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**UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA**

SONOS, INC.,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Case No. 2:20-cv-00169-JAK (DFMx)

**SONOS, INC.'S CORRECTED
DISCLOSURE OF ASSERTED
CLAIMS AND INFRINGEMENT
CONTENTIONS**

JURY TRIAL DEMANDED

1 Pursuant to the parties' agreement and Standing Patent Rule (S.P.R.) 2.1, Plaintiff Sonos,
2 Inc. ("Sonos") hereby submits this Disclosure of Asserted Claims and Infringement Contentions
3 for U.S. Patent Nos. 7,571,014 (the "'014 Patent"), 8,588,949 (the "'949 Patent"), 9,195,258 (the
4 "'258 Patent"), 9,219,959 (the "'959 Patent"), 10,031,715 (the "'715 Patent"), 10,209,953 (the
5 "'953 Patent"), 10,439,896 (the "'896 Patent"), 10,541,883 (the "'883 Patent"), 10,966,025 (the
6 "'025 Patent"), and 11,080,001 (the "'001 Patent") (collectively, "the Asserted Patents").

7 Sonos bases these contentions on the publicly available information known to Sonos as
8 of the date of these contentions. Sonos has not yet begun, much less completed, its non-public
9 investigation, collection of information, discovery, or analysis relating to this action, and
10 additional discovery, including discovery from Google and third parties, may lead Sonos to
11 further amend, revise, and/or supplement these contentions. Indeed, the accused functionalities
12 of the accused instrumentalities are implemented, at least in part, by proprietary and specialized
13 electronics, firmware, and/or other software, and the precise designs, processes, and algorithms
14 used to perform the accused functionalities are held secret, at least in part, and are not publicly
15 available in their entirety. As such, an analysis of non-publicly-available documentation and
16 source code, including that of Google and/or third-parties may be necessary to fully and
17 accurately describe every infringing functionality.

18 For at least these reasons, Sonos specifically reserves the right to further amend, revise,
19 and/or supplement these contentions and/or accompanying exhibits (including but not limited to
20 adding and/or dropping asserted claims) in accordance with any Orders of record in this matter,
21 S.P.R. 4.1, and Federal Rule of Civil Procedure 26(e), as additional documents and information
22 become available and as discovery and investigation proceed. Sonos also reserves the right to
23 supplement, modify or amend these contentions to include additional products or services made,
24 used, sold, or offered for sale in or imported into the United States by Google.

25 The information in these contentions is not an admission regarding the scope of any claims
26 or the proper construction of those claims or any terms contained therein. Google has not
27 indicated whether it intends to advance in this case any construction of any claim pursuant to
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1 S.P.R. 3.4. In the event Google advances any constructions under S.P.R. 3.4, Sonos reserves the
2 right to revise or supplement these contentions to address such a construction.

3 **I. Disclosure of Asserted Claims & Infringement Contentions**

4 **A. Identification of Asserted Claims Pursuant to S.P.R. 2.1.1**

5 Based on the public information currently in its possession, Sonos asserts the following
6 claims (collectively, the “Asserted Claims”) literally and/or under the Doctrine of Equivalents.
7 Sonos expressly reserves the right to amend and/or supplement its identification of Asserted
8 Claims should discovery (including Google’s technical documentation, source code, and
9 witnesses) reveal additional, relevant information.

U.S. Patent No.	Asserted Claims	35 U.S.C. § 271 Subsection(s)
7,571,014	25, 32, 35, 38, 42, 43	§ 271(a), (b), (c), (f)(1), (f)(2)
8,588,949	1, 2, 4, 5, 8, 9, 11, 12	§ 271(a), (b), (c), (f)(1), (f)(2)
9,195,258	17, 21, 22, 23, 24, 26	§ 271(a), (b), (c), (f)(1), (f)(2)
9,219,959	5, 10, 29	§ 271(a), (b), (c), (f)(1), (f)(2)
10,031,715	7, 9, 11, 13, 15, 17	§ 271(a), (b), (c), (f)(1), (f)(2)
10,209,953	7, 8, 12, 13, 14, 18, 22, 23, 24, 25, 28, 29, 30	§ 271(a), (b), (c), (f)(1), (f)(2)
10,439,896	1, 5, 6, 8, 9, 12, 13, 15, 17, 18	§ 271(a), (b), (c), (f)(1), (f)(2)
10,541,883	1, 2, 4, 5, 9, 10, 11, 13, 14, 15, 16, 17, 19	§ 271(a), (b), (c), (f)(1), (f)(2)
10,966,025	1, 10, 12, 13, 18	§ 271(a), (b), (c), (f)(1), (f)(2)
11,080,001	12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33	§ 271(a), (b), (c), (f)(1), (f)(2)

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20 Although not expressly called for by the Standing Patent Rules, Sonos identifies specific,
21 example acts of infringement for each Asserted Patent below.

22 **B. Identification of Accused Instrumentalities Pursuant to S.P.R. 2.1.2**

23 The accused products include various “**Cast-enabled media players**” that Google has
24 branded as Chromecast, Home, and/or Nest products, including the Chromecast, Chromecast
25 Ultra, Chromecast Audio, Chromecast with Google TV, Google TV Streamer (4K), Pixel Tablet
26 with the Charging Speaker Dock, Home Mini, Nest Mini, Home, Home Max, Home Hub, Nest
27 Hub, Nest Hub Max, Nest Audio, and Nest Wifi Point.

1 Each of these Cast-enabled media players is a data network device equipped with a
2 physical component that provides an interconnection with a data network, such as a Wi-Fi and/or
3 Ethernet interface that provides an interconnection with a Wi-Fi and/or Ethernet network. Each
4 of these Cast-enabled media players is also configured to process and output audio. In this
5 respect, each Chromecast, Chromecast Ultra, Chromecast Audio, Chromecast with Google TV,
6 and Google TV Streamer (4K) can connect with and output audio to an external audio device that
7 has speaker drivers, such as a TV. Each Home Mini, Nest Mini, Home, Home Max, Home Hub,
8 Nest Hub, Nest Hub Max, Nest Audio, Nest Wifi Point, and Pixel Tablet with the Charging
9 Speaker Dock contains one or more speaker drivers from which it outputs sound. Thus, each
10 Cast-enabled media player amounts to a “zone player” or “playback device” of the Asserted
11 Patents.

12 The accused products also include user devices, including Google’s own “Pixel”
13 smartphone, tablet, and other computer devices (e.g., the Pixel, Pixel XL, Pixel 2, Pixel 2 XL,
14 Pixel 3, Pixel 3 XL, Pixel 3a, Pixel 3a XL, Pixel 4, Pixel 4 XL, Pixel 4a, Pixel 4a (5G), Pixel 5,
15 Pixel 5a (5G), Pixel 6, Pixel 6 Pro, Pixel 6a, Pixel 7, Pixel 7 Pro, Pixel 7a, Pixel Fold, Pixel 8,
16 Pixel 8 Pro, Pixel 8a, Pixel 9, Pixel 9 Pro, Pixel 9 Pro XL, and Pixel 9 Pro Fold phones, the Pixel
17 Slate and Pixel Tablet tablets, and the Pixelbook and Pixelbook Go laptops), as well as third-
18 party smartphone, tablet, and other computer devices, installed with one or more “**accused apps,**”
19 including the Google Home, YouTube Music, and Google Play Music apps, that can be used to
20 set up and/or control Cast-enabled media players on a data network. Such a user device will be
21 referred to as a “**Cast-enabled controller.**”

22 In addition to being an intelligent, network-enabled media player, each Nest/Home Hub
23 and Nest Hub Max comprises a display screen and is provisioned with programming that enables
24 the device to control other Cast-enabled media players on a data network (such a product may be
25 referred to as a “**Cast-enabled display**” installed with Cast-enabled display software). Thus, in
26 addition to being a Cast-enabled media player, each Cast-enabled display can serve as a Cast-
27 enabled controller for one or more other Cast-enabled media players.

28 In practice, a user can set up a Cast-enabled media system to include any combination of

1 one or more Cast-enabled media players that are connected to the same local data network (e.g.,
2 such as the user’s home Wi-Fi network), and the user can then control that Cast-enabled media
3 system using one or more Cast-enabled controllers that are connected to that same local data
4 network.

5 On information and belief, in developing and updating the functionality of the Cast-
6 enabled media players and accused apps, Google has stored and continues storing in the memory
7 of one or more servers (or other computers) located in the United States program instructions
8 embodying such functionality (e.g., program instructions for the Cast-enabled media player’s
9 firmware or for the accused apps app-software). Relatedly, on information and belief, to facilitate
10 (i) making accused apps available to users for download onto their user devices, (ii) making
11 firmware and/or other software available for installation onto Cast-enabled media players, and
12 (iii) providing software updates (e.g., for firmware and/or app-software) to Cast-enabled media
13 players and accused apps, Google has stored and continues storing in the memory of one or more
14 servers (or other computers) located in the United States program instructions for such software
15 packages. Such a server (or other computer) will be referred to herein as a “**Google Software**
16 **Server.**”

17 On January 7, 2020, Sonos initiated this action against Google and originally asserted the
18 ’949, ’258, ’959, ’953, and ’883 Patents (the “Original Patents”). In the parallel ITC
19 investigation, the ITC found Google liable for infringing each of the Original Patents, and so,
20 Google released purported “redesigns” for each of the Original Patents ostensibly by January 6,
21 2022. *See, e.g.*, Ex. 134 [Inv. No. 337-TA-1191 Initial Determination – Public Version]; Inv. No.
22 337-TA-1191, ID 759893 [Final Determination], ID 759897 [Limited Exclusion Order], ID
23 759899 [Cease and Desist Order]. Also, a number of the Original Patents expired after Sonos
24 initiated this action, including the ’949, ’258, and ’953 Patents. For simplicity, reference herein
25 by Sonos to “each” Cast-enabled media player, Cast-enabled controller, or Google Software
26 Server refers to each such device (regardless of version or generation) that existed during the term
27 of the given Asserted Patent and/or each such device (regardless of version or generation)
28 comprising (i) program instructions (e.g., firmware or other software) embodying Google’s

1 original infringing technology or (ii) program instructions (e.g., firmware or other software)
2 embodying Google’s purported redesign technology, unless noted otherwise. Likewise, reference
3 herein to an accused app, software, or firmware (or a version thereof) refers to each version of
4 such app, software, or firmware that existed during the term of the given Asserted Patent, unless
5 noted otherwise. In this regard, with respect to the ’014 and ’949 Patents, “pre-redesign” refers
6 to Android versions of the Google Home app and versions of the Cast-enabled display software
7 that were released before Google implemented its purported redesign for the ’949 Patent
8 (removing group-volume control functionality), and “post-redesign” refers to Android versions
9 of the Google Home app and versions of the Cast-enabled display software that were released
10 after Google dropped its purported redesign for the ’949 Patent and added back group-volume
11 control functionality (which appears to be sometime after the ’949 Patent expired).

12 Based on the public information currently in its possession, Sonos contends that the
13 Asserted Patents are infringed by Google via, either individually or in combination, the following
14 products (individually, “**Accused Instrumentality**” or collectively, “**Accused**
15 **Instrumentalities**”):

16 ’014 Patent:

- 17 • *All Asserted Claims:* each Cast-enabled controller installed with a pre- or post-
18 redesign Android version of the Google Home app or an iOS version of the Google
19 Home app.
- 20 • *Asserted Claims 25, 32:* (a) each Cast-enabled controller installed with a pre- or post-
21 redesign Android version of the Google Home app, an iOS version of the Google
22 Home app, an Android or iOS version of the YouTube Music app, and/or an Android
23 or iOS version of the Google Play Music app; and (b) each Cast-enabled display
24 installed with a pre- or post-redesign version of the Cast-enabled display software.
- 25 • *Asserted Claims 35:* each Cast-enabled controller installed with a pre- or post-
26 redesign Android version of the Google Home app or an iOS version of the Google
27 Home app.
- 28 • *Asserted Claims 38, 42, 43:* (a) each Cast-enabled controller installed with a pre- or

1 post-redesign Android version of the Google Home app, an iOS version of the Google
2 Home app, an Android or iOS version of the YouTube Music app that provides
3 individual volume meters for Cast-enabled media players in a group and a group
4 volume meter for a group of Cast-enabled media players, and/or an Android or iOS
5 version of the Google Play Music app; and (b) each Cast-enabled display installed
6 with a pre- or post-redesign version of the Cast-enabled display software.

7 '949 Patent:

- 8 • *All Asserted Claims:* each Cast-enabled controller installed with a pre-redesign
9 Android version of the Google Home app or an iOS version of the Google Home app
- 10 • *Asserted Claims 1, 4:* (a) each Cast-enabled controller installed with a pre-redesign
11 Android version of the Google Home app, an iOS version of the Google Home app,
12 an Android or iOS version of the YouTube Music app, and/or an Android or iOS
13 version of the Google Play Music app; and (b) each Cast-enabled display installed
14 with a pre-redesign version of the Cast-enabled display software.
- 15 • *Asserted Claim 2:* (a) each Cast-enabled controller installed with a pre-redesign
16 Android version of the Google Home app or an iOS version of the Google Home app;
17 and (b) each Cast-enabled display installed with a pre-redesign version of the Cast-
18 enabled display software.
- 19 • *Asserted Claim 5:* each Cast-enabled controller installed with a pre-redesign Android
20 version of the Google Home app or an iOS version of the Google Home app.
- 21 • *Asserted Claims 8, 11:* (a) each Cast-enabled controller installed with a pre-redesign
22 Android version of the Google Home app, an iOS version of the Google Home app,
23 an Android or iOS version of the YouTube Music app, and/or an Android or iOS
24 version of the Google Play Music app; (b) each Cast-enabled display installed with a
25 pre-redesign version of the Cast-enabled display software; and (c) each Google
26 Software Server.
- 27 • *Asserted Claim 9:* (a) each Cast-enabled controller installed with a pre-redesign
28 Android version of the Google Home app or an iOS version of the Google Home app;

1 (b) each Cast-enabled display installed with a pre-redesign version of the Cast-enabled
2 display software; and (c) each Google Software Server.

- 3 • *Asserted Claim 12*: (a) each Cast-enabled controller installed with a pre-redesign
4 Android version of the Google Home app or an iOS version of the Google Home app;
5 and (b) each Google Software Server.

6 '258 Patent:

- 7 • *All Asserted Claims*: each Cast-enabled media player.

8 '959 Patent:

- 9 • *All Asserted Claims*: each Home Max and Nest Audio player provisioned with
10 firmware embodying Google's original infringing technology (referred to herein as a
11 "'959 Cast-enabled media player").

12 '715 Patent:

- 13 • *All Asserted Claims*: each Cast-enabled media player.
14 • *Asserted Claims 13, 15, 17*: (a) each Cast-enabled media player; and (b) each Google
15 Software Server.

16 '953 Patent:

- 17 • *All Asserted Claims*: each Cast-enabled media player provisioned with firmware
18 embodying Google's original infringing technology (referred to herein as a "'953
19 Cast-enabled media player").
20 • *Asserted Claims 25, 28, 29, 30*: (a) each '953 Cast-enabled media player; and (b) each
21 Google Software Server.

22 '896 Patent:

- 23 • *All Asserted Claims*: each Cast-enabled controller installed with the Google Home
24 app.
25 • *Asserted Claims 13, 15, 17, 18*: (a) each Cast-enabled controller installed with the
26 Google Home app; and (b) each Google Software Server.

27 '883 Patent:

- 28 • *All Asserted Claims*: each Cast-enabled media player.

- 1 • *Asserted Claims 14, 15, 16, 17, 19*: (a) each Cast-enabled media player; and (b) each
2 Google Software Server.

