "Evening Scene" that could group zone players in the bedroom, den, and dining room — and, separately, the garage and garden — with the remaining zone players in the bathroom, family room, and foyer "separated from any group if they were part of a group before the Zone Scene was invoked" (*id.* at 2–3).

The zone scenes UI document *explicitly disclosed* customizing and saving a group of zone players that could be invoked on demand like "Morning Scene" and "Evening Scene." It also explicitly disclosed customizing and saving several such groups, depicting selection from a "Party Mode" zone scene and a "Morning Wakeup" zone scene in one instance, as well as from a "Party Mode" zone scene, a "Wakeup" zone scene, and a "Garden Party" zone scene

in another (*id.* at 5–6). But the zone scenes UI document *did not explicitly disclose* customized, saved, *overlapping* groups of zone players that could be invoked on demand. Whereas Inventor Lambourne's notebook sketches had text that stated the "same room can be in two groups" and "one room can be part of 2 sets," no such text can be found in the zone scenes UI document (*see* TX6539 at 24, 31). Note "Morning Scene" and "Evening Scene" belonged to different systems, with the system in which "Evening Scene" was created containing additional zone players in the garage and garden. Similarly, there was no explicit disclosure of customized, saved, overlapping groups of zone players that could be invoked on demand in the alarm clock UI document.

So how did the UI documents disclose the claimed invention? They *implicitly disclosed* overlapping zone scenes by reference to party mode in the Sonos 2005 prior art system. Significantly, the alarm clock UI document stated that " 'Party Mode' that currently ships with the product is one example of a Zone Scene" (TX6544 at 27). The zone scenes UI document similarly referred to the "current Party Mode setting" and represented "Party Mode" as a "Zone Scene" in various figures (TX6545 at 2; *see id.* at 5–6). When the zone scenes UI document showed a "Party Mode" zone scene next to a "Morning Wakeup" zone scene in one instance, and a "Party Mode" zone scene next to "Wakeup" and "Garden Party" zone scenes in another, it would have been understood that zone scenes would overlap because it would have been understood that the "Party Mode" zone scene would group all of the zone players in a given system. As such, the UI documents implicitly disclosed customized, saved, overlapping groups of zone players that could be invoked on demand. To be sure, this disclosure depended on inference, but both sides stipulated that the UI documents disclosed the claimed invention. Accordingly, this order credits the implicit disclosure.

* * *

The zone scenes UI document had distinct sections on "Invoking a Scene," showing "various user Interface methods for invoking a configuration on a Handheld Controller or Desktop Controller," versus "Scene Setup," showing various user interface methods for configuring a zone scene from a desktop controller only. According to this document, it was "not expected that the Zone Scenes should be set up using the Handheld Controller" (*id.* at 5, 9).

Meanwhile, the zone scenes UI document had a distinct section on "Alternative Linking Methods," which showed an

"adaptation of the Link and Drop Zone feature" of the Sonos 2005 prior art system, *i.e.*, ad hoc grouping (*id.* at 17–18). Whereas the zone scene feature would allow for groups of zone players to be set up *in advance* on a *desktop controller*, this "Zone Linking" feature would allow for groups of zone players to be set up *in real-time* on a *handheld controller*. It pertained to ad hoc "zone groups," *not "zone scenes."* This ad hoc grouping was an improvement over the ad hoc grouping in the Sonos 2005 prior art system, however.

*7 Whereas the ad hoc grouping in the Sonos 2005 prior art system "allow[ed] the user to link and drop Zones *one at a time*," "[t]his feature would allow the user to link and drop *multiple* zones in one screen," "check[ing] Zones that w[ould] be a part of a zone group, and uncheck[ing] those that w[ould] not]" (*ibid.*) (emphasis added). Here, "the list of the zones in the screen" would "include[ ] ALL the zones in the system, including the Zones that [were] already grouped" (*id.* at 17). This would allow for more efficient ad hoc grouping. The "Zone Linking" feature was depicted as follows:
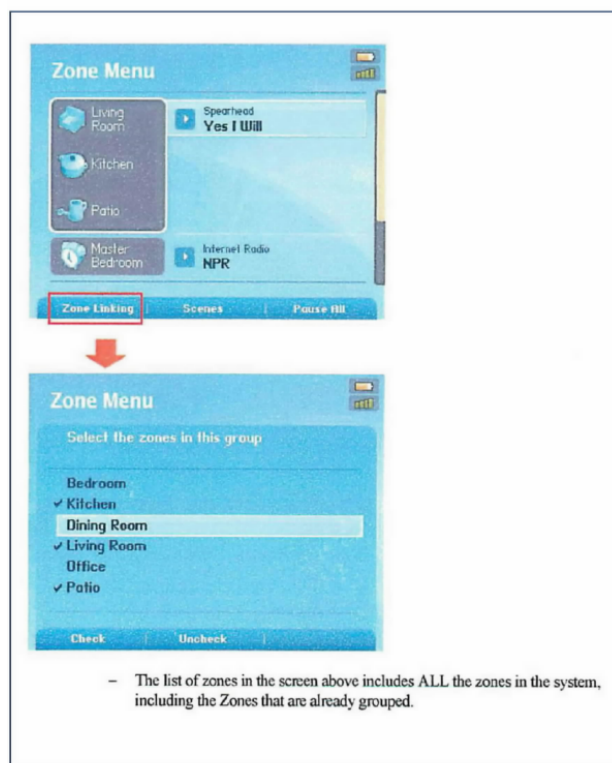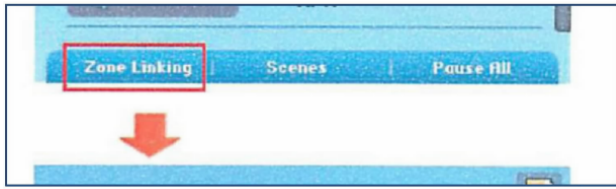

Zone Scenes UI Document: "Zone Linking" Feature Diagram.

(*ibid.*).

To repeat, "Zone Linking," as depicted above, was ad hoc grouping, not "Scene Setup." Ad hoc "zone groups" were not "zone scenes." They were addressed in different sections in the zone scenes UI document and even accessed using

different soft buttons on the handheld controller. By way of demonstration, the diagram is cropped below:

Zone Scenes UI Document: Cropped "Zone Linking" Feature Diagram (Soft Buttons).

The complete diagram will become all the more important later on in connection with the issue of new matter inserted by way of amendment.

3. THE FIRST ZONE SCENE PATENT APPLICATIONS.

The patents in suit descend from a family of patent applications that claim priority to, or the benefit of, a provisional application filed in September 2006 through a corresponding non-provisional application filed in September 2007. September 2006 was more than one year after the commercial release of the Sonos 2005 prior art system but less than one year after the stipulated conception date. Each of the earlier applications in the "zone scene patent family" is "incorporated by reference in its entirety for all purposes" in its successors, including the patents in suit. [1]

The prosecution histories of the applications for the patents in suit are in the trial record, abridged to exclude tens of thousands of pages of prior art references and other publications (gratuitously) submitted (*see* TX004; TX006). The prosecution histories of the parent applications in the patent family are not in the trial record, though the parties provided excerpts in binders requested by the judge during trial (*see* Tr. 1030:13–19). The same holds for the resulting patents (*ibid.*). Seeing that the judge must consider these prosecution histories and patents in order to evaluate arguments raised herein, this order takes judicial notice of these prosecution histories and patents. [2]

A. THE 2006 PROVISIONAL APPLICATION.

*8 On September 12, 2006, Sonos filed a "provisional application," with Inventor Lambourne listed as the named inventor, entitled "Controlling and manipulating groupings in a multi-zone music or media system" (TX2651). A provisional application is a temporary form of patent

application that is not required to include any patent claims or information disclosure (prior art) and is never reviewed by a patent examiner. It operates as a low-cost placeholder, establishing an earlier effective filing date for a corresponding non-provisional application filed within twelve months that claims its subject matter. Although a provisional application is never "published" or made publicly searchable, it is "made available to the public" as an individual file when a corresponding non-provisional application is published, as one was here eventually. [3]

The specification of this provisional application consisted of a "Detailed Description of the Preferred Embodiments," an assortment of implementations involving zones, zone players, zone groups, and zone scenes. It was drafted broadly. Many described embodiments did not relate to zone scenes at all, such as those in which "memory is used to save one or more saved zone configuration files that may be retrieved for modification at any time" and in which "a user creates a zone group including at least two zone players from the controller that sends signals or data to one of the zone players" (TX2651 at 15, 19). In any event, the specification of the provisional application eventually described zone scene technology as follows:

> According to one embodiment, a set of zones can be dynamically linked together using one command. Using what is referred to as a zone scene or scene, zones can be configured in a particular scene (*e.g.*, morning, afternoon, or garden), where a predefined zone grouping and setting of attributes in for the grouping are determined.

(*id.* at 21). It also described an "extension of this embodiment to trigger a zone scene command as an alarm clock function" (*id.* at 22). The provisional application did not include any claims.

It did include two sizable appendices, however. Each appendix was "annexed" to the specification to "provid[e] examples to teach and refer to various features, detailed designs, uses, advantages, configurations and characteristics in one embodiment of the present invention" (*id.* at 22–23). At first glance at trial, Appendix A and Appendix B looked

identical to the aforementioned zone scenes UI document and alarm clock UI document, respectively (*compare* TX6545 *and* TX6544, *with* TX2651 at 29–48 *and id.* at 49–81). Yet, as was discovered at trial and will be taken up below, the UI documents were *altered* before they were annexed to the provisional application specification. In particular, one sentence was omitted from the second page of the zone scenes UI document (*compare* TX6545 at 2, *with* TX2651 at 30). Meanwhile, the alarm clock UI document nearly doubled in size, but the page on zone scenes was left out (*compare* TX6544 at 27, *with* TX2651 at 49–81).

Keep in mind that the highlighted language was excluded from the UI documents when they were submitted as appendices to the provisional application specification:

> 'Party Mode' that currently ships with the product is one example of a Zone Scene.

Alarm Clock UI Document, Language Omitted from Appendix B Highlighted.

> The Zone Scene feature allows the user to arrange the zones into groups using one single command. This is similar to the current Party Mode setting that is available. However, the Zone Scene feature is much more flexible and powerful.

Zone Scenes UI Document, Language Omitted from Appendix A Highlighted.

(TX6544 at 27; TX6545 at 2). Significantly, whereas both sides agree that the original UI documents disclosed the claimed invention, they dispute whether the provisional application, with these altered versions of the UI documents appended, did so.

