UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.
and APPLE INC.
Petitioners,

v.

MARLIN SEMICONDUCTOR LTD.,
Patent Owner.

Case No. IPR2025-00864
U.S. Patent No. 9,184,292 B2

DECLARATION OF JOSEPH C. MCALEXANDER III REGARDING PATENT OWNER'S PRELIMINARY RESPONSE FOR *INTER PARTES REVIEW* OF U.S. PATENT NO. 9,184,292

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Exhibit	Description
2002	Peter Van Zant, *Microchip Fabrication, A Practical Guide to Semiconductor Processing*, (4th ed. 2000)
2003	Webster's Dictionary, "contact"

I. Qualifications

1. I am a Registered Professional Engineer (#79454) and the President of McAlexander Sound, Inc. I hold a Bachelor of Science degree in Electrical Engineering from North Carolina State University. I have been associated with the integrated circuit and electronics industry as a designer and consultant for the past 53 years and am a named inventor on 31 U.S. patents and a number of foreign patents, many of which are directly related to the design and operation of transistors and circuits incorporating transistors, including control, addressing, comparing and sensing, and fabrication.

2. My skills and experience are in areas of circuit design and analysis, device and board fabrication and assembly, testing, marketing, control system design and analysis, manufacturing operations, and respective areas of quality, reliability, and defect/failure analysis. Specifically, I have:

- designed memories, including Dynamic Random Access Memories (DRAMs), Static Random Access Memories (SRAMs), Charge Coupled Devices (CCDs), Shift Registers (SRs), and functional circuits including I/O buffers for address and data, decoders, clocks, sense amplifiers, fault tolerant (incorporating both non-volatile EPROM and random access memory components), parallel-to-serial data paths for video applications, level shifters, converters, pumps, and logic, as well as wireless communication systems and MEMs;

- managed operations including engineering, training, and quality assurance for device fabrication, assembly, test, analysis, and reliability assessment, as well as manufacturing control, each of which involved both volatile and non-volatile memory; testing,

analysis, and control involved use of mechanical calibration and measuring equipment, including optical, scanning e-beam, IR, capacitive, and laser using phase contrast and FFT for HARI applications;

- taught courses in solid-state device physics, integrated circuit design, integrated circuit fabrication, and statistical control;

- provided expert services, investigating both process and design technologies of various devices (microprocessor and controller, volatile and non-volatile memory, programmable logic, card, tag, module, mixed signal, custom, and other), systems (PC and peripheral, computer, control, laser measurement, switch, architecture, software, and other), and consumer products (medical, TV, telephone, VCR, facsimile, copier, lighting, game, and other); and

- designed and managed development, testing, and evaluation of memory devices and systems incorporating such devices, including simulation of operation. I have also had experience in programming, erasing, and wearout of electrically programmable and erasable non-volatile memories.

3. Because of my background, training, and experience, I am qualified as an expert to opine on the challenged patent. A more detailed account of my work experience and other qualifications is listed in my Curriculum Vitae attached to this declaration.

II. Materials Considered

4. In preparing this declaration, I have reviewed the Petition and the declaration of Petitioner's expert, as well as the material that they cite, including the asserted prior art.

III. Semiconductor Transistor Technology Primer

5. The following is a brief primer of semiconductor transistors to establish a foundation of common terms and concepts that can be used in addressing the defects in the Petition. These terms and concepts focus on: (1) the basic components of transistors; (2) the difference between planar and three-dimensional (e.g., fin) transistors; and (3) common process steps for creating transistors.

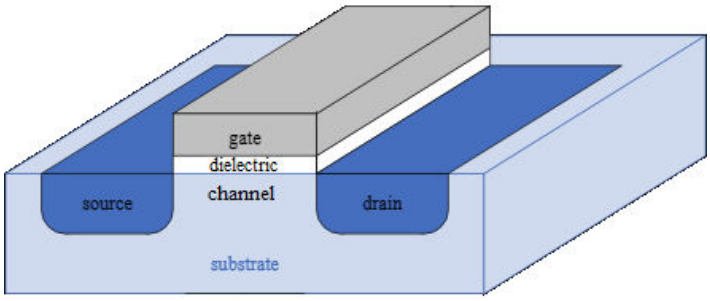
A. Basic Transistor Components

6. Today's semiconductor devices trace their lineage back to the first computers of the 1940s, which used vacuum tubes to perform two key electrical functions: switching (i.e., turning electrical current on and off) and amplification (i.e., increasing the amplitude of a signal while retaining its electrical characteristics). (EX2002 at 1-2). Where earlier tube devices used a vacuum to control the flow of electrons (turning electrical current on and off), today's semiconductor devices use transistors. (EX2002 at 3).

7. One type of transistor typically used in an integrated circuit (or "chip") is a "field effect transistor," or FET. Materials used to build such transistors are divided into three categories based on their ability to conduct electrical current: conductors, dielectrics, and semiconductors. (EX2002 at 29-34). In a conductor (e.g., a metal), electric current can flow freely. (EX2002 at 29). A dielectric (e.g., silicon dioxide) is an insulative material at the opposite end of the conductivity

spectrum and has a high resistance to the flow of current. (EX2002 at 30). Semiconductors (e.g., silicon) fall between conductors and dielectrics and have some conducting and some resisting ability. (EX2002 at 31-34).

8. The simplified FET below illustrates how these materials may be used to create a semiconductor transistor device. As shown, the transistor is built on a semiconductor substrate and comprises a source, a drain, a gate, and a channel. (*See*, *e.g.*, EX2002 at 510-511). The source, drain and channel comprise semiconductor material, the gate comprises a conductor, and the gate and channel are separated by a thin dielectric layer.



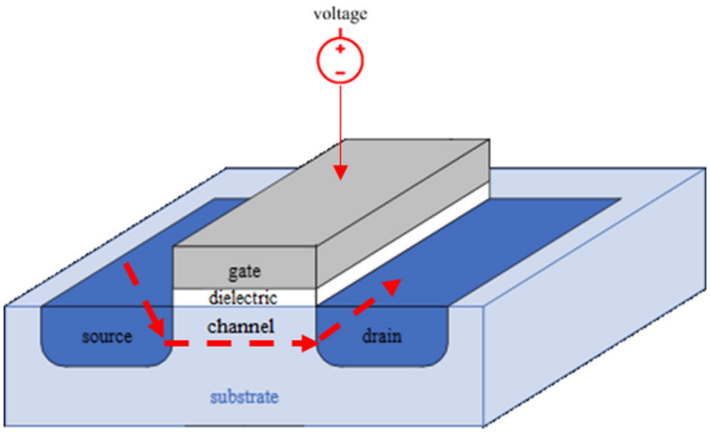
(*See*, *e.g.*, EX2002 at 510-511).

9. The source and drain are regions in the semiconductor substrate that are either rich in electrons (a negative, or n-type, region) or rich in holes (a positive, or p-type, region). (EX2002 at 26-28, 427-28). The channel is a region under the gate and between the source and drain, and is of the opposite type to that of the source

and drain. In other words, if the source and drain are n-type regions, then the channel will be a p-type region (and vice versa). (EX2002 at 510-511).

10. The gate is a conductor located above the channel. In this simplified version of a FET, there is a dielectric between the channel and the gate. (EX2002 at 510-511). When a voltage is applied to the gate, the dielectric prevents the flow of current from the gate to the channel, but the applied voltage results in the creation of a "field effect" in the channel. (EX2002 at 510-511). This "field effect" either builds up or depletes the charges in the channel (depending on whether it is a p- or n-type channel). (EX2002 at 510-511).

11. As illustrated below, this field effect allows electrical current to flow from the source, through the channel, to the drain. Thus, selectively applying voltage to the gate switches the transistor on and off, starting and stopping the flow of electrical current.

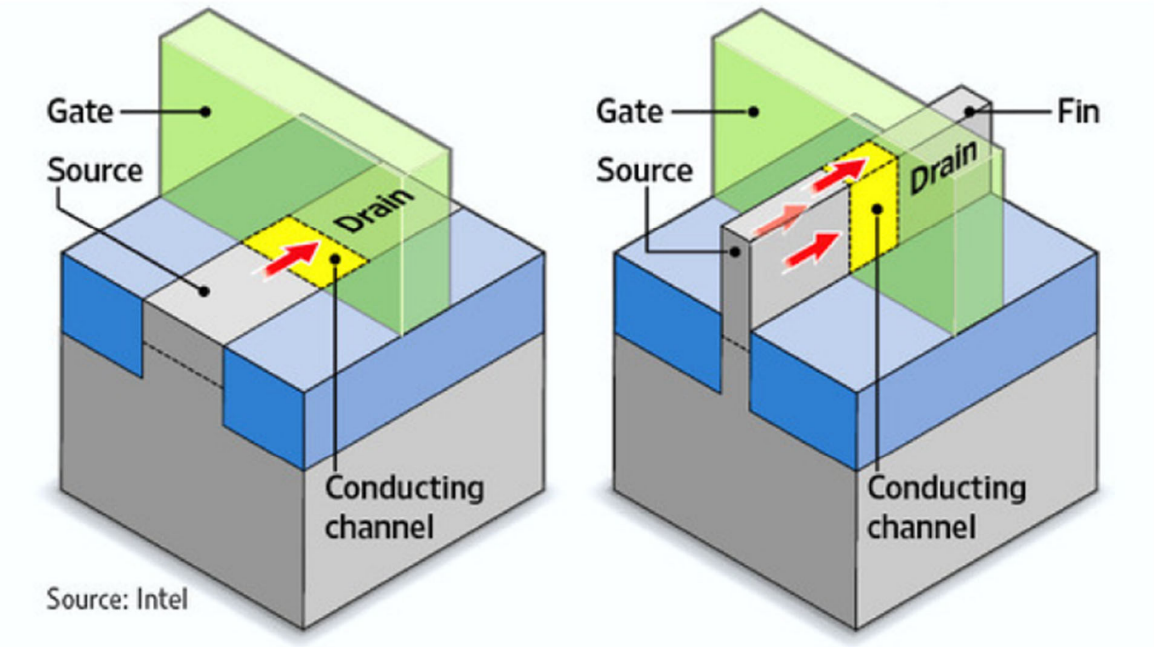


B. Planar vs. Three-Dimensional Transistors

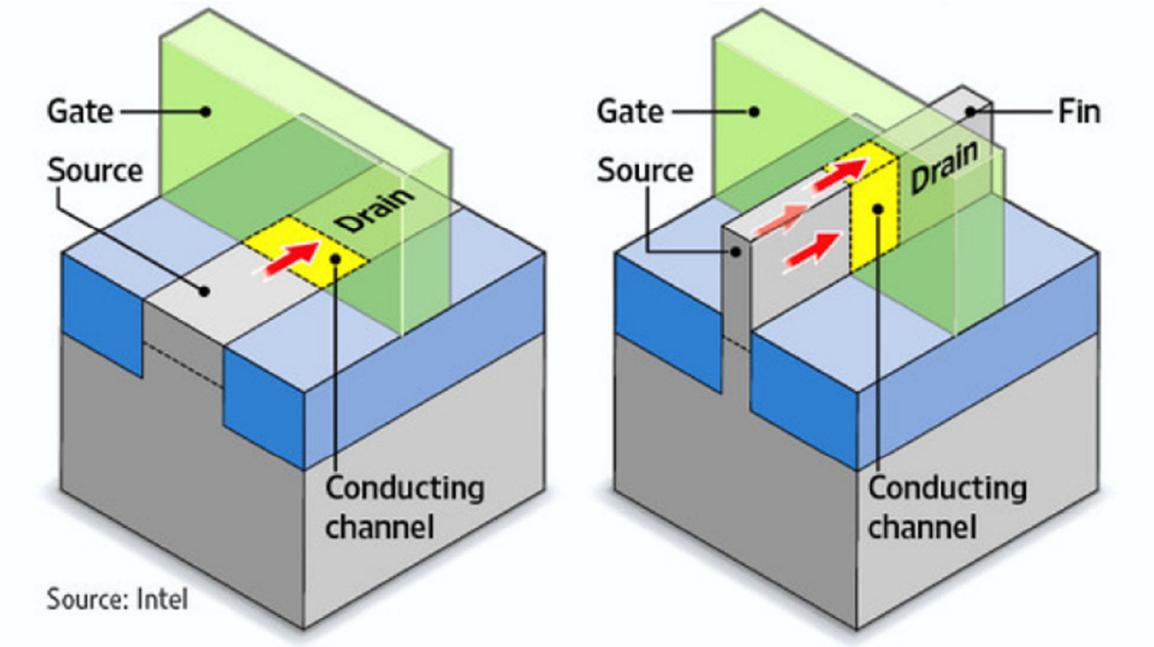
12. Integrated circuit chips in modern computer systems are typically composed of millions and even billions of transistors. The first transistor prototypes in 1947 were several inches in size, and implementing even the simplest early computers required tens of thousands of gates or transistors. Given those numbers, and the correlation between an increased number of transistors and increased computing power, the desire to shrink transistor sizes to fit more transistors on a chip has been consistent and widespread in industry. This desire led to the development of a new type of transistor, a "FinFET."

