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UNITED STATES INTERNATIONAL TRADE COMMISSION
WASHINGTON D.C.

Before the Honorable Cameron R. Elliot
Administrative Law Judge

In the Matter of **CERTAIN INTEGRATED CIRCUITS, COMPONENTS THEREOF, AND PRODUCTS CONTAINING THE SAME**	**INVESTIGATION NO. 337-TA-1350**

COMPLAINANT REALTEK SEMICONDUCTOR CORPORATION'S PETITION FOR REVIEW OF THE ADMINISTRATIVE LAW JUDGE'S INITIAL DETERMINATION

REALTEK EXHIBIT 2009
AMD v. Realtek
IPR2023-00920

[redacted]

TABLE OF CONTENTS

I. Introduction 1

II. The ALJ's Improper Sriking of a Key Realtek Witness Despite Counsel for AMD's Concurrent Representation of that Witness Mandates a New, Untainted Trial 2

A. Background 4

B. The ALJ Erred in Excluding Steve Baik's Testimony and Using Winston & Strawn's Ethical Violation as a Basis for Precluding Realtek from Offering Critical Evidence 6

1. The ALJ's prohibition of Mr. Baik's testimony as a negotiator of the Realtek-Avago license agreement is reversible error 9

2. There were no privilege or work product issues related to Mr. Baik testifying about his personal knowledge negotiating an agreement with Avago/Broadcom, a third party. 10

3. The PO does not prohibit witnesses or attorneys that possess CBI from testifying. 11

4. The ALJ's conclusion that Mr. Baik is not a party ignores that his actions were taken as Realtek's representative and were fundamental to its case. 12

5. AMD's confidence that Winston had forsaken all loyalty to Mr. Baik does not remove the taint 12

C. The ALJ Was Also Required to Disqualify Winston Pursuant to RPC 1.9 15

1. Winston was involved in settlement strategy that led to the License Agreement and hired (but did not validly screen) Realtek's former counsel who litigated the same License Agreement. 15

2. The ALJ departed from settled law when concluding the prior representation was not substantially related. 17

III. Domestic Industry - Economic Prong 20

A. Background 21

B. The ALJ Erred in Holding that Realtek Did Not Show Significant Investments 23

1. The ALJ either misunderstood or chose to ignore that Full Time Equivalent units were determined by excluding work on non-DI products. 23

2. The ALJ disregarded Commission precedent in rejecting labor investments for Broadcom's operational employees. 27

3. The ALJ wrongly rejected capital investments that were properly apportioned by FTE and revenue related to the DI products. 28

[redacted]

C. A Domestic Industry Need Not Be Apportioned When that Industry Consists of an Undifferentiated Set of Development Costs for the Same DI Products Even If Sold by Multiple Entities 29

D. The ID Shows that the Identified Domestic Industry Is Significant 35

E. The ALJ Erred in Concluding that Broadcom Inc. and Broadcom Corp. Are Not [redacted] of Avago Sales 36

1. Broadcom Inc. is a licensed [redacted] 37

2. Broadcom Corp. is a licensed [redacted] 38

3. Impact of the ALJ's errors regarding licensed entities. 44

IV. The '218 Patent Is Valid 44

A. The ALJ Erred By Holding Claim 18 Obvious Over Li in Light of Jiang By Intervening on Behalf of AMD, Developing New Arguments Irreconcilable With the Record, and Shifting the Burden of Proof to Realtek 44

1. The ID's finding of invalidity of Claim 18 is based on the erroneous construction of "same ground wire" to cover a mesh including multiple wires 45

a. The ALJ's claim construction is inconsistent with other rulings 45

b. The ALJ's construction is contradicted by the intrinsic record requiring that a "same" ground wire must be a single ground wire 46

2. The ALJ intervened on behalf of AMD by crafting his own evidence and shifting the burden of proof to Realtek to improperly find Claim 18 obvious 47

a. Contrary to the ALJ, Realtek never argued that a same ground wire need not be a single wire 47

b. The ALJ improperly used demonstratives related to power wires and applied them to ground wires to find Claim 18 obvious 49

c. The ALJ shifts the burden of proof to Realtek to show the prior art reference is NOT similar to an Accused Product 50

B. The ALJ Erred Finding Claims 16-17 Obvious By Ignoring Evidence and Failing to Identify a Motivation to Modify the Wiring Structure Disclosed in Li 52

1. The ALJ completely ignores that the Li reference teaches away from coupling a ground wire from an upper power mesh to a power domain by ONLY disclosing a ground path through a lower substrate. 53

2. The ID erred by applying hindsight analysis to modify the substrate ground connections at the first and second power domains in Li to non-existent connections to ground wires in a power mesh. 55

C. The ALJ Erred Finding Claims 12-13 Are Obvious Over Li Alone or in Combination By Construing Claim Limitations Improperly, Failing to Find All Elements Are Disclosed, and Shifting the Burden of Proof to Realtek 57

1. The ALJ's construction of "first power domain" and "second power domain" reads out the requirement of two different power domains to improperly read on a single power domain 58

2. Li alone does not render Claim 12 or its dependent claims obvious because Li does not suggest a local power grid that corresponds to the location of, and couples to, a first and second power domain (Core and Switch). 60

3. Li combined with Jiang does not render Claim 12 or its dependent claims obvious because they do not suggest a local power grid corresponds to the location of, and couples to, a first and second power domain (Core and Switch) 61

4. By "inferring" that a "block" refers to a logical block of circuitry, the ALJ independently arrived at the conclusion that Li must suggest a local power mesh that "corresponds to" a power domain; a non-sequitor 64

D. The ID Erred in Finding Claims 12-13 Obvious Over Jiang and/or Jiang2 66

1. The ALJ legally erred in his construction that the first and second power domains can have the same power requirement in order to cover the prior art. 67

2. The ALJ erred by excluding Dr. Souri's admitted testimony on power domain in favor of AMD, despite agreement by the parties to admit the testimony into evidence. 68

3. The ALJ erred by failing to apply his prior construction of "separately" to exclude the same electrical path in order to allow the claims to cover Jiang. 69

4. The ALJ erred by applying hindsight reasoning to modify Jiang and shift the burden of proof to Realtek 74

5. The ALJ further erred by finding obviousness without a supporting finding of a reasonable expectation of success for the hindsight modification of Jiang. 77

V. The '582 Patent Is Infringed and Valid, and the DI Products Practice Claims 1-4 78

A. The '582 Patent Is Infringed and the DI Products Practice its Claims 79

1. The ALJ erred in inconsistently construing the ordinary meaning of "corresponding to." 79

2. The ALJ committed a second claim construction error in limiting "a" capacitor component to a single capacitor component. 84

B. The '582 Patent Is Valid 87

1. There is not clear and convincing evidence that RBR1000 is prior art. 87

[redacted]

a. The RBR1000 AMD applied to the claims is from 2023, not 2007. 88

b. The ID improperly shifted the burden of proof to Realtek. 90

2. RBR1000 has a secondary coil that overlaps the capacitor component, precluding anticipation. 90

a. The comparison of RBR1000 to the DI Products is unpersuasive. 91

b. The TechInsights Reports are unreliable and insufficient to meet a clear and convincing evidence burden 93

c. The ALJ's personal opinion, that is at odds with the evidence of record, is not a basis to find a clear and convincing burden met 94

d. The improper construction of "not substantially overlapped with the coil-conductor segment" does not support the ALJ's conclusion 97

VI. The ALJ Erred on Imposing Sanctions on Realtek 98

A. The ALJ Improperly Held Realtek to a Double Standard 99

B. The ALJ Improperly Imposed Sanctions for Discovery Errors Regarding Irrelevant Documents 100

C. Any Sanctions Should Have Been Awarded Against Realtek's Outside Counsel 100

VII. The '245 patent 100

VIII. Conclusion 100

[redacted]

[redacted]

TABLE OF AUTHORITIES

Page(s)

Cases

ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.,
694 F.3d 1312 (Fed. Cir. 2012).....50, 56, 63, 64

Alcon Research, Ltd. v. Apotex Inc.,
687 F.3d 1362 (Fed. Cir. 2012).....46

Belden Inc. v. Berk-Tek LLC,
805 F.3d 1064 (Fed. Cir. 2015).....52

In re Butler,
194 F.3d 1332 (Fed. Cir. 1999).....63

Eli Lilly & Co. v. Teva Pharms. Int'l GmbH,
8 F.4th 1331 (Fed. Cir. 2021).....64

In re Fritch,
972 F.2d 1260 (Fed. Cir. 1992).....63

Gillette Co. v. Energizer Holdings, Inc.,
405 F.3d 1367 (Fed. Cir. 2005).....59

In re Gordon,
733 F.2d 900 (Fed. Cir. 1984).....63

Helmsderfer v. Bobrick Washroom Equip., Inc.,
527 F.3d 1379 (Fed. Cir. 2008).....47

In re Kotzab,
217 F.3d 1365 (Fed. Cir. 2000).....52

KSR International Co. v. Teleflex Inc.,
550 U.S. 398 (2007).....63

In re Laskowski,
871 F.2d 115 (Fed. Cir. 1989).....63

In re Magnum Oil Tools Int'l, Ltd.,
829 F.3d 1364 (Fed. Cir. 2016).....52

Metalcraft of Mayville, Inc. v. The Toro Co.,
848 F.3d 1358 (Fed. Cir. 2017).....62

[redacted]

Outside the Box Innovations, LLC v. Travel Caddy, Inc.,
695 F.3d 1285 (Fed. Cir. 2012).....55, 63

Plantronics, Inc. v. Aliph, Inc.,
724 F.3d 1343 (Fed. Cir. 2013).....62

Plas-Pak Indus., Inc. v. Sulzer Mixpac AG,
600 F. App'x 755 (Fed. Cir. 2015).....56, 61

Procter & Gamble Co. v. Teva Pharms. USA, Inc.,
566 F.3d 989 (Fed. Cir. 2009).....64

Provisur Techs., Inc. v. Weber, Inc.,
No. 2021-1851, 2022 WL 17688071 (Fed. Cir. Dec. 15, 2022).....62

In re Stepan Co.,
868 F.3d 1342 (Fed. Cir. 2017).....52

Teva Pharms. USA, Inc. v. Corcept Therapeutics, Inc.,
18 F.4th 1377 (Fed. Cir. 2021).....56

TQ Delta, LLC v. CISCO Sys., Inc.,
942 F.3d 1352 (Fed. Cir. 2019).....55

Other Authorities

19 C.F.R. §210.43(i).....45, 48, 50, 52, 54

19 C.F.R. §210.43(ii).....*passim*

19 C.F.R. § 210.43(iii).....45, 52

19 C.F.R. §210.43(b)(ii).....56, 57, 58

MPEP 2143.01(VI).....56, 61

[redacted]

[redacted]

TABLE OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Meaning
'218 patent	U.S. Patent No. 8,006,218 [JX-0002]
'218 patent Asserted Claims	Claims 12-13 and 15-18
'245 patent	U.S. Patent No. 7,936,245 [JX-0001]
'245 patent Asserted Claims	Claims 1, 2, and 8
'582 patent	U.S. Patent No. 9,590,582 [JX-0003]
'582 patent Asserted Claims	Claims 1-4
AMD or Respondent	Respondent Advanced Micro Devices, Inc.
Asserted Patents	The '245, '582, and '218 patents, collectively
AMD Products or Accused Products	AMD Products that are accused of infringement ([redacted], and [redacted] products)
APR	Automated placement and routing
Avago Licensee	Avago Technologies General IP (Singapore) Pte. Ltd.
Avago Sales	Avago Technologies International Sales Pte. Limited
CIB	Complainant's Revised Initial Post-Hearing Brief
CRB	Complainant's Reply Post-Hearing Brief
Decl.	Declaration
DI	Domestic Industry
DI Products	Broadcom's BCM4387 and BCM4389 products
FTE	Full-time equivalent
GDS or layout	Graphic design system
Hrg. Tr. (8-4)	Case Management Conference – Remote, *Certain Integrated Circuits, Components Thereof, and Products Containing the Same*, Inv. No. 337-TA-1350 (Aug. 4, 2023)
ID	Initial Determination
IFOP	Infinity-Fabric-on-Package
Jiang	Jiang et al, "Benefits and Costs of Power-Gating Technique" 2005 [JX-0042]
Jiang2	Jiang et al, "Power/Ground Supply Network Optimization for Power-Gating" [JX-0199]

[redacted]

Jiang3	Jiang et al, "Power-Gating Aware Floorplanning" [JX-0200]
Li	Li et al, "LVS Verification across Multiple Power Domains for a Quad-Core Microprocessor," 2006 [JX-0043]
License Agreement	Settlement and Patent License Agreement between Avago Technologies General IP (Singapore) Pte. Ltd. and Realtek Semiconductor Corp. (July 27, 2015) [JX-0784C]
Merger Plan	Agreement and Plan of Merger by and Between Pavonia Ltd., et al., and Broadcom Corp. (May 28, 2015) [CX-1762]
Niknejad	Ali M. Niknejad et al., "mm-Wave Silicon Technology 60 GHz and Beyond," (Springer Science + Business Media 2008) [JX-0175]
POSITA	Person of Ordinary Skill in the Art
Q	Quality factor
RBR1000	Qualcomm RBR1000 product/chip
Realtek or Complainant	Complainant Realtek Semiconductor Corporation
RFR6122	Qualcomm RFR6122 product/chip
RIB	Respondents' Initial Post-Hearing Brief
RRB	Respondents' Reply Post-Hearing Brief
Section 337	19 U.S.C. § 1337
this Investigation	Investigation No. 337-TA-1350

[redacted]

TABLE OF CLAIM ELEMENT IDENTIFIERS

U.S. Patent No. 8,006,218	
Identifier	**Claim Element**
[12PRE]	A power routing structure applied in an integrated circuit having multiple power domains, comprising:
[12A]	a first partial local power mesh having its position corresponding to the position of a first power domain and coupling to the first power domain;
[12B]	a second partial local power mesh having its position corresponding to the position of a second power domain and coupling to the second power domain; and
[12C]	a global power mesh, coupling to the first local power mesh and the second local power mesh, to provide the power needed by the first power domain and the second domain separately;
[12D]	wherein the first partial local power mesh and the second partial local power mesh are positioned on the same metal layer while the global power mesh and the first local power mesh are positioned on different metal layers;
[12E]	wherein the global power mesh comprises a plurality of horizontal power supply wires placed on a first metal layer and a plurality of vertical power supply wires placed on a second metal layer; and
[12F]	wherein the first metal layer and the second metal layer are different layers.
[13]	The power routing structure according to claim 12, wherein the global power mesh is positioned above the first local power mesh.
[15]	The power routing structure according to claim 12, wherein the global power mesh comprises: at least one ground wire; at least one first power wire that provides the power needed by the first power domain; and at least one second power wire that provides the power needed by the second power domain.
[16]	The power routing structure according to claim 15, wherein the first partial local power mesh comprises: at least one first local ground wire that couples to the ground wire of the global power mesh; and at least one third power wire that couples to the first power wire and the first power domain.
[17]	The power routing structure according to claim 16, wherein the second partial local power mesh comprises: at least one second local ground wire that couples to the ground wire of the global power mesh; and at least one fourth power wire that couples to the second power wire and the second power domain.
[18]	The power routing structure according to claim 17, wherein the first local ground wire and the second local ground wire share the same ground wire of the global power mesh.

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[redacted]

U.S. Patent No. 9,590,582	
Identifier	**Claim Element**
[1PRE]	semiconductor device with an inductor-capacitor (LC) resonant circuit, comprising:
[1A]	a first insulation layer;
[1B]	an inductor component, comprising:
[1C]	a coil-conductor segment, located on a surface of the first insulation layer; and
[1D]	two extension-conductor segments, located on the surface of the first insulation layer, coupled to two ends of the coil-conductor segment respectively arranged at an interval, and extending outwards relative to the coil-conductor segment, wherein a first region is defined by the two extension-conductor segments and the coil-conductor segment; and
[1E]	a capacitor component, arranged corresponding to the first region in an embedded manner on the other surface opposite to the inductor component, of the first insulation layer, wherein the capacitor component is correspondingly configured outwards relative to the coil-conductor segment, and the capacitor component is not substantially overlapped with the coil-conductor segment,
[1F]	wherein the capacitor component comprises: a plurality of connecting segments, extending corresponding to the two extension-conductor segments m a same direction, wherein the plurality of connecting segments are respectively overlapped with the two extension-conductor segments in a vertical direction; and
[1G]	a plurality of electrode segments, located below the first region, wherein one end of each of the plurality of electrode segments is coupled to one of the plurality of connecting segments, and each of the plurality of electrode segments extends laterally relative to the respective coupled connecting segment of the plurality of connecting segments.
[2PRE]	The semiconductor device with an LC resonant circuit according to claim 1, further comprising:
[2A]	a second insulation layer, wherein the capacitor component is sandwiched between the first insulation layer and the second insulation layer; and
[2B]	an electronic component, arranged corresponding to the first region in an embedded manner on a surface opposite to the capacitor component, of the second insulation layer.
[3PRE]	The semiconductor device with an LC resonant circuit according to claim 2,
[3A]	wherein the electronic component is on~ of another capacitor component, a transistor component, a diode component, and a resistor component.
[4PRE]	The semiconductor device with an LC resonant circuit according to claim 1,

[redacted]

[redacted]

[4A]	wherein the first region is defined between the two extension-conductor segments.

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I. INTRODUCTION

This is not a typical petition for review. Ordinarily, a petition identifies legal or factual errors within a fundamentally sound proceeding. Here, in contrast, the proceedings were fundamentally unfair. The ALJ departed from the role of objective trier of fact, and decider of law, and strayed into advocacy for Respondent AMD. The following exemplary errors illustrate the widespread problems that occurred throughout the proceedings:

- The ALJ allowed AMD's counsel at Winston & Strawn ("Winston") to represent AMD despite two ***separate*** disqualifying conflicts of interest, each of which requires a re-trial. Most appalling—the ALJ refused to disqualify Winston when Winston moved to strike Mr. Baik as a crucial fact witness on a key license agreement that is the underpinning of Realtek's DI, despite the ALJ presuming that Winston concurrently represented Mr. Baik in a separate matter. The ALJ tried to sidestep the disqualifying conflict, by excluding Mr. Baik, but in doing so inflicted vastly more prejudice onto Realtek.
- The ALJ engaged in so many irregular and improper actions, in deciding the ID, that the only rational conclusion is a results-oriented process. For example: (1) The ALJ refused to consider sworn deposition testimony admitted by agreement of the parties; (2) relied upon the ALJ's own technical expertise in developing new theories that aided AMD; (3) applied different constructions to the generic term "corresponding to" as applied to the '218 and '582 patents; (4) filled in evidentiary gaps in AMD's invalidity theories to find the patents invalid; and (5) routinely shifted the burden to Realtek to establish that references did not qualify as prior art.
- Regarding the economic prong of the domestic industry requirement, the ALJ made two fundamental mistakes: (1) despite accepting the factual testimony that full time equivalent (FTE) time [redacted] work on DI products, the ALJ baselessly speculated (based on

[redacted]

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a misunderstanding) that the FTE reporting [redacted] work on non-DI products; and (2) the ALJ created a new rule that a domestic industry (consisting of the labor and capital used to create a product) must be apportioned based on the license status of downstream sellers, contrary to ITC precedent and the underlying mission of the ITC to promote investment in labor and capital in the U.S.

These are but a number of clear errors in both law and fact that must be addressed by the Commission, which along with a cornucopia of other errors are discussed in detail, *infra*.

Under Federal Circuit precedent, the disqualifying conflicts alone require a new trial, before a different ALJ, with non-conflicted counsel. Correcting the substantive errors in the ID, however, may obviate the need for a new trial. Those substantive errors include the erroneous rulings regarding economic DI and a slew of errors related to the '218 and '582 patents, most of which arise directly from the fundamental problems outlined above. At a minimum, the Commission must review these serious errors, and if it does not find a violation, it must remand for a new trial on a factual record untainted by evidence and arguments the parties did not raise and that includes the evidence the ALJ wrongfully excluded.

II. THE ALJ'S IMPROPER STRIKING OF A KEY REALTEK WITNESS DESPITE COUNSEL FOR AMD'S CONCURRENT REPRESENTATION OF THAT WITNESS MANDATES A NEW, UNTAINTED TRIAL.

Perhaps the most inexplicable action of the ALJ was the refusal to disqualify one of AMD's law firms, Winston, in the face of multiple conflicts of interest, one of which the ALJ acknowledged likely existed. Upon the ALJ's initial ruling, Realtek immediately requested review by the Commission to avoid an unfair trial. The ALJ denied the request, resulting in a hearing where: Realtek was handicapped by losing a key witness; its key witness had to litigate against his own attorneys, and Realtek had to litigate against its own former attorneys who represented it when

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it negotiated the License Agreement that forms the basis for Realtek's domestic industry.

The ALJ's disqualification rulings are based on legal error and are contrary to strong Commission policy, which justifies review under § 210.43(b)(1)(i) and (iii).

First and foremost, the ALJ permitted an egregious, concurrent conflict of interest in violation of RPC 1.7. The ALJ acknowledged that AMD's counsel at Winston concurrently represented Mr. Baik, one of Realtek's key fact witnesses but allowed Winston ***to attack its own client*** (Mr. Baik) and secure an order precluding him from testifying. Somehow, the ALJ concluded that rewarding Winston's attack on its own client, by excluding him, would eliminate Winston's deliberate and egregious ethical violation. In doing so, the ALJ primarily relied upon assurances from AMD that Winston's continued involvement would not prejudice ***AMD***, but ignored the significant prejudice to Realtek, which the ALJ acknowledged was being harmed.

Just as serious, the ALJ permitted an egregious violation of RPC 1.9. The ALJ agreed that Winston represented ***Realtek*** in litigation that led to the License Agreement that supports economic DI in this Investigation. The ALJ recognized that Winston therefore had confidential knowledge regarding settlement discussions leading up to the License Agreement. In allowing Winston to remain AMD's counsel, the ALJ disregarded settled law, which compels disqualification.

These ethical violations were not technical errors caused by, for example, an erroneous conflicts check. These were intentional, flagrant actions taken to flout ethical rules. They forced Realtek and its witnesses not only to forego critical testimony but also forced Realtek's key witness to battle his own lawyers, and Realtek to battle its prior counsel—always worried what confidences and secrets of theirs were wrongfully being shared. If the Commission does not correct these errors, it will be encouraging lawyers, without consequence, to freely and intentionally breach their ethical obligations.

[redacted]

A. Background

Realtek does not lightly request a new trial, but that remedy is required by AMD's and Winston's deliberate choices. Both Winston and AMD were aware from the outset of the Investigation of the following: (a) Realtek relies on the Realtek-Avago License Agreement as the basis of its DI; (b) Mr. Baik had negotiated the agreement (AMD and Winston knew that Winston's prior representation of Realtek in the underlying matters resulted in the agreement); and (c) Winston was concurrently representing Mr. Baik in another matter. Regardless, AMD and Winston sought discovery related to the License Agreement, whereupon Realtek identified Mr. Baik as a witness. In order to avoid conflict issues, Realtek suggested that AMD could use its other counsel, well-known ITC firm Foster Murphy, to handle Mr. Baik's deposition and cross examination at hearing. CX-2095C.00035-.0036; CX-2054C.0012. Rather than agree to a proposal that would have avoided the current situation, Winston moved to strike Mr. Baik in violation of ethical duties.

During the motion to strike proceedings, the ALJ issued Order No. 19, an Order to Show Cause "why Winston should not be disqualified from representing [AMD]." Order No. 19 at 3. The facts submitted in response to that order confirmed that Winston was ***concurrently*** representing Mr. Baik in another matter during this Investigation. In fact, Mr. David Enzminger, a Winston partner also representing AMD in this matter, had personally defended Mr. Baik in a deposition in April 2023 in the other matter. Just weeks later, Winston and Mr. Enzminger moved to strike Mr. Baik's testimony in this Investigation by attacking his credibility and reliability.

Despite these obvious and prejudicial ethical violations, the ALJ issued Order Nos. 23 and 24, which resolved the order to show cause in AMD's favor and struck Mr. Baik from the witness

[redacted]

list, precluding his testimony.[1]

Realtek's evidence also showed that Winston possessed confidential Realtek information about ***the very License Agreement*** that formed the basis for Realtek's domestic industry. Winston, and Mr. Enzminger, had previously represented Realtek in two ITC Investigations between Realtek and Avago (Broadcom) which led to license agreement. Winston and Mr. Enzminger were apprised of the settlement negotiations and met with the Realtek General Counsel to discuss these matters, including settlement. *See infra* pp. 16, 19. Despite the intertwined relationship between those matters and this Investigation, the ALJ incorrectly required Realtek to establish, with written proof, that Winston worked on the License Agreement itself to warrant disqualification.[2]

These errors deeply prejudiced Realtek and tainted the entire Investigation. Among other things, they allowed AMD to ensure a lopsided presentation of evidence by using its own counsel to target a disfavored client, thereby making a mockery of the Rules of Professional Conduct. Each of the factors the Commission considers in ruling upon ethical violations weighed strongly in favor of disqualification, and now require reversal and a new trial. *Certain Laser Abraded Denim Garments* ("*Denim Garments*"), Inv. No. 337-TA-930, Order No. 43 at 7-9 (May 5, 2015), *reversed on other grounds*, Comm'n Op. (May 16, 2016). But at a minimum, the ALJ's legal errors in failing to disqualify Winston as AMD's counsel require a remand for a new trial before

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[1] Realtek sought immediate review by this Commission to avoid a tainted trial that may need to be redone, but the ALJ summarily denied the request. Realtek further sought to overturn the ALJ's ruling through a mandamus petition to the Federal Circuit, but the Federal Circuit held that the errors identified could be reviewed by the "ITC or on appeal." Order, *In re: Realtek Semiconductor Corp.*, No. 2023-147 (Fed. Cir. Sept. 25, 2023).