B. THE 2007 NON-PROVISIONAL APPLICATION.

*9 On September 11, 2007 — one day short of twelve months after the provisional application was filed — Sonos filed a corresponding non-provisional application with Inventor Lambourne listed as the named inventor, likewise entitled "Controlling and manipulating groupings in a multi-zone music or media system." This non-provisional application "claim[ed] the benefits of the provisional application" that it "incorporated by reference for all purposes" ('853 patent cross reference to related application). Because the non-provisional application was filed with a request for nonpublication, it was not published until it issued as United States Patent No. 8,483,853 on July 9, 2013. Although this patent has never been asserted against Google or others, its prosecution set a pattern for its descendants.

Like the provisional application, the non-provisional application was drafted broadly. The specification explained that "the present invention pertain[ed] to controlling a plurality of multimedia players, or simply players, in groups" ('853 patent 2:21–22). But it also described, "[a]ccording to one aspect of the present invention, a mechanism ... to allow a user to group some of the players according to a theme or scene, where each of the players is located in a zone," and, "[a]ccording to another aspect of the present invention, the scene [being] activated at any time or a specific time" and "used as an alarm" (*id.* at 2:23–26, 31–32, 36). In addition to including patent claims, the non-provisional application included an abstract, a background of the invention, a summary of the invention, a brief description of the drawings, and several new drawings.

On March 8, 2011, the non-provisional application received a non-final rejection from the Patent and Trademark Office, as the patent examiner found that all of its claims were anticipated by another Sonos patent, with CIO Millington listed as the named inventor, published on February 10, 2005. A few months later, on July 7, 2005, following an interview with the patent examiner, Sonos requested reconsideration and amended the non-provisional application "to provide an updated claim set directed to a certain set of embodiments," apparently those involving zone scenes. Even so, on October 13, 2011, the non-provisional application received a final rejection from the PTO, as the patent examiner found the new claim set unpatentable over a user manual for the Yamaha Digital Mixing Engine ("DME") 32 system, another "media player and controller" that was "functional in the manner claimed" (Final Rejection, Oct. 13, 2011, at 3). This order will refer to the user manual as the Yamaha DME prior art.

According to the patent examiner, the Yamaha DME prior art taught, *inter alia*, "user interface functions to graphically configure plural audio processor scenes and configurations upon a plurality of cascaded i/o interfaces," as well as "storage and recall of scenes and configurations comprising specific operation parameters," "including synchronization and connections among plural networked audio processors" (*ibid.*). This was the first rejection based on the Yamaha DME prior art in the patent family, but it would not be the last. Over the years, the very same patent examiner would go on to reject the applications for the patents in suit and *every single parent application* — often more than once, and often with nearly identical language — based on the Yamaha DME prior art.

After this "final rejection," having initially declined to amend its claims while seeking continued examination on

December 13, 2011, Sonos narrowed them considerably in an amendment submitted on February 7, 2012, and the patent examiner issued a notice of allowance on April 18, 2013. The first zone scene patent issued as the '853 patent on July 9, 2013, at which point it was published and the provisional application from which it descended was made available to the public. Critically, the '853 patent did not claim customized, saved, overlapping groups of zone players that could be invoked on demand. As stated, the '853 patent has never been asserted against Google (or others).

4. GOOGLE'S DISCLOSURE AND IMPLEMENTATION OF OVERLAPPING ZONE SCENES.

*10 Just before the '853 patent issued, Sonos and Google employees exchanged a series of emails that gave rise to meetings between the two companies. By now it was 2013. Smartphones had taken hold, music and video streaming was taking off, and both sides saw that they stood to gain from working with each other. Having just launched a digital music service, Google Play Music, Google was eager to integrate it with Sonos products. Meanwhile, having waited many years for "streaming music adoption to really become a thing," as Sonos General Counsel Alaina Kwasizur put it at trial, Sonos was eager to make more digital music services accessible on its products to further cement its position as the leader in wireless multiroom audio (Tr. 1010:3). Audio-focused competitors Bluesound and Denon would release competing products in 2013 and 2014.

According to CIO Millington's testimony, seeing that "one of the key purposes" of Sonos products "was to play streaming music services from the internet," Sonos personnel "had kept in touch over the years with some Google personnel who were working on ... Google's music services" (Tr. 299:18–20). Shortly after Google Play Music launched on May 15, 2013, CIO Millington sent Google Engineer Chris Yerga an email congratulating him on the launch and complimenting him that it had been well received. Engineer Yerga wrote back that he was a fan of Sonos and that he wanted to talk about bringing Sonos and Google together with respect to the new digital music service. So, that July, the parties held a meeting to discuss how Google Play Music could be made available to Sonos users. At this meeting, Sonos shared its hardware products and its application programming interface used to integrate digital music services. More fawning followed, with Google Engineer Debajit Ghosh emailing his positive feedback, telling CIO Millington that Sonos had built "an incredible product" (TX359).

The following year, in July 2014, the parties held another meeting at which Google pitched a new collaboration — participation in the Cast for Audio program. At this meeting, Google shared its vision (and a "Confidential and Proprietary" slide deck) for providing a simple, standardized platform that would connect devices that played music with devices that controlled streaming apps. This stood to help audio device manufacturers used to supporting music playback from traditional sources like radio broadcast and CDs, as well as streaming companies experiencing challenges integrating their apps with the wide variety of audio devices on the market. It also stood to help consumers bearing the brunt of incompatibility — Google's proposed program would have been cross-brand, supporting products from different manufacturers (*see* TX0125 at 3–4). Using Google's Cast for Audio software, an audio device manufacturer like Sonos would have been able to make its devices compatible with third-party audio devices and third-party streaming apps.

Notably, in pitching Cast for Audio to Sonos, Google shared plans for a "Cast Multi-Zone feature" (TX0125 at 5). Several presentation slides focused on "Multi Zone Groups" (*id.* at 17–22). Specifically, one slide explained that each Cast for Audio device would "be a member of several groups," *e.g.*, "1st floor" and "Parents" (*id.* at 18). In other words, Google directly revealed to Sonos its plans to create a product that would implement *customized, overlapping groups* of multimedia players:
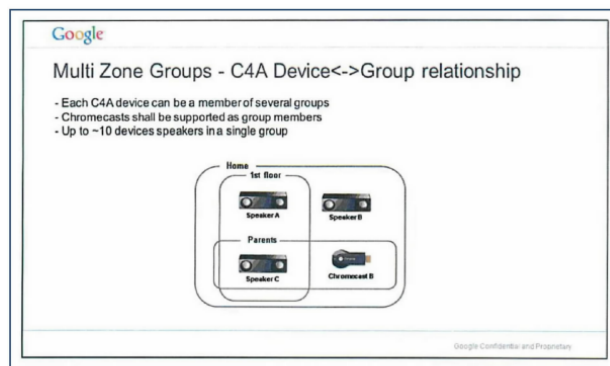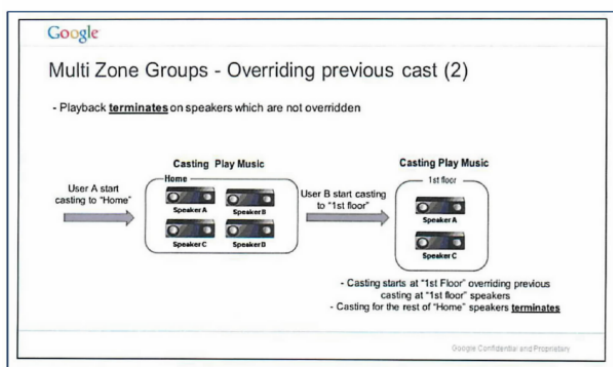

Cast for Audio Slide Deck: Customized Overlap.

(*ibid.*). Moreover, other slides showed a user continuing to play music on one multimedia player individually (*e.g.*, "Speaker A") before that player was invoked in a group (*e.g.*, "Home"), and a user continuing to play music on multimedia players in one group (*e.g.*, "Home") before some configuration of those players was invoked in another group (*e.g.*, "1st Floor"). In other words, Google directly revealed

to Sonos its plans to create a product that would implement *saved* groups of multimedia players that could be *invoked on demand*:
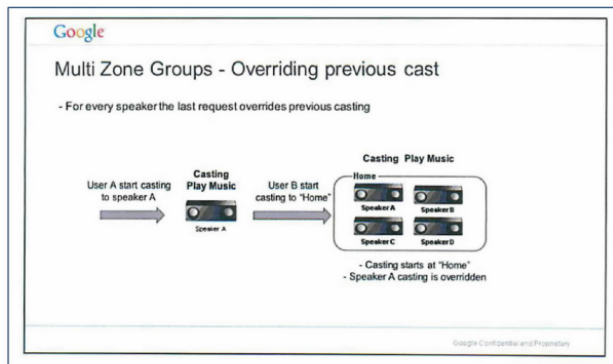
Cast for Audio Slide Deck: Save & Invoke I.

Cast for Audio Slide Deck: Save & Invoke II.

(*id.* at 24–25). All told, at this meeting, Google decisively disclosed to Sonos its plans to create a product that would implement customized, saved, overlapping groups of multimedia players that could be invoked on demand — plans to practice what would become the claimed invention of the patents in suit.

Recall, at that time, Sonos products were themselves still incapable of practicing the invention. Zone players remained "smart amplifiers" hard-wired to one or more speakers; Sonos did not launch its first smart speaker until a few months after this presentation in September 2014, and it did not roll out the invention in its own products until June 2020. Sonos said nothing to Google about infringement of its patents or potential patents.

In the end, Sonos did not participate in the Cast for Audio program, which failed to materialize. But soon, as General Counsel Kwasizur explained, "we started to see big technology companies ... showing up in our neighborhood" (Tr. 297:16–18). In December 2015, Google entered the wireless multiroom space with two new Chromecast devices. It is undisputed that these devices were released with the accused functionality. According to Sonos,

they practiced the invention. In November 2016, Google launched its first smart speaker product, the Google Home, and in October 2017, it went on to launch another, the Google Home Mini. It is likewise undisputed that these products, and several other Google products that followed, were released with the accused functionality. According to Sonos, they too practiced the invention. Around this time, Amazon and Apple were also entering the fray, releasing their own smart speakers in 2017 and 2018, respectively, which presumptively were released with the accused functionality as well. Many consumers sought out products offered by Google, some on account of lower prices, others on account of voice-assistive technology and integration with the Google ecosystem.

