

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

SONOS, INC.,
Plaintiff,

No. C 20-06754 WHA
No. C 21-07559 WHA

v.

(Consolidated)

GOOGLE LLC,
Defendant.

**ORDER RE PROSECUTION
LACHES AND POST-TRIAL
MOTIONS**

INTRODUCTION

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.

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

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

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

22 STATEMENT

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

26 The patents in suit are United States Patent Nos. 10,848,885 and 10,469,966. They
27 generally concern managing groups of multimedia players (*e.g.*, "smart speakers") in a
28 multiroom system. Much like how one can customize, save, and invoke groups of email

1 addresses from selected contacts with a name like “Ball Team” or “Band,” the patents
2 contemplate customizing, saving, and invoking groups of multimedia players from selected
3 rooms with a name like “Morning” or “Downstairs.” They refer to the multimedia players as
4 “zone players” and the customized, saved groups of zone players that can be invoked on
5 demand as “zone scenes.” Specifically, the patents in suit claim devices that implement
6 *overlapping* zone scenes, which share one or more zone players. Just as a single email address
7 can be a member of “Ball Team” *and* “Band,” a single zone player can be a member of
8 “Morning” *and* “Downstairs.”

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

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

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

1 **1. THE SONOS 2005 PRIOR ART SYSTEM.**

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

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

13 In 2003, as Rincon Networks, Sonos began designing hardware and writing software for
14 its first wireless multiroom audio system. By summer 2004, it demoed product prototypes at
15 the All Things Digital conference. And, by January 2005, Sonos shipped its first commercial
16 wireless multiroom audio system. All agree that the system was prior art for our purposes.
17 This order will refer to it as the Sonos 2005 prior art system. It consisted of the ZonePlayer
18 100 (“ZP100”) and the Controller 100 (“CR100”).

19 Readers familiar with Sonos’s contemporary products should be mindful that these
20 earlier products were different. The ZP100 was a wireless internet-connected “smart
21 amplifier” rather than a smart speaker. Sonos’s first zone players were wirelessly connected to
22 other zone players and to the internet, but each one was still hard-wired to the speaker(s) it
23 powered. Sonos released its first wireless internet-connected smart speaker in September 2014
24 (which, incidentally, did not practice the claimed invention; that did not occur until June 2020).
25 Moreover, the CR100 was a discrete hand-held controller rather than an app on a mobile
26 device. Recall, in 2005, the iPhone was still two years in the future. Sonos’s first controller
27 was its own hardware product with a non-touch screen and buttons that allowed a user to
28

1 manage zone players and music playback. Sonos released its first controller app for mobile
2 devices (the iPhone and iPod Touch) in October 2008.

3 The Sonos 2005 prior art system made waves, drawing attention from the likes of
4 Microsoft Cofounder Bill Gates at the flagship Consumer Electronics Show that year.
5 Importantly, this first commercial wireless multiroom system allowed for grouping zone
6 players in different zones to play music in synchrony. However, as Sonos Chief Innovation
7 Officer Nicholas Millington and Sonos Director of User Experience Robert Lambourne both
8 testified, this system had limitations in terms of how zone players could be grouped.
9 Lambourne went on to be listed as the named inventor on the applications for the patents in
10 suit and the applications from which they descend.

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

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

26 To demonstrate, imagine a user of the Sonos 2005 prior art system had four zone players
27 in four zones: one in her dining room, one in her living room, one in her bedroom, and one in
28 her bathroom. Let's say she started out playing Joan Baez in her dining room. If she wanted

1 to play Joan Baez in her dining room *and living room* simultaneously, she would create a zone
2 group by linking those zone players on her controller, selecting “Dining Room,” then “Link
3 Zone,” and then “Living Room.” “Living Room” would be instantly configured to play Joan
4 Baez in synchrony with “Dining Room.” If she paused, resumed, or changed the music, the
5 music would be paused, resumed, or changed in the dining room and living room.

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

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

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

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1 In the Sonos 2005 prior art system, “All Zones-Party Mode” was listed alongside
2 available zone players under “Link Zone.” When selected, it simultaneously linked *all* of the
3 zone players in a given system (thereby destroying any ad hoc zone group). So, if our user was
4 playing Joan Baez in her dining room and wanted to play Joan Baez throughout, she would
5 simultaneously link all of the zone players in her system on her controller, selecting “Dining
6 Room,” then “Link Zone,” and then “All Zones-Party Mode.” “Living Room,” “Bedroom,”
7 and “Bathroom” would be instantly configured to play Joan Baez in synchrony with “Dining
8 Room.” As explained by Inventor Lambourne, “[i]t was sort of a shortcut to grouping all of
9 the rooms together” that “was baked into the product” (Tr. 420:9–10, 15). After selecting party
10 mode, however, if a user wanted to play music on fewer than all of the zone players, there was
11 no shortcut. That user would have to unlink individual zone players, one at a time. Thus, if
12 our user wanted to play Joan Baez only in the dining room after selecting party mode, she
13 would have to drop the zone players in the living room, bedroom, and bathroom, one by one.

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

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

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

22 **A. CUSTOMER COMMENTS AND INVENTOR SKETCHES.**

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

26 On February 27, 2005, in a forum post titled “Virtual Zones and Zone Grouping,” a
27 customer going by the name of “theboyg” observed, “[t]his ‘link/unlink’ business is really
28 cumbersome,” and asked, “[w]hy can’t I have a virtual zone — ie a zone called ‘Downstairs’”

1 so that “I can group all my downstairs zones into this” and “I don’t have to keep manually
2 linking/unlinking multiple zones everytime” (TX2424). In other words, back in 2005, theboyg
3 requested a customized, saved group of zone players that could be invoked on demand.

4 On September 22, 2005, in a forum post titled “Macro / presets,” a customer going by the
5 name of “JeffT” took it a step further, suggesting “save[d] Zone links,” such as “Morning
6 mode for the units I want in the morning,” and “2 party modes, Summer and Winter,” in which
7 “[t]he Summer mode would include the deck speakers and the Winter mode would not”
8 (TX3930). In other words, back in 2005, JeffT requested customized, saved, *overlapping*
9 groups of zone players that could be invoked on demand.

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

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

21 The following month, Inventor Lambourne traded emails with a Sonos colleague,
22 Andrew Schulert, about the grouping limitations of their own home systems. They compared
23 the merits of Inventor Lambourne’s proposed “Permanent Zone Groups” approach, in which
24 zones could be configured to always appear as one entity, and Inventor Lambourne’s proposed
25 “Zone Profiles” approach, in which zones could be put into different customized, saved groups
26 that could be invoked on demand, such as “downstairs” and “mornings.” Inventor Lambourne
27 observed that “making the UI [*i.e.*, user interface] simple enough” was a problem with the
28

1 proposed Zone Profiles approach. Colleague Schulert said his first reaction was that the Zone
2 Profiles approach “would be the biggest bang for the buck” (TX0120 at 1).

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

10 **B. THE UI DOCUMENTS.**

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

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

23 Let’s start with “zone scenes.” According to the zones scenes UI document, “[t]he Zone
24 Scene feature” would “allow[] the user to arrange the zones into groups using one single
25 command” (TX6545 at 2). “Simple Scenes” would allow a user to set up one group in a zone
26 scene. The document gave the example of a “Morning Scene” that could group zone players in
27 the bedroom, den, and dining room, while leaving the remaining zone players in the bathroom,
28 family room, and foyer untouched (*id.* at 2). “Advanced Scenes” would allow a user to set up

1 more than one group in a zone scene. The document gave the example of an “Evening Scene”
2 that could group zone players in the bedroom, den, and dining room — and, separately, the
3 garage and garden — with the remaining zone players in the bathroom, family room, and foyer
4 “separated from any group if they were part of a group before the Zone Scene was invoked”
5 (*id.* at 2–3).

6 The zone scenes UI document *explicitly disclosed* customizing and saving a group of
7 zone players that could be invoked on demand like “Morning Scene” and “Evening Scene.” It
8 also explicitly disclosed customizing and saving several such groups, depicting selection from
9 a “Party Mode” zone scene and a “Morning Wakeup” zone scene in one instance, as well as
10 from a “Party Mode” zone scene, a “Wakeup” zone scene, and a “Garden Party” zone scene in
11 another (*id.* at 5–6). But the zone scenes UI document *did not explicitly disclose* customized,
12 saved, *overlapping* groups of zone players that could be invoked on demand. Whereas
13 Inventor Lambourne’s notebook sketches had text that stated the “same room can be in two
14 groups” and “one room can be part of 2 sets,” no such text can be found in the zone scenes UI
15 document (*see* TX6539 at 24, 31). Note “Morning Scene” and “Evening Scene” belonged to
16 different systems, with the system in which “Evening Scene” was created containing additional
17 zone players in the garage and garden. Similarly, there was no explicit disclosure of
18 customized, saved, overlapping groups of zone players that could be invoked on demand in the
19 alarm clock UI document.