[2] Compounding these glaring ethical violations, Realtek later ascertained that Winston hired a lawyer that previously worked with Mr. Baik in representing Realtek in connection with ***that same agreement*** but did not screen him in compliance with California's ethical rules or provide the required screening notice to Realtek. *See* Realtek Response to Order No. 42 at 2-5.

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another ALJ, with Realtek permitted to present the excluded evidence.

B. The ALJ Erred In Excluding Steve Baik's Testimony and Using Winston & Strawn's Ethical Violation as a Basis for Precluding Realtek from Offering Critical Evidence.

The ALJ assumed, for purposes of his analysis, that Winston represented Mr. Baik at the time that it sought, on behalf of AMD, to exclude Mr. Baik as a witness. Hrg. Tr. (8-4) at 29-30 ("I am not making any findings about whether Mr. Baik is or even was represented in his personal capacity by Winston. I'm simply assuming that he was."). Although this was only an "assum[ption]," the record leaves no doubt that Winston represented Mr. Baik despite its representations that it had never represented Mr. Baik in any capacity. CX02958C.0002. Winston could not explain how Mr. Enzminger had just weeks earlier defended Mr. Baik in his personal capacity in another matter and yet it still had never represented him. Hrg. Tr. (8-4) at 23-24 (email submitted *in camera* in which Winston attorney Enzminger stated [redacted]); CX-2055C.0015 (deposition transcript from April 2023, in which Winston made an appearance by stating: [redacted]").[3]

Winston undeniably violated its obligations to Mr. Baik under RPC 1.7 for at least two

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[3] To the extent Winston argues that it terminated its attorney-client relationship with Mr. Baik on July 12, 2023, eight days before it filed a motion to strike him as a witness, CX-2095C.0005, such attempted termination is ineffective. Courts have unanimously held that a firm cannot dodge its ethical obligations by withdrawing in the face of a conflict: "So inviolate is the duty of loyalty to an existing client that not even by withdrawing from the relationship can an attorney evade it." *Flatt v. Superior Court*, 9 Cal.4th 275, 288 (1994); *see also Blue Water*, 192 Cal. App. 4th at 490; *Western Sugar Coop. v. Archer-Daniels-Midland Co.*, 98 F.Supp.3d 1074, 1084 (C.D. Cal. 2015); *Fujitsu Ltd. v. Belkin Intern., Inc.*, 2010 WL 5387920 (N.D. Cal. Dec. 22, 2010). This often is referred to as the "hot potato" doctrine, which precludes dropping a client like a hot potato to avoid a conflict. *Picker Int'l, Inc. v. Varian Assocs.*, 670 F. Supp. 1363, 1365 (N.D. Ohio 1987), *aff'd*, 869 F.2d 578 (Fed. Cir. 1989).

[redacted]

reasons. First, Winston, on AMD's behalf, filed a motion to strike its own client—Mr. Baik—from testifying in this Investigation. CX-2050C. That action interfered with Mr. Baik's duties to Realtek to provide fact testimony regarding negotiations he undertook on Realtek's behalf. Unsurprisingly, courts require disqualification when, as here, lawyers file a motion that results in adverse consequences for a client. *Blue Water Sunset, LLC v. Markowitz*, 192 Cal. App. 4th 477, 489-90 (2011). Second, Winston (on AMD's behalf) impermissibly attacked its own client's credibility. CX-2050C.0009, .0014 (arguing that Mr. Baik's testimony is unreliable); CX-2068C.0031 (stating that Mr. Baik's memory is "mistaken at best," strongly implying that he may have lied); CX-2069C.0018 (accusing Mr. Baik of engaging in a scheme to create "a pretext to try and raise another conflict argument").[4] Such criticism against a client, on behalf of another client, is a textbook violation of ethics rules which necessarily are violated when a lawyer "is attacking the integrity of her own client." LEGAL ETHICS, LAW DESKBK. PROF. RESP., SPECIAL PROBLEM AREAS § 1.7-6 (2021-2022 ed.).

The ALJ provided three reasons that these undeniable conflicts did not prejudice Realtek in a way that undermined the integrity of the proceeding, *see* Hrg. Tr. (8-4) at 29-30, but each rests on a legal error.

The ALJ first reasoned that the exclusion of Mr. Baik did not undermine the integrity of the proceeding because "he never should have been offered up as witness in the first place." *Id.* at

[4] Winston's accusation of Mr. Baik's nefarious intent at the time of his deposition to create a pretext for a conflict ignores the fact that Mr. Baik was then bedridden recuperating from pneumonia, *see* CX-2097C.0003-.0004 ¶ 15, and Realtek initially requested that AMD proceed with his deposition through its other counsel, and cross examination at trial could likewise be handled by Winston's co-counsel, *see* CX-2054C..00007, .00010, .0012; CX-2095C.00035-.0036, thereby avoiding the conflict and any harm to any party. Winston refused and moved to strike Mr. Baik which precipitated the conflict issue.

[redacted]

29. That conclusion rests on the legally erroneous ruling that Mr. Baik should have been excluded as a witness because: (1) lawyers cannot be fact witnesses; (2) the protective order prohibits those with access to CBI from serving as fact witnesses; and (3) although the ALJ agreed there was no evidence Mr. Baik would do anything improper, "we don't know what the rules are" when a lawyer testifies. *Id.* at 17, 29; Order No. 24 at 1. Those rulings are contrary to RPC 3.7, the text of the protective order, and the testimony Mr. Baik would have offered based on his personal knowledge.

The ALJ next improperly reasoned that there was insufficient prejudice because Mr. Baik is not a party. Hrg. Tr. (8-4) at 29. But Mr. Baik was Realtek's representative in negotiating the License Agreement and is the only person who could provide percipient testimony about those negotiations. The ALJ created a situation in which Mr. Baik, an agent of Realtek, was not permitted to testify about the negotiations, but the individual with whom he negotiated, Mr. Phillips of Avago, testified at length, with the ALJ ultimately citing his testimony in the ID at least 17 times.

Finally, the ALJ relied on the fact that AMD was satisfied that Winston would protect AMD's interests over the interests of Mr. Baik, and not pull punches. *Id.* at 30. This is non-sensical. The fact that AMD—which benefitted and must have authorized the ethical violations that occurred—was pleased that those violations successfully prejudiced Realtek is *not* a factor the ALJ can consider when determining if the ethical violations tainted the Investigation. *See Certain Doxorubicin and Preparations Containing the Same* ("*Doxorubicin*"), Inv. No. 337-TA-300, Order No. 4, 1989 WL 609022, at *7 (July 28, 1989) (holding that effectiveness of representation to ***both*** clients must be considered); *see also Denim Garments*, Order No. 43 at 7-8, *overruled on other grounds*, Comm'n Op. (May 16, 2016) (holding that all factors must be considered). The ALJ should have focused on the prejudice to Realtek of excluding a key percipient witness, which the ALJ failed to do.

[redacted]

1. The ALJ's prohibition of Mr. Baik's testimony as a negotiator of the Realtek-Avago license agreement is reversible error.

Courts have held that excluding testimony such as Mr. Baik's regarding negotiations and their impact on meaning of contractual terms "is reversible error," even if the tribunal believes the "contract appears to be clear and unambiguous on its face." *See First Nat. Morg. Co. v. Fed. Realty Inv. Tr.*, 631 F.3d 1058, 1067 (9th Cir. 2011); *see also Onyx Pharm., Inc. v. Bayer Corp.*, 863 F. Supp. 2d 894, 897-98 (N.D. Cal. 2011) (negotiator testimony "is permitted, and indeed required").

The ALJ recognized that Model RPC 3.7 governs lawyers as witnesses. Hrg. Tr. (8-4) at 19. That rule applies when a fact witness is also "act[ing] as an advocate at a trial." RPC 3.7(a). There is no dispute that Mr. Baik would not (and did not) act as an advocate at the trial. CX-2056C.0022; CX-2050C.0012. Moreover, trials at the ITC are bench trials, and there was no risk that the ALJ would be confused in any way by testimony from a lawyer with personal knowledge of events. RPC 3.7 cmt. [1] (noting that the rule is designed to protect against situations in which "the trier of fact may be confused or misled"); *see also* RPC 3.7(b) & cmt. [5] (explaining that a tribunal will not be misled when a lawyer testifies but an affiliated lawyer is the advocate). Under RPC 3.7, Courts allow attorneys involved in negotiations to testify about the meaning of negotiated terms. *See, e.g.*, *Onyx*, 863 F. Supp. 2d at 898 (collecting cases and holding that an "attorney who participated in the negotiations of the [contract], is entitled to testify as to what he, as a representative of [defendant], thought the ambiguous terms meant." (cleaned up) (quoting *Mickey Bearman Co. v. John Morrell & Co.*, No. CV-00-05616 CAS, 2001 WL 36097432, at *3 (C.D. Cal. Oct. 29, 2001)).

Winston's actions in the case in which it represented Mr. Baik (the *NetEase* litigation) confirm that it is routine for negotiating lawyers to testify and that the ALJ's ruling rests upon a

[redacted]

legal error. In the *NetEase* litigation, Winston and its opposing counsel each designated Mr. Baik as a testifying fact witness because (as here) he negotiated the agreement in dispute in that matter. He was designated to testify even though he was counsel of record for a party in that case. CX-2056.0007-.0008; CX-2055.00002-.0003 (Baik Decl. ¶¶ 7-9). In short, RPC 3.7 and the actions of Winston itself confirm that Mr. Baik should be allowed to testify on Realtek's behalf.

2. There were no privilege or work product issues related to Mr. Baik testifying about his personal knowledge negotiating an agreement with Avago/Broadcom, a third party.

The ALJ next held that there might be privilege or work product problems in allowing Mr. Baik to testify about his negotiation (on Realtek's behalf) of the License Agreement. Hrg. Tr. (8-4) at 16-18; Order No. 24 at 1. That reasoning is unsupported and unsupportable. The ALJ never identified the privilege and work product problems which purportedly justified his draconian ruling. Mr. Baik was designated to provide testimony about his negotiations (on Realtek's behalf) with Mr. Phillips, who negotiated on Avago/Broadcom's behalf. The ALJ permitted Mr. Phillips to testify at trial, and the ID quotes his testimony at least 17 times. *See, e.g.*, ID at 229, 233, 235-40. There likewise can be no dispute that Mr. Baik's testimony was vital to the issues decided in the ID. The ID's conclusions regarding the economic prong turn on the meaning of [redacted] and [redacted] of the License Agreement. ID at 229-239. Mr. Baik was expressly designated to provide testimony "regarding the negotiations between Realtek and Avago related to [redacted] of the Agreement." CX-2097C.0012 (¶ 49); CX-2095C.0010 (emphasis added). Moreover, the ALJ recognized that Mr. Baik "may be best positioned to testify about the license." Hrg. Tr. (8-4) at 20. There is no work product or privilege implicated in Mr. Baik providing testimony about his own negotiations with a third party. But based on that completely unsupported concern, the ALJ created an utterly one-sided story about the portions of the License Agreement

[redacted]

on which the economic prong turns. The ALJ's results-oriented exclusion of Mr. Baik's testimony, entered to save Winston from a disqualifying conflict, manifestly tainted the proceedings.[5]

3. The PO does not prohibit witnesses or attorneys that possess CBI from testifying.

The ALJ also based his exclusion ruling on the conclusion that the protective order somehow precluded Mr. Baik's testimony. Hrg. Tr. (8-4) at 18-19; Order No. 24 at 1 (citing "confusion over [Mr. Baik's] status as a signatory to the Protective Order"). The ALJ suggested that the protective order prohibited fact testimony from those with access to CBI. Hrg. Tr. (8-4) at 18 ("But when he's playing the role of a fact witness, strictly speaking, under the protective order, he's not allowed to have access to CBI."). ***There is no such prohibition in the protective order.*** It does not prohibit outside counsel from testifying. Nor does it say that fact witnesses may not have access to confidential information.

The ALJ committed legal error in inventing such restrictions and relying on them to avoid confusion "that I don't really need in this case." Hrg. Tr. (8-4) at 18. It also is impossible for Mr. Baik to violate the protective order in testifying about his own discussions (as Realtek's representative) with Mr. Phillips during the negotiation of the License Agreement. That information, obtained years ago, belongs to Realtek, and Realtek did not obtain it by virtue of the protective order.

Finally, the ALJ also based his decision on the strange statement that "we don't know what the rules are." To the contrary, RPC 3.7, the protective order, and a long line of cases all establish

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[5] The ALJ did permit a Realtek employee to speak with Mr. Baik and offer hearsay repetition of what Mr. Baik told him. ID at 2-3. But that employee had no firsthand knowledge, could not remember or understand the negotiations, and was not a native English speaker. Tr. (Lin) at 49:17-25; *id.* at 55:3-60:10. Notably, the ALJ did not cite any of that testimony in the ID.

[redacted]

that attorneys who negotiated an agreement must be allowed to testify about it. The ALJ allowed Mr. Phillips to testify, a lawyer who negotiated the agreement who also had access to Broadcom CBI, but he prevented Mr. Baik from doing the same to protect Winston from a conflict of interest that it pursued on AMD's behalf. The ALJ recognized this serious imbalance in proof but said: "[T]hat may be, ***but so what***?" Hrg. Tr. (8-4) at 31:15-16 (emphasis added).

To add insult to injury, the ALJ acknowledged that excluding Mr. Baik would cause prejudice to Realtek, but concluded without any evidence or analysis (and manifestly contrary to all facts) that allowing him to testify would somehow cause greater prejudice to AMD. *Id.* at 20:16-17. There is absolutely no rhyme or reason to this conclusion. The ALJ's actions seriously tainted the integrity of the proceedings, created unbalanced evidence, and countenanced blatant ethical violations that Winston knowingly pursued on AMD's behalf. *Denim Garments*, Order No. 43 at 7-8. These actions require reversal and remand for a new trial before a different ALJ.

4. The ALJ's conclusion that Mr. Baik is not a party ignores that his actions were taken as Realtek's representative and were fundamental to its case.

The ALJ ruled that Winston's conflict did not taint the proceedings because Mr. Baik is not a party. Hrg. Tr. (8-4) at 29. That ruling ignores that Mr. Baik was Realtek's agent in conducting the negotiations on Realtek's behalf, and is the only person with personal knowledge of those negotiations. As shown above, the ALJ's actions led to testimony from Mr. Phillips, but no corresponding testimony from Mr. Baik, regarding the interpretation of the sections of the License Agreement ([redacted]) that formed the basis for the ALJ's rulings. *See supra* p. 10. Such a one-sided presentation of evidence deeply prejudiced Realtek and tainted the proceedings.

5. AMD's confidence that Winston had forsaken all loyalty to Mr. Baik does not remove the taint.

[redacted]

In concluding that the proceedings were not tainted, the ALJ relied on the fact that AMD was "satisfied" with Winston's actions and had no concerns about its conflict. Hrg. Tr. (8-4) at 30. It is a perversion of the ethical rules, and the ITC's strict requirements of fairness, to hold that an adversarial process is not tainted because one party is confident that it's law firm will not "pull[] its punches," *id.* at 30, because of divided loyalties, and instead will violate its ethical obligations by continuing to favor the first client's interests over those of another client. The ALJ thus relied on AMD's confidence that Winston was zealously trashing another of its clients, to AMD's benefit. In doing so, Winston and AMD prevented Mr. Baik from fulfilling his obligations to Realtek and succeeded in creating a lopsided record resulting in "reversible error." *First Nat. Morg. Co.*, 631 F.3d at 1067; *see also Onyx*, 863 F. Supp. 2d at 897-98.

Winston's actions breached the duty of loyalty it owed to Mr. Baik, who was Winston's client in a separate matter at the time. No informed consent of Realtek or Mr. Baik was ever obtained. Representations adverse to a present client must be measured against the duty of undivided loyalty which an attorney owes to ***each*** of its clients. *Baas v. Dollar Tree Stores*, No. C 07-03108 JSW, 2008 WL 906496 (N.D. Cal. April 1, 2008) (citing ABA Formal Opn. 92-367). The *Baas* court stated: "[A]n attorney should not be permitted to put himself in a position where, even unconsciously, he will be tempted to 'soft pedal' his zeal in furthering the interests of one client in order to avoid an obvious clash with those of another." *Id.* at *3. Here, Winston breached its duty of loyalty to Mr. Baik by favoring one client's interest over another client. No doubt AMD was happy with that, but that is not the proper test for a tainted proceeding. The ALJ's reliance on AMD's confidence that its counsel was working to harm Mr. Baik and Realtek is legally erroneous. Commission authority required the ALJ to consider that the ethical violation involved deliberate harm to one client in favor of another, the resulting prejudice, the effectiveness of counsel in light

[redacted]

of the violation, and the public perception arising from the violation. *Denim Garments*, Order No. 43 at 7-8, *overruled on other grounds*, Comm'n Op. (May 16, 2016); *Doxorubicin*, 1989 WL 609022, at *7. The ALJ committed legal error in failing to consider all of these factors.

Winston (and by imputation, AMD) acting with knowledge that Winston represented Mr. Baik, ***deliberately chose to attack its own client*** in this proceeding. In doing so—with the ALJ's help—it eliminated his important testimony from this case, thereby preventing Mr. Baik from fulfilling his duties to Realtek and leaving Realtek without critical proof. The public perception of the profession is severely damaged by such conduct.

The outcome and optics of the ALJ's rulings are terrible. In hopes of saving Winston from its blatant ethical misconduct—attacking and challenging its own client—the ALJ literally "hid the evidence" by excluding Mr. Baik's testimony and thereby prejudiced Realtek's ability to present its case. Indeed, the ALJ could have avoided prejudice to Realtek and Mr. Baik by allowing Mr. Baik to testify and directing that his cross-examination be conducted by lawyers other than Winston. Excluding Mr. Baik entirely was simply unnecessary, resulting in an unfair presentation inconsistent with the fair administration of justice. Elsewhere, this petition establishes that the ALJ erred in several important rulings, and once those are reversed, there is a violation of Section 337. If the Commission somehow does not reverse those other errors and find a violation, the ALJ's rulings regarding disqualification independently require remand for a new trial before a different ALJ, with counsel other than Winston. This remedy is not in doubt. Indeed, we have found no case in which the Federal Circuit found a violation of RPC 1.7 and did not order disqualification. *See, e.g.*, *Trimble Inc. v. PerDiemCo LLC*, 802 F. App'x 556, 560 (Fed. Cir. 2020); *Dr. Falk Pharma GmbH v. GeneriCo, LLC*, 916 F.3d 975, 978 (Fed. Cir. 2019); *Celgard, LLC v. LG Chem, Ltd.*, 594 F. App'x 669, 671-72 (Fed. Cir. 2014).

[redacted]

C. The ALJ Was Also Required to Disqualify Winston Pursuant to RPC 1.9.

The ALJ misconstrued and misapplied the "substantial relationship" test in RPC 1.9. The test addresses whether the subject matter of two representations have a substantial relationship. Here, that relationship exists. It is undisputed that Winston represented Realtek in the 837 and 859 Investigations, that its work for Realtek in the 859 Investigation (involving predecessors to Broadcom) was focused on domestic industry, that those Investigations were resolved through the Realtek-Avago License Agreement (which is the sole basis for establishing domestic industry in this Investigation), and that Winston was aware of (and had confidential information regarding) the settlement discussions that led to the License Agreement. The ALJ nonetheless declined to order disqualification because he found insufficient written evidence that Winston ***specifically*** worked on the License Agreement. That is not the test. The substantial relationship test asks ***whether the present and former cases as a whole are related, not whether the law firm did specific work on a particular term in an agreement that is relevant to the present case***. Winston performed substantial services as counsel for Realtek in the former cases that resulted in the License Agreement at issue here. That alone satisfies the substantial relationship between the cases. Because the ALJ erred in understanding the substantial relationship test, he incorrectly declined to disqualify Winston and allowed a tainted proceeding.

1. Winston was involved in settlement strategy that led to the License Agreement and hired (but did not validly screen) Realtek's former counsel who litigated the same License Agreement.

There is no dispute that Winston represented Realtek in the 837 and 859 Investigations. CX-2055C.0003-.0007; CX-2069C.0002-.0005. There likewise can be no dispute that those Investigations were settled by the License Agreement at issue in this investigation. JX-0784C.0002 (listing the 837 and 859 Investigations as litigation resolved through the Agreement). In addition,

[redacted]

there can be no dispute that Realtek had confidential and privileged consultations with Winston about the ongoing settlement negotiations and ways to use Winston's legal services to strengthen Realtek's litigating and settlement positions. Such conversations are memorialized in emails provided to the ALJ *in camera*. For example, Realtek provided the ALJ with an [redacted] (*In Camera* Ex. titled 2014.08.14 2142-00552). Billing records confirm that [redacted] CX-2097C.0013, .0042. The evidence in the record shows that settlement and case discussions [redacted] between Realtek and Winston. CX-2097C.0007 (¶ 29). Realtek was working on the potential terms of the settlement in August 2014, *see* CX-2055C.0006 (¶ 23), before the meeting with Winston, which [redacted] corroborates that Realtek discussed [redacted] with Winston from the outset. Winston was also copied on other confidential emails about the settlement strategy, including those on [redacted]. *See In Camera* Ex. titled 2014.0808 1251 – 00304.

Later emails confirm that Winston remained involved in settlement strategy. For example, a [redacted] email confirms that Mr. Baik talked to [redacted] *In Camera* Ex. titled 2014.09.10 0143-00107.

After the settlement agreement was finalized, Realtek sought to enforce it against Broadcom in litigation in Delaware filed in 2017. Winston falsely stated that it was unaware of that litigation, and had carefully searched all communications between Mr. Baik and Mr. Enzminger to confirm that fact. *See* Compl. Realtek's Resp. to Respondent Advanced Micro Device, Inc.'s Response to Order No. 42 at 5 (Nov. 28, 2023) ("Realtek Response to Order No.

[redacted]

42") (recounting that Mr. Enzminger said he "personally reviewed all communications with Mr. Baik" and "Winston reiterates that the team substantively working on this matter was unaware of the Delaware Cases"). In reality, as documents showed, Mr. Baik directly brought that litigation to Mr. Enzminger's attention by sending one of the pleadings [redacted] to Mr. Enzminger by email at the time of that litigation. *Id.*; Decl. of Steve Baik ¶¶ 3-5 & Ex. 1 (Nov. 28, 2023). Documents also showed that Winston hired one of Realtek's lawyers from that 2017 litigation regarding the License Agreement but did not institute a screen that complied with governing ethics rules. That California lawyer still remains at Winston. Realtek Response to Order No. 42 at 2-5.

2. The ALJ departed from settled law when concluding the prior representation was not substantially related.

Even though Winston represented Realtek in two ITC investigations that were resolved through the License Agreement, even though Winston received confidential information regarding settlement discussions that led to the License Agreement, the ALJ found that Winston's prior representation of Realtek was not substantially related to Winston's representation of AMD. Specifically, the ALJ explained that "if there is then a basis for a substantial relationship, it's going to be the license." Hrg. Tr. (8-4) at 80:21-22. He stated that Winston's billing statements were the "most significant evidence of whether or not there was a substantially related matter." *Id.* at 81:1-3. Because the billing statements did not state that Winston explicitly had worked on drafting the licensing provisions in the License Agreement, and despite the emails corroborating the declarations of Mr. Baik and Ms. Hung that the substance of the settlement was discussed with Winston, *see* CX-2096C; CX-2097C, he ruled that that there was no substantial relationship

[redacted]

between Winston's former representation of Realtek and its current representation of AMD.[6] In reaching this conclusion, the ALJ disregarded evidence that Winston's billing statements [redacted]. CX-2097.0012-.13 (¶ 51).

The ALJ misunderstood and misapplied RPC 1.9. The Commission uses a three-part analysis to determine whether there is a substantial relationship that requires disqualification:

> Initially, the trial judge must make a factual reconstruction of the scope of the prior legal representation. Second, it must be determined whether it is reasonable to infer that the confidential information allegedly given would have been given to a lawyer representing a client in those matters. Finally, it must be determined whether that information is relevant to the issues raised in the litigation pending against the former client.

Cardiac Pacemakers & Components Thereof, Inv. No. 337-TA-162, Order No. 7 at 2, 1983 WL 207337, at *4 (Nov. 1, 1983) ("*Cardiac Pacemakers*") (citing *Westinghouse Elec. Corp. v. Gulf Oil Corp. & United Nuclear Corp.*, 588 F.2d 221, 225 (7th Cir. 1978); *Hughes v. Paine, Webber et al.*, 565 F. Supp. 663, 669 (N.D. Ill. 1983)).