5. THE PATENTS IN SUIT.

In order for a patent holder to claim priority to a provisional application, it must claim priority to an intermediate non-provisional continuing application that is copending, *i.e.*, not yet patented or abandoned. Although the April 2019 applications for the patents in suit were not themselves copending with the September 2006 provisional application, they were copending with the September 2007 non-provisional application that claimed priority to it through a daisy chain of continuation applications. A pattern developed. Just before a patent would issue, Sonos would file another continuation application to keep the daisy chain alive. [4]

*12 By November 2018, Sonos had three "zone scene patents" — the '853 patent, which issued on July 9, 2013; United States Patent No. 8,843,228, which issued on September 23, 2014; and United States Patent No. 9,344,206, which issued on May 17, 2016. It had yet to assert any of them. Those patents did not claim overlapping zone scenes. And, recall, zone scenes were already disclosed by the prior art. As such, those patents claimed niche variations of little consequence. For example, in the reasons for allowance of the '206 patent, the patent examiner observed that "[t]he prior art does not reasonably teach a loudspeaker system wherein a first independent playback device in the form of a networked loudspeaker or networked master loudspeaker is polled or subject to discovery to determine a zone scene configuration or plurality thereof ...." (Notice of Allowance, Jan. 20, 2016).

Sonos also had a further application pending, which served as the parent application for the patents in suit. This application ultimately issued after them as United States Patent No. 11,388,532 on July 12, 2022. On November 14, 2018, however, Sonos had just received a final rejection of that

application from the PTO, once again on account of the Yamaha DME prior art. This was the same prior art that had been relied upon by the same patent examiner in initially rejecting all of the parent applications in the family.

According to the patent examiner, Yamaha "DME cause[d] an indication to be displayed which [wa]s provided by the utility of an open or new command sufficient to open or create a zone scene for instantiation on the plurality of playback devices" and "a particular configuration of players" (Final Rejection, Nov. 14, 2018, at 5). He observed that this was "substantially similar to the disclosed invocation of a scene such as upon the instant disclosed players upon the event of a stored alarm configuration," which, the "Examiner must point out ... [was] the extent of the indication disclosed by the [preceding] applications" (*id.* at 6). The examiner then emphasized that "it would have been obvious to one of ordinary skill in the art on or before the effective priority date of the instant application to operate the DME disclosed displayed selectable indicators to cause one or more zone scenes to be invoked on two or more playback devices," "[a]s this would comprise no more than a choice between a finite number of identified predictable solutions" (*id.* at 7). According to the patent examiner, based on the Yamaha DME prior art, it would have been obvious to customize, save and invoke groups of zone players on demand. Zone scenes remained obvious.

To get around this, and to secure patents that would read on the products of the big technology companies who had shown up in the neighborhood, Sonos reframed the invention it attempted to claim in the '532 patent. On March 21, 2019, in a request for reevaluation, Sonos for the first time made the argument that the Yamaha DME prior art had not disclosed customizing, saving, and later invoking *overlapping* zone scenes, "wherein the zone configuration data characterizes two or more zone scenes, wherein a first zone scene identifies a first group configuration *including the first independent playback device and a second independent playback device*, and wherein a second zone scene identifies a second group configuration *including the first independent playback device but not the second independent playback device*" (Remarks Made in Amendment, Mar. 21, 2019, at 8–9). Sonos concurrently amended the claim language to refer to "two or more" zone scenes instead of "at least one" (Claims, Mar. 21, 2019; *see, e.g.*, *id.* at 2).

Then, on April 12, 2019, less than a month after filing its request for reevaluation and amendment of the application for the '532 patent, Sonos filed the continuation applications for

the patents in suit, the '885 and '966 patents (TX003; TX001). Unlike the prior applications in the family, these two applications were filed "Track One" for prioritized (expedited) examination, and they were filed with a combined 70,000 pages of disclosures — even though the patent examiner's rejections had only rested on one prior art publication, either alone or in combination with a few other prior art publications, over the course of the last thirteen years. (Those disclosures explain the twenty-six pages of "References Cited" at the beginning of the '885 patent, and the eighteen pages of "References Cited" at the beginning of the '966 patent.) Whereas the '885 patent claimed the technology from the perspective of a zone player (*e.g.*, a smart speaker), the '966 patent claimed the technology from the perspective of a computing device that controlled at least three zone players (*e.g.*, a smartphone).

*13 Like the other applications in the patent family, the applications for the patents in suit claimed priority to the 2006 provisional application and incorporated it by reference, but they also contained new abstracts that expressly highlighted overlapping zone scenes. Specifically, the applications described the creation of "a first zone scene including a first preconfigured grouping of zones" with a "first zone" and "second zone," creation of "a second scene including a second preconfigured grouping of zones" with a "first zone" and "third zone," and an instruction invoking one of those zone scenes that causes the zones to be "configured" for synchronous playback (TX0004 at 4703; TX0006 at 43). They also included claims that expressly called for groups of zone players that shared a zone and thereby attempted to claim overlapping zone scenes (TX0004 at 4696–4702; TX0006 at 35–42).

On July 5, 2019, Sonos received non-final rejections for both of these new applications from the PTO, again, on account of the Yamaha DME prior art. The patent examiner observed that "while DME does not explicitly teach the inclusion, exclusion etc, of particular enumerated first, second, etc. players of the set of available players to form, create, save, recall etc. a particular first, second etc. grouping[,] Examiner takes official notice that the grouping and sub-grouping of a constellation of audio players was well known" and that the "DME system enables the practice of the claimed subject matter without undue experimentation" (TX0004 at 4577; TX0006 at 3804). In other words, not only were zone scenes obvious, so were overlapping zone scenes. In its response, Sonos did the following.

First, Sonos amended the *claims* of both applications to clarify that "the first zone player" would operate "in a standalone mode in which" it was "configured to play back media individually ... until a given one of the first and second zone scenes has been selected for invocation," at which point it would transition out of standalone mode to play music in synchrony with one or more zone players (TX0004 at 810–12; TX0006 at 4087–88; *see generally* TX0004 at 810–20; TX0006 at 4087–4100). In essence, the standalone mode limitations provided (slightly) more detail on implementing overlap, thereby narrowing the proposed claims to evade prior art.

Second, Sonos amended the *specification and figures* of both applications (TX0004 at 808–09; TX0006 at 4085–86). Ordinarily, an applicant can only amend continuation applications to pursue new claims for subject matter previously disclosed; the idea is that, because all of the subject matter was previously disclosed in a parent application, the new claims should be entitled to that parent application's earlier effective filing date. But 37 C.F.R. Section 1.57(g) provides for an exception. Specifically, it provides for the insertion of material incorporated by reference into the specification or drawings of a continuation application by way of amendment when that amendment is accompanied by a statement that the material being inserted is material previously incorporated by reference *and that the amendment contains no new matter*.

Pursuant to that regulation, on August 23, 2019, Sonos claimed to "insert material into the specification and figures that was previously incorporated by reference in this application" (TX0004 at 821; TX0006 at 4101). In doing so, it represented that "the amendment contain[ed] no new matter" and that "the inserted material c[ould] be found at least at pp. 5–6 and 17 of Appendix A to [the] provisional application," "the entirety of which was incorporated by reference on the filing date of this application" (*ibid.*). Again, whether there was indeed new matter has become important here and will be addressed below.

On Sonos's representation that its amendment to the specification and figures contained no new matter, the patent examiner allowed the amendments to the applications for the patents in suit (and the application for the '532 patent). The '966 patent issued on November 5, 2019, and the '885 patent issued on November 24, 2020.

6. OUR LITIGATION.

*14 On September 29, 2020, Sonos sued Google for patent infringement in the Western District of Texas. One day before, Google sued Sonos for declaratory relief in the Northern District of California. And, one year later, the infringement action was transferred to this district at the direction of the Federal Circuit. The civil actions were related and ultimately consolidated for trial.[5]

Originally, Sonos asserted five patents, including the '966 patent and one of its predecessors, the '206 patent. But after Judge Alan Albright indicated that he was inclined to find the '206 patent claims indefinite shortly before the infringement action was transferred, Sonos opted to dismiss its infringement claims based on the '206 patent. It asserted the '885 patent instead, which had just issued.

Here, summary judgment motions whittled down the actions. By the time of our trial in May 2023, they turned on the '885 and '966 patents. With respect to the '885 patent, Sonos asserted claim 1 and accused Google media players (*e.g.*, a Google Nest Mini speaker). With respect to the '966 patent, Sonos asserted claims 1, 2, 4, 6, and 8, and accused all smartphones and other computing devices that have or had the Google Home app installed (*e.g.*, an iPhone with the Google Home app).[6] After an order found claim 1 of the '885 patent infringed, Google implemented a redesign that it disclosed to Sonos during discovery. On account of this redesign, it contended that the accused products no longer infringed the asserted claims of either patent.

The issues tried by the jury were: (1) Sonos's claim for direct infringement of claim 1 of the '885 patent with respect to the redesigned accused products, and Google's associated non-infringement and invalidity defenses; (2) Sonos's claim for direct, indirect, and willful infringement of claims 1, 2, 4, 6, and 8 of the '966 patent with respect to the original and redesigned accused products, and Google's associated non-infringement and invalidity defenses; and (3) damages for infringement of claim 1 of the '885 patent and, if applicable, claims 1, 2, 4, 6, and/or 8 of the '966 patent. The parties stipulated, and the judge agreed, that remaining affirmative defenses and injunctive relief would be evaluated by the judge after the jury verdict, with each side having "14

hours [of evidence time] to present *all* of the issues to be tried in this case" (Final Pretrial Order 8; *see* Proposed Final Pretrial Order 2–3, 5).

*15 A unanimous jury found: (1) Google failed to prove, by clear and convincing evidence, that the asserted claims of either patent were invalid; (2) Sonos proved, by a preponderance of the evidence, that claim 1 of the 🚩'885 patent was infringed with respect to the redesigned accused products; and (3) Sonos failed to prove, by a preponderance of the evidence, that claims 1, 2, 4, 6, and 8 of the 🚩'966 patent were infringed with respect to the original and redesigned accused products. As for damages, the jury found that a per-unit royalty of $2.30 would adequately compensate Sonos for Google's infringement of the 🚩'885 patent, and it multiplied this by 14,133,558 units to derive a $32,507,183.50 damages award (Dkt. No. 774).

For reference, claim 1 of the 🚩'885 patent is included below:

1. A first zone player comprising:

a network interface that is configured to communicatively couple the first zone player to at least one data network;

one or more processors;

a non-transitory computer-readable medium; and

program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players;

(i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

(ii) receiving, from the network device over the data network, a second indication that the first zone player

has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

(🚩'885 patent 11:36–12:22).

After the jury verdict, the judge requested briefing on the remaining affirmative defenses and injunctive relief, and the parties filed renewed motions for judgment as a matter of law. Google argued, *inter alia*, that the patents are unenforceable under the affirmative defense of prosecution laches. A hearing followed. This order follows full briefing and oral argument.

ANALYSIS

*16 Prosecution laches is an equitable affirmative defense. The doctrine may "render a patent unenforceable when it has issued only after an unreasonable and unexplained delay in prosecution that constitutes an egregious misuse of the statutory patent system under a totality of the circumstances."