20 So how did the UI documents disclose the claimed invention? They *implicitly disclosed*
21 overlapping zone scenes by reference to party mode in the Sonos 2005 prior art system.
22 Significantly, the alarm clock UI document stated that “‘Party Mode’ that currently ships with
23 the product is one example of a Zone Scene” (TX6544 at 27). The zone scenes UI document
24 similarly referred to the “current Party Mode setting” and represented “Party Mode” as a “Zone
25 Scene” in various figures (TX6545 at 2; *see id.* at 5–6). When the zone scenes UI document
26 showed a “Party Mode” zone scene next to a “Morning Wakeup” zone scene in one instance,
27 and a “Party Mode” zone scene next to “Wakeup” and “Garden Party” zone scenes in another,
28 it would have been understood that zone scenes would overlap because it would have been

1 understood that the “Party Mode” zone scene would group all of the zone players in a given
2 system. As such, the UI documents implicitly disclosed customized, saved, overlapping
3 groups of zone players that could be invoked on demand. To be sure, this disclosure depended
4 on inference, but both sides stipulated that the UI documents disclosed the claimed invention.
5 Accordingly, this order credits the implicit disclosure.

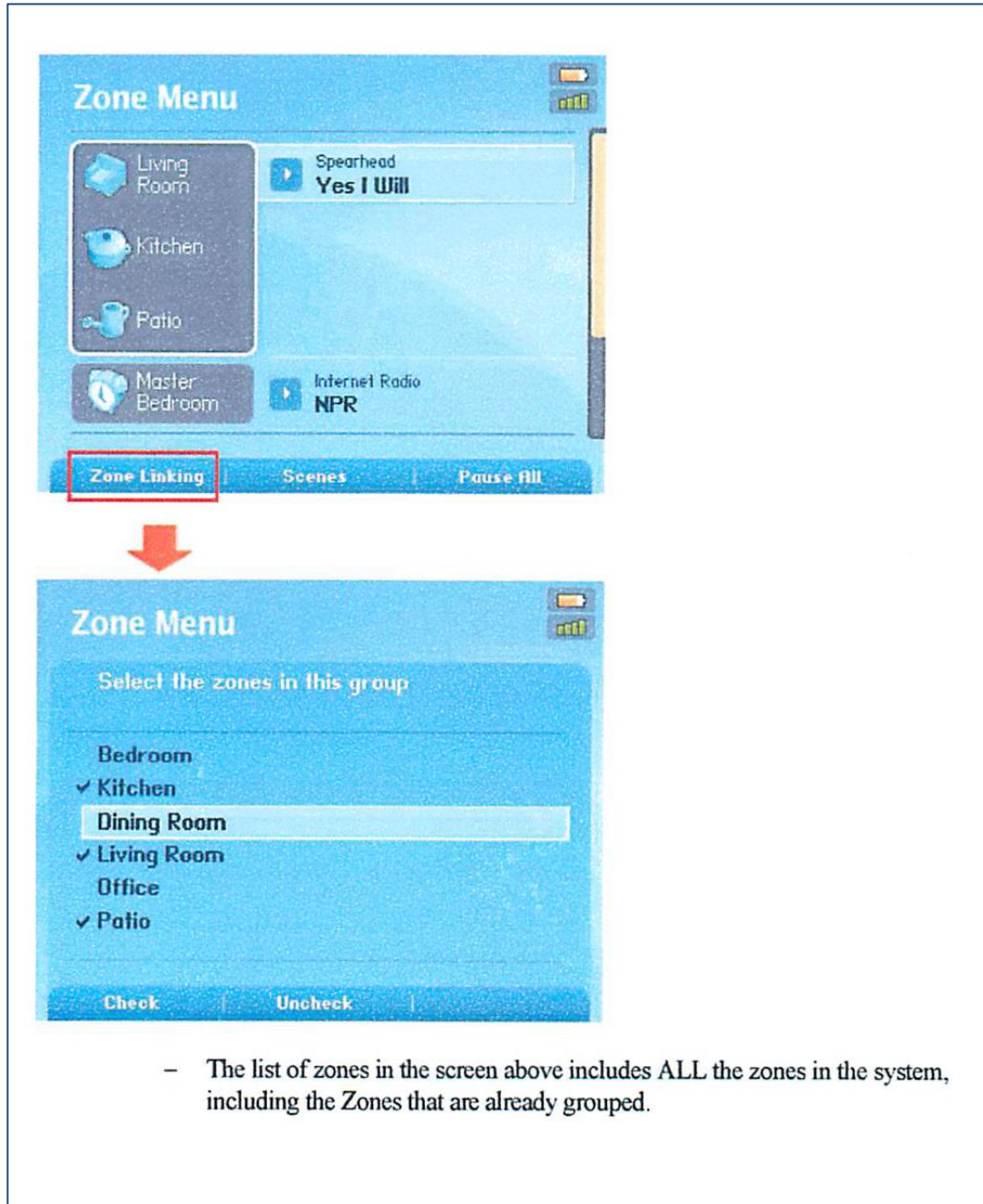
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7 The zone scenes UI document had distinct sections on “Invoking a Scene,” showing
8 “various user Interface methods for invoking a configuration on a Handheld Controller or
9 Desktop Controller,” versus “Scene Setup,” showing various user interface methods for
10 configuring a zone scene from a desktop controller only. According to this document, it was
11 “not expected that the Zone Scenes should be set up using the Handheld Controller” (*id.* at 5,
12 9).

13 Meanwhile, the zone scenes UI document had a distinct section on “Alternative Linking
14 Methods,” which showed an “adaptation of the Link and Drop Zone feature” of the Sonos 2005
15 prior art system, *i.e.*, ad hoc grouping (*id.* at 17–18). Whereas the zone scene feature would
16 allow for groups of zone players to be set up *in advance* on a *desktop controller*, this “Zone
17 Linking” feature would allow for groups of zone players to be set up *in real-time* on a
18 *handheld controller*. It pertained to ad hoc “zone groups,” *not* “zone scenes.” This ad hoc
19 grouping was an improvement over the ad hoc grouping in the Sonos 2005 prior art system,
20 however.

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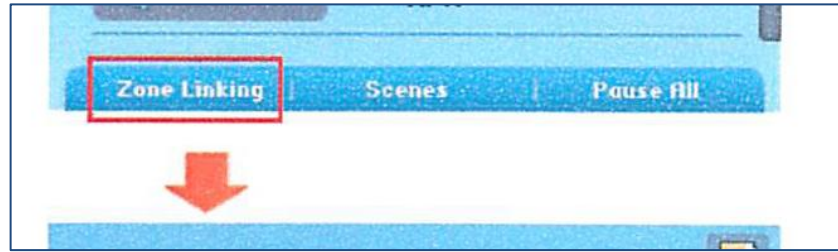
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Zone Scenes UI Document: “Zone Linking” Feature Diagram.

(ibid.).

1 To repeat, “Zone Linking,” as depicted above, was ad hoc grouping, not “Scene Setup.”
 2 Ad hoc “zone groups” were not “zone scenes.” They were addressed in different sections in
 3 the zone scenes UI document and even accessed using different soft buttons on the handheld
 4 controller. By way of demonstration, the diagram is cropped below:



10 *Zone Scenes UI Document: Cropped “Zone Linking” Feature*
 11 *Diagram (Soft Buttons).*

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

14 **3. THE FIRST ZONE SCENE PATENT APPLICATIONS.**

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

22

23 ¹ Specifically, the April 2019 applications for the ’885 and ’966 patents were continuations of, and
 24 claimed priority to, an application filed in April 2016, which issued in July 2022 as United States
 25 Patent No. 11,388,532. The April 2016 application for the ’532 patent was a continuation of, and
 26 claimed priority to, an application filed in August 2014, which issued in May 2016 as United
 27 States Patent No. 9,344,206. The August 2014 application for the ’206 patent was a continuation
 28 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.

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

9 **A. THE 2006 PROVISIONAL APPLICATION.**

10 On September 12, 2006, Sonos filed a “provisional application,” with Inventor
11 Lambourne listed as the named inventor, entitled “Controlling and manipulating groupings in a
12 multi-zone music or media system” (TX2651). A provisional application is a temporary form
13 of patent application that is not required to include any patent claims or information disclosure
14 (prior art) and is never reviewed by a patent examiner. It operates as a low-cost placeholder,
15 establishing an earlier effective filing date for a corresponding non-provisional application
16 filed within twelve months that claims its subject matter. Although a provisional application is
17 never “published” or made publicly searchable, it is “made available to the public” as an
18 individual file when a corresponding non-provisional application is published, as one was here
19 eventually.³

20 The specification of this provisional application consisted of a “Detailed Description of
21 the Preferred Embodiments,” an assortment of implementations involving zones, zone players,
22 zone groups, and zone scenes. It was drafted broadly. Many described embodiments did not
23 relate to zone scenes at all, such as those in which “memory is used to save one or more saved
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25 ² Courts may judicially notice facts that “can be accurately and readily determined from sources
26 whose accuracy cannot reasonably be questioned.” Fed. R. Evid. 201(b)(2). Patents and
27 prosecution histories are public records. *Boyden v. Burke*, 55 U.S. 575, 576 (1852); *Data Engine
28 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.

