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18
19 UNITED STATES DISTRICT COURT
20 NORTHERN DISTRICT OF CALIFORNIA
21 SAN FRANCISCO DIVISION

22 LS CABLE & SYSTEM LTD.,

23 Plaintiff,

24 v.

25 APPLE INC.,

26 Defendant.
27
28

Case No. 3:24-cv-09194-JD

**DEFENDANT APPLE INC.'S PATENT
LOCAL RULE 3-3 AND 3-4
DISCLOSURES**

Judge: Hon. James Donato

Action Filed: December 18, 2024
Trial Date: None Yet Set

APPLE INC.'S PATENT LOCAL RULE 3-3 & 3-4 DISCLOSURES
CASE NO. 3:24-CV-09194-JD

LS CABLE EXHIBIT 2025

Apple v. LS Cable

IPR2025-01141

TABLE OF CONTENTS

		Page
1	I. PATENT LOCAL RULE 3-3—INVALIDITY CONTENTIONS	1
2	A. Patent Local Rule 3-3(a)—Identification of Prior Art	5
3	B. Non-Patent Literature	6
4	C. Prior Art Sales and Public Use	6
5	D. Admitted Prior Art	7
6	II. PATENT LOCAL RULE 3-3(B)—ANTICIPATION AND OBVIOUSNESS	7
7	A. Explanation of why the prior art renders the asserted claims obvious	8
8	B. Exemplary combinations of prior art showing obviousness	14
9	III. PATENT LOCAL RULE 3-3(C)—INVALIDITY CLAIM CHARTS	17
10	IV. PATENT LOCAL RULE 3-3(D)—GROUNDS OF INVALIDITY BASED ON 35	
11	U.S.C. § 112	18
12	V. PATENT LOCAL RULE 3-4—DOCUMENT PRODUCTION	
13	ACCOMPANYING INVALIDITY CONTENTIONS	19
14	A. Patent Local Rule 3-4(a)—Source code, specifications, schematics, flow	
15	charts, artwork, formulas, or other documentation sufficient to show the	
16	operation of any aspects or elements of an Accused Instrumentality	
17	identified by the patent claimant in its Patent L.R. 3-1(c) chart	19
18	B. Patent Local Rule 3-4(b)—A copy or sample of the prior art identified	
19	pursuant to Patent L.R. 3-3(a) which does not appear in the file history of	
20	the patent(s) at issue	19
21	C. Patent Local Rule 3-4(c)—All agreements that may be related to the	
22	accused instrumentality or may be comparable to a license that would	
23	result from a hypothetical reasonable royalty negotiation	19
24	D. Patent Local Rule 3-4(d)—Documents sufficient to show the sales,	
25	revenue, cost, and profits for accused instrumentalities identified pursuant	
26	to Patent L.R. 3-1(b) for any period of alleged infringement	19
27	E. Patent Local Rule 3-4(e)—All agreements that may be used to support the	
28	party denying infringement’s damages case	19

1 **I. PATENT LOCAL RULE 3-3—INVALIDITY CONTENTIONS**

2 Pursuant to Northern District of California Patent Local Rule 3-3, Defendant Apple Inc.
3 provides these Invalidity Contentions (“Contentions”) concerning U.S. Patent No. 8,013,568 (the
4 “’568 Patent” or the “Asserted Patent”). Apple’s Contentions address claims 1, 3, 7–9, 11–12,
5 30–34, 48–50, 52–53 (the “Asserted Claims”) of the ’568 Patent, which LS Cable & System Ltd.
6 (“LS Cable”) asserted in its April 3, 2025 Infringement Contentions.

7 Apple’s discovery and investigation are ongoing. Apple bases these disclosures on its
8 current understanding of the Asserted Patent, LS Cable’s Infringement Contentions, the prior art,
9 and other available information. Apple reserves the right to amend or supplement these
10 Contentions and its associated document production under Patent Local Rule 3-4 if it obtains
11 additional information or if LS Cable modifies assertions, including the Asserted Claims or its
12 Infringement Contentions.¹ LS Cable’s deficient Infringement Contentions fail to provide Apple
13 with adequate notice as to LS Cable’s infringement theories. (See May 9, 2025 Ltr. To E.
14 Halverson.) Apple also has not yet completed its search for and analysis of prior art given that
15 Apple’s investigation of prior art systems and products is ongoing and Apple is actively engaged
16 in third party discovery seeking additional information from parties with knowledge regarding
17 prior art systems and products. Thus, Apple reserves the right to amend, modify, or supplement
18 the information provided herein, including identifying, charting, and relying on additional
19 references, should Apple’s further search and analysis yield additional information or references.

20 The Court has not yet provided constructions for the Asserted Claims. Apple therefore
21 reserves the right to amend or supplement these Contentions in response to LS Cable’s claim
22 construction positions, briefing, and supporting evidence, including expert testimony; LS Cable’s
23 positions on infringement or validity; and the Court’s claim construction rulings.

24 That these Contentions may reflect claim constructions that are consistent with LS
25 Cable’s apparent constructions does not mean that Apple agrees with LS Cable’s claim
26 constructions or claim interpretations. Apple will provide its claim construction positions per the
27

28 ¹ Any amendment of these Invalidity Contentions referenced herein would be made in accordance
with any applicable Court orders and rules.