13. The simplified illustrative FET transistors illustrated in the previous section all feature a gate structure built on a flat semiconductor substrate; in other words, a "planar" FET. In the early 2010s, however, commercial gates evolved from such two-dimensional (2D) planar transistors to three-dimensional (3D) FinFET transistors.

14. In the below image, the figure on the left illustrates a 2D planar transistor built on a flat silicon substrate. In this traditional 2D planar transistor, the transistor forms a conducting channel in the silicon region under the gate.



15. In contrast, as illustrated below in the right figure, an exemplary 3D fin transistor design features a vertical semiconductor fin structure above the substrate that acts as a channel between the source and drain regions. In the resulting fin field effect transistor ("FinFET"), the source and drain regions are formed at opposing regions of the fin, and the gate is wrapped over the fin surrounding the fin on the top and two sides.



16. Thus, where a planar gate has only a horizontal dimension, the FinFET gate has both horizontal and vertical dimensions, thereby allowing a FinFET transistor to take up less surface area than a planar transistor. This alone means that more FinFET transistors may fit on an integrated circuit chip compared to that of a planar transistor. In addition, because FinFETs typically leak less current than planar FET transistors, FinFETs may be more tightly packed on an integrated circuit chip. This, too, increases the number of FinFET transistors that may fit onto a single chip.

C. Processes For Manufacturing Integrated Circuits And Transistors

1. The Four Stages Of Fabricating Integrated Circuits

17. The intricate, complex manufacturing process developed over the years for achieving such highly-dense integrated circuits can be divided into four distinct stages: (1) material preparation; (2) wafer preparation; (3) wafer fabrication; and (4) packaging.

18. In the first stage, the semiconductor material itself is created. (EX2002 at 13). For a silicon semiconductor, the raw starting material is sand, which is converted to pure silicon with a polysilicon structure. (EX2002 at 13).

19. In the second stage, the semiconductor material is first formed into a silicon crystal with specific electrical and structural parameters, and it is then sliced into thin disks called "wafers." (EX2002 at 13-14). A wafer acts as a semiconductor substrate on and in which transistors may be formed.

20. The third stage is wafer fabrication, during which individual integrated circuits are formed in and on the wafer semiconductor substrate. (EX2002 at 14). Thousands of integrated circuits can be formed on the substrate of a single wafer. (EX2002 at 14).

21. In the packaging stage, the wafer is separated into individual chips. (EX2002 at 14-15).

2. The Wafer Fabrication Stage

22. The third manufacturing stage, wafer fabrication, is the one most relevant here, and it can take several thousand steps, during which transistors and other devices are formed in the wafer's substrate. (EX2002 at 14). These steps are generally performed using three categories of materials (conductors, semiconductors, and dielectrics) in four basic operations (layering, patterning, doping, and heat treatments). (*See* EX2002 at 29-31, 71). For purposes of understanding the Petition and its deficiencies, the two most important basic operations are layering and patterning.

23. **Layering** is the operation used to add thin layers to the semiconductor substrate. (EX2002 at 72). The layers may be conductors, semiconductors, or dielectrics; and they can have a variety of functions and be made in a variety of ways. (EX2002 at 72).

24. For example, one way of adding a layer of material is to deposit that material onto the semiconductor substrate. Another way of adding a layer of material is to grow the material on the semiconductor substrate. After an initial layer is added to the semiconductor substrate additional layers may be added to the earlier layers using similar growth or deposition processes. To illustrate, the transistor structure shown below shows a number of layers that have been added to the wafer's semiconductor substrate, some deposited, some grown. (EX2002 at 72).

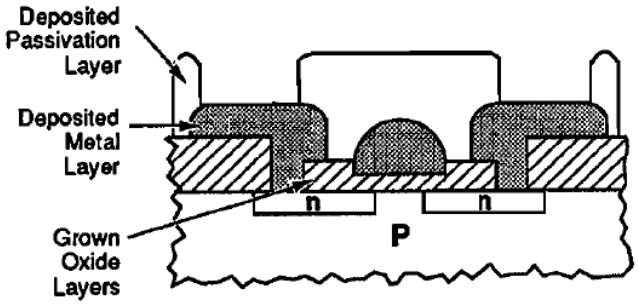


Figure 4.4 Cross section of completed metal gate MOS transistor with grown and deposited layers.

25. **Patterning** is the series of steps to remove (etch away) selected portions of the semiconductor substrate or one or more layers of materials that were added during one or more prior layering operations. (EX2002 at 72-73). This creates a pattern on the wafer surface. (EX2002 at 72-73).

26. The patterning may result in one or more holes in the layered material or one or more remaining islands of material. (EX2002 at 72-73). For example, the following figures illustrate the use of patterning to make (1) a hole in a previously formed layer: and (2) an island from a previously formed layer:

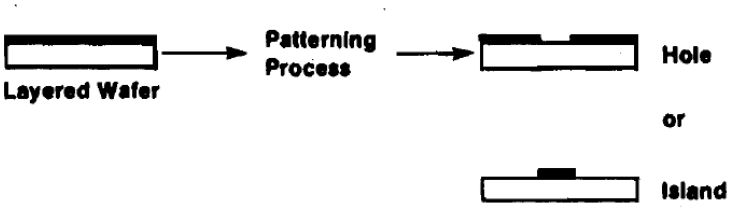


Figure 4.7 Patterning.

27. The repeated combination of layering and patterning in different sequences and variations is critical to the formation of transistors in and on the semiconductor wafer:

> These parts are created one layer at a time by the combination of putting a layer on the surface and removing a portion, with a patterning process, to leave a specific shape. The goal of the patterning operations is to create the desired shapes in the exact dimensions (feature size) required by the circuit design, and to locate them in their proper location on the wafer surface and in relation to the other parts.

(EX2002 at 73).

IV. Understanding Of The Law

28. In preparing and expressing my opinions and considering the subject matter of the challenged patent, I am relying on certain basic legal principles that counsel have explained to me. These principles are discussed below.

A. Claim Construction

29. I understand that the scope of a patent is defined by its claims. I understand that a claim can be:

a. a method claim, which covers a process/activity, or

b. an apparatus claim, which covers a physical machine, etc.

30. I understand that the first step in determining the validity of a claim is for the claim to be properly construed. I have been further advised that, in an inter

partes review proceeding, the claims of a patent are typically given their ordinary and customary meaning as would be understood by one of ordinary skill in the art in the context of the claims and the patent disclosure (specification).

31. I further understand that an inventor can provide special definitions for specific claim term(s) within the patent. However, any special definition for a claim term must be set forth in the specification with reasonable clarity and precision.

B. Invalidity

32. I have been informed that a claim may be invalid as obvious if the subject matter described by the claim, as a whole, would have been obvious to a POSITA at the time the claimed invention was made. I understand that the standard for obviousness in an inter partes review proceeding is by a preponderance of the evidence.

33. I have also been informed that a determination of obviousness involves an analysis of the scope and content of the prior art, the similarities between the claimed invention and the prior art, and the level of ordinary skill in the art. I have been informed and understand that a prior art reference should be viewed as a whole.

34. I have been informed that in considering whether an invention for a claimed combination would have been obvious, I may assess whether there are apparent reasons to combine known elements in the prior art in the manner claimed in view of interrelated teachings of multiple prior art references, the effects of

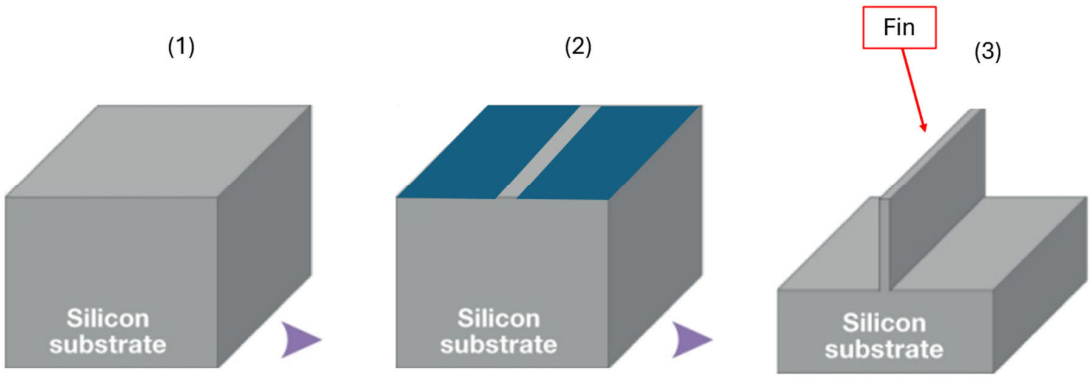
demands known to the design community or present in the market place, and/or the background knowledge possessed by a POSITA. I also understand that other principles may be relied on in evaluating whether a claimed invention would have been obvious.

35. I have been informed that, in making a determination as to whether or not the claimed invention would have been obvious to a POSITA, one may consider certain objective indicators of non-obviousness if they are present, such as: commercial success of product(s) practicing the claimed invention; long-felt but unsolved need; teaching away; unexpected results; copying; and praise by others in the field. I understand that for such objective evidence to be relevant to the non-obviousness of claim, however, there must be a causal relationship (called a "nexus") between the claim and the evidence. I also understand that this nexus must be based on a novel element of the claim rather than something available in the prior art.

36. I have also been informed and understand that, when considering the obviousness of a patent claim, one should consider whether a reason or motivation existed for combining the elements of the references in the manner claimed, and that the prior art must create a reasonable expectation of success in producing the claimed subject matter.

V. The Challenged '292 Patent

37. As the Petition acknowledges, a conventional method for forming the fins of an array of FinFETs was to (1) start with the wafer's semiconductor substrate; (2) apply the photomask pattern to the substrate; and (3) etch away portions of the substrate as defined by the pattern to form the fins. (Petition at 2-3).



38. The challenged '292 Patent recognized that this conventional use of patterning to form all FinFET fins from a semiconductor substrate had several drawbacks. For example:

> [I]n the current FinFET process, the density of the fin patterns of the FinFET array is quite high and the thickness of the photoresist layer is quite large, so that the pattern development is difficult and accurate pattern transfer is impossible.

(EX1001 at 1:31-35).

39. The '292 Patent describes and claims an alternate approach to forming the fins, wherein different sets of fins could have different attributes, including, for

example, the way they are fabricated, the materials from which they are made, and their dimensions.

A. Different Sets of Fins

40. Instead of forming a single set of homogenous fins on a semiconductor chip, the ’292 Patent describes forming different sets of fins on the same chip, each set differing from the other in one or more ways. For example, one set of fins could be made in a different manner than the other set; one set of fins could have a different material composition than the other set of fins; and/or each fin set could have different dimensions from the other, such as different heights or different widths. (*E.g.*, EX1001 at Fig. 6, 3:37-49).

41. The ’292 Patent alternately refers to these different sets of fins as odd or first fins, on the one hand, and even or second fins on the other. The patent’s Figure 6 illustrates an embodiment of odd fins 10a (blue) and even fins 20 (green) and a semiconductor substrate 10 (also blue).

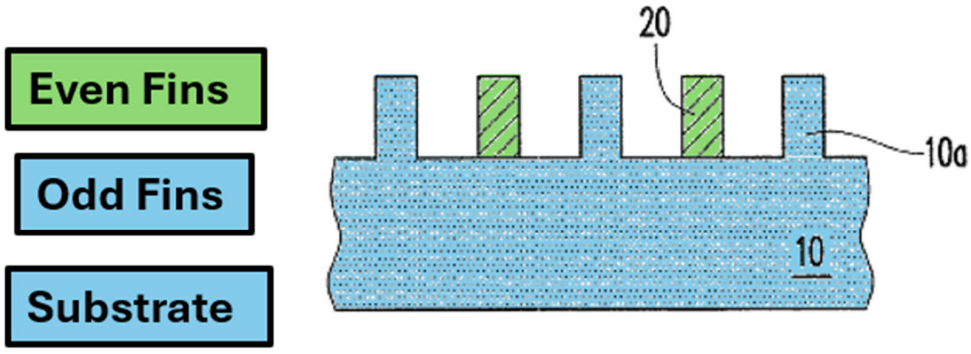


FIG. 6

(EX1001 at Fig 6) (colors and annotations added).[1]

B. Fabricating The "Odd" Fins

42. The '292 Patent describes a non-limiting illustrative method for fabricating these different sets of fins so that they can have different attributes, including different fabrication processes, dimensions, and materials.

43. For example, to make one set of fins (the "odd" fins), the patent describes starting with a silicon semiconductor substrate 10, illustrated in the following annotated Figure 1:

[1] Unless otherwise indicated, all colors and annotations to the '292 Patent's figures are added.

