UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

IMPERATIVE CARE, INC.,
Petitioner,

v.

INARI MEDICAL, INC.,
Patent Owner.

Case IPR2025-01264
Patent No. 12,016,580

SUPPLEMENTAL DECLARATION OF TROY L. THORNTON IN SUPPORT OF PETITIONER'S REPLY FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 12,016,580

Imperative Care v. Inari Medical
IPR2025-01264
Imperative Care Ex. 1067

TABLE OF CONTENTS

Page No.

I. ENGAGEMENT 1

II. EXPERIENCE AND QUALIFICATIONS 2

III. MATERIALS CONSIDERED 8

IV. GARRISON'S ASPIRATION METHOD IS COMPATIBLE WITH BLOOD RETURN 9

A. Syringes And Receptacles Can Be Used For Blood Return 9

B. Building Up Pressure With Garrison's Valve Is Compatible With Blood Return 11

V. CONCLUSION 12

TABLE OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 12,016,580 ("the '580 patent")
1002	'580 Patent Prosecution History
1003	Expert Declaration of Troy Thornton
1004	Resume of Troy Thornton
1005	WIPO Publication No. WO 2006/124307 A2 to Goff et al. ("Goff")
1006	U.S. Patent Publication No. 2015/0173782 A1 to Garrison et al. ("Garrison")
1007	U.S. Patent Publication US 2003/0225379 A1 to Schaffer et al. ("Schaffer")
1008	U.S. Patent Publication No. 2003/0116731 A1 to Hartley ("Hartley")
1009	U.S. Patent Publication No. 2015/0352325 A1 to Quick ("Quick")
1010	U.S. Patent Publication No. 2010/0042118 A1 to Garrison et al.
1011	U.S. Patent No. 8,734,374 B2 to Aklog et al. ("Aklog")
1012	U.S. Patent Publication No. 2017/0043066 A1 to Laub ("Laub")
1013	U.S. Patent No. 6,776,770 B2 to Trerotola ("Trerotola")
1014	U.S. Patent No. 5,938,645 to Gordon ("Gordon")
1015	U.S. Patent Publication No. 2014/0296868 A1 to Garrison et al.
1016	Certified File History of U.S. Patent Application 10/371,190 (Schaffer File History)
1017	U.S. Provisional Patent Application No. 62/554,931 (the "'931 application")

Exhibit No.	Description
1018	U.S. Patent No. 6,481,439 B1 to Lewis et al.
1019	U.S. Patent No. 5,256,150 to Quiachon et al.
1020	WIPO Publication No. WO 2018/019829 A1 to Brady et al. ("Brady")
1021	U.S. Patent No. 12,109,384 B2 to Merritt et al.
1022	Expert Declaration of Dr. Aquilla S. Turk, III, DO
1023	Resume of Dr. Aquilla Turk, III, D.O.
1024	Shani, Jacob M.D., et al., Mechanical Manipulation of Thrombus: Coronary Thrombectomy, Intracoronary Clot Displacement, and Transcatheter Aspiration, 72 Am. J. Cardiol. 116G-118G (1993)
1025	Bose, A et al., The Penumbra System: A Mechanical Device for the Treatment of Acute Stroke due to Thromboembolism, 29 Am. J. Neuroradiol. 1409-1413 (Aug. 2008)
1026	Turk, Aquilla S. et al., Initial clinical experience with the ADAPT technique: A direct aspiration first pass technique for stroke thrombectomy, 6 J. NeuroIntervent. Surg. 231-237 (2014)
1027	Turk, Aquilla S. et al., ADAPT FAST study: a direct aspiration first pass technique for acute stroke thrombectomy, 6 J. NeuroIntervent. Surg. 260-264 (2014)
1028	April 24, 2024 Letter from Inari to Imperative Care
1029	Turk, Aquilla S. et al., Aspiration thrombectomy versus stent retriever thrombectomy as first-line approach for large vessel occlusion (COMPASS): a multicentre, randomized, open label, blinded outcome, non-inferiority trial, 393 Lancet 998-1008 (March 2019)
1030	Save, Jeffrey L., Time is Brain – Quantified, American Heart Association Journals, available at http://www.stokeaha.org (2005).
1031	Decision Granting Institution of IPR, IPR2024-01157, U.S. Patent No.