1 Court's case schedule. Nothing in these Contentions constitutes an admission that Apple agrees
2 with LS Cable's assertions or constructions, or that any claim is valid, enforceable, or infringed.

3 The accompanying claim charts list specific examples of prior art that disclose, expressly
4 or inherently, or render obvious each limitation of the Asserted Claims. Apple's citations to the
5 art are illustrative, not exhaustive. Although Apple has endeavored to identify relevant portions
6 or features of the identified prior art, the claim charts may contain additional descriptions of or
7 alternative support for the claim limitations. Apple may rely on uncited portions or features of
8 the identified prior art, other documents, and fact and expert testimony to provide context,
9 technical background, or help with understanding the identified prior art. Where Apple cites to a
10 particular figure in a reference, Apple intends that its citation encompass the caption, description,
11 and any text relating to the figure. Similarly, where Apple cites to particular text referring to a
12 figure, Apple intends that its citation encompass the figure, caption, and description as well.

13 Apple's charts demonstrate that the Asserted Claims are anticipated or rendered obvious
14 under 35 U.S.C. §§ 102 and 103.

15 LS Cable's Infringement Contentions identify July 29, 2005 as the priority date for the
16 Asserted Claims. LS Cable has not provided evidence of prior conception and actual reduction to
17 practice of the '568 Patent. If LS Cable later asserts an earlier date of invention or earlier priority
18 date, Apple reserves its right to amend or supplement its Contentions, including by identifying
19 and producing additional prior art.

20 If Apple identifies a prior art reference as part of one or more combinations of references
21 under 35 U.S.C. § 103, Apple reserves the right to chart that reference independently under 35
22 U.S.C. § 102 later, if circumstances warrant. Additionally, in many instances where a particular
23 contention calls for combining references, any one of a number of references can be combined.
24 The inclusion of certain exemplary combinations of prior art references does not exclude other
25 combinations.

26 Certain prior art references and inventions are described in multiple related patents or
27 publications with similar or identical specifications or disclosures. To the extent that Apple
28 identifies a citation in one of those references, Apple reserves the right to rely on parallel or

1 similar citations in related patents or publications. A POSITA would read a prior art reference
2 and understand a prior art invention as a whole in the context of other publications and known
3 technologies. Therefore, to understand any disclosure in a prior art reference or invention, the
4 POSITA would rely on other information within the reference or invention, along with other
5 publications and known technologies. Apple reserves the right to establish what was known to
6 POSITAs through other publications, products, or testimony. Apple also reserves the right to rely
7 on uncited portions of prior art references, other publications, and testimony to establish that a
8 POSITA would have been motivated to combine cited references to render the claims obvious.

9 Apple also may rely on other documents and information, including the inventors'
10 admissions concerning the Asserted Claims' scope and relevant prior art. These may be found in
11 the '568 Patent; its prosecution history; related patents or applications; the prosecution history of
12 related patents or applications; declarations of, or deposition or trial testimony from, any inventor;
13 and any papers or evidence that LS Cable produces or submits in this or other litigation involving
14 the Asserted Patent or related patents. Apple reserves the right to contend that the Asserted
15 Claims are invalid under 35 U.S.C. § 102(f) if evidence reveals that the named inventors did not
16 invent, either alone or with others, the subject matter claimed in the '568 Patent.

17 Apple's investigation of prior art systems and products is ongoing. Apple has diligently
18 sought and continues to diligently seek discovery from LS Cable and third parties to demonstrate
19 LS Cable's or other parties' earlier invention. Apple reserves its right to contend that the
20 Asserted Claims are invalid under 35 U.S.C. § 102(g). As LS Cable has not produced relevant
21 discovery regarding prior art systems and products,² Apple reserves the right to raise this
22 deficiency with LS Cable or the Court and amend or supplement its Contentions. To the extent
23 that a claim chart pertains to a patent or publication concerning a prior-art system, the claim chart
24 further applies to that prior-art system.

25 Apple has served subpoenas on The Proctor & Gamble Company, The Gillette Company
26

27 ² Apple requested such discovery at least in its Request For Production No. 11, which requests,
28 *inter alia*, all Documents Related to Prior Art or Potential Prior Art. In LS Cable's April 21,
2025 response, LS Cable agreed to produce documents in its possession, custody, or control
responsive to this request subject to certain objections.

1 LLC, Philips Oral Healthcare, LLC, Philips North America LLC, Alticor Inc., Amway Corp.,
2 Fulton Innovation Inc., and Epson America Inc. regarding prior art systems and products. Apple
3 will amend or supplement its Contentions, as required, with documents, information, and
4 testimony that these or other third parties provide in response to Apple's subpoenas. Apple may
5 rely on all deposition transcripts of third parties regarding prior art systems and products and all
6 documents produced by third parties.

7 Apple's further investigation and discovery from LS Cable or third parties with
8 knowledge regarding prior art systems and products may reveal additional relevant prior art
9 systems and products or further information regarding those systems and products. Apple
10 reserves the right to amend or supplement these Contentions based on its further investigation and
11 discovery.

12 Apple may rely on any relevant findings by any court, any statements or arguments by any
13 party, and/or prior art disclosed or asserted in any litigation involving the '568 Patent. Apple
14 incorporates by reference any future litigation involving the '568 Patent.