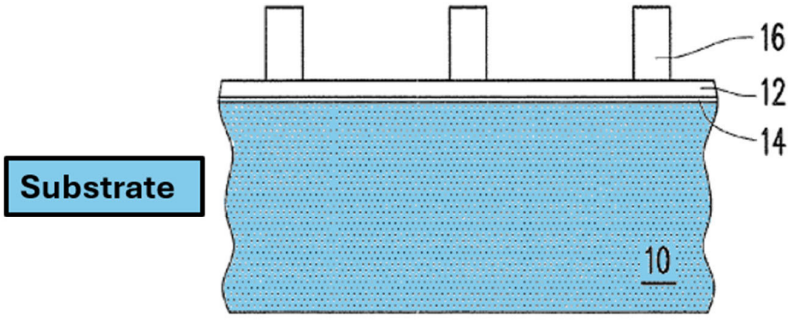


FIG. 1

(EX1001 at 2:48-50, Fig. 1).

44. This silicon substrate is then patterned to form a set of odd/first fins from the semiconductor substrate 10. For example, to perform this patterning, a patterned photoresist layer 16 (shown in orange below) may be deposited on the silicon substrate in the intended locations of the odd fins. Portions of the substrate are then etched away, excepting where the etching process is blocked by the patterned photoresist layer. The photoresist layers are consumed in this etching step and, as illustrated below in annotated Figure 2, patterning the substrate in this manner results in a plurality of odd fins 10a formed from the silicon substrate itself:

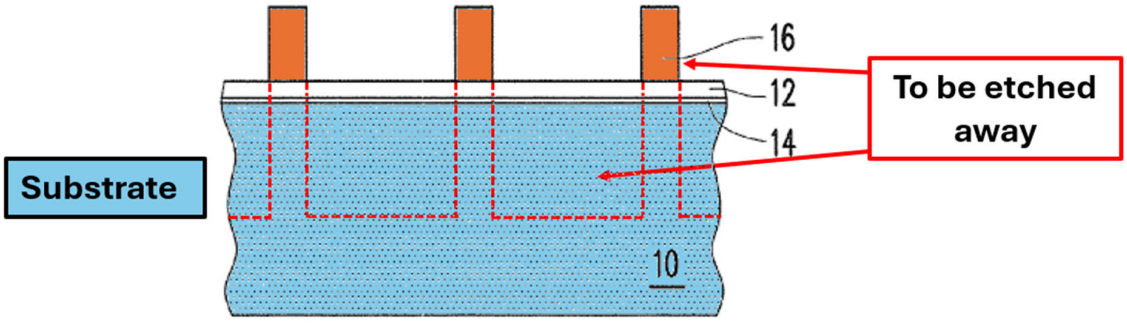


FIG. 1

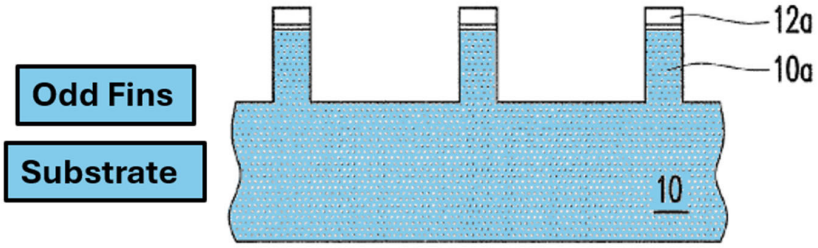


FIG. 2

(EX1001 at 2:53-64, Figs. 1-2).

C. Fabricating The "Even" Fins

45. The '292 Patent further describes a different method for fabricating a set of even/second fins, so that those even fins differ from the odd fins. For example, the patent describes using layering and patterning to form spacers (annotated in yellow) located near the odd fins, as illustrated in Figure 4 below:

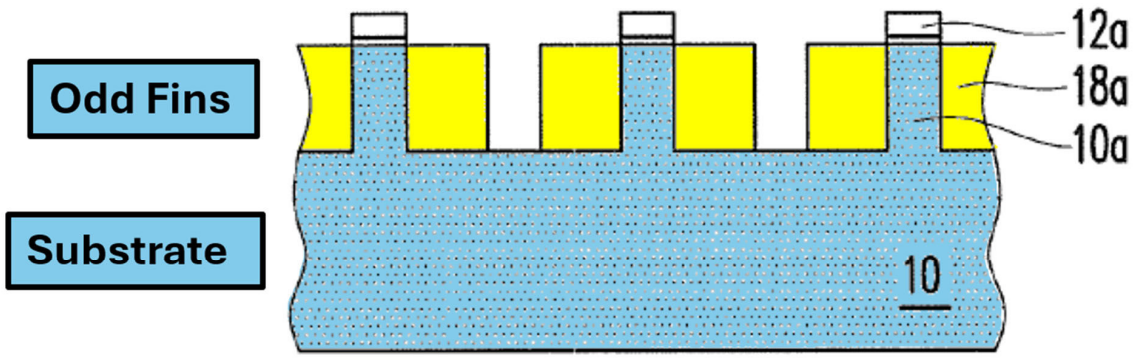


FIG. 4

(EX1001 at 2:65-3:16, Fig. 4).

46. Next, a material (such as SiGe) is grown in the gaps between the spacers:

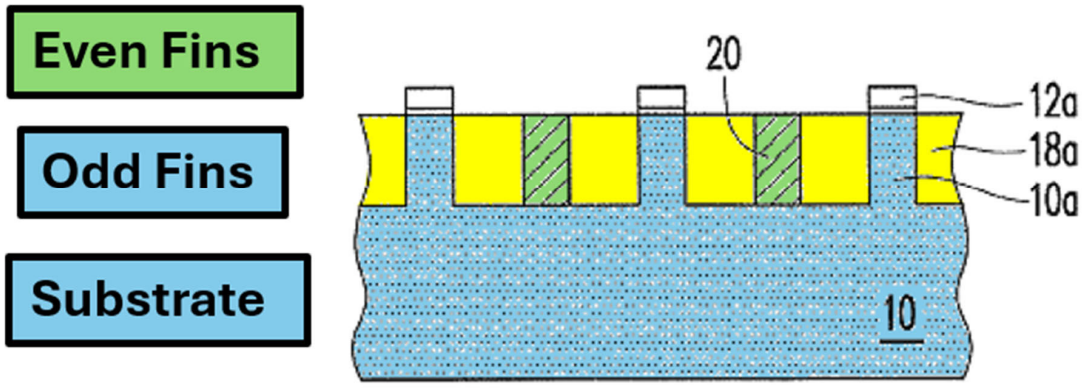


FIG. 5

(EX1001 at 3:29-34, Fig. 5).

47. Finally, the spacers are removed, leaving behind the odd/first set of fins 10a and the even/second set of fins 20:

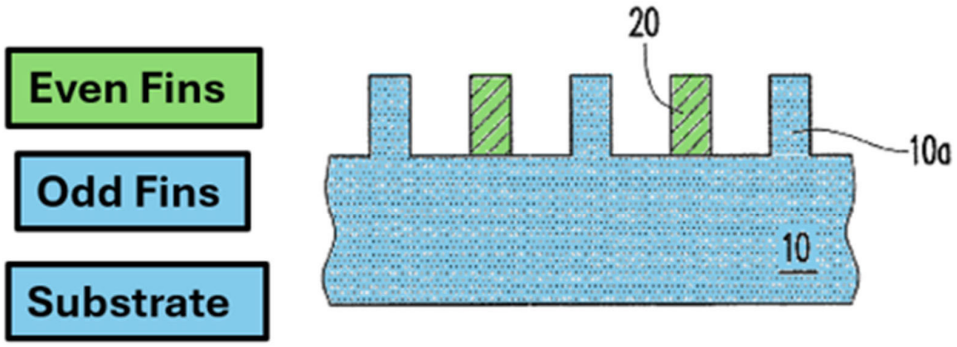


FIG. 6

(EX1001 at 3:50-52, Fig. 6).

D. Different Attributes of the Odd /First Fins and the Even/Second Fins

48. The foregoing illustrative process results in a semiconductor structure comprising fins with different attributes. For example, because the odd fins are patterned from the silicon substrate but the even fins are grown on the silicon substrate, the even fins are in direct contact with the substrate material and the odd fins are not. Instead, the odd fins are formed from the substrate material itself:

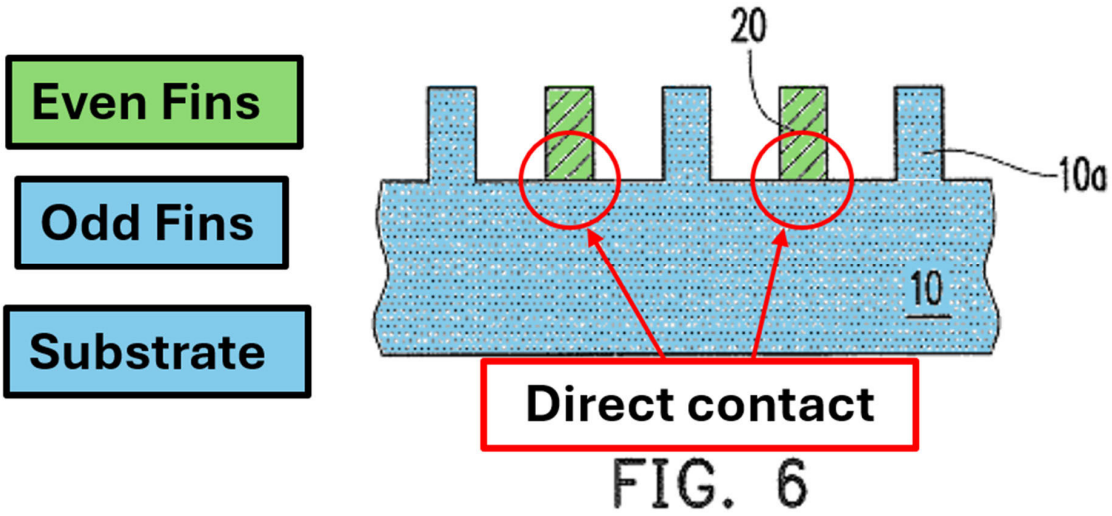


FIG. 6

(*E.g.*, EX1001 at Fig. 6).

49. Similarly, in this illustration above, because the odd fins are formed from the substrate material, they are the same material as that substrate (in this example, silicon). In contrast, the even fins in this example have a material composition different from the substrate and odd fins (in this example, silicon germanium). (*E.g.*, EX1001 at 3:37-41).

50. In addition, by controlling the even fin growth process and/or selectively sizing and orienting the spacers—and the gaps therebetween—the even fins may be formed having different dimensions than the odd fins, including the fin width or height. (*E.g.*, EX1001 at 3:42-49).

E. The Challenged Claims

51. The Petition challenges '292 Patent claims 1-20. Each of these claims incorporates one or more of the foregoing differences between. For example, all of

the claims recite that that the even/second finds are in direct contact with the substrate's semiconductor material and are different from the claimed odd/first fins in either material or width. Independent claim 1 is exemplary of these common limitations found in every challenged claim:

> 1. A semiconductor structure for forming FinFETs, comprising
>
> a semiconductor substrate, wherein a top portion of **the semiconductor substrate comprises a semiconductor material**;
>
> a plurality of odd fins of the FinFETs on the semiconductor substrate, being defined from the semiconductor substrate and being formed of the semiconductor material; and
>
> a plurality of **even fins** of the FinFETs on the semiconductor substrate between the odd fins of the FinFETs, being **different from the odd fins** of the FinFETs **in at least one of width and material**, wherein the plurality of **even fins are in direct contact with the semiconductor material**.

(EX1001 at claim 1).[2]

52. The remaining independent claims 9 and 15 (and their dependent claims) also include these limitations. Claim 9 identically recites "a plurality of **even fins** of the FinFETs on the semiconductor substrate between the odd fins of the FinFETs, being **different from the odd fins** of the FinFETs **in at least one of width and material**, wherein the plurality of **even fins are in direct contact with the semiconductor material**." (EX1001 at claim 9).

[2] Unless otherwise indicated, all emphasis in quotations is added.

53. Claim 15 also claims these limitations, but for a plurality of "second" fins rather than a plurality of "even" fins: "**the second fins are different from the first fins** of the FinFETs **in at least one of width and material**, wherein the plurality of **second fins are in direct contact with the semiconductor material**." (EX1001 at claim 15).

VI. The Asserted Grounds Fail To Demonstrate Invalidity

54. The Petition asserts eight different grounds against various selections of claims:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)
1	1, 3-9, 11-15, 17-20	103	Basker + Hill
2	2, 10, 16	103	Basker + Hill + Yu
3A/3B	1, 5, 7-9, 13, 15, 19	102/103	Inaba
4	3, 4, 6, 11, 12, 14, 17, 18, 20	103	Inaba + Basker
5	2, 10, 16	103	Inaba + Yu
6	1, 3-9, 11-15, 17-20	103	Liaw + Basker
7	2, 10, 16	103	Liaw + Basker + Yu

(Petition at 1). In my opinion, the Petition fails to show that any of the asserted references or combinations teaches or renders obvious each limitation in any challenged claim.

55. For example, each ground fails to identify a reference that teaches the claimed even/second fins "in direct contact with the [substrate's] semiconductor

material" limitation required in every challenged claim. Grounds 1-2 rely on the *Basker* reference as supposedly teaching this "direct contact" limitation; Grounds 3A-5 and Grounds 6-7 ignore the limitation altogether.