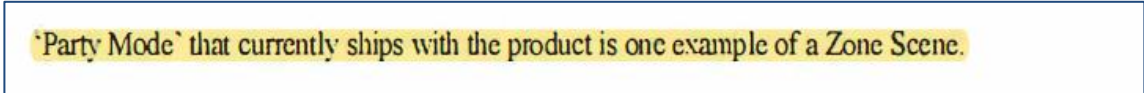
1 zone configuration files that may be retrieved for modification at any time” and in which “a
2 user creates a zone group including at least two zone players from the controller that sends
3 signals or data to one of the zone players” (TX2651 at 15, 19). In any event, the specification
4 of the provisional application eventually described zone scene technology as follows:

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

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

12 It did include two sizable appendices, however. Each appendix was “annexed” to the
13 specification to “provid[e] examples to teach and refer to various features, detailed designs,
14 uses, advantages, configurations and characteristics in one embodiment of the present
15 invention” (*id.* at 22–23). At first glance at trial, Appendix A and Appendix B looked identical
16 to the aforementioned zone scenes UI document and alarm clock UI document, respectively
17 (*compare* TX6545 and TX6544, with TX2651 at 29–48 and *id.* at 49–81). Yet, as was
18 discovered at trial and will be taken up below, the UI documents were *altered* before they were
19 annexed to the provisional application specification. In particular, one sentence was omitted
20 from the second page of the zone scenes UI document (*compare* TX6545 at 2, with TX2651
21 at 30). Meanwhile, the alarm clock UI document nearly doubled in size, but the page on zone
22 scenes was left out (*compare* TX6544 at 27, with TX2651 at 49–81).

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

25
26 

27 *Alarm Clock UI Document, Language Omitted from Appendix B Highlighted.*
28

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.

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.

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

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

22 After this “final rejection,” having initially declined to amend its claims while seeking
23 continued examination on December 13, 2011, Sonos narrowed them considerably in an
24 amendment submitted on February 7, 2012, and the patent examiner issued a notice of
25 allowance on April 18, 2013. The first zone scene patent issued as the ’853 patent on July 9,
26 2013, at which point it was published and the provisional application from which it descended
27 was made available to the public. Critically, the ’853 patent did not claim customized, saved,
28

1 overlapping groups of zone players that could be invoked on demand. As stated, the '853
2 patent has never been asserted against Google (or others).

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

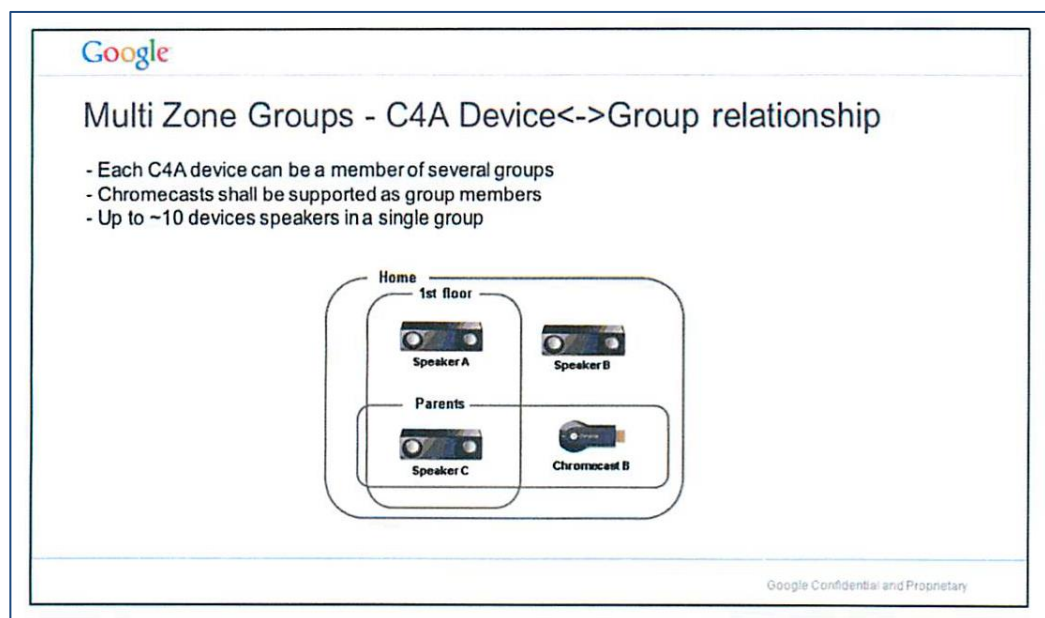
4 Just before the '853 patent issued, Sonos and Google employees exchanged a series of
5 emails that gave rise to meetings between the two companies. By now it was 2013.
6 Smartphones had taken hold, music and video streaming was taking off, and both sides saw
7 that they stood to gain from working with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

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

26 The following year, in July 2014, the parties held another meeting at which Google
27 pitched a new collaboration — participation in the Cast for Audio program. At this meeting,
28 Google shared its vision (and a "Confidential and Proprietary" slide deck) for providing a

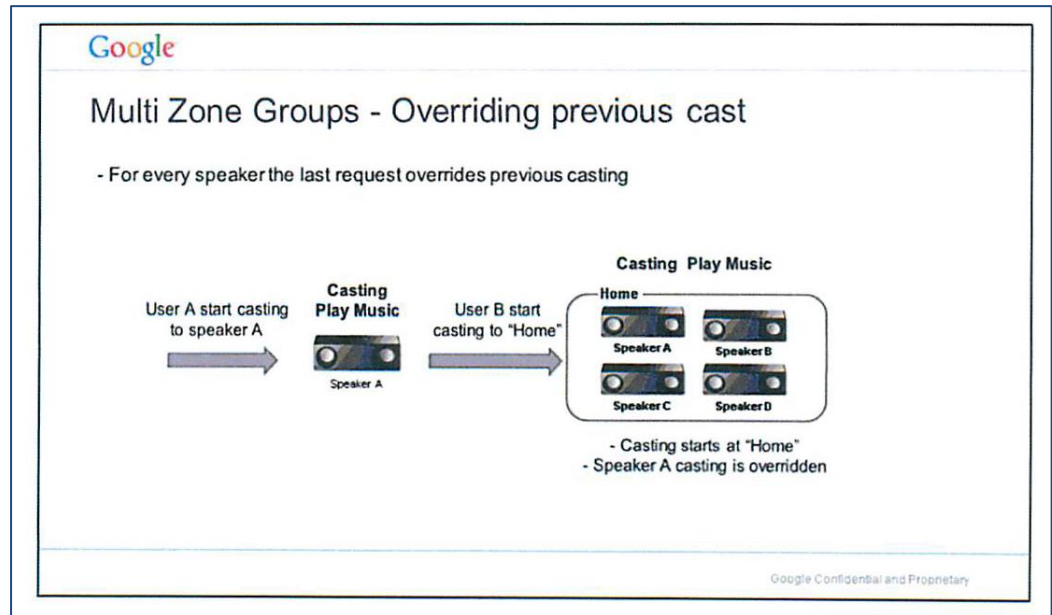
1 simple, standardized platform that would connect devices that played music with devices that
 2 controlled streaming apps. This stood to help audio device manufacturers used to supporting
 3 music playback from traditional sources like radio broadcast and CDs, as well as streaming
 4 companies experiencing challenges integrating their apps with the wide variety of audio
 5 devices on the market. It also stood to help consumers bearing the brunt of incompatibility —
 6 Google’s proposed program would have been cross-brand, supporting products from different
 7 manufacturers (*see* TX0125 at 3–4). Using Google’s Cast for Audio software, an audio device
 8 manufacturer like Sonos would have been able to make its devices compatible with third-party
 9 audio devices and third-party streaming apps.

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

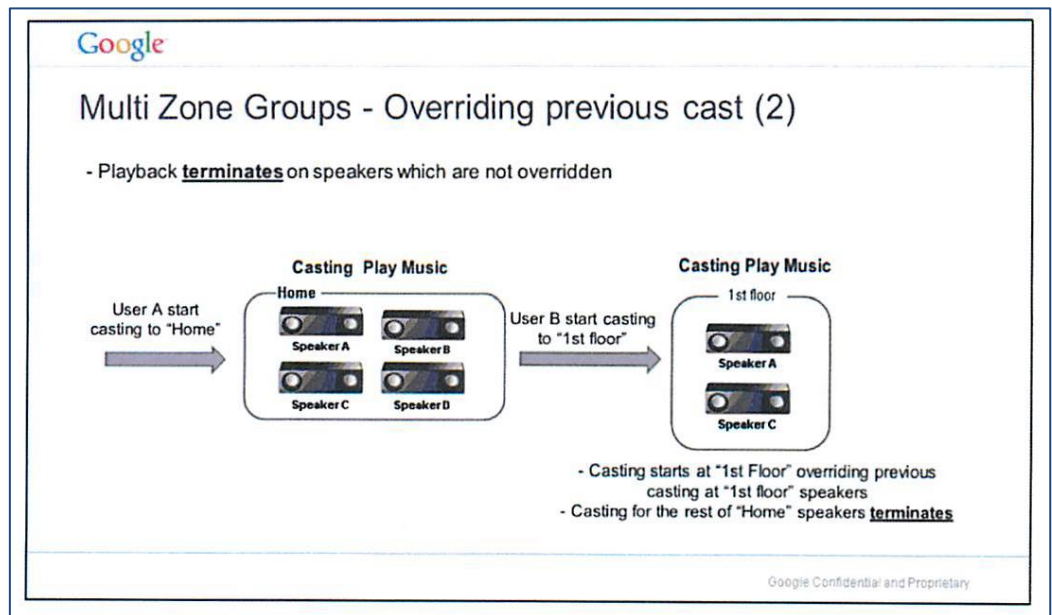


Cast for Audio Slide Deck: Customized Overlap.