15 Apple may rely on any relevant findings of the PTAB or Federal Circuit or any statements
16 by LS Cable in connection with all IPR proceedings on the '568 Patent (including future IPR
17 proceedings), all of which Apple incorporates by reference. Apple incorporates by reference any
18 past or future *ex parte* reexaminations involving the '568 Patent and may rely on relevant PTO
19 findings in those proceedings. Apple further incorporates by reference all claim construction,
20 non-infringement, and invalidity reports that it serves in this matter. Apple further incorporates
21 by reference each and every prior art reference of record in the prosecution and supplemental
22 examination of the '568 Patent (Application No. 96/000,355) and any related patent or
23 application, the applicant's statements made during prosecution and supplemental examination,
24 and the findings by the PTO and WIPO/PCT examiners regarding the prior art. Apple also may
25 rely on the doctrines of issue preclusion or judicial estoppel arising from WIPO/PCT, PTO,
26 PTAB, and Federal Circuit proceedings concerning the '568 Patent.

27 For each Asserted Claim, Apple: (a) identifies each currently known item of prior art that
28 either anticipates or renders obvious, alone or in combination, each Asserted Claim; (b) specifies

whether each such item of prior art anticipates or renders obvious the applicable claims; and
(c) submits charts for illustrative prior art references identifying exemplary reference portions where each element is disclosed or rendered obvious by the prior art.

Based on Apple's current understanding of the Asserted Claims and LS Cable's apparent construction of the claims, Apple also identifies invalidity grounds based on indefiniteness and/or written description under 35 U.S.C. § 112. As noted, Apple does not adopt LS Cable's apparent constructions or agree to their correctness. Apple reserves all rights to advance claim construction positions different from LS Cable's apparent constructions. In light of the deficiencies in LS Cable's Infringement Contentions, Apple reserves the right to amend or supplement these Contentions to identify further bases for invalidity under 35 U.S.C. § 112.

A. Patent Local Rule 3-3(a)—Identification of Prior Art

Subject to Apple's reservations above, Apple identifies prior art below that anticipates or renders obvious, alone or in combination, one or more of the Asserted Claims. The prior art identified below also is relevant to show the state of the art and reasons and motivations for making improvements, additions, modifications, and combinations.

1. Prior Art Patents

Prior Art	Exhibit No.	BegBates	Date of Issue	U.S.C. §§
U.S. Patent No. 7,522,878 to Baarman ("Baarman-878")	A-2	APL-LSCS_00499052	April 21, 2009	102(b)/103
U.S. Patent No. 7,518,267 to Baarman ("Baarman-267")	A-3	APL-LSCS_00499040	April 14, 2009	102(b)/103
U.S. Patent No. 7,791,319 to Veselic et al. ("Veselic")	A-4	APL-LSCS_00499406	September 7, 2010	102(b)/103
KR950005819B1 ("Chung-Sik")	A-5	APL-LSCS_00499137 APL-LSCS_00499148	May 31, 1995	102(b)/103
U.S. Patent No. 6,906,495 ("Cheng")	A-6	APL-LSCS_00499104	June 14, 2005	102(b)/103
U.S. Patent No. 6,469,472 ("Aoshima")	A-7	APL-LSCS_00499013	October 22, 2001	102(b)/103
U.S. Patent No. 6,313,612 ("Honda-612")	A-8	APL-LSCS_00499225	November 6, 2001	102(b)/103

Prior Art	Exhibit No.	BegBates	Date of Issue	U.S.C. §§
U.S. Patent No. 6,316,909 (“Honda-909”)	A-9	APL-LSCS_00499256	November 13, 2001	102(b)/103
U.S. Patent No. 6,912,137 (“Berghegger”)	A-10	APL-LSCS_00499069	June 28, 2005	102(b)/103
U.S. 6,184,651 (“Fernandez”)	A-11	APL-LSCS_00499205	February 6, 2001	102(b)/103

B. Non-Patent Literature

Prior Art	Exhibit No.	BegBates	Date of Publication
Datasheet for NCP1800, Single-Cell Lithium Ion Battery Charge Controller, Rev. 4 (May 2003) (“NCP1800 Datasheet”)	A-12	APL-LSCS_00499320	May 4, 2003
R. Coup, <i>An Inductively Coupled Universal Battery Charger</i> , (Sept. 15, 2003) (“Coup”)	A-13	APL-LSCS_00499156	September 15, 2003
K. Hatanaka et al., <i>Coil Shape in a Desk-Type Contactless Power Station System</i> , Journal of Magnetism Society of Japan Vol. 25, No. 4-2 (2001) (“Hatanaka”)	A-14	APL-LSCS_00499214 APL-LSCS_00499215 APL-LSCS_00499221	January 24, 2001
C. Kim et al., <i>Design of a Contactless Battery Charger for Cellular Phone</i> , IEEE Transactions on Industrial Electronics, Vol. 48, No. 6 (Dec. 2001) (“Kim”)	A-15	APL-LSCS_00499310	December 31, 2001

C. Prior Art Sales and Public Use

Apple sets forth prior art products and systems below. For such prior art products and systems, Apple identifies approximate dates on which such products were offered for sale or publicly used or known in the United States, based on its current knowledge. Apple’s investigation of prior art products and systems remains ongoing. Apple will produce or disclose further information or documents as they become available to Apple. Apple reserves the right to

amend or supplement these Contentions based on its further investigation and discovery.