56. "Contact" occurs where two different surfaces touch one another, where there is a "union or junction of surfaces." (EX2003 (Webster's Dictionary)). But none of these refences teach an even/second fin having a surface that touches a surface of the substrate semiconductor material, and Petitioners have identified no reason for finding otherwise. Instead, in each of these references, the alleged even/second fins are admittedly made in a conventional manner, by etching away portions of the substrate's semiconductor material to form the fins. In other words, these fins are not formed in direct contact with the substrate semiconductor material, they are formed from that substrate semiconductor material itself—there are no surfaces of the fin touching a different surface of the semiconductor material because, as the Petition concedes, the fins and substrate semiconductor material do not have any surfaces distinct from one another but are a single unitary body.

A. Grounds 1-2: *Basker* Does Not Teach The Claimed "Direct Contact"

57. Grounds 1-2 rely solely on the *Basker* reference (EX1006) as allegedly teaching the claimed even/second fins "in direct contact with the [substrate's] semiconductor material" limitation required in every challenged claim. (*E.g.*,

Petition at 25, 28). But the Petition identifies no such teaching or disclosure in *Basker*. The Petition cannot because *Basker*'s fins are formed **from** the substrate semiconductor material, not **in direct contact** with it.

58. As the Petition itself describes, Basker starts with substrate 10 comprising silicon semiconductor material, as shown in this annotated figure from the Petition:

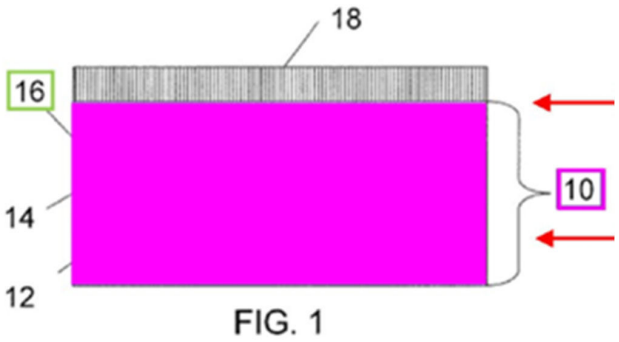


FIG. 1

(Petition at 23-24; EX1006 at ¶0024, Fig. 1).

59. As the Petition further describes, the alleged odd/first fins 20 and alleged even/second fins 22 are then formed by patterning the substrate's semiconductor material. Specifically, portions of the substrate's semiconductor material are etched away to form the alleged odd/first fins 20 and alleged even/second fins 22. (Petition at 23-24; EX1006 at ¶¶ 26-28, Figs. 1-2). The Petition illustrates this formation of the fins from the substrate's semiconductor material in the following annotated Figure:

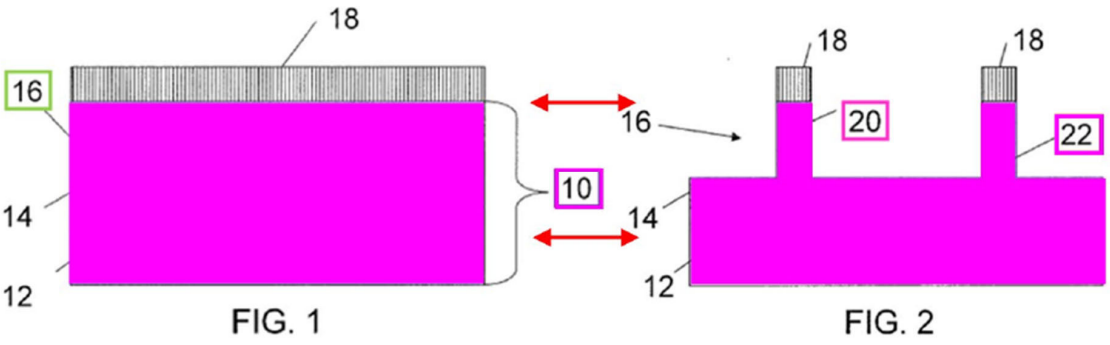


FIG. 1 FIG. 2

(Petition at 23-24; EX1006 at ¶¶ 26-28, Figs. 1-2).

60. The Petition does not even assert or attempt to show that a surface of any fin is touching another surface of the semiconductor material. It cannot, because as illustrated in the Petition's own figures above, there is no surface of any fin that touches a different surface of the substrate's semiconductor material because each of the fins and the substrate are a single unitary integral body, with no distinct surfaces between them. This is in direct contrast with the even/second fin of the '292 Patent, which is grown on the substrate semiconductor material and thus has a bottom surface that directly touches a top surface of the semiconductor material:

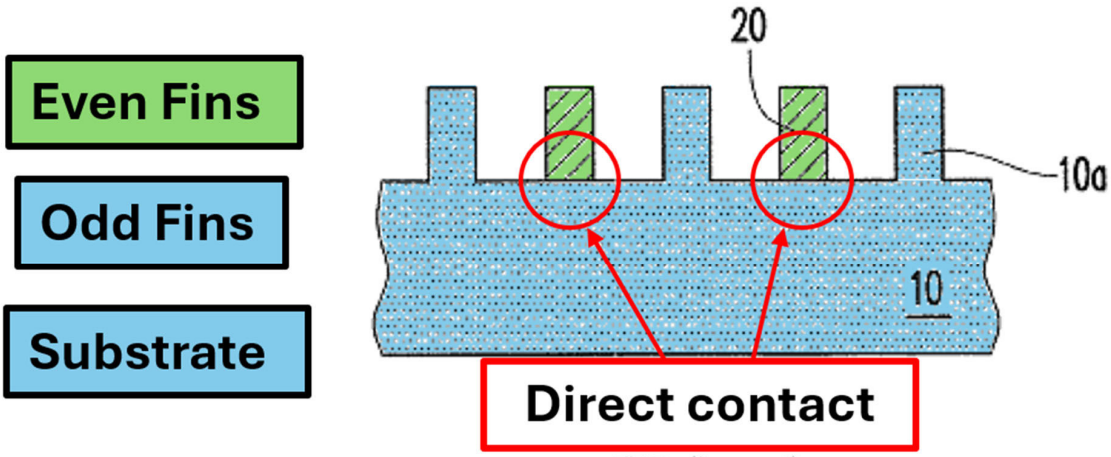


FIG. 6

61. Nonetheless, the Petition argues that, because each of these fins is formed from the semiconductor substrate material, they are also somehow in direct contact with that same material. The Petition provides no construction or definition of "contact," nor does it actually explain how the "contact" limitation is supposedly met here. Instead, the Petition merely concludes that since fins 20 and 22 were "formed by etching the top partition of bulk substrate 10, the [fins 20 and 22] (the remaining/non-etched portion of the substrate) [are] 'in direct contact with [the substrate's semiconductor material]' as the fin[s] and substrate 10 were in unity before etching." (Petition at 25 (analyzing fin 20) and 28 (applying that same

analysis to fin 22)). This conclusory sentence is the total extent of the Petition's attempt to identify the "direct contact" requirement in *Basker*.[3]

62. But the Petition does not explain this conclusion, and there is no reasonable explanation because the conclusion makes no sense. In fact, the fins are **not in direct contact** with the substrate's semiconductor material, they admittedly are **formed from** the substrate's semiconductor material. The fins cannot be formed from and integral with the substrate material and simultaneously have their own distinct surfaces that are touching distinct surfaces of that same substrate material. And the Petition does not explain how the fin somehow has a surface that touches another surface of the substrate semiconductor material when the fin **is** that

[3] *Basker* later describes doping the top of silicon fin 22 with germanium so that it further comprises silicon germanium. (EX1006 at ¶ 31). But this does not change the fact that fin 22 is formed from the substrate semiconductor material, rather than having a distinct surface touching a surface of that substrate material, and the Petition does not contend otherwise. Instead, the Petion relies solely on its argument that the fins are somehow in direct contact with the substrate material because they were literally carved from that substrate material. (Petition at 25 (analyzing fin 20) and 28 (applying that same analysis to fin 22)).

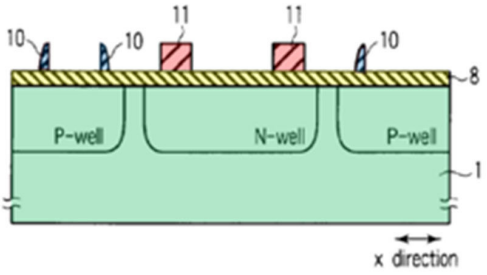
semiconductor material. There is no explanation, and the Petition thus fails as to Grounds 1-2.

B. Grounds 3A-5: *Inaba* Does Not Teach The Claimed "Direct Contact"

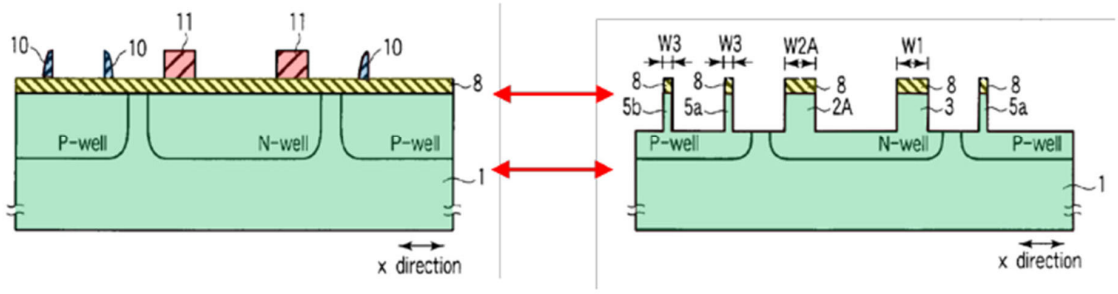
63. Although Grounds 3A-5 rely on *Inaba* (EX1005) as teaching the alleged odd/first fins and even/second fins, the Petition does not allege that *Inaba*—or any other references asserted in these Grounds—teaches that the alleged even/second fins are "in direct contact with the [substrate's] semiconductor material" limitation required in every challenged claim. (*E.g.*, Petition at 52-53). Instead, the Petition's analysis for these grounds ignores this requirement all together, addressing only whether the alleged even/second fins meet different requirements (such as whether theses fins are on, between, and wider), but **not** addressing the additional "direct contact" requirement. (Petition at 52-53). For this reason alone, Grounds 3A-5 fail.

64. Although the analysis can and should stop there, the Petition's allegations concerning *Inaba* and its alleged odd/first fins establish that **none** of *Inaba*'s fins are in direct contact with the substrate's semiconductor material—as with *Basker*, *Inaba*'s fins are **formed from** the substrate semiconductor material, not **in direct contact** with it.

65. Indeed, the Petition itself describes and illustrates that in *Inaba*, all of the fins are formed from the substrate semiconductor material. The Petition describes and illustrates that *Inaba* starts with a substrate of semiconductor material, which the Petition annotates below in green:



(Petition at 49-50). The Petition then describes and illustrates that, in *Inaba*, fins are then formed by patterning the substrate's semiconductor material. Specifically, portions of the substrate's semiconductor material are etched away to form the fins 2, 3, 5a, 5b, and 5x. (Petition at 51). The Petition illustrates *Inaba*'s formation of the fins from the substrate's semiconductor material in the following annotated Figure:



(Petition at 49-51).

66. Thus, as the Petition itself illustrates, there is no surface of the *Inaba* fins that touches a different surface of the substrate's semiconductor material because they are a single unitary integral body, with no distinct surfaces between them. There is thus no "direct contact" as required by all challenged claims.

67. Accordingly, the Petition does not even argue that *Inaba* (or any other Grounds 3A-5 references) teaches or renders obvious even/second fins that "are in direct contact with the [substrate] semiconductor material." It could not because all fins are simply made of the semiconductor substrate, and that material cannot be in contact with itself. Because the Petition's Grounds 3A-5 ignore this required limitation, they fail.

C. Grounds 6-7: *Liaw* Does Not Teach The Claimed "Direct Contact"

68. Finally, Grounds 6-7 suffer from at least the same flaws as Grounds 1-5. To start (and identical to the *Inaba* Grounds), although Grounds 3A-5 rely on *Liaw* (EX1008) as teaching the alleged odd/first fins and even/second fins, the Petition does not allege that *Liaw*—or any other references asserted in these Grounds—teaches that the alleged even/second fins are "in direct contact with the [substrate's] semiconductor material" limitation required in every challenged claim. (*E.g.*, Petition at 77-79). Instead, the Petition's analysis for these grounds ignores this requirement all together, addressing only whether the alleged even/second fins

meet different requirements (such as whether theses fins are on, between, and wider), but **not** addressing the additional "direct contact" requirement. (Petition at 77-79). For this reason alone, Grounds 6-7 fail.

69. And although the analysis can and should stop there, the Petition's allegations concerning *Liaw* and its alleged odd/first fins establish that **none** of *Liaw*'s fins are in direct contact with the substrate's semiconductor material—as with *Basker* and *Inaba*, *Liaw'*s fins are **formed from** the substrate semiconductor material, not **in direct contact** with it.