Exhibit No.	Description
	11,697,011 B2
1032	Decision Granting Institution of IPR, IPR2025-00156, U.S. Patent No. 11,697,012 B2
1033	Decision Granting Institution of IPR, IPR2025-00289, U.S. Patent No. 11,554,005 B2
1034	Merriam-Webster's Collegiate Dictionary – Previously Submitted by Patent Owner as Ex. 2002 in IPR2024-00289 – Definition of "Loosen"
1035	U.S. Patent No. 7,998,104 B2 to Chang
1036	U.S. Patent No. 8,157,760 B2 to Craido et al.
1037	Plaintiff Inari's Supplemental Preliminary Disclosure of Asserted Claims and Infringement Contentions Pursuant to Patent Local Rules 3-1 and 3-2 in *Inari Medical, Inc. v. Imperative Care, Inc.,* 5:24-cv-03117-EKL (N.D. Cal.)
1038	Case Management and Scheduling Order (Dkt. #54) in *Inari Medical, Inc. v. Imperative Care, Inc.,* 5:24-cv-03117-EKL (N.D. Cal.)
1039	Imperative Care, Inc.'s Notice of Motion and Motion to Stay Pending *Inter Partes* Review in *Inari Medical, Inc. v. Imperative Care, Inc.,* 5:24-cv-03117-EKL (N.D. Cal.)
1040	Order Regarding Case Schedule and Motion to Stay in *Inari Medical, Inc. v. Imperative Care, Inc.,* 5:24-cv-03117-EKL (N.D. Cal.)
1041	Order Denying Motion for Preliminary Injunction (Dkt. #136) in *Inari Medical, Inc. v. Imperative Care, Inc.*, 24-cv-03117-EKL (N.D. Cal.) (issued September 29, 2025)
1042	Decision Denying Patent Owner's Request for Discretionary Denial (Paper 9) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-00289 (P.T.A.B. June 12, 2025)
1043	Decision Referring the Petition to the Board (Paper 9) in *Imperative*

Exhibit No.	Description
	Care, Inc. v. Inari Medical, Inc., IPR2025-00728 (P.T.A.B. July 31, 2025)
1044	Decision Referring the Petitions to the Board (Paper 11) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-01021 (P.T.A.B. Oct. 10, 2025)
1045	Decision Referring the Petitions to the Board (Paper 11) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-01025 (P.T.A.B. Oct. 10, 2025)
1046	Order Granting In Part Motion To Stay (Dkt. #137) in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.) (issued September 29, 2025)
1047	Redacted Excerpts of Deposition Transcript of PO's Expert Brian Brown dated August 27, 2024, submitted as Exhibit 1019 to R. Tyler Kendrick's Declaration in Support of Inari's Statement Regarding Truvic's Administrative Motion Pursuant to Civil L.R. 79-5(C)(1) & (F) (Dkt. #85-1) in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.) (filed February 26, 2025)
1048	Deposition Transcript of PO's Expert Paul Zalesky, Ph.D. dated June 23, 2025
1049	Joint Stipulation to Continue the Stay of Litigation Pending IPR Decisions and Vacate Upcoming Case Management Conference (Dkt. #139) in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.) (filed January 21, 2026)
1050	Order Granting Joint Stipulation to Continue the Stay of Litigation Pending IPR Decisions and Vacate Upcoming Case Management Conference (Dkt. #140) in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.) (issued January 21, 2026)
1051	Final Written Decision Determining All Challenged Claims Unpatentable (Paper 33) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-00156 (P.T.A.B. Apr. 7, 2026)