3 '025 Patent:

- 4 • *All Asserted Claims*: each Home, Home Mini, Home Max, Nest Mini, and Nest Audio
5 player (referred to herein as a "'025 Cast-enabled media player").
6 • *Asserted Claim 18*: (a) each '025 Cast-enabled media player; and (b) each Google
7 Software Server.

8 '001 Patent:

- 9 • *Asserted Claims 12, 13, 14, 17, 18, 21*: each Cast-enabled media player.
10 • *Asserted Claim 19*: each Cast-enabled media player provisioned with firmware
11 embodying Google's purported redesign technology.
12 • *Asserted Claims 20, 22*: each Cast-enabled media player provisioned with firmware
13 embodying Google's original infringing technology.
14 • *Asserted Claims 23, 24, 25, 28, 29, and 32*: (a) each Cast-enabled media player; and
15 (b) each Google Software Server.
16 • *Asserted Claim 30*: (a) each Cast-enabled media player provisioned with firmware
17 embodying Google's purported redesign technology; and (b) each Google Software
18 Server.
19 • *Asserted Claims 31, 33*: (a) each Cast-enabled media player provisioned with
20 firmware embodying Google's original infringing technology; and (b) each Google
21 Software Server.

22 **C. Infringement Claim Charts Pursuant to S.P.R. 2.1.3**

23 Based on the public information currently in its possession, Sonos provides the following
24 exhibits¹ attached hereto, which specify where each limitation of each Asserted Claim is found
25 within each Accused Instrumentality (whether literally or under the Doctrine of Equivalents):

26 *Exhibit A*: Infringement of '014 Patent

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28 ¹ An "Ex. [numeral]" citation in these infringement charts refer to an exhibit to Sonos's Second Amended Complaint (D.I. 68) unless noted otherwise.

1 Exhibit B: Infringement of '949 Patent

2 Exhibit C: Infringement of '258 Patent

3 Exhibit D: Infringement of '959 Patent

4 Exhibit E: Infringement of '715 Patent

5 Exhibit F: Infringement of '953 Patent

6 Exhibit G: Infringement of '896 Patent

7 Exhibit H: Infringement of '883 Patent

8 Exhibit I: Infringement of '025 Patent

9 Exhibit J: Infringement of '001 Patent

10 Sonos identifies below specific, example acts of infringement for each Asserted Patent
11 under 35 U.S.C. § 271(a), (b), (c), (f)(1), and (f)(2).

12 ***i. Direct Infringement Under 35 U.S.C. § 271(a)***

13 '014 Patent: Google has directly infringed and continues to directly infringe claims 25
14 and 32 of the '014 Patent at least by offering to sell, selling, and/or importing into the United
15 States Cast-enabled controllers (e.g., Google's Pixel devices) with an Android version of the
16 YouTube Music app, an Android version of the Google Home App, and/or an Android version
17 of the Google Play Music app installed thereon, and Cast-enabled displays with a pre- or post-
18 redesign version of the Cast-enabled display software installed thereon.

19 Google has also directly infringed and continues to directly infringe claims 38, 42, and 43
20 of the '014 Patent at least by offering to sell, selling, and/or importing into the United States Cast-
21 enabled controllers (e.g., Google's Pixel devices) with an Android version of the YouTube Music
22 app that provides individual volume meters for Cast-enabled media players in a group and a group
23 volume meter for a group of Cast-enabled media players and/or an Android version of the Google
24 Play Music app installed thereon, and Cast-enabled displays with a pre- or post-redesign version
25 of the Cast-enabled display software installed thereon.

26 Google has directly infringed and continues to directly infringe each Asserted Claim of
27 the '014 Patent by virtue of installing a pre- or post-redesign Android version of the Google Home
28 app or an iOS version of the Google Home app onto a Pixel smartphone, tablet, or other computer

1 device, or a third-party smartphone, tablet, or other computer device within the United States,
2 which constitutes “mak[ing]” a Cast-enabled controller, which is an infringing device under 35
3 U.S.C. § 271(a).

4 Google has also directly infringed and continues to directly infringe claims 25 and 32 of
5 the '014 Patent by virtue of installing an Android or iOS version of the YouTube Music app
6 and/or an Android or iOS version of the Google Play Music app onto a Pixel smartphone, tablet,
7 or other computer device, or a third-party smartphone, tablet, or other computer device within the
8 United States, which constitutes “mak[ing]” a Cast-enabled controller, which is an infringing
9 device under 35 U.S.C. § 271(a).

10 Google has directly infringed and continues to directly infringe claims 38, 42, and 43 of
11 the '014 Patent by virtue of installing an Android or iOS version of the YouTube Music app that
12 provides individual volume meters for Cast-enabled media players in a group and a group volume
13 meter for a group of Cast-enabled media players and/or an Android or iOS version of the Google
14 Play Music app onto a Pixel smartphone, tablet, or other computer device, or a third-party
15 smartphone, tablet, or other computer device within the United States, which constitutes
16 “mak[ing]” a Cast-enabled controller, which is an infringing device under 35 U.S.C. § 271(a).

17 Further, on information and belief, Google has directly infringed and continues to directly
18 infringe each Asserted Claim of the '014 Patent by virtue of testing Cast-enabled controllers with
19 a pre- or post-redesign Android version of the Google Home app or an iOS version of the Google
20 Home app installed thereon, which constitutes “us[ing]” an infringing device under 35 U.S.C. §
21 271(a).

22 Further still, on information and belief, Google has directly infringed and continues to
23 directly infringe claims 25 and 32 of the '014 Patent by virtue of testing Cast-enabled controllers
24 with an Android or iOS version of the YouTube Music app and/or an Android or iOS version of
25 the Google Play Music app installed thereon, and Cast-enabled displays with a pre- or post-
26 redesign version of the Cast-enabled display software installed thereon within the United States,
27 which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

28 Further yet, on information and belief, Google has directly infringed and continues to

1 directly infringe claims 38, 42, and 43 of the '014 Patent by virtue of testing Cast-enabled
2 controllers with an Android or iOS version of the YouTube Music app that provides individual
3 volume meters for Cast-enabled media players in a group and a group volume meter for a group
4 of Cast-enabled media players and/or an Android or iOS version of the Google Play Music app
5 installed thereon, and Cast-enabled displays with a pre- or post-redesign version of the Cast-
6 enabled display software installed thereon within the United States, which constitutes “us[ing]”
7 an infringing device under 35 U.S.C. § 271(a).

8 '949 Patent: Google has directly infringed (up to the '949 Patent's expiration) claims 1,
9 4, 8, and 11 of the '949 Patent at least by offering to sell, selling, and/or importing into the United
10 States Cast-enabled controllers (e.g., Google's Pixel devices) with an Android version of the
11 YouTube Music app, a pre-redesign Android version of the Google Home app, or an Android
12 version of the Google Play Music app installed thereon.

13 Google has directly infringed claims 1, 2, 4, 8, 9, and 11 of the '949 Patent at least by
14 offering to sell, selling, and/or importing into the United States Cast-enabled displays with a pre-
15 redesign version of the Cast-enabled display software installed thereon.

16 Google has also directly infringed each Asserted Claim of the '949 Patent by virtue of
17 installing a pre-redesign Android version of the Google Home app or an iOS version of the
18 Google Home app onto a Pixel smartphone, tablet, or other computer device, or a third-party
19 smartphone, tablet, or other computer device within the United States, which constitutes
20 “mak[ing]” a Cast-enabled controller, which is an infringing device under 35 U.S.C. § 271(a).

21 Google has directly infringed claims 1, 4, 8, and 11 of the '949 Patent by virtue of
22 installing an Android or iOS version of the YouTube Music app and/or an Android or iOS version
23 of the Google Play Music app onto a Pixel smartphone, tablet, or other computer device, or a
24 third-party smartphone, tablet, or other computer device within the United States, which
25 constitutes “mak[ing]” a Cast-enabled controller, which is an infringing device under 35 U.S.C.
26 § 271(a).

27 Google has also directly infringed claims 8, 9, 11, and 12 of the '949 Patent by virtue of
28 storing program instructions on Google Software Servers, which constitutes “mak[ing]” an

1 infringing “non-transitory computer readable storage medium” under 35 U.S.C. § 271(a).

2 Further, on information and belief, Google has directly infringed each Asserted Claim of
3 the ’949 Patent by virtue of testing Cast-enabled controllers with a pre-redesign Android version
4 of the Google Home app or an iOS version of the Google Home app installed thereon, which
5 constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

6 Further, on information and belief, Google has directly infringed claims 1, 4, 8, and 11 of
7 the ’949 Patent by virtue of testing Cast-enabled controllers with an Android or iOS version of
8 the YouTube Music app and/or an Android or iOS version of the Google Play Music app installed
9 thereon within the United States, which constitutes “us[ing]” an infringing device under 35 U.S.C.
10 § 271(a).

11 Further, on information and belief, Google has directly infringed claims 1, 2, 4, 8, 9, and
12 11 of the ’949 Patent by virtue of testing Cast-enabled displays with a pre-redesign version of the
13 Cast-enabled display software installed thereon within the United States, which constitutes
14 “us[ing]” an infringing device under 35 U.S.C. § 271(a).

15 ’258 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
16 Claim of the ’258 Patent. Thus, Google has directly infringed (up to the ’258 Patent’s expiration)
17 each Asserted Claim of the ’258 Patent at least by offering to sell, selling, and/or importing into
18 the United States infringing devices.

19 Sonos also contends that Google has directly infringed each Asserted Claim of the ’258
20 Patent by virtue of installing software (e.g., firmware updates) onto Cast-enabled media players
21 in the United States, which constitutes “mak[ing]” an infringing device under 35 U.S.C. § 271(a).

22 Sonos further contends that Google has directly infringed each Asserted Claim of the ’258
23 Patent by virtue of using Cast-enabled media players in the United States, which constitutes
24 “us[ing]” an infringing device under 35 U.S.C. § 271(a).

25 ’959 Patent: Sonos contends that each ’959 Cast-enabled media player infringes each
26 Asserted Claim of the ’959 Patent. Thus, Google has directly infringed each Asserted Claim of
27 the ’959 Patent at least by offering to sell, selling, and/or importing into the United States
28 infringing devices.

1 Sonos also contends that Google has directly infringed each Asserted Claim of the '959
2 Patent by virtue of installing software (e.g., firmware updates) onto '959 Cast-enabled media
3 players in the United States, which constitutes “mak[ing]” an infringing device under 35 U.S.C.
4 § 271(a).

5 Sonos further contends that Google has directly infringed each Asserted Claim of the '959
6 Patent by virtue of using '959 Cast-enabled media players in the United States, which constitutes
7 “us[ing]” an infringing device under 35 U.S.C. § 271(a).

8 '715 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
9 Claim of the '715 Patent. Thus, Google has directly infringed and continues to directly infringe
10 each Asserted Claim of the '715 Patent at least by offering to sell, selling, and/or importing into
11 the United States infringing devices.

12 Sonos also contends that Google has directly infringed and continues to directly infringe
13 each Asserted Claim of the '715 Patent by virtue of installing software (e.g., firmware updates)
14 onto Cast-enabled media players in the United States, which constitutes “mak[ing]” an infringing
15 device under 35 U.S.C. § 271(a).

16 Sonos further contends that Google has directly infringed and continues to directly
17 infringe each Asserted Claim of the '715 Patent by virtue of using Cast-enabled media players in
18 the United States, which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

19 Sonos additionally contends that Google has directly infringed and continues to directly
20 infringe claims 13, 15, and 17 of the '715 Patent by virtue of storing program instructions on
21 Google Software Servers, which constitutes “mak[ing]” an infringing “tangible, non-transitory
22 computer-readable media” under 35 U.S.C. § 271(a).

23 '953 Patent: Sonos contends that each '953 Cast-enabled media player infringes each
24 Asserted Claim of the '953 Patent. Thus, Google has directly infringed (up to the '953 Patent's
25 expiration) each Asserted Claim of the '953 Patent at least by offering to sell, selling, and/or
26 importing into the United States infringing devices.

27 Sonos also contends that Google has directly infringed each Asserted Claim of the '953
28 Patent by virtue of installing software (e.g., firmware updates) onto '953 Cast-enabled media

1 players in the United States, which constitutes “mak[ing]” an infringing device under 35 U.S.C.
2 § 271(a).

3 Sonos further contends that Google has directly infringed each Asserted Claim of the '953
4 Patent by virtue of using '953 Cast-enabled media players in the United States, which constitutes
5 “us[ing]” an infringing device under 35 U.S.C. § 271(a).

6 Sonos additionally contends that Google has directly infringed claims 25, 28, 29, and 30
7 of the '953 Patent by virtue of storing program instructions on Google Software Servers, which
8 constitutes “mak[ing]” infringing “[t]angible, non-transitory computer-readable storage media”
9 under 35 U.S.C. § 271(a).

10 '896 Patent: Google has directly infringed and continues to directly infringe each
11 Asserted Claim of the '896 Patent at least by offering to sell, selling, and/or importing into the
12 United States Cast-enabled controllers (e.g., Pixel Tablets) with the Google Home app installed
13 thereon.

14 Google has also directly infringed and continues to directly infringe each Asserted Claim
15 of the '896 Patent by virtue of installing the Google Home app onto a Pixel smartphone, tablet,
16 or other computer device, or a third-party smartphone, tablet, or other computer device within the
17 United States, which constitutes “mak[ing]” a Cast-enabled controller, which is an infringing
18 device under 35 U.S.C. § 271(a).

19 Google has also directly infringed and continues to directly infringe claims 13, 15, 17,
20 and 18 of the '896 Patent by virtue of storing program instructions on Google Software Servers,
21 which constitutes “mak[ing]” an infringing “non-transitory computer-readable medium” under
22 35 U.S.C. § 271(a).

23 Further, on information and belief, Google has directly infringed and continues to directly
24 infringe each Asserted Claim of the '896 Patent by virtue of testing Cast-enabled controllers with
25 the Google Home app installed thereon, which constitutes “us[ing]” an infringing device under
26 35 U.S.C. § 271(a).

27 '883 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
28 Claim of the '883 Patent. Thus, Google has directly infringed and continues to directly infringe

1 each Asserted Claim of the '883 Patent at least by offering to sell, selling, and/or importing into
2 the United States infringing devices.

3 Sonos also contends that Google has directly infringed and continues to directly infringe
4 each Asserted Claim of the '883 Patent by virtue of installing software (e.g., firmware updates)
5 onto Cast-enabled media players in the United States, which constitutes “mak[ing]” an infringing
6 device under 35 U.S.C. § 271(a).

7 Sonos further contends that Google has directly infringed and continues to directly
8 infringe each Asserted Claim of the '883 Patent by virtue of using Cast-enabled media players in
9 the United States, which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

10 Sonos additionally contends that Google has directly infringed and continues to directly
11 infringe claims 14, 15, 16, 17, and 19 of the '883 Patent by virtue of storing program instructions
12 on Google Software Servers, which constitutes “mak[ing]” an infringing “non-transitory,
13 computer-readable storage medium” under 35 U.S.C. § 271(a).

14 '025 Patent: Sonos contends that each '025 Cast-enabled media player infringes each
15 Asserted Claim of the '025 Patent. Thus, Google has directly infringed and continues to directly
16 infringe each Asserted Claim of the '025 Patent at least by offering to sell, selling, and/or
17 importing into the United States infringing devices.

18 Sonos also contends that Google has directly infringed and continues to directly infringe
19 each Asserted Claim of the '025 Patent by virtue of installing software (e.g., firmware updates)
20 onto '025 Cast-enabled media players in the United States, which constitutes “mak[ing]” an
21 infringing device under 35 U.S.C. § 271(a).

22 Sonos further contends that Google has directly infringed and continues to directly
23 infringe each Asserted Claim of the '025 Patent by virtue of using '025 Cast-enabled media
24 players in the United States, which constitutes “us[ing]” an infringing device under 35 U.S.C. §
25 271(a).