70. Indeed, the Petition admits and describes that *Liaw* discloses making its fins in the same manner as *Basker* and *Inaba*: starting with a substrate semiconductor material and patterning that material to form the fins. For example, the Petition states that Liaw starts with a substrate of semiconductor material and then forms Liaw's fins 186 and 188 "by etching/removing the substrate material in certain regions," as illustrated in the Petition's following annotated figure:

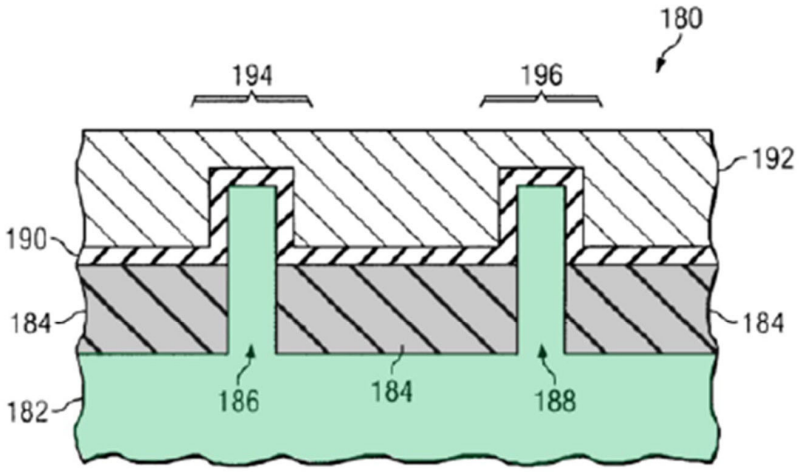


Fig. 7

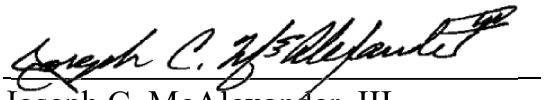
EX1008, FIG. 7

(Petition at 66, 73, 74, 76).

71. Thus, the Petition itself establishes that there is no surface of the *Liaw* fins that touches a different surface of the substrate's semiconductor material because they are a single unitary integral body, with no distinct surfaces between them. There is thus no "direct contact" as required by all challenged claims.

72. Accordingly, the Petition does not even argue that *Liaw* (or any other Grounds 6-7 references) teaches or renders obvious even/second fins that "are in direct contact with the [substrate] semiconductor material." It could not because all fins are simply made of the semiconductor substrate, and that material cannot be in contact with itself. Because the Petition's Grounds 6-7 ignore this required limitation, they fail.

Dated: August 15, 2025



Joseph C. McAlexander, III

PROFESSIONAL SUMMARY

Currently a Registered Professional Engineer (#79454) and recognized as an inventor on 31 US and a number of foreign patents, I am President of McAlexander Sound, Inc., and the Managing Director of McAlexander Sound Pte Ltd. I have focused my expertise to support a number of clients in product, process, and operations analysis and investigation. Fifty-two years of experience in microcircuit and semiconductor technologies has developed my skills in areas of circuit design and analysis, device fabrication and assembly, testing, marketing, control system design and analysis, manufacturing operations and respective areas of quality, reliability, and defect / failure analysis. I am also the President and CEO of MDFHoldings, Inc., an IP holding company currently engaged in the field of GPS Tracking, and was formerly, among others, a Manager with QM Partners, LP, supporting clients in IP management and licensing. I have:

- designed and managed development, testing, and evaluation of devices including Dynamic Random Access Memories (DRAMs), Static Random Access Memories (SRAMs), Charge Coupled Devices (CCDs), Shift Registers (SRs), and functional circuits including I/O buffers for address and data, decoders, clocks, sense amplifiers, fault tolerant, parallel-to-serial data paths for video applications, level shifters, converters, pumps, and logic, as well as wireless communication systems and MEMs applications;

- designed, built, and managed 4 physical / chemical analysis laboratories to assess cause of defect and reliability of products, including nanostructure integrated circuits, systems, and product packaging;

- managed operations including engineering, training, and quality assurance for device fabrication, assembly, test, analysis, and reliability assessment, as well as manufacturing control, each of which involved both volatile and non-volatile memory; testing, analysis, and control involving use of mechanical calibration and measuring equipment, including optical, scanning e-beam, IR, capacitive, and laser using phase contrast and Fast Fourier Transform (FFT) for High Aspect Ratio Inspection (HARI) applications; audio and video system design and installation;

- taught courses in solid state device physics, integrated circuit design, integrated circuit fabrication, and statistical control;

- provided expert services, investigating both process and design technologies of various devices (microprocessor and controller, memory, programmable logic, card, tag, module, mixed signal, custom, and other), systems (PC and peripheral, computer, control, laser measurement, switch, architecture, software, and other), and consumer products (medical, TV, telephone, VCR, facsimile, copier, lighting, game, and other);

- provided nuclear radiation hardness testing services for military and space clients; and

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PROFESSIONAL SUMMARY

- managed the design and installation of audio sound and video systems for private and commercial enterprises.

From 1986-1990, I was Executive Vice President of EPI Technologies, Inc., prior to joining the staff at Cochran Consulting, Inc. where I served as senior managing consultant from 1991-2002. From 1972 to 1986, I was employed by Texas Instruments Incorporated.

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EXPERIENCE PROFILE

1988-present **McAlexander Sound, Inc. (McASI)** - Richardson, TX
President

o System, Product, and Process investigation, expert witness services for protection of intellectual property;
o Patent portfolio development and valuation;
o Product liability and insurance claim investigation, expert witness services for matters involving such claims;
o Quality Systems consulting and engineering;
o Radiation Hardness Testing Technical Representative;
o Acoustic system design/installation
o Technical Advisor in High Aspect Ratio and Surface Contour Measurement using Direct-to-Digital Holography.

2005-present **McAlexander Sound Pte Ltd** - Singapore
Managing Director

o System, Product, and Process investigation, expert witness services for protection of intellectual property;
o Patent portfolio development and valuation;
o Contract consultation;
o Not assigned any patents and is not engaged in any IP related licensing or litigation activities.

2002-present **MDFHoldings, Inc.** – Las Vegas, NV
CEO

o IP holding and licensing company;
o Assigned U.S. Patent Nos. 7,340,260 and 7,657,265 and EP 1 557 058 B1, each related to an object locating system;
o Has not been and is not engaged in any IP related litigation or licensing activities.

2006-2020 **QM Partners, L.P.** – Texas
Manager

o Management of development, licensing, prosecution and exploitation of assigned intellectual property;
o Not assigned any patents and is not engaged in any IP related licensing or litigation activities.

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EXPERIENCE PROFILE (continued)

2006-2020 **Guardian Technologies, LLC** – Texas
Manager

o IP holding and licensing company;
o Litigated U.S. Patent No. 5,657,076 related to security surveillance 2009-2011 (patent expired 2015);
o Assigned U.S. Patent No. 8,334,775 related to RFID tracking (reassigned 2020 to personal);
o Not engaged in any IP related licensing or litigation activities.

2006-2020 **Appropriate Holdings, LLC** – Delaware
Manager

o IP holding company;
o Not assigned any patents, has not been and is not engaged in any IP related licensing or litigation activities.

1996-2010 **RMC Management, LLP** - Plano, TX
Partner

o Asset management.

1991-2002 **Cochran Consulting, Inc. (CCI)** - Richardson, TX
Managing Consultant

o System, Product, and Process investigation, expert witness services for protection of intellectual property;
o Design, process, and product reliability;
o Defect and failure analysis.

1986-Nov'90 **EPI Technologies, Inc.** - Richardson, TX
Executive Vice President and Company Officer

o Managed Advanced Technology Div., QA, and Engineering, including software program development;
o Developed strategic, space/energy market growth plans;
o Negotiated the acquisition of and managed a radiation company;
o Designed and managed physical analysis, radiation effects, and environmental stress laboratories, including optical and e-beam measurement;
o Achieved > 30% annual revenue growth and profitability for each laboratory the first 12 months;

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EXPERIENCE PROFILE (continued)

o Product and Process investigation services for protection of intellectual property.

1972 – 1986 **Texas Instruments, Inc.** - Dallas/Houston, TX; Singapore

'84 - '86 **Quality/Reliability Assurance Manager, TI Dallas** Advanced DRAM semiconductor wafer fabrication facility

o Developed/implemented on-line, computerized SPC software tools for dimensioning analysis and control and pattern recognition;
o Coordinated people development, design-of-experiments;
o Managed chemical and physical analysis laboratories;
o Implemented control systems to assure product, process, material, equipment, and facility compliance, including Cost of Quality analysis.

'82 - '84 **Quality/Reliability Assurance and Engineering Manager**, **TI Singapore** assembly/test facility

o Developed, implemented, and operated an effective Quality/Reliability Assurance program for assembly processing including optical pattern recognition for equipment registration;
o Supervised 225 people for 7 day/week operation, including QRA, Computer Systems software development, and Training;
o Trained engineers in Solid State Physics, device fabrication, and statistical process control.

'81 - '82 **Engineering Operations Manager**, **TI Houston**

o Managed DRAM memory product cost center;
o Responsible for division test software generation, product assembly and test quality / yield, cost reduction and quality improvement;
o Provided technical customer interface for marketing;
o Coordinated TI Singapore engineering test/assembly.

'79 - '81 **Product Engineering Manager**, **TI Houston**

o Responsible for yield improvement, technical customer interface, quality improvement, design evaluation, and device characterization for DRAM and CCD products;
o Developed device specifications and test software.

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EXPERIENCE PROFILE (continued)

'72 - '79 **Design Section Manager / Engineer**, **TI Houston**

o Responsible for design and development, process compatibility, production introduction of Dynamic Ram products;
o Activities included electrical and physical layout, SPICE model simulation, test program generation, and product implementation for MOS Dynamic Ram products.

1969 - 1972 **U. S. Army** - Coventry, Rhode Island; Seoul, Korea
Captain, Air Defense Artillery

o Served one year as Communications Officer in Korea;
o Served two years as Tactical Officer, New England Defense.

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ORGANIZATIONS, PUBLICATIONS, EDUCATION

PROFESSIONAL ORGANIZATIONS AND AWARDS

1 - Institute of Electrical and Electronics Engineers, Inc. (IEEE), Senior Member. Societies: Computer, Electron Devices, Solid State Circuits
2 - Licensing Executives Society (LES)
3 - National Society of Professional Engineers
4 - Texas Board of Professional Engineers, Registered License #79454
5 - American Society of Civil Engineers
6 - Architectural Engineering Institute
7 - 2000/2001 Nationwide Register's Who's Who in Executives and Businesses
8 - 1996/1997 Strathmore's Who's Who Registry of Business Leaders

PUBLICATIONS

1- NUS Proceedings of Engineering Convention '83, Aug '83, pgs. 139-142, The Memory Challenge.

2- Archives of Biochemistry and Biophysics, Dec'81, Vol. 212, No. 2, Equilibrium Constants under Physiological Conditions for the Reactions of D-3-Phosphoglycerate Dehydrogenase and L-Phosphoserine Aminotransferase.

3- International Electron Devices Meeting, Dec '79, pgs. 355-357, Sub 100ns 16K x 1 MOS Dynamic RAM Using a Grounded Substrate.