Exhibit No.	Description
1052	Decision Granting Institution of *Inter Partes* Review for U.S. Patent No. 11,969,333 (Paper 15) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-01021 (P.T.A.B. December 11, 2025)
1053	Decision Granting Institution of *Inter Partes* Review for U.S. Patent No. 11,974,910 (Paper 15) in *Imperative Care, Inc. v. Inari Medical, Inc.,* IPR2025-01025 (P.T.A.B. December 11, 2025)
1054	New Oxford American Dictionary Definition of "Material" (3d ed. 2010)
1055-1062	RESERVED
1063	Deposition Transcript of PO's Expert Brian Brown dated May 13, 2026
1064	Redacted Deposition Transcript of PO's Expert Brian Brown dated August 27, 2024 in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.)
1065	Deposition Transcript of PO's Expert Dr. Christopher Morris dated May 4, 2026 in IPR2025-01021 and IPR2025-01025
1066	Deposition Transcript of PO's Expert Dr. Paul Zalesky in IPR2025-00289 dated November 7, 2025
1067	Supplemental Expert Declaration of Troy Thornton
1068	RESERVED
1069	Gibbs, et al., Temporary Stent as a bail-out device during percutaneous transluminal coronary angioplasty: preliminary clinical experience, 71 British Heart J., 372-377 (1994)
1070	Edwards Lifesciences, Fogarty® Occlusion Catheters (product brochure) http://web.archive.org/web/20150228193218/http://www.edwards.com/products/vascular/atraumaticocclusion/pages/occlusioncatheter.aspx
1071	U.S. Patent No. 5,030,201

Exhibit No.	Description
1072	U.S. Patent No. 8,657,867
1073	U.S. Patent No. 8,721,714
1074	Redacted Deposition Transcript of Troy Thornton dated September 30, 2024 in *Inari Medical, Inc. v. Imperative Care, Inc.,* 24-cv-03117-EKL (N.D. Cal.)
1075	MitraClip Clip Delivery System Instructions for Use (2013)
1076	FDA Summary of Safety and Effectiveness Data (SSED) for the MitraClip Clip Delivery System (2013)
1077	Troy Thornton and Liz McDermott, MitraClip System Design and History of Development, published as Ch. 7 in Percutaneous Mitral Leaflet Repair (1st ed. 2012)
1078	James I. Fann et al., Beating Heart Catheter-Based Edge-to-Edge Mitral Valve Procedure in a Porcine Model Efficacy and Healing Response, 110 Circulation, 988-993 (2004)
1079	U.S. Patent Publication No. 2004/0092962 A1
1080	U.S. Patent Publication No. 2003/0130721 A1
1081	U.S. Patent Publication No. 2010/0145434 A1
1082	U.S. Patent No. 11,638,585

I, Troy L. Thornton, do hereby declare:

I. ENGAGEMENT

1. I have been retained on behalf of Imperative Care, Inc. ("Imperative" or "Petitioner") to provide my opinion regarding the patentability of Claims 1, 5-6, 9-30, and 33-34 of U.S. Patent No. 12,016,580 ("the '580patent"). For the reasons discussed herein and in my prior Declaration, I have concluded that Claims 1, 5-6, 9-30, and 33-34 of the '580 patent are unpatentable because the prior art references anticipate the claims or render them obvious.

2. I understand that this Supplemental Declaration supports Imperative's Reply for the above-captioned *inter partes* review ("IPR") of the '333 patent.

3. I reserve the right to supplement, change, clarify, or modify my opinions should additional information and/or documentation become available to me.

4. I am being compensated at my customary hourly rate for my work in this matter and I am being reimbursed at cost for my expenses. My compensation in no way depends upon the substance of my opinions or the outcome of this proceeding. I have no financial interest in any of the parties to this proceeding.

II. EXPERIENCE AND QUALIFICATIONS

5. My experience and qualifications are summarized in my *curriculum vitae*, which is designated as Exhibit 1004 in this IPR. I have also summarized some of my relevant experience in my previous Declaration submitted in this IPR. *See* Ex. 1003 at ¶¶ 5-14.

6. I understand that Patent Owner ("PO") has argued a person of ordinary skill in the art would have been:

> (1) a person with a Bachelor of Science degree in engineering or an equivalent field, with two to four years of academic or industry experience in the mechanical thrombectomy industry ***or comparable industry experience*** who would, where necessary or desired, work or consult with others including a physician to develop thrombectomy devices; or (2) an interventional radiologist or pulmonologist with at least three years of experience developing and/or using medical devices in thrombectomy procedures, and who would, where necessary, work or consult with others including an engineer to develop such a medical device.