1 (*ibid.*). Moreover, other slides showed a user continuing to play music on one multimedia player
 2 individually (*e.g.*, “Speaker A”) before that player was invoked in a group (*e.g.*, “Home”), and a
 3 user continuing to play music on multimedia players in one group (*e.g.*, “Home”) before some
 4 configuration of those players was invoked in another group (*e.g.*, “1st Floor”). In other words,
 5 Google directly revealed to Sonos its plans to create a product that would implement *saved*
 6 groups of multimedia players that could be *invoked on demand*:



17 Cast for Audio Slide Deck: Save & Invoke I.



Cast for Audio Slide Deck: Save & Invoke II.

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

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

10 In the end, Sonos did not participate in the Cast for Audio program, which failed to
11 materialize. But soon, as General Counsel Kwasizur explained, “we started to see big
12 technology companies . . . showing up in our neighborhood” (Tr. 297:16–18). In December
13 2015, Google entered the wireless multiroom space with two new Chromecast devices. It is
14 undisputed that these devices were released with the accused functionality. According to
15 Sonos, they practiced the invention. In November 2016, Google launched its first smart
16 speaker product, the Google Home, and in October 2017, it went on to launch another, the
17 Google Home Mini. It is likewise undisputed that these products, and several other Google
18 products that followed, were released with the accused functionality. According to Sonos, they
19 too practiced the invention. Around this time, Amazon and Apple were also entering the fray,
20 releasing their own smart speakers in 2017 and 2018, respectively, which presumptively were
21 released with the accused functionality as well. Many consumers sought out products offered
22 by Google, some on account of lower prices, others on account of voice-assistive technology
23 and integration with the Google ecosystem.

24 5. THE PATENTS IN SUIT.

25 In order for a patent holder to claim priority to a provisional application, it must claim
26 priority to an intermediate non-provisional continuing application that is copending, *i.e.*, not
27 yet patented or abandoned. Although the April 2019 applications for the patents in suit were
28 not themselves copending with the September 2006 provisional application, they were

1 copending with the September 2007 non-provisional application that claimed priority to it
2 through a daisy chain of continuation applications. A pattern developed. Just before a patent
3 would issue, Sonos would file another continuation application to keep the daisy chain alive.⁴

4 By November 2018, Sonos had three “zone scene patents” — the ’853 patent, which
5 issued on July 9, 2013; United States Patent No. 8,843,228, which issued on September 23,
6 2014; and United States Patent No. 9,344,206, which issued on May 17, 2016. It had yet to
7 assert any of them. Those patents did not claim overlapping zone scenes. And, recall, zone
8 scenes were already disclosed by the prior art. As such, those patents claimed niche variations
9 of little consequence. For example, in the reasons for allowance of the ’206 patent, the patent
10 examiner observed that “[t]he prior art does not reasonably teach a loudspeaker system
11 wherein a first independent playback device in the form of a networked loudspeaker or
12 networked master loudspeaker is polled or subject to discovery to determine a zone scene
13 configuration or plurality thereof” (Notice of Allowance, Jan. 20, 2016).

14 Sonos also had a further application pending, which served as the parent application for
15 the patents in suit. This application ultimately issued after them as United States Patent
16 No. 11,388,532 on July 12, 2022. On November 14, 2018, however, Sonos had just received a
17 final rejection of that application from the PTO, once again on account of the Yamaha DME
18 prior art. This was the same prior art that had been relied upon by the same patent examiner in
19 initially rejecting all of the parent applications in the family.

20 According to the patent examiner, Yamaha “DME cause[d] an indication to be displayed
21 which [wa]s provided by the utility of an open or new command sufficient to open or create a
22 zone scene for instantiation on the plurality of playback devices” and “a particular
23 configuration of players” (Final Rejection, Nov. 14, 2018, at 5). He observed that this was
24 “substantially similar to the disclosed invocation of a scene such as upon the instant disclosed
25 players upon the event of a stored alarm configuration,” which, the “Examiner must point
26

27
28 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).

1 out . . . [was] the extent of the indication disclosed by the [preceding] applications” (*id.* at 6).
2 The examiner then emphasized that “it would have been obvious to one of ordinary skill in the
3 art on or before the effective priority date of the instant application to operate the DME
4 disclosed displayed selectable indicators to cause one or more zone scenes to be invoked on
5 two or more playback devices,” “[a]s this would comprise no more than a choice between a
6 finite number of identified predictable solutions” (*id.* at 7). According to the patent examiner,
7 based on the Yamaha DME prior art, it would have been obvious to customize, save and
8 invoke groups of zone players on demand. Zone scenes remained obvious.

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

21 Then, on April 12, 2019, less than a month after filing its request for reevaluation and
22 amendment of the application for the ’532 patent, Sonos filed the continuation applications for
23 the patents in suit, the ’885 and ’966 patents (TX003; TX001). Unlike the prior applications in
24 the family, these two applications were filed “Track One” for prioritized (expedited)
25 examination, and they were filed with a combined 70,000 pages of disclosures — even though
26 the patent examiner’s rejections had only rested on one prior art publication, either alone or in
27 combination with a few other prior art publications, over the course of the last thirteen years.
28 (Those disclosures explain the twenty-six pages of “References Cited” at the beginning of the

1 '885 patent, and the eighteen pages of “References Cited” at the beginning of the '966 patent.)
2 Whereas the '885 patent claimed the technology from the perspective of a zone player (*e.g.*, a
3 smart speaker), the '966 patent claimed the technology from the perspective of a computing
4 device that controlled at least three zone players (*e.g.*, a smartphone).

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

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

24 *First*, Sonos amended the *claims* of both applications to clarify that “the first zone
25 player” would operate “in a standalone mode in which” it was “configured to play back media
26 individually . . . until a given one of the first and second zone scenes has been selected for
27 invocation,” at which point it would transition out of standalone mode to play music in
28 synchrony with one or more zone players (TX0004 at 810–12; TX0006 at 4087–88; *see*

1 generally TX0004 at 810–20; TX0006 at 4087–4100). In essence, the standalone mode
2 limitations provided (slightly) more detail on implementing overlap, thereby narrowing the
3 proposed claims to evade prior art.

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

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

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

25 **6. OUR LITIGATION.**

26 On September 29, 2020, Sonos sued Google for patent infringement in the Western
27 District of Texas. One day before, Google sued Sonos for declaratory relief in the Northern
28 District of California. And, one year later, the infringement action was transferred to this

1 district at the direction of the Federal Circuit. The civil actions were related and ultimately
2 consolidated for trial.⁵

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

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

17 The issues tried by the jury were: (1) Sonos's claim for direct infringement of claim 1 of
18 the '885 patent with respect to the redesigned accused products, and Google's associated non-
19 infringement and invalidity defenses; (2) Sonos's claim for direct, indirect, and willful
20 infringement of claims 1, 2, 4, 6, and 8 of the '966 patent with respect to the original and
21 redesigned accused products, and Google's associated non-infringement and invalidity

22
23 ⁵ Prior orders have described the twists and turns of our entangled actions in greater detail. *See*
24 *Sonos, Inc. v. Google LLC*, No. C 20-06754 WHA, 2023 WL 2962400, at *1, 19 (N.D. Cal.
25 Apr. 13, 2023); *Sonos, Inc. v. Google LLC*, 591 F. Supp. 3d 638, 641 (N.D. Cal. 2022), *leave to*
26 *appeal denied*, 2022 WL 1486359 (Fed. Cir. May 11, 2022).

27 ⁶ At trial, contrary to Sonos's position, the judge ruled that the mere installation of the Google
28 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.

1 defenses; and (3) damages for infringement of claim 1 of the '885 patent and, if applicable,
 2 claims 1, 2, 4, 6, and/or 8 of the '966 patent. The parties stipulated, and the judge agreed, that
 3 remaining affirmative defenses and injunctive relief would be evaluated by the judge after the
 4 jury verdict, with each side having "14 hours [of evidence time] to present *all* of the issues to
 5 be tried in this case" (Final Pretrial Order 8; *see* Proposed Final Pretrial Order 2–3, 5).

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

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

- 15 **1.** A first zone player comprising:
 16 a network interface that is configured to communicatively couple the first
 17 zone player to at least one data network;
 18 one or more processors;
 19 a non-transitory computer-readable medium; and
 20 program instructions stored on the non-transitory computer-readable
 21 medium that, when executed by the one or more processors, cause the
 22 first zone player to perform functions comprising:
 23 while operating in a standalone mode in which the first zone player is
 24 configured to play back media individually in a networked media
 25 playback system comprising the first zone player and at least two
 26 other zone players;
 27 (i) receiving, from a network device over a data network, a first
 28 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

1 scenes has been selected for invocation;
2 after the given one of the first and second zone scenes has been
3 selected for invocation, receiving, from the network device over the
4 data network, an instruction to operate in accordance with a given
5 one of the first and second zone scenes respectively comprising a
6 given one of the first and second predefined groupings of zone
7 players; and
8 based on the instruction, transitioning from operating in the standalone
9 mode to operating in accordance with the given one of the first and
10 second predefined groupings of zone players such that the first zone
11 player is configured to coordinate with at least one other zone player
12 in the given one of the first and second predefined groupings of zone
13 players over a data network in order to output media in synchrony
14 with output of media by the at least one other zone player in the
15 given one of the first and second predefined groupings of zone
16 players.

17 ('885 patent 11:36–12:22).