EDUCATION PROFILE

1980 - 1985	Taught Solid State Device Physics, Semiconductor Processing, Circuit Design Techniques, and Statistical Quality Control Methods Effectiveness Training and Japanese Manufacturing Techniques, Participative Problem Solving courses
1975 - 1976	1.5 years Graduate Study in Neural Science, the University of Texas Graduate School of Biomedical Science
1965 - 1969	BSEE, North Carolina State University

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PATENTS (US-31, Foreign-8)

4,239,993	(1980) High Performance Dynamic Sense Amplifier with Active Loads
4,280,070	(1981) Balanced Input Buffer Circuit for Semiconductor Memory
4,288,706	(1981) Noise Immunity in Input Buffer Circuit for Semiconductor Memory
4,370,575	(1983) High Performance Dynamic Sense Amplifier with Active Loads
4,418,293	(1983) High Performance Dynamic Sense Amplifier with Multiple Column Outputs
4,533,843	(1985) High Performance Dynamic Sense Amplifier with Voltage Boost for Row Address Lines
4,543,500	(1985) High Performance Dynamic Sense Amplifier Voltage Boost for Row Address Lines
4,543,501	(1985) High Performance Dynamic Sense Amplifier with Dual Channel Grounding Transistor
4,748,349	(1988) High Performance Dynamic Sense Amplifier with Voltage Boost for Row Address Lines
6,172,640 B1	(2001) Pet Locator
6,236,358 B1	(2001) Mobile Object Locator
6,421,001 B1	(2002) Object Locator
6,441,778 B1	(2002) Pet Locator
6,480,147 B2	(2002) Portable Position Determining Device
6,518,919 B1	(2003) Mobile Object Locator
6,771,213 B2	(2004) Object Locator
6,859,171 B2	(2005) Mobile Object Locator

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PATENTS (continued)

7,113,126 B2	(2006) Portable Positioning Determining Device
7,179,674 B2	(2007) Bi-Directional Released-Beam Sensor
7,209,075 B2	(2007) Mobile Object Locator
7,324,044 B2	(2008) Object Locator
7,336,227 B2	(2008) Portable Position Determining Device
7,340,260 B2	(2008) System and Method for Tracking the Location of Multiple Mobile Radio Transceiver Units (assigned to MDFHoldings, Inc.)
7,353,706 B2	(2008) Weighted Released-Beam Sensor
7,397,097 B2	(2008) Integrated Released Beam Layer Structure Fabricated in Trenches and Manufacturing Method Thereof
7,564,405 B2	(2009) Object Locator
7,657,265 B2	(2010) System and Method for Tracking the Location of Multiple Mobile Radio Transceiver Units (assigned to MDFHoldings, Inc.)
7,760,137 B2	(2010) Portable Positioning Determining Device
7,764,228 B2	(2010) Portable Positioning Determining Device
7,989,906 B2	(2011) Bi-Directional released-Beam Sensor
8,334,775 B2	(2012) RFID-Based Asset Security and Tracking System, Apparatus and Method (assigned to personal)
JP 55-053640 B4	(1980) Defect Resistant Semiconductor Memory Cell
JP 59-044720 B4	(1984) Semiconductor High Speed Read/Write Memory Unit
DE2935121 C2	(1980) Clock Voltage Generator for Semiconductor Memory with Reduced Power Dissipation
DE3043651 A1	(1981) Clock Voltage Generator for Semiconductor Memory with Reduced Power Dissipation

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PATENTS (continued)

GB2032211 B2	(1980) High Performance Dynamic MOS Read/Write Memory
EP 1 557 058 B1	(2011) System and method for tracking the location of multiple mobile radio transceiver units (assigned to MDFHoldings, Inc.) [States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR]
EP 1 676 809 B1	(2010) Weighted released-beam sensor [States: DE FR GB IT]
EP 1 676 810 B1	(2010) Bi-directional released-beam sensor [States: DE FR GB IT]

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CASES

Cases over at least the past 7 years, either active or closed, in which I have signed a Protective Order, have testified as an expert either at a trial, hearing, or deposition, or have submitted statements / opinions by declaration, affidavit, or report, are:

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Kangaroo Media* v. Immersion Entertainment (*firm: Kenyon & Kenyon)	2:12-cv-00382-JFC, 2:14-cv-01536-JFC	WD PA	2012 - 2016	P,t
(Audio/Video Entertainment System patent)				
Securus* v. Global (*firm: Gruber)	3:13-CV-03009-K	ND TX	2014 - 2017	P,t
(Patents related to telecom systems)				
Global v. Securus* (*firm: Gruber)	3:14-CV-0829-K, 3:13-CV-00713-JRS	ND TX / ED VA	2014 - 2017	P
(Patents related to telecom systems)				
Advanced Audio Devices* (*firm: Clark Hill PLC)	IPR2014-01155	USPTO PTAB	2014 - 2016	P,t
(Patent 7,289,393 related to music jukebox)				
Advanced Audio Devices* (*firm: Clark Hill PLC)	IPR2014-01156	USPTO PTAB	2014 - 2016	P,t
(Patent 7,817,502 related to a personal digital stereo player)				
Advanced Audio Devices* (*firm: Clark Hill PLC)	IPR2014-01157	USPTO PTAB	2014 - 2016	P,t
(Patent 7,933,171 related to a personal digital stereo player)				
Advanced Audio Devices* (*firm: Clark Hill PLC)	IPR2014-01158	USPTO PTAB	2014 – 2016	P,t
(Patent 8,400,888 related to a personal digital stereo player)				

[1] * = Client

[2] P=Patent, C=Contract, ©=Copyright, TS=Trade Secret, AT=Antitrust; CA=Class Action; t=testified, TH=Trial/Hearing

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Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
One-E-Way* v. Sony, Sennheiser, BlueAnt, Creative Tech, Beats, Jawbone, Jabra (*firm: Knobbe Marten, Olson & Bear)	337-TA-943	ITC (Pender)	2014 - 2018	P,t
(Patents related to bluetooth configured headphones)				
Omega* v. Calamp	6:13-cv-1950-Orl-31DAB	MD, FL	2015 - 2016	P,t,TH
(Patents related to vehicular control systems and tracking)				
AVM* v. Intel (*firm: Boies, Schiller & Flexner)	1:15-cv-00033-RGA	DE	2015 - 2016	P,t,TH
(Patent related to dynamic logic circuits)				
Allure Energy* v. Honeywell (*firm: McKool Smith)	1:15-cv-00079-RP	WDTX, Austin	2015 - 2017	P
(Smart Thermostat)				
IV* v. Toshiba (*firm: Desmarais)	13-cv-453-SLR-SRF	DE	2015 - 2017	P,t,TH
(NAND Flash)				
IMS v. Micron* (*Weil Gotchal/ Orrick)	1:14-cv-01480-RGA	DE	2015 - 2022	P,t
(Patents related to flash memory)				
Honeywell v. Allure* (*firm: Dickinson Wright)	IPR201501248, 01251,01253	USPTO PTAB	2015 - 2017	P
(Smart Thermostat)				
Blitzsafe* v Honda (*firm: Brown Rudnick)	2:15-cv-01274-JRG-RSP	EDTX, Marshall	2015 - 2017	P,t
(Patents related to audio device integration systems)				
Blitzsafe* v Hyundai (*firm: Brown Rudnick)	2:15-cv-01275-JRG-RSP	EDTX, Marshall	2015 - 2017	P,t
(Patents related to audio device integration systems)				