Patent Owner's Response at 13 (emphasis added). PO does not define "comparable industry experience."

7. As I explained in my prior Declaration, it is my opinion that a person of ordinary skill in the art would have had "an undergraduate degree in mechanical engineering or a related engineer discipline and 2-4 years of catheter design experience and, where necessary, would have consulted with a physician regarding the methods of treatment." Ex. 1003 at ¶ 35. I believe that catheter design experience is "comparable industry experience" to "industry experience in

the mechanical thrombectomy industry" at least because aspiration systems for mechanical thrombectomy are primarily made up of a catheter connected to other standard catheter components like valves, filters, syringes, and pumps. Because the catheter is a primary component of any aspiration system, catheter design experience is the relevant experience a person of ordinary skill in the art would need to possess.

8. I also understand that PO has argued that I would not have qualified as a person of ordinary skill in the art with respect to the '580 patent in 2018 under PO's definition because I have not designed a mechanical thrombectomy system or a catheter specifically intended for thrombectomy procedures. *See* Patent Owner's Response at 15-17. I disagree. Even under PO's proposed definition, I qualified as a person of ordinary skill in 2018 because I had more than 30 years of "comparable industry experience." As discussed in my Declaration and below, I had extensive catheter design experience. I also understand that PO's expert, Dr. Morris, testified that "the common denominator" for what constitutes "comparable industry experience" is "clotting, or clot" and "experience in clot, and mitigating the effects of clots." Ex. 1065 (Morris Dep. Tr.) at 205:17-206:21. As I detail below, I had extensive experience with blood clots and mitigating the effects of blood clots in 2018.

9. Since 1985, I have spent my career working in the medical device field on devices for cardiovascular procedures, including thermodilution catheters, left ventricular assist devices, a centrifugal blood pump for cardiopulmonary bypass procedures, angioplasty catheters, abdominal aortic aneurysm endoprosthesis (a two-part implant and the two delivery catheters used to deliver the implant), the MitraClip device to treat mitral valve regurgitation that included the implant and the three catheters to deliver the implant, and a blood flow controller to treat acute decompensated heart failure. All these devices were in blood contact, and choosing materials that were biocompatible was a key component of the projects. Knowledge of the potential complications related to blood clots, thrombus, and thromboemboli was a critical part of every project I worked on.

10. As one example, the Instructions for Use ("IFU") for the MitraClip device, first approved in 2013, includes numerous references to emboli, embolism, thromboembolism, thrombosis, and thrombus. *See* Ex. 1075 (MitraClip IFU) at 3, 6, 20, 40, 42, . I wrote portions of the IFU, and I reviewed and approved every published IFU for the MitraClip system. Thrombosis of the MitraClip device and its potential to cause thromboembolism was one of the many important considerations that I addressed during the device's development.

11. The FDA's Summary of Safety and Effectiveness Data (SSED) for the MitraClip system similarly identifies the potential for thrombosis and thromboembolism as potential adverse events. *See* Ex. 1076 (MitraClip SSED) at 5, 24, 38-39. Section IX of the SSED details the summary of the pre-clinical studies. *Id.* at 6-12. As the VP of R&D, I was responsible for the testing and results summarized in that section. Tables 2 and 3 reflect that thrombogenicity testing was successfully conducted (per ISO 10993 requirements) on the MitraClip and the catheters. *Id.* a 7. In addition, the protocols and reports for the animal studies described in the SSED specifically required documentation of clot or thrombus on the MitraClip device and related catheters. For chronic animal studies, the pathologist documented any presence of clot or thrombus by microscopic examination of the implant, and also by examination and sectioning of the end organs.