26 Sonos additionally contends that Google has directly infringed and continues to directly
27 infringe claim 18 of the '025 Patent by virtue of storing program instructions on Google Software
28

1 Servers, which constitutes “mak[ing]” infringing “tangible, non-transitory, computer readable
2 memory” under 35 U.S.C. § 271(a).

3 '001 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
4 Claim of the '001 Patent. Thus, Google has directly infringed and continues to directly infringe
5 each Asserted Claim of the '001 Patent at least by offering to sell, selling, and/or importing into
6 the United States infringing devices.

7 Sonos also contends that Google has directly infringed and continues to directly infringe
8 each Asserted Claim of the '001 Patent by virtue of installing software (e.g., firmware updates)
9 onto Cast-enabled media players in the United States, which constitutes “mak[ing]” an infringing
10 device under 35 U.S.C. § 271(a).

11 Sonos further contends that Google has directly infringed and continues to directly
12 infringe each Asserted Claim of the '001 Patent by virtue of using Cast-enabled media players in
13 the United States, which constitutes “us[ing]” an infringing device under 35 U.S.C. § 271(a).

14 Sonos additionally contends that Google has directly infringed and continues to directly
15 infringe claims 23, 24, 25, 28, 29, 30, 31, 32, and 33 of the '001 Patent by virtue of storing
16 program instructions on Google Software Servers, which constitutes “mak[ing]” infringing
17 “[t]angible, non-transitory computer-readable media” under 35 U.S.C. § 271(a).

18 ***ii. Induced Infringement Under 35 U.S.C. § 271(b)***

19 Pursuant to 35 U.S.C. § 271(b), Google also actively, knowingly, and intentionally
20 induced (and continues to actively, knowingly, and intentionally induce) others to make, use,
21 offer to sell, sell, and/or import the Accused Instrumentalities into the United States. As noted in
22 Sonos’s Second Amended Complaint, Google had actual knowledge of the Asserted Patents prior
23 to the filing of the Complaint.

24 '014 Patent: Despite knowing of the '014 Patent, Google has actively, knowingly, and
25 intentionally induced (and continues to actively, knowingly, and intentionally induce) others to
26 directly infringe the Asserted Claims in various ways, in violation of 35 U.S.C. § 271(b).

27 For example, through Google’s website, advertising and promotional material, user
28 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally

1 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
2 induce) others to install a pre- or post-redesign Android version of the Google Home app or an
3 iOS version of the Google Home app onto computer devices (and updates thereto), and thereby
4 “make[]” an infringing device, which constitutes direct infringement of each Asserted Claim of
5 the ’014 Patent under 35 U.S.C. § 271(a).

6 For example, through Google’s website, advertising and promotional material, user
7 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
8 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
9 induce) others to install an Android or iOS version of the YouTube Music app and/or an Android
10 or iOS version of the Google Play Music app onto computer devices (and updates thereto), and
11 thereby “make[]” an infringing device, which constitutes direct infringement of claims 25 and 32
12 of the ’014 Patent under 35 U.S.C. § 271(a).

13 For example, through Google’s website, advertising and promotional material, user
14 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
15 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
16 induce) others to install an Android or iOS version of the YouTube Music app that provides
17 individual volume meters for Cast-enabled media players in a group and a group volume meter
18 for a group of Cast-enabled media players and/or an Android or iOS version of the Google Play
19 Music app onto computer devices (and updates thereto), and thereby “make[]” an infringing
20 device, which constitutes direct infringement of claims 38, 42, and 43 of the ’014 Patent under
21 35 U.S.C. § 271(a).

22 For example, through Google’s website, advertising and promotional material, user
23 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
24 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
25 induce) others to install a pre-redesign version of the Cast-enabled display software onto Cast-
26 enabled displays (e.g., updates thereto), and thereby “make[]” an infringing device, which
27 constitutes direct infringement of claims 25, 32, 38, 42, and 43 of the ’014 Patent under 35 U.S.C.
28 § 271(a).

1 As yet another example, through Google’s website, advertising and promotional material,
2 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
3 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
4 induce) others to “use” Cast-enabled controllers with a pre- or post-redesign Android version of
5 the Google Home app or an iOS version of the Google Home app installed thereon, which
6 constitutes direct infringement of each Asserted Claim of the ’014 Patent under 35 U.S.C. §
7 271(a).

8 As yet another example, through Google’s website, advertising and promotional material,
9 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
10 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
11 induce) others to “use” Cast-enabled controllers with an Android or iOS version of the YouTube
12 Music app and/or an Android or iOS version of the Google Play Music app installed thereon, and
13 Cast-enabled displays with a pre- or post-redesign version of the Cast-enabled display software
14 installed thereon, which constitutes direct infringement of claims 25 and 32 of the ’014 Patent
15 under 35 U.S.C. § 271(a).

16 As yet another example, through Google’s website, advertising and promotional material,
17 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
18 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
19 induce) others to “use” Cast-enabled controllers with an Android or iOS version of the YouTube
20 Music app that provides individual volume meters for Cast-enabled media players in a group and
21 a group volume meter for a group of Cast-enabled media players and/or an Android or iOS version
22 of the Google Play Music app installed thereon, and Cast-enabled displays with a pre- or post-
23 redesign version of the Cast-enabled display software installed thereon, which constitutes direct
24 infringement of claims 38, 42, and 43 of the ’014 Patent under 35 U.S.C. § 271(a).

25 As a further example, Google has actively, knowingly, and intentionally encouraged and
26 induced (and continues to actively, knowingly, and intentionally encourage and induce)
27 distributors and retailers to “offer[] to sell” and “sell[]” Cast-enabled controllers (e.g., Google’s
28 Pixel devices) with an Android or iOS version of the YouTube Music app, an Android version of

1 the Google Home App, and/or an Android or iOS version of Google Play Music app installed
2 thereon and Cast-enabled displays with a pre- or post-redesign version of the Cast-enabled display
3 software installed thereon, which constitutes direct infringement of claims 25 and 32 of the '014
4 Patent under 35 U.S.C. § 271(a).

5 As a further example, Google has actively, knowingly, and intentionally encouraged and
6 induced (and continues to actively, knowingly, and intentionally encourage and induce)
7 distributors and retailers to “offer[] to sell” and “sell[]” Cast-enabled controllers (e.g., Google’s
8 Pixel devices) with an Android or iOS version of the YouTube Music app that provides individual
9 volume meters for Cast-enabled media players in a group and a group volume meter for a group
10 of Cast-enabled media players and/or an Android or iOS version of the Google Play Music app
11 installed thereon, and Cast-enabled displays with a pre- or post-redesign version of the Cast-
12 enabled display software installed thereon, which constitutes direct infringement of claims 38,
13 42, and 43 of the '014 Patent under 35 U.S.C. § 271(a).

14 As still another example, by making, importing, offering to sell, and selling Cast-enabled
15 media players programmed with software that facilitates the accused functionality in the accused
16 apps, Google has actively, knowingly, and intentionally induced (and continues to actively,
17 knowingly, and intentionally induce) others to “mak[e]” and “use” Cast-enabled controllers and
18 Cast-enabled displays, which constitutes direct infringement of each Asserted Claim of the '014
19 Patent under 35 U.S.C. § 271(a).

20 Along with its actual knowledge of the '014 Patent, Google also knew (or should have
21 known) that its actions would induce others to directly infringe the Asserted Claims of the '014
22 Patent. For example, Google has supplied and continues to supply from the United States the
23 accused apps to users in the United States and abroad and encourages installation and use of such
24 accused apps in the United States and abroad while knowing that the installation and use of the
25 accused apps will infringe the Asserted Claims of the '014 Patent. As another example, Google
26 has supplied and continues to supply Cast-enabled displays (and software for the Cast-enabled
27 displays) to users and encourages installation and use of Cast-enabled display software on the
28 Cast-enabled displays while knowing that such installation and use will infringe the Asserted

1 Claims of the '014 Patent.

2 '949 Patent: Despite knowing of the '949 Patent, Google has actively, knowingly, and
3 intentionally induced others to directly infringe the Asserted Claims in various ways, in violation
4 of 35 U.S.C. § 271(b).

5 For example, through Google's website, advertising and promotional material, user
6 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
7 encouraged and induced others to install a pre-redesign Android version of the Google Home app
8 or an iOS version of the Google Home app onto computer devices (and updates thereto), and
9 thereby "make[]" an infringing device, which constitutes direct infringement of each Asserted
10 Claim of the '949 Patent under 35 U.S.C. § 271(a).

11 For example, through Google's website, advertising and promotional material, user
12 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
13 encouraged and induced others to install an Android or iOS version of the YouTube Music app
14 and/or an Android or iOS version of the Google Play Music app onto computer devices (and
15 updates thereto), and thereby "make[]" an infringing device, which constitutes direct
16 infringement of claims 1, 4, 8, and 11 of the '949 Patent under 35 U.S.C. § 271(a).

17 For example, through Google's website, advertising and promotional material, user
18 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
19 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
20 induce) others to install a pre-redesign version of the Cast-enabled display software onto Cast-
21 enabled displays (e.g., updates thereto), and thereby "make[]" an infringing device, which
22 constitutes direct infringement of claims 1, 2, 4, 8, 9, 11 of the '949 Patent under 35 U.S.C. §
23 271(a).

24 As yet another example, through Google's website, advertising and promotional material,
25 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
26 encouraged and induced others to "use" Cast-enabled controllers with a pre-redesign Android
27 version of the Google Home app or an iOS version of the Google Home app installed thereon,
28

1 which constitutes direct infringement of each Asserted Claim of the '949 Patent under 35 U.S.C.
2 § 271(a).

3 As yet another example, through Google's website, advertising and promotional material,
4 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
5 encouraged and induced others to "use" Cast-enabled controllers with an Android or iOS version
6 of the YouTube Music app and/or an Android or iOS version of the Google Play Music app
7 installed thereon, which constitutes direct infringement of claims 1, 4, 8, and 11 of the '949 Patent
8 under 35 U.S.C. § 271(a).

9 As yet another example, through Google's website, advertising and promotional material,
10 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
11 encouraged and induced others to "use" Cast-enabled displays installed with a pre-redesign
12 version of the Cast-enabled display software, which constitutes direct infringement of claims 1,
13 2, 4, 8, 9, and 11 of the '949 Patent under 35 U.S.C. § 271(a).

14 As a further example, Google has actively, knowingly, and intentionally encouraged and
15 induced distributors and retailers to "offer[] to sell" and "sell[]" Cast-enabled controllers (e.g.,
16 Google's Pixel devices) with an Android or iOS version of the YouTube Music app, a pre-
17 redesign Android version of the Google Home app, and/or an Android or iOS version Google
18 Play Music app installed thereon, which constitutes direct infringement of claims 1, 2, 4, 8, and
19 11 of the '949 Patent under 35 U.S.C. § 271(a).

20 As a further example, Google has actively, knowingly, and intentionally encouraged and
21 induced distributors and retailers to "offer[] to sell" and "sell[]" Cast-enabled displays installed
22 with a pre-redesign version of the Cast-enabled display software, which constitutes direct
23 infringement of claims 1, 2, 4, 8, 9, and 11 of the '949 Patent under 35 U.S.C. § 271(a).

24 As still another example, by making, importing, offering to sell, and selling Cast-enabled
25 media players programmed with software that facilitates the accused functionality in the accused
26 apps, Google has actively, knowingly, and intentionally induced others to "mak[e]" and "use"
27 Cast-enabled controllers and Cast-enabled displays, which constitutes direct infringement of each
28 Asserted Claim of the '949 Patent under 35 U.S.C. § 271(a).

1 Along with its actual knowledge of the '949 Patent, Google also knew (or should have
2 known) that its actions would induce others to directly infringe the Asserted Claims of the '949
3 Patent. For example, Google has supplied from the United States the accused apps to users in the
4 United States and abroad and encouraged installation and use of such accused apps in the United
5 States and abroad while knowing that the installation and use of the accused apps would infringe
6 the Asserted Claims of the '949 Patent. As another example, Google has supplied Cast-enabled
7 displays (and software for the Cast-enabled displays) to users and encouraged installation and use
8 of Cast-enabled display software on the Cast-enabled displays while knowing that such
9 installation and use would infringe the Asserted Claims of the '949 Patent.

10 '258 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
11 Claim of the '258 Patent. Despite knowing of the '258 Patent, Google has actively, knowingly,
12 and intentionally induced others to directly infringe the Asserted Claims by actively encouraging
13 others to make, use, offer to sell, sell, and/or import Cast-enabled media players into the United
14 States in violation of 35 U.S.C. § 271(b).

15 For example, through Google's website, advertising and promotional material, user
16 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
17 Store, Google has actively, knowingly, and intentionally encouraged and induced others to install
18 firmware updates onto Cast-enabled media players, thereby "mak[ing]" an infringing device,
19 which constitutes direct infringement of the Asserted Claims of the '258 Patent under 35 U.S.C.
20 § 271(a).

21 As another example, through Google's website, advertising and promotional material,
22 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
23 Store, Google has actively, knowingly, and intentionally encouraged and induced others to
24 "use[]" Cast-enabled media players, which constitutes direct infringement of the Asserted Claims
25 of the '258 Patent under 35 U.S.C. § 271(a).

26 As yet another example, Google has actively, knowingly, and intentionally induced
27 distributors and retailers to "offer[] to sell" and "sell[]" Cast-enabled media players, which
28 constitutes direct infringement of the Asserted Claims of the '258 Patent under 35 U.S.C. §

1 271(a).

2 Along with its actual knowledge of the '258 Patent, Google also knew (or should have
3 known) that its actions would induce others to directly infringe the Asserted Claims of the '258
4 Patent. For instance, Google has supplied Cast-enabled media players (as well as firmware
5 updates) to users while knowing that the use of Cast-enabled media players will infringe the
6 Asserted Claims of the '258 Patent.

7 '959 Patent: Sonos contends that each '959 Cast-enabled media player infringes each
8 Asserted Claim of the '959 Patent. Despite knowing of the '959 Patent, Google has actively,
9 knowingly, and intentionally induced others to directly infringe the Asserted Claims by actively
10 encouraging others to make, use, offer to sell, sell, and/or import '959 Cast-enabled media players
11 into the United States in violation of 35 U.S.C. § 271(b).

12 For example, through Google's website, advertising and promotional material, user
13 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
14 Store, Google has actively, knowingly, and intentionally encouraged and induced others to install
15 firmware updates onto '959 Cast-enabled media players, thereby "mak[ing]" an infringing device,
16 which constitutes direct infringement of the Asserted Claims of the '959 Patent under 35 U.S.C.
17 § 271(a).

18 As another example, through Google's website, advertising and promotional material,
19 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
20 Store, Google has actively, knowingly, and intentionally encouraged and induced others to
21 "use[]" '959 Cast-enabled media players, which constitutes direct infringement of the Asserted
22 Claims of the '959 Patent under 35 U.S.C. § 271(a).

23 As yet another example, Google has actively, knowingly, and intentionally induced
24 distributors and retailers to "offer[] to sell" and "sell[]" '959 Cast-enabled media players, which
25 constitutes direct infringement of the Asserted Claims of the '959 Patent under 35 U.S.C. §
26 271(a).

27 Along with its actual knowledge of the '959 Patent, Google also knew (or should have
28 known) that its actions would induce others to directly infringe the Asserted Claims of the '959

1 Patent. For instance, Google has supplied '959 Cast-enabled media players (as well as firmware
2 updates) to users while knowing that the use of '959 Cast-enabled media players will infringe the
3 Asserted Claims of the '959 Patent.

4 '715 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
5 Claim of the '715 Patent. Despite knowing of the '715 Patent, Google has actively, knowingly,
6 and intentionally induced (and continues to actively, knowingly, and intentionally induce) others
7 to directly infringe the Asserted Claims by actively encouraging others to make, use, offer to sell,
8 sell, and/or import Cast-enabled media players into the United States in violation of 35 U.S.C. §
9 271(b).