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

22 ANALYSIS

23 Prosecution laches is an equitable affirmative defense. The doctrine may “render a patent
24 unenforceable when it has issued only after an unreasonable and unexplained delay in
25 prosecution that constitutes an egregious misuse of the statutory patent system under a totality
26 of the circumstances.” *Hyatt v. Hirshfeld*, 998 F.3d 1347, 1360 (Fed. Cir. 2021) (quoting
27 *Cancer Rsch. Tech. Ltd. v. Barr Lab ’ys, Inc.*, 625 F.3d 724, 728 (Fed. Cir. 2010)). As such, it
28 “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

1 surrounding the particular patent applications at issue and can include “the prosecution history
2 of all of a series of related patents and overall delay in issuing claims.” *Symbol Techs., Inc., v.*
3 *Lemelson Med., Educ. & Rsch Found., LP (Symbol Techs., II)*, 422 F.3d 1378, 1385–86 (Fed.
4 Cir. 2005). With respect to the second element, prejudice requires a showing of intervening
5 rights, in that “either the accused infringer or others invested in, worked on, or used the
6 claimed technology during the period of delay.” *Cancer Rsch.*, 625 F.3d at 729.

7 The Federal Circuit has not expressly clarified an accused infringer’s burden of proof for
8 prosecution laches, so this order errs on the side of caution and applies clear and convincing
9 evidence, consistent with what is required for other unenforceability defenses. *See, e.g.,*
10 *id.* at 732 (applying clear and convincing evidence for inequitable conduct); *see also*
11 *Personalized Media Commc’ns, LLC v. Apple, Inc.*, 552 F. Supp. 3d 664, 684–85 (E.D. Tex.
12 2021) (Judge Rodney Gilstrap), *aff’d*, 57 F.4th 1346 (Fed. Cir. 2023) (applying clear and
13 convincing evidence for prosecution laches). In the end, it makes no difference here.⁷

14 **1. UNREASONABLE AND INEXCUSABLE DELAY.**

15 Having considered the totality of the circumstances, this order concludes, by clear and
16 convincing evidence, that Sonos was guilty of unreasonable and inexcusable delay in its
17 prosecution of the patents in suit.

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

25
26 ⁷ Likewise, the Federal Circuit has not expressly clarified whether the presumption that a delay of
27 more than six years is unreasonable, inexcusable, and prejudicial applies when prosecution laches
28 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.

1 Although the Federal Circuit has “not set forth any firm guidelines” for determining
2 when a delay in prosecution is unreasonable and inexcusable, it has “discussed precedent such
3 as *Woodbridge v. United States*, 263 U.S. 50, 44 S. Ct. 45, 68 L. Ed. 159 (1923), and *Webster*
4 *Electric Co. v. Splitdorf Electrical Co.*, 264 U.S. 463, 44 S. Ct. 342, 68 L. Ed. 792 (1924),
5 wherein the Supreme Court applied the doctrine of prosecution laches to render patents
6 unenforceable.” *Symbol Techs. II*, 422 F.3d at 1385. In these two decisions, the Supreme
7 Court found patents unenforceable based on nine-year and eight-year delays in presenting
8 claims. *See Woodbridge*, 263 U.S at 50; *Webster*, 264 U.S. at 465. In the decision in which
9 the Federal Circuit applied prosecution laches for the first time, it likewise found patents
10 unenforceable based on an eight-year delay in presenting claims. *In re Bogese*, 303 F.3d 1362,
11 1369 (Fed. Cir. 2002). And, in its two most recent decisions affirming prosecution laches
12 determinations, the Federal Circuit found patents unenforceable based on ten-year to nineteen-
13 year delays in presenting claims. *See Personalized Media Commc’ns, LLC v. Apple Inc.*
14 *(PMC)*, 57 F.4th 1346, 1355 (Fed. Cir. 2023) (citing *Hyatt*, 998 F.3d at 1368). Here, Sonos
15 delayed thirteen years in presenting claims. “The magnitude of [Sonos’s] delay in presenting
16 [its] claims for prosecution suffices to invoke prosecution laches.” *Hyatt*, 998 F.3d at 1367.

17 Remarkably, at trial, Sonos never provided any sworn explanation for why it waited
18 until April 2019 to claim overlapping zone scenes. The only sworn explanation addressed a
19 different delay: delay in coming out with its own products that implemented overlapping
20 zone scenes, which took place in June 2020. Even crediting the testimony of Sonos’s
21 witnesses that earlier Sonos products lacked sufficient memory to practice the claimed
22 invention (*see, e.g.*, Tr. 915:20–22), that in no way explained why Sonos failed to seek
23 claims on this invention until April 2019. In other words, this testimony addressed why
24 Sonos delayed in practicing the invention, not why Sonos delayed in patenting it.

25 Meanwhile, the thrust of Sonos’s explanation in its post-trial brief is that it diligently
26 prosecuted the family of patent applications in the interim: from September 2006, when it
27 filed a provisional application that allegedly disclosed the invention; through September
28 2007, when it filed a corresponding non-provisional application that allegedly disclosed the

1 invention; through May 2013, August 2014, and April 2016, when it filed additional non-
2 provisional applications that incorporated those earlier applications by reference; all the way
3 up to April 2019, when it filed the applications for the patents in suit that claimed the
4 invention (*see* Opp. 6). In other words, Sonos emphasizes that it complied with the statutory
5 requirements and PTO regulations. Yet a patent applicant must “not only comply with the
6 statutory requirements and PTO regulations but must also prosecute its applications in an
7 equitable way that avoids unreasonable, unexplained delay that prejudices others.” *Hyatt*,
8 998 F.3d at 1360 (citation omitted). That Sonos diligently prosecuted patent applications in
9 the interim does not render the delay any less unreasonable and inexcusable. Indeed, it
10 renders the delay *all the more* unreasonable and inexcusable.

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

18 Moreover, the Federal Circuit has explained that “subject matter disclosed by a patentee,
19 but not claimed, is considered dedicated to the public,” the reason being “that members of the
20 public reading a disclosure of particular subject matter are entitled, absent a claim to it, to
21 assume that it is not patented and therefore dedicated to the public.” *Eli Lilly & Co. v.*
22 *Hospira, Inc.*, 933 F.3d 1320, 1334 (Fed. Cir. 2019) (citations omitted). True, the Federal
23 Circuit has recognized an exception for subject matter “claimed in a continuation or other
24 application based on the disclosure,” *ibid.*, but it has also recognized that unreasonable,
25 inexcusable delay “is not what is contemplated by the patent statute when it provides for
26 continuation and continuation-in-part applications” and “creates an ‘adverse effect on
27 businesses that [are] unable to determine what [is] patented from what [is] not patented.’” *See*
28 *Hyatt*, 998 F.3d at 1361 (alterations in original) (quoting *Symbol Techs. II*, 422 F.3d at 1386).

1 As such, that an invention may have been lurking between the lines of an earlier application
2 does not excuse a delay in presenting claims on it.

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

9 **2. PREJUDICE.**

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

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

21 In its post-trial brief, Sonos attempts to sidestep the issue by arguing that there was no
22 prejudice because Google could have studied the tortured prosecution history dating back to
23 2006 before investing in infringing products (*see* Opp. 11). This argument is highly
24 unpersuasive for several reasons.

25 *First*, unearthing the layers of file histories would have resembled an exercise in
26 archeology. As even Sonos’s own counsel acknowledged at trial, “it is, actually, a very
27 confusing priority chain. I’ve seen a lot, and it’s confusing” (Tr. 969:1–3). Because the 2007
28 non-provisional application was filed with a request for non-publication, it was not even

1 published until it issued in 2013 — mere months before Sonos and Google first explored a
2 Google Play Music collaboration, and one year before the Cast for Audio presentation.
3 Furthermore, the 2006 provisional application, by definition, *was never published*. It was
4 made available to the public in 2013, but it was (and is) not publicly searchable like standard
5 patents and patent applications.

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

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

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

25 In sum, in considering the totality of the circumstances, including the prosecution history
26 of the series of related patents and the overall delay in issuing claims, this order finds and
27 concludes, by clear and convincing evidence, that Sonos was guilty of unreasonable and
28

1 inexcusable delay in prosecution of the patents in suit, to the extreme prejudice of Google and
2 others.

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

5 **3. PROSECUTION LACHES APPLIES TO POST-1995 APPLICATIONS.**

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

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

19 So why 1995? Essentially, Sonos contends that prosecution laches lost its luster that year
20 because that was when the United States moved from a patent term of 17-years-from-issuance
21 to a patent term of 20-years-from-filing, thereby reducing the incentive to delay the issuance of
22 a “submarine patent” that surfaces unexpectedly and catches competitors off guard. Because
23 the ’885 and ’966 patents claim priority to a 2006 provisional application through a 2007 non-
24 provisional application, Sonos ostensibly “did not (and could not) ‘postpone’ its patent
25 monopoly by delaying filing its patent applications” for the patents in suit (Opp. 5). According
26 to Sonos, “[p]rosecution laches developed to thwart the ‘practice’ of ‘deliberately and without
27 excuse postpon[ing] beyond the date of the actual invention, the beginning of the term of [the
28 patentee’s] monopoly,’” and “that practice was a relic of the pre-1995 patent system” (*ibid.*

1 (quoting *Hyatt*, 998 F.3d at 1360)). In support, Sonos selectively quotes the Federal Circuit’s
2 2021 opinion in *Hyatt*, which itself quotes the Supreme Court’s 1923 opinion in *Woodbridge*.
3 But that 1923 decision, a forebearer of the prosecution laches defense, was not so
4 circumscribed. Nor was *Hyatt*’s reading of it, for that matter.