Courts have explained that, for purposes of RPC 1.9, the "subjects" of the current and former representations is ***"broader*** 'than the discrete legal and factual issues involved in the compared representations.'" *Sunbeam Prods. Inc. v. Oliso, Inc.*, No. C 13-03577 SI, 2014 WL 892918, at *2 (N.D. Cal. Mar. 4, 2014) (emphasis added) (citing *Genentech, Inc. v. Sanofi-Aventis Deutschland GmbH*, No. C 08-04909 SI, 2010 WL 1136478, *6 (N.D. Cal. Mar. 20, 2010)). Thus, a later representation will be "substantially related," and therefore prohibited, when the evidence

[6] AMD's primary defense to the conflict of interest with Realtek was waiver, but the ALJ concluded there was no waiver "because I think Realtek had a good basis, a legal valid basis for not filing earlier." Hrg. Tr. (8-4) at 79:6-8.

[redacted]

supports a rational conclusion that information material to former representation is also material to the evaluation, prosecution, settlement or accomplishment of the current representation. *Id.*

Here, the ALJ addressed only one small part of the dispute between Realtek and LSI/Avago in which Winston represented Realtek—the negotiation of the License Agreement. Those terms are undeniably a critical issue in this proceeding, and Realtek provided evidence that the terms were discussed with Winston on multiple occasions, including in [redacted]. *See supra* p. 16; CX-2096.0003 (¶ 13); *id.* at .0004 (¶ 16); .0005 (¶¶ 20-23). The ALJ wrongly concluded that it was necessary for Realtek to provide a writing or billing statement that would corroborate Ms. Hung's testimony that Winston had offered legal advice to Realtek on the specific licensing provision, before the "substantial relationship" could be satisfied. To the contrary, as shown above, the substantial relationship test is much broader than such "discrete legal and factual issues." *Sunbeam*, 2014 WL 892918. It prohibits a subsequent representation if there is a "rational conclusion" that "information material to evaluation, prosecution, settlement, or accomplishment" of the 837 and 859 Investigations was "material to the evaluation, prosecution, settlement, or accomplishment" of this Investigation. *See supra* pp. 18-19.

Under that standard, given that it is undisputed that Winston received information about the ongoing settlement negotiations with LSI/Avago (Broadcom's predecessors), and those negotiations and the resulting License Agreement are fundamental to this proceeding, the substantial relationship test is satisfied. Indeed, Winston's possession of confidential information regarding settlement discussions is, under the governing standard, enough to create a substantial relationship. That relationship was further strengthened once Winston hired a lawyer who had represented Realtek in subsequent litigation related to the License Agreement. Compl. Realtek's Resp. to AMD's Response to Order No. 42 (Nov. 28, 2023).

[redacted]

Once two matters are substantially related, the law presumes that Winston received confidential information in the prior matter that will be detrimental to Realtek in this Investigation. That presumption confirms that the Investigation is tainted and fundamentally unfair and requires disqualification as a matter of law. The ALJ's misapplication of RPC 1.9 is legal error requiring review. Moreover, the substantial relationship test is a controlling issue of law or Commission policy that should be reviewed by the Commission in this case. A clear articulation of the proper test to apply in cases of successive representation will materially benefit the progress of this Investigation and will assist attorneys and clients in future ITC proceedings.

The ALJ refused to disqualify Winston, despite the fact that Winston willingly and egregiously engaged in numerous ethical violations that demonstrably prejudiced Realtek. The Commission must—if it does not find a violation and provide the requested relief—remand the Investigation to a new ALJ for a new trial in which Mr. Baik is allowed to testify and AMD is represented by non-conflicted counsel.

III. DOMESTIC INDUSTRY - ECONOMIC PRONG

The ALJ committed fundamental errors that led to the conclusion that no Domestic Industry exists for the Asserted Patents. The ALJ initially determined that: (a) Avago Sales is a licensed entity but other Broadcom entities are not; (b) Avago Sales does in fact sell the identified DI products, [redacted] and (c) there is "massive" investment in labor and capital in the development of the DI products in the U.S. This alone should have ended the inquiry, but the ALJ persisted in finding a way to determine no DI exists.

The ALJ chose to ignore basic testimony from Broadcom's witness explaining how Broadcom calculated the full time equivalent (FTE) time invested in the development of the DI products. The witness testified that FTE units were determined by [redacted]

[redacted]. Completely ignoring this simple testimony, the ALJ came to the conclusion that the FTE numbers ***might*** include work on non-DI products and found the data unreliable. The ALJ also excluded valid work spent on operational support related to the DI products, as well as capital expenditures which were ***apportioned*** by DI products. It is mystifying how any objective trier of fact could have arrived at such findings.

The ALJ inexplicably went further to require—contrary to ITC and Federal Circuit precedent—that the investments made towards each product must somehow be segregated relative to the sales by licensed versus non-licensed entities. This absolutely new requirement would require all complainants relying upon licensed sales to satisfy DI requirements to undergo an impossible calculation of how investment into a singular product is apportioned based upon potentially dozens of licensed/unlicensed sales channels.

Unsurprisingly, due to the absence of Mr. Baik's testimony, the ALJ found that some Broadcom entities that also sell the DI products [redacted] are not licensed under the Realtek-Avago license agreement. It is highly coincidental that this determination is necessary for the ALJ's creative requirement that labor and capital investments must then be apportioned between licensed and unlicensed selling entities. These errors resulted in a baffling determination that no DI exists for the asserted patents. The Commission must review these decisions and rectify errors that will upend DI analyses in future investigations.

A. Background

Realtek presented evidence that a domestic industry exists under sub-prong (B).[7] That

[7] Realtek also asserted a domestic industry under sub-prong (C). Realtek does not seek Commission review of that issue.

[redacted]

industry consists of [redacted] in U.S. labor and capital that Realtek's licensee, Broadcom, expended exclusively on two chips that practice Realtek's patents: BCM4387 and BCM4389 ("the DI Products"). The DI Products provide Bluetooth and Wi-Fi functionality for Apple iPhones and Samsung Galaxy phones—approximately 80% of the U.S. cell phone market. Tr. (Lin) at 46:12-47:6; Tr. (Sheridan) at 675:9-18; Tr. (Bakewell) at 731:7-16.[8] Of the [redacted] investment, about [redacted] consists of labor costs that a Broadcom witness tied ***explicitly*** to the DI products using contemporaneous time records. Broadcom further allocated the remaining labor costs (an additional [redacted] using a [redacted] by the employees' supervisor, which the Commission has repeatedly accepted. Broadcom used a sales-based allocation for an additional [redacted] in U.S. capital expenses, which the Commission likewise accepts. This evidence establishes that the economic prong is satisfied under sub-prong (B). *See Certain Multimedia Display and Navigation Devices and Systems,* Inv. No. 337-TA-694, Comm'n Op. at 5, 2011 WL 3813121 (July 22, 2011).

The ALJ erroneously determined that Realtek had failed to show the existence of a domestic industry under sub-prong (B) for two reasons. ***First***, the ALJ held that the full-time equivalent ("FTE") data Broadcom provided for its labor costs could have included investments not related to the DI products. That finding rests on a fundamental misunderstanding of FTE data and how Broadcom gathered it. The ALJ understood an "FTE" to refer to actual Broadcom employees whose work needed to be apportioned among projects. That is not the data Broadcom

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[8] The ALJ found that both DI Products practice all three of the Patents-in-Suit (ID at 252). As such, there was no requirement that the subject investments be apportioned among those products. *See Certain Laser Bar Code Scanners and Scan Engines, Components Thereof and Products Containing Same*, Inv. No. 337-TA-551, Order No. 25 at 10, 2006 WL 2222926 (July 17, 2006) (*unrev'd in relevant part*).

[redacted]

provided. [redacted] By failing to understand that fact, the ALJ committed clear error.

Second, the ALJ erroneously ruled that the [redacted] domestic industry needed to be apportioned because two entities sell the DI Products, one of which (Avago Sales) was licensed and one of which (Broadcom Corp.) was found not licensed. This ruling is contrary to Section 337 and Commission precedent. There was a single universe of development investments for the DI products. The fact that multiple entities sell the DI Products does not convert their development into separate industries. Carving up (and thereby negating) an actual U.S. industry is contrary to the language of Section 337 and Commission precedent and would turn the domestic industry requirement on its head. It would eliminate protections for U.S. development activities, encouraging companies to move them abroad. It also would create immense new burdens on litigants and ALJs—requiring them to divide up the domestic industry investments based on sales territories when the underlying products are the same regardless of point of sale.

Once these two errors are reversed, there is a domestic industry under sub-prong (B). Realtek also seeks review, however, of the ALJ's erroneous conclusion that Broadcom Inc. and Broadcom Corp. are not licensed under the License Agreement. Reversing either of those conclusions is an alternative basis for finding a domestic industry under sub-prong (B).

B. The ALJ Erred in Holding That Realtek Did Not Show Significant Investments.

1. The ALJ either misunderstood or chose to ignore that Full Time Equivalent units were determined by excluding work on non-DI products.

Broadcom produced data showing ***domestic labor investments*** in both dollars and

[redacted]

headcount on a fiscal year basis between 2020 and the present (CX-1801C; Tr. (Singh) at 296:3-11; Tr. (Sheridan) at 666:21-668:9). The headcount numbers did not identify actual U.S. employees but rather were expressed in terms of FTEs. CX-1801C; Tr. (Singh) at 297:17-21; Tr. (Sheridan) at 670:11-25. As Realtek's economic expert, Dr. Sheridan, explained:

> ***An FTE, or a full-time equivalent, it represents the equivalent of one employee who worked full time on these [domestic industry] products***, but it could also be, for example, two employees that each spent 50 percent of their time on the products.

Tr. (Sheridan) at 670:18-22 (emphasis added).

Broadcom's representative, Mr. Singh, confirmed that the FTE data represents domestic labor ***solely*** for the DI Products. Tr. (Singh) at 297:11-21 (explaining that the FTEs show [redacted] and explaining that an FTE shows "the time and effort it takes a typical employee to support such kind of activities in a given time period"). Other testimony confirmed the difference between FTEs and actual employees. For example, when asked if he could correlate the FTEs reported by Broadcom to actual employee names, Dr. Sheridan responded "[t]hat would be tricky because these are FTEs, and there's not [redacted] employees. These are partial amounts of different employees." Tr. (Sheridan) at 685:9:14. Regardless of whether FTEs identify specific employees, FTEs are a well-accepted way of expressing labor headcount. *Certain Batteries and Products Containing Same*, 337-TA-1244, Comm'n Op. at 12, 2022 WL 4181607 (Sept. 8, 2022).

The record shows that—for the vast majority of labor counted (*i.e.*, more than 90%)—only work specifically identified as being performed ***on the DI products*** was included in the FTE calculation. Specifically, the vast majority of the FTE calculation came from the General Manager of Broadcom's Mobility Division, Mark Gonikberg. Tr. (Singh) at 298:1-3; Tr. (Sheridan) at

[redacted]

667:20-24. Mr. Gonikberg requires his employees [redacted] Tr. (Singh) at 298:6-299:6; Tr. (Sheridan) at 667:20-668:3. Remarkably, the ALJ nonetheless ruled that the FTEs in this case were not reliable, as they ***might*** capture work performed on non-DI Products. ID at 245-46. The ALJ's sole basis for that conclusion was a fundamental misunderstanding of an "FTE." An FTE equates to portions of individual Broadcom employees' labor ***exclusively*** allocated to the DI products, which were then aggregated into equivalent FTEs for the total hours spent on those products. Tr. (Singh) at 297:11-21; Tr. (Sheridan) at 670:18-25.

As Mr. Singh explained, Broadcom's U.S. engineers used [redacted] to input the amount of time spent "to support ***these two chips***." Tr. (Singh) at 297:14-16 (emphasis added). The aggregate of all such time was converted into the number of "***typical*** employee[s]" needed to support that total level of work "in a given time period," which was expressed in yearly terms. *Id.* at 297:18-21 (emphasis added). Work on other products was ***excluded*** from the FTE calculation because it was coded to "***different*** projects within their division." Tr. (Singh) at 298:6-25 (emphasis added); *see also* JX-0027C.00015 ("Q Just going back to Mr. Gonikberg, then, it's your understanding that he satisfied himself that the time was devoted to research, development and engineering tasks for the 4387 and 4389 products? A Yes."). Thus, apportionment of labor expenses to the specific DI Products, and ***only*** to those products, is automatically performed.

Based upon his misunderstanding of an FTE, the ALJ incorrectly conjectured that Mr. Singh "did not seem to know that he needed also to exclude FTE time in support of non-DI Products." *See* ID at 245. As explained above, however, that exclusion had already occurred in calculating the FTEs in the first place. The ALJ wrongly disregarded the FTE calculation and the

[redacted] used to generate it.[9] *See* ID at 245-46. Indeed, the Commission has approved this type of apportionment as sufficient. *See Certain High-Density Fiber Optic Equipment*, Inv. No. 337-TA-1194, Comm'n Op. at 62-63, 2021 WL 3809088 (Aug. 23, 2021) (relying upon "project codes" corresponding to the domestic industry EDGE solution).

Yet based upon pure speculation, the ALJ found that the work identified as being performed for the DI products ***might*** also have been ***usable*** for other projects and was therefore over-counted. ID at 243. But the work performed was [redacted] as being for the DI products, and as the ALJ noted, "AMD provides ***no evidence*** to disprove the reliability of the [redacted] dinarily kept by Broadcom and accessed by Mr. Gonikberg to generate the amounts." ID at 243 (emphasis added). Broadcom itself explained that [redacted], such as new iPhones and Samsung. Tr. (Singh) at 299:7-300:6; JX-0027.0014. All other witnesses agreed [redacted] as new products were released. *See* Tr. (Lin) at 46:12-47:6; Tr. (Sheridan) at 675:9-18; Tr. (Bakewell) at 731:7-16.[10] The ALJ initially rejected AMD's speculation that Broadcom's time records over-counted investments in the DI products.

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[9] The ALJ cited testimony in which Mr. Singh described that there is not [redacted] ID at 245-246. Mr. Singh did not know all of the projects worked on by each employee whose time was captured in the FTE calculations. *Id.* That does not change the fact that the FTE data included ***only*** the time spent on the DI products.

[10] The ALJ, in passing, notes that AMD challenged Realtek's DI evidence by noting that one of Broadcom's engineers [redacted] DI Products. ID at 242-43. The ID does not credit that argument because Mr. Chen's responsibility was limited to [redacted]," JX-0011C.0008:18 to .0010:5, and he had no responsibility for [redacted] at all. JX-0011C.0056:19 to .0057:5; JX-0011C.0057:2-5.

[redacted]

Having done so, the ALJ was not permitted to use speculation to overcome the record evidence.[11] *See Multimedia Display and Navigation Devices*, Comm'n Op. at 5. This is another example of the ALJ's results-oriented and inconsistent rulings.

2. The ALJ disregarded Commission precedent in rejecting labor investments for Broadcom's operational employees.

More than 90% of Broadcom's labor investments were calculated using the [redacted] discussed above. But a small amount of additional labor investments (from a different Broadcom group) were calculated [redacted] an apportionment the Commission has expressly deemed reliable. *See Certain Electrical Connectors and Cages, Components Thereof, and Products Containing the Same* ("*Electrical Connectors and Cages*"), Inv. No. 337-TA-1241, Initial Det. EDIS Doc. ID 767918 at 365-66, 2022 WL 1124999 (Mar. 11, 2022) (citing *Certain Solid State Storage Drives, Stacked Elecs. Components & Prods. Containing Same*, Inv. No. 337-TA-1097, Comm'n Op. at 20-21, EDIS Doc. ID 649139, 2018 WL 4300500 (June 29, 2018)). Indeed, AMD's expert, Mr. Bakewell, has used such estimates in the past. *See, e.g.*, *Certain Dental and Orthodontic Scanners and Software*, Inv. No. 337-TA-1144, Initial Det. at 265, 2020 WL 3073789 (April 30, 2020).

The ALJ improperly dismissed this good faith evidence because it came from the Operational Lead of the Mobility Division, Donald Reisinger, and his team does not use

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[11] The evidence showed that the FTEs and corresponding investments were determined using [redacted] kept in Broadcom's ordinary course of business. ID at 243. The ALJ nonetheless speculated that this precise data could be overstated because "software routinely affects multiple products within a family and Broadcom likely has other products and continues to develop wireless communication chipsets." *Id.* at 246. In other words, with no evidentiary support whatsoever, the ALJ dismissed actual and precise evidence based on speculation that individual employees did not split their development time between different benefitted projects. Speculation, especially speculation already dismissed as inconsistent with the record, is unacceptable.

[redacted]

[redacted] ID at 246-47; *see also* Tr. (Singh) at 300:7-20 (describing Mr. Reisinger's evidence); Tr. (Sheridan) at 671:10-18 (same). The testimony explains, however, that Mr. Reisinger was able to identify the number of FTEs that correspond to work performed by his supervisees because "he's aware of what his supervisees are doing." Tr. (Singh) at 300:25-301:7, with quoted language at 301:5-7. The testimony further states that Mr. Reisinger's supervisees performed [redacted] for the DI Products for the DI Products. Tr. (Singh) at 301:8-15; Tr. (Sheridan) at 671:19-24. Indeed, the testimony explicitly states that Mr. Reisinger prepared FTE calculations representing work "***[f]or*** the domestic industry products." Tr. (Singh) at 301:11-15 (emphasis added). His actions yielded a [redacted] which, as noted above, the Commission repeatedly allows. The ID provides ***no basis*** for discounting them other than indirectly referring back to the speculation above. ID at 246-47. Broadcom's testimony showed that Mr. Reisinger performed [redacted] for work ***for the DI products***.

3. The ALJ wrongly rejected capital investments that were properly apportioned by FTE and revenue related to the DI products.

The ALJ's sole basis for rejecting the capital investments in the DI products was his mistaken understanding of "FTE headcount," discussed above, and the legal error regarding apportionment, discussed below. *See* ID at 248 ("[T]he two allocation problems identified above . . . are enough to find them not sufficiently reliable"). The ALJ also suggested there could be other "reasonable questions" regarding allocation of capital expenses. *Id.* Because he did not rely on those questions, they form no part of his conclusion, and they need not be addressed. In the interest of completeness, Realtek responds briefly. Broadcom testified that the capital investments it identified are "[redacted] the DI Products, *i.e.*, [redacted]

[redacted]. Tr. (Singh) at 302:15-19, 303:2-11 (emphasis added); *see also* Tr. (Sheridan) at 672:15-673:3. Broadcom (as opposed to Dr. Sheridan, or anyone associated with Realtek) apportioned these expenses as U.S. based and attributable to the DI products. Tr. (Sheridan) at 673:4-9. Broadcom apportioned theses expenses based upon FTE headcount, except for the [redacted] portion, which is allocated [redacted]. CX-1798C at 31:12-15.

There is no legal error in Realtek's methodology. As noted above, an FTE-based apportionment passes muster under Commission precedent. *See Batteries*, Comm'n Op. at 12. The Commission has also accepted a revenue-based allocation of expenses as reliable. *See, e.g.*, *High-Density Fiber Optic Equipment*, Comm'n Op. at 65.

Nor is there any basis in the record for AMD's speculation about the veracity of Realtek's proof. AMD wondered "whether the [redacted] costs were truly spent in the United States given the DI Products' [redacted] of manufacture and how the revenue allocation was effected to limit [redacted] to the DI Products." ID at 248. Broadcom [redacted] *Id.* Thus, the [redacted] Broadcom used could not have been used in commercial manufacture of the DI Products [redacted] as AMD speculates. *Id.* The ALJ mused that he did not think Realtek answered AMD's question about [redacted] "***convincingly.***" *Id.* That statement alone shows another mistake. Realtek's burden is one of preponderance of the evidence. Realtek was not required to provide clear and convincing evidence to overcome AMD's speculation.

C. A Domestic Industry Need Not Be Apportioned When That Industry Consists of an Undifferentiated Set of Development Costs for the Same DI Products Even If Sold by Multiple Entities.

The investments identified above were incurred to develop the two specific DI products. The ALJ erroneously held that Subsection (B) requires splitting this unitary set of investments

[redacted]

based on which entity ultimately sold them. Section 337 and Commission precedent refute the ALJ's holding. An "industry in the United States" "shall be considered to exist if there is in the United States, with respect to the articles protected by the patent . . . concerned," *inter alia*, a "significant employment of labor or capital." 19 U.S.C. §§ 1337(a)(3)(B). Section 337 requires a link between the domestic industry to the protected articles. Here, all of the investments identified are explicitly linked to the protected articles. *See supra* § III.B. There is no requirement that the domestic industry be further apportioned based on which entity later sells the protected articles. Indeed, the Commission has repeatedly rejected the argument that a domestic industry will not exist if multiple entities benefit from it. For example, a collective of corporate entities, including one or more licensed parties acting in concert with respect to domestic investments necessary for the protected article, comprises a domestic industry. *See, e.g.*, *Certain Diltiazem Hydrochloride and Diltiazem Preparations* ("*Diltiazem*"), Inv. No. 337-TA-349, Initial Det. at 134 (Feb. 1, 1995) (*unrev'd in relevant part*); *Certain Slide Fastener Stringers and Machines and Components Thereof for Producing Such Slide Fastener Stringers*, Inv. No. 337-TA-85, Comm'n Op. at 20, 1981 WL 50449 (Jan. 12, 1981); *see also Certain Optical Disc Drives,* Inv. No. 337-TA-897, Comm'n Order at 4-5 (Sept. 4, 2014).

Here, the ALJ acknowledged the identified work on the DI Products is a joint effort involving cooperative actions by several Broadcom/Avago entities for the benefit of all of them:

> Realtek acknowledges that it was [redacted] who developed the DI Products but asserts they did so [redacted]

ID at 237 (citing Tr. (Phillips) at 258:16-259:22; Tr. (Singh) at 307:20-308:2; and CX-1878.10)

[redacted]

(internal citations omitted).

Specifically, [redacted] Tr. (Phillips) at 256:20-257:3; *see also id.* at 260:20-24 (explaining that research and development is [redacted]"); *id.* at 261:6-15 (noting that [redacted]). The [redacted] that developed the DI Products did so as "[redacted]" of [redacted] *Id.* at 284:11-20.

This concerted effort—[redacted]—represents "the kind of investment that satisfies the policies behind the domestic industry requirement." *Diltiazem*, Initial Det. at 134 (*unrev'd in relevant part*). Other Commission authority confirms that fact. For example, in *Certain Wearable Monitoring Devices, Systems, and Components Thereof*, the presiding ALJ granted summary determination on economic domestic industry based on the activities of a subsidiary, finding that a subsidiary was "implicitly authorized by its parent . . . to practice the [asserted] patent; no license or explicit authorization is necessary." *Certain Wearable Monitoring Devices, Sys., and Components Thereof*, Inv. No. 337-TA-1190, Order No. 34 at 27-28, 2020 WL 6591309 (Oct. 1, 2020) (*not rev'd in relevant part*). Such concerted action is presumed to be authorized and to constitute a unified domestic industry, even in the case of a later-acquired subsidiary. *Electrical Connectors and Cages*, Initial Det. at 355-56 (*aff'd in relevant part*).

The ALJ wrongly concluded that this concerted development of the DI products must be

[redacted]

disregarded because not all of the participants in this effort have a license to Realtek's patents. *Id.* at 247. As shown below, the conclusion that Broadcom Inc. and Broadcom Corp. are not licensed is incorrect, but it also is irrelevant. The ALJ correctly determined that the DI Products sold by Avago Sales are licensed, and are therefore "articles protected by the patent[s]." 19 U.S.C. § 1337(a)(1)(B). The domestic industry requirement is satisfied if there is a significant employment of labor or capital in the United States "with respect to" the DI products. *Id.* It would be contrary to both the language of § 337 and Commission precedent to divide the unitary set of U.S. investments ([redacted] because there are different sellers of the finished products.

In analogous cases, the Commission has rejected attempts to divide concerted action that forms a domestic industry. *Certain Wearable Electronic Devices with ECG Functionality and Components* Thereof, Inv. No. 337-TA-1266, Comm'n Op. at 16-17, 2023 WL 372372 (Jan. 20, 2023) (expenditures by contractor incurred for benefit of patentee's customers count toward domestic industry); *Diltiazem*, Initial Det. at 134 (Feb. 1, 1995) (*unrev'd in relevant part*) (performance of non-patented processing step in United States by complainant Marion Merrell Dow for complainant/patentee Tanabe counted toward domestic industry); *Wearable Monitoring Devices*, Order No. 34 at 27-28 (*unrev'd in relevant part*) ("[A] domestic industry encompasses the activities of the patent owner 'and the activities of those authorized by it to practice the patent.'" (citations and emphasis omitted)); *Electrical Connectors and Cages*, Initial Det. at 355-56 *(aff'd in relevant part*) (holding that entities authorized to practice subject patents, even in the absence of a license agreement, are properly part of a domestic industry); *Certain Magnetic Tape Cartridges and Components Thereof*, Inv. No. 337-TA-1058, Comm'n Op. at 41, EDIS Doc. ID 672595, 2019 WL 2635509 (Apr. 9, 2019).

[redacted]

The ALJ necessarily, and correctly, concluded that the domestic activities are licensed because they are necessary to create the products sold. ID at 239. In other words, the sub-prong (B) investments were incurred to develop ***all*** of the DI Products, and they are properly included in the domestic industry irrespective of whether some DI products were sold by entities not purportedly licensed. There is no obligation in Section 337 or Commission precedent to apportion domestic industry investments based on which entity ultimately sells the DI Products.