Hyatt v. Hirshfeld, 998 F.3d 1347, 1360 (Fed. Cir. 2021) (quoting *Cancer Rsch. Tech. Ltd. v. Barr Lab'ys, Inc.*, 625 F.3d 724, 728 (Fed. Cir. 2010)). As such, it "places an additional, equitable restriction on patent prosecution conduct beyond those imposed by statute or PTO regulation." *Id.* at 1366. A patent applicant must "not only comply with the statutory requirements and PTO regulations but must also prosecute its applications in an equitable way that avoids unreasonable, unexplained delay that prejudices others." *Ibid.*

To prove prosecution laches as a defense to patent infringement, an accused infringer must show: (1) the patent holder's delay in prosecution was unreasonable and inexcusable under the totality of circumstances; and (2) the accused infringer suffered prejudice attributable to the delay. *Cancer Rsch.*, 625 F.3d at 729. With respect to the first element, the determination of unreasonable and inexcusable delay is not limited to the circumstances surrounding the particular patent applications at issue and can include "the prosecution history of all of a series of related patents and overall delay in issuing claims." *Symbol Techs., Inc., v. Lemelson Med., Educ. & Rsch Found., LP* (*Symbol Techs., II*), 422 F.3d 1378, 1385–86 (Fed. Cir. 2005). With respect to the second element, prejudice requires a showing of intervening rights, in that "either the accused infringer or others invested in, worked on, or used the claimed technology during the period of delay." *Cancer Rsch.*, 625 F.3d at 729.

The Federal Circuit has not expressly clarified an accused infringer's burden of proof for prosecution laches, so this order errs on the side of caution and applies clear and convincing evidence, consistent with what is required for other unenforceability defenses. *See, e.g., id.* at 732 (applying clear and convincing evidence for inequitable conduct); *see also Personalized Media Commc'ns, LLC v. Apple, Inc.*, 552 F. Supp. 3d 664, 684–85 (E.D. Tex. 2021) (Judge Rodney Gilstrap), *aff'd*, 57 F.4th 1346 (Fed. Cir. 2023) (applying clear and convincing evidence for prosecution laches). In the end, it makes no difference here. [7]

1. UNREASONABLE AND INEXCUSABLE DELAY.
Having considered the totality of the circumstances, this order concludes, by clear and convincing evidence, that Sonos was guilty of unreasonable and inexcusable delay in its prosecution of the patents in suit.

To recap, Sonos filed the provisional application from which the patents claim priority in September 2006, but it did not file applications for the patents in suit, with claims on overlapping zone scenes, until April 2019. Moreover, those claims were amended to include the "standalone mode" limitations in August 2019 before the applications issued as patents in November 2019 and November 2020. That was *over thirteen years* after Sonos had filed the provisional application. That was also well after Google had disclosed the claimed invention to Sonos and, on its own, brought the claimed invention to the market.

*17 Although the Federal Circuit has "not set forth any firm guidelines" for determining when a delay in prosecution is unreasonable and inexcusable, it has "discussed precedent such as *Woodbridge v. United States*, 263 U.S. 50, 44 S. Ct. 45, 68 L. Ed. 159 (1923), and *Webster Electric Co. v. Splitdorf Electrical Co.*, 264 U.S. 463, 44 S. Ct. 342, 68 L. Ed. 792 (1924), wherein the Supreme Court applied the doctrine of prosecution laches to render patents unenforceable." *Symbol Techs. II*, 422 F.3d at 1385. In these two decisions, the Supreme Court found patents unenforceable based on nine-year and eight-year delays in presenting claims. *See Woodbridge*, 263 U.S at 50; *Webster*, 264 U.S. at 465. In the decision in which the Federal Circuit applied prosecution laches for the first time, it likewise found patents unenforceable based on an eight-year delay in presenting claims. *In re Bogese*, 303 F.3d 1362, 1369 (Fed. Cir. 2002). And, in its two most recent decisions affirming prosecution laches determinations, the Federal Circuit found patents unenforceable based on ten-year to nineteen-year delays in presenting claims. *See Personalized Media Commc'ns, LLC v. Apple Inc.* (*PMC*), 57 F.4th 1346, 1355 (Fed. Cir. 2023) (citing *Hyatt*, 998 F.3d at 1368). Here, Sonos delayed thirteen years in presenting claims. "The magnitude of [Sonos's] delay in presenting [its] claims for prosecution suffices to invoke prosecution laches." *Hyatt*, 998 F.3d at 1367.

Remarkably, at trial, Sonos never provided any sworn explanation for why it waited until April 2019 to claim overlapping zone scenes. The only sworn explanation addressed a different delay: delay in coming out with its own products that implemented overlapping zone scenes, which took place in June 2020. Even crediting the testimony of Sonos's witnesses that earlier Sonos products lacked

sufficient memory to practice the claimed invention (*see, e.g.*, Tr. 915:20–22), that in no way explained why Sonos failed to seek claims on this invention until April 2019. In other words, this testimony addressed why Sonos delayed in practicing the invention, not why Sonos delayed in patenting it.

Meanwhile, the thrust of Sonos's explanation in its post-trial brief is that it diligently prosecuted the family of patent applications in the interim: from September 2006, when it filed a provisional application that allegedly disclosed the invention; through September 2007, when it filed a corresponding non-provisional application that allegedly disclosed the invention; through May 2013, August 2014, and April 2016, when it filed additional non-provisional applications that incorporated those earlier applications by reference; all the way up to April 2019, when it filed the applications for the patents in suit that claimed the invention (*see* Opp. 6). In other words, Sonos emphasizes that it complied with the statutory requirements and PTO regulations. Yet a patent applicant must "not only comply with the statutory requirements and PTO regulations but must also prosecute its applications in an equitable way that avoids unreasonable, unexplained delay that prejudices others."

Hyatt, 998 F.3d at 1360 (citation omitted). That Sonos diligently prosecuted patent applications in the interim does not render the delay any less unreasonable and inexcusable. Indeed, it renders the delay *all the more* unreasonable and inexcusable.

At all relevant times in the more than thirteen years it took for Sonos to present its claims, Sonos had related applications on file. It would have been a small step for Sonos to amend those applications to claim the invention. Likewise, nothing prevented Sonos from filing parallel applications with new claims covering the invention. Sonos did not have to run out its string of inert applications before turning to claim the invention that mattered. Indeed, Sonos already had an application pending (for the '532 patent) when it filed the applications for the patents in suit.

Moreover, the Federal Circuit has explained that "subject matter disclosed by a patentee, but not claimed, is considered dedicated to the public," the reason being "that members of the public reading a disclosure of particular subject matter are entitled, absent a claim to it, to assume that it is not patented and therefore dedicated to the public." *Eli Lilly & Co. v. Hospira, Inc.*, 933 F.3d 1320, 1334 (Fed. Cir. 2019) (citations omitted). True, the Federal Circuit has recognized

an exception for subject matter "claimed in a continuation or other application based on the disclosure," *ibid.*, but it has also recognized that unreasonable, inexcusable delay "is not what is contemplated by the patent statute when it provides for continuation and continuation-in-part applications" and "creates an 'adverse effect on businesses that [are] unable to determine what [is] patented from what [is] not patented.'" *See* *Hyatt*, 998 F.3d at 1361 (alterations in original) (quoting *Symbol Techs. II*, 422 F.3d at 1386). As such, that an invention may have been lurking between the lines of an earlier application does not excuse a delay in presenting claims on it.

*18 It is also true that a patent applicant is allowed to draft claims to read on competitors' products and claim a priority date that precedes them. *See* *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 909 n.2 (Fed. Cir. 2004) (citing *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 874 (Fed. Cir. 1988)). But that is only so long as there is no unreasonable, inexcusable delay, and so long, of course, that an earlier specification really did disclose the claimed invention.

2. PREJUDICE.

In addition, having considered the totality of the circumstances, this order concludes, by clear and convincing evidence, that Google suffered prejudice by reason of delay by Sonos.

Again, this element requires a showing of intervening rights, in that "either the accused infringer or others invested in, worked on, or used the claimed technology during the period of delay." *Cancer Rsch.*, 625 F.3d at 729. Here, Google began investing in the accused products by at least 2015, when it released its first products that practiced the invention. Sonos never offered sworn evidence that Google suffered no economic prejudice. To the contrary, its very theory of the case presented at trial was that Google invested in building out a line of products that infringed Sonos's patents and that Google profited off this investment. There is no question that Google worked on, invested in, and used the claimed technology during the period of Sonos's delay.

In its post-trial brief, Sonos attempts to sidestep the issue by arguing that there was no prejudice because Google could have studied the tortured prosecution history dating back to

2006 before investing in infringing products (*see* Opp. 11). This argument is highly unpersuasive for several reasons.

First, unearthing the layers of file histories would have resembled an exercise in archeology. As even Sonos's own counsel acknowledged at trial, "it is, actually, a very confusing priority chain. I've seen a lot, and it's confusing" (Tr. 969:1–3). Because the 2007 non-provisional application was filed with a request for non-publication, it was not even published until it issued in 2013 — mere months before Sonos and Google first explored a Google Play Music collaboration, and one year before the Cast for Audio presentation. Furthermore, the 2006 provisional application, by definition, *was never published*. It was made available to the public in 2013, but it was (and is) not publicly searchable like standard patents and patent applications.

Second, the earlier applications *never claimed the invention*. Claims define a patent holder's rights. "[W]e look to the words of the claims themselves ... to define the scope of the patented invention." *Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996)*. We do not look to the specifications of much earlier related patents to define the scope of a patented invention, and we certainly do not look to an appendix to the specification of a much earlier unpublished provisional application.

Third, it turns out that the earlier applications *never disclosed the invention*. That is why Sonos had to add new matter. If Sonos itself was unable to find the disclosure in the specification prior to 2019, how could Google have been expected to find it? Sonos's machinations during prosecution, inserting new matter into the specification and masquerading it as subject matter previously disclosed, have turned out to be so important that they will be detailed separately.

 *19 Another unavailing argument Sonos raises in its post-trial brief is that there was no prejudice because Sonos had previously patented broader claims that would read on Google's products (*see* Opp. 11). But, with the exception of the '206 patent claims (that Sonos promptly withdrew upon Judge Albright's comment on indefiniteness), Sonos never asserted *any of these earlier claims*. This is telling. Those claims were, in fact, *very narrow*, with the patent examiner having repeatedly rejected any suggestion that Sonos had invented zone scenes (and having at least once rejected the suggestion that Sonos had invented overlapping zone scenes).

In sum, in considering the totality of the circumstances, including the prosecution history of the series of related patents and the overall delay in issuing claims, this order finds and concludes, by clear and convincing evidence, that Sonos was guilty of unreasonable and inexcusable delay in prosecution of the patents in suit, to the extreme prejudice of Google and others.

This order will now take up two of Sonos's arguments that do not carry the day but warrant a deeper dive.