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

18 Sonos waited over *thirteen years* to patent the invention. Although this did not delay the
19 priority date, it did “postpone[] beyond the date of the actual invention[] the beginning of the
20 term of [Sonos’s] monopoly.” *Woodbridge*, 263 U.S. at 56. There simply *was no monopoly*
21 on the claimed invention until the patents issued in 2019 and 2020. Having conceived of the
22 claimed invention in 2005 (as stipulated), having known that Google planned to release a
23 product that practiced it as early as 2014, and having known that Google, in fact, released
24 products that practiced it as early as 2015, Sonos undertook “designed delay.” It imposed
25 limitations on the public’s right to practice the invention after the fact, at considerable expense
26 to Google, other companies, and consumers. Sonos thereby made the term of its patent
27 monopoly “square with the period when the commercial profit from it would be highest” —
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1 after Google and others had put the invention into practice and Sonos had sustained
2 “damages.” *Ibid.*

3 Just this year, the Federal Circuit rejected an argument that a district court committed
4 legal error in finding unreasonable and inexcusable delay because the “conduct look[ed]
5 nothing like *Hyatt* or the handful of other cases that have found prosecution laches.” *PMC*,
6 57 F.4th at 1354. One can anticipate the same argument being made on appeal here. In
7 rejecting the argument, the Federal Circuit emphasized that prosecution laches is a “flexible
8 doctrine.” *Ibid.* True, our patents are not the “submarine patents” of yesteryear, but they
9 likewise issued after many years of lurking beneath the surface, catching competitors off
10 guard. Sonos let the industry develop and only then sought to extract an invention from a
11 much earlier application that would read on an industry trend. It is worse than that, actually,
12 for Sonos learned of Google’s specific product plans and *still waited five years* to frame claims
13 to read on those products. A patent holder may only need a short (seven-year) term to extract a
14 substantial (thirty-two-million-dollar) damages award.

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

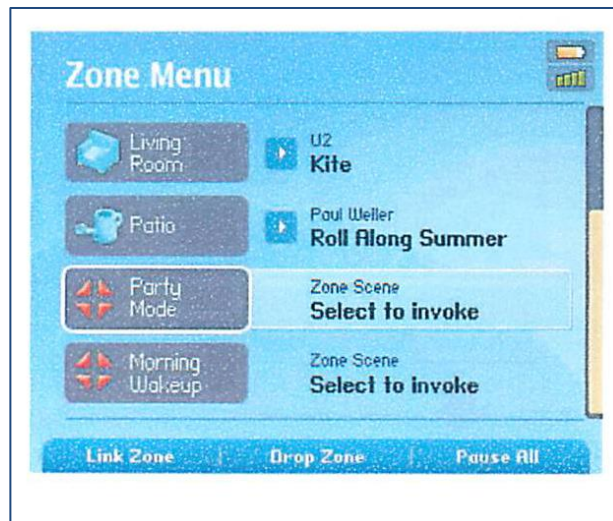
23 **4. NO DISCLOSURE IN ORIGINAL APPLICATIONS.**

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

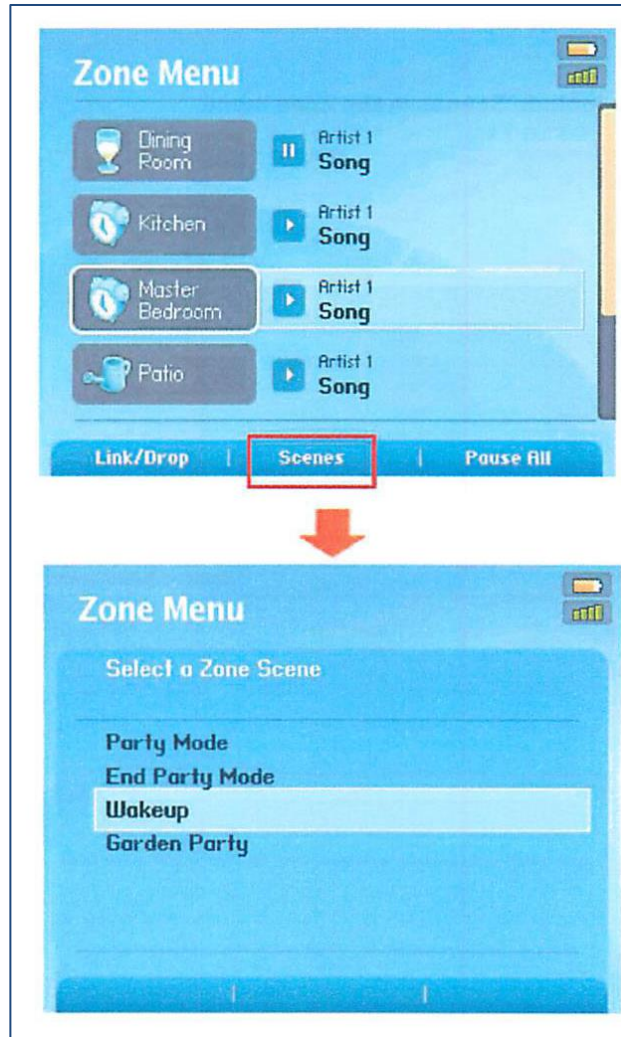
1 In essence, Sonos's position is that because both sides agree the UI documents disclosed
 2 the claimed invention, and the UI documents were appended to the provisional application as
 3 appendices, the provisional application disclosed the claimed invention. And, because the
 4 provisional application disclosed the claimed invention, and all subsequent non-provisional
 5 applications incorporated the provisional application by reference, all subsequent non-
 6 provisional applications disclosed the claimed invention (*see* Opp. 10).

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

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



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25 *Original Zone Scenes UI Document: "Party Mode" and "Morning*
 26 *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

1 that the “Party Mode” zone scene would group all of the zone players in a system. As such,
2 the original UI documents implicitly disclosed customized, saved, *overlapping* groups of zone
3 players that could be invoked on demand — *i.e.*, the claimed invention. Both sides stipulated
4 that the original UI documents conceived of the claimed invention but dispute whether the
5 2006 provisional application and the 2007 non-provisional application disclosed the invention
6 (thereby reducing it to practice).

7 Importantly, before the UI documents were appended to the provisional application as
8 appendices, *certain language was omitted*. What was omitted? Crucially omitted was *all*
9 *language describing party mode in the Sonos 2005 prior art system as a zone scene*. The
10 relevant excerpts of the original UI documents with the highlighted language showing
11 omissions are reproduced below:

12 **‘Party Mode’ that currently ships with the product is one example of a Zone Scene.**

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

14
15 **The Zone Scene feature allows the user to arrange the zones into groups using one single**
16 **command. This is similar to the current Party Mode setting that is available. However, the Zone**
17 **Scene feature is much more flexible and powerful.**

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

19 (TX6544 at 27; TX6545 at 2).

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

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

11 Why did Sonos omit this language? Party mode in the Sonos 2005 prior art system *was*
 12 *what was described as inventive* in the 2006 provisional application specification. It was “a set
 13 of zones [that] can be dynamically linked together using one command[.]” with a “predefined
 14 zone grouping” (TX2651 at 21). Sonos, no doubt, saw the risk that its own product — the
 15 Sonos 2005 prior art system, released in January 2005 — would have served as invalidating
 16 prior art for a broad zone scene patent.⁹

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

20
 21
 22 ⁸ For example, “party mode” was also discussed at summary judgment in these very actions to
 23 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).

24 ⁹As Sonos explained in a post-trial brief, “under pre-AIA [35 U.S. Code Section] 102(b), a
 25 reference qualifies as prior art if it was . . . ‘in public use or on sale’ in the United States more than
 26 one year prior to a patent’s effective filing date This ‘one year prior’ date is commonly
 27 referred to as the patent’s ‘critical date’ [T]he ‘critical date’ for purposes of pre-AIA
 28 [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.

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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.

* * *

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

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.*).