10 For example, through Google's website, advertising and promotional material, user
11 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
12 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
13 to actively, knowingly, and intentionally encourage and induce) others to install firmware updates
14 onto Cast-enabled media players, thereby "mak[ing]" an infringing device, which constitutes
15 direct infringement of the Asserted Claims of the '715 Patent under 35 U.S.C. § 271(a).

16 As another example, through Google's website, advertising and promotional material,
17 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
18 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
19 to actively, knowingly, and intentionally encourage and induce) others to "use[]" Cast-enabled
20 media players, which constitutes direct infringement of the Asserted Claims of the '715 Patent
21 under 35 U.S.C. § 271(a).

22 As yet another example, Google has actively, knowingly, and intentionally induced (and
23 continues to actively, knowingly, and intentionally induce) distributors and retailers to "offer[] to
24 sell" and "sell[]" Cast-enabled media players, which constitutes direct infringement of the
25 Asserted Claims of the '715 Patent under 35 U.S.C. § 271(a).

26 Along with its actual knowledge of the '715 Patent, Google also knew (or should have
27 known) that its actions would induce others to directly infringe the Asserted Claims of the '715
28 Patent. For instance, Google has supplied and continues to supply Cast-enabled media players

1 (as well as firmware updates) to users while knowing that the use of Cast-enabled media players
2 will infringe the Asserted Claims of the '715 Patent.

3 '953 Patent: Sonos contends that each '953 Cast-enabled media player infringes each
4 Asserted Claim of the '953 Patent. Despite knowing of the '953 Patent, Google has actively,
5 knowingly, and intentionally induced others to directly infringe the Asserted Claims by actively
6 encouraging others to make, use, offer to sell, sell, and/or import '953 Cast-enabled media players
7 into the United States in violation of 35 U.S.C. § 271(b).

8 For example, through Google's website, advertising and promotional material, user
9 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
10 Store, Google has actively, knowingly, and intentionally encouraged and induced others to install
11 firmware updates onto '953 Cast-enabled media players, thereby "mak[ing]" an infringing device,
12 which constitutes direct infringement of the Asserted Claims of the '953 Patent under 35 U.S.C.
13 § 271(a).

14 As another example, through Google's website, advertising and promotional material,
15 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
16 Store, Google has actively, knowingly, and intentionally encouraged and induced others to
17 "use[]" '953 Cast-enabled media players, which constitutes direct infringement of the Asserted
18 Claims of the '953 Patent under 35 U.S.C. § 271(a).

19 As yet another example, Google has actively, knowingly, and intentionally induced
20 distributors and retailers to "offer[] to sell" and "sell[]" '953 Cast-enabled media players, which
21 constitutes direct infringement of the Asserted Claims of the '953 Patent under 35 U.S.C. §
22 271(a).

23 Along with its actual knowledge of the '953 Patent, Google also knew (or should have
24 known) that its actions would induce others to directly infringe the Asserted Claims of the '953
25 Patent. For instance, Google has supplied '953 Cast-enabled media players (as well as firmware
26 updates) to users while knowing that the use of '953 Cast-enabled media players will infringe the
27 Asserted Claims of the '953 Patent.

28

1 '896 Patent: Despite knowing of the '896 Patent, Google has actively, knowingly, and
2 intentionally induced (and continues to actively, knowingly, and intentionally induce) others to
3 directly infringe the Asserted Claims in various ways, in violation of 35 U.S.C. § 271(b).

4 For example, through Google's website, advertising and promotional material, user
5 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
6 encouraged and induced (and continues to actively, knowingly, and intentionally induce) others
7 to install the Google Home app onto computer devices (and updates thereto), and thereby
8 "make[]" an infringing device, which constitutes direct infringement of each Asserted Claim of
9 the '896 Patent under 35 U.S.C. § 271(a).

10 As yet another example, through Google's website, advertising and promotional material,
11 user guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
12 encouraged and induced (and continues to actively, knowingly, and intentionally induce) others
13 to "use" Cast-enabled controllers with the Google Home app installed thereon, which constitutes
14 direct infringement of each Asserted Claim of the '896 Patent under 35 U.S.C. § 271(a).

15 As a further example, Google has actively, knowingly, and intentionally encouraged and
16 induced (and continues to actively, knowingly, and intentionally induce) distributors and retailers
17 to "offer[] to sell" and "sell[]" Cast-enabled controllers (e.g., Pixel Tablets with the Google Home
18 app installed thereon), which constitutes direct infringement of each Asserted Claim of the '896
19 Patent under 35 U.S.C. § 271(a).

20 As a further example, Google has actively, knowingly, and intentionally encouraged and
21 induced (and continues to actively, knowingly, and intentionally induce) distributors and retailers
22 to "offer[] to sell" and "sell[]" Cast-enabled displays installed with a pre-redesign version of the
23 Cast-enabled display software, which constitutes direct infringement of claims 1, 2, 4, 8, 9, and
24 11 of the '896 Patent under 35 U.S.C. § 271(a).

25 As still another example, by making, importing, offering to sell, and selling Cast-enabled
26 media players programmed with software that facilitates the accused functionality in the accused
27 apps, Google has actively, knowingly, and intentionally induced (and continues to actively,
28 knowingly, and intentionally induce) others to "mak[e]" and "use" Cast-enabled controllers and

1 Cast-enabled displays, which constitutes direct infringement of each Asserted Claim of the '896
2 Patent under 35 U.S.C. § 271(a).

3 Along with its actual knowledge of the '896 Patent, Google also knew (or should have
4 known) that its actions would induce others to directly infringe the asserted claims of the '896
5 Patent. For example, Google has supplied and continues to supply from the United States the
6 accused apps to users in the United States and abroad and encourages installation and use of such
7 accused apps in the United States and abroad while knowing that the installation and use of the
8 accused apps will infringe the asserted claims of the '896 Patent.

9 '883 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
10 Claim of the '883 Patent. Despite knowing of the '883 Patent, Google has actively, knowingly,
11 and intentionally induced (and continues to actively, knowingly, and intentionally induce) others
12 to directly infringe the Asserted Claims by actively encouraging others to make, use, offer to sell,
13 sell, and/or import Cast-enabled media players into the United States in violation of 35 U.S.C. §
14 271(b).

15 For example, through Google's website, advertising and promotional material, user
16 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
17 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
18 to actively, knowingly, and intentionally encourage and induce) others to install firmware updates
19 onto Cast-enabled media players, thereby "mak[ing]" an infringing device, which constitutes
20 direct infringement of the Asserted Claims of the '883 Patent under 35 U.S.C. § 271(a).

21 As another example, through Google's website, advertising and promotional material,
22 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
23 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
24 to actively, knowingly, and intentionally encourage and induce) others to "use[]" Cast-enabled
25 media players, which constitutes direct infringement of the Asserted Claims of the '883 Patent
26 under 35 U.S.C. § 271(a).

27 As yet another example, Google has actively, knowingly, and intentionally induced (and
28 continues to actively, knowingly, and intentionally induce) distributors and retailers to "offer[] to

1 sell” and “sell[]” Cast-enabled media players, which constitutes direct infringement of the
2 Asserted Claims of the ’883 Patent under 35 U.S.C. § 271(a).

3 Along with its actual knowledge of the ’883 Patent, Google also knew (or should have
4 known) that its actions would induce others to directly infringe the Asserted Claims of the ’883
5 Patent. For instance, Google has supplied and continues to supply Cast-enabled media players
6 (as well as firmware updates) to users while knowing that the use of Cast-enabled media players
7 will infringe the Asserted Claims of the ’883 Patent.

8 ’025 Patent: Sonos contends that each ’025 Cast-enabled media player infringes each
9 Asserted Claim of the ’025 Patent. Despite knowing of the ’025 Patent, Google has actively,
10 knowingly, and intentionally induced (and continues to actively, knowingly, and intentionally
11 encourage and induce) others to directly infringe the Asserted Claims by actively encouraging
12 others to make, use, offer to sell, sell, and/or import ’025 Cast-enabled media players into the
13 United States in violation of 35 U.S.C. § 271(b).

14 For example, through Google’s website, advertising and promotional material, user
15 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
16 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
17 to actively, knowingly, and intentionally encourage and induce) others to install firmware updates
18 onto ’025 Cast-enabled media players, thereby “mak[ing]” an infringing device, which
19 constitutes direct infringement of the Asserted Claims of the ’025 Patent under 35 U.S.C. §
20 271(a).

21 As another example, through Google’s website, advertising and promotional material,
22 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
23 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
24 to actively, knowingly, and intentionally encourage and induce) others to “use[]” ’025 Cast-
25 enabled media players, which constitutes direct infringement of the Asserted Claims of the ’025
26 Patent under 35 U.S.C. § 271(a).

27 As yet another example, Google has actively, knowingly, and intentionally induced (and
28 continues to actively, knowingly, and intentionally encourage and induce) distributors and

1 retailers to “offer[] to sell” and “sell[]” ’025 Cast-enabled media players, which constitutes direct
2 infringement of the Asserted Claims of the ’025 Patent under 35 U.S.C. § 271(a).

3 Along with its actual knowledge of the ’025 Patent, Google also knew (or should have
4 known) that its actions would induce others to directly infringe the Asserted Claims of the ’025
5 Patent. For instance, Google has supplied and continues to supply ’025 Cast-enabled media
6 players (as well as firmware updates) to users while knowing that the use of ’025 Cast-enabled
7 media players will infringe the Asserted Claims of the ’025 Patent.

8 ’001 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
9 Claim of the ’001 Patent. Despite knowing of the ’001 Patent, Google has actively, knowingly,
10 and intentionally induced (and continues to actively, knowingly, and intentionally induce) others
11 to directly infringe the Asserted Claims by actively encouraging others to make, use, offer to sell,
12 sell, and/or import Cast-enabled media players into the United States in violation of 35 U.S.C. §
13 271(b).

14 For example, through Google’s website, advertising and promotional material, user
15 guides, the Google Home app (among other apps offered by Google), and/or the Google Play
16 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
17 to actively, knowingly, and intentionally encourage and induce) others to install firmware updates
18 onto Cast-enabled media players, thereby “mak[ing]” an infringing device, which constitutes
19 direct infringement of the Asserted Claims of the ’001 Patent under 35 U.S.C. § 271(a).

20 As another example, through Google’s website, advertising and promotional material,
21 user guides, the Google Home app (among other apps offered by Google), and/or the Google Play
22 Store, Google has actively, knowingly, and intentionally encouraged and induced (and continues
23 to actively, knowingly, and intentionally encourage and induce) others to “use[]” Cast-enabled
24 media players, which constitutes direct infringement of the Asserted Claims of the ’001 Patent
25 under 35 U.S.C. § 271(a).

26 As yet another example, Google has actively, knowingly, and intentionally induced (and
27 continues to actively, knowingly, and intentionally induce) distributors and retailers to “offer[] to
28 sell” and “sell[]” Cast-enabled media players, which constitutes direct infringement of the

1 Asserted Claims of the '001 Patent under 35 U.S.C. § 271(a).

2 Along with its actual knowledge of the '001 Patent, Google also knew (or should have
3 known) that its actions would induce others to directly infringe the Asserted Claims of the '001
4 Patent. For instance, Google has supplied and continues to supply Cast-enabled media players
5 (as well as firmware updates) to users while knowing that the use of Cast-enabled media players
6 will infringe the Asserted Claims of the '001 Patent.

7 *iii. Contributory Infringement Under 35 U.S.C. § 271(c)*

8 Pursuant to 35 U.S.C. § 271(c), Google has also contributorily infringed (and continues
9 to contributorily infringe) the Asserted Claims of the Asserted Patents by supplying software
10 components in the United States to be installed and/or used by users of the Accused
11 Instrumentalities – each of which is a material component of the Accused Instrumentalities that
12 has no substantial noninfringing use – with knowledge that the software components were
13 especially made or adapted for use in an Accused Instrumentality such that the installation and/or
14 use of the software components would result in direct infringement. As noted in Sonos's
15 Amended Complaint, Google had actual knowledge of the Asserted Patents prior to the filing of
16 the Complaint.

17 '014 Patent: Google has contributorily infringed (and continues to contributorily infringe)
18 each Asserted Claim of the '014 Patent by virtue of the fact that (i) in addition to importing and
19 selling certain Cast-enabled controllers that come pre-installed with one or more of the accused
20 apps, Google supplies software components for performing the accused functionality as part of
21 Google's accused apps for installation onto Cast-enabled controllers in the United States and also
22 as part of Google's own software (e.g., firmware and/or Cast-enabled display software) for
23 installation onto Cast-enabled displays in the United States, and each time a user installs (or
24 updates) these software components, the user "makes" an infringing device and thereby directly
25 infringes each Asserted Claim of the '014 Patent under 35 U.S.C. § 271(a).

26 The software components for performing the accused functionality are material
27 components of infringing devices that are not staple articles or commodities of commerce suitable
28

1 for substantial noninfringing use because the only possible use for these software components is
2 to be installed and run on infringing Cast-enabled controllers and Cast-enabled displays.

3 Along with its actual knowledge of the '014 Patent, Google knew (or should have known)
4 that the software components for performing the accused functionality were especially made or
5 adapted for installation on infringing devices, and that installation of these software components
6 by others resulted in (and continues to result in) direct infringement of the '014 Patent under 35
7 U.S.C. § 271(a) because each such installation “makes” a device that meets every element of each
8 of the Asserted Claims of the '014 Patent.

9 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
10 Asserted Claims of the '014 Patent. For example, users have installed the supplied software
11 components onto Cast-enabled controllers in the United States, thereby “making” infringing
12 devices. As another example, users have installed the supplied software components (which are
13 included in firmware, as well as Cast-enabled display software) onto Cast-enabled displays in the
14 United States, thereby “making” updated Cast-enabled displays that are infringing devices. As
15 yet another example, after installing the supplied software components onto Cast-enabled
16 controllers and Cast-enabled displays, users have used these infringing devices, which also
17 constitutes direct infringement.

18 '949 Patent: Google has contributorily infringed each Asserted Claim of the '949 Patent
19 by virtue of the fact that (i) in addition to importing and selling certain Cast-enabled controllers
20 that come pre-installed with one or more of the accused apps, Google supplies software
21 components for performing the accused functionality as part of Google’s accused apps for
22 installation onto Cast-enabled controllers in the United States and also as part of Google’s own
23 software (e.g., firmware and/or Cast-enabled display software) for installation onto Cast-enabled
24 displays in the United States, and each time a user installs (or updates) these software
25 components, the user “makes” an infringing device and thereby directly infringes each Asserted
26 Claim of the '949 Patent under 35 U.S.C. § 271(a).

27 The software components for performing the accused functionality are material
28 components of infringing devices that are not staple articles or commodities of commerce suitable

1 for substantial noninfringing use because the only possible use for these software components is
2 to be installed and run on infringing Cast-enabled controllers and Cast-enabled displays.

3 Along with its actual knowledge of the '949 Patent, Google knew (or should have known)
4 that the software components for performing the accused functionality were especially made or
5 adapted for installation on infringing devices, and that installation of these software components
6 by others resulted in direct infringement of the '949 Patent under 35 U.S.C. § 271(a) because
7 each such installation “makes” a device that meets every element of each of the Asserted Claims
8 of the '949 Patent.

9 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
10 Asserted Claims of the '949 Patent. For example, users have installed the supplied software
11 components onto Cast-enabled controllers in the United States, thereby “making” infringing
12 devices. As another example, users have installed the supplied software components (which are
13 included in firmware, as well as Cast-enabled display software) onto Cast-enabled displays in the
14 United States, thereby “making” updated Cast-enabled displays that are infringing devices. As
15 yet another example, after installing the supplied software components onto Cast-enabled
16 controllers and Cast-enabled displays, users have used these infringing devices, which also
17 constitutes direct infringement.