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Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Blitzsafe* v Nissan (*firm: Brown Rudnick)	2:15-cv-01276-JRG-RSP	EDTX, Marshall	2015 - 2017	P,t
(Patents related to audio device integration systems)				
Blitzsafe* v Toyota (*firm: Brown Rudnick)	2:15-cv-01277-JRG-RSP	EDTX, Marshall	2015 - 2017	P,t
(Patents related to audio device integration systems)				
Blitzsafe* v VW (*firm: Brown Rudnick)	2:15-cv-01278-JRG-RSP	EDTX, Marshall	2015 - 2017	P,t
(Patents related to audio device integration systems)				
3rd Eye Surveillance* v Stealth (*firm: Kennedy Law)	6:14-cv-00162 JDL	EDTX, Tyler	2015 - 2016	P
(Patents related to real-time image processing to response agency)				
3rd Eye Surveillance* v Vision Video (*firm: Kennedy Law)	6:14-cv-00161-JDL	EDTX, Tyler	2015 - 2016	P
(Patents related to real-time image processing to response agency)				
3rd Eye Surveillance* v Ft Worth / e-Watch (*firm: Kennedy Law)	6:14-cv-00725	EDTX, Tyler	2015 - 2017	P,t,TH
(Patents related to real-time image processing to response agency)				
3rd Eye Surveillance* v Uinted States (*firm: Kennedy Law)	1:15-cv-00501-CFL	Court of Federal Claims, DC	2015 -	P,t,TH
(Patents related to real-time image processing to response agency)				
Hitachi v TPV* (*firm: O'Melveny & Myers)	2:14-cv-1121-JRG-RSP	EDTX, Marshall	2015 - 2016	P
(Patent related to LCD power and signal board arrangement)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Nidec Motor v Broad Ocean Motor* (*firm: Locke Lord)	2:15-cv-00443	EDTX, Marshall	2016	P
(Patent related to blower motor control for HVAC)				
TracBeam* v T-Mobile (*firm: Dovel & Luner)	6:14-cv-678-RWS	EDTX, Tyler	2016	P,t
(Patents related to geographic location estimates)				
SMS v Emerson* (*firm: Davidson Berquist)	2:15-cv-00032-RWS-RSP	EDTX, Marshall	2016	P
(Patent related to a method of monitoring a protected space)				
Prong v Sorias* (*firm: Gottlieb, Rackman & Reisman)	IPR2015-01317	USPTO PTAB	2016	P
(Patent related to attachable mobile charger)				
Skyline Software Systems v Duane Morris* (*firm: Venable)	2015-08868	Circuit Court Fairfax County	2016	P
(3D mapping technology)				
SignalQuest v Oncque* (*firm: Duane Morris)	11-cv-00392-JL	NH	2016	P
(Patents related to vibration switches)				
TiVo v Samsung* (*firm: Fish & Richardson)	2:15-CV-1503	EDTX, Marshall	2016	P
(Patent related to multimedia signal processing)				
Richtek v uPi* (*firm: Hogan Lovells)	C 09-05659 WHA LB	NDCA, SF	2016	P
(Patents related to converter channel current balance and PWM circuit)				
Paice* v VW, Porsche, Audi (*firm: Fish & Richardson)	337-TA-998	ITC	2016 – 2017	P
(Patents related to hybid vehicle technology)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Biosonix v Hydrowave* (*firm: Bradley)	4:16-cv-00139-RC	EDTX, Sherman	2016 - 2017	P
(Patent related to underwater sound listening and generation)				
Univ of S FL* v Fujifilm (*firm: Dickinson Wright)	8:16-cv-01194-MSS-TGW	MDFL, Tampa	2017	P
(Patent related to Workstation Interface – Digital Mammography)				
Univ of S FL * v BRIT (*firm: Dickinson Wright)	8:16-cv-03109-MSS-TGW	MDFL, Tampa	2017	P,t
(Patent related to Workstation Interface – Digital Mammography)				
Nokia v Apple	337-TA-1038	ITC	2017	P
(Patent related to controllable bias mode oscillator)				
Univ of IL v Micron* (*firm: Fish & Richardson)	2:11-cv-02288-SLD-JAG	CDIL, Rock Falls	2017	P, C
(Patents and contract related to use of deuterium in semicondutor processing)				
ZiiLabs v AMD* (*firm: O'Melveny & Myers)	337-TA-1037	ITC-Shaw	2017	P
(Patents related to graphics processors)				
MTL* v Sandisk (*firm: Tensegrity)	337-TA-1034	ITC-Lord	2017	P,t
(Patents related to flash memory)				
Razberi v Dynacolor* (*firm: McDole Williams)	01-16-0003-3734	AAA	2017 - 2018	C,TS,t, TH
(Arbitration related to contractual obligations)				
Seed Spring* v Microsoft (*firm: Dovel)	6:17-cv-427-RWS	EDTX, Tyler	2017	P
(Patents related to Wirelss Location)				
TracBeam* v Microsoft (*firm: Dovel)	6:17-cv-426-RWS	EDTX, Tyler	2017	P
(Patents related to Wirelss Location)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
TracBeam* v Cisco (*firm: Dovel)	6:17-cv-525-RWS	EDTX, Tyler	2017 - 2018	P
(Patents related to Wirelss Location)				
Arris* v Sony (*firm: Fish & Richardson)	337-TA-1060	ITC-Lord	2017	P,t
(Patent related to Broadcast Signals)				
Vivint* v Alarm.com (*firm: Weil)	2:15-cv-00392-CW-BCW	UT	2017 - 2023	P,t
(Patents related to Electronic Message Delivery)				
Blitzsafe* v Bosch (*firm: Brown Rudnick)	2:17-cv-00105-JRG	EDTX, Marshall	2017 - 2019	P,t
(Patents related to audio device integration systems)				
Blitzsafe* v Daimler & Mercedes (*firm: Brown Rudnick)	2:17-cv-00422-JRG	EDTX, Marshall	2017 – 2019	P
(Patents related to audio device integration systems)				
Blitzsafe* v BMW (*firm: Brown Rudnick)	2:17-cv-00418-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to audio device integration systems)				
Blitzsafe* v Mazda (*firm: Brown Rudnick)	2:17-cv-00423-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to audio device integration systems)				
Blitzsafe* v Mitsubishi (*firm: Brown Rudnick)	2:17-cv-00430-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to audio device integration systems)				
Blitzsafe* v Subaru (*firm: Brown Rudnick)	2:17-cv-00421-JRG	EDTX, Marshall	2017 - 2019	P,t
(Patents related to audio device integration systems)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Blitzsafe* v Tata & Jaguar (*firm: Brown Rudnick)	2:17-cv-00424-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to audio device integration systems)				
Blitzsafe* v Volvo (*firm: Brown Rudnick)	2:17-cv-00420-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to audio device integration systems)				
AGIS* v Huawei (*firm: Brown Rudnick)	2:17-00513-JRG	EDTX, Marshall	2017 - 2018	P,t
(Patents related to Patents related to interactive remote communications)				
AGIS* v HTC (*firm: Brown Rudnick)	2:17-00514-JRG	EDTX, Marshall	2017 - 2019	P,t
(Patents related to Patents related to interactive remote communications)				
AGIS* v LG (*firm: Brown Rudnick)	2:17-00515-JRG	EDTX, Marshall	2017 - 2019	P,t
(Patents related to Patents related to interactive remote communications)				
AGIS* v Apple (*firm: Brown Rudnick)	2:17-00516-JRG	EDTX, Marshall	2017 - 2019	P,t
(Patents related to Patents related to interactive remote communications)				
AGIS* v ZTE (*firm: Brown Rudnick)	2:17-00517-JRG	EDTX, Marshall	2017 - 2019	P
(Patents related to Patents related to interactive remote communications)				
Arya v Dufossat* (*firm: Robert Sueiro)	4:16-cv-03595	SDYX, Houston	2017 -	TS,C,t
(Dispute related to Trade Secrets)				
Seven Networks v Samsung* (*firm: Fish & Richardson)	2:17-cv-00441-JRG	EDTX, Marshall	2017 - 2018	P,t
(Patents related to Power Management of Mobile Networks)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
ZF Micro Solutions* v. Tat Investment (*firm: Berger)	1-09-CV-134970	Santa Clara County	2018	C,t,TH
(Business tort, unfair practice)				
Univ of S FL* v Fujifilm (*firm: Dickinson Wright)	3:18-cv-00215-AVC	Connecticut	2018	P,t
(Patent related to Workstation Interface – Digital Mammography)				
Univ of S FL* v BRIT (*firm: Dickinson Wright)	3:18-CV-0250-K	NDTX, Dallas	2018 - 2019	P,t
(Patent related to Workstation Interface – Digital Mammography)				
Cypress Insurance v Hynix* (*firm: Bird Marella)	C17-467 RAJ	WDWA, Seattle	2018 - 2019	C,t,TH
(Contract dispute related to product delivery)				
Belliveau* v BARCO (*firm: McKool)	1:17-CV-00379-SS	WDTX, Austin	2018	C,t
(Patent portfolio liceinsing dispute)				
MPS* v Intersil (*firm: Perkins	16-1125-LPS	DE	2018 - 2021	TS,t
(Trade Secret dispute)				
GoGo v Squire Patton Boggs* (*firm: Cozen O'Connor)	2016-L-007789	Cook County, IL	2018 - 2019	P
(Patent Malpractice claim)				
X2Y* v Intel (*firm: Dovel)	3:18-cv-1394-HZ	DOR, Portland	2018 - 2020	P
(Patents related to package layer metalization)				
Power Integration* v ON Semi (*firm: Fish & Richardson)	5:16-cv-06371-BLF	NDCA, San Jose	2019	P,t
(Patents related to power converter regulation)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
ON Semi v Power Integration* (*firm: Fish & Richardson)	1:17-cv-00247-LPS-CJB	DE	2019	P,t
(Patents related to power converter regulation)				
Semcon* v Amazon (*firm: Brown Rudnick)	2:18-CV-00192-JRG	EDTX, Marshall	2019	P
(Patent related to Adaptive Power Control)				
Semcon* v Asustek (*firm: Brown Rudnick)	2:18-CV-00193-JRG	EDTX, Marshall	2019	P
(Patent related to adaptive power control)				
Semcon* v Kyocera (*firm: Brown Rudnick)	2:18-CV-00197-JRG	EDTX, Marshall	2019	P
(Patent related to adaptive power control)				
Innovation Sciences* v Amazon (*firm: Davidson Berquist)	4:18-cv-00474-ALM	EDTX, Sherman	2019 - 2020	P,t,TH
(Patent related to Internet communication)				
Innovation Sciences* v HTC (*firm: Davidson Berquist)	4:18-cv-00476-ALM	EDTX, Sherman	2019 - 2020	P,t
(Patent related to Internet communication)				
Innovation Sciences* v Resideo (*firm: Davidson Berquist)	4:18-cv-00475-ALM	EDTX, Sherman	2019 - 2020	P,t
(Patent related to Internet communication)				
Innovation Sciences* v Vector (*firm: Davidson Berquist)	4:18-cv-00477-ALM	EDTX, Sherman	2019	P
(Patent related to Internet communication)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
CXT* v JC Penny (*firm: Brown Rudnick)	2:18-cv-00171-RWS-RSP (lead) 2:18-CV-233-RWS-RSP	EDTX, Marshall	2019 - 2020	P,t
(Patents related to storage management and information distribution)				
Photonics* v Lenovo (*firm: Brown Rudnick)	1:18-cv-00489-MN	DE	2019	P
(Patents related to GDS-II Layout)				
Quest NetTech Corp* v Apple (*firm: Brown Rudnick)	2:19-CV-00118-JRG	EDTX, Marshall	2019 - 2020	P
(Patent related to programmable credit card system)				
Pilot, Inc.* v Schumacher (*firm: Bradford)	1:19-cv-05982-EEC	NDIL, Eastern Div	2019 - 2921	P
(Patents related to battery chargers)				
Vocalife* v Amazon (*firm: Brown Rudnick)	2:19-cv-00123-JRG	EDTX, Marshall	2019 - 2020	P,t,TH
(Patent related to microphone array)				
Semcon* v Vuitton (*firm: Brown Rudnick)	2:19-CV-00122-JRG	EDTX, Marshall	2019	P,t
(Patent related to adaptive power control)				
Semcon* v Shenzhen (*firm: Brown Rudnick)	2:18-CV-00196-JRG	EDTX, Marshall	2019	P,t
(Patent related to adaptive power control)				
Ultravision* v GoVision (*firm: Brown Rudnick)	2:18-cv-00100-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v Shenzhen (*firm: Brown Rudnick)	2:18-cv-00103-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Ultravision* v Aoto (*firm: Brown Rudnick)	2:18-cv-00113-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v Leyard (*firm: Brown Rudnick)	2:18-cv-00102-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v NEC (*firm: Brown Rudnick)	2:18-cv-00150-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to Modular Display Panels and LED lighting)				
Ultravision* v Prismaflex (*firm: Brown Rudnick)	2:18-cv-00108-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v Unilumin (*firm: Brown Rudnick)	2:18-cv-00116-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v Yaham (*firm: Brown Rudnick)	2:18-cv-00118-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Ultravision* v Absen (*firm: Brown Rudnick)	2:18-cv-00112-JRG-RSP	EDTX, Marshall	2019	P
(Patents related to modular display panels and LED lighting)				
Birchett* v City of Fort Worth (*firm: Kennedy Law)	DC-19-06941	Dallas County	2019	C,t
(Whistleblower)				
Innovation Sciences* v HTC (*firm: Davidson Berquist)	337-TA-1180	ITC	2020 - 2021	P,t
(Patent related to wireless communication)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Innovation Sciences* v Resideo (*firm: Davidson Berquist)	337-TA-1180	ITC	2020	P,t
(Patent related to Internet communication)				
CXT* v Neiman Marcus (*firm: Brown Rudnick)	2:19-cv-00270-RWS-RSP	EDTX, Marshall	2020	P
(Patents related to storage management and information distribution)				
CXT* v General Nutrition (*firm: Brown Rudnick)	2:19-cv-00271-RWS-RSP	EDTX, Marshall	2020	P
(Patents related to storage management and information distribution)				
CXT* v Steven Madden (*firm: Brown Rudnick)	2:19-cv-00272-RWS-RSP	EDTX, Marshall	2020	P
(Patents related to storage management and information distribution)				
Consolidated* v Amazon (*firm: Devlin Law)	1:19-cv-01715-RGA	DE	2020 – 2021	P,t
(Patents related to on-line shopping)				
Consolidated* v Ford (*firm: Devlin Law)	1:19-cv-01916-RGA	DE	2020 - 2021	P,t
(Patents related to on-line shopping)				
Consolidated* v JC Penney (*firm: Devlin Law)	1:19-cv-01918-RGA	DE	2020 - 2021	P,t
(Patents related to on-line shopping)				
Consolidated* v Ebay (*firm: Devlin Law)	1:19-cv-01580-RGA	DE	2020 - 2021	P,t
(Patents related to on-line shopping)				
Consolidated* v Walmart (*firm: Devlin Law)	1:19-cv-01581-RGA	DE	2020 - 2021	P,t
(Patents related to on-line shopping)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Semcon* v TCT Mobile (*firm: Brown Rudnick)	2:18-CV-00194-JRG	EDTX, Marshall	2020	P
(Patent related to adaptive power control)				
BNR v Samsung* (*firm: Fish & Richardson)	2:19-cv-00286-JRG	EDTX, Marshall	2020	P
(Patents related to portable communication devices)				
AGIS* v Google (*firm: BRudnick, Fabricant)	2:19-cv-00361-JRG	EDTX, Marshall	2020 - 2022	P,t
(Patents related to interactive remote communications)				
AGIS* v Waze (*firm: BRudnick, Fabricant)	2:19-cv-00359-JRG	EDTX, Marshall	2020 - 2022	P,t
(Patents related to interactive remote communications)				
Burke* v City of Fort Worth (*firm: Kennedy Law)	DC-19-07239	Dallas County	2020	C,t
(Whistleblower)				
Infinera v Oyster Optics* (*firm: Davidson Berquist)	IPR2020-00325	PTAB	2020	P,t
(Patent related to fiber optic telecommunications)				
Blitzsafe* v GM (*firm: Fabricant)	2:19-cv-00377-JRG	EDTX, Marshall	2020	P,t
(Patents related to audio device integration systems)				
Blitzsafe* v FCA (*firm: Fabricant)	2:19-cv-00378-JRG	EDTX, Marshall	2020	P,t
(Patents related to audio device integration systems)				
Kuster v Western Digital* (*firm: Shearman & Sterling)	6:20-cv-00563	WDTX, Waco	2020	P,t
(Patent related to memory stack storage)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
TruSun* v Eaton (*firm: Duane Morris)	6:19-cv-00656-ADA	WDTX, Waco	2020 - 2022	P,t
(Patent related to a light-generating system)				
RJR v PMI* (*firm: Latham Watkins)	1:20-cv-00393-LO-TCB	EDVA, Alexandria	2020 - 2022	P,t,TH
(Patents related to e-cigarette controls)				
Koss* v Apple et al (*firm: K L Gates)	6:20-cv-00665	WDTX, Waco	2020 - 2022	P,t
(Patents related to Wireless Headphones)				
Koss* v Bose (*firm: K L Gates)	6:20-cv-00661	WDTX, Waco	2020	P
(Patents related to Wireless Headphones)				
Ipcom v Sprint et al (Nokia*) (*Alston Bird)	2:20-cv-321	EDTX, Marshall	2020 - 2022	P
(Patents related to CDMA communication)				
Ipcom v Verizon et al (Nokia*) (*Alston Bird)	2:20-cv-323	EDTX, Marshall	2020 - 2022	P
(Patents related to CDMA communication)				
Pilot* v CarKu (*firm: Bradford / Sheridan)	7131799991	Amazon Arbitration	2020	P,t
(Patent related to jump starters)				
MPS* v Meraki (*firm: Perkins Coie)	6:2020cv00876-ADA	WDTX, Waco	2020 - 2022	P,TS,C
(Patents related to synchronous rectifier control)				
AGIS* v Uber (*firm: Fabricant)	2:21-cv-00026-JRG-RSP)	EDTX, Marshall	2021	P
(Patents related to interactive remote communications)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
AGIS* v WhatsApp (*firm: Fabricant)	2:21-cv-00029-JRG-RSP)	EDTX, Marshall	2021	P
(Patents related to interactive remote communications)				
One E-Way* v Apple (*firm: Knobbe Martin)	2:20-cv-06339-JSK-PD	CDCA	2021 - 2023	P,t
(Patent related to Bluetooth Headphones)				
BMW v Omega Patents* (*firm: Allen Dyer)	IPR2021-00181	PTAB	2021 -	P,t
(Patent related to remote start)				
Pilot* v The NOCO Co (*firm: Bradford / Sheridan)	2:20-cv-01452-SRB	AZ	2021 - 2023	P,t
(Patents related to auto chargers)				
Express Mobile* v Atlassian (*firm: Mololamken)	6:20-cv-00805-ADA	WDTX, Austin	2021	P
(Patents related to browser-based web site generation)				
AGIS* v Lyft (*firm: Fabricant)	2:21-cv-00024-JRG-RSP	EDTX, Marshall NDCA	2021 - 2022	P
(Patents related to interactive remote communications)				
AGIS* v T-Mobile (*firm: Fabricant)	2:21-cv-00072-JRG-RSP	EDTX, Marshall	2021	P
(Patents related to interactive remote communications)				
Altria* v RJR (*firm: Weil Gotshal)	1:20-cv-00472	MDNC	2021 - 2022	P,t,TH
(Patents related to e-cig)				
One E-Way* v Apple (*firm: Knobbe Martin)	IPR2021-00283 IPR2021-00286	PTAB	2021 - 2022	P,t
(Patent related to Bluetooth Headphones)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Altria* v RJR (*firm: Weil Gotshal)	IPR2021-00650 IPR2021-00652 IPR2021-00725 IPR2021-00744 IPR2021-00745 IPR2021-00746 IPR2021-00747 IPR2021-00793	PTAB	2021 - 2022	P,t,TH
(Patents related to e-cig control)				
Kiwi Connection* v Anker (*firm: Bradford)	8519300821	Amazon Arbitration	2021	P,t
(Patent related to bidirectional connector)				
Kiwi Connection* v JBL (*firm: Bradford)	8674855301	Amazon Arbitration	2021	P,t
(Patent related to bidirectional connector)				
Platform Science v Omnitracs* (*firm: Kirkland & Ellis)	IPR2020-0187 IPR2020-1517 IPR2020-1518	PTAB	2021 – 2022	P,t
(Patent related to critical event reporting)				
Netlist v Samsung* (*firm: Bird Marella)	8:20-cv-993-MCS	CDCA, Southern	2021	C,t
(Contract dispute)				
Monterey Research* v (*firm: Desmarais)	IPR 2021-00119 IPR 2021-00120 IPR 2021-00172	PTAB	2021 - 2022	P,t
(Patents related to semiconductor processing)				
Apple / Bose v Koss* (*firm: K L Gates)	IPR2021-00255 IPR2021-00297 IPR2021-00305 IPR2021-00381 IPR2021-00592	PTAB	2021 - 2022	P,t
(Patents related to Wireless Headphones)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Vocalife* v Amazon2 (*firm: Fabricant)	2 :20-cv-00401-JRG-RSP	EDTX, Marshall	2021 - 2023	P,t
(Patent related to microphone array)				
Vocalife* v Google (*firm: Fabricant)	2 :21-cv-00124-JRG-RSP	EDTX, Marshall	2021 - 2023	P,t
(Patent related to microphone array)				
Luxshare* v Amphenol (*firm: K L Gates)	IPR2022-00132	PTAB	2021 - 2022	P,t
(Patent related to high performance connector)				
Vervain v Micron* (*firm: Orrick)	6:20-cv-487-ADA	WDTX, Waco	2021 - 2023	P,t
(Patents related to MLC & SLC endurance)				
Express Mobile* v Dropbox (*firm: Mololamken)	3:21-cv-01145	NDCA	2021	P
(Patents related to browser-based web site generation)				
Lexmark v Universal Imaging* (*firm: Allen Dyer)	8:18-cv-1047-T-17AEP	MDFL, Tampa	2021 - 2023	P
(Patents related to printer cartridge authentication)				
Pilot* v The NOCO Co (*firm: Bradford / Sheridan)	IPR2021-00777 IPR2021-01232 IPR2023-00167 IPR2023-00810	PTAB	2021	P,t
(Patents related to auto chargers)				
Delta T* v MacroAir (*firm: Latham/VedderPrice)	5:20-cv-00728-GW-GJS	CDCA, LA	2022 - 2023	P
(Patents related to fan sensors and control)				
MPS* v Dong & Sheng (*firm: Perkins Coie)	4 :20-cv-6752-JSW	NCCA, Oakland	2022 - 2023	P, TS
(Patents related to synchronous rectifier control)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Vocalife* v Sonos (*firm: Fabricant)	2 :21-cv-00129-JRG	EDTX, Marshall	2022	P,t
(Patent related to microphone array)				
Vocalife* v Bose (*firm: Fabricant)	2 :21-cv-00128-JRG	EDTX, Marshall	2022	P,t
(Patent related to microphone array)				
Enovsys* v T-Mobile (*firm: Eichmann)	2:21-cv-00368-JRG	EDTX, Marshall	2022	P,t
(Patents related to precise location determination and secure disclosure)				
Enovsys* v Verizon (*firm: Eichmann)	2:21-cv-00315-JRG-RSP	EDTX, Marshall	2022	P,t
(Patents related to precise location determination and secure disclosure)				
Lyft v AGIS* (*firm: Fabricant)	5 :21-cv-04653-BLF	NDCA, San Jose	2022 - 2023	P
(Patents related to interactive remote communications)				
Vocalife* v Amazon (*firm: Fabricant)	IPR2021-01331	PTAB	2022	P,t
(Patent related to microphone array)				
MPS* v Meraki (*firm: Perkins Coie)	4:22-cv-01986 JSW	NDCA, Oakland	2022 - 2023	P,TS,C
(Patents related to synchronous rectifier control)				
Signode v Polychem* (*firm: Latham)	1 :22-cv-00519-UNA	DE	2022	P
(Patents related to a strapping apparatus)				
Pilot* v Hulkman (*firm: BRADFORD)	10427111251	Amazon Arbitration	2022	P,t
(Patent related to jump starters)				