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

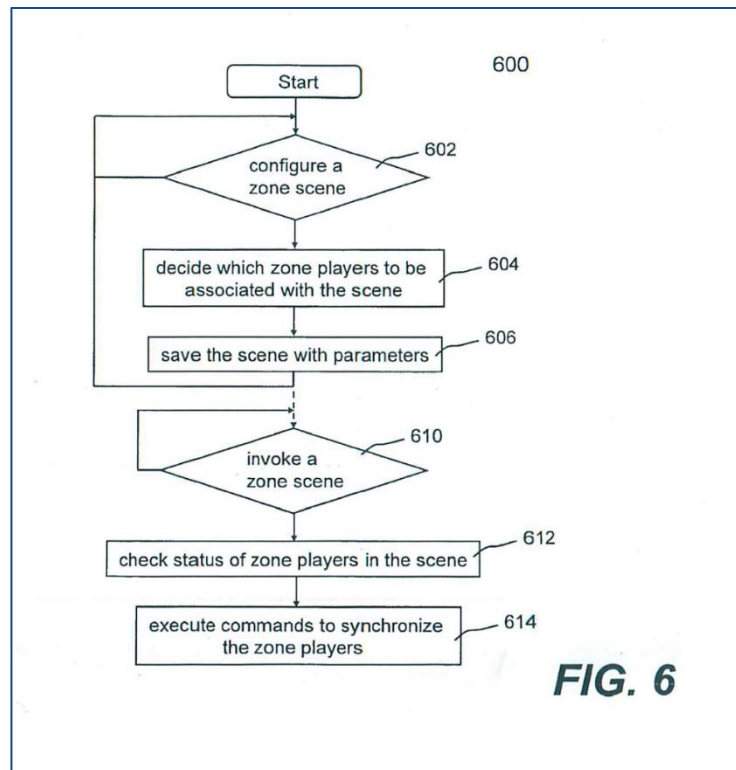
5 In some instances, Sonos points to language describing *individual zone scenes*. The 2007
6 non-provisional specification described “form[ing] respective groups, *each* of which is set up
7 *per a scene*,” *i.e.*, a “Simple Scene” in the original zone scenes UI document (Dkt. No. 723
8 at 26 (quoting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

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

22 Further, Sonos looks to the disclosure in the description of the problem solved: that it
23 was “difficult for the traditional system to accommodate the requirement of dynamically
24 arranging the ad hoc creation and deletion of groups” (Dkt. No. 723 (quoting ’853 patent 1:59–
25 2:17)). With the power of hindsight, Sonos proceeds to clarify the problem as “each time a
26 user created a new group with the ‘den’ player, the previous group with the ‘den’ player would
27 be destroyed” (*id.* at 31). But *the specification itself* proceeded to clarify the problem as “the
28 audio players have to be adjusted one at a time” and “there is a need to individually or

1 systematically adjust the audio volume of the audio players” (’853 patent 2:7–10). Which is to
 2 say, *overlapping* zone scenes was not the required solution. The required solution was simply
 3 *zone scenes*, with audio players “readily grouped” instead of linked one by one, and with “the
 4 players in a scene react[ing] in a synchronized manner” (*id.* at 2:6, 26–27).

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



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

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

4 **5. THE NEW MATTER.**

5 So where *was* the claimed invention disclosed? When the judge inquired at trial, upon
6 realizing that “the heart of the case is the overlapping,” Sonos pointed to a passage in the
7 specification of the patents in suit (the italicized sentence being the critical disclosure):

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

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

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

18 Specifically:

- 19 • Counsel for Sonos stated that the specification of the patents in suit
20 “ha[d] an initial sentence in the very first [*sic*] that says this
21 application claims priority to such and such an application. Other
22 than that, no changes” (Tr. 656:15–22).
- 23 • Sonos Expert Dr. Kevin Almeroth testified that the patents in suit
24 “date[d] back over time where patents were filed with the same
25 specification and they ha[d] different sets of claims at the end. But
26 the description of the invention, what the specification [was], the
27 columns in it, the figures, that’s all the same” (Tr. 676:25–677:5).
- 28 • 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

1 an incorporation by reference in the specification to the
2 provisional.

3 However, the specification has changed in slight ways as the
4 applicant has amended the specification over the years to bring in
5 things from the provisional, which is perfectly permissible under
6 Rule 57(g). I just thought I should bring that up.

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

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

22 [T]he '885 Patent discloses that when a user is selecting which
23 “zone players” to add during setup of each “zone scene,” the user
24 is presented with “ALL the zones in the system, including the
25 zones that are already grouped” – which conveys to a POSITA that
26 each “zone scene” being set up can include any grouping of “zone
27 players” in a multi-zone audio system, regardless of whether the
28 “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

1 to say there was an adequate written description,” “I did not realize that that came in later by
2 amendment,” and “[t]hat would have made a difference to me if I had known that”
3 (Tr. 1410:16–20). Put another way, “I got a half a deck of cards” and “I was not told the
4 complete truth” (Tr. 2023:1–2).

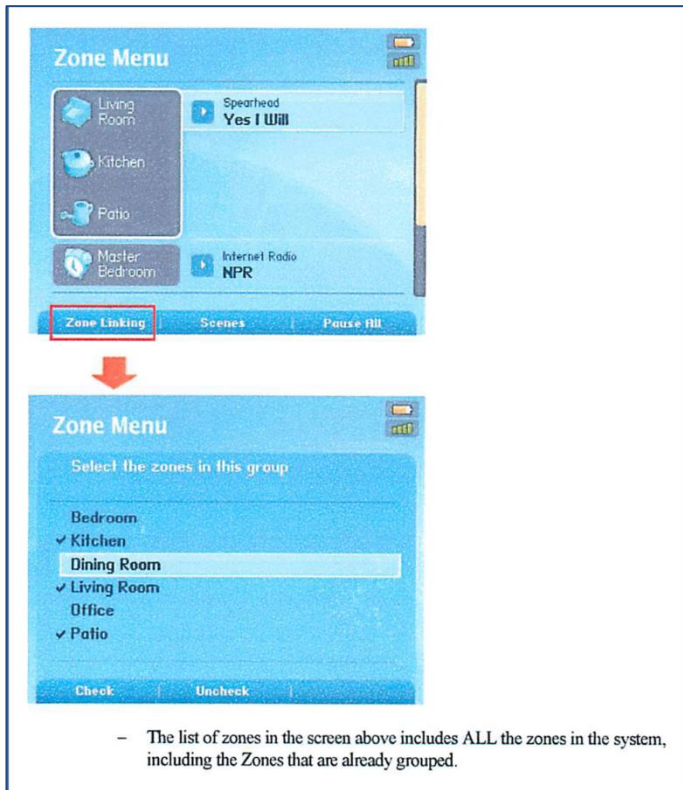
5 It is axiomatic under patent law that new matter cannot be added to a continuation
6 application’s specification. *See Pfizer, Inc. v. Teva Pharms. USA, Inc.*, 518 F.3d 1353, 1361
7 (Fed. Cir. 2008) (citing *Asseff v. Marzall*, 189 F.2d 660, 661 (D.C. Cir.1951)). That
8 application inherits a parent application’s priority date and is limited to that parent
9 application’s disclosure. Likewise, a patent may claim the benefit of a provisional application
10 only if it “relies on subject matter . . . that is present in and supported by its provisional.” *See*
11 *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1377 (Fed. Cir. 2015)
12 (citation omitted). If a patent applicant adds new matter to a continuation application, it is not
13 entitled to claim the benefit of an earlier application.

14 According to Sonos, it properly amended the specification under 37 C.F.R. Section
15 1.57(g), which provides for “insertion of material incorporated by reference into the
16 specification or drawings of an application . . . by way of an amendment to the specification or
17 drawings” so long as it is “accompanied by a statement that the material being inserted is the
18 material previously incorporated by reference and that the amendment contains no new
19 matter.” Sonos asserts that it provided such a statement to the patent examiner, the inserted
20 material was material previously incorporated by reference (with the entire provisional
21 application), and the inserted material contained no new matter since it came from Appendix A
22 to the 2006 provisional application (*see, e.g.*, Dkt. No. 723 at 18). Alas, not so.

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

24 FIG. 5B shows another user interface **520** to allow a user to form a
25 scene. The user interface **520** that may be displayed on a controller
26 or a computing device, lists available zones in a system. *The list of*
27 *zones in the user interface 520 includes ALL the zones in the system,*
28 *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.

1 ('885 and '966 patent 10:12–19). Contrary to Sonos’s position, the descriptive sentence
 2 inserted into the specification of the patents in suit was *not* the same as that included in
 3 Appendix A and the original zone scenes UI document. “The list of zones in the screen
 4 above . . .” became “The list of zones in the *user interface 520*” (compare TX6545 at 17, with
 5 '885 and '966 patent 10:15). The use of the reference number “**520**” indicated that the
 6 sentence was describing Figure 5B. And, Figure 5B was *not* the diagram that this sentence had
 7 described in Appendix A and the original zone scenes UI document. Rather, Figure 5B was a
 8 truncated version of that diagram, reappropriated to show “another user interface **520** to allow
 9 a user to form a scene” — *despite the fact that the Appendix A image, we know now, had not*
 10 *shown forming a zone scene at all.*



“Zone Linking” from Appendix A to Provisional Application (and Original Zone Scenes UI Document).

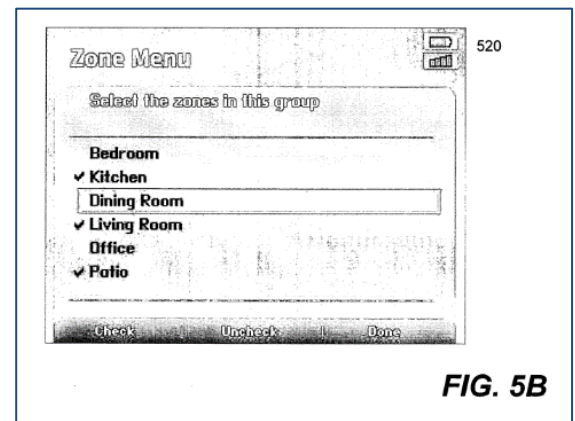


FIG. 5B

Figure 5B from Patents in Suit.

1 Recall, Appendix A and the original zone scenes UI document had described “Zone Linking”
 2 as distinct from “Scene Setup.” Indeed, Appendix A and the original zone scenes UI document
 3 *expressly stated* that it was “not expected that the Zone Scenes should be set up using the
 4 Handheld Controller,” like what Figure 5B ostensibly shows.