The ALJ's contrary conclusion rests upon inapposite Commission authority. The ALJ cited *Certain Electronic Stud Finders, Metal Detectors and Electrical Scanners*, Inv. No. 337-TA-1221, Comm'n Op. at 50-51, 2022 WL 834280 (Mar. 14, 2022). ID at 243-44. There, the Commission found only that a domestic industry cannot result from aggregating ***different*** articles that do not practice all of the patents. Here, there are only two DI Products, and they practice all three of the patents. ID at 252.

The ALJ also cited *Certain Artificial Eyelash Extension Systems, Products and Components Thereof*, Inv. No. 337-TA-1226, Comm'n Op. at 50, 2022 WL 15498309 (Oct. 24, 2022), but there, Lashify presented false evidence when asserting that 100% of its investments were in the U.S. *Id.* at 49-50. Lashify had submitted declarations, and provided testimony, stating that 100% of its investments were domestic, but the record showed, among other things, "foreign tooling costs" and other expenses outside the United States. *Id.* The Commission also rejected Lashify's calculations because they included "sales and marketing expenses," and Lashify had not justified inclusion of those expenses. *Id.* at 53-54.

Here, in contrast, the evidence showed significant expenditures in labor related exclusively to the development of the DI products and cognizable as a domestic industry. *See* § III.A, *supra*. Nothing in the Commission's opinion in *Eyelash Extension Systems* supports the conclusion that

[redacted]

the labor and capital expended on the DI products must be apportioned based on the number of DI products sold by the licensed entity versus by an unlicensed entity.

The ALJ's requirement would create perverse results and undue complexities. This requirement disregards (and would leave unprotected) significant U.S. labor investments, which here consist of development activities for two chips critical to marquee products (such as the iPhone and Galaxy phones). These development activities fall squarely within the purpose of the domestic industry requirement of section 337. H.R. Rep. No. 40, 100th Cong., 1st Sess., pt. 1, at 156-57 (1987). There is no basis to divide (and thereby negate) a unitary domestic in "articles protected by the patent" merely because multiple downstream entities sell the resulting products. 19 U.S.C. § 1337(a)(1)(B). By leaving R&D within the United States unprotected, the ALJ's rule contradicts Section 337's purpose and promotes offshoring.

In addition, this new rule would create enormous complexity. Going forward, parties would need to determine, for example, all of the immediate and downstream sellers of DI products, determine whether they are licensed, and apportion the domestic investments accordingly. A domestic industry would exist based on significant U.S. investments if a licensed Chinese company made most of the sales of the resulting product but not if an unlicensed U.S. company made most of the sales. That is not what Section 337 or Commission precedent provides. The selling company has absolutely nothing to do with the significance of the work performed domestically. And the amount of work needed to track down all the entities that sell a particular product, and apportion development work between them, is staggering. The ALJ's ruling is contrary to Section 337, contrary to Commission precedent, punishes U.S. development efforts, and would create substantial new burdens for litigants and ALJs. It also raises key issues of Commission policy.

[redacted]

[redacted]

D. The ID Shows That the Identified Domestic Industry Is Significant.

There can be no dispute that the investments in the protected articles are significant. The ALJ referred to them as "massive." ID at 246. That is unsurprising given the importance of the DI Products to fundamental U.S. products including iPhones and Samsung Galaxy phones. Even if the Commission determines that only the investments reflected in the [redacted] should be considered, that investment is quantitatively significant, standing alone, because it totals about [redacted] and involves work from about [redacted] annual FTEs.[12] *See Certain Filament Light-Emitting Diodes and Products containing Same*, Inv. No. 337-TA-1220, Initial Det. at 216, 2021 WL 6102808 (Nov. 19, 2021) (finding significant 5 years' investments totaling $5,483,442).

As to qualitative significance, investments in the "development and support of . . . products that have been extremely successful in the market . . . are significant and substantial." *High-Density Fiber Optic Equipment*, Initial Det. at 408. Mr. Bakewell does not dispute the market share and sales figures evidencing such success. Tr. (Bakewell) at 731:13-20. His only response is that the iPhone was successful well before 2020. *Id.* at 708:21-709:2. That is immaterial because the Commission does not require that the DI Products ***cause*** the success of the products in which they are present to satisfy the qualitative prong. It is enough that the products are an important part of a domestic industry. Here, that test is easily met. Dr. Sheridan noted that there are "lots of sales" of the chips, and they supply Bluetooth and Wi-Fi functionality to most of the mobile phones used

[12] This figure is calculated by taking [redacted] of the [redacted] in labor investments and 90% of the [redacted] FTEs calculated by Broadcom because the evidence shows that operating labor expenses provided by Mr. Reisinger are "[redacted]." (Tr. (Singh) at 300:7-20; Tr. (Sheridan) at 671:10-18).

[redacted]

in the United States. They are significant irrespective of the success the iPhone had previously enjoyed. Tr. (Sheridan) at 676:2-14. In *High-Density Fiber Optic Equipment*, the complainant's investments were found significant where its domestic industry solutions had "been installed in data centers of 'some of the largest U.S.-based technology and financial industry institutions.'" *High-Density Fiber Optic Equipment*, Comm'n Op. at 69. There was no requirement that those solutions have been singularly responsible for the success of those data centers, nor was there even an inquiry into whether those data centers (which were already "some of the largest") had been successful prior to the installation of those solutions therein. *See id.*

The ALJ did not find that the numbers above are insignificant. Mr. Bakewell similarly did not offer an opinion that such investment was insignificant. Tr. (Bakewell) at 725:22-726:10. Accordingly, once the Commission overturns the ALJ's erroneous conclusions regarding the FTE data and the apportionment the record compels a finding of significance.

E. The ALJ Erred In Concluding that Broadcom Inc. and Broadcom Corp. Are Not [redacted] of Avago Sales.

Realtek entered into the License Agreement with Avago Licensee and the license granted thereunder extends to the latter's "[redacted] JX-0784C.0001; Tr. (Lin) at 49:6-13; Tr. (Phillips) at 268:7-269:15. Realtek also petitions for review of the ALJ's erroneous decision that Broadcom Inc. and Broadcom Corp. are not [redacted] under the License Agreement. Those rulings must be reversed for two reasons. ***First***, they rest upon the ALJ's interpretations of [redacted] of the License Agreement, which the ALJ entered after wrongly striking Mr. Baik's testimony regarding the negotiations of those provisions. Order Nos. 23 & 24; ID at 229-30. As discussed above, excluding that testimony "is reversible error," even if the tribunal believes the "contract appears to be clear and unambiguous on its face." *First Nat. Morg.*, 631 F.3d at 1067;

[redacted]

Onyx, 863 F. Supp. 2d at 897-98. That error, standing alone, requires reversal and a new trial with non-conflicted counsel, before a different ALJ.

Second, the ALJ's rulings are contrary to the language of the License Agreement. Broadcom Inc is a licensed [redacted] because it was "[redacted] JX-0784C at [redacted] and the License Agreement states that such entities are [redacted] Broadcom Corp. is a licensed [redacted] because the transaction through which Avago Sales became associated with Broadcom Corp. is not a disqualifying [redacted]

1. Broadcom Inc. is a licensed [redacted]

In ruling that Broadcom Inc. is not a licensed [redacted] the ALJ once again issued a ruling completely at odds with other portions of the ID. The ALJ expressly found that "Broadcom Inc., [is] [redacted]." ID at 239; *see also id.* at 229 (recounting evidence from Mr. Phillips confirming that finding). And there was no dispute that "Avago Parent" was an [redacted] of the licensee, Avago Sales. *Id.* at 229-30. The ALJ nonetheless concluded that Broadcom Inc. was not an [redacted] because it [redacted] ownership of Avago Sales (by succeeding to Avago Parent) after the effective date of the License Agreement. *Id.* at 230-32.

The ALJ erred because he ignored the portion of the definition of [redacted] in the License Agreement that expressly ***includes*** as an [redacted] any company "[redacted] y." JX-0784C at App'x A. [redacted] As noted above, the ALJ found that Broadcom Inc. [redacted] ID at 239; *see also* Tr. (Phillips) at 264:11-17; *id.* at 265:19-266:1. More specifically, the ALJ found that [redacted]

[redacted] ID at 231. As a result of those [redacted]. *See id.* at 230. Such control reorganization expressly makes Broadcom Inc. an [redacted] under the License Agreement (*see* JX-0784C.0014).[13]

As the ALJ recognized, *see* ID at 232, under governing California authority,[14] it was AMD's burden to establish that Broadcom Inc. is ***not*** an [redacted] *See Simpson Strong-Tie Co., Inc. v. Gore*, 49 Cal. 4th 12, 23 (Cal. 2010); *Sun Pacific Marketing Co-op., Inc. v. Dimare Fresh, Inc.*, 592 F. App'x. 564, 564-65 (9th Cir. 2015)). AMD presented no evidence to undercut the conclusion that Broadcom Inc. [redacted]. ID at 239. The ALJ ignored the portions of the "[redacted] definition that apply, and thereby clearly erred both legally and factually. Accordingly, Broadcom Inc. is an [redacted] under the License Agreement, and is therefore licensed to the Asserted Patents. [redacted] this conclusion moots the ALJ's rulings with respect to the need to apportion the domestic industry.

2. Broadcom Corp. is a licensed [redacted]

Broadcom Corp. was not [redacted] by a Party or an [redacted] *i.e.*, there was no disqualifying [redacted] of Broadcom Corp. under the License Agreement. The License Agreement excludes from the definition of [redacted] "any company or legal entity [redacted]

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[13] The ALJ found that Broadcom Inc. does, in fact, "[redacted] ID at 231.

[14] California law governs the License Agreement (JX-0784C.0011, Art. 8.07).

[redacted]

after the EFFECTIVE DATE." JX-0784C.0014. [redacted] in turn, requires an [redacted] by "a Party or an [redacted] *Id*. Consequently, if the [redacted] of Broadcom Corp. was by other than "a Party or an [redacted] such [redacted] would not render Broadcom Corp. unlicensed.

The evidence shows that Broadcom Corp. became [redacted] with Broadcom Inc. as a result of a series of "complex transactions" [redacted]." *See* ID at 233; CX-1762. The Merger Plan demonstrates that Broadcom Corp. was not [redacted] Specifically, [redacted]. CX-1814C at 28:16-19:16. On May 28, 2015, a group of companies entirely separate from Avago Licensee and Avago Technologies Ltd., and outside the ownership and control structure of those entities, entered into an agreement to obtain Broadcom Corp. In particular, seven different, newly-created Avago-related entities, on the one hand, and Broadcom Corp., on the other hand, entered into the Merger Plan. CX-1762.0001. The Merger Plan, among other things, sets forth the timing of certain then-future events that comprise the subject merger:

> At the Avago Effective Time[15]. . . all of the issued Avago Ordinary Shares[16] will be transferred from the holders of such issued Avago Ordinary Shares . . . to Finance Holdco."[17] CX-1762.0031, § 2.1;

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[15] "Avago Effective Time" is defined as "such time as the Avago Scheme becomes effective." CX-1762.0033, § 2.4(b)(i).

[16] "Avago Ordinary Shares" is defined as "ordinary shares in the capital of Avago" Technologies Limited. CX-1762.0006, Preamble.

[17] "Finance Holdco" is defined as "Avago Technologies Cayman Finance Limited, an exempted company incorporated under the laws of the Cayman Islands and a direct wholly-owned subsidiary of Intermediate Holdco." CX1762.0006, Preamble. The other entities are likewise defined therein. In court documents, Pavonia was characterized in 2016 as "a newly formed Singapore holding company." CX-1849.0001.

[redacted]

> At the Cash/Stock Effective Time[18] . . . Cash/Stock Merger Sub[19] shall be merged with and into Broadcom [Corp.] . . . the separate corporate existence of Cash/Stock Merger Sub shall cease and Broadcom [Corp.] shall continue as the surviving corporation and as an indirect wholly-owned Subsidiary of Holdco and a direct, wholly-owned Subsidiary of Lower Holdco."[20] CX-1762.0032, § 2.2;
>
> At or immediately after the Avago Effective Time, Avago shall cause Holdco to, and Holdco shall, deposit . . . for the account and benefit of the former holders of Avago Ordinary Shares . . . shares representing the full number of Holdco Ordinary Shares issuable pursuant to Section 2.1 in exchange for outstanding Avago Ordinary Shares CX-1762.0036, §2.10(a), thereby providing each former owner of Avago Ordinary Shares with Holdco Ordinary Shares; and
>
> At the Unit Effective Time[21] . . . Unit Merger Sub[22] shall be merged with and into Broadcom . . . the separate corporate existence of Unit Merger Sub shall cease and Broadcom shall continue as the surviving corporation and as a wholly owned subsidiary of Lower Holdco." CX-1762.0032, § 2.3.

The Merger Plan also provides that "Avago [Technologies Limited] shall cause Finance Holdco to form a newly formed wholly-owned direct Subsidiary ('Lower Holdco')." CX-1762.0083, § 6.1(f). After the Unit Merger, Broadcom Corp., as the surviving entity of the Cash/Stock and Unit Mergers was to operate "as a wholly owned subsidiary of Lower Holdco." CX-1762.0032, § 2.2. Broadcom Corp.'s stockholders ultimately could elect to receive cash or ordinary shares in Holdco. CX-1849.0001. The merger was structured this way for tax purposes and to comply with

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[18] "Cash/Stock Effective Time" is defined as "such time as the Cash/Stock Merger becomes effective." CX-1762.0033, § 2.4(a).

[19] "Cash/Stock Merger Sub" is defined as "Buffalo CS Merger Sub, Inc., a California corporation and wholly-owned subsidiary of Finance Holdco." CX-1762.0006, Preamble.

[20] "Lower Holdco" is defined as "a wholly-owned direct Subsidiary" of Finance Holdco newly formed by Holdco. CX-1762.0083, § 6.1(f).

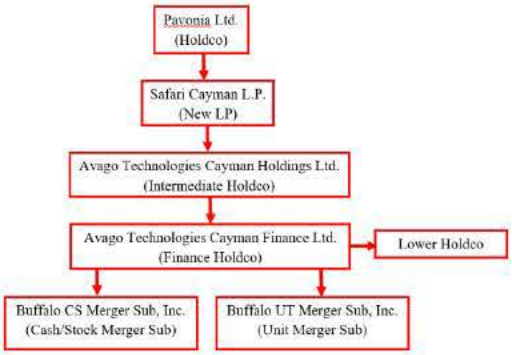
[21] "Unit Effective Time" is defined as "such time as the Unit Merger becomes effective." CX-1762.0033, § 2.4(b)(i).

[22] "Unit Merger Sub" is defined as "Buffalo UT Merger Sub, Inc., a California corporation and wholly-owned subsidiary of Finance Holdco." CX-1762.0006, Preamble.

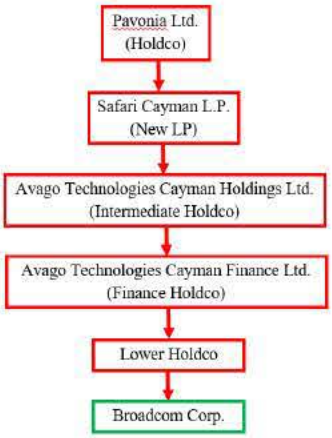
[redacted]

Singapore law. *See* CX-1762.0109, § 6.19; ID at 234 ("complicated, tax-driven . . . transactions").

Thus, before the Cash/Stock Effective Time, the following was the corporate structure of the relevant Avago merger entities, with none of those entities being a parent of, a subsidiary of, or under common ownership of, Avago Licensee (CX-1848):



After the Unit Effective Time, which occurred after the effective date of the License Agreement, and which is the ***final event*** in the merger chain, Unit Merger Sub and Cash/Stock Merger Sub merged into Broadcom Corp. The corporate structure was transformed to the following, with Broadcom Corp. becoming a subsidiary, albeit indirect, "of the new HoldCo, Broadcom Limited." CX-1849 at 8. The result was the corporate structure below (CX-1848):



The "business combination" resulting in the Broadcom Corp. merger was completed—and thus the various "Effective Time[s]" discussed above were all completed—no earlier than February 1,

[redacted]

2016. CX-1856 at 3 ("Broadcom Limited, or Broadcom, is the successor to Avago Technologies Limited, or Avago, as a result of the business combination between Avago and Broadcom Corporation, or BRCM, ***completed on February 1, 2016***" (emphasis added)).

After the final step in the series of merger transactions, Pavonia Ltd. changed its name to Broadcom Ltd. *See id.*; *see also* CX-1762, §§ 2.3, 2.4, 2.9, 2.10 (describing the transaction and ultimately the name change to Broadcom Ltd. after merger).[23] Broadcom Ltd. then became the successor in interest to Avago Technologies Ltd. *See* CX-1856 at 3. Only ***after*** the completion of all of these transactions was there finally a corporate relationship between Broadcom Corp., on the one hand, and Avago License Party and Broadcom Ltd., on the other hand, by virtue of the common control by Broadcom Ltd. as the ultimate parent of both. *See* CX-1856, Ex. 21.1 at 2.

Accordingly, at the time Broadcom Corp. was [redacted] none of the [redacted] entities was an [redacted] of Avago Licensee because Avago Licensee was not within the corporate structure of the entities involved in such [redacted] There was therefore no disqualifying [redacted]

Rather than delving into this series of transactions resulting in the [redacted] of Broadcom Corp., the ALJ chastised "Realtek's focus on the *minutiae* of the Merger Agreement" as defying "common sense." ID at 233. At the same time, the ALJ acknowledged the "many shell corporations and special purpose vehicles established to execute the Merger Agreement." *See id.* The ALJ simplistically focused upon the "net result" of the series of merger transactions "that Avago Parent paid consideration for Broadcom Corp." *Id.* at 234. The provision from the Merger Agreement upon which the ALJ relied is the following:

---

[23] [redacted]. CX1814C at 12:24-13:7.

[redacted]

Section 3.5 Exchange Procedures for Broadcom Common Shares.

(a) At or immediately after the Cash/Stock Effective Time, Avago shall cause Holdco and New LP to respectively deposit with the Exchange Agent, acting as exchange agent and solely for the account and benefit of the former holders of Broadcom Common Shares at the Broadcom Effective Times, for exchange in accordance with this Article III, certificates or book entry shares representing the full number of Holdco Ordinary Shares and Units issuable pursuant to this Article III in exchange for outstanding Broadcom Common Shares. At or immediately after the Broadcom Effective Times, Avago shall provide or shall cause to be provided to the Exchange Agent all of the cash necessary to pay the aggregate amount of the Broadcom Merger Consideration payable pursuant to this Article III, including the aggregate amount of the Holdco Ordinary Shares and Units and the Aggregate Cash Consideration payable pursuant to this Article III (such Holdco Ordinary Shares, Units and Aggregate Cash Consideration, the "Consideration Fund"). In addition, Avago shall make available as necessary cash in an amount sufficient for payment in lieu of fractional shares pursuant to Section 3.3. In the event the Consideration Fund shall be insufficient to pay the aggregate amount of the

ID at 233 (quoting CX-1762C.0042) (highlighting in original)).

Prior to Broadcom Corp. being [redacted] it had outstanding shares. Broadcom Corp. would therefore be [redacted] by "a [redacted]." JX-0784C.0014. The ALJ simply ignored, to reach the desired result, [redacted]

In fact, the Merger Plan provides that the Broadcom [redacted]. CX-1762C.0042. Avago Technologies Ltd. never [redacted] them. Instead, [redacted] CX-1762.0032, § 2.2. [redacted]

Thus, not only did the ALJ improperly ignore the details (which he called the "*minutiae*") of the Merger Plan, which detail the flow of money and ownership critical to [redacted] status, he also misconstrued the provisions of the Merger Plan upon which he selectively relied. In doing so, he arrived at the erroneous "net result" conclusion that Broadcom Corp. was the subject of a

[redacted]

disqualifying [redacted] This erroneous conclusion regarding Broadcom Corp.'s licensed status justifies review given the ALJ's mistaken apportionment ruling.

3. Impact of the ALJ's errors regarding licensed entities.

If either Broadcom Inc. or Broadcom Corp. is a licensed [redacted] then there is no dispute that all sub-prong (B) investments are properly included in the domestic industry. If Broadcom Inc. is a licensee, it is undisputed that it directed all investment and sales of the DI Products. If Broadcom Corp. is licensed, all sellers of the DI Products are licensed, which makes the ALJ's improper apportionment rule moot.

IV. THE '218 PATENT IS VALID

A. The ALJ Erred By Holding Claim 18 Obvious Over Li in Light of Jiang By Intervening on Behalf of AMD, Developing New Arguments Irreconcilable With the Record, and Shifting the Burden of Proof to Realtek.

The ALJ's holding that claim 18 is obvious over Li is based on two fundamental and results-oriented errors.[24] ***First***, the ID adopted an improper construction of the term "same ground wire." The proper construction for "same ground wire" requires a single wire. The ALJ ruled, however, that a mesh can be a single wire. That ruling not only is contrary to the intrinsic record, but also is utterly inconsistent with the ALJ's other rulings. The ALJ expressly ruled, during claim construction, that a wire cannot be a mesh. In ruling that a mesh can be a wire, the ALJ violated *Phillips* and the Federal Circuit's established claim construction requirements and issued irreconcilable rulings. This is legal error. 19 C.F.R. §210.43(ii).

Second, in what appears to be an effort to insulate an erroneous analysis from review, the ALJ baselessly says that his improper claim construction is based on Realtek's position at trial.

[24] Claim 18 also depends from claims 12 and 16-18 and the errors the ALJ made with respect to the analysis of those claims is also a basis for finding that the ALJ erred with respect to claim 18 and that claim 18 is not obvious.

[redacted]

That is demonstrably false. The ALJ reasoned that Realtek never disputed his analysis, but the ALJ made up this analysis, and presented it for the first time, in the ID. The ALJ disturbingly seems to have appointed himself counsel for AMD, developed new arguments irreconcilable with the record, and then shifted the burden of proof to Realtek. This is clearly erroneous, an abuse of discretion, and arbitrary and capricious decision-making to arrive at what only could have been a pre-ordained outcome. 19 C.F.R. §210.43(i), (ii), (iii).

1. The ID's finding of invalidity of Claim 18 is based on the erroneous construction of "same ground wire" to cover a mesh including multiple wires.

a. The ALJ's claim construction is inconsistent with other rulings.

The ALJ's analysis of claim 18 rests on an incorrect construction of "same ground wire." In short, the ALJ finds that the term "same ground wire" can include ***5*** different wires on ***3*** different metal layers including the ***vias*** that connect these wires and layers. ID at 148-150 (finding wires on the RDL, Metal-6, and Metal 7 layers and connecting vias meets the claim limitation and characterizing it as a "super wire"). A collection of five different wires on three different layers and their associated vias are plainly not "the same ground wire." They are a "mesh." ID at 91 (construing "power mesh" to be "a network of intersecting wires capable of distributing power"). If a mesh can be a single wire, but a single wire cannot be a mesh, the terms "same ground wire" and "mesh" are rendered meaningless.

Even more curiously, the ALJ ***expressly rejected***, during claim construction, the position that a single wire could be a mesh. ID at 85 (contradicting prior holding that single wires can be a "power mesh"); ID at 91 (construing "power mesh" as "a network of intersecting wire**s** capable of distributing power.") (emphasis added)). This inconsistency underscores the ALJ's improper constructions.

[redacted]

b. The ALJ's construction is contradicted by the intrinsic record requiring that a "same" ground wire must be a single ground wire.

The ALJ's construction of "same ground wire"—encompassing 5 different wires on 3 different metal layers and associated vias—is contrary to the intrinsic record. The claim language itself requires the "same ground wire" to be a single wire. If there is not a single wire, then the wire is not the "same"; it would be a different wire. Other claims confirm that conclusion. Claim 15 recites "at least one ground wire." *See, e.g.*, JX-0002 at claim 15. Claim 18, depending on Claim 15, must have a different, narrower scope, so the "same ground wire" cannot be multiple wires. *See, e.g.*, *Alcon Research, Ltd. v. Apotex Inc.*, 687 F.3d 1362, 1367 (Fed. Cir. 2012) ("[D]ependent claim cannot be broader than the claim from which it depends[.]").

The specification of the '218 patent confirms this meaning of "same ground wire." It describes a power routing structure and power mesh arrangement through various metal layers of an integrated circuit. CDX-0003C.11-33; Tr. (Souri) at 366:4-377:13. Wiring is placed on different metal layers, and vias can connect wires with similar electrical properties to provide power or ground to the power domains. JX-0002 at 4:53-5:44; CDX-0003C.11-33; CDX-0003C.53; CDX-0023C.49-54. As part of the inventive routing structure, the specification explains that there is "***one*** common ground wire 403" of the global power mesh. JX-0002 at 4:31-34 (emphasis added); *see also id.* at 5:17-20, 5:39-44, 6:37-40; Fig. 4. The patent explains the importance of one common ground wire: "global power mesh uses ***only one*** common ground wire to supply the ground potential to the various power domains, such implementation will not waste excess large area." JX-0002 at 6:37-40 (emphasis added).

The intrinsic record further distinguishes between "wires," "meshes," and "vias." For

[redacted]

example, the claims use the terms "wire" and "mesh" separately and makes clear they are different by claiming that "meshes" comprise "wires." *See, e.g.*, JX-0002 at claim 15 ("The power routing structure according to claim 12, wherein the global power mesh comprises: at least one ground wire; at least one first power wire that provides the power needed by the first power domain; and at least one second power wire that provides the power needed by the second power domain."). "[D]ifferent claim terms are presumed to have different meanings." *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008). There has never been any dispute that a mesh and a wire are different.