18 '258 Patent: Google has contributorily infringed the Asserted Claims of the '258 Patent
19 by virtue of the fact that, in addition to importing and selling Cast-enabled media players that
20 come pre-installed with firmware, Google supplies software components for performing the
21 accused functionality as part of firmware updates for Cast-enabled media players in the United
22 States, and each time a user installs such a firmware update, the user “makes” an infringing
23 device, thereby directly infringing the Asserted Claims of the '258 Patent under 35 U.S.C. §
24 271(a). The software components included in the firmware updates are material components of
25 Cast-enabled media players that are not staple articles or commodities of commerce suitable for
26 substantial noninfringing use because the only possible use for these software components is to
27 be installed and run on Cast-enabled media players.

28 Along with its actual knowledge of the '258 Patent, Google knew (or should have known)

1 that the software components included in the firmware updates were especially made or adapted
2 for installation on Cast-enabled media players, and that installation of these software components
3 by others resulted in direct infringement of the '258 Patent under 35 U.S.C. § 271(a) because
4 each such installation “makes” an updated player that meets every element of the Asserted Claims
5 of the '258 Patent.

6 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
7 Asserted Claims of the '258 Patent. For example, users have installed the supplied software
8 components included as part of the firmware updates onto Cast-enabled media players in the
9 United States, thereby “making” updated Cast-enabled media players, which constitutes direct
10 infringement. As another example, after installing the software components included as part of
11 the firmware updates onto Cast-enabled media players, users have used Cast-enabled media
12 players, which also constitutes direct infringement of the Asserted Claims.

13 '959 Patent: Google has contributorily infringed the Asserted Claims of the '959 Patent
14 by virtue of the fact that, in addition to importing and selling '959 Cast-enabled media players
15 that come pre-installed with firmware, Google supplies software components for performing the
16 accused functionality as part of firmware updates for '959 Cast-enabled media players in the
17 United States, and each time a user installs such a firmware update, the user “makes” an infringing
18 device, thereby directly infringing the Asserted Claims of the '959 Patent under 35 U.S.C. §
19 271(a). The software components included in the firmware updates are material components of
20 '959 Cast-enabled media players that are not staple articles or commodities of commerce suitable
21 for substantial noninfringing use because the only possible use for these software components is
22 to be installed and run on '959 Cast-enabled media players.

23 Along with its actual knowledge of the '959 Patent, Google knew (or should have known)
24 that the software components included in the firmware updates were especially made or adapted
25 for installation on '959 Cast-enabled media players, and that installation of these software
26 components by others resulted in direct infringement of the '959 Patent under 35 U.S.C. § 271(a)
27 because each such installation “makes” an updated player that meets every element of the
28 Asserted Claims of the '959 Patent.

1 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
2 Asserted Claims of the ’959 Patent. For example, users have installed the supplied software
3 components included as part of the firmware updates onto ’959 Cast-enabled media players in
4 the United States, thereby “making” updated ’959 Cast-enabled media players, which constitutes
5 direct infringement. As another example, after installing the software components included as
6 part of the firmware updates onto ’959 Cast-enabled media players, users have used ’959 Cast-
7 enabled media players, which also constitutes direct infringement of the Asserted Claims.

8 ’715 Patent: Google has contributorily infringed (and continues to contributorily infringe)
9 the Asserted Claims of the ’715 Patent by virtue of the fact that, in addition to importing and
10 selling Cast-enabled media players that come pre-installed with firmware, Google supplies
11 software components for performing the accused functionality as part of firmware updates for
12 Cast-enabled media players in the United States, and each time a user installs such a firmware
13 update, the user “makes” an infringing device, thereby directly infringing the Asserted Claims of
14 the ’715 Patent under 35 U.S.C. § 271(a). The software components included in the firmware
15 updates are material components of Cast-enabled media players that are not staple articles or
16 commodities of commerce suitable for substantial noninfringing use because the only possible
17 use for these software components is to be installed and run on Cast-enabled media players.

18 Along with its actual knowledge of the ’715 Patent, Google knew (or should have known)
19 that the software components included in the firmware updates were especially made or adapted
20 for installation on Cast-enabled media players, and that installation of these software components
21 by others resulted in (and continues to result in) direct infringement of the ’715 Patent under 35
22 U.S.C. § 271(a) because each such installation “makes” an updated player that meets every
23 element of the Asserted Claims of the ’715 Patent.

24 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
25 Asserted Claims of the ’715 Patent. For example, users have installed the supplied software
26 components included as part of the firmware updates onto Cast-enabled media players in the
27 United States, thereby “making” updated Cast-enabled media players, which constitutes direct
28 infringement. As another example, after installing the software components included as part of

1 the firmware updates onto Cast-enabled media players, users have used Cast-enabled media
2 players, which also constitutes direct infringement of the Asserted Claims.

3 '953 Patent: Google has contributorily infringed the Asserted Claims of the '953 Patent
4 by virtue of the fact that, in addition to importing and selling '953 Cast-enabled media players
5 that come pre-installed with firmware, Google supplies software components for performing the
6 accused functionality as part of firmware updates for Cast-enabled media players in the United
7 States, and each time a user installs such a firmware update, the user “makes” an infringing
8 device, thereby directly infringing the Asserted Claims of the '953 Patent under 35 U.S.C. §
9 271(a). The software components included in the firmware updates are material components of
10 '953 Cast-enabled media players that are not staple articles or commodities of commerce suitable
11 for substantial noninfringing use because the only possible use for these software components is
12 to be installed and run on '953 Cast-enabled media players.

13 Along with its actual knowledge of the '953 Patent, Google knew (or should have known)
14 that the software components included in the firmware updates were especially made or adapted
15 for installation on '953 Cast-enabled media players, and that installation of these software
16 components by others resulted in direct infringement of the '953 Patent under 35 U.S.C. § 271(a)
17 because each such installation “makes” an updated player that meets every element of the
18 Asserted Claims of the '953 Patent.

19 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
20 Asserted Claims of the '953 Patent. For example, users have installed the supplied software
21 components included as part of the firmware updates onto '953 Cast-enabled media players in
22 the United States, thereby “making” updated '953 Cast-enabled media players, which constitutes
23 direct infringement. As another example, after installing the software components included as
24 part of the firmware updates onto '953 Cast-enabled media players, users have used '953 Cast-
25 enabled media players, which also constitutes direct infringement of the Asserted Claims.

26 '896 Patent: Google has contributorily infringed (and continues to contributorily infringe)
27 each Asserted Claim of the '896 Patent by virtue of the fact that (i) in addition to importing and
28 selling certain Cast-enabled controllers that come pre-installed with one or more of the accused

1 apps, Google supplies software components for performing the accused functionality as part of
2 Google's accused apps for installation onto Cast-enabled controllers in the United States, and
3 each time a user installs (or updates) these software components, the user "makes" an infringing
4 device and thereby directly infringes each Asserted Claim of the '896 Patent under 35 U.S.C. §
5 271(a).

6 The software components for performing the accused functionality are material
7 components of infringing devices that are not staple articles or commodities of commerce suitable
8 for substantial noninfringing use because the only possible use for these software components is
9 to be installed and run on infringing Cast-enabled controllers.

10 Along with its actual knowledge of the '896 Patent, Google knew (or should have known)
11 that the software components for performing the accused functionality were especially made or
12 adapted for installation on infringing devices, and that installation of these software components
13 by others resulted in (and continues to result in) direct infringement of the '896 Patent under 35
14 U.S.C. § 271(a) because each such installation "makes" a device that meets every element of each
15 of the Asserted Claims of the '896 Patent .

16 Moreover, as a result of Google's contributory conduct, others have directly infringed the
17 Asserted Claims of the '896 Patent. For example, users have installed the supplied software
18 components onto Cast-enabled controllers in the United States, thereby "making" infringing
19 devices. As yet another example, after installing the supplied software components onto Cast-
20 enabled controllers, users have used these infringing devices, which also constitutes direct
21 infringement.

22 '883 Patent: Google has contributorily infringed (and continues to contributorily infringe)
23 the Asserted Claims of the '883 Patent by virtue of the fact that, in addition to importing and
24 selling Cast-enabled media players that come pre-installed with firmware, Google supplies
25 software components for performing the accused functionality as part of firmware updates for
26 Cast-enabled media players in the United States, and each time a user installs such a firmware
27 update, the user "makes" an infringing device, thereby directly infringing the Asserted Claims of
28 the '883 Patent under 35 U.S.C. § 271(a). The software components included in the firmware

1 updates are material components of Cast-enabled media players that are not staple articles or
2 commodities of commerce suitable for substantial noninfringing use because the only possible
3 use for these software components is to be installed and run on Cast-enabled media players.

4 Along with its actual knowledge of the '883 Patent, Google knew (or should have known)
5 that the software components included in the firmware updates were especially made or adapted
6 for installation on Cast-enabled media players, and that installation of these software components
7 by others resulted in (and continues to result in) direct infringement of the '883 Patent under 35
8 U.S.C. § 271(a) because each such installation “makes” an updated player that meets every
9 element of the Asserted Claims of the '883 Patent.

10 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
11 Asserted Claims of the '883 Patent. For example, users have installed the supplied software
12 components included as part of the firmware updates onto Cast-enabled media players in the
13 United States, thereby “making” updated Cast-enabled media players, which constitutes direct
14 infringement. As another example, after installing the software components included as part of
15 the firmware updates onto Cast-enabled media players, users have used Cast-enabled media
16 players, which also constitutes direct infringement of the Asserted Claims.

17 '025 Patent: Google has contributorily infringed (and continues to contributorily infringe)
18 the Asserted Claims of the '025 Patent by virtue of the fact that, in addition to importing and
19 selling '025 Cast-enabled media players that come pre-installed with firmware, Google supplies
20 software components for performing the accused functionality as part of firmware updates for
21 '025 Cast-enabled media players in the United States, and each time a user installs such a
22 firmware update, the user “makes” an infringing device, thereby directly infringing the Asserted
23 Claims of the '025 Patent under 35 U.S.C. § 271(a). The software components included in the
24 firmware updates are material components of '025 Cast-enabled media players that are not staple
25 articles or commodities of commerce suitable for substantial noninfringing use because the only
26 possible use for these software components is to be installed and run on '025 Cast-enabled media
27 players.

28 Along with its actual knowledge of the '025 Patent, Google knew (or should have known)

1 that the software components included in the firmware updates were especially made or adapted
2 for installation on '025 Cast-enabled media players, and that installation of these software
3 components by others resulted in direct infringement of the '025 Patent under 35 U.S.C. § 271(a)
4 because each such installation “makes” an updated player that meets every element of the
5 Asserted Claims of the '025 Patent.

6 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
7 Asserted Claims of the '025 Patent. For example, users have installed the supplied software
8 components included as part of the firmware updates onto '025 Cast-enabled media players in
9 the United States, thereby “making” updated '025 Cast-enabled media players, which constitutes
10 direct infringement. As another example, after installing the software components included as
11 part of the firmware updates onto '025 Cast-enabled media players, users have used '025 Cast-
12 enabled media players, which also constitutes direct infringement of the Asserted Claims.

13 '001 Patent: Google has contributorily infringed (and continues to contributorily infringe)
14 the Asserted Claims of the '001 Patent by virtue of the fact that, in addition to importing and
15 selling Cast-enabled media players that come pre-installed with firmware, Google supplies
16 software components for performing the accused functionality as part of firmware updates for
17 Cast-enabled media players in the United States, and each time a user installs such a firmware
18 update, the user “makes” an infringing device, thereby directly infringing the Asserted Claims of
19 the '001 Patent under 35 U.S.C. § 271(a). The software components included in the firmware
20 updates are material components of Cast-enabled media players that are not staple articles or
21 commodities of commerce suitable for substantial noninfringing use because the only possible
22 use for these software components is to be installed and run on Cast-enabled media players.

23 Along with its actual knowledge of the '001 Patent, Google knew (or should have known)
24 that the software components included in the firmware updates were especially made or adapted
25 for installation on Cast-enabled media players, and that installation of these software components
26 by others resulted in (and continues to result in) direct infringement of the '001 Patent under 35
27 U.S.C. § 271(a) because each such installation “makes” an updated player that meets every
28 element of the Asserted Claims of the '001 Patent.

1 Moreover, as a result of Google’s contributory conduct, others have directly infringed the
2 Asserted Claims of the ’001 Patent. For example, users have installed the supplied software
3 components included as part of the firmware updates onto Cast-enabled media players in the
4 United States, thereby “making” updated Cast-enabled media players, which constitutes direct
5 infringement. As another example, after installing the software components included as part of
6 the firmware updates onto Cast-enabled media players, users have used Cast-enabled media
7 players, which also constitutes direct infringement of the Asserted Claims.

8 ***iv. Infringement Under 35 U.S.C. § 271(f)(1)***

9 Pursuant to 35 U.S.C. § 271(f)(1), Google has also infringed by supplying in or from the
10 United States software (e.g., firmware, app-software, Cast-enabled display software, or other
11 software) components, which constitute substantial portions of the components of Sonos’s
12 patented inventions, and actively, knowingly, and intentionally induced (and continues to
13 actively, knowingly, and intentionally induce) others outside of the United States to combine
14 these software components in a manner that, if such combination would have occurred in the
15 United States (as it does pursuant to the theories set forth above), infringes the Asserted Claims
16 of the Asserted Patents. And these combinations by those outside of the United States do in fact
17 occur. Accordingly, by supplying such software components from the United States, Google is
18 liable for infringement under 35 U.S.C. § 271(f)(1).

19 *’014 Patent*: Despite knowing of the ’014 Patent, Google supplies software components
20 for performing the accused functionality as part of Google’s accused apps for installation onto
21 Cast-enabled controllers and also as part of Google’s software (e.g., firmware and/or Cast-
22 enabled display software) for installation onto Cast-enabled displays. These software
23 components are at least substantial portions of the components of the patented inventions of the
24 ’014 Patent. Google supplies these software components from the United States to various
25 entities outside the United States. Google then induces those entities to combine the supplied
26 components in a manner that would, if combined within the United States, constitute
27 infringement. Google has actively, knowingly, and intentionally induced (and continues to
28 actively, knowingly, and intentionally induce) these entities to make such combinations outside

1 the United States in various ways, in violation of 35 U.S.C. § 271(f)(1).

2 For example, through Google’s website, advertising and promotional material, user
3 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
4 encouraged and induced (and continues to actively, knowingly, and intentionally encourage and
5 induce) others outside the United States to install one or more of the accused apps onto Cast-
6 enabled controllers outside of the United States. If this combination were done within the United
7 States, that act would constitute “mak[ing]” an infringing device, which constitutes direct
8 infringement of each Asserted Claim of the ’014 Patent under 35 U.S.C. § 271(a).

9 As another example, through Google’s website, advertising and promotional material,
10 user guides, and Cast-enabled apps, Google has actively, knowingly, and intentionally
11 encouraged and induced others outside the United States to install software (e.g., firmware
12 updates and/or Cast-enabled display software) onto the Cast-enabled displays outside of the
13 United States. If this combination were done within the United States, that act would constitute
14 “mak[ing]” an infringing device, which constitutes direct infringement of claims 25, 32, 38, 42,
15 and 43 of the ’014 Patent under 35 U.S.C. § 271(a).

16 As another example, through Google’s relationship with third-party manufacturers, third-
17 party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor
18 role, Google actively, knowingly, and intentionally encourages and induces or instructs such
19 parties to install one or more of the accused apps onto computer devices outside of the United
20 States. If this combination were done within the United States, that act would constitute
21 “mak[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim
22 of the ’014 Patent.