5 In Appendix A and the original zone scenes UI document, the descriptive sentence
 6 stating that “the list of zones in the screen above includes ALL the zones in the system,
 7 including the zones that are already grouped,” explained how this “Zone Linking” feature
 8 “would allow the user to link and drop multiple zones in one screen” on an ad hoc basis using a
 9 handheld controller, “check[ing] Zones that will be a part of a zone group, and uncheck[ing]
 10 those that won’t” (TX6545 at 17–18). This referred to ad hoc grouping — nimbler ad hoc
 11 grouping than what was available in the Sonos 2005 prior art system, but ad hoc grouping all
 12 the same. The descriptive sentence had *nothing to do with zone scenes*. Zone scenes were
 13 discussed elsewhere in both Appendix A and the original zone scenes UI document, and
 14 accessed using a distinct soft button. The old sentence was given a new and different meaning.
 15 It had referred to ad hoc grouping, but Sonos reappropriated it to refer to zone scenes. It was,
 16 therefore, new matter. Sonos’s reappropriation was “a clear abuse of the PTO’s patent
 17 examination system, which may alone suffice to satisfy the prejudice requirement of
 18 prosecution laches.” *Hyatt*, 998 F.3d at 1370.¹¹

19
 20
 21 ¹¹ There were other manipulations as well. As observed by Google, submitting over 70,000 pages
 22 of largely superfluous disclosures across the patents in suit while requesting prioritized
 23 examination “created a perfect storm” to overwhelm the PTO (Br. 8 (quoting *Hyatt*, 998 F.3d
 24 at 1368)). Again, this was hardly diligent prosecution. Sonos could have filed “Track One”
 25 applications as early as 2011, and it could have filed the bulk of those largely superfluous
 26 disclosures even earlier. What’s more, in prosecuting patent family applications, Sonos often
 27 submitted superfluous disclosures after receiving a notice of allowance, adding work for the patent
 28 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.

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

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

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

20 **6. WRITTEN DESCRIPTION REDUX.**

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

27 This order has explained that the earlier applications did not disclose the claimed
28 invention. So, that means that the claimed invention must be disclosed by material that was

1 added by way of amendment on August 23, 2019. After all, “drafters of patent applications
2 know that they must describe their inventions as well as disclose how to enable their use.”
3 *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1298 (Fed.
4 Cir. 2014). “The essence of the written description requirement is that a patent applicant, as
5 part of the bargain with the public, must describe his or her invention so that the public will
6 know what it is and that he or she has truly made the claimed invention.” *Ibid.* (citation
7 omitted).

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

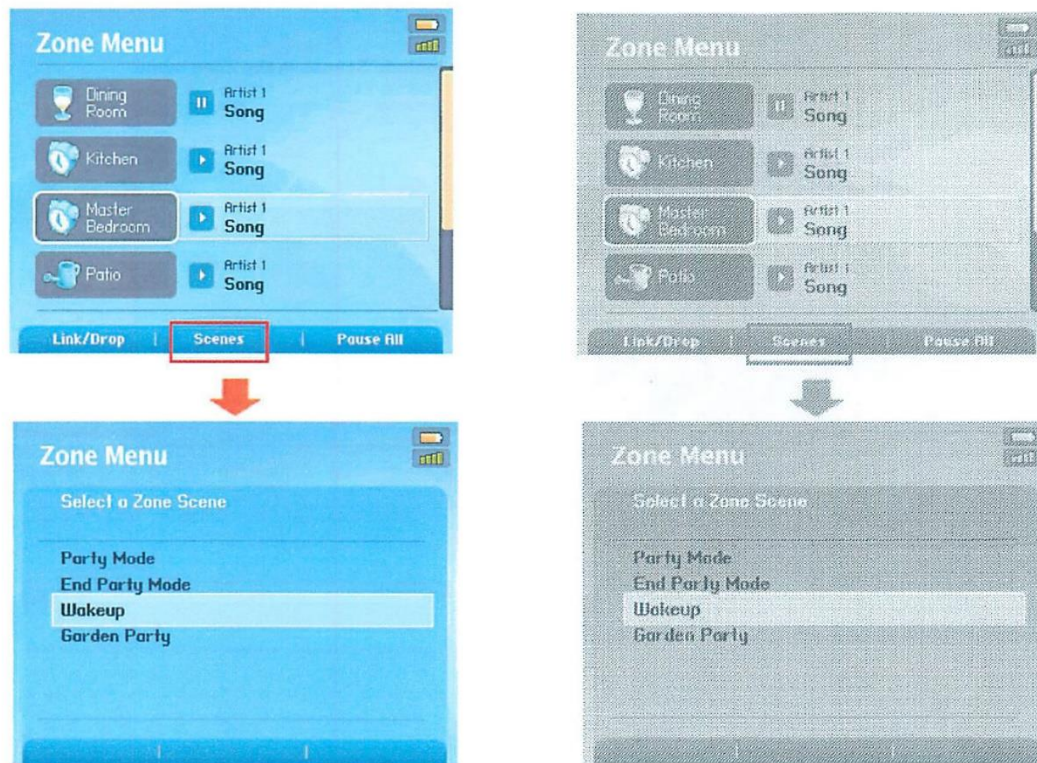
11 Figures 7 and 8 were identical to images in Appendix A (and the original zone scenes UI
12 document) and were not new matter. They showed a “Party Mode” zone scene and a
13 “Morning Wakeup” zone scene displayed next to each other in one instance, and a “Party
14 Mode” zone scene, a “Wakeup” zone scene,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



FIG. 7

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Invoking a Scene I 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?

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

8 The Federal Circuit has been clear that “novel aspects of the invention must be disclosed
9 and not left to inference.” *See Crown Operations Int’l, Ltd. V. Solutia Inc.*, 289 F.3d 1367,
10 1380 (Fed. Cir. 2002) (citing *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed.
11 Cir. 1997)). “Working backward from a knowledge of [the claims]” to “derive written
12 description support from an amalgam of disclosures plucked selectively” does not cut it. *See*
13 *Novozymes A/S v. DuPont Nutrition Biosciences APS*, 723 F.3d 1336, 1349 (Fed. Cir. 2013).
14 A person of ordinary skill in the art “must immediately discern the limitation at issue in the
15 claims,” *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1323 (Fed. Cir. 2000), “viewing
16 the matter from the proper vantage point ‘of one with no foreknowledge of the specific
17 [limitation.]’” *Novozymes*, 723 F.3d at 1349 (quoting *In re Ruschig*, 379 F.2d 990, 995
18 (C.C.P.A. 1967)).

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

25 It is no help in finding a trail or in finding one’s way through the
26 woods where the trails have disappeared — or have not yet been
27 made, which is more like the case here — to be confronted simply
28 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.

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

4 To help demonstrate, let’s revisit how the Sonos 2005 prior art system worked. Recall, in
5 2005, if three zone players were grouped, two of those zone players would have been
6 configured to play music in synchrony with one of those zone players. For example, if our
7 hypothetical user wanted to play music in her dining room, living room, and bedroom, she
8 would start with a “leader” zone player, say “Dining Room.” Then, she would link another
9 zone player, say “Living Room,” at which point “Living Room” would be instantly configured
10 to play music in synchrony with “Dining Room.” And, then, she would link yet another zone
11 player, say “Bedroom,” at which point “Bedroom” would be instantly configured to play music
12 in synchrony with “Dining Room” and, thereby, “Living Room.” In this configuration,
13 “Living Room” and “Bedroom” *were not connected to each other*. Rather, they were both
14 connected to and configured to play music in synchrony with the “leader” zone player, “Dining
15 Room.”

16 Now, let’s consider the zone scenes of the original UI documents, which the parties
17 stipulate disclosed the claimed invention. If our user had invoked a first zone scene composed
18 of the zone players in her dining room, living room, and bedroom, and she then invoked a
19 second zone scene composed of the zone players in her dining room and bathroom, what would
20 happen? (Note the overlap of the zone player in the dining room.) Would “Dining Room”
21 keep playing music in the first zone scene configuration? Would the system tell the user that
22 the second zone scene configuration was unavailable due to “Dining Room” already being in
23 use? Would “Dining Room” switch over to the second zone scene configuration? *If so, what if*
24 *“Dining Room” was the “leader” zone player?* How would the “Living Room” and
25 “Bedroom” zone players know to stay grouped in the first zone scene configuration? None of
26 these questions were addressed, much less solved, in the specification of the patents in suit.
27 Yet these questions bristle upon consideration.
28

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

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

26 Maybe this is beside the point now, given the rulings made earlier in this order. But
27 Sonos has indicated that it may bring lawsuits against others in the industry based on these
28 patents. It would be a miscarriage of justice for Sonos to assert that this district judge has

1 already found that written description was adequate when, with the benefit of the trial record, it
2 has since become evident that it was inadequate. Accordingly, the part of the prior order on
3 written description is **VACATED**. *See* Fed. R. Civ. P. 54(b).

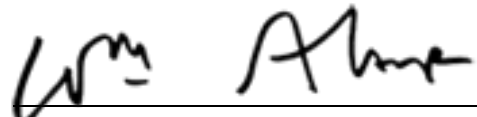
4 **CONCLUSION**

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

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

15 **IT IS SO ORDERED.**

16
17 Dated: October 6, 2023.



18
19 WILLIAM ALSUP
UNITED STATES DISTRICT JUDGE