The intrinsic record is also clear that a "via" connects wires and is not itself a wire. *See, e.g.*, JX-0002 at 4:16-18 ("Besides, the power wires and ground wires of adjacent metal layers having the same electrical property can be interconnected to each other by via"). Indeed, the ALJ in other contexts expressly acknowledges that the vias and wires are different. The ALJ distinguished between wires and vias to (incorrectly) find that Jiang meets the global power mesh requirement of claim 12. ID at 130-131. *See infra* § IV.D.3. In short, there has never been any dispute that a "via" and a wire are different. And there is nothing in the intrinsic evidence supporting the ALJ's construction for "same ground wire" to expansively cover a cornucopia of multiple wires over several layers interconnected by numerous vias. Because the ALJ's construction of "same ground wire" is legally erroneous, his resulting obviousness finding cannot be correct. 19 C.F.R. §210.43(ii).

2. The ALJ intervened on behalf of AMD by crafting his own evidence and shifting the burden of proof to Realtek to improperly find Claim 18 obvious.

a. Contrary to the ALJ, Realtek never argued that a same ground wire need not be a single wire.

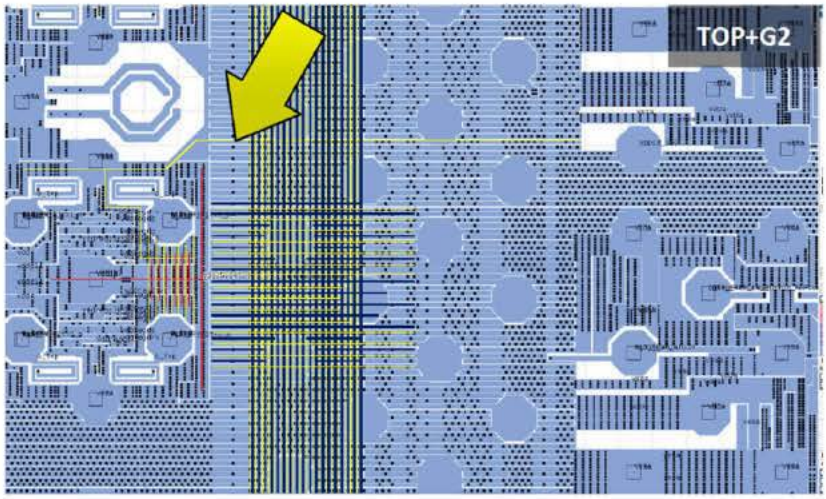
The ALJ's analysis of claim 18 begins from a false premise: that Realtek took a position

[redacted]

that the "same ground wire" need not be a "single wire." Specifically, the ALJ states that the shared ground wire "as presented by Dr. Souri, is the yellow trace in the figures below." ID at 149 (citing CDX-0003C.855). This is simply false. Dr. Souri never contended that the global power mesh, as shown on Slide 855 was the same ground wire. To the contrary, the record evidence shows that Slide 855 relates to the ***entire portion of the global power mesh*** that was presented in connection with elements of claim 12—not to a "same ground wire" of claim 18. Tr. (Souri) at 486:4-11. This is another example of misstating facts to achieve a result. 19 C.F.R. §210.43(i).

Realtek and Dr. Souri have always maintained that the "same ground wire" is a ***single wire***. CDX-0003.862; Tr. (Souri) at 488:1-17 (reproducing testimony referring to slide 862, which says "I'm showing here the summary of the analysis and the evidence that I rely on for the requirements of claim 18, and I demonstrate that the first local [power mesh] ground wire and the second local [power mesh] ground wire share the ***same ground wire of the global power mesh***.") (emphasis added); *see also* CRB at 52-53 (identifying the same ground wire as a single yellow wire with an arrow pointing to it). Dr. Souri presented slides specific to his analysis of claim 18 for [redacted] and identified a ***single wire*** using the yellow arrow below:

[redacted]



CDX-0003.862; 860.

The ALJ does not cite any record evidence substantiating his conclusion that Realtek's position on "same ground wire" is broader, and his analysis is contrary to Realtek's analysis of claim 18 as presented at trial. CRB at 52-53; Tr. (Souri) at 488:1-17; CDX-0003.862. In fact, as discussed below, the ALJ had to craft his own incorrect evidence and perform impermissible expert analysis in order to find some way to attribute an incorrect construction of "same ground wire" to Realtek. That results-oriented adventurism is completely prohibited. There is no evidence to support the ALJ's conclusion that Realtek's position on the construction of "same ground wire" is broader than a single wire.

b. The ALJ improperly used demonstratives related to power wires and applied them to ground wires to find Claim 18 obvious.

Because there was no record evidence that Realtek contended "same ground wire" was anything other than a single wire, the ALJ crafted his own demonstratives and performed his own analysis (despite not being a POSITA) all in an effort to attribute to Realtek a claim construction position than Realtek never took. ID at 149. This is error for two reasons.

First, Realtek's position on claim construction issues cannot be inferred from an analysis

[redacted]

that Realtek did not present. The analysis on the Starship product contained in the ID is the ALJ's, not Realtek's.

Second, the ALJ's analysis is clearly erroneous because he relied on slides related to ***power***, not ***ground*** wires. ID at 149 (citing CDX-0003C.851-852); Tr. (Souri) at 484:25-485:6 (referring to slide 851, "This slide summarizes the evidence that I rely on, based on the trace-down that I performed from the ***VDD1*** power pad from the top all the way to the silicon device layer") (emphasis added); *id.* at 485:7-14 (referring to slide 852, "Here I am showing the trace-down of the evidence, summary evidence that supports my opinion based on the trace-down that I have performed starting from the ***VDD2*** power pad all the way down to the silicon device layer") (emphasis added). Thus, it was plain error to rely on slides that identify power wires as to incorrectly say that they show the location of ground wires. This type of conflation in real life practice would result in defective chips, as it results in defective determinations in this proceeding. Because the ALJ's conclusion regarding claim 18 is based on clearly erroneous and manufactured evidence, his obviousness finding cannot stand. 19 C.F.R. §210.43(i).

c. The ALJ shifts the burden of proof to Realtek to show the prior art reference is NOT similar to an Accused Product.

AMD completely failed to establish that claim 18 was obvious over Li in view of Jiang by clear and convincing evidence. Notably, in its post-hearing brief, AMD did ***not*** argue that Li Figure 3 (which plainly includes multiple wires and vias) was analogous to Starship. The argument AMD presented in its post-hearing brief was conclusory, and the only testimony AMD relied upon for claim 18 addressed whether the ***power*** wires (not ***ground*** wires) of the local power grid of Li is connected to the power domain and the global power mesh. Tr. (Subramanian) at 969:10-970:22; RIB at 180; RRB at 67.

[redacted]

Realtek argued, in response, among other things, that AMD's testimony was insufficient as a matter of law because AMD provided legally insufficient analysis under Federal Circuit Precedent such as *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327–28 (Fed. Cir. 2012) (rejecting generic conclusory motivations to combine and requiring expert testimony "to explain why a person of ordinary skill in the art would have combined elements from specific references in the way the claimed invention does" and identify "which combination(s) of elements in specific references would yield a predictable result" and explain "how any specific combination would operate or read on the asserted claims"). CRB at 55.

Rather than ruling on the arguments and evidence the parties presented, and requiring AMD to meet its burden of proof, the ALJ appointed himself AMD's expert and lawyer, crafted new arguments and expert analysis, all in an effort to reach his desired result. He latched on to Dr. Subramanian's statement during the hearing, which mischaracterizes Realtek's position on the same ground wire in Starship (ID at 147-148), and which Realtek plainly refuted in post-hearing briefing. CRB at 51-52. AMD did present some slides to support its mischaracterization, but these slides focused on ***one*** layer of the global power mesh and were clearly not Dr. Souri's actual position because AMD was identifying numerous wires and not a single wire. RDX-0002C.68. Because even AMD's position did not support the position the ALJ wanted to take, the ALJ took it upon himself to create the evidence he needed to compare Starship to Li, even though he is not a POSITA. The ALJ even provides his own annotations (green circles) to try to support a position that Starship discloses something similar to Li. *See* ID at 149.

No expert ever performed the analysis the ALJ presents in the ID—i.e., there is no evidence in the record of what the green circles indicate. Yet the ALJ asserts that Realtek does not dispute it and concludes that the limitation is, therefore, met. ID at 150 ("Realtek does not dispute the

[redacted]

similarity between Li's Figure 3 and the accused ground wire in Starship[.]") To be clear: Realtek ***does*** and ***always has*** contended that Li and Starship are ***not*** similar. The "same ground wire" in Starship is *a single wire* identified in CDX-0003C.862. In contrast to Slide 862, Figure 3 of Li discloses 5 different wires on three different layers and includes vias. CRB at 52-53; CIB at 280-281. Realtek was not given an opportunity to address the ALJ's strange and incorrect analysis of Starship because it was provided for the first time in the ID.

The ALJ's entire approach to claim 18 is the epitome of arbitrary and capricious reasoning. The activist approach demonstrated by the ALJ with respect to invalidity here improperly shifts the burden of proof to Realtek to prove its claims are ***not*** invalid based on any possible argument, no matter how specious. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1378 (Fed. Cir. 2016) ("The final written decision is replete with examples where, rather than require McClinton to prove its assertion of obviousness, the Board improperly shifted the burden to Magnum to disprove obviousness."). In order to prevail, Realtek would have had to foresee the ALJ's undisclosed arguments and prepare its case to rebut those unknown arguments. This is plainly inconsistent with the law and an abuse of discretion. 19 C.F.R. § 210.43(ii), (iii).

B. The ALJ Erred Finding Claims 16-17 Obvious By Ignoring Evidence and Failing to Identify a Motivation to Modify the Wiring Structure Disclosed in Li.

The ALJ made two fundamental errors with respect to claims 16-17. ***First***, the ALJ ignores the actual wiring structure at the core power domain of Li despite identifying the Core as one of the two power domains required by the claim. Li discloses that the ground wiring at the core power domain must ***not*** connect to the top level power grid because it is routed through the substrate to switch the power domain on and off. The ALJ's finding to the contrary is clearly erroneous. 19 C.F.R. § 210.43(i).

[redacted]

Second, the ALJ modifies the structure of the wiring at the core power domain but fails to identify any motivation to modify the wiring disclosed in Li or any requisite reasonable expectation of success of such modifications. *In re Stepan Co.*, 868 F.3d 1342, 1346 (Fed. Cir. 2017); *see also In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) ("Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference."). Obviousness requires more than showing that a POSITA ***could*** have modified or combined the prior art to obtain arrive at the claimed invention. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). The ALJ's analysis failed to meet this requirement under any standard, let alone by clear and convincing evidence. This is legal error. 19 C.F.R. § 210.43(ii).

1. The ALJ completely ignores that the Li reference teaches away from coupling a ground wire from an upper power mesh to a power domain by ONLY disclosing a ground path through a lower substrate.

The ALJ conjectures there ***must*** be ground wires in the local power grids that connect to the top level grid. ID at 147-148. But the actual wiring structure shows the complete opposite: that the ground wires of the local grids must ***not*** connect to the top-level grid because the Core has a "different internal ground net for each core [that] is ***separated*** from chip ground by an NMOS switch." JX-0043.00006 (emphasis added). In other words, Li discloses that it provides the internal core ground from the bottom (substrate) and ***not*** from the top-level power grid carrying chip ground, and can be two ***different*** ground potentials. *See, e.g.*, JX-0043.00005. Figure 4 of Li illustrates core ground is connected to the substrate ground through a switch in the substrate:

[redacted]

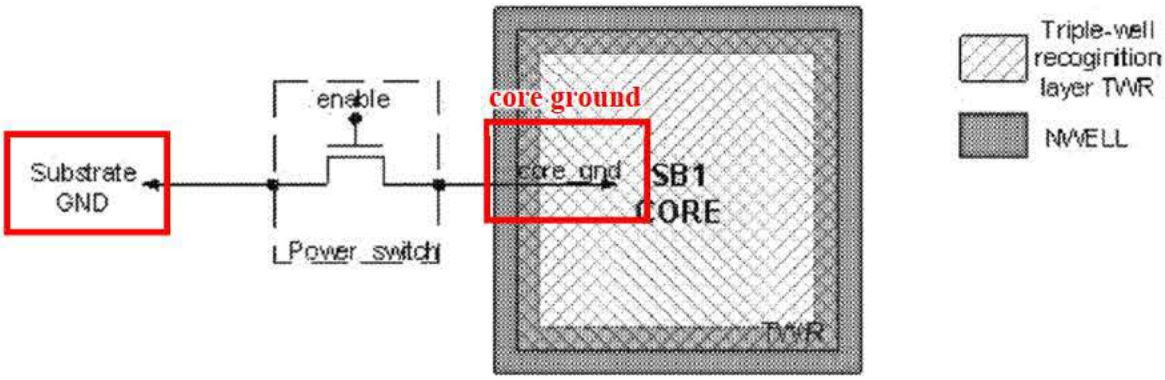


Fig. 4. An SB1 core inside triple-well with power switch.

There are numerous other statements in Li disclosing that the ground of the Core cannot be routed through the global power mesh, for example:

- "the individual cores are electrically isolated from one another as well as the rest of the chip" (JX-0043.00005)
- Core GND is "not globally connected across the entire chip" (JX-0043.00001)
- "multiple ground domains" (JX-0043.00002)
- "different internal ground net for ***each*** core" (JX-0043.00006) (emphasis added)

The unrebutted testimony is that a POSITA would understand that at the Core power domain, Li does not disclose providing a ground path from the global power mesh in Li through a connection to the local power grid, but instead discloses providing ground potential from the substrate. *See*, *e.g.*, Tr. (Souri) at 1298:14-1300:7 (ground provided through substrate in Li); *id.* at 1301:12-1304:3 (a POSITA would understand that ground is provided through the substrate); *id.* at 1306:13-1308:6 (ground wire connection would bypass switch).

Realtek presented unrebutted expert testimony explaining the grounding that is actually disclosed in Li is through the substrate. *See id.* The ALJ ignored these disclosures. Contrary to the actual grounding disclosed in Li, the ALJ found that the ground "must" connect between the local

[redacted]

power grid and the top level grid, when it plainly must ***not*** based on the record evidence. The ALJ's statement that the ground "must" connect between the local power grid and the top level power grid in Li is clearly erroneous and justifies review. 19 C.F.R. § 210.43(i).

2. The ID erred by applying hindsight analysis to modify the substrate ground connections at the first and second power domains in Li to non-existent connections to ground wires in a power mesh.

The ALJ summarily concludes that claims 16 and 17 are obvious in view of Li because "it logically follows" that the wiring, including the ground wires, in the local grids must connect to the top level grid. ID at 148. The actual disclosure of Li recites connecting local logic (or actual circuitry) ***directly*** to the top-level power grid and does ***not*** state that the local grids are also connected as part of the process. JX-0043.0004 ("The local power grids are left floating until final assembly at the full-chip level. At the final stage of the layout design, an in-house automated procedure is applied, connecting local logic to the top-level power grid, to implement a complete full-chip power distribution network."). There is an important reason: the local grid connections are complicated because the ground is provided through the substrate and not the top-level power grid so that the Core can be switched on and off. *See supra* IV.B.1. The ALJ, however, ignored the actual disclosure and applied an improper hindsight analysis to find the connections recited in the claim without any motivation to modify or expectation of success.

As discussed above, the actual wiring of Li does ***not*** have ground wires of the local power grids connected to the top level power grid. *Supra* at IV.B.1; Tr. (Souri) at 1307:8-1308:6. In reaching his conclusion, the ALJ must be modifying Li's actual wiring structure. But the modifications are unsupported by any legally sufficient motivation to modify, a harbinger of prohibited hindsight analysis. *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1361 (Fed. Cir. 2019). "Good ideas may well appear 'obvious' after they have been disclosed, despite having been

[redacted]

previously unrecognized." *Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1297 (Fed. Cir. 2012) (quotations omitted).

The ALJ's motivation to modify the actual wiring structure of Li is simply that "it logically follows" that the inventive connections claimed in the '218 patent are disclosed in Li. ID at 148. But elsewhere in the ID, the ALJ recognized that stating an invention is "straightforward"—which is analogous to his reasoning here—is not sufficient to meet the burden to show obviousness. ID at 137. Specifically, the ID states:

> AMD has not met its clear and convincing burden. Dr. Subramanian fails to present a clear and convincing motivation to include a connective series of ground wires in each mesh. His closest testimony is that this arrangement "is the most obvious way and the most straightforward way to route ground down to the chip." Hr'g Tr. (Subramanian) at 960:5-7. He repeats moments later, "[a]nd even if the ground wire is not explicitly shown in the power mesh, it would have been abundantly straightforward to do. In fact, it is the most obvious way to do it." *Id.* at 960:15-18. Yet calling the arrangement "straightforward" is synonymous with "obvious" and lacks any technical underpinning.

ID at 137. Here, with respect to claims 16 and 17, the ALJ's analysis is similarly legally deficient and the finding of obviousness is legally incorrect.

The ALJ's obviousness analysis for claims 16 and 17 is also legally erroneous because he identifies no reasonable expectation of success in modifying the wiring structure of Li given that the wiring structure of ground has been explicitly shown in Li. The unrebutted testimony shows that modifying the wiring structure would not be successful because it would undermine the operation of the switch. Tr. (Souri) at 1307:8-1308:6. The ALJ simply ignores this requirement, which means that his obviousness analysis of claims 16-17 cannot be correct. *Teva Pharms. USA, Inc. v. Corcept Therapeutics, Inc.*, 18 F.4th 1377, 1383 (Fed. Cir. 2021) ("[W]ithout showing a reasonable expectation of success, Teva did not prove obviousness."); *ActiveVideo*, 694 F.3d at 1327 (requiring evidence of reasonable expectation of success). A modification that changes or

[redacted]

renders inoperable a reference's basic "principle of operation" is legally insufficient to support a conclusion of obviousness. *Plas-Pak Indus., Inc. v. Sulzer Mixpac AG*, 600 F. App'x 755, 758 (Fed. Cir. 2015); MPEP 2143.01(VI) ("THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE[:] If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious."). Because the ALJ legally erred in his obviousness analysis, Li cannot render claims 16-18 obvious. 19 C.F.R. §210.43 (b)(ii).

C. The ALJ Erred Finding Claims 12-13 Are Obvious Over Li Alone or in Combination By Construing Claim Limitations Improperly, Failing to Find all Elements Are Disclosed, and Shifting the Burden of Proof to Realtek.

The ALJ erroneously found that claims 12 and all claims depending from claim 12 are obvious based on three fundamental errors. ***First***, the ALJ was required to construe "first power domain" and "second power domain" when considering the Li reference. But he erred in concluding that the first and second power domains ***do not*** require different power requirements from one another. ID at 130-31 ("[T]he claim permits the first and second power domains having the same power requirement as one another."). At trial, the parties' experts agreed that the recited power domains must have different power requirements. ID at 103; Tr. (Subramanian) at 923:4-924:3; Tr. (Souri) at 554:21-555:14, 1313:12-18. The ALJ had also previously recognized that the power domains in the '218 patent were different. JX-1009. Yet the ALJ determined that the experts and parties were wrong. This was legal error. 19 C.F.R. §210.43 (b)(ii).

In so doing, the ALJ fundamentally altered the scope of the patent to cover the prior art. The entire purpose of the '218 patent is to provide a power routing structure for an integrated circuit with ***multiple*** power domains. *See, e.g.*, JX-0002 at Title ("Power Mesh Arrangement

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Method Utilized In An Integrated Circuit Having Multiple Power Domains"); *id*. at Abstract ("The invention discloses a power mesh arrangement method utilized in an integrated circuit having multiple power domains."). The patent itself acknowledges that integrated circuits with single power domains were well known, and in contrast, this invention is directed to routing power to circuitry with different power requirements. *See, e.g.*, JX-0002 at 1:18-34 (contrasting single power domain chips with a chip in which all circuitry operates at the same voltage sometimes but one portion of the circuitry can enter "sleeping mode" while other portions remain at "normal operating voltage"). The ALJ, however, merges the first and second power domain into the ***one*** single power domain, not the ***two*** that are claimed (*i.e.*, first and second). This error expands the invention to cover the prior art (single power domains), which the patent expressly distinguishes from the claimed invention (multiple power domains). *See*, *infra*, Sec. IV.C.1.

Second, ALJ erred in concluding that elements 12[a] and 12[b] were obvious because he never found all elements were met, *i.e.*, he never found the wiring structure in the first ***and*** second power domains. He only considered the wiring structure in one power domain. The ALJ's legal conclusion that elements 12[a] and 12[b] were met is, therefore, legally erroneous. 19 C.F.R. §210.43(b)(ii); *see also infra*, Sec. IV.C.2.

Third, AMD provided only conclusory arguments and testimony that the elements of the claims were met. The ALJ, however, intervened to fill in arguments for AMD to find obviousness. This practice shifts the burden of proof to Realtek to prove its patents are valid in order to anticipate any unstated reasoning the ALJ may provide in the ID to support invalidity. This is legal error. 19 C.F.R. §210.43 (b)(ii). *See, infra*, Sec. IV.C.3.

1. The ALJ's construction of "first power domain" and "second power domain" reads out the requirement of two different power domains to improperly read on a single power domain.

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Claim 12[a] and 12[b] recite that that the first and second partial local power meshes must correspond to the location of the first and second power domains. The ALJ concluded that the ***first*** and ***second*** power domains may have the same "power requirements." ID at 130-31 ("[T]he claim permits the first and second power domains having the same power requirement as one another."). If all portions of the chip have the same power requirements, then the chip has a single power domain. A single power domain cannot satisfy the "first" and "second" power domain requirement without rendering those terms meaningless.

At the hearing, there was no dispute that the first and second power domains required different power requirements. ID at 103; Tr. (Subramanian) at 923:4-924:3; Tr. (Souri) at 554:21-555:14, 1313:12-18. Further, the ALJ himself had previously held that the power domains had different power requirements. JX-1009. The patent itself makes clear that there are two different power domains. It addresses power routing in chips with "multiple power domains." Power routing for single power domain chips, in which the same voltage was applied to all portions of the chip, was simple, and well-known APR tools could provide power routing for those types of chips. JX-0002 at 1:34-43. In contrast, the '218 patent invented "a power mesh arrangement method utilized in an integrated circuit having ***multiple power domains***." JX-0002 at Abstract (emphasis added); *id.* at 1:13-33 (describing some portion of the circuitry that could operate at the "normal operating voltage" and also enter "sleeping mode" while other portions remain at "normal operating voltage"). The entire disclosure of the patent, including the examples and figures, involve providing two powers, V_{DD1} and V_{DD2}, to two different portions of chip circuitry. JX-0002 at 4:31-36, 5:10-17, 1:12-43, 1:24-25, 3:6-64, 3:56-64, 3:55-64, 4:31-45, 6:16-24, abstract, 1:57-59, 2:1-3, 2:8-13, 2:20-28, 4:25-38, 5:10-29, 6:16-24, claims 1-20, Figs 1-6; CX-2004 at 5; Tr. (Souri) at 1281:3-7, 1283:4-10. In practice, part of the range of voltages associated with each power may

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happen to have the same numerical value at some point in time, but the point of the invention is that, since they are distinct powers carried by separate paths from separate sources (*e.g.*, V_{DD1} and V_{DD2}), they do not have to. Tr. (Souri) at 448:21–450:16; *see id.*

The claim language is also clear that the first and second power domains must be different. The claims require a "first power domain" and "second power domain." The claim uses the terms "first" and "second" to differentiate between two different power domains. By indicating that there is a first and second power domain, the claim requires that the first and second power domain must have different power requirements. *Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1373 (Fed. Cir. 2005) (holding that "first, second, and third" distinguish different claim elements).

The ALJ provides no intrinsic support for his construction. Because the ALJ's construction is erroneous, his resulting obviousness conclusion is incorrect.

2. Li alone does not render Claim 12 or its dependent claims obvious because Li does not suggest a local power grid that corresponds to the location of, and couples to, a first and second power domain (Core and Switch).

The ALJ identifies two power domains present in Li, the Core and the Switch. ID at 139-142 ("And as determined above, 'power domain' is broad and simply means 'a portion of an integrated circuit whose elements have the same power requirement'—a construction met by a portion of the chip that receives and is powered by the same delivered voltage, as in the core (VDD_chip) and switch (VDD_switch) regions of Li."). But, as a result of conflating the power requirements of the first and second power domains, the ALJ does not even endeavor to find the specific wiring structure claimed in elements 12[a] and 12[b] at the Core and Switch power domains. There is no finding in the ID regarding whether the wiring structure at the ***Core*** and ***Switch*** power domain meets the limitations of the claims or renders them obvious.

For example, with respect to elements 12[a] and 12[b], the ALJ's analysis relates to

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whether there is a local grid at ***any*** corresponding circuity. ID at 142 (analyzing claim 12 based on "underlying logical circuitry;"), *id.* at 144 (characterizing the "pertinent combination" as "placing a local power grid above corresponding logical circuitry"); *id.* at 147-48 (analyzing claims 16-17 based on "associated logic block"). There is no regard for what the power requirements are for the circuitry being analyzed. By analyzing only whether there is a local grid with underlying logical circuitry, the ALJ ignores the claim limitations that requires a corresponding location at the first and second power domains (here, Core or Switch). As a result, there is no finding whatsoever that a local grid at the first and second power domain corresponds to the location of and couples to the ***first and second*** power domain. At best, the ALJ analyzed a single power domain. Thus it was legal error to find that elements 12[a] and 12[b] are met. Li cannot render claim 12 or its dependent claims obvious.