23 As another example, through Google’s relationship with third-party manufacturers, third-
24 party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor
25 role, Google actively, knowingly, and intentionally encourages and induces or instructs such
26 parties to install software (e.g., firmware updates and/or Cast-enabled display software) onto the
27 Cast-enabled displays outside of the United States. If this combination were done within the
28 United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct

1 infringement of claims 25, 32, 38, 42, and 43 of the '014 Patent under 35 U.S.C. § 271(a).

2 '949 Patent: Despite knowing of the '949 Patent, Google supplied software components
3 for performing the accused functionality as part of Google's accused apps for installation onto
4 Cast-enabled controllers and also as part of Google's software (e.g., firmware and/or Cast-
5 enabled display software) for installation onto Cast-enabled displays. These software
6 components are at least substantial portions of the components of the patented inventions of the
7 '949 Patent. Google supplied these software components from the United States to various
8 entities outside the United States. Google then induced those entities to combine the supplied
9 components in a manner that would, if combined within the United States, constitute
10 infringement. Google has actively, knowingly, and intentionally induced these entities to make
11 such combinations outside the United States in various ways, in violation of 35 U.S.C. §
12 271(f)(1).

13 For example, through Google's website, advertising and promotional material, user
14 guides, and/or the Google Play Store, Google has actively, knowingly, and intentionally
15 encouraged and induced others outside the United States to install one or more of the accused
16 apps onto Cast-enabled controllers outside of the United States. If this combination were done
17 within the United States, that act would constitute "mak[ing]" an infringing device, which
18 constitutes direct infringement of each Asserted Claim of the '949 Patent under 35 U.S.C. §
19 271(a).

20 As another example, through Google's website, advertising and promotional material,
21 user guides, and Cast-enabled apps, Google has actively, knowingly, and intentionally
22 encouraged and induced others outside the United States to install software (e.g., firmware
23 updates and/or Cast-enabled display software) onto the Cast-enabled displays outside of the
24 United States. If this combination were done within the United States, that act would constitute
25 "mak[ing]" an infringing device, which constitutes direct infringement of claims 1, 2, 4, 8, 9, and
26 11 of the '949 Patent under 35 U.S.C. § 271(a).

27 As another example, through Google's relationship with third-party manufacturers, third-
28 party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor

1 role, Google actively, knowingly, and intentionally encouraged and induced or instructed such
2 parties to install one or more of the accused apps onto computer devices outside of the United
3 States. If this combination were done within the United States, that act would constitute
4 “mak[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim
5 of the ’949 Patent.

6 As another example, through Google’s relationship with third-party manufacturers, third-
7 party distributors, or via an otherwise affiliated entity that acts in a manufacturer or distributor
8 role, Google actively, knowingly, and intentionally encouraged and induced or instructed such
9 parties to install software (e.g., firmware updates and/or Cast-enabled display software) onto the
10 Cast-enabled displays outside of the United States. If this combination were done within the
11 United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct
12 infringement of claims 1, 2, 8, 9, and 11 of the ’949 Patent under 35 U.S.C. § 271(a).

13 As still another example, through Google’s relationship with entities (including affiliated
14 entities) that operate servers outside of the United States that host accused apps for download
15 onto Cast-enabled controllers and/or software (e.g., firmware and/or Cast-enabled display
16 software) for download onto Cast-enabled displays, Google actively, knowingly, and
17 intentionally encouraged and induced or instructed these entities to load, store, or otherwise
18 provide the accused apps and/or Cast-enabled display software onto these servers. If this
19 combination were done within the United States, that act would constitute direct infringement of
20 each Asserted Claim of the ’949 Patent by “mak[ing]” servers that host such software in violation
21 of 35 U.S.C. § 271(a).

22 ’258 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
23 Claim of the ’258 Patent. Despite knowing of the ’258 Patent, Google supplies from the United
24 States software components for performing the accused functionality as part of making firmware
25 updates available for installation onto Cast-enabled media players. Google then through Google’s
26 website, advertising and promotional material, user guides, the Google Home app (among other
27 apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and
28 intentionally encouraged and induced others outside the United States to install these software

1 components as a part of installing firmware updates onto Cast-enabled media players outside the
2 United States. If this combination were done within the United States, that act would constitute
3 “mak[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim
4 of the ’258 Patent under 35 U.S.C. § 271(a).

5 As another example, despite knowing of the ’258 Patent, Google supplies from the United
6 States software components for performing the accused functionality as part of making firmware
7 available for installation onto Cast-enabled media players. Through Google’s relationship with
8 third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
9 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
10 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
11 United States, install or load these software components onto Cast-enabled media players. If this
12 combination were done within the United States, that act would constitute “mak[ing]” an
13 infringing device, which constitutes direct infringement of each Asserted Claim of the ’258 Patent
14 under 35 U.S.C. § 271(a).

15 ’959 Patent: Sonos contends that each ’959 Cast-enabled media player infringes each
16 Asserted Claim of the ’959 Patent. Despite knowing of the ’959 Patent, Google supplies from
17 the United States software components for performing the accused functionality as part of making
18 firmware updates available for installation onto ’959 Cast-enabled media players. Google then
19 through Google’s website, advertising and promotional material, user guides, the Google Home
20 app (among other apps offered by Google), and/or the Google Play Store, Google has actively,
21 knowingly, and intentionally encouraged and induced others outside the United States to install
22 these software components as a part of installing firmware updates onto ’959 Cast-enabled media
23 players outside the United States. If this combination were done within the United States, that
24 act would constitute “mak[ing]” or “us[ing]” an infringing device, which constitutes direct
25 infringement of each Asserted Claim of the ’959 Patent under 35 U.S.C. § 271(a).

26 As another example, despite knowing of the ’959 Patent, Google supplies from the United
27 States software components for performing the accused functionality as part of making firmware
28 available for installation onto ’959 Cast-enabled media players. Through Google’s relationship

1 with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
2 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
3 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
4 United States, install or load these software components onto '959 Cast-enabled media players.
5 If this combination were done within the United States, that act would constitute "mak[ing]" an
6 infringing device, which constitutes direct infringement of each Asserted Claim of the '959 Patent
7 under 35 U.S.C. § 271(a).

8 '715 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
9 Claim of the '715 Patent. Despite knowing of the '715 Patent, Google supplies from the United
10 States software components for performing the accused functionality as part of making firmware
11 updates available for installation onto Cast-enabled media players. Google then through Google's
12 website, advertising and promotional material, user guides, the Google Home app (among other
13 apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and
14 intentionally encouraged and induced (and continues to actively, knowingly, and intentionally
15 encourage and induce) others outside the United States to install these software components as a
16 part of installing firmware updates onto Cast-enabled media players outside the United States. If
17 this combination were done within the United States, that act would constitute "mak[ing]" or
18 "us[ing]" an infringing device, which constitutes direct infringement of each Asserted Claim of
19 the '715 Patent under 35 U.S.C. § 271(a).

20 As another example, despite knowing of the '715 Patent, Google supplies from the United
21 States software components for performing the accused functionality as part of making firmware
22 available for installation onto Cast-enabled media players. Through Google's relationship with
23 third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
24 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
25 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
26 United States, install or load these software components onto Cast-enabled media players. If this
27 combination were done within the United States, that act would constitute "mak[ing]" an
28

1 infringing device, which constitutes direct infringement of each Asserted Claim of the '715 Patent
2 under 35 U.S.C. § 271(a).

3 '953 Patent: Sonos contends that each '953 Cast-enabled media player infringes each
4 Asserted Claim of the '953 Patent. Despite knowing of the '953 Patent, Google supplies from
5 the United States software components for performing the accused functionality as part of making
6 firmware updates available for installation onto '953 Cast-enabled media players. Google then
7 through Google's website, advertising and promotional material, user guides, the Google Home
8 app (among other apps offered by Google), and/or the Google Play Store, Google has actively,
9 knowingly, and intentionally encouraged and induced others outside the United States to install
10 these software components as a part of installing firmware updates onto '953 Cast-enabled media
11 players outside the United States. If this combination were done within the United States, that
12 act would constitute "mak[ing]" or "us[ing]" an infringing device, which constitutes direct
13 infringement of each Asserted Claim of the '953 Patent under 35 U.S.C. § 271(a).

14 As another example, despite knowing of the '953 Patent, Google supplies from the United
15 States software components for performing the accused functionality as part of making firmware
16 available for installation onto '953 Cast-enabled media players. Through Google's relationship
17 with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
18 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
19 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
20 United States, install or load these software components onto '953 Cast-enabled media players.
21 If this combination were done within the United States, that act would constitute "mak[ing]" an
22 infringing device, which constitutes direct infringement of each Asserted Claim of the '953 Patent
23 under 35 U.S.C. § 271(a).

24 '896 Patent: Despite knowing of the '896 Patent, Google supplies the Google Home app
25 from the United States to various entities outside the United States. Google then induces those
26 entities to combine the Google Home app in a manner that would, if combined within the United
27 States, constitute infringement. Google has actively, knowingly, and intentionally induced (and
28

1 continues to actively, knowingly, and intentionally induce) these entities to make such
2 combinations outside the United States in various ways, in violation of 35 U.S.C. § 271(b).

3 For example, through Google’s website, advertising and promotional material, user
4 guides, and/or the Google Play Store, and via audible or visual instructions emitted from or
5 displayed on the Cast-enabled media players and Cast-enabled displays, Google has actively,
6 knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and
7 intentionally encourage and induce) others outside the United States to install the Google Home
8 app onto computer devices outside the United States. If this combination were done within the
9 United States, that act would constitute “mak[ing]” an infringing device, which constitutes direct
10 infringement of each Asserted Claim of the ’896 Patent under 35 U.S.C. § 271(a).

11 As another example, Google supplies from the United States software components for
12 performing the accused functionality as part of making the Google Home app available as a part
13 of a package of apps that are preinstalled on computer devices (e.g., the Pixel Tablet). Through
14 Google’s relationship with third-party manufacturers, third-party distributors, or via an otherwise
15 affiliated entity or subsidiary, acting for example in a manufacturer or distributor role, Google
16 then actively, knowingly, and intentionally encourages and induces or instructs such parties to,
17 outside of the United States, install or load these software components onto computer devices. If
18 this combination were done within the United States, that act would constitute “mak[ing]” an
19 infringing device, which constitutes direct infringement of each Asserted Claim of the ’896 Patent
20 under 35 U.S.C. § 271(a).

21 As another example, through Google’s relationship with entities (including affiliated
22 entities) that operate servers outside of the United States that host the Google Home app for
23 download onto smartphone, tablet, and computer devices, Google actively, knowingly, and
24 intentionally encourages and induces or instructs these entities to load, store, or otherwise provide
25 the Google Home app onto these servers. If this combination were done within the United States,
26 that act would constitute direct infringement of claims 13, 15, 17, and 18 of the ’896 Patent by
27 “mak[ing]” and/or “us[ing]” servers that host such software in violation of 35 U.S.C. § 271(a).

28

1 '883 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
2 Claim of the '883 Patent. Despite knowing of the '883 Patent, Google supplies from the United
3 States software components for performing the accused functionality as part of making firmware
4 updates available for installation onto Cast-enabled media players. Google then through Google's
5 website, advertising and promotional material, user guides, the Google Home app (among other
6 apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and
7 intentionally encouraged and induced (and continues to actively, knowingly, and intentionally
8 encourage and induce) others outside the United States to install these software components as a
9 part of installing firmware updates onto Cast-enabled media players outside the United States. If
10 this combination were done within the United States, that act would constitute "mak[ing]" or
11 "us[ing]" an infringing device, which constitutes direct infringement of each Asserted Claim of
12 the '883 Patent under 35 U.S.C. § 271(a).

13 As another example, despite knowing of the '883 Patent, Google supplies from the United
14 States software components for performing the accused functionality as part of making firmware
15 available for installation onto Cast-enabled media players. Through Google's relationship with
16 third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
17 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
18 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
19 United States, install or load these software components onto Cast-enabled media players. If this
20 combination were done within the United States, that act would constitute "mak[ing]" an
21 infringing device, which constitutes direct infringement of each Asserted Claim of the '883 Patent
22 under 35 U.S.C. § 271(a).

23 '025 Patent: Sonos contends that each '025 Cast-enabled media player infringes each
24 Asserted Claim of the '025 Patent. Despite knowing of the '025 Patent, Google supplies from
25 the United States software components for performing the accused functionality as part of making
26 firmware updates available for installation onto '025 Cast-enabled media players. Google then
27 through Google's website, advertising and promotional material, user guides, the Google Home
28 app (among other apps offered by Google), and/or the Google Play Store, Google has actively,

1 knowingly, and intentionally encouraged and induced (and continues to actively, knowingly, and
2 intentionally encourage and induce) others outside the United States to install these software
3 components as a part of installing firmware updates onto '025 Cast-enabled media players outside
4 the United States. If this combination were done within the United States, that act would
5 constitute “mak[ing]” or “us[ing]” an infringing device, which constitutes direct infringement of
6 each Asserted Claim of the '025 Patent under 35 U.S.C. § 271(a).

7 As another example, despite knowing of the '025 Patent, Google supplies from the United
8 States software components for performing the accused functionality as part of making firmware
9 available for installation onto '025 Cast-enabled media players. Through Google’s relationship
10 with third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
11 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
12 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
13 United States, install or load these software components onto '025 Cast-enabled media players.
14 If this combination were done within the United States, that act would constitute “mak[ing]” an
15 infringing device, which constitutes direct infringement of each Asserted Claim of the '025 Patent
16 under 35 U.S.C. § 271(a).

17 '001 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
18 Claim of the '001 Patent. Despite knowing of the '001 Patent, Google supplies from the United
19 States software components for performing the accused functionality as part of making firmware
20 updates available for installation onto Cast-enabled media players. Google then through Google’s
21 website, advertising and promotional material, user guides, the Google Home app (among other
22 apps offered by Google), and/or the Google Play Store, Google has actively, knowingly, and
23 intentionally encouraged and induced (and continues to actively, knowingly, and intentionally
24 encourage and induce) others outside the United States to install these software components as a
25 part of installing firmware updates onto Cast-enabled media players outside the United States. If
26 this combination were done within the United States, that act would constitute “mak[ing]” or
27 “us[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim of
28 the '001 Patent under 35 U.S.C. § 271(a).

1 As another example, despite knowing of the '001 Patent, Google supplies from the United
2 States software components for performing the accused functionality as part of making firmware
3 available for installation onto Cast-enabled media players. Through Google's relationship with
4 third-party manufacturers, third-party distributors, or via an otherwise affiliated entity or
5 subsidiary, acting for example in a manufacturer or distributor role, Google then actively,
6 knowingly, and intentionally encourages and induces or instructs such parties to, outside of the
7 United States, install or load these software components onto Cast-enabled media players. If this
8 combination were done within the United States, that act would constitute "mak[ing]" an
9 infringing device, which constitutes direct infringement of each Asserted Claim of the '001 Patent
10 under 35 U.S.C. § 271(a).

11 **v. *Infringement Under 35 U.S.C. § 271(f)(2)***

12 Pursuant to 35 U.S.C. § 271(f)(2), Google has also infringed by supplying software
13 components in or from the United States to be combined, installed, loaded, and/or used by others
14 outside of the United States –where these software components are components of the patented
15 inventions that have no substantial noninfringing use and are not staple articles or commodities
16 of commerce – with knowledge that these software components were especially made or adapted
17 for use and an intent that these software components would be combined, installed, loaded, and/or
18 used outside the United States such that, if such combination, installation, load, and/or use
19 occurred within the United States (as it does pursuant to the theories set forth above), it would
20 infringe the Asserted Claims of the Asserted Patents. And these combinations by those outside
21 of the United States do in fact occur. Accordingly, by supplying such software components in or
22 from the United States, Google is liable for infringement under 35 U.S.C. § 271(f)(2).