3. PROSECUTION LACHES APPLIES TO POST-1995 APPLICATIONS.

Much ink has been spilled by Sonos in seeking to demonstrate that the affirmative defense of prosecution laches is dead (Opp. 2–3, 5–6). It is not.

Sonos (correctly) observes that, despite issuing comprehensive opinions expounding on the doctrine of prosecution laches in recent years, and even as recently as a few months ago, the Federal Circuit has yet to affirm the application of this defense to patent applications originally filed after 1995. Needless to say, if the doctrine were dead with respect to applications filed after 1995, it would have been easy for the Federal Circuit to say so in opinions it issued after 1995. And, the Federal Circuit has *only* affirmed the application of prosecution laches *after* 1995 (in 2023, 2021, 2005 and 2002). *See* *PMC, 57 F.4th at 1350*; *Hyatt, 998 F.3d at 1370*; *Symbol Techs. II, 422 F.3d at 1385*; *In re Bogese, 303 F.3d at 1363*. Meanwhile, the defense was only endorsed by the Federal Circuit as a grounds for challenging patent enforceability *after* 1995 (based on Supreme Court precedent from a century ago). *Symbol Techs. v. Lemelson, 277 F.3d 1361, 1364–68 (Fed. Cir. 2002)*.

So why 1995? Essentially, Sonos contends that prosecution laches lost its luster that year because that was when the United States moved from a patent term of 17-years-from-issuance to a patent term of 20-years-from-filing, thereby reducing the incentive to delay the issuance of a "submarine patent" that surfaces unexpectedly and catches competitors off guard. Because the '885 and '966 patents claim priority to a 2006 provisional application through a 2007 non-provisional application, Sonos ostensibly "did not (and could not) 'postpone' its patent monopoly by delaying filing its patent applications" for the patents in suit (Opp. 5). According to Sonos, "[p]rosecution laches developed to thwart the

'practice' of 'deliberately and without excuse postpon[ing] beyond the date of the actual invention, the beginning of the term of [the patentee's] monopoly,' " and "that practice was a relic of the pre-1995 patent system" (*ibid.* (quoting ⚑*Hyatt, 998 F.3d at 1360*)). In support, Sonos selectively quotes the Federal Circuit's 2021 opinion in *Hyatt*, which itself quotes the Supreme Court's 1923 opinion in *Woodbridge*. But that 1923 decision, a forebearer of the prosecution laches defense, was not so circumscribed. Nor was *Hyatt*'s reading of it, for that matter.

As the Federal Circuit explained in *Hyatt*, *Woodbridge* "held that, by delaying to 'mak[e] the term of the monopoly square with the period when the commercial profit from it would have been highest,' [the patent holder] 'forfeit[ed] the right to a patent by designed delay.' " ⚑*Hyatt*, 998 F.3d at 1360 (quoting ⚑*Woodbridge*, 263 U.S. at 56). The Supreme Court recognized that this delay improperly "postpon[ed] the time when the public could freely enjoy [the invention] for nearly 10 years." ⚑*Woodbridge*, 263 U.S. at 56. Likewise, in *Webster*, a decision that issued the following year, the Supreme Court held that the patent claims first presented to the PTO following an eight-year delay reflected "an undue extension of the patent monopoly against private and public rights" and rendered the underlying patent unenforceable. *See* ⚑*Webster*, 264 U.S. at 466. In establishing the defense of prosecution laches, the Supreme Court was less concerned with the nuances of patent term duration and more concerned with manipulation of patent monopoly for profit at the expense of public enjoyment. And that is precisely what this Court is concerned with here.

*20 Sonos waited over *thirteen years* to patent the invention. Although this did not delay the priority date, it did "postpone[ ] beyond the date of the actual invention[ ] the beginning of the term of [Sonos's] monopoly." ⚑*Woodbridge*, 263 U.S. at 56. There simply *was no monopoly* on the claimed invention until the patents issued in 2019 and 2020. Having conceived of the claimed invention in 2005 (as stipulated), having known that Google planned to release a product that practiced it as early as 2014, and having known that Google, in fact, released products that practiced it as early as 2015, Sonos undertook "designed delay." It imposed limitations on the public's right to practice the invention after the fact, at considerable expense to Google, other companies, and consumers. Sonos thereby made the term of its patent monopoly "square with the period when the

commercial profit from it would be highest" — after Google and others had put the invention into practice and Sonos had sustained "damages." *Ibid.*

Just this year, the Federal Circuit rejected an argument that a district court committed legal error in finding unreasonable and inexcusable delay because the "conduct look[ed] nothing like *Hyatt* or the handful of other cases that have found prosecution laches." ⚑*PMC*, 57 F.4th at 1354. One can anticipate the same argument being made on appeal here. In rejecting the argument, the Federal Circuit emphasized that prosecution laches is a "flexible doctrine." *Ibid.* True, our patents are not the "submarine patents" of yesteryear, but they likewise issued after many years of lurking beneath the surface, catching competitors off guard. Sonos let the industry develop and only then sought to extract an invention from a much earlier application that would read on an industry trend. It is worse than that, actually, for Sonos learned of Google's specific product plans and *still waited five years* to frame claims to read on those products. A patent holder may only need a short (seven-year) term to extract a substantial (thirty-two-million-dollar) damages award.

Sonos has done exactly what the Supreme Court has long said should not be done. "It will not do for the patentee to wait until other inventors have produced new forms of improvement, and then, with the new light thus acquired, under pretence of inadvertence and mistake, apply for such an enlargement of his claim as to make it embrace these new forms." ⚑*Miller v. Bridgeport Brass Co.*, 104 U.S. 350, 355 (1881). As the Supreme Court explained in reference to reissues, "the rule of laches should be strictly applied; and no one should be relieved who has slept upon his rights, and has thus led the public to rely on the implied disclaimer involved in the terms of the original patent." *Ibid.* So too here.

4. NO DISCLOSURE IN ORIGINAL APPLICATIONS.

This order now turns to the details of a point made above — namely, that contrary to Sonos's position, the 2006 provisional application and the 2007 non-provisional application actually failed to disclose the invention. The truth is that Sonos did not so much as adumbrate, let alone disclose, the claimed invention *in any of its filings prior to 2019*.

In essence, Sonos's position is that because both sides agree the UI documents disclosed the claimed invention, and the UI documents were appended to the provisional application

as appendices, the provisional application disclosed the claimed invention. And, because the provisional application disclosed the claimed invention, and all subsequent non-provisional applications incorporated the provisional application by reference, all subsequent non-provisional applications disclosed the claimed invention (*see* Opp. 10).

As it turns out, however, this reasoning falls apart upon examination. The UI documents were *not* annexed to the provisional application as appendices. Rather, *altered versions of the UI documents* were annexed to the provisional application as appendices. Therein lies the rub.

 *21 Recall, the original zone scenes UI document *explicitly disclosed* zone scenes, *i.e.*, customized, saved groups of zone players that could be invoked on demand. For example, in the section on "Invoking a Scene," a "Party Mode" zone scene and a "Morning Wakeup" zone scene were displayed next to each other in one instance, and a "Party Mode" zone scene, a "Wakeup" zone scene, and a "Garden Party" zone scene were displayed next to each other in another. The visuals are now included below for reference:

Original Zone Scenes UI Document: "Party Mode" and "Morning Wakeup" Zone Scenes.

Original Zone Scenes UI Document: "Party Mode," "Wakeup," and "Garden Party" Zone Scenes.

(TX6545 at 5–6). And, the original UI documents *implicitly disclosed* overlapping zone scenes by reference to party mode in the Sonos 2005 prior art system. Specifically, the original alarm clock UI document stated that " 'Party Mode' that currently ships with the product is one example of a Zone Scene" (TX6544 at 27). The original zone scenes UI document similarly referred to the "current Party Mode setting" and represented "Party Mode" as a "Zone Scene" in various figures (TX6545 at 2, 5–6). Accordingly, when the original zone scenes UI document showed a "Party Mode" zone scene next to the "Morning Wakeup" zone scene, and a "Party Mode" zone scene next to "Wakeup" and "Garden Party" zone scenes, it would have been understood that these zone scenes would overlap because it would have been understood that the "Party Mode" zone scene would group all of the zone players in a system. As such, the original UI documents implicitly disclosed customized, saved, *overlapping* groups of zone players that could be invoked on demand — *i.e.*, the claimed invention. Both sides stipulated that the original UI documents conceived of the claimed invention but dispute whether the 2006 provisional application and the 2007 non-provisional application disclosed the invention (thereby reducing it to practice).

Importantly, before the UI documents were appended to the provisional application as appendices, *certain language*

was omitted. What was omitted? Crucially omitted was *all language describing party mode in the Sonos 2005 prior art system as a zone scene.* The relevant excerpts of the original UI documents with the highlighted language showing omissions are reproduced below:

'Party Mode' that currently ships with the product is one example of a Zone Scene.

Alarm Clock UI Document, Language Omitted from Appendix B Highlighted.

The Zone Scene feature allows the user to arrange the zones into groups using one single command. This is similar to the current Party Mode setting that is available. However, the Zone Scene feature is much more flexible and powerful.

Zone Scenes UI Document, Language Omitted from Appendix A Highlighted.

(TX6544 at 27; TX6545 at 2).

The provisional application specification likewise did not mention party mode as a zone scene. Instead, it advanced the idea that zone scenes were an invention, stating, for example, that "a set of zones ... dynamically linked together using one command[ ] [u]sing what is referred to as a zone scene or scene" was inventive (TX2651 at 22). The provisional application specification also explained that "[o]ptionally, a system may be supplied with a command that links all zones in one step" and that "[t]his may be a simple form of a zone scene" (*ibid.*).

Significantly, Sonos's deletion of the highlighted language in turn *omitted its (implicit) disclosure of overlapping zone scenes.* The public (and the patent examiner) would have had no way of knowing what party mode meant in Appendix A. [8] Accordingly, when Appendix A showed a "Party Mode" zone scene next to the "Morning Wakeup" zone scene — and a "Party Mode" zone scene next to "Wakeup" and "Garden Party" zone scenes — it no longer would have been understood that these zone scenes would overlap because it no longer would have been understood that the "Party Mode" zone scene would group all of the zone players in a system. The sentences needed to understand this were omitted. As such, as the provisional application did not disclose customized, saved, *overlapping* groups of zone players that could be invoked on demand — *i.e.*, the claimed invention.