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Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Netlist v Samsung* (*firm: Fish & Richardson)	2:21-cv-463	EDTX, Marshall	2022 - 2024	P,t,TH
(Patents related to DIMM DDR3 signal timing, power management, and rank multiplication)				
Orange* v Autel (*firm: Sughrue Mion)	2 :21-cv-240	EDTX, Marshall	2022 - 2023	P,t,TH
(Patent related to Tire Pressure Monitoring Systems)				
Bell Power v MPS* (*firm: Perkins Coie)	6 :21-cv-00655-ADA	WDTX, Waco	2022 -	P
(Patents related to power converter/regulator control)				
VPR v Jupiter* (*firm: Noroozi PC)	2:20-CV-02185-DJH	AZ	2023 -	P,t
(Patent related to electronic vape device with air flow sensor)				
Multimodal* v Guangdong (*firm: Fabricant)	2:21-cv-00436-JRG-RSP	EDTX, Marshall	2023	P
(Patents related to communication over a network, call completion)				
Multimodal v ZTE (*firm: Fabricant)	2:21-cv-00437-JRG-RSP	EDTX, Marshall	2023	P
(Patents related to communication over a network, call completion)				
Entropic* v Charter Communications et al. (*firm: K L Gates)	2 :22-cv-00125-JRG	EDTX, Marshall	2022	P
(Patents related to modems and broadband content distribution)				
Oasis Tooling* v Global Foundries U.S. (*firm: Kramer Levin)	22-00312-CJB	DE	2022 - 2024	P,t
(Patents related to chip design process workflow)				
Oasis Tooling* v Siemens Industry Software (*firm: Kramer Levin)	22-00151-CJB	DE	2022 - 2024	P,t
(Patents related to chip design process workflow)				

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Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
AGIS* ITC (*firm: Fabricant)	337-TA-1347	ITC	2023	P
(Patents related to Location-Sharing Systems)				
Monterey* v Nanya (*firm: Desmarais)	19-2090-NIQA-LAS	DE	2023 – 2024	P
(Patents directed to semiconductor technology)				
Geotab v Omega* (*firm: Allen Dyer)	IPR2023-00504	PTAB	2023	P,t
(Patent related to multi-vehicle communication)				
Adv Lighting Concepts* v mate (*firm: Munsch)	IPR2023-01264	PTAB	2023	P
(Patent related to LED drivers)				
SitePro* v Waterbridge (*firm: Perkins Coie)	6:23-cv-00115-ADA-DTG	WDTX, Waco	2023	P,TS,C
(Patents and Trade Secrets related to remote delivery control)				
Nanya v Monterey* (*firm: Botos Churchill)	EPR 6,825,526C1 EPR 6,680,516	USPTO	2023	P,t
(Patents directed to semiconductor technology)				
ICPillar* v ARM (*firm: Eichmann)	6_23-cv-00115-ADA-DTG	WDTX, Austin	2023 - 2024	P
(Patents related to computer method for IC design)				
GoTV Streaming v Netflix* (*firm: Wilkie Farr)	EPR 8478245 EPR 8989715	USPTO	2023	P,t
(Patent related to rendering content on a wireless device)				
Greenthread v MPS* (*firm: Perkins Coie)	23-579-RGA	DE	2024	P
(Patents related to semiconductor structure with graded doping)				

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Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
MPS* v REED (*firm: Perkins Coie)	23-1155-JFM	DE	2023 -	P,t
(Patent related to bootstrap refresh control)				
Verizon v Omega* (*firm: Allen Dyer)	IPR2023--01162	PTAB	2023 -	P,t
(Patent related to multi-vehicle communication)				
MOSAID v MediaTek* (*firm: Fish & Richardson	2:23-cv-00129-JRG-RSP	EDTX, Marshall	2023 - 2024	P
(Patents related to IC Power Management)				
GoTV Streaming v Netflix* (*firm: Wilkie Farr)	2 :22-cv-07556-RGK-SHK	CDCA	2023	P
(Patent related to rendering content on a wireless device)				
Lifetime* v Qima (*firm: Fabricant)	2:23-cv-00216-JRG	EDTX, Marshall	2024	P,t
(Patents related to Quality Management)				
Stellar* v Motorola Solutions (*firm: Devlin)	4:23-cv-00750-SDJ	EDTX, Sherman	2024 -	P
(Patents related to write protect recording)				
Enovsys* v Lyft (*firm: Seth Law)	23-cv-05157-EJD	NDCA, San Jose	2024	P
(Patents related to mobile unit tracking)				
ARM v ICPillar* (*firm: Lowenstein)	IPR2024-00476 IPR2024-00566	PTAB	2024	P,t
(Patents related to computer method for IC design)				
Maxell v TCL* (*firm: King & Spalding)	5:23-CV-00108-RWS-JBB	EDTX, Texarkana	2024 -	P,t
(Patents related to image display apparatus)				
Enovsys* v Uber (*firm: Seth Law)	23-cv-04549-EJD	NDCA, San Jose	2024	P
(Patents related to mobile unit tracking)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Uber v Enovsys* (*firm: Seth Law)	IPR2024-00825 IPR2024-00826 IPR2024-00827	PTAB	2024 -	P,t
(Patents related to mobile unit tracking)				
JUUL v NJOY* (*firm: Weil Gotshal)	337-TA-1368 IPR2024-00231	ITC PTAB	2024	P,t,TH
(Patent related to vaping devices)				
RJR v Guangdong et al.* (*firm: Mei & Mark)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v Kangvape* (*firm: Fish & Richardson)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v Breeze et al.* (*firm: Goodwin Procter)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v Pastel et al.* (*firm: Keller Heckman)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v Shenzhen Yanyang et al.* (*firm: Rimon)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v Maduro* (*firm: Thompson Hine)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
RJR v TheSy* (*firm: Thompson Hine)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				

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CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
RJR v SV3* (*firm: Sterne Kessler)	337-TA-1410	ITC	2024 -	P,t
(Patent related to vaping devices)				
REED v MPS* (*firm: Perkins Coie)	IPR2024-00871	PTAB	2024 -	P,t
(Patent related to bootstrap refresh control)				
Phenix* v AU Optronics (*firm: Womble Bond)	2:23-cv-00477-RWS-RSP	EDTX, Marshall	2024 -	P
(Patents related to Gamma reference generation)				
Phenix* v Innolux (*firm: Womble Bond)	2:23-cv-00478-RWS-RSP	EDTX, Marshall	2024 -	P
(Patents related to Gamma reference generation)				

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I have worked with other clients in various areas of my expertise, including "system, product, and process investigation," "patent valuation," "product liability and insurance claim investigation," "quality systems consulting and engineering," and "IP licensing." This work generally relates to patents and/or trade secrets and may involve analysis of products either defensively or offensively. In no case does any of the work involve design of circuits, processes, packaging, software, or systems.

Non-confidentially, I have represented a radiation effects testing company, ICS Radiation Technology. Further, I have worked with investment companies, such as Hatcreek Partners, reviewing potential investment opportunities, and have participated as a technical advisor to nLine Corporation, a company that developed a product for semiconductor wafer inspection using holographic High Aspect Ratio Inspection (HARI) technology. Work associated with each of these matters occurred more than 10 years ago.

These and other non-confidentially related companies are:

The Aspire International Foundation (2019-present)
- Partner;
- Rediscovering and redefining identity and purpose through experiential equine learning programs;
- Not assigned any patents and not engaged in any IP related activities.

Casualty Consulting Group of America (2013-present)
- Partner;
- Assessment of structural damage caused by extreme weather events;
- Not assigned any patents and not engaged in any IP related activities.

VCSY (2013-2020)
- Advisory board Member;
- Technology related to encrypted communication.

Bethel Cannon Group / Bethel Cannon Holdings (2011-present)
- Partner;
- Counseling / Event / Retreat Center / Hunting Lodge;
- Not assigned any patents and not engaged in any IP related activities.

Spirit Song Youth Equestrian Academy / Spirit Song Holdings (2011-present)
- CEO;
- Equine Assisted Learning Program for abused / traumatized youth, families, corporations, and churches;
- Not assigned any patents and not engaged in any IP related activities.

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E^{3}A (2016-present)
- President (2018-2023);
- Certification training of Equine Practitioners;
- Not assigned any patents and not engaged in any IP related activities.

Novo Tellus Capital Partners (2016-2017)
- Novo Tellus is an investment firm. I served as a technical advisor in reviewing the technology and contracts of investment opportunities.

UTAC (2008-2016)
- Technical consultant in matters related to packaging test and assembly, patents, and contracts.

ICS Radiation Technology (1988-2009)
- Consulting work related to nuclear radiation effects testing.

Creative Management Consultants (CMC) (2003-2004)
- Consulting work related to Internet services, such as access service to clients and web site hosting services; providing business co-op services and internet product purchasing sites.

Hatcreek Partners (1999-2003)
- Hatcreek Partners is an investment firm. I served as a technical advisor in reviewing the technology of investment opportunities.

nLine Corporation (1999-2003)
- Member of Technical Advisory Board;
- nLine Corp.'s business related to semiconductor holographic High Aspect Ratio Inspection (HARI) technology.

Texas Instruments (pre 2002)
- Patent evaluation and application consulting.

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