3. Li combined with Jiang does not render Claim 12 or its dependent claims obvious because they do not suggest a local power grid corresponds to the location of, and couples to, a first and second power domain (Core and Switch).

The ALJ also considers whether Li in combination with Jiang renders elements 12[a] and 12[b] obvious. The ALJ speculated that "[e]ven if not clearly disclosed, placing Li's 'local power grids' in a location so that they at least partially overlap the ***corresponding logic circuitry*** would have been obvious given Li's teachings and Figure 1 of Jiang which visually demonstrates the concept." ID at 142. The ALJ's obviousness analysis is wrong for at least two reasons.

First, the ALJ's obviousness analysis does not remedy the deficiency of his analysis of Li discussed above. The combination is directed to whether it would be obvious to place a local grid so that there is at least some overlap with its "***corresponding circuitry***," not whether it would be obvious to place the local grid at the location of the first and second power domains (Core and Switch) as required by 12[a] and 12[b]. Thus, there is a complete failure to even address whether

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the combination would meet elements 12[a] and 12[b] as properly construed. To the contrary, whereas the ALJ has identified two power domains in Li (Core and Switch), he has only identified "macros" with all the same power requirement in Jiang. *See infra* at IV.D.1. Under the ALJ's own construction of power domain this would only constitute one power domain. *See id.* Accordingly, not only would such a combination not meet elements 12[a] and 12[b], but combining the structures of Jiang, which is directed at providing a single power to a single power domain, with the two purported power domains and related structures in Li would impermissibly change Li's basic principle of operation, which is legal error. *See Plas-Pak Indus.*, 600 F. App'x at 758; MPEP 2143.01(VI). For this reason alone, the combination does not show elements 12[a] and 12[b].

Second, the ALJ's obviousness analysis is legally erroneous. The ALJ found that the motivation to make this combination comes from Li itself by disclosing "at block level" and Jiang visually discloses the concept. ID at 142-43. The ALJ cites no expert testimony to support this analysis of what "block level" means nor does he cite an expert testimony cited for the motivation to modify. In fact, AMD did not present this motivation to modify and never explained what "at block level" meant. The ALJ created these arguments and explained his speculation as to "at block level" for the first time in the ID on behalf of AMD.

In any event, the motivation identified by the ALJ is clearly erroneous. The ALJ cherry picks "at block level" from a sentence in Li, which when viewed in its entirety actually instructs a POSITA to place the local power grids ***in the local sections***. JX-00043.4 ("The power and ground lines ***in the local sections*** are grided on Metal-2 through Metal-5, on which the local power grids are formed at the block level.") (emphasis added)). Jiang does not demonstrate forming the local power grids "in the local sections." Jiang discloses the opposite: forming the local power grids at every macro. JX-00042.2.

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The ALJ's motivation to modify is also legally insufficient. That Jiang visually illustrates a concept discussed in Li (forming local grids "at block level") is no different than saying the limitation was known in the art, which courts hold is insufficient motivation to modify. *Provisur Techs., Inc. v. Weber, Inc.*, No. 2021-1851, 2022 WL 17688071, at *5 (Fed. Cir. Dec. 15, 2022) ("Even if a person of skill would have this knowledge, it does not necessarily follow that such an artisan would have any motivation to combine the prior art in this manner."); *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) ("Where, as here, the necessary reasoning is absent, we cannot simply assume that 'an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.'"); *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) ("Often, every element of a claimed invention can be found in the prior art. . . . We agree with the district court that Toro provides no explanation or reasoning for concluding that one of skill in the art would have combined these particular references to produce the claimed invention.").

The mere fact that the prior art ***could*** be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification. *In re Butler*, 194 F.3d 1332 (Fed. Cir. 1999); *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992); *In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989); *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984). The ALJ identifies no desirability to modify. Local power grids are needed in Li only in local sections and not at every macro. Space is at a premium in integrated circuits and it would make no sense to add additional grids if they were not needed. Tr. (Souri) at 369:13-370:9.

The lack of a motivation to modify and the lack of any expert testimony from a POSITA at the time of the invention is strongly suggestive of the use of impermissible hindsight bias. *ActiveVideo*, 694 F.3d at 1327 (finding obviousness analysis "fraught with hindsight bias" where

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there was an inadequate motivation to modify and no testimony concerning how to combine the references to achieve the claimed invention). "Precedent recognizes the pitfalls of judicial hindsight exercised at the time of litigation, the Court cautioning in *KSR* that '[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.'" *Outside the Box Innovations.*, 695 F.3d at 1297-98 (Fed. Cir. 2012) (quoting *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007)). The foil to judicial hindsight is the testimony of persons experienced in the field of the invention. *Id.* at 1297. The analysis here was completed by the ALJ, who is not a POSITA, and is not providing evidence at the time of the invention.

The ALJ's obviousness analysis is legally improper for another reason: The ALJ did not find a reasonable expectation of success for the modification. "A party seeking to invalidate a patent based on obviousness must demonstrate 'by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009); *see also Eli Lilly & Co. v. Teva Pharms. Int'l GmbH*, 8 F.4th 1331, 1344 (Fed. Cir. 2021). Here, there is no finding of reasonable expectation of success making the ALJ's finding of obviousness legally erroneous. *ActiveVideo*, 694 F.3d at 1327. Therefore, Li cannot render claims 12 or any of its dependent claims obvious because of the ALJ's erroneous obviousness analysis.

4. By "inferring" that a "block" refers to a logical block of circuitry, the ALJ independently arrived at the conclusion that Li must suggest a local power mesh that "corresponds to" a power domain; a non-sequitor.

It was apparent that AMD's presentation at the hearing was legally insufficient. AMD provided only conclusory expert testimony on critical issues, such as the location of the "local

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power grids" (purported partial local power meshes) in Li in relation to the Core and Switch power domains. Tr. (Subramanian) at 967:3-6 ("So the power domains are there. And it is my opinion that Li shows power meshes to drive this or makes it obvious to use the power meshes to drive this, based on the figure that I showed earlier.") *id.* at 971:4-21 ("And it's 'sections,' plural, which means both the first and second partial local sections are grided on metals 2 through 5.").. The Li reference itself made clear that the local grids were in the "local sections" and the unrebutted expert testimony was that Li did not disclose where those local sections were, especially relative to the blocks. Tr. (Souri) at 1296:14-22 (testifying that the POSITA would understand that the local power grids are only in the local sections and there is "no disclosure of where these local sections are."). AMD had no answer to the unrebutted testimony that the local power grid in Li does not correspond to the location of, or coupled to, the Core and Switch power domains.

Similarly, AMD's proof on the ***ground*** wiring structure of the local power grids in Li was legally deficient. The only testimony provided was entirely conclusory and actually related to connecting ***power*** wires between the global power mesh and the local logic. Tr. (Subramanian) at 969:10-970:22; RIB at 180-181; RRB at 67. Critically, however, AMD completely ignored the actual ***ground*** path in the power domain it identified (Core)—*i.e.*, through the substrate—and not through the global power mesh. *See supra*, IV.B.1.

These fatal deficiencies should have resulted in a finding that AMD did not meet its burden of proof. Yet the ALJ stepped in and filled in arguments and reasoning for AMD in the ID. For example, AMD relied heavily on a statement in Li regarding the local power grids being formed "at block level," but never explained what the term meant. Realtek's expert, Dr. Souri, testified that Li did not explain what the block level means. Tr. (Souri) at 1295:5-1296:22 ("Well, when we look at the Li reference in more detail, there is no discussion of exactly what is the block level. If

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anything, it certainly distinguishes it from the full chip level."). The ALJ, who is not a POSITA, filled in the gaps for AMD in the ID. ID at 142 (speculating "it is fair to infer that 'block' corresponds to a logical block of chip circuitry"). This type of judicial activism effectively shifted the burden to Realtek to prove its patents are ***not*** invalid based on any possible argument, no matter how specious. In order to prevail, Realtek would have had to foresee the ALJ's undisclosed arguments and prepare its case to rebut those unknown arguments. It is legal error for the ALJ to shift the burden of proof to Realtek in this manner and his activism on behalf of AMD is an abuse of discretion.

D. The ID Erred in Finding Claims 12-13 Obvious Over Jiang and/or Jiang2

The ALJ's holding that claim 12-13 of the '218 patent is obvious over Jiang and/or Jiang2 is contaminated by numerous legal errors. First, the ALJ disregards that the claims require a "first" and "second" power domain. In doing so, the ALJ seemingly ignores the actual invention and intrinsic record in order to comport the claim language to the disclosures in Jiang, which is improper hindsight reasoning. This is legal error. 19 C.F.R. §210.43 (b)(ii).

Second, the ALJ erroneously clears the way for AMD by dismissing Dr. Souri's deposition testimony on "power domain" as not admitted, even though the parties jointly submitted it and the ALJ admitted it. This is legal error. 19 C.F.R. §210.43 (b)(ii).

Third, the ALJ interpreted the intrinsic record and construed the term "separately" in Realtek's favor, but then errs by completely ignoring his own construction when analyzing Jiang. This is clear error. 19 C.F.R. §210.43 (b)(i).

Finally, in finding that a combination of the separate embodiments in Jiang renders a two-layer "global power mesh" as required by claims 12-13 obvious, the ALJ relies on his own purported motivations to fill in gaps in the record evidence left by AMD. Moreover, the ALJ

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completely fails to consider or find any reasonable expectation of success necessary to support such a finding of obviousness. This is legal error. 19 C.F.R. §210.43 (b)(ii).

1. The ALJ legally erred in his construction that the first and second power domains can have the same power requirement in order to cover the prior art.

When considering the Jiang references, the ALJ was required to construe "first power domain" and "second power domain." He erred in concluding that the ***first*** and ***second*** power domains may have the same "power requirements." ID at 130-31 ("[T]he claim permits the first and second power domains having the same power requirement as one another."). If all portions of the chip have the same power requirements, then it the chip has a single power domain. A single power domain cannot constitute first and second power domains.

The '218 patent is clear: It addresses power routing in chips with "multiple power domains." Power routing for single power domain chips, in which the same voltage was applied to all portions of the chip, was simple, and well-known APR tools could provide power routing for those types of chips. JX-0002 at 1:34-43. In contrast, the '218 patent invented "a power mesh arrangement method utilized in an integrated circuit having ***multiple power domains***." JX-0002 at Abstract (emphasis added); *id.* at 1:13-33 (describing some portion of the circuitry that could operate at the "normal operating voltage" and also enter describing some portion of the circuitry entering "sleeping mode" while other portions remain at "normal operating voltage"). As shown above, the entire disclosure of the patent, including the examples and figures, involve providing two powers, V_{DD1} and V_{DD2}, to two different portions of chip circuitry. *See supra* Sec. IV.C.1. In practice, part of the range of voltages associated with each power may happen to have the same numerical value at some point in time, but the point of the invention is that, since they are distinct powers carried by separate paths from separate sources (*e.g.*, V_{DD1} and V_{DD2}), they do not have to.

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Tr. (Souri) at 448:21–450:16; *see id*.

Again, the claim language is also clear that the first and second power domains must be different. *See supra* Sec. IV.C.1; *see also Gillette*, 405 F.3d at 1373. At trial, the parties' experts agreed that the recited power domains must have different power requirements. ID at 103; Tr. (Subramanian) at 923:4-924:3; Tr. (Souri) at 554:21-555:14, 1313:12-18. Yet the ALJ determined, without citing any intrinsic or extrinsic support at all, that the first and second power domains are not required to have different power requirements from one another. ID at 130-31.

That construction ignores the requirement of different power domains, as indicated by "first" and "second" in the claims and is therefore incorrect. Because the ALJ misconstrued these terms, he engaged in an incorrect obviousness analysis for the Jiang references. For example, with respect to the ALJ's analysis of Jiang, there is no finding that Jiang has two different power domains, a "first power domain" and a "second power domain." Specifically, the ALJ did not analyze the power requirements of each of Jiang's macros to determine if there is a first power domain ***and*** a second power domain as the claims require. Instead, the ALJ found that each macro of Jiang is a "power domain" even though they have the same power requirements and could be encompassed in a single power domain. ID at 131 ("When all four macros in the embodiment of Figure 1(b) are active, each is a power domain[.]"). The ALJ's failure to examine whether Jiang's macros have different power requirements (and the fact that Jiang teaches only one power VDD) shows that Jiang has ***one*** power domain, not ***two*** as the claims require. JX-0002 at claim 12. Accordingly, the ALJ's claim construction ruling, and his resulting conclusions regarding Jiang, are erroneous. Claim 12 is not obvious in view of Jiang.

2. The ALJ erred by excluding Dr. Souri's admitted testimony on power domain in favor of AMD, despite agreement by the parties to admit the testimony into evidence.

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In erroneously finding that Jiang discloses a first and second power domain as required by claim 12, the ALJ expressly dismissed Dr. Souri's testimony to the contrary, stating that "[t]he cited testimony (JX-0029C) comes from Dr. Souri's deposition and not the evidentiary hearing . . . [and] is therefore not substantive evidence and is not considered." ID at 128. The ALJ's refusal to consider Dr. Souri's testimony is legal error because Dr. Souri's deposition transcript was admitted evidence by the parties' agreement and there is no rule that excludes deposition testimony when properly admitted, as here.

During the pretrial conference, the ALJ admitted into evidence all of "what is on the parties' exhibit lists," other than certain disputed materials, such as expert reports and declarations. Tr. (Pretrial Conference) at 35:3–16; *see also id*. at 35:17–18 ("Exhibits, as submitted by counsel and reflected in the attached index, were received into evidence."); *id*. at 22:7–10 ("So if the parties have agreed that a prior sworn statement from an expert, whether it's a report or a declaration ***or a deposition transcript***, should be admitted, ***I will admit it***.") (emphasis added); Order No. 2 at 21 ("At the pre-trial conference, exhibits to which no party objects will be admitted and identified for the record."). The ALJ further clarified that he admitted all "exhibits that are on the JX list, the CX list, and the RX list." Tr. (Pretrial Conference) at 35:20–36:1. The record leaves no doubt that the parties agreed to the admission of Dr. Souri's deposition transcript and the ALJ did in fact admit it. Indeed, his transcript was included on both party's trial exhibit lists as a joint exhibit (JX). *See, e.g.*, AMD's Final Exhibit Lists and Submission of Final Exhibits, Ex. A at 172; Realtek's Joint Exhibit CBI Index at 3. Accordingly, the ALJ's refusal to consider Dr. Souri's testimony because it was not admitted as substantive evidence is legal error.

3. The ALJ erred by failing to apply his prior construction of "separately" to exclude the same electrical path in order to allow the claims to cover Jiang.

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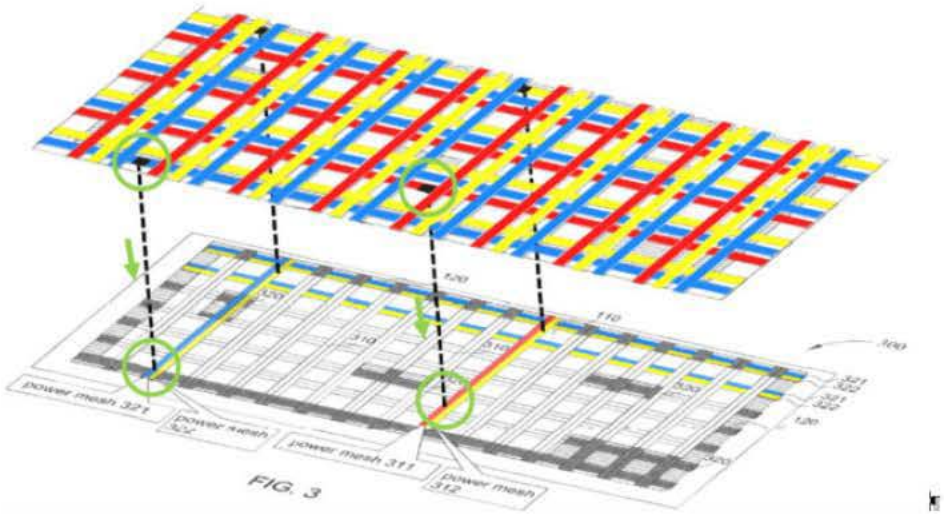
Element 12[C] requires a "global power mesh, coupling to the first local power mesh and the second local power mesh, ***to provide the power*** needed by the first power domain and the second domain ***separately***." JX-0002 at claim 12 (emphasis added). The ALJ had already found, the term requires "separate electrical paths," which must include separate (and not the same) wires within the global power mesh. Nonetheless, when analyzing the global power mesh of Jiang, the ALJ inexplicably found that Jiang's interconnected wiring providing power using the ***same power wire*** can still disclose this limitation. ID at 130-131. This is error. The ALJ's findings on invalidity are inconsistent with the rulings on claim construction. The ALJ's finding ignores the intrinsic record, the intent of the invention, and the structure of the global power mesh.

Realtek asked the ALJ to construe "separately" as part of claim construction to resolve whether a separate path ***in the global power mesh*** was required. ID at 99-102. The ALJ held that the "intrinsic evidence strongly favors a separate-in-space meaning," which means physical separation, and he therefore construed the term as meaning "through separate electrical paths." *Id.* As the reasoning for his construction, the ALJ explained "a single mesh ***cannot*** supply different voltages at the same time unless by different paths." *Id.* at 101 (emphasis added). As discussed above, the ALJ's observation is apt, as supplying separate voltages to different power domains is the entire point of the invention. *See supra* at IV.C.1, IV.D.1.

The ALJ elaborates that separate paths, as is required to provide two different powers, necessarily entails separate wires in the global power mesh: "[t]he patent further refers to voltages V_{DD1} and V_{DD2} as being supplied to the local mesh from ***distinct*** (*i.e.*, ***separate***) ***wires*** 401 and 402 [in the global power mesh]." ID at 100 (citing JX-0002 at 4:31-38) (emphasis added). Those separate wires then couple to the partial local power meshes by separate vias: "The global power mesh 400 is laid on top of the local power mesh 300 and connects to different portions of that mesh

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(*i.e.*, partial local power meshes) through different vertical vias." ID at 100 (quoting and referring to JX-0002 at 5:8-20, Figs. 5, 6). The required separate wires (red and blue, respectively) and vias (black) are illustrated below:



CDX-0023.0005 (illustrating wiring structure contemplated in the '218 patent) (respective coupling of separate wires annotated in green). In other words, "separately" requires different power wires in the global power mesh coupling through different vias to the local power meshes. Otherwise, they "cannot supply different voltages at the same time[,]" which would defeat the purpose of the invention. *Id.* at 101.

Yet in the context of Jiang, the ALJ ignored his own construction and found that the ***same*** power wire in the global power mesh in Jiang is providing power "***separately***." ID at 130-131. The ALJ appears to focus on the "separate vias" between the global power mesh and the partial local power meshes and those between the partial local power meshes and the respective power domains. But, as discussed above, and as the ALJ himself construed, separate vias are not enough: the paths must begin with separate wires in the global power mesh. *See supra* at § IV.D.3. Failing to apply his own claim construction is plain error. The ALJ expressly ruled that "separately" means

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"through separate electrical paths," but he erroneously found that Jiang's use of the same, interconnected electrical path satisfies the "separately" requirement. The ALJ not only ignores his own claim construction but what he admits is the intent of the claimed invention—to supply multiple voltages—which is impossible in Jiang. ID at 102.

By focusing on the vias, the ALJ's finding appears to fixate on the phrase "global power mesh, ***coupling to the first local power mesh and the second local power mesh***" in determining separation. But this misreads the entirety of the limitation—the clause in question is set off from the term "separately" by a comma, which makes it clear that "separately" modifies provide," and cannot be read to modify "coupling":

> "global power mesh, coupling to the first local power mesh and the second local power mesh, ***to provide the power*** needed by the first power domain and the second domain ***separately***."

JX-0002 at claim 12 (emphasis added). Accordingly, the only appropriate analysis is to determine whether power can and is provided separately, *i.e.*, by separate paths. The ALJ's focus on whether the ***vias*** are separate rather than the whole electrical path not only disregards his own construction for "separately," but completely misapprehends the grammar of the claim language. Such a failure to correctly parse the claim language constitutes reversible error. *See TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1258 (Fed. Cir. 2008) ("Because the district court construed the relevant claim language incorrectly, we reverse."); *Credle v. Bond*, 25 F.3d 1566, 1571 (Fed. Cir. 1994) (relying on the placement of commas in construing claim language).

Moreover, by failing to apply the "separately" limitation, the ALJ continues to make the same error discussed above: misconstruing the language "*first* and *second* power domain." *See supra* at IV.C.1; IV.D.1. Indeed, the ALJ attempts to justify his failure to apply "separately" by perplexingly reasoning that the capability to provide two powers "is only relevant if 'power

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domains' are required to have different power requirements from one another[,]" a premise that he claims was rejected based on his construction of "power domain." ID at 130-31. This is legally erroneous. First, the ALJ's analysis completely eviscerates the "separately" limitation. Nothing about the power domain's power requirement can change the "separately" requirement. Second, regardless of how "power domain" is construed, the claim requires a ***first*** and ***second*** power domain. By allowing the ***same wire(s)***, providing the ***same power***, to meet the ***same power requirement*** renders claim 12 obvious, the ALJ impermissibly conflates the first and second power domain and reads the claim to cover a single power domain.

Again, as the ALJ admits, the invention is demonstrably not directed to single power domain power routing and construing the claims in this manner guts the invention. *See supra* at IV.C.1; IV.D.1. As the patent itself explains, power routing in single power domain integrated circuits was known. JX-0002 at 1:37-39. The point of the invention is to provide two powers, V_{DD1} and V_{DD2}. JX-0002 at 1:13-43. While V_{DD1} and V_{DD2} may happen to have the same or overlapping numerical voltage, the power routing structure provides the powers separately. *See supra* at IV.C.1; IV.D.1. The patent exclusively describes providing two powers V_{DD1} and V_{DD2} through separate wiring in the global power mesh. JX-0002 at 5:10-20, 6:8-24, 4:25-40, 3:41-64, 4:43-4, Fig. 4, Fig. 6. The patent does not contemplate that the global power mesh includes the same electrical path to portions of a chip with the same electrical requirement, *i.e.*, a single domain chip.

Again, by the ALJ's own admission, the unrebutted expert testimony on this point confirms that a POSITA would understand that the power is delivered "separately" through a "global power mesh" that has a wiring structure in which it has separate power wires that are capable of providing separate powers to the chip circuitry. CDX-0003C.0027; *see also* CDX-0003C.0012, 24-27, 32; Tr. at 1280:17-1281:1; JX-0002 at Figs. 3-6, 3:1-4:45, 5:9-20, 6:8-24, 6:8-20, 5:54-6:4, claims 1,

[redacted]

12, 15-18, 19. The patent does not contemplate any other form of providing the power needed "separately." Therefore, Jiang cannot render claim 12 obvious.

4. The ALJ erred by applying hindsight reasoning to modify Jiang and shift the burden of proof to Realtek.

Claim 12 further requires that the global power mesh includes horizontal and vertical power supply wires placed on two different metal layers. The ALJ agreed with Realtek that Jiang Figure 1(b) only discloses a global mesh with ***one layer***. ID at 131. Therefore, Figure 1(b) does not disclose the two-layer global power mesh required by Claim 12. The ALJ further correctly observes that Figure 1(b) of Jiang is a different embodiment from Figure 10—on which AMD relies and which appears to show a two-layer mesh of some sort—and agrees with Realtek that "'there is no reason to have two layers to distribute one VDD' which is the only voltage level any mesh within Jiang uses." ID at 132; *see also* Tr. (Souri) at 1286:19–1288:16 (explaining same).

The ALJ erred, however, in finding the limitations nonetheless obvious in light of some combination of the separate embodiments of Figure 1(b) and Figure 10. ID at 132. The ALJ cannot be correct. This finding is inconsistent with his conclusion that Figure 1(b) discloses provision of "one power level at a time [VDD]" and his agreement that "there is no reason to have two layers to distribute one VDD." ID at 130-32 ("Realtek fairly posits that 'there is no reason to have two layers to distribute one VDD' which is the only voltage level any mesh within Jiang uses[.]"). A finding that there is "no reason" to modify the embodiment on which AMD relies is tantamount to a finding that such a modification is not obvious.

Indeed, the ALJ's findings cannot be correct because AMD failed to identify any legally sufficient motivation to modify Jiang's Figure 1(b) or a reasonable expectation of success in doing so. Nonetheless, the ALJ attempts to find motivations in the reference to fill the gaps left by AMD.

[redacted]

The motivations manufactured by the ALJ are nonetheless legally insufficient, but the ALJ also fundamentally errs by excusing AMD's failure to meet its burden to establish obviousness by clear and convincing evidence and improperly shifting the burden to Realtek. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d at 1378 ("The final written decision is replete with examples where, rather than require McClinton to prove its assertion of obviousness, the Board improperly shifted the burden to Magnum to disprove obviousness."). First, the ALJ attempts to rely on isolated statements about the two-layer mesh present in Figure 10 to establish a motivation despite admitting "there [is] ***no apparent need*** for a dual-layer power mesh [in Figure 1(b)]":

4. Gating-effect vs. power-mesh-granularity

In this experiment, we studied the impact of the power mesh granularity on power-gating result. We kept the area of power mesh constant and changed the width of horizontal and vertical segments. Fig.10 shows power meshes of various granularity. We used meshes of several granularities on the same gated system. Fig 11 shows the decap insertion results for such meshes. *MxN* stands for a mesh of m rows and n columns. The y-axis data is normalized to the ungated system. The stable curve implies that if we keep the power mesh area constant, the noise incurred by power-gating does not change much with mesh granularity.