 *22 Why did Sonos omit this language? Party mode in the Sonos 2005 prior art system *was what was described as inventive* in the 2006 provisional application specification. It was "a set of zones [that] can be dynamically linked together using one command[ ]" with a "predefined zone grouping" (TX2651 at 21). Sonos, no doubt, saw the risk that its own product — the Sonos 2005 prior art system, released

in January 2005 — would have served as invalidating prior art for a broad zone scene patent. [9]

At trial, Inventor Lambourne suggested that language from the original UI documents describing party mode as it existed in the Sonos 2005 prior art system as a zone scene was untrue and never should have been there:

Q. Do you see kind of in the middle of the screen, the middle of the page here there's a sentence that says, "Party Mode that currently ships with the product is one example of a zone scene"?

A. Yes ...

Q. Sitting here today, do you believe that to be a true statement?

A. No.

Q. So, if it's not true, why did you write it?

A. These were some notes that I added to the end of a spec that was sort of — the main body of the spec was previous pages. I used the — I used the description imprecisely. I think if I was to write — could write it again I wouldn't have used the word zone — Party Mode as an example of zone scene there.

(Tr. 462:16–20, 463:2–11). [10] This order rejects the explanation as not credible and finds that the omitted language was accurate and left out for the reason stated above.

The excising of party mode from the UI documents perhaps helped Sonos then, but it hurts Sonos now because it excised the only basis for finding the 2006 provisional application disclosed overlap. Accordingly, this order finds and concludes that the claimed invention was *not disclosed* by the 2006 provisional application. And, because it was not disclosed by the 2006 provisional application, it was not disclosed by the 2007 non-provisional application and the subsequent continuation applications by virtue of their incorporating by reference the 2006 provisional application. Sonos was too clever by half.

* * *

 *23 Sonos also contends that, irrespective of what was in the 2006 provisional application, the claimed invention was disclosed in the 2007 non-provisional specification, which was likewise incorporated by reference into all of the

subsequent continuation applications. The judge has reviewed all of the passages that Sonos contends disclosed the claimed invention (including those in a 56-page trial brief) and now disagrees. Here too, there was no disclosure of *overlapping* zone scenes whatsoever — only zone scenes generally, like in the 2006 provisional application.

In some instances, Sonos points to language describing *individual* zone scenes. The 2007 non-provisional specification described "form[ing] respective groups, *each of which is set up per a scene*," *i.e.*, a "Simple Scene" in the original zone scenes UI document (Dkt. No. 723 at 26 (quoting '853 patent 2:40–41); *id.* at 31 (quoting '853 patent 1:54–66)) (emphasis added). It also described "*a scene* creat[ing] separate groups of zones," *i.e.*, an "Advanced Scene" in the original zone scenes UI document (Dkt. No. 723 at 28–29 (quoting '853 patent 8:29–47)) (emphasis added). But in describing *individual* zone scenes, the specification never disclosed *overlapping* zone scenes.

In other instances, Sonos claims support for disclosure through mixing and matching distinct embodiments, combining one that disclosed a zone scene that "links all zones" with another that separately disclosed a zone scene that links some zones (Dkt. No. 723 at 27–28 (quoting, *e.g.*, '853 patent FIG. 3A, FIG. 3B, 8:52–60, 9:1–15)). A claimed invention is hardly disclosed "by picking and choosing claim elements from different embodiments that are never linked together in the specification." *Flash-Control, LLC v. Intel Corp.*, No. 20-2141, 2021 WL 2944592, at *4 (Fed. Cir. July 14, 2021). Moreover, *the Sonos 2005 prior art system also disclosed linking all zones and, separately, linking some zones*. Mixing and matching, therefore, shows nothing more than what the prior art already showed.

Further, Sonos looks to the disclosure in the description of the problem solved: that it was "difficult for the traditional system to accommodate the requirement of dynamically arranging the ad hoc creation and deletion of groups" (Dkt. No. 723 (quoting '853 patent 1:59–2:17)). With the power of hindsight, Sonos proceeds to clarify the problem as "each time a user created a new group with the 'den' player, the previous group with the 'den' player would be destroyed" (*id.* at 31). But *the specification itself* proceeded to clarify the problem as "the audio players have to be adjusted one at a time" and "there is a need to individually or systematically adjust the audio volume of the audio players" ('853 patent 2:7–10). Which is to say, *overlapping* zone scenes was not the required solution. The required solution was simply *zone scenes*, with audio players

"readily grouped" instead of linked one by one, and with "the players in a scene react[ing] in a synchronized manner" (*id.* at 2:6, 26–27).

Finally, Sonos focuses on Figure 6, which "shows a flowchart or process of providing a player theme or a zone scene for a plurality of players, where one or more of the players are placed in a zone" ('853 patent 9:59–61; *see id.* at FIG 6). In that flowchart, included below, there is an arrow after "save the scene with parameters" leading back up to "configure a zone scene." But there is no indication that a zone player that is already a member of a saved zone scene would be available for inclusion in a subsequent one. Indeed, the specification *teaches against this*, explaining that "[t]he user may be given an interface to select *four of the ten players* to be associated with the scene" (*id.* at 10:3–4).
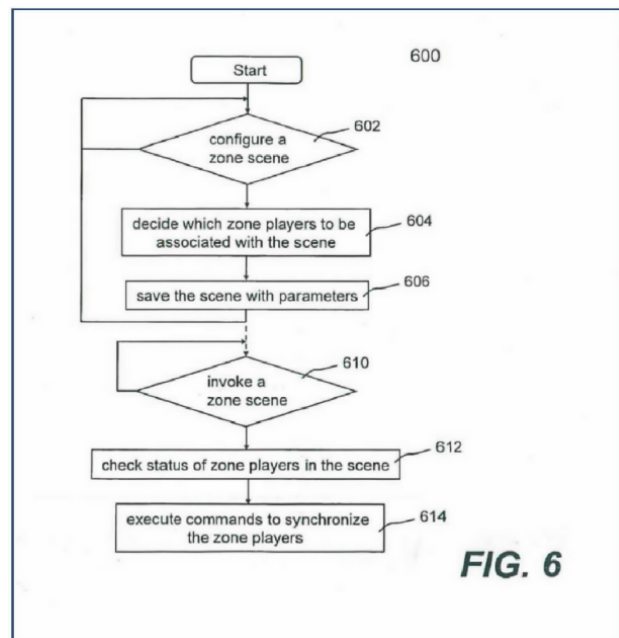

Figure 6 from 2007 Non-Provisional Application (and Patents in Suit).

In sum, Sonos did not disclose the claimed invention in the 2006 provisional application, the 2007 non-provisional application, or any of the subsequent continuation applications by virtue of their incorporation by reference prior to 2019.

5. THE NEW MATTER.

So where *was* the claimed invention disclosed? When the judge inquired at trial, upon realizing that "the heart of the case is the overlapping," Sonos pointed to a passage in the

specification of the patents in suit (the italicized sentence being the critical disclosure):

> FIG. **5**B shows another user interface **520** to allow a user to form a scene. The user interface **520** that may be displayed on a controller or a computing device, lists available zones in a system. *The list of zones in the user interface 520 includes ALL the zones in the system, including the zones that are already grouped.* A checkbox is provided next to each of the zones so that a user may check in the zones to be associated with the scene.

(Tr. 659:15–22, 662:6; 🚩'885 and 🚩'966 patent 10:12–19).

Counsel for Sonos had represented, and Sonos witnesses proceeded to represent, that the specification of the patents in suit was identical to the specification of the earlier applications. Specifically:

- Counsel for Sonos stated that the specification of the patents in suit "ha[d] an initial sentence in the very first [*sic*] that says this application claims priority to such and such an application. Other than that, no changes" (Tr. 656:15–22).

- Sonos Expert Dr. Kevin Almeroth testified that the patents in suit "date[d] back over time where patents were filed with the same specification and they ha[d] different sets of claims at the end. But the description of the invention, what the specification [was], the columns in it, the figures, that's all the same" (Tr. 676:25–677:5).

- General Counsel Kwasizur proffered testimony that referred to the "patents in the zone scene family" as "patents that ha[d] the same specification as both the asserted patents in this case" (Dkt. No. 705 at 3). Meanwhile, her supporting declaration explained that the 2007 non-provisional application issued as a patent that "share[d] a substantively identical specification to the zone patents at issue in this case" (Dkt. No. 705-1 ¶ 8).

But, this was not true, as counsel for Sonos later confessed:

> I need to apologize for a clarification. You and I had a discussion yesterday about the specification in this case and whether it's the same, and I said it was the same, and that's true insofar as there's an incorporation by reference in the specification to the provisional.
>
> However, the specification has changed in slight ways as the applicant has amended the specification over the years to bring in things from the provisional, which is perfectly permissible under Rule 57(g). I just thought I should bring that up.

(Tr. 748:6–16). Yes, he should have brought that up. But even this was misleading. It later turned out that the sentence (italicized above) that Sonos had directed the judge to in order to support disclosure of the claimed invention *did not appear* in the 2007 non-provisional application specification. Rather, it was *added during prosecution in August 2019 by way of amendment* — mere months after the applications for the patents in suit were filed — with a statement that this material was previously incorporated by reference in this application and this amendment contained no new matter. That prosecution statement identified specific pages of Appendix A to the 2006 provisional application where the inserted material could be found (TX0004 at 821; TX0006 at 4101).

*25 In fact, this was the very same sentence that the judge had earlier used as his primary evidence in finding written description support for overlap at summary judgment last year. Sonos had moved for summary judgment of infringement of claim 1 of the 🚩'885 patent. Google had opposed and cross-moved for summary judgment of invalidity of that claim, asserting, *inter alia*, that it lacked written description support. Sonos, in reply, had directed the judge to the sentence:

> [T]he 🚩'885 Patent discloses that when a user is selecting which "zone players" to add during setup of each "zone scene," the user is presented with "ALL the zones in the system, including the zones that are already grouped" – which conveys to a POSITA that each "zone scene" being set up can include any grouping of "zone players" in a multi-zone audio system, regardless of whether the "zone players" are included in any other "zone scenes" and thus that multiple "zone scenes" with one or more overlapping "zone players" can be set up and exist at the same time.

(Dkt. No. 273-4 at 9 (citing ⚑'885 patent 10:12–19, 10:4–6; 10:36–42; Ex. R, ¶ 47)).

At that time, neither party informed the judge that this very passage had been inserted by way of amendment in August 2019. As the judge explained at trial upon learning this, "I ruled for Sonos specifically [calling] out a sentence in the specification that was served up by Sonos to say there was an adequate written description," "I did not realize that that came in later by amendment," and "[t]hat would have made a difference to me if I had known that" (Tr. 1410:16–20). Put another way, "I got a half a deck of cards" and "I was not told the complete truth" (Tr. 2023:1–2).

It is axiomatic under patent law that new matter cannot be added to a continuation application's specification. *See* ⚑*Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 518 F.3d 1353, 1361 (Fed. Cir. 2008) (citing *Asseff v. Marzall*, 189 F.2d 660, 661 (D.C. Cir.1951)). That application inherits a parent application's priority date and is limited to that parent application's disclosure. Likewise, a patent may claim the benefit of a provisional application only if it "relies on subject matter ... that is present in and supported by its provisional."