In addition, Apple identifies and relies on any system, product, or public knowledge or use that embodies or incorporates any of the prior art patents listed above in Section I.A.1 (e.g., the Seiko Epson electronic watch and charging station described by Aoshima, Honda-612, and/or Honda-909). Apple reserves the right to identify and rely on systems that represent different versions or related variations of the identified products and systems.

Prior Art System	Exhibit No.	Entity	Date of Use, Sale, Offer for Sale, or Invention
SplashPad and SplashModule System	A-16	Amway Corp.	Before 2005
Oral-B Electric Toothbrushes	A-17	The Gillette Company LLC	Before 2005
Sonicare Electric Toothbrushes	A-18	Philips Oral Healthcare, Inc.	Before 2005
eSpring Water Purifier	A-19	Amway Corp.	Before 2005
Seiko Epson Watch Charger	A-20	Seiko Epson	Before 2005

D. Admitted Prior Art

The specification of the '568 Patent admits that many of the limitations recited in the Asserted Claims were known in the prior art. *See Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1998) (“A statement in a patent that something is in the prior art is binding on the applicant and patentee for determinations of anticipation and obviousness.”); *In re Fout*, 675 F.2d 297, 300 (C.C.P.A. 1982) (“Valid prior art may be created by the admissions of the parties.”). Apple may rely on those admissions just as it relies on the items of prior art identified above. A claim chart for the admitted prior art is provided in **Exhibit A-1**.

II. Patent Local Rule 3-3(b)—Anticipation and Obviousness

Pursuant to Patent Local Rule 3-3(b), Apple contends that each item of prior art identified

1 in Section I.A at least renders the Asserted Claims obvious, alone or in combination with other
2 items of prior art. At this time, Apple has insufficient information regarding the items of prior art
3 in Section I.A to determine whether they also *anticipate* the Asserted Claims. Moreover, other
4 items of prior art in Section I.A may anticipate the Asserted Claims if the claims are construed
5 broadly, as LS Cable apparently proposes. Apple may amend these disclosures in response to
6 additional discovery and investigation, LS Cable’s amendment or supplementation of its
7 Infringement Contentions, LS Cable’s representations during the *Markman* hearing, or the
8 Court’s claim construction order.

9 **A. Explanation of why the prior art renders the asserted claims obvious**

10 Each Asserted Claim is obvious in view of the items of prior art identified in Section I.A,
11 both alone (coupled with the knowledge of a POSITA) and in combination with other items of
12 prior art identified in Section I.A. Apple’s obviousness contentions do not imply that the
13 inventions of the ’568 Patent have any value. As noted, Apple bases its contentions on how LS
14 Cable apparently construes the Asserted Claims in its Infringement Contentions.

15 A POSITA would have been motivated to combine the disclosures in each item of prior
16 art charted in **Exhibits A-1 – A-20** (see discussion of anticipation and obviousness under Patent
17 Local Rule 3-3(c) below). Apple’s discussion of particular combinations does not imply that any
18 item in the combination, taken alone, would not anticipate or render the Asserted Claims obvious.

19 A POSITA would have been motivated to combine the disclosures charted in
20 **Exhibits A-1 – A-20** for the following reasons:

- 21 (A) the Asserted Claims combine prior art elements according to known methods
22 to yield predictable results
- 23 (B) the Asserted Claims involve the simple substitution of one known element for
24 another to obtain predictable results;
- 25 (C) the Asserted Claims involve the use of known technique to improve similar
26 devices (methods, or products) in the same way;
- 27 (D) the Asserted Claims apply a known technique to a known device (method, or
28 product) ready for improvement to yield predictable results;
- 29 (E) the Asserted Claims involve combinations of prior art references that would
30 have been “obvious to try”—a POSITA could have reached the Asserted
31 Claims by choosing from a finite number of identified, predictable solutions,
32 with a reasonable expectation of success;
- 33 (F) the Asserted Claims are simply variations of work from one field of endeavor

1 or a different one that would have been prompted based on design incentives or
2 other market forces because the variations were predictable to one of ordinary
skill in the art.

3 *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415-418 (2007).

4 Notably, each item of prior art is in the same technical field—contactless inductive power
5 transfer—or involves standard electronics well known in the prior art. Thus, a POSITA would
6 immediately have recognized the obviousness of combining a beneficial concept disclosed in one
7 item of prior art with a beneficial concept disclosed in another item of prior art.