Figure 10. Power mesh granularity

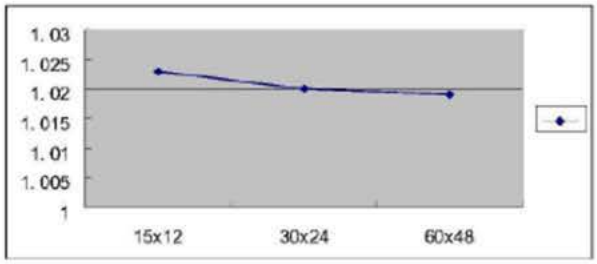


Figure 11. inserted decap

[redacted]

JX-0042.0007. The ALJ then concludes, without analysis, that this description of Figure 10 (and the ensuing Figure 11) is "itself a motivation" for the asserted combination. ID at 133.

This is a legally insufficient motivation to modify. The excerpt is discussing the impact of adjusting the granularity (*e.g.*, the spacing between wires) of a two-layer power mesh—that already exists—and does not at all address why a POSITA would implement a two-layer power mesh ***in the first place***. Therefore, the proposed motivation is nothing more than a disclosure that some embodiments *might* have a two-layer mesh. This is the type of motivation that courts routinely find insufficient. *KSR*, 550 U.S. at 418 ("[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art"); *Provisur Techs.*, 2022 WL 17688071, at *5 ("Even if a person of skill would have this knowledge, it does not necessarily follow that such an artisan would have any motivation to combine the prior art in this manner."). At best, the portion of Jiang that the ALJ points to might provide a motivation to adjust granularity of what is already a two-layer power mesh. But this is wholly irrelevant to the question of what might motivate a POSITA to implement a two-layer power mesh in the embodiment of Figure 1(b). To the contrary, the ALJ admits there is "no reason" to do so in the first place. ID at 132.

The ALJ also makes the irrelevant observation that either the global or the partial local power mesh could be two layers, suggesting that "given that there are only two meshes to choose from, the obviousness case becomes even stronger as a matter of limited options." ID at 133. But this is irrelevant to whether a POSITA would be motivated to modify a specific mesh in the first place. It is only relevant to whether, once a POSITA was motivated (they would not be), ***which*** mesh to modify. Thus, it too is legally insufficient to provide a motivation to modify Figure 1(b)'s purported global power mesh into a two-layer power mesh.

[redacted]

Importantly, AMD never offered any such analysis regarding granularity or made the argument that "there are only two meshes to choose from." The ALJ's reliance on such "motivations" instead appear to be an (unsuccessful) attempt to fill in gaps in AMD's invalidity case. Indeed, the ***only*** motivation AMD actually offers is what the ALJ admits is "***generalized*** testimony" from Dr. Subramanian that, in the abstract and outside the specific context of a global power mesh under the '218 patent, a two-layer mesh is "extremely common" and "the easiest way to do it." ID at 133 (emphasis added). These are exactly the sort of generic motivations rejected by the Federal Circuit, and, further, are highly suggestive of hindsight reasoning. *TQ Delta*, 942 F.3d 1352 at 1361. The ALJ admits as much elsewhere in the ID, determining that stating an invention is "straightforward" is not sufficient to meet the burden to show obviousness. ID at 137. Here, with respect to claim 12, the ALJ's analysis is similar legally deficient and the finding of obviousness is legally incorrect. There is simply no conceivable rationale to support the ALJ's conclusion other than improper hindsight bias.

5. The ALJ further erred by finding obviousness without a supporting finding of a reasonable expectation of success of the hindsight modification of Jiang.

Further, the ALJ erred in finding claims 12-13 obvious based on a combination of the separate embodiments of Jiang because the ALJ did not find a reasonable expectation of success for the modification. "A party seeking to invalidate a patent based on obviousness must demonstrate 'by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *Procter & Gamble*, 566 F.3d at 994 (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)); *see also Eli Lilly & Co.*, 8 F.4th at 1344. Here, there was no finding of any reasonable

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expectation whatsoever making the ALJ's finding of obviousness legally erroneous. ID at 130-133; *Teva Pharms.*, 18 F.4th at 1383 ("In doing so, it ignores the reasonable-expectation-of-success requirement. . . . But without showing a reasonable expectation of success, Teva did not prove obviousness.") *ActiveVideo*, 694 F.3d at 1327 ("To invalidate a patent claim based on obviousness, a challenger must demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so" (quotations omitted)). Therefore, Jiang cannot render claims 12-13 obvious.

V. THE '582 PATENT IS INFRINGED AND VALID, AND THE DI PRODUCTS PRACTICE CLAIMS 1-4.

The ALJ's rulings regarding the '582 Patent reflect fundamental errors in claim construction:

- ALJ construed "corresponding to" to have its plain and ordinary meaning in both the '582 and '218 patents, but applied them vastly differently for each patent.
- ALJ held that the claimed LC circuit containing "a capacitor component" cannot include additional capacitors or capacitor components, even though this is a "comprising" claim, which means additional structures are permitted.

Reversing ***either*** of these errors, under 19 C.F.R. § 210.43(b)(1)(ii) requires overturning the ID's adverse infringement and technical DI rulings. The ALJ additionally made fundamental errors in determining that Qualcomm's RBR1000 product anticipates Claims 1-3:

- The ALJ accepted a 2023 version of the RBR1000 provided by AMD as being the same as the 2007 product identified as prior art—failing to require AMD to show that they are indeed the same. Instead, the ALJ shifted the burden on Realtek to show that they are

[redacted]

different.

- The ALJ disregarded the only expert testimony as to the functionality of a key portion of the LC circuit found in the RBR1000, which is a "secondary coil" providing inductance, simply because the ALJ found it "difficult to believe" that a coil-shaped structure creates inductance. The ALJ again required Realtek to bear the burden of showing that the structure in the prior art reference did provide inductance rather than AMD showing that it does not.
- The ALJ assumes that an alleged prior art chip marked with "0817" must mean that it was produced in the 17th week of 2008 to qualify as prior art, without considering that it could have been made (too late for invalidity) in the eighth week of 2017.

These errors justify review under 19 C.F.R. § 210.43(b)(1)(i)-(ii).

A. The '582 Patent Is Infringed and the DI Products Practice its Claims.

The sole basis for the ALJ's adverse conclusions on infringement and technical DI was his erroneous constructions of "corresponding to" and his erroneous conclusion that each LC circuit can have only one capacitor component. ID at 171-72, 196-97. Both conclusions are contrary to binding Federal Circuit authority. Reversing either of these rulings establishes both infringement and technical DI.

1. The ALJ erred in inconsistently construing the ordinary meaning of "corresponding to."

In construing the term "corresponding to" for the '218 patent, the ALJ recognizes that it should be accorded its ordinary meaning absent a disclaimer or lexicography. ID at 12-13; *id.* at 91 (rejecting "AMD's restrictive construction" of "corresponding to" because there is neither "lexicograph[y]" or "prosecution disclaimer"); *id.* at 94 (same). The ALJ rejected AMD's suggestion that the ordinary meaning requires the "same" shape and position with regard to the

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location of wired meshes in an integrated circuit relative to circuitry located in "corresponding" power domains. ID at 91-92 ("[T]o describe an object's position as 'corresponding' to another object ***is a loose concept***, which falls short of requiring the 'same' position, let alone the 'same' shape that AMD urges.") (citing *Broadcom Corp. v. Emulex Corp.*, 732 F.3d 1325, 1333 (Fed. Cir. 2013) (emphasis added)). In finding so, the ALJ acknowledged that the ordinary meaning of "corresponding to," which in the '218 patent involved conductive wires (power mesh) and circuit components (power domain) only require a "loose" correlation in terms of relative locations.

Similarly, with regard to the '582 patent, the ALJ acknowledged that AMD neither argued that there was lexicography or disclaimer. ID at 157 (noting that AMD relied on "the commonly understood meaning"); *id.* at 166 (noting that "AMD does not allege prosecution history disclaimer"). Despite this, and the ALJ's construction of the same generic term as used in the '218 patent, the ALJ inexplicably held that plain and ordinary meaning of "corresponding to" in the context of the '582 patent requires that "a capacitor component" (a circuit component) must be "substantially limited to the first region" defined by two "extension-conductor segments" (wiring) and the coil-conductor segment (wiring). The ALJ arrived at this self-contradictory conclusion by looking to the prosecution history to apply a pseudo-disclaimer that does not exist.

Disclaimer requires clear and unmistakable intent by the Applicant to surrender the ordinary scope of the term. *See Omega Engr., Inc, v. Raytek Corp.*, 334 F.3d 1314, 1325-26 (Fed. Cir. 2003) ("[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable"). "[T]he standard for justifying the conclusion [of disclaimer] is a high one." *Avid Tech., Inc. v. Harmonic, Inc.*, 812 F.3d 1040, 1045 (Fed. Cir. 2016). Where the prosecution history is ambiguous, or even "amenable to multiple reasonable interpretations," *Cordis Corp. v. Medtronic*

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AVE, Inc., 339 F.3d 1352, 1359 (Fed. Cir. 2003), the Federal Circuit will ***not*** find disclaimer. *Omega Eng'g*, 334 F.3d at 1325 ("[W]e have thus consistently rejected prosecution statements too vague or ambiguous to qualify as a disavowal of claim scope."); *Rheox, Inc. v. Entact, Inc.*, 276 F.3d 1319, 1327 (Fed. Cir. 2002). "The standard for disavowal . . . is . . . exacting." *Id.* at 1366.

The prosecution history here falls well short of supporting disclaimer. During the prosecution of the '582 patent, the Examiner initially rejected the proposed claims over Daley. ID at 159; JX-0009.119. Daley discloses an LC circuit with widely spaced connecting segments of a capacitor 16 (elements 26, 28, 34, and 36, highlighted in red) at either end, and long fingers (Figure 2, elements 30, 32, 38, 40) between them. All parts of Daley's inductor coil completely overlap with its capacitors (Figure 1, inductor 20 and capacitor 16).

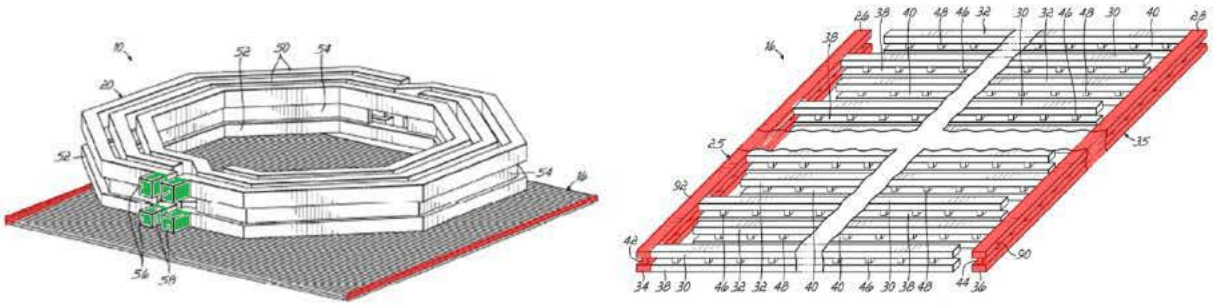


FIG. 2

JX-1017 Figs.1-2 & 2 ¶¶ [0024]. With respect to "corresponding to" the Examiner found that Daley's capacitor arrangement taught "a capacitor component, arranged corresponding to the first region" because there are capacitors "directly below the 'first region'" between alleged extension conductor segments 56 and 58 (highlighted in green, above) JX-0009.119. The examiner explained that proposed claim 5 would be allowable over Daley because the connecting segments are not overlapped by the extension-conductor segments. JX-0009.0121.

The Applicant amended the claims to require that the capacitor component is "configured outwards relative to the coil-conductor segment" as opposed to directly under the inductor coil as

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shown in Daley. JX-0009.132; ID at 160. The Applicant explained that, by "configured outward," it meant that the capacitor component is "substantially un-overlapped with the coil-conductor segment [(the inductor coil)]." JX-0009.0136, 0141. The examiner again rejected the claims, and again said that "corresponding to" was satisfied because some capacitors were "directly below the 'first region.'" *Id.* at .0147. As the ALJ noted, the Examiner did not believe that the claims as written "invoked the negative limitation of 'un-overlaped." ID at 163; JX-0009.0149-.150. The Applicant therefore ***amended*** the claims to require that the coil portion of the inductor not be substantially overlapped with the capacitor component. JX-00009.156. The Applicant also urged that because "capacitor 16" in Daley covers "the *WHOLE* of the inductor 20," it did not satisfy ***a group of claim elements*** consisting of the "un-overlapped" requirement and the "corresponding to" requirement. ID at 164-65; JX-0009.0159-.160.

The ALJ then mistakenly states that "the prosecution continued without further relevant discussion." ID at 165. To the contrary, the prosecution continued with the examiner once again rejecting any assertion that "corresponding to" had a meaning other than its ordinary meaning. The Examiner reiterated that Daley satisfied the loose requirement of "corresponding to" because one or more capacitors were "directly below the 'first region.'" JX-0009.0407. The Examiner *expressly rejected* ***any suggestion*** *that corresponding* is more restrictive, noting that "[t]he claim does ***not*** limit the entire capacitor to be disposed directly below the first region." JX-0009.410 (emphasis added). That is, "corresponding to" only requires a "loose" correlation in relative positions between inductor coils (wires) and a capacitor (circuit component), which does not require a complete or substantial overlap.

Accordingly, the Applicant further amended the claim to move away from using the term "corresponding to" in relation to the positioning of the capacitor to the inductor coil as a

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distinguishing feature and clarified that the distinguishing characteristic between the invention and Daley was the lack of ***any*** substantial vertical alignment between the coil-conductor segment and the capacitor component. JX-00009.0419. In remarks, the Applicant did ***not*** argue that "corresponding to" had a narrow meaning such that it is "substantially limited to" the first region, choosing instead to distinguish Daley because the inventions prohibit substantial vertical alignment between the inductor coil and the capacitor component. The Examiner declined to enter that amendment, so the Applicant further amended the claims to add additional requirements for the capacitor component. *Id.* at .0440-.443. Once again, the Applicant did ***not*** distinguish Daley based on any narrow construction of "corresponding to," but rather on additional requirements for the capacitor component, including a mandatory overlap between a plurality of connecting segments and the extension-conductor segments. *Id.*

The ALJ completely ignored this portion of the prosecution history, summarily discounting it as not "relevant." The ALJ's serendipitous reasoning directly violates Federal Circuit precedent, which requires reading the prosecution history as whole and warns it may be unclear and useless. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) ("[P]rosecution history . . . often ***lacks the clarity*** of the specification and thus is ***less useful for claim construction purposes***.") (emphasis added); *Inverness Med. Switz. GmbH v. Warner Lambert Co.*, 309 F.3d 1373, 1380-82 (Fed. Cir. 2002) (same); *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1580 (Fed. Cir. 1996) (the ambiguity of the prosecution history made it "unhelpful as an interpretive resource" for claim construction). That is why disclaimer requires exacting proof.

Disclaimer is legally unjustified here. There is no clear and unmistakable "expression[ ] of manifest exclusion" of claim scope. *Epistar Corp. v. Int'l Trade Comm'n*, 566 F.3d 1321, 1335 (Fed. Cir. 2009). Throughout the prosecution, the Applicant consistently distinguished Daley by

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arguing that the claimed "capacitor component is substantially un-overlapped with the coil-conductor segment," JX-0009.136, .0149-.0150, .0159-.0160, and that insistence ripened into multiple claim ***amendments*** making that requirement clear. When that, too, was ineffective, the Applicant ***further amended*** the claims to add unrelated requirements. There is nothing clear or unmistakable about statements regarding "corresponding to the first region," and the statements made undeniably were ineffective in changing the Examiner's conclusion that "corresponding to" has its ordinary meaning. At worst, the Applicant's statements are ambiguous regarding restrictions on "corresponding to," and when the prosecution history is "amenable to multiple reasonable interpretations," there can be no disclaimer. *Cordis*, 339 F.3d at 1359. Nothing in the claims of the '582 patent prevents an LC circuit from having a capacitor component that extends beyond the first region. And as the ALJ conceded, the specification expressly teaches a capacitor component that extends beyond the analogous "second region." ID at 156-57 ('582 patent Fig.15). This prosecution history cannot supply a disclaimer, or otherwise justify the ALJ's negative limitation. There is no prosecution disclaimer, and the ordinary and customary meaning of "corresponding to" that does not require the capacitor component to be "substantially limited to the first region," must be adopted. The ALJ's claim construction findings are incorrect and improper.

The ID is clear that there is infringement of all Asserted Claims, and technical DI for all claims, if the capacitor component extends beyond the first region. ID at 171-72. Because this construction is the only basis for the adverse ruling and technical DI conclusion, its reversal establishes both.

2. The ALJ committed a second claim construction error in limiting "a" capacitor component to a single capacitor component.

[redacted]

The ALJ made a second claim construction error. The ALJ ruled that Applicant disclaimed any structure with capacitors or capacitor components beyond those claimed. ID at 172-73. The sole basis for that conclusion was that the claims would otherwise not distinguish Daley because it, too, had "some but not all capacitors in the 'prime real estate.'" ID at 173-74. The ALJ is simply wrong about Daley. The prosecution history involved the distinction between the "substantial overlap" between the capacitor component and the coils of the inductor and not the relative positioning of the capacitor and the extension conductor segment extending out from the coils.

The claims require a "capacitor component" comprising "a plurality of connecting segments" (red in the above image) "respectively overlapped with the two extension-conductor segments" (green in above the image) and a plurality of "electrode segments" extending laterally from those connecting segments. Daley's connecting segments are far outside the first region confined by the extension-conductor segments (as shown in green in the figure on p. 81 above) and not overlapped by the connecting segments. *See supra* p. 81 (showing Daley Figures 1 and 2). Daley does not have the claimed capacitor component.[25]

In contrast, the only evidence in the record confirms that the structures in the Accused Products that Realtek identified as capacitor components are substantially limited to the first region. *See, e.g.*, Tr. (Phinney) at 166:8-14 (explaining why the identified capacitor component is a "component" to a POSITA). There is nothing in Daley that provides a clear and unmistakable surrender of scope to preclude LC circuits with ***additional*** capacitors or capacitor components, some of which may be outside the first region. The only restriction is that there must be no

[25] Daley discloses two capacitor components stacked on one another, but neither satisfies the '582 patent's claims since they both completely overlap with the inductor coils.

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capacitors components substantially overlapped with the inductor coil segments, as in Daley.

The ALJ's construction improperly changes "comprising" claims into "consisting" claims. ID at 156. The term "comprising" is well understood to mean "including but not limited to." *CIAS, Inc. v. All. Gaming Corp.*, 504 F.3d 1356, 1360 (Fed. Cir. 2007); *B.F. Goodrich FlightSystems, Inc. v. Insight Instruments Corp.*, No. C–2–91–0800, 1992 WL 193112, at *9 (S.D. Ohio Feb. 25, 1992) ("Use of the term 'comprised' renders this claim an 'open' claim which ***will read on devices which merely add additional elements*** or steps.") (emphasis added), *aff'd*, 991 F.2d 810 (Fed. Cir. 1993). The ID incorrectly interprets the "comprising" of claim 1 to ***preclude*** the ability to have addition capacitor components, an interpretation that is at odds with "comprising" claims.

It is well understood that patent claims that "use the signal 'comprising,' which is generally understood to signify that the claims do not exclude the presence in the accused device or method of factors in addition to those explicitly recited," are broader than those that use the signal "consisting." *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 811 (Fed. Cir. 1999). The ID notes, but does not address, that the claims of the '582 patent are comprising claims and, therefore, do not preclude the presence of other additional components. AMD does not dispute that the claims are comprising claims. ID at 156 (citing RRB at 74).

The ALJ's incorrect interpretation of the claims effectively replaces the introductory phrase "comprising" with "consisting," and would allow any party to avoid the scope of the claim simply by including additional capacitors that exist beyond the claimed first region. There is no dispute that the Accused Products include a capacitor component (that is, a component that includes one or more capacitors) that is arranged completely within the first region. ID at 173. The dispute AMD raised was whether ***additional*** capacitor components could exist beyond the first region, and whether such a configuration is outside the scope of the claims. The ALJ improperly found that it

[redacted]

would be. Reversing that ruling is a second, independent basis for concluding that Realtek demonstrated infringement and technical DI.

B. The '582 Patent Is Valid.

The ALJ makes two fundamental errors in finding Claims 1-3 of the '582 Patent anticipated by the Qualcomm RBR1000:

- The ID wrongly shifted onto Realtek the burden of proving that the product analyzed is not prior art.
- The ID shifted onto Realtek the burden of proving that a coil within the RBR1000 product is a coil and then rejected the proof Realtek did provide based solely on the ALJ's personal opinion, an opinion contrary to the testimony of both parties' experts.

A proper interpretation of RBR1000 ***or*** an adherence to the proper burden of proof leads to the conclusion that AMD did not prove the '582 patent invalid by clear and convincing evidence. Review is warranted under 19 C.F.R. § 210.43(b)(1)(i)-(ii).

1. There is not clear and convincing evidence that RBR1000 is prior art.

It is undeniable that the ICmasters report (JX-0745) itself is not prior art. It was created in 2023. JX-0745.1. The ID erroneously states that "[t]he evidence demonstrates a clear and convincing case that the RBR1000, as in the model analyzed by ICmasters and compared against the asserted claims in this investigation, was on sale or publicly used before April 16, 2014." ID at 198. There is ***no*** such evidence that the device ICmasters analyzed was on sale or in public use.

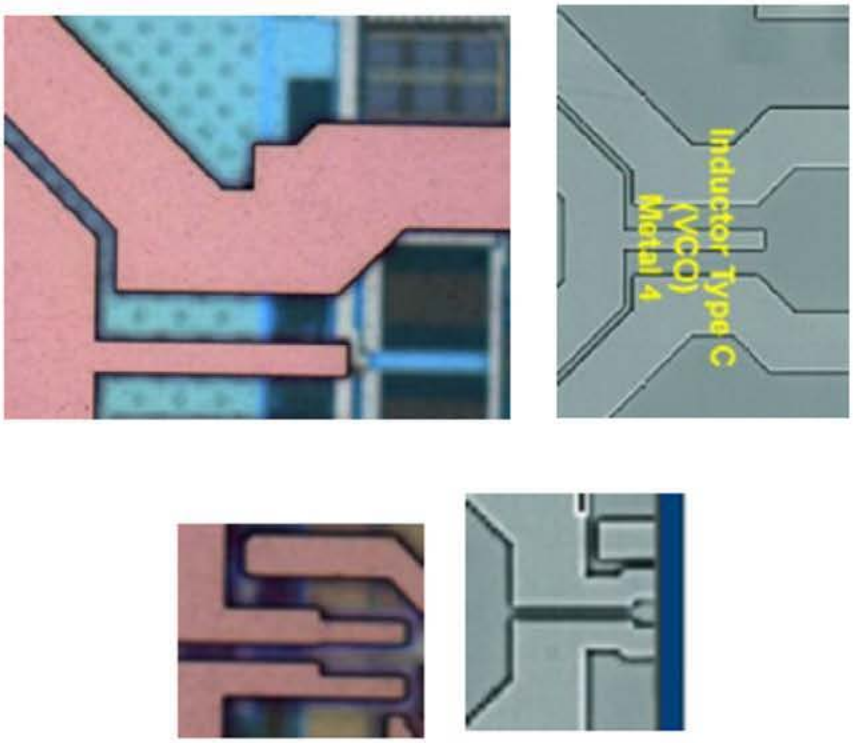
As a result, the ALJ improperly shifted the burden regarding RBR1000 to Realtek that the device was not on sale or in public use before April 2014. The AMD posits that Realtek must show that the RBR1000 chip was "completely concealed by Qualcomm all the way through April 14, 2014—as would be necessary to prevent its status as prior art against the 582 patent." ID at 201.

[redacted]

This is wrong. It is AMD's burden, and it is a heavy burden, to establish that the 2023 version of the RBR1000 ICmasters analyzed, and AMD relied on, was publicly available as of 2014.

a. The RBR1000 AMD applied to the claims is from 2023, not 2007.

A chip having the name "RBR1000" was available in the prior art. However, there is no evidence linking the chip analyzed by ICmasters, in 2023, with any chip that existed prior to 2014. AMD relies upon a 2007 analysis of an RBR1000, which likely would qualify as prior art. However, there is no evidence in the record that the two chips analyzed by two different consultants 16 years apart are the same device, and AMD does not rely on the 2007 analysis for invalidity. ID at 200. Moreover, as the evidence clearly shows, there are structural differences between the RBR1000 available prior to 2014 and the version actually analyzed, as the images below demonstrate:



JX-0745.38 (ICmasters report, images on left); JX-0628.38 (TechInsights report, images on

[redacted]

right)

The ID unreasonably confers prior art status of the 2023 ICmasters chip based on a printed number "0817" on the cover of the chip analyzed in 2023 and based upon AMD's expert's testimony that the four digits could refer to a date code despite lack of personal knowledge of Qualcomm's chip marking procedures. ID at 198-199. To the extent that may be true, AMD's expert's conjecture does not establish whether the chip was manufactured in the 8th week of 2017 (and after the '582 patent) rather than the 17th week of 2008. There is no evidence about when or where this chip was sold, and it is undisputed that it was not obtained and analyzed until 2023. The lack of intellectual rigor in the ALJ's analysis of the "date code" of the chip underscores arbitrary nature of the ID.