See ⚑*Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1377 (Fed. Cir. 2015) (citation omitted). If a patent applicant adds new matter to a continuation application, it is not entitled to claim the benefit of an earlier application.

According to Sonos, it properly amended the specification under 37 C.F.R. Section 1.57(g), which provides for "insertion of material incorporated by reference into the specification or drawings of an application ... by way of an amendment to the specification or drawings" so long as it is "accompanied by a statement that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter." Sonos asserts that it provided such a statement to the patent examiner, the inserted material was material previously incorporated by reference (with the entire provisional application), and the inserted material contained no new matter since it came from Appendix A to the 2006 provisional application (*see, e.g.*, Dkt. No. 723 at 18). Alas, not so.

Again, the critical sentence inserted in 2019 is italicized below:

FIG. **5**B shows another user interface **520** to allow a user to form a scene. The user interface **520** that may be displayed on a controller or a computing device, lists available zones in a system. *The list of zones in the user interface **520** includes ALL the zones in the system, including the zones that are already grouped*. A checkbox is provided next to each of the zones so that a user may check in the zones to be associated with the scene.

*26 (⚑'885 and ⚑'966 patent 10:12–19). Contrary to Sonos's position, the descriptive sentence inserted into the specification of the patents in suit was *not* the same as that included in Appendix A and the original zone scenes UI document. "The list of zones in the screen above ... " became "The list of zones in the *user interface **520***" (*compare* TX6545 at 17, *with* ⚑'885 and ⚑'966 patent 10:15). The use of the reference number "**520**" indicated that the sentence was describing Figure 5B. And, Figure 5B was *not* the diagram that this sentence had described in Appendix A and the original zone scenes UI document. Rather, Figure 5B was a truncated version of that diagram, reappropriated to show "another user interface **520** to allow a user to form a scene" — *despite the fact that the Appendix A image, we know now, had not shown forming a zone scene at all*.
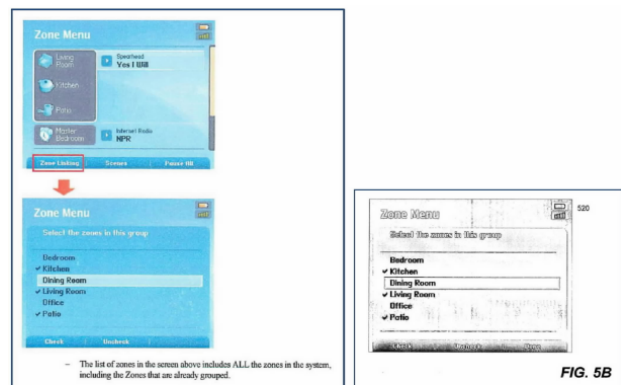
"Zone Linking" from Appendix A to Provisional Application (and Original Zone Scenes UI Document).

FIG. 5B

Figure 5B from Patents in Suit.

Recall, Appendix A and the original zone scenes UI document had described "Zone Linking" as distinct from "Scene Setup." Indeed, Appendix A and the original zone scenes UI

document *expressly stated* that it was "not expected that the Zone Scenes should be set up using the Handheld Controller," like what Figure 5B ostensibly shows.

In Appendix A and the original zone scenes UI document, the descriptive sentence stating that "the list of zones in the screen above includes ALL the zones in the system, including the zones that are already grouped," explained how this "Zone Linking" feature "would allow the user to link and drop multiple zones in one screen" on an ad hoc basis using a handheld controller, "check[ing] Zones that will be a part of a zone group, and uncheck[ing] those that won't" (TX6545 at 17–18). This referred to ad hoc grouping — nimbler ad hoc grouping than what was available in the Sonos 2005 prior art system, but ad hoc grouping all the same. The descriptive sentence had *nothing to do with zone scenes*. Zone scenes were discussed elsewhere in both Appendix A and the original zone scenes UI document, and accessed using a distinct soft button. The old sentence was given a new and different meaning. It had referred to ad hoc grouping, but Sonos reappropriated it to refer to zone scenes. It was, therefore, new matter. Sonos's reappropriation was "a clear abuse of the PTO's patent examination system, which may alone suffice to satisfy the prejudice requirement of prosecution laches."

⚑ *Hyatt*, 998 F.3d at 1370. [11]

 *27 Sonos claimed the priority date of the 2006 provisional application because the inventive subject matter was ostensibly disclosed by that application. But here, this subject matter could not have been disclosed until 2019, when the reappropriated sentence was strategically and deceptively added to the specification of the patents in suit. "The disclosure of a continuation application must be the same as the disclosure of the prior-filed application; *i.e.*, the continuation must not include anything which would constitute new matter if inserted in the original application." MPEP § 211.05 (9th ed. Rev. 7.2022, Feb. 2023). Otherwise, it is not entitled to the priority date of the prior-filed application. When new matter is added to a specification of a continuation application by way of amendment, the effective filing date should be the date of the amendment that added the new matter.

As such, it turns out that Sonos is not entitled to its claimed priority date of September 12, 2006, when the provisional application was filed; or a priority date of September 11, 2007, when the non-provisional application was filed; or a priority date based on any of the continuation applications in the daisy chain leading up to 2019, for that matter. The effective filing date of the patents in suit should be August 23, 2019.

That which infringes if later anticipates if before. It is undisputed that Google released products with the accused functionality in December 2015. Those accused products are now prior art. This order finds and concludes that the patents in suit are anticipated by Google's products and are therefore **INVALID**.

6. WRITTEN DESCRIPTION REDUX.

To summarize, this order finds and concludes that the patents in suit are unenforceable on account of prosecution laches. It also finds and concludes that the patents are invalid as anticipated by the accused products themselves, because Sonos was not entitled to its claimed priority date on account of new matter added to the specification. One last step is required in the interests of justice. A pretrial order sustained the specification of the patents in suit against a written description challenge. With a more complete record, it is clear that was in error.

This order has explained that the earlier applications did not disclose the claimed invention. So, that means that the claimed invention must be disclosed by material that was added by way of amendment on August 23, 2019. After all, "drafters of patent applications know that they must describe their inventions as well as disclose how to enable their use."

⚑ *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1298 (Fed. Cir. 2014). "The essence of the written description requirement is that a patent applicant, as part of the bargain with the public, must describe his or her invention so that the public will know what it is and that he or she has truly made the claimed invention." *Ibid.* (citation omitted).

What was added on August 23, 2019? The application was amended to include: (1) Figures 7 and 8, (2) descriptions of Figures 7 and 8, and (3) the new-matter sentence describing Figure 5B.

Figures 7 and 8 were identical to images in Appendix A (and the original zone scenes UI document) and were not new matter. They showed a "Party Mode" zone scene and a "Morning Wakeup" zone scene displayed next to each other in one instance, and a "Party Mode" zone scene, a "Wakeup" zone scene, and a "Garden Party" zone scene displayed next to each other in another.

FIG. 7

Invoking a Scene 1 from Appendix A.   *Figure 7 from Patents in Suit.*
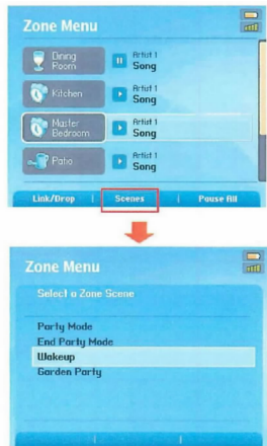
FIG. 8

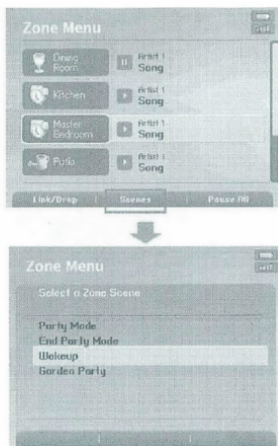*Invoking a Scene II from Appendix A.*   *Figure 8 from Patents in Suit.*

(TX6545 5–6; '885 and '966 patents at FIG. 7, FIG. 8). Given, however, that Appendix A did not disclose overlapping zone scenes in light of the omission of sentences discussed previously, Figures 7 and 8 likewise did not disclose overlapping zone scenes. These zone scenes could have been distinct groups of zone players, like those available in the Sonos 2005 prior art system, but with the new feature to save and invoke on demand. This order finds that these figures were properly inserted by way of amendment under 37 C.F.R. Section 1.57(g), but that they had no effect in terms of disclosing the claimed invention. Meanwhile, the descriptions of Figures 7 and 8 likewise did not indicate that zone scenes could overlap; they merely referred to "selectable indications of zone scenes" and "available zone scenes" ('885 and '966 patents 11:15, 19–20).

This leaves the single new-matter sentence describing Figure 5B. Put aside the new-matter point and ask: Did that sentence disclose the claimed invention?

To glean overlapping zone scenes from this sentence, one must do so by way of inference. Because Figure 5B shows a "user interface **520**" for forming a scene that "lists available zones in a system," and because the "list of zones in the user interface **520** includes ALL the zones in the system, including the zones that are already grouped," one can infer zone scenes overlap (*id.* at 10:12, 14–17). That's it. That is the sole adumbration of overlapping zone scenes in the entire six-page specification, as amended (again, even forgiving the new-matter point).

The Federal Circuit has been clear that "novel aspects of the invention must be disclosed and not left to inference." *See Crown Operations Int'l, Ltd. V. Solutia Inc.*, 289 F.3d 1367, 1380 (Fed. Cir. 2002) (citing *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997)). "Working backward from a knowledge of [the claims]" to "derive written description support from an amalgam of disclosures plucked selectively" does not cut it. *See Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013). A person of ordinary skill in the art "must immediately discern the limitation at issue in the claims," *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000), "viewing the matter from the proper vantage point 'of one with no foreknowledge of the specific [limitation.]' " *Novozymes*, 723 F.3d at 1349 (quoting *In re Ruschig*, 379 F.2d 990, 995 (C.C.P.A. 1967)).

Other patent appeals courts have recognized this as well. Indeed, the Patent Trial and Appeal Board recently observed "[i]t is well-settled that one cannot disclose a forest in the original application, and then later pick a tree out of the forest and say here is my invention." *Ex parte Hassler et al.*, No. 2020-001367, 2020 WL 6781447, at *5 (P.T.A.B. Nov. 13, 2020) (quoting *Purdue Pharma*, 230 F.3d at 1326). In doing so, it extended an analogy made by the Court of Customs and Patent Appeals in reference to written description several decades ago:

> ***29** It is no help in finding a trail or in finding one's way through the woods where the trails have disappeared — or have not yet been made, which is more like the case here — to be confronted simply by a large number of unmarked trees. Appellants are pointing to trees. We are looking for blaze marks which

single out particular trees. We see none.