23 '014 Patent: Despite knowing of the '014 Patent, Google supplies software components
24 for performing the accused functionality as part of Google's accused apps for installation onto
25 Cast-enabled controllers outside the United States and also as part of Google's Cast-enabled
26 display software (e.g., firmware and/or Cast-enabled display software) for installation onto Cast-
27 enabled displays outside the United States. Google intends that others outside the United States,
28 including users, install these software components onto computer devices and Cast-enabled

1 displays and knows that such installation does in fact occur and that such installation, if occurring
2 in the United States, would constitute “mak[ing]” an infringing device, thereby directly infringing
3 each Asserted Claim of the ’014 Patent under 35 U.S.C. § 271(a).

4 As another example, Google supplies software components for performing the accused
5 functionality to third-party manufacturers, third-party distributors, or to an otherwise affiliated
6 entity that acts in a manufacturer or distributor role, who then, outside of the United States installs
7 these software components onto computer devices outside of the United States. Google intends
8 that these parties install these software components onto computer devices outside of the United
9 States. If this combination were done within the United States, that act would constitute
10 “mak[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim
11 of the ’014 Patent under 35 U.S.C. § 271(a).

12 Google knows the foregoing software components for performing the accused
13 functionality are material components of infringing devices and the patented inventions that are
14 not staple articles or commodities of commerce suitable for substantial noninfringing use because
15 the only possible use for these software components is to be loaded, installed, and/or run on
16 infringing Cast-enabled controllers

17 ’949 Patent: Despite knowing of the ’949 Patent, Google supplied software components
18 for performing the accused functionality as part of Google’s accused apps for installation onto
19 Cast-enabled controllers outside the United States and also as part of Google’s Cast-enabled
20 display software (e.g., firmware and/or Cast-enabled display software) for installation onto Cast-
21 enabled displays outside the United States. Google intended that others outside the United States,
22 including users, install these software components onto computer devices and Cast-enabled
23 displays and knew that such installation did in fact occur and that such installation, if occurring
24 in the United States, would constitute “mak[ing]” an infringing device thereby directly infringing
25 each Asserted Claim of the ’949 Patent under 35 U.S.C. § 271(a).

26 As another example, Google supplied software components for performing the accused
27 functionality to third-party manufacturers, third-party distributors, or to an otherwise affiliated
28 entity that acts in a manufacturer or distributor role, who then, outside of the United States installs

1 these software components onto computer devices outside of the United States. Google intended
2 that these parties install these software components onto computer devices outside of the United
3 States. If this combination were done within the United States, that act would constitute
4 “mak[ing]” an infringing device, which constitutes direct infringement of each Asserted Claim
5 of the ’949 Patent under 35 U.S.C. § 271(a).

6 As another example, Google supplied software components for performing the accused
7 functionality to entities (including affiliated entities) that operate servers outside of the United
8 States that host accused apps for download onto Cast-enabled controllers and/or software (e.g.,
9 firmware and/or Cast-enabled display software) for download onto Cast-enabled displays.
10 Google intended that these entities load, store, or otherwise provide the accused apps and/or Cast-
11 enabled display software onto these servers. If this combination were done within the United
12 States, that act would constitute direct infringement of claims 8, 9, 11, and 12 of the ’949 Patent
13 by “mak[ing]” servers that host such software in violation of 35 U.S.C. § 271(a).

14 Google knew the foregoing software components for performing the accused functionality
15 are material components of infringing devices and the patented inventions that are not staple
16 articles or commodities of commerce suitable for substantial noninfringing use because the only
17 possible use for these software components is to be loaded, installed, and/or run on infringing
18 Cast-enabled controllers and Cast-enabled displays.

19 ’258 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
20 Claim of the ’258 Patent. Despite knowing of the ’258 Patent, Google supplies in or from the
21 United States software components for performing the accused functionality as part of firmware
22 updates for Cast-enabled media players, and users install such a firmware update outside of the
23 United States in a manner that, if done within the United States, would constitute “mak[ing]” an
24 infringing device and thereby directly infringe each Asserted Claim of the ’258 Patent under 35
25 U.S.C. § 271(a). The software components included in the firmware updates are material
26 components of the patented invention that are not staple articles or commodities of commerce
27 suitable for substantial noninfringing use because the only possible use for these software
28

1 components is to be installed and run on Cast-enabled media players, which constitute infringing
2 devices.

3 Along with its actual knowledge of the '258 Patent, Google knew (or should have known)
4 that the software components included in the firmware updates were especially made or adapted
5 for installation on Cast-enabled media players, and that installation of these software components
6 by others outside the United States would, if done within the United States, have resulted in direct
7 infringement of the '258 Patent under 35 U.S.C. § 271(a) because each such installation “makes”
8 an updated player that meets every element of each Asserted Claim.

9 Moreover, as a result of Google providing such firmware updates others have outside of
10 the United States combined the firmware updates in a manner that, if done within the United
11 States, would constitute direct infringement of each Asserted Claim of the '258 Patent. For
12 example, users have, outside of the United States, installed the supplied software components
13 included as part of the firmware updates onto Cast-enabled media players outside the United
14 States, which if done within the United States would constitute “making” updated Cast-enabled
15 media players, which constitutes direct infringement.

16 As another example, Google provides firmware to manufacturers, third-party distributors,
17 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
18 of the United States installs or loads such firmware onto Cast-enabled media players. If this
19 combination were done within the United States, that act would constitute “mak[ing]” an
20 infringing device, which constitutes direct infringement of each Asserted Claim of the '258 Patent
21 under 35 U.S.C. § 271(a).

22 '959 Patent: Sonos contends that each '959 Cast-enabled media player infringes each
23 Asserted Claim of the '959 Patent. Despite knowing of the '959 Patent, Google supplies in or
24 from the United States software components for performing the accused functionality as part of
25 firmware updates for '959 Cast-enabled media players, and users install such a firmware update
26 outside of the United States in a manner that, if done within the United States, would constitute
27 “mak[ing]” an infringing device and thereby directly infringe each Asserted Claim of the '959
28 Patent under 35 U.S.C. § 271(a). The software components included in the firmware updates are

1 material components of the patented invention that are not staple articles or commodities of
2 commerce suitable for substantial noninfringing use because the only possible use for these
3 software components is to be installed and run on Cast-enabled media players, which constitute
4 infringing devices.

5 Along with its actual knowledge of the '959 Patent, Google knew (or should have known)
6 that the software components included in the firmware updates were especially made or adapted
7 for installation on '959 Cast-enabled media players, and that installation of these software
8 components by others outside the United States would, if done within the United States, have
9 resulted in direct infringement of the '959 Patent under 35 U.S.C. § 271(a) because each such
10 installation “makes” an updated player that meets every element of each Asserted Claim.

11 Moreover, as a result of Google providing such firmware updates others have outside of
12 the United States combined the firmware updates in a manner that, if done within the United
13 States, would constitute direct infringement of each Asserted Claim of the '959 Patent. For
14 example, users have, outside of the United States, installed the supplied software components
15 included as part of the firmware updates onto '959 Cast-enabled media players outside the United
16 States, which if done within the United States would constitute “making” updated '959 Cast-
17 enabled media players, which constitutes direct infringement.

18 As another example, Google provides firmware to manufacturers, third-party distributors,
19 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
20 of the United States installs or loads such firmware onto '959 Cast-enabled media players. If this
21 combination were done within the United States, that act would constitute “mak[ing]” an
22 infringing device, which constitutes direct infringement of each Asserted Claim of the '959 Patent
23 under 35 U.S.C. § 271(a).

24 '715 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
25 Claim of the '715 Patent. Despite knowing of the '715 Patent, Google supplies in or from the
26 United States software components for performing the accused functionality as part of firmware
27 updates for Cast-enabled media players, and users install such a firmware update outside of the
28 United States in a manner that, if done within the United States, would constitute “mak[ing]” an

1 infringing device and thereby directly infringe each Asserted Claim of the '715 Patent under 35
2 U.S.C. § 271(a). The software components included in the firmware updates are material
3 components of the patented invention that are not staple articles or commodities of commerce
4 suitable for substantial noninfringing use because the only possible use for these software
5 components is to be installed and run on Cast-enabled media players, which constitute infringing
6 devices.

7 Along with its actual knowledge of the '715 Patent, Google knew (or should have known)
8 that the software components included in the firmware updates were especially made or adapted
9 for installation on Cast-enabled media players, and that installation of these software components
10 by others outside the United States would, if done within the United States, have resulted in (and
11 continues to result in) direct infringement of the '715 Patent under 35 U.S.C. § 271(a) because
12 each such installation “makes” an updated player that meets every element of each Asserted
13 Claim.

14 Moreover, as a result of Google providing such firmware updates others have outside of
15 the United States combined the firmware updates in a manner that, if done within the United
16 States, would constitute direct infringement of each Asserted Claim of the '715 Patent. For
17 example, users have, outside of the United States, installed the supplied software components
18 included as part of the firmware updates onto Cast-enabled media players outside the United
19 States, which if done within the United States would constitute “making” updated Cast-enabled
20 media players, which constitutes direct infringement.

21 As another example, Google provides firmware to manufacturers, third-party distributors,
22 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
23 of the United States installs or loads such firmware onto Cast-enabled media players. If this
24 combination were done within the United States, that act would constitute “mak[ing]” an
25 infringing device, which constitutes direct infringement of each Asserted Claim of the '715 Patent
26 under 35 U.S.C. § 271(a).

27 '953 Patent: Sonos contends that each '953 Cast-enabled media player infringes each
28 Asserted Claim of the '953 Patent. Despite knowing of the '953 Patent, Google supplies in or

1 from the United States software components for performing the accused functionality as part of
2 firmware updates for '953 Cast-enabled media players, and users install such a firmware update
3 outside of the United States in a manner that, if done within the United States, would constitute
4 “mak[ing]” an infringing device and thereby directly infringe each Asserted Claim of the '953
5 Patent under 35 U.S.C. § 271(a). The software components included in the firmware updates are
6 material components of the patented invention that are not staple articles or commodities of
7 commerce suitable for substantial noninfringing use because the only possible use for these
8 software components is to be installed and run on Cast-enabled media players, which constitute
9 infringing devices.

10 Along with its actual knowledge of the '953 Patent, Google knew (or should have known)
11 that the software components included in the firmware updates were especially made or adapted
12 for installation on '953 Cast-enabled media players, and that installation of these software
13 components by others outside the United States would, if done within the United States, have
14 resulted in direct infringement of the '953 Patent under 35 U.S.C. § 271(a) because each such
15 installation “makes” an updated player that meets every element of each Asserted Claim.

16 Moreover, as a result of Google providing such firmware updates others have outside of
17 the United States combined the firmware updates in a manner that, if done within the United
18 States, would constitute direct infringement of each Asserted Claim of the '953 Patent. For
19 example, users have, outside of the United States, installed the supplied software components
20 included as part of the firmware updates onto '953 Cast-enabled media players outside the United
21 States, which if done within the United States would constitute “making” updated '953 Cast-
22 enabled media players, which constitutes direct infringement.

23 As another example, Google provides firmware to manufacturers, third-party distributors,
24 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
25 of the United States installs or loads such firmware onto '953 Cast-enabled media players. If this
26 combination were done within the United States, that act would constitute “mak[ing]” an
27 infringing device, which constitutes direct infringement of each Asserted Claim of the '953 Patent
28 under 35 U.S.C. § 271(a).

1 '896 Patent: Despite knowing of the '896 Patent, Google supplies software components
2 for performing the accused functionality as part of Google's accused apps for installation onto
3 Cast-enabled controllers outside the United States. Google intends that others outside the United
4 States, including users, install these software components onto computer devices and knows that
5 such installation does in fact occur and that such installation, if occurring in the United States,
6 would constitute "mak[ing]" an infringing device thereby directly infringing each Asserted Claim
7 of the '896 Patent under 35 U.S.C. § 271(a).

8 As another example, Google supplies software components for performing the accused
9 functionality to third-party manufacturers, third-party distributors, or to an otherwise affiliated
10 entity that acts in a manufacturer or distributor role, who then, outside of the United States installs
11 these software components onto computer devices outside of the United States. Google intends
12 that these parties install these software components onto computer devices outside of the United
13 States. If this combination were done within the United States, that act would constitute
14 "mak[ing]" an infringing device, which constitutes direct infringement of each Asserted Claim
15 of the '896 Patent under 35 U.S.C. § 271(a).

16 As another example, Google supplies software components for performing the accused
17 functionality to entities (including affiliated entities) that operate servers outside of the United
18 States that host accused apps for download onto Cast-enabled controllers. Google intends that
19 these entities load, store, or otherwise provide the accused apps onto these servers. If this
20 combination were done within the United States, that act would constitute direct infringement of
21 claims 13, 15, 17, and 18 of the '896 Patent by "mak[ing]" and/or "us[ing]" servers that host such
22 software in violation of 35 U.S.C. § 271(a).

23 Google knows the foregoing software components for performing the accused
24 functionality are material components of infringing devices and the patented inventions that are
25 not staple articles or commodities of commerce suitable for substantial noninfringing use because
26 the only possible use for these software components is to be loaded, installed, and/or run on
27 infringing Cast-enabled controllers.
28

1 '883 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
2 Claim of the '883 Patent. Despite knowing of the '883 Patent, Google supplies in or from the
3 United States software components for performing the accused functionality as part of firmware
4 updates for Cast-enabled media players, and users install such a firmware update outside of the
5 United States in a manner that, if done within the United States, would constitute “mak[ing]” an
6 infringing device and thereby directly infringe each Asserted Claim of the '883 Patent under 35
7 U.S.C. § 271(a). The software components included in the firmware updates are material
8 components of the patented invention that are not staple articles or commodities of commerce
9 suitable for substantial noninfringing use because the only possible use for these software
10 components is to be installed and run on Cast-enabled media players, which constitute infringing
11 devices.

12 Along with its actual knowledge of the '883 Patent, Google knew (or should have known)
13 that the software components included in the firmware updates were especially made or adapted
14 for installation on Cast-enabled media players, and that installation of these software components
15 by others outside the United States would, if done within the United States, have resulted in (and
16 continues to result in) direct infringement of the '883 Patent under 35 U.S.C. § 271(a) because
17 each such installation “makes” an updated player that meets every element of every asserted
18 claims.

19 Moreover, as a result of Google providing such firmware updates others have outside of
20 the United States combined the firmware updates in a manner that, if done within the United
21 States, would constitute direct infringement of each Asserted Claim of the '883 Patent. For
22 example, users have, outside of the United States, installed the supplied software components
23 included as part of the firmware updates onto Cast-enabled media players outside the United
24 States, which if done within the United States would constitute “making” updated Cast-enabled
25 media players, which constitutes direct infringement.

26 As another example, Google provides firmware to manufacturers, third-party distributors,
27 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
28 of the United States installs or loads such firmware onto Cast-enabled media players. If this

1 combination were done within the United States, that act would constitute “mak[ing]” an
2 infringing device, which constitutes direct infringement of each Asserted Claim of the ’883 Patent
3 under 35 U.S.C. § 271(a).

4 ’025 Patent: Sonos contends that each ’025 Cast-enabled media player infringes each
5 Asserted Claim of the ’025 Patent. Despite knowing of the ’025 Patent, Google supplies in or
6 from the United States software components for performing the accused functionality as part of
7 firmware updates for ’025 Cast-enabled media players, and users install such a firmware update
8 outside of the United States in a manner that, if done within the United States, would constitute
9 “mak[ing]” an infringing device and thereby directly infringe each Asserted Claim of the ’025
10 Patent under 35 U.S.C. § 271(a). The software components included in the firmware updates are
11 material components of the patented invention that are not staple articles or commodities of
12 commerce suitable for substantial noninfringing use because the only possible use for these
13 software components is to be installed and run on Cast-enabled media players, which constitute
14 infringing devices.