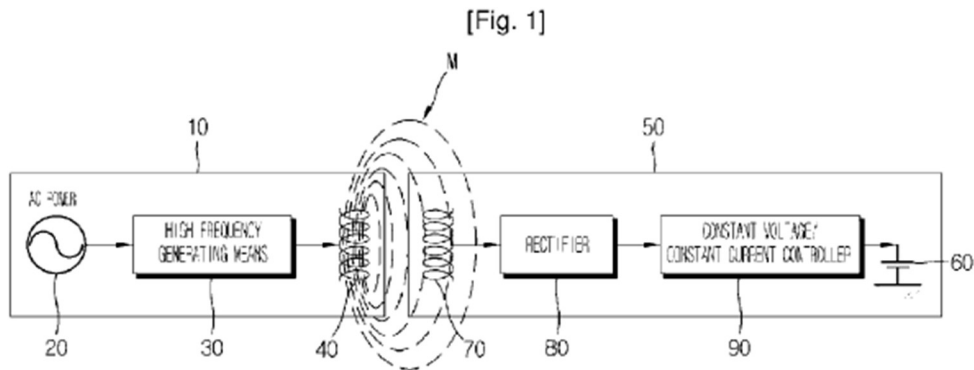
8 Furthermore, a POSITA would have readily taken teachings from one item of prior art and
9 applied them to other items of prior art, with predictable results. As referenced above, multiple
10 items of prior art teach or suggest the concepts claimed in the '568 Patent. If LS Cable argues
11 that any concepts claimed in the '568 Patent were not disclosed in any item of prior art, it would
12 have been obvious to adapt each item of prior art to include the concept or combine it with other
13 items of prior art that disclose the concept. In addition, the charted disclosures in
14 **Exhibits A-1 – A-20** were well known to POSITAs and understood to be among a menu of
15 available design choices for contactless inductive power transfer systems.

16 Additionally, common industry knowledge supplied a motivation to combine the charted
17 disclosures in the items of prior art with each other. Each combination would have produced no
18 unexpected results and would have been a known alternative to a POSITA.

19 Although not required, the references themselves provide motivations to combine. A
20 POSITA would have been motivated to combine a reference that refers to or explicitly invites its
21 combination with another reference. Where the cited references explicitly invite one to combine
22 a reference with others, that invitation would have motivated a POSITA to do so.

23 The '568 Patent itself establishes motivations to combine the items of prior art that Apple
24 has identified to create a contact-less charging circuit for charging a chargeable battery. For
25 example, the specification acknowledges that contact-less charging techniques were “widely
26 utilized for daily goods such as electric toothbrushes and electric shavers” and provides FIGs. 1
27 and 2, which it acknowledges adopt a “conventional contact-less charging method.” (*See* '568
28 Patent, 1:61-63, 5:36-41.)

The specification provides a schematic depicting this “conventional”—and thus widely known in the art—contact-less charging method as FIG. 1, which is reproduced below:



According to the specification, it was known according to the conventional methods to use “a high frequency power driving means ... to output a high frequency AC current” that is “supplied” to “a primary coil ... to form a magnetic field M,” which would induce a “high frequency AC current” to “a second coil” that would then be converted into a DC current by “a rectifier” and applied to charge a battery cell using “a constant voltage/constant current supplier.” (*See id.*, 1:66-2:12.) The ’568 Patent recognizes that the “constant voltage/constant current supplier” is “an essential element of a charging circuit module” and is “a well-known circuit element widely used in a battery charging device.” (*See id.*, 2:13-15, 2:34-35.) The ’568 Patent provides that the well-known constant voltage/constant current supplier would supply charging power in a constant current mode at an initial charging stage and then supply charging power in a constant voltage mode at a later charging stage. (*See id.* at 2:13-20.)

Furthermore, the ’568 Patent recognizes that in a system that “adopt[s] the contact-less charging method of the prior art ... the intensity of the magnetic flux linked to the secondary coil [] is changed according to a relative position with the primary coil”—that is, the intensity of the magnetic field supplied by the primary coil is changed based on the relative positions of the primary and secondary coils. (*See id.*, 2:21-32.) Under Plaintiff’s interpretation as reflected in its Infringement Contentions, the final wherein limitation of claim 1, which recites “wherein the monitoring result includes a wireless feedback control signal to induce the change of intensity of the magnetic field by adjusting a power applied to the primary coil of the external contact-less

1 charging device based on relative positions of the contact-less chargeable battery and the external
2 contact-less charging device” and the analogous limitations of the other independent claims 7 and
3 48, is inherent in any inductive power transfer system. A person of ordinary skill in the art would
4 know based on Faraday’s Law and/or the Biot-Savart Law that the intensity of the magnetic field
5 is inherently a function of the relative position of the external contact-less charging device and the
6 contact-less chargeable battery.

7 In view of the above, a POSITA would recognize that it was well known to use a primary
8 coil to induce a magnetic field on a secondary coil for charging a rechargeable battery, that a
9 rectifier could receive high frequency AC current induced by the primary coil and convert it into
10 a DC current, and that a constant voltage/constant current supplier is an essential element for a
11 system for charging a rechargeable battery. A POSITA further would have been motivated to
12 combine the charted teachings of the items of prior art that Apple identifies. The prior art
13 references relate to electronics, including those associated with inductive power transfer systems.
14 A POSITA would have been motivated to combine their teachings with a reasonable expectation
15 of success. Moreover, inductive systems with coils, rectifiers, constant voltage/constant current
16 suppliers, overvoltage monitoring units, voltage comparators, wireless transmitting units,
17 including antennas, voltage detectors, and microprocessors, as well as other electronic
18 components, were all well known in the art. Replacing custom circuitry for one of these
19 components (or vice versa) would have been a matter of simple substitution of one known
20 element for another to obtain predictable results. For example, a POSITA would have been
21 motivated to combine a contactless charging system with an off-the-shelf overvoltage protection
22 unit (or other off-the-shelf electronic components) to prevent damage from an unexpected
23 overvoltage to one or more components of the contactless charging system (such as the constant
24 voltage/constant current supplier).