The evidence of record is clear that at least two versions of the chip called RBR1000 existed, and there is no attempt by AMD to establish that the chip analyzed by ICmasters is itself a prior art chip. Instead, AMD only identifies marketing literature and sales information that establish nothing more than a product called RBR1000 (which is admittedly different than the product analyzed in 2023) was available prior to 2014. No reasonable fact finder could have found that, based on the evidence of record, that any prior art version of RBR1000 satisfied the claims.

AMD and the ID have identified no evidence tying the 2023 ICmasters chip, which is the only chip on which cross-sectional analysis was performed or relied upon by AMD, to the earlier chip even though such tying is a necessary step to attempt to map any prior art product to the claims of the '582 Patent. Instead, AMD simply identified a chip in the prior art time that was referred to as RBR1000, and ***a demonstrably different chip*** from 2023 that is not prior art was also referred to as RBR1000, and concludes that the 2023 version of the chip must be prior art. As a matter of law, such evidence cannot satisfy AMD's clear and convincing evidence burden.

[redacted]

b. The ID improperly shifted the burden of proof to Realtek.

The ALJ based the conclusion that the 2023 chip is prior art on the erroneous requirement that Realtek must come forward with evidence showing that Qualcomm concealed the RBR1000 chip to "prevent its status as prior art against the 582 patent." ID at 201. That reasoning improperly presumes that the 2023 RBR1000 is prior art, and places the burden on Realtek to identify evidence that Qualcomm concealed the product from 2008 through 2014. This is not the case. Realtek need not undertake any efforts, the burden to establish RBR1000 as prior art always sits with AMD, and this burden is high—clear and convincing evidence.

The ALJ further erroneously says that "***Realtek*** has not otherwise explained why the differing contours might make a difference to the claims." ID at 201 (emphasis added). It is immaterial whether the undeniable differences between the product available prior to 2014 and the product from 2023 that AMD tested "might make a difference to the claims." The facts are plain that the product that ICmasters analyzed is different than the product TechInsights analyzed. It is AMD's burden, and a high burden at that, to establish that a prior art product both is prior art and meets the claims of the '582 patent; at no point does the burden shift to Realtek. AMD did not offer testimony from Qualcomm or provide any other evidence to confirm that the pre-2014 chip matched the structure of the 2023 chip. No reasonable fact finder could conclude AMD met its burden.

2. RBR1000 has a secondary coil that overlaps the capacitor component, precluding anticipation.

The ALJ's finding that the secondary coil of RBR1000 is actually an extension-conductor segment, ID at 215-17, is not supported by ***any*** evidence of record. Dr. Phinney plainly explained that the shape and size of the Secondary Coil of RBR1000 demonstrated that it was a fundamental

[redacted]

part of the designed inductance of the inductor. The RBR1000 thus had the same design as Daley and other prior art products, with the capacitor component substantially overlapped with a coil-conductor segment. AMD did not offer any testimony from Qualcomm stating that the Secondary Coil did not contribute to designed inductance of the RBR1000, and there is no opinion testimony from AMD that the Secondary Coil does not contribute to designed inductance. Nonetheless, without any evidentiary support, the ALJ casts aside the evidence of record in favor of inferences unsupported by any actual evidence.

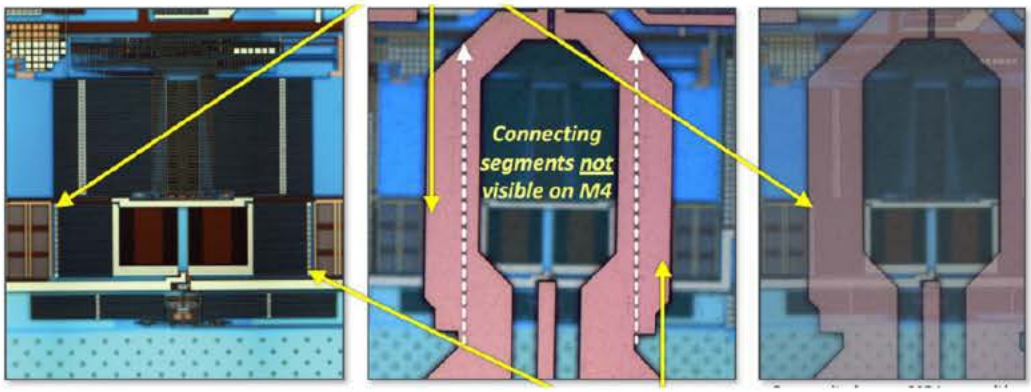
The only record evidence on point shows that the shape of the secondary coil of the RBR1000 is expressly designed to create inductance as shown by "its size and particularly its – the size of its inner window," as well as "its shape," which is "quite similar to the window size and trace side of the adjoining two-turn coil." Tr. (Phinney) at 1274:24-1275:3. Dr. Phinney went on to explain that the size and shape, especially in comparison to the other coils, "tells me that it contributes significant inductance and was designed to have low Q [*i.e.* Quality rating]." *Id.* at 1275:4-7. Dr. Phinney also explained that the design—which was common in the prior art—was problematic. *Id.* at 1248:13-1249:5. This was the only testimony in the record regarding the operation and function of the Secondary Coil and why it rendered the RBR1000 different than the prior art. The ID erroneously dismissed this evidence, made three factual findings and one legal conclusion, none of which are rooted in any evidence in this proceeding, and each of which is infused with legal error. ID at 216-217.

a. The comparison of RBR1000 to the DI Products is unpersuasive.

The ID first states that the [redacted] "bear the same hallmarks as the DI products" with

[redacted]

regard to their [redacted] ID at 216.[26] This is entirely different than the design of the secondary coil of RBR1000. RBR1000's secondary coil has no change in direction where any capacitor is (and indeed could have been made entirely straight, approximately along the white dotted line below) and still travel over the top of each white connecting segment.



ID at 212 (citing RIB at 227-228 (citing Hr'g Tr. (Prucnal) at 1041:19-1043:22; RDX-0004.27, 28; JX-0745.16, 31, 33)). Unlike in the DI products, there is no effort in RBR1000 to maintain a [redacted].

The ID cites no evidence from Qualcomm regarding any design decisions made as it relates to the RBR1000; no such evidence exists in the record. Instead, the only evidence is the testimony from Dr. Phinney that the shape confirms it is a coil, and Dr. Prucnal confirming that the loops of the inductor provide inductance. Tr. (Phinney) at 1247:3-1249:5 ("It is an intentionally designed part of the inductor component"; "it was designed to add inductance"; "It's approximately the same width as the primary coil."); Tr. (Prucnal) at 1135:8-10 ("the inductance of the loop [of an

[26] This DI products' design ensures that a [redacted] while also ensuring the [redacted] ID at 188 (citing CIB at 340 (citing CPX-0179.2C; CPX-0194C); *see* CDX-0002C.331; Hr'g Tr. (Phinney) at 205:7-206:15).

[redacted]

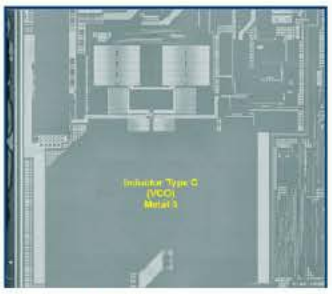
LC circuit] is the primary source of inductance in the LC circuit").

Moreover, even if RBR1000 is expressly designed to match the capacitors below (which, as set forth above, is not the case), this is entirely consistent with the specification of the '582 patent, confirming that the prior art (such as RBR1000 or Daley) had ***inductor coils*** that overlapped capacitors below. As discussed below in Section VI.C.3, the ALJ disregards this in favor of his own personal opinion. Accordingly, no reasonable fact finder could find, by clear and convincing evidence, that the RBR1000 secondary coil is not a coil and that it is instead an extension-conductor segment.

b. The TechInsights Reports are unreliable and insufficient to meet a clear and convincing evidence burden.

The ALJ posits that because the TechInsights report states "Turns: 2.0"; RBR1000 does not also include a secondary coil as part of the coil-conductor segment. This completely ignores the expert opinions that the TechInsights report on which the ALJ relied is clearly erroneous. For example, the portion of JX-0628 that the ALJ relies upon for the "Turns: 2.0" statement incorrectly states that there is an Underpass on M3 and M2:

Octagonal Symmetric Center Tap
Turns: 2.0
Width: 51.8u
Spacing: 8.0u
OD: 400.0u x 400.0u
Layers: M4 - Windings,
M3 & M2 - Underpass,
M4 - Center Tap
PGS: None
Type: C

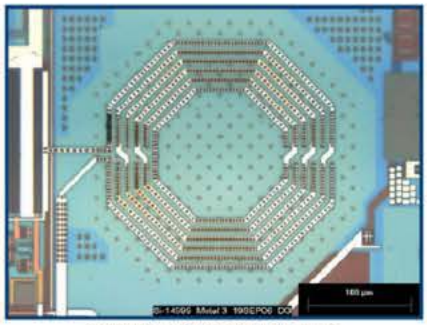


Photograph 2.3.10: SEM image of inductor type C- metal 3.

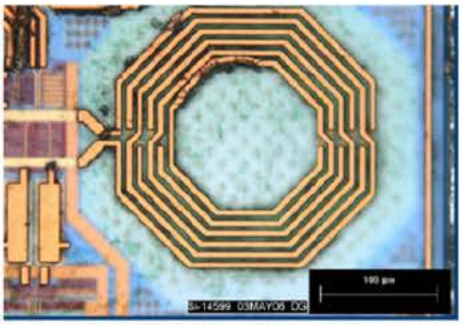
JX-0628.80 (left, showing the erroneous M2 underpass identification); JX-0628.0031 (right, showing the only underpass of TechInsights on M3). There is no evidence of any underpass on M2—the only underpass appears on M3. Dr. Prucnal, under no uncertain terms, confirmed this

[redacted]

error. Tr. (Prucnal) at 1126:11-1128:2 (confirming that he can't connect the TechInsights report to the ICmasters analysis). Further, the TechInsights report for the RFR6122 product indicated TechInsights improperly interpreted two plainly different inductors as the same. JX-0265.31 (depicting two different metal structures as both being "Inductor type 3"):



Photograph 2.3.12: Inductor type 3 – metal 3.



Photograph 2.3.11: Inductor type 3 – metal 4.

TechInsights reports and their identifications of metal layers and circuit components are replete with errors, rendering them unreliable to establish a clear and convincing burden. The ALJ did not address the evidence in the record that undercuts the reliability of the TechInsights report, which makes it impossible to satisfy the clear and convincing evidence standard.

Even if the "Turns 2.0" statement were correct, it only means that the primary coil has at least two turns in a primary coil; it does ***not*** mean there is no secondary coil. Moreover, since there is no electrical analysis done on this element,[27] there is no way to conclude that the secondary coil is not coil but rather extension-conductor segments, as the ALJ speculated. These TechInsights reports are not sufficient to establish anything about the secondary coil to a clear and convincing burden standard.

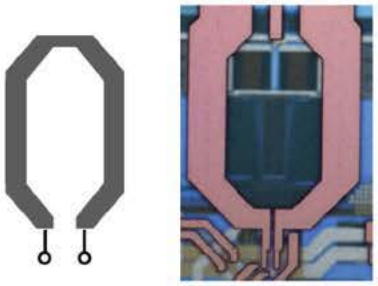
c. The ALJ's personal opinion, that is at odds with the evidence of record, is not a basis to find a clear and convincing burden met.

[27] As discussed in Section c below, the ID improperly shifts this analysis burden to Realtek. *See* ID at 217.

[redacted]

The ALJ incredulously states that, contrary to Dr. Phinney's expert opinion and basic rules of electrical engineering, "it is difficult to believe the extension segments are intended and do create an inductance as windings just based on appearances." ID at 216. The ALJ has, effectively, replaced unrebutted expert testimony (corroborated by record evidence) with his own subjective beliefs, when finding in AMD's favor on an issue that requires a clear and convincing evidence burden of proof. This is itself improper as it again appears to assume that AMD has already won, and then disregards Dr. Phinney's expert testimony because the ALJ finds it "difficult to believe." Notably, it is undeniably accurate that the secondary coil's shape, extending outward, across, and back inward, creates significant, additional inductance. Tr. (Phinney) at 1247:3-1249:5. This is further confirmed by AMD's expert, Dr. Prucnal. Tr. (Prucnal) at 1135:8-12 (confirming that inductance from all loops contribute to the design, and "would be taken into account."). Dr. Phinney's conclusion is supported by the other evidence in the record advanced by AMD, including Niknejad (JX-0175).

Niknejad explains that it "prefers to also bend the front of the line" in an inductor shape, noting that it "very much resembles a ring inductor, showing a close connection between transmission lines and ring inductors" (JX-0175.25-26) when it explains that the shape of the secondary coil of RBR1000 is indeed an inductor. The images from Niknejad and the RBR1000 product are substantially identical:



Compare JX-0175.26 (left) with JX-0745.11 (right).

[redacted]

The ALJ compounds the error of unsupported speculation by using hindsight in suggesting that the benefits of the invention of the '582 patent must have been the motivation for the structure of the prior art. The invention of the '582 patent is to solve the problems that circuits such as RBR1000 had (*e.g.*, the presence of capacitors substantially overlapped by coil-conductor segments). The ALJ concludes that because Dr. Phinney explained that the benefits of the '582 patent identified and solved a problem, the prior art should be interpreted consistently with the teachings of the '582 patent. ID at 216-217. Based on this reasoning, the ALJ concludes that it is "less likely that the extensions [the secondary coil] contributes to inductance." This is false.

The prior art includes capacitors having coil conductor segments that overlapped the capacitor component (*e.g.*, RBR1000 (if prior art) and Daley). The '582 patent explains that part of its invention is the recognition of the problems associated with these designs and the moving of the capacitor component apart from the coil-conductor segments, such that "the capacitor component is not substantially overlapped with the coil-conductor segment." The ALJ suggests that the prior art RBR1000 also recognized and had solved this problem. ID at 217 ("the [RBR1000] primary coil's plain background demonstrates appreciation and intentional avoidance of this problem"). There is no evidence that this is the case. The ALJ, without any evidence, uses the problem and solution identified ***by the '582 patent*** to interpret the reasons the alleged prior art RBR1000 design choices. This is an unsupported factual finding based only on hindsight.

In making this conclusion, the ALJ disregards the coil-shape of RBR1000 because "it is difficult to believe" the coil shape causes inductance (in the face of both experts and other documentary evidence such as Niknejad, all agreeing that such a coil shape causes inductance) and assumes, without evidence, that the same problems and solutions of the '582 patent were identified and implemented in the RBR1000 product. There is no support in the record for such conclusions.

[redacted]

Decades of Federal Circuit precedent confirms that the ALJ's reasoning is erroneous. *SRI Int'l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985). The Federal Circuit ensures that the exercise of defining the scope of the patent is *not* infected by notions of where the case is going. Similarly, the prior art should not be interpreted to have already obtained the very benefit the patent identifies. That is precisely what the ALJ did here, which is legally erroneous.

Moreover, the ALJ incorrectly shifts the burden to Realtek regarding RBR1000 by stating "Dr. Phinney provides no technical explanation or experimental results as to why the segments do so contribute." ID at 217. This is incorrect. Dr. Phinney provided technical testimony that the shape does cause inductance, and other evidence in the record (such as Niknejad) confirms that fact. To the extent any experimental results are necessary to show that the secondary coil does not contribute to designed inductance, AMD bears that burden, and it is a burden AMD has not met.

It was not until the '582 patent's invention that this relative placement of coil conductor segments and capacitor components came to be. The RBR1000 is not anticipatory.

d. The improper construction of "not substantially overlapped with the coil-conductor segment" does not support the ALJ's conclusion.

The ALJ's last basis for his conclusion is an improper claim construction. In this portion of the ID, the ALJ assumes that Realtek is correct that the secondary coil is, in fact, a coil. ID at 217. The ID then construes the claims to allow the secondary coil to completely overlap the capacitor component: "even if a 'sister coil' existed, it is irrelevant when a separate 'coil-conductor segment' exists with no overlap." ID at 217. The ALJ misreads the claim language by failing to credit its negative limitation. The claim expressly prohibits substantial overlap between the capacitor component and the coil-conductor segment. By using "a," the claim permits one or more coil-conductor segments. But ***every one*** of the coil conductor segments must adhere to the negative

[redacted]

limitation. *In re Varma*, 816 F.3d 1352, 1362 (Fed. Cir. 2016) ("'Comprising' means that the claim can be met by a system that contains features over and above those specifically required . . ., but only if the system ***still satisfies the specific claim element requirements***[.]") (emphasis added). The claim permits multiple coil-conductor segments but prohibits ***all*** overlap with the capacitor component.[28] It does so because the '582 patent is designed to reduce phase noise and parasitics due to the prohibited overlap. As Dr. Phinney explained, substantial overlap between the secondary coil and the capacitor components ***perpetuates*** that problem of the prior art. ID at 216-17.

Notably, the ALJ's reasoning in this section of the ID is inconsistent with his conclusion that all capacitor components of the LC circuit must be substantially limited to the first region. ID at 173-74. In order to find no infringement, the ALJ ruled that the capacitors in an LC circuit must be seen as one capacitor component and must satisfy all limitations. In contrast, when straining to find invalidity of the '582 patent, he concludes that there can be many coil-conductor segments, and they do not all need to satisfy the claim language. The ALJ's rulings regarding the coil-conductor segment are incorrect, as shown, but it is telling that they are also inconsistently applied.

VI. THE ALJ ERRED IN IMPOSING SANCTIONS ON REALTEK.

The ALJ committed three errors in awarding "nominal" sanctions against Realtek:

- ***First,*** the ALJ wrongly punished Realtek while excusing more egregious AMD conduct;
- ***Second,*** the ALJ wrongly awarded sanctions for errors involving irrelevant documents;
- ***Third***, the ALJ improperly sanctioned Realtek for actions of its outside counsel.

Each of these errors justifies review under 19 C.F.R. § 210.43(b)(1)(i)-(iii).

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[28] This construction (ID at 217) also is completely at odds with the claim construction adopted regarding capacitors. Here, the ALJ says that the claims are satisfied if there is at least one coil-conductor segment not overlapping the capacitor component. But for capacitors, he says that every capacitor must be within the first region.

[redacted]

A. The ALJ Improperly Held Realtek to a Double Standard.

In the 1318 Investigation, which likewise involves a dispute between Realtek and AMD, AMD produced a requested license agreement on the Saturday before the Monday start of the trial. Decl. of Theodore J. Angelis ISO Compl. Realtek's Response to Respondent AMD's Mot. for Sanctions at 3 ¶ 13 (Oct. 10, 2023) ("Angelis Sanctions Decl.") (included as Ex. H to Realtek's Opposition); Hrg. Tr., Inv. No. 337-TA-1318 at 1146.4-1156:17 (Mar. 16, 2023) ("[T]he Saturday night before trial began . . . Complainants produced a license agreement."). The ALJ did not award sanctions there. Here, in contrast, AMD says it learned (on September 22, 2023), about a month before trial, about public documents from prior litigation involving the License Agreement. AMD Mot. for Sanctions at 2.[29] AMD was able to use those documents to pursue its unsuccessful collateral estoppel defense, which is the only issue to which those documents were relevant. ID at 5. More fundamentally, as Realtek only later discovered, AMD's motion for sanctions was predicated on untrue representations. AMD was fully aware of the Delaware litigation even as it told the ALJ to the contrary. *See* Realtek's Resp. to AMD's Resp. to Order No. 42 (Nov. 28, 2023). The ALJ held Realtek to a different standard than AMD, without explanation of why the two cases were addressed so differently, which is arbitrary and capricious action as a matter of law. *Westar Energy, Inc. v. F.E.R.C.*, 473 F.3d 1239, 1241 (D.C. Cir. 2007). In addition, the ALJ failed to consider that AMD's representations were not truthful. The Commission should vacate Order 39.

[29] Once Realtek learned that AMD (at least purportedly) did not know of the prior Delaware litigation, it made extensive efforts to try to obtain for AMD ***unredacted*** versions of the pleadings from that litigation, which it did not have. Angelis Sanctions Decl. ¶¶ 1-2. Broadcom finally made those documents available AMD, even though it should have produced them earlier. *Id.* at 2.

[redacted]

B. The ALJ Improperly Imposed Sanctions for Discovery Errors Regarding Irrelevant Documents.

In the 1318 Investigation, AMD's primary defense was that the license agreement not produced until just before trial was tangential. Here, the prior Delaware litigation was not even tangentially relevant. The ALJ correctly determined that the prior litigation was dismissed on jurisdictional grounds with no rulings regarding any substantial issue in this Investigation. ID at 3-5. Mistaken failure to provide irrelevant public documents cannot support sanctions.

C. Any Sanctions Should Have Been Awarded Against Realtek's Outside Counsel.

Commission Rules generally instruct ALJs to focus upon the party who "made the certification." 19 C.F.R. § 210.27(g)(3). Imposing a sanction on the non-signing party requires some evidence of culpable conduct. *Optronic Techs., Inc. v. Ningbo Sunny Elecs. Co.*, 2020 WL 2838806 (N.D. Cal. June 1, 2020). The papers and Order No. 39 both demonstrate that the prior Delaware litigation was not identified in discovery responses because Realtek's counsel misread the discovery requests. It is arbitrary and capricious, and against Commission policy, to hold Realtek responsible for the errors that occurred without a finding of responsibility. If the Commission upholds the nominal sanction, it should outside counsel to pay, rather than Realtek.

VII. THE '245 PATENT

Realtek alleged a violation of Section 337 arising from infringement of three patents: the '245 patent, the '218 patent, and the '582 patent. In the interest of streamlining issues for the Commission, and in light of the lack of issue preclusion arising from the Commission's rulings, Realtek is not addressing the ALJ's errors related to the '245 patent. ID at 25-82. Realtek will address the patentability of the '245 patent in the pending PTAB and U.S. District Court actions.

VIII. CONCLUSION

Realtek respectfully asks the Commission to grant its petition for review.

[redacted]

Dated: February 2, 2024

Respectfully submitted,

/s/ *Theodore J. Angelis**

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[redacted]

**All sections related to disqualification and legal ethics are presented by ethics counsel: Sall Spencer Callas & Krueger.*

Counsel for Complainant Realtek Semiconductor Corporation

CERTIFICATE OF SERVICE

I hereby certify that copies of the forgoing, COMPLAINANT REALTEK SEMICONDUCTOR CORPORATION'S PETITION FOR REVIEW OF THE ADMINISTRATIVE LAW JUDGE'S INITIAL DETERMINATION, has been served upon the following parties as indicated below on this 2nd day of February 2024.

Lisa R. Barton Secretary to the Commission U.S. International Trade Commission 500 E. Street, S.W. Washington, D.C. 20436	[X] EDIS Electronic Filing [ ] Via Hand Delivery [ ] Via Overnight Carrier [ ] Via Electronic Mail [ ] Via U.S. First Class Mail
The Honorable Cameron R. Elliot Administrative Law Judge **U.S. International Trade Commission** 500 E. Street, S.W., Room 317 Washington, DC 20436 Email: Michael.Turner@usitc.gov	[ ] Via Hand Delivery [ ] Via Overnight Carrier [X] Via Electronic Mail [ ] Via File Transfer Protocol (FTP) [ ] Via U.S. First Class Mail
Brian E. Ferguson Winston & Strawn LLP 1901 L Street, N.W. Washington, D.C. 20036-3506 Phone: (202) 282-5000 Fax: (202) 282-5100 Email: BEFerguson@winston.com Email: AMD-Realtek-ITC@winston.com	[ ] Via Hand Delivery [ ] Via Overnight Carrier [X] Via Electronic Mail [ ] Via File Transfer Protocol (FTP) [ ] Via U.S. First Class Mail
David F. Nickel John F. Presper FOSTER, MURPHY, ALTMAN & NICKEL, PC 1150 18th Street NW, Suite 775 Washington, D.C. 20036 Phone: 202-822-4100 Fax: 202-822-4199 Email: FM-AMD-1350@fostermurphy.com	[ ] Via Hand Delivery [ ] Via Overnight Carrier [ ] Via Electronic Mail [ ] Via File Transfer Protocol (FTP) [ ] Via U.S. First Class Mail

/s/ *Perry C. Brooks*
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CERTIFICATE OF SERVICE

I hereby certify that copies of the forgoing, Complainant Realtek Semiconductor Corporation's Petition for Review of the Administrative Law Judge's Initial Determination, has been served upon the following parties as indicated below on this 29th day of February 2024.

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The Honorable Cameron R. Elliot Administrative Law Judge **U.S. International Trade Commission** 500 E. Street, S.W., Room 317 Washington, DC 20436 Email: Michael.Turner@usitc.gov	[ ] Via Hand Delivery [ ] Via Overnight Carrier [X] Via Electronic Mail [ ] Via File Transfer Protocol (FTP) [ ] Via U.S. First Class Mail
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