In re Ruschig, 379 F.3d at 994–95. Likewise, we see none here. The trial evidence has made clear that the sentence describing Figure 5B would not allow a person of skill in the art to recognize that the inventor invented what is claimed — that is, overlapping zone scenes.

To help demonstrate, let's revisit how the Sonos 2005 prior art system worked. Recall, in 2005, if three zone players were grouped, two of those zone players would have been configured to play music in synchrony with one of those zone players. For example, if our hypothetical user wanted to play music in her dining room, living room, and bedroom, she would start with a "leader" zone player, say "Dining Room." Then, she would link another zone player, say "Living Room," at which point "Living Room" would be instantly configured to play music in synchrony with "Dining Room." And, then, she would link yet another zone player, say "Bedroom," at which point "Bedroom" would be instantly configured to play music in synchrony with "Dining Room" and, thereby, "Living Room." In this configuration, "Living Room" and "Bedroom" *were not connected to each other*. Rather, they were both connected to and configured to play music in synchrony with the "leader" zone player, "Dining Room."

Now, let's consider the zone scenes of the original UI documents, which the parties stipulate disclosed the claimed invention. If our user had invoked a first zone scene composed of the zone players in her dining room, living room, and bedroom, and she then invoked a second zone scene composed of the zone players in her dining room and bathroom, what would happen? (Note the overlap of the zone player in the dining room.) Would "Dining Room" keep playing music in the first zone scene configuration? Would the system tell the user that the second zone scene configuration was unavailable due to "Dining Room" already being in use? Would "Dining Room" switch over to the second zone scene configuration? *If so, what if "Dining Room" was the "leader" zone player?* How would the "Living Room" and "Bedroom" zone players know to stay grouped in the first zone scene configuration? None of these questions were addressed, much less solved, in the specification of the patents in suit. Yet these questions bristle upon consideration.

At trial, by contrast, Google explained how it was able to implement the claimed invention in 2015. Specifically, according to Google Engineer Kenneth MacKay, each zone player in its system was assigned a dynamic leader rating, and the zone player with the highest rating would serve as the leader for the zone scene — the one that the other zone players synchronized to. When a "leader" zone player was invoked in a second zone scene, the first zone scene would persist with a new "leader" zone player based on which remaining zone player had the highest leader rating. As such, the original "leader" zone player could move to another zone scene. To repeat, nothing in the specification of the patents in suit explained such a solution (or even recognized this problem). Meanwhile, Google considered four options for facilitating overlapping group membership and settled on this one (TX6454).

*30 Before trial, a prior order rejected Google's arguments that claim 1 of the 🚩'885 patent was invalid for lack of written description (Dkt. No. 309 at 14–17). These arguments were raised in an opposition brief, and Sonos filed a reply brief that pointed to the sentence describing Figure 5B. Relying on that sentence, the prior order found sufficient written description support for limitations involving overlap. To repeat, the judge was not made aware in the briefing (or at the hearing, or otherwise until trial,) that this sentence had been inserted by amendment in August 2019. That, alone, would have been a red flag. But the judge was also not made aware that none of the earlier applications in the zone scene family had claimed overlap until 2019. Nor was the judge made aware of how the Sonos 2005 prior art system and Google's accused products grouped speakers by synchronizing to a "leader." Nor was the judge made aware that overlap was the lynchpin of the claimed invention. When the judge observed this at trial, and, in light of this, asked about the written description support for overlap, Sonos emphasized that what was inventive was "separating the defining of the group from the implementation of the group," *i.e.*, customizing, saving, and invoking (*see* Tr. 751:21–22). But the patent examiner clarified that this was not true.

Maybe this is beside the point now, given the rulings made earlier in this order. But Sonos has indicated that it may bring lawsuits against others in the industry based on these patents. It would be a miscarriage of justice for Sonos to assert that this district judge has already found that written description was adequate when, with the benefit of the trial record, it has since become evident that it was inadequate. Accordingly, the

part of the prior order on written description is **VACATED**. *See* Fed. R. Civ. P. 54(b).

CONCLUSION

It is wrong that our patent system was used in this way. With its constitutional underpinnings, this system is intended to promote and protect innovation. Here, by contrast, it was used to punish an innovator and to enrich a pretender by delay and sleight of hand. It has taken a full trial to learn this sad fact, but, at long last, a measure of justice is done.

In sum, under the doctrine of prosecution laches, the patents in suit are **UNENFORCEABLE**. What's more, they are anticipated by the accused products themselves on account of new matter having been inserted into the specification and are thus **INVALID**. And, the portion of the prior order on written description (Dkt. No. 309 at 14–17) is **VACATED**. In light of these holdings, all remaining affirmative defenses are **MOOT** and all post-trial motions are **DENIED AS MOOT**. Final judgment will be entered.

IT IS SO ORDERED.

All Citations

Slip Copy, 2023 WL 6542320

Footnotes

1 Specifically, the April 2019 applications for the '885 and '966 patents were continuations of, and claimed priority to, an application filed in April 2016, which issued in July 2022 as United States Patent No. 11,388,532. The April 2016 application for the '532 patent was a continuation of, and claimed priority to, an application filed in August 2014, which issued in May 2016 as United States Patent No. 9,344,206. The August 2014 application for the '206 patent was a continuation of, and claimed priority to, an application filed in May 2013, which issued in September 2014 as United States Patent No. 8,843,228. The May 2013 application for the '228 patent was a continuation of, and claimed priority to, an application filed in September 2007, which issued in July 2013 as United States Patent No. 8,483,853. And, the September 2007 application for the '853 patent claimed priority to a corresponding provisional application filed in September 2006 as United States Patent Application No. 60/825,407.

2 Courts may judicially notice facts that "can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned." Fed. R. Evid. 201(b)(2). Patents and prosecution histories are public records. *Boyden v. Burke*, 55 U.S. 575, 576 (1852); *Data Engine Techs. LLC v. Google LLC*, 906 F.3d 999, 1008 n.2 (Fed. Cir. 2018). They can be accessed using the Patent Center tool on the Patent and Trademark Office website.

3 *See* 35 U.S.C. § 122(b)(2)(A)(iii); 37 C.F.R. § 1.14(a)(1)(iv). Today, the individual files are accessible using the Patent Center tool.

4 In fact, it remains alive today. There is a pending application, filed one day before the parent application of the patents in suit issued as its own patent, sixteen years after the provisional application (*see* United States Patent Application No. 17/861,882).

5 Prior orders have described the twists and turns of our entangled actions in greater detail. *See Sonos, Inc. v. Google LLC*, No. C 20-06754 WHA, 2023 WL 2962400, at *1, 19 (N.D. Cal. Apr. 13, 2023); *Sonos, Inc. v.*

Google LLC, 591 F. Supp. 3d 638, 641 (N.D. Cal. 2022), *leave to appeal denied*, 2022 WL 1486359 (Fed. Cir. May 11, 2022).

6   At trial, contrary to Sonos's position, the judge ruled that the mere installation of the Google Home app on a computing device did not itself infringe, and that Google was incapable of infringing the ⚑ '966 patent unless the accused products were networked with at least three zone players that might be added to overlapping zone scenes using the Google Home app (Final Charge 15; Tr. 1403:5–11). It cannot be that Google would infringe on account of someone who installed the Google Home app to control her smart lights and had no zone players, or had three *Sonos* zone players that could not be added to zone scenes using the Google Home app.

7   Likewise, the Federal Circuit has not expressly clarified whether the presumption that a delay of more than six years is unreasonable, inexcusable, and prejudicial applies when prosecution laches is raised as a defense to infringement, as it does when it is raised in a civil action challenging an adverse decision of the PTO. *See* ⚑ *Hyatt*, 998 F.3d at 1369; *see also Personalized Media Commc'ns*, 552 F. Supp. 3d at 685 (declining to apply presumption). This order does not reach this question. It too makes no difference here.

8   For example, "party mode" was also discussed at summary judgment in these very actions to mean something entirely different in relation to Google prior art. *See Sonos, Inc. v. Google LLC*, No. C 20-06754 WHA, 2023 WL 2962400, at *6–12 (N.D. Cal. Apr. 13, 2023).

9   As Sonos explained in a post-trial brief, "under pre-AIA [⚑ 35 U.S. Code Section] 102(b), a reference qualifies as prior art if it was ... 'in public use or on sale' in the United States more than one year prior to a patent's effective filing date .... This 'one year prior' date is commonly referred to as the patent's 'critical date' .... [T]he 'critical date' for purposes of pre-AIA [⚑ Section] 102(b) (*i.e.*, the date that is one year before the effective filing date) is September 12, 2005, and any alleged reference that precedes that critical date will qualify as prior art under pre-AIA [⚑ Section] 102(b) regardless of conception date" (Dkt. No. 809 at 2, 4). Based on the claimed priority date of September 12, 2006 (the filing date of the 2006 provisional application), the Sonos 2005 prior art system, released in January 2005, is pre-AIA ⚑ Section 102(b) prior art.

10   Inventor Lambourne then suggested that the original zone scenes UI document had "more clear descriptions, more accurate descriptions of zone scenes" (Tr. 453:15–17). But, as discussed, there was no language in the original zone scenes UI document stating that "Party Mode," as it appears in that document, did not operate like "the current Party Mode setting that [was] available" (TX6545 at 2). Specifically, the document observed that the "Zone Scene feature" was "similar to the current Party Mode" but "more flexible and powerful" (*ibid.*). That did not mean, however, that "Party Mode," as it appeared in that document, was itself "more flexible and powerful" than the "current Party Mode" (*ibid.*).

11   There were other manipulations as well. As observed by Google, submitting over 70,000 pages of largely superfluous disclosures across the patents in suit while requesting prioritized examination "created a perfect storm" to overwhelm the PTO (Br. 8 (quoting ⚑ *Hyatt*, 998 F.3d at 1368)). Again, this was hardly diligent prosecution. Sonos could have filed "Track One" applications as early as 2011, and it could have filed the bulk of those largely superfluous disclosures even earlier. What's more, in prosecuting patent family applications, Sonos often submitted superfluous disclosures after receiving a notice of allowance, adding work for the patent examiner and further delaying the date of issuance until Sonos could craft a new continuation application and keep its daisy chain of continuation applications alive. The application for the '532 patent, the parent application of the patents in suit, received *ten additional notices of allowance* before it issued (well over a year after receiving its first such notice). The ⚑ '885 patent likewise received several

notices of allowance; having initially issued around the same time as the ⚑'966 patent, Sonos proceeded to file a Request for Continued Examination on November 18, 2019. Many of the superfluous disclosures submitted to the PTO were documents from this very litigation. One of the firms representing Sonos here also represented Sonos in the prosecution of these patents.

End of Document