25 Motivation to Combine Prior Art with Overvoltage Monitoring Units

26 By way of further example, to the extent one of Apple’s specific charted prior art
27 references does not expressly disclose the use of an overvoltage monitoring unit, it would have
28 been obvious at least by the July 29, 2005 priority date for a POSITA to use an overvoltage

1 monitoring unit to perform circuit operations, *e.g.*, operations that the reference discloses
2 performing using voltage detectors and/or a voltage regulator or other feedback mechanisms or
3 circuitry. By the priority date, the importance of overvoltage protection was appreciated in the
4 art. As the POSITA would have recognized, “it is often a good idea to include some sort of
5 overvoltage protection at the output of a regulated supply.” (P. Horowitz et al., *The Art of*
6 *Electronics*, 2nd Ed., Cambridge University Press (1989), 317.)

7 A POSITA further would have recognized that it could be desirable to measure the
8 voltage at both sides of the constant voltage/constant current supplier, such as via voltage
9 detectors in order to monitor the voltage being supplied. (*See, e.g.*, Chung-Sik at 8-3-8-5
10 (implementing voltage detectors on either side of a “charging unit” that provide voltage
11 measurements to a comparator, which provides a charge state signal to a microcomputer that in
12 turn determines whether the charge state signal is “normal” and communicates that status to a
13 microcomputer in the charging unit, which may stop charging operation); Veselic at 5:55-64,
14 FIG. 4 (implementing a voltage sensing circuit (30) that measures the voltage drop “by comparing
15 the voltage at the input and voltage at the output of the battery charge controller 20” *e.g.*, using an
16 operational amplifier (op amp)); U.S. Patent Publication No. 20070029975 (“Martin”) at
17 ¶ [0026], FIG. 2 (implementing an op amp to “monitor the voltage across battery charger 22”
18 with the OUT pin “coupled to the inverting input of the amplifier and the BAT pin [] coupled to
19 the non-inverting input”).) A POSITA would have recognized that the voltages at either end of
20 the constant voltage/constant current supplier could be compared and that a difference of such
21 voltages, the values of such voltages, and/or a code indicating that the voltages are in an
22 overvoltage state could be transmitted to a microprocessor or other control device and that this
23 monitoring information could be used to adjust the power being supplied to the coils of the
24 inductive system. (*See e.g.*, Chung-Sik at 8-3-8-5; Martin at ¶ [0027].) For example, a POSITA
25 would have recognized that this monitoring information could be used to provide a signal to
26 adjust the power being supplied to the primary coil to induce a change in the magnetic field. (*See*
27 *Chung-Sik* at 8-3-8-5.) A POSITA further would have recognized that the charging mode of the
28 battery may be based on one or more voltages exceeding a predetermined level. (P. Scherz,

1 Practical Electronics for Inventors, McGraw-Hill (2000) at 282 (discussing rechargeable batteries
2 and noting, “Li-ion batteries require special voltage-limiting properties. . . . Most cells feature a
3 mechanical pressure switch that permanently interrupts the current path if a safe pressure
4 threshold is exceeded. . . . Full charge is attained after the voltage has reached the upper voltage
5 threshold and the current has dropped and leveled off at about 3 percent of the nominal charge
6 current.”).)

7 A POSITA further would have recognized that it could be desirable to incorporate a
8 wireless transmitting unit as part of an overvoltage monitoring unit. (*See, e.g.*, Fernandez at 5:51-
9 6:16 (disclosing an RF communications loop between a charger base device and a portable device
10 for communicating control and data signals, including a feedback control signal, which is used to
11 regulate parameters of the charging process such as charging signal voltage and/or cycling rate).)

12 A POSITA would have recognized that it could be desirable to communicate information, via a
13 wireless transmitting unit, measured by certain electrical components in order to provide
14 overvoltage protection. (*See id.*) A POSITA would have recognized that the information
15 communicated could include a wireless feedback control signal to adjust the charging power
16 supplied to the rechargeable battery, for instance via a signal that adjusts the power supplied to a
17 primary coil and thereby induces a change of intensity of the magnetic field. (*See id.*) A
18 POSITA further would have recognized that a wireless transmitting unit may incorporate one or
19 more antennas. (*See id.* (disclosing the feedback control signal can be communicated through
20 antenna 37).)

21 Apple anticipates that its technical expert(s) in this case will provide more detailed
22 explanations of motivations to combine, and explanations for there being a reasonable expectation
23 of success in doing so, for each of the items of prior art, alone and in combination. Apple
24 incorporates by reference all expert declarations and reports on motivations to combine that it has
25 submitted or will submit in the future in this case, IPR proceedings, or *ex parte* reexaminations.

26 Apple is unaware of any secondary considerations of non-obviousness for the Asserted
27 Claims and contends that no such secondary considerations exist. Apple reserves the right to
28 address any alleged secondary considerations of non-obviousness that LS Cable may raise.

1 **B. Exemplary combinations of prior art showing obviousness**

2 Apple provides exemplary obviousness combinations below. Apple's investigation
3 remains in its early stages, and its further investigation and discovery may lead to additional prior
4 art and prior art combinations. Apple's inclusion of exemplary combinations does not preclude it
5 from identifying other prior art and invalidating combinations. Apple reserves the right to
6 identify additional specific combinations as well as to detail and explain such combinations.