15 Along with its actual knowledge of the ’025 Patent, Google knew (or should have known)
16 that the software components included in the firmware updates were especially made or adapted
17 for installation on ’025 Cast-enabled media players, and that installation of these software
18 components by others outside the United States would, if done within the United States, have
19 resulted in (and continues to result in) direct infringement of the ’025 Patent under 35 U.S.C. §
20 271(a) because each such installation “makes” an updated player that meets every element of
21 every asserted claims.

22 Moreover, as a result of Google providing such firmware updates others have outside of
23 the United States combined the firmware updates in a manner that, if done within the United
24 States, would constitute direct infringement of each Asserted Claim of the ’025 Patent. For
25 example, users have, outside of the United States, installed the supplied software components
26 included as part of the firmware updates onto ’025 Cast-enabled media players outside the United
27 States, which if done within the United States would constitute “making” updated ’025 Cast-
28 enabled media players, which constitutes direct infringement.

1 As another example, Google provides firmware to manufacturers, third-party distributors,
2 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
3 of the United States installs or loads such firmware onto '025 Cast-enabled media players. If this
4 combination were done within the United States, that act would constitute “mak[ing]” an
5 infringing device, which constitutes direct infringement of each Asserted Claim of the '025 Patent
6 under 35 U.S.C. § 271(a).

7 '001 Patent: Sonos contends that each Cast-enabled media player infringes each Asserted
8 Claim of the '001 Patent. Despite knowing of the '001 Patent, Google supplies in or from the
9 United States software components for performing the accused functionality as part of firmware
10 updates for Cast-enabled media players, and users install such a firmware update outside of the
11 United States in a manner that, if done within the United States, would constitute “mak[ing]” an
12 infringing device and thereby directly infringe each Asserted Claim of the '001 Patent under 35
13 U.S.C. § 271(a). The software components included in the firmware updates are material
14 components of the patented invention that are not staple articles or commodities of commerce
15 suitable for substantial noninfringing use because the only possible use for these software
16 components is to be installed and run on Cast-enabled media players, which constitute infringing
17 devices.

18 Along with its actual knowledge of the '001 Patent, Google knew (or should have known)
19 that the software components included in the firmware updates were especially made or adapted
20 for installation on Cast-enabled media players, and that installation of these software components
21 by others outside the United States would, if done within the United States, have resulted in (and
22 continues to result in) direct infringement of the '001 Patent under 35 U.S.C. § 271(a) because
23 each such installation “makes” an updated player that meets every element of every asserted
24 claims.

25 Moreover, as a result of Google providing such firmware updates others have outside of
26 the United States combined the firmware updates in a manner that, if done within the United
27 States, would constitute direct infringement of each Asserted Claim of the '001 Patent. For
28 example, users have, outside of the United States, installed the supplied software components

1 included as part of the firmware updates onto Cast-enabled media players outside the United
2 States, which if done within the United States would constitute “making” updated Cast-enabled
3 media players, which constitutes direct infringement.

4 As another example, Google provides firmware to manufacturers, third-party distributors,
5 or an otherwise affiliated entity that acts in a manufacturer or distributor role, who then, outside
6 of the United States installs or loads such firmware onto Cast-enabled media players. If this
7 combination were done within the United States, that act would constitute “mak[ing]” an
8 infringing device, which constitutes direct infringement of each Asserted Claim of the ’001 Patent
9 under 35 U.S.C. § 271(a).

10 **D. Identification of Priority Dates Pursuant to S.P.R. 2.1.4**

11 Sonos contends that: (a) each Asserted Claim of the ’014 Patent is entitled to a priority
12 date no later than June 5, 2004; (b) each Asserted Claim of the ’949 Patent is entitled to a priority
13 date no later than June 5, 2004; (c) each Asserted Claim of the ’258 Patent is entitled to a priority
14 date no later than April 1, 2004; (d) each Asserted Claim of the ’959 Patent is entitled to a priority
15 date no later than April 8, 2011; (e) each Asserted Claim of the ’715 Patent is entitled to a priority
16 date no later than April 1, 2004; (f) each Asserted Claim of the ’953 Patent is entitled to a priority
17 date no later than July 28, 2003; (g) each Asserted Claim of the ’896 Patent is entitled to a priority
18 date no later than June 5, 2004; (h) each Asserted Claim of the ’883 Patent is entitled to a priority
19 date no later than June 5, 2004; (i) each Asserted Claim of the ’025 Patent is entitled to a priority
20 date no later than January 25, 2011; and (j) each Asserted Claim of the ’001 Patent is entitled to
21 a priority date no later than April 1, 2004.

22 **E. Identification of Practicing Instrumentalities Pursuant to S.P.R. 2.1.5**

23 Pursuant to S.P.R. 2.1.5, Sonos identifies the following Sonos devices or other
24 instrumentalities that incorporate or reflect, or that incorporated or reflected, the claimed
25 inventions of the Asserted Patents:

26 ’014 Patent: All Asserted Claims

- 27
- Sonos CR100 and CR200; and
 - Any user device (e.g., smartphone, tablet, or other computers) provisioned with
- 28

1 Sonos’s controller app.

2 '949 Patent: At least Asserted Claims 1, 2, 5, 8, 9, 12

- 3 • Sonos CR100 and CR200; and
- 4 • Any user device (e.g., smartphone, tablet, or other computers) provisioned with
- 5 Sonos’s controller app.

6 '258 Patent: All Asserted Claims

- 7 • ZP100, ZP80, ZP90, ZP120, Connect, Connect:Amp, Port, and Amp;
- 8 • Play:1, Play:3, Play:5, Playbar, and Playbase;
- 9 • One, One SL, Roam, Move, Five, Beam, Ray, Arc, Era 100, Era 300; and
- 10 • SYMFONISK table lamp WiFi speaker, and SYMFONISK bookshelf WiFi speaker.

11 '959 Patent: All Asserted Claims

- 12 • Play:1, Play:3, Play:5, Playbar, Playbase, and Sub;
- 13 • One, One SL, Roam, Move, Five, Beam, Ray, Arc, Era 100, Era 300, and Sub Mini;
- 14 and
- 15 • SYMFONISK table lamp WiFi speaker, and SYMFONISK bookshelf WiFi speaker.

16 '953 Patent: All Asserted Claims

- 17 • ZP100, ZP80, ZP90, ZP120, Connect, Connect:Amp, Port, and Amp;
- 18 • Play:1, Play:3, Play:5, Playbar, Playbase, and Sub;
- 19 • One, One SL, Roam, Move, Five, Beam, Ray, Arc, Era 100, Era 300, and Sub Mini;
- 20 and
- 21 • SYMFONISK table lamp WiFi speaker, and SYMFONISK bookshelf WiFi speaker.

22 '896 Patent: All Asserted Claims

- 23 • Sonos CR100 and CR200; and
- 24 • At least any user device (e.g., smartphone, tablet, or other computers) provisioned
- 25 with Sonos’s controller app of a version corresponding with a “Floyd” or later
- 26 firmware.

27 '883 Patent: All Asserted Claims

28

- ZP100, ZP80, ZP90, ZP120; and
- Connect, Connect:Amp, Port, Amp, Play:1, Play:3, Play:5, Playbar, Playbase, One, One SL, Roam, Move, Five, Beam, Ray, Arc, Era 100, Era 300, Sub, and Sub Mini provisioned with version 9.0 or later firmware.

'025 Patent: All Asserted Claims

- Play:1, Play:3, Play:5; and
- One, One SL, Roam, Move, Five, Era 100, and Era 300.

'001 Patent: All Asserted Claims

- ZP100, ZP80, ZP90, ZP120, Connect, Connect:Amp, Port, and Amp;
- Play:1, Play:3, Play:5, Playbar, and Playbase; and
- One, One SL, Roam, Move, Five, Beam, Ray, Arc, Era 100, and Era 300.

In fact, in the 1191 ITC investigation, the Commission determined that the following Sonos devices or other instrumentalities practiced a number of the Asserted Claims:

Patent No.	Asserted Claim(s)	Instrumentality
'258 Patent	17, 21, 24, 26	Play:1, Play:3, Play:5, One, One SL, Move, Five, Playbar, Playbase, Beam, Arc, Connect, Connect:Amp, Port, Amp, SYMFONISK table lamp WiFi speaker, and SYMFONISK bookshelf WiFi speaker
'953 Patent	7, 14, 22, 23, 24	Play:1, Play:3, Play:5, One, One SL, Move, Five, Playbar, Playbase, Beam, Arc, Sub, Connect, Connect:Amp, Port, Amp, SYMFONISK table lamp WiFi speaker, and SYMFONISK bookshelf WiFi speaker
'959 Patent	10	Play:1, Play:3, Play:5, One, One SL, Move, Five, Playbar, Playbase, Beam, Arc, SYMFONISK table lamp, WiFi speaker, and SYMFONISK bookshelf WiFi speaker
'949 Patent	1, 2, 5	User devices (such as smartphones, tablets, or other computers) installed with Sonos's controller app
'896 Patent	1, 5, 6, 12	User devices (such as smartphones, tablets, or other computers) installed with Sonos's controller app

Ex. 134 [Inv. No. 337-TA-1191 Initial Determination – Public Version], p. 44, 45, 82, 83, 108, 167; ID 731374 [Summary Determination – Public Version], p. 8.

1 **F. Identification of Willful Infringement Bases Pursuant to S.P.R. 2.1.6**

2 Sonos contends that Google has willfully infringed, and continues willfully infringing,
3 each Asserted Claim of each Asserted Patent. Example bases for this contention are set forth in
4 paragraphs 38-76 of Sonos’s Second Amended Complaint. Dkt. 68.

5 Moreover, discovery that Google has not yet produced may provide additional evidence
6 that shows Google has willfully infringed the Asserted Patents. Sonos therefore reserves its right
7 to amend and/or modify its willful infringement contentions as discovery in this case progresses,
8 under S.P.R. 4.1, or as otherwise permitted by the Court.

9 **II. Document Production Accompanying Disclosure**

10 **A. Documents Pursuant to S.P.R. 2.2.1**

11 Pursuant to S.P.R. 2.2.1, Sonos has produced documents bearing production numbers
12 SONOS-ITC-00000282 – SONOS-ITC-00037952, SONOS-ITC-00050103 – SONOS-ITC-
13 00105172, and SONOS-SVG1-00000724 – SONOS-SVG1-00095425

14 **B. Documents Pursuant to S.P.R. 2.2.2**

15 Pursuant to S.P.R. 2.2.2, Sonos has produced documents bearing production numbers
16 SONOS-ITC-00000200 SONOS-ITC-00000281, SONOS-SVG1-00000698 – SONOS-SVG1-
17 00000723, and SONOS-SVG1-00095426 – SONOS-SVG-00095429.

18 **C. Documents Pursuant to S.P.R. 2.2.3**

19 Pursuant to S.P.R. 2.2.3, Sonos produced documents in the 1191 ITC investigation that
20 demonstrate the operation of the instrumentalities identified above pursuant to S.P.R. 2.1.5,
21 including but not limited to: SONOS-ITC-00397695 - SONOS-ITC-00397808 [Sonos Digital
22 Music System User Guide - 2005]; SONOS-ITC-00164995 - SONOS-ITC-00165049 [Sonos
23 Controller for iPad User Guide - 2010]; SONOS-ITC-00226070 - SONOS-ITC-00226077 [Sonos
24 Changelog - 2014]; SONOS-ITC-00248320 - SONOS-ITC-00248321 [3/17/2004 email re ‘join
25 household’ rework for wireless]; SONOS-ITC-00248942 - SONOS-ITC-00248951 [Stereo Pair
26 Design]; SONOS-ITC-00158137 - SONOS-ITC-00158148 [Sonos System Overview]; SONOS-
27 ITC-00704671 - SONOS-ITC-00704797 [Sonos User Guide - 2020]; SONOS-ITC-00158017 -
28 SONOS-ITC-00158128 [Sonos User Guide - 2019]; SONOS-ITC-00366546 - SONOS-ITC-

1 00366581 [SYMFONISK Guide]; SONOS-ITC-00704816 - SONOS-ITC-00704819
2 [SYMFONISK WiFi Speakers]; SONOS-ITC-00158179–SONOS-ITC-00158182 [Setting up
3 your Sonos system]; SONOS-ITC-00256685 - SONOS-ITC-00256706 [CS Briefing – Eliminator
4 Floyd]; SONOS-ITC-00342568 - SONOS-ITC-00342575 [CC Briefing - Floyd - Setup Wizard];
5 SONOS-ITC-00342528 - SONOS-ITC-00342549 [Setup Flow Golden Paths]; SONOS-ITC-
6 00342033 - SONOS-ITC-00342037 [7. BLE Setup]; SONOS-ITC-00342577 - SONOS-ITC-
7 00342601 [Netstart Protocol]; SONOS-ITC-00342798 - SONOS-ITC-00342804 [Group Linking
8 and Unlinking]; SONOS-ITC-00257852 - SONOS-ITC-00257855 [Zone Grouping]; SONOS-
9 ITC-00248921 - SONOS-ITC-00248923 [UPnP Services]; SONOS-ITC-00343547 - SONOS-
10 ITC-00343559 [Muse Protocol – “groups” namespace]; SONOS-ITC-00248895 - SONOS-ITC-
11 00248899 [Sonos Player Group Overview]; SONOS-ITC-00248798 -SONOS-ITC-00248803
12 [Audio Sync]; SONOS-ITC-00232879 - SONOS-ITC-00232883 [Zone group synchronization
13 using SNTP]; SONOS-ITC-00342915 - SONOS-ITC-00342918 [Stereo Pairs and Bonded
14 Devices]; SONOS-ITC-00341673 [UPnP commands for Converting a Zone Player into a
15 Satellite]; SONOS-ITC-00342057 - SONOS-ITC-00342059 [Audio Pipeline 2.0 DSP block
16 distribution]; SONOS-ITC-00342042 - SONOS-ITC-00342043 [ChannelSink HT]; SONOS-
17 ITC-00342894 - SONOS-ITC-00342899 [Sonos Player and Player Group Discovery Guide];
18 SONOS-ITC-00342961 - SONOS-ITC-00342964 [Zone Group Topology]; SONOS-ITC-
19 00342954 - SONOS-ITC-00342960 [ZoneGroupState Variable for Home Theater Satellites];
20 SONOS-ITC-00248860 - SONOS-ITC-00248880 [MediaRenderer:Queue]; SONOS-ITC-
21 00248900 - SONOS-ITC-00248912 [Sonos Queue Overview]; SONOS-ITC-00158162 -
22 SONOS-ITC-00158169 [Sonos Developer – Subscribe]; SONOS-ITC-00343623 - SONOS-ITC-
23 00343633 [Muse Protocol]; SONOS-ITC-00257980 [Household Controller Limitation];
24 SONOS-ITC-00248840 - SONOS-ITC-00248842 [Getting Started with the Sonos UPnP API];
25 SONOS-ITC-00257173 - SONOS-ITC-00257179 [MediaRenderer:GroupRenderingControl];
26 SONOS-ITC-00248843 - SONOS-ITC-00248850 [Group Rendering Control Guide]; SONOS-
27 ITC-00257477 - SONOS-ITC-00257488 [Sonos Controller Terminology / Applications Areas];
28 SONOS-ITC-00262246 - SONOS-ITC-00262249 [Group Coordinator Delegation]; SONOS-

1 ITC-00707694 - SONOS-ITC-00707719 [Sonos Changelog]. Sonos also identifies and
2 incorporates by reference: <https://www.sonos.com/en-us/guides/sonosystem>.

3 In the 1191 ITC investigation, Sonos made available for inspection Sonos source code
4 that demonstrates the operation of the instrumentalities identified above pursuant to S.P.R. 2.1.5.
5 Sonos intends to make such source code available for inspection in this action.
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1 Dated: April 30, 2025

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