7 The Asserted Claims of the '568 Patent are rendered obvious by:

- 8 • The Admitted Prior Art in view of one or more of Baarman-878, Baarman-267,
9 Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger,
10 Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, SplashPad and
11 SplashModule System, Oral-B Electric Toothbrushes, Sonicare Electric
12 Toothbrushes, Seiko Epson Watch Charger and/or the eSpring Water Purifier.
- 13 • Baarman-878 in view of one or more of Baarman-267, Veselic, Chung-Sik, Cheng,
14 Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet,
15 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
16 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
17 Epson Watch Charger and/or the Admitted Prior Art.
- 18 • Baarman-267 in view of one or more of Baarman-878, Veselic, Chung-Sik, Cheng,
19 Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet,
20 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
21 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
22 Epson Watch Charger and/or the Admitted Prior Art.
- 23 • Veselic in view of one or more of Baarman-878, Baarman-267, Chung-Sik, Cheng,
24 Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet,
25 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
26 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
27 Epson Watch Charger and/or the Admitted Prior Art.
- 28 • Chung-Sik in view of one or more of Baarman-878, Baarman-267, Veselic, Cheng,

1 Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet,
2 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
3 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
4 Epson Watch Charger and/or the Admitted Prior Art.

- 5 • Cheng in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik,
6 Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet,
7 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
8 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
9 Epson Watch Charger and/or the Admitted Prior Art.

- 10 • Aoshima in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-
11 Sik, Cheng, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800
12 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B
13 Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier,
14 Seiko Epson Watch Charger and/or the Admitted Prior Art.

- 15 • Honda-612 in view of one or more of Baarman-878, Baarman-267, Veselic,
16 Chung-Sik, Cheng, Aoshima, Honda-909, Berghegger, Fernandez, NCP 1800
17 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B
18 Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier,
19 Seiko Epson Watch Charger and/or the Admitted Prior Art.

- 20 • Honda-909 in view of one or more of Baarman-878, Baarman-267, Veselic,
21 Chung-Sik, Cheng, Aoshima, Honda-612, Berghegger, Fernandez, NCP 1800
22 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B
23 Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier,
24 Seiko Epson Watch Charger and/or the Admitted Prior Art.

- 25 • Berghegger in view of one or more of Baarman-878, Baarman-267, Veselic,
26 Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Fernandez, NCP 1800
27 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B
28 Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier,

1 Seiko Epson Watch Charger and/or the Admitted Prior Art.

- 2 • Fernandez in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-
3 Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, NCP 1800 Datasheet,
4 Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
5 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
6 Epson Watch Charger and/or the Admitted Prior Art.
- 7 • NCP 1800 Datasheet in view of one or more of Baarman-878, Baarman-267,
8 Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger,
9 Fernandez, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B
10 Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier,
11 Seiko Epson Watch Charger and/or the Admitted Prior Art.
- 12 • Coup in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik,
13 Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800
14 Datasheet, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric
15 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
16 Epson Watch Charger and/or the Admitted Prior Art.
- 17 • Hatanaka in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-
18 Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800
19 Datasheet, Coup, Kim, SplashPad and SplashModule System, Oral-B Electric
20 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
21 Epson Watch Charger and/or the Admitted Prior Art.
- 22 • Kim in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik,
23 Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800
24 Datasheet, Coup, Hatanaka, SplashPad and SplashModule System, Oral-B Electric
25 Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko
26 Epson Watch Charger and/or the Admitted Prior Art.
- 27 • SplashPad and SplashModule System in view of one or more of Baarman-878,
28 Baarman-267, Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909,

Berghegger, Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, Oral-B Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko Epson Watch Charger and/or the Admitted Prior Art.

- Oral-B Electric Toothbrushes in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Sonicare Electric Toothbrushes, eSpring Water Purifier, Seiko Epson Watch Charger and/or the Admitted Prior Art.
- Sonicare Electric Toothbrushes in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, Oral-B Electric Toothbrushes, eSpring Water Purifier, and/or the Admitted Prior Art.
- eSpring Water Purifier in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric Toothbrushes, Sonicare Electric Toothbrushes, Seiko Epson Watch Charger and/or the Admitted Prior Art.
- Seiko Epson Watch Charger in view of one or more of Baarman-878, Baarman-267, Veselic, Chung-Sik, Cheng, Aoshima, Honda-612, Honda-909, Berghegger, Fernandez, NCP 1800 Datasheet, Coup, Hatanaka, Kim, SplashPad and SplashModule System, Oral-B Electric Toothbrushes, Sonicare Electric Toothbrushes, eSpring Water Purifier and/or the Admitted Prior Art.

III. Patent Local Rule 3-3(c)—Invalidity Claim Charts

Pursuant to Patent Local Rule 3-3(c), Apple provides the following charts identifying specifically where and how, in each item of prior art (including admitted prior art), each limitation of each asserted claim is found: **Exhibits A-1 – A-20**. The cited portions of each item of prior art are exemplary and representative of the prior art’s content. If a cited portion discusses terms or topics for which context is provided in another portion not explicitly cited, the citations

1 necessarily incorporate by reference in full that other portion. Apple may rely on any portion of
2 any prior art reference. If a prior art reference does not anticipate or render obvious a claim
3 because it does not teach or suggest one or more claim limitations, the claim still would have
4 been obvious in view of the reference alone or when combined with other references or the
5 knowledge of a POSITA.

6 **IV. Patent Local Rule 3-3(d)—Grounds of Invalidity Based on 35 U.S.C. § 112**

7 Based on Apple's present understanding of the Asserted Claims and LS Cable's apparent
8 constructions, and subject to Apple's reservations of rights above, Apple lists below the grounds
9 upon which the Asserted Claims are invalid based on indefiniteness and/or lack of written
10 description under 35 U.S.C. § 112. Apple does not adopt LS Cable's apparent constructions or
11 agree that they are correct. Moreover, as LS Cable's deficient Infringement Contentions fail to
12 provide Apple with adequate notice as to its infringement theories, Apple reserves all rights to
13 advance additional grounds of invalidity under Section 112.

14 Apple's § 112 contentions do not constitute an admission that LS Cable's claim
15 constructions are correct or that the Asserted Claims are not anticipated or obvious. Apple's
16 invalidity positions as to any independent claim apply to its dependent claims. In view of LS
17 Cable's deficient Infringement Contentions, Apple reserves the right to amend or supplement its
18 Contentions to identify further bases for invalidity under 35 U.S.C. § 112.

19 Apple's contentions that the following claims are invalid under 35 U.S.C. § 112 are based
20 on Apple's present understanding of the Asserted Claims and/or LS Cable's apparent construction
21 of the claims, as set forth in LS Cable's Infringement Contentions. Apple is not adopting LS
22 Cable's apparent constructions, nor is Apple agreeing that any of LS Cable's apparent
23 constructions are correct. Apple reserves all rights to advance claim construction positions
24 different from LS Cable's apparent constructions.

25 Apple's invalidity contentions under 35 U.S.C. § 112 are provided in **Exhibit B**.
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28

1 **V. PATENT LOCAL RULE 3-4—DOCUMENT PRODUCTION ACCOMPANYING**
2 **INVALIDITY CONTENTIONS**

3 Pursuant to Northern District of California Patent Local Rule 3-4, Apple is making the
4 document production set forth below.

5 **A. Patent Local Rule 3-4(a)—Source code, specifications, schematics, flow**
6 **charts, artwork, formulas, or other documentation sufficient to show the**
7 **operation of any aspects or elements of an Accused Instrumentality identified**
8 **by the patent claimant in its Patent L.R. 3-1(c) chart**

9 Apple produced technical documents as APL-LSCS_00000001–APL-LSCS_00499011
10 and APL-LSCS_00499425–APL-LSCS_00507173. Source code for the Accused
11 Instrumentalities will be made available for inspection.

12 **B. Patent Local Rule 3-4(b)—A copy or sample of the prior art identified**
13 **pursuant to Patent L.R. 3-3(a) which does not appear in the file history of the**
14 **patent(s) at issue**

15 Produced as APL-LSCS_00499012–APL-LSCS_00499424.

16 **C. Patent Local Rule 3-4(c)—All agreements that may be related to the accused**
17 **instrumentality or may be comparable to a license that would result from a**
18 **hypothetical reasonable royalty negotiation**

19 Apple agreements are produced as APL-LSCS_00508085–APL-LSCS_00508593 and
20 include agreements that may be deemed comparable to a license that would result from a
21 hypothetical reasonable royalty negotiation. Apple will rely on experts for comparability.

22 **D. Patent Local Rule 3-4(d)—Documents sufficient to show the sales, revenue,**
23 **cost, and profits for accused instrumentalities identified pursuant to Patent**
24 **L.R. 3-1(b) for any period of alleged infringement**

25 Produced as APL-LSCS_00507174–APL-LSCS_00508084.

26 **E. Patent Local Rule 3-4(e)—All agreements that may be used to support the**
27 **party denying infringement's damages case**

28 Apple agreements are produced as APL-LSCS_00508085–APL-LSCS_00508593 and
include agreements that may be used to support Apple's damages case. Apple will rely on experts
for a damages analysis, and for comparability.

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Dated: June 3, 2025

MORRISON & FOERSTER LLP

By: /s/ Shaelyn K. Dawson
Shaelyn K. Dawson

Attorneys for Defendant
APPLE INC.

1 **PROOF OF SERVICE**

2 I declare that I am employed with the law firm of Morrison & Foerster LLP, whose
3 address is 707 Wilshire Boulevard, Los Angeles, California 90017-3543. I am not a party to the
4 within cause, and I am over the age of eighteen years.

4 I further declare that on June 3, 2025, I served a copy of:

- 5 • **DEFENDANT APPLE INC.'S PATENT LOCAL RULE 3-3 AND 3-4**
6 **DISCLOSURES**

7 ☒ **BY ELECTRONIC SERVICE [Fed. Rule Civ. Proc. rule 5(b)]** by electronically
8 mailing a true and correct copy through Morrison & Foerster LLP's electronic mail
9 system to the e-mail address(es) set forth below, or as stated on the attached service list
per agreement in accordance with Federal Rules of Civil Procedure rule 5(b).

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19 I declare under penalty of perjury that the foregoing is true and correct.

20 Executed at Los Angeles, California this 3rd day of June, 2025.

21
22

Silvia Specht
(typed)

/s/ Silvia Specht
(signature)