12. I was also the lead author of Chapter 7 of the textbook *Percutaneous Mitral Leaflet Repair* by Ted Feldman, MD and Fredrick St Goar, MD published in 2012. Ex. 1077 (Thornton). In that chapter, I provide an overview of the R&D path for the MitraClip system. For example, I discuss the importance of the polyester fabric covering on the device to encourage tissue ingrowth and encapsulation of the device. *Id.* at 36, 40. In prior iterations of the MitraClip, our team experimented with uncovered metal components and alternative covering

materials, such as ePTFE, and witnessed evidence of thrombus on the implant. These findings led our team to use the polyester covering to, in part, prevent the development of thrombus on the device.

13. I was also an author of the MitraClip chronic animal study results published in the journal *Circulation*. Ex. 1078 (Fann). As I explained above, we inspected the devices used in that study for the presence of thrombus, and the animals were also observed for evidence of thromboembolism. *Id.* at 988, 990-991. Our study found no clinical or pathological evidence of thrombosis, thromboembolism, or infarcts. *Id.*

14. When I worked for Prograft, Inc. (later acquired by WL Gore) from 1995-2000, I led the development of a novel stent-graft to treat abdominal aortic aneurysms. A key component of the design was a smooth ePTFE lining on the stent-graft. This component differed from prior competitive designs where graft was on the outside of the stent. The lining was designed to prevent thrombosis and thromboembolism when the stent-graft was implanted.

15. In patent publication US 2004/0092962 A1, which relates to the two-part steerable guiding catheter system used to deliver the MitraClip device, in which I was the first named inventor, we considered the potential for emboli and the possibility of using the catheter for removal of embolic material:

- Paragraph 190 explains that "the device 14 may have a smooth surface which prevents cellular adhesion thereby ***reducing the accumulation of cells having potential for form an emboli***";
- Paragraph 245 explains that "the delivery catheter of the present invention may be used to deliver other types of devices, particularly endovascular and minimally invasive surgical devices used in angioplasty, atherectomy, stent-delivery, ***embolic filtration and removal***,'

Ex. 1079 ('962 Publication) at ¶¶190, 245 (emphases added).

16. I was also an inventor on patent publication US 2003/0130721 A1, which relates to a kink resistant stent graft. Ex. 1080 ('721 Publication). In that patent publication, we discussed the issues with current stent designs, which included the "use of highly thrombogenic material (stainless steels, tantalum, ELGILOY) which are exposed to blood" and may lead to thromboembolism. *Id.* at [0004]-[0005]. We also discussed the issue of turbulent flow through the stent graft caused by reductions in lumen diameter, "which possibly can lead to complications such as thrombosis." *Id.* at [0019].

17. I was also the first inventor on patent publication US 2010/0145434 A1, which relates to a kink resistant bifurcated endoluminal prosthesis. Ex. 1081 ('434 Publication). In the patent publication, we discussed how a buckle or wrinkle in graft material could form "a potential site for thrombogenic material to

build up." *Id.* at [0175]. Our design addressed that issue by not including graft material between the apices of the stent so that the graft material did not form a wrinkle. *Id.*

18. Most recently, I have worked on a catheter-based device to aid in the treatment of acute decompensated heart failure patients. I am the first (and only) named inventor on U.S. Patent No. 11,638,585, which relates to a blood flow controller. Ex. 1082 ('585 Patent). In that patent I describe that the "blood flow control devices described herein can have a non-thrombogenic surface on their inside diameter." *Id.* 7:42-46. This is important to avoid build-up of thrombogenic material and ultimately, thromboembolism. *Id.* I also disclose that portions of the catheter may be "outside of the blood flow path [which] may reduce clotting and hemolysis during use of the blood flow control device." *Id.* at 8:25-27.

III. MATERIALS CONSIDERED

19. In preparing this Supplemental Declaration, I have considered the materials referenced in this Supplemental Declaration. The materials are identified in the attached list of exhibits.

20. I have also relied on my education, training, and experience, and my knowledge of pertinent literature in the field of the '580 patent.

IV. GARRISON'S ASPIRATION METHOD IS COMPATIBLE WITH BLOOD RETURN

21. Patent Owner and Mr. Brown also argue that Garrison's method of building up vacuum pressure while the valve is closed is incompatible with reinfusing the patient's blood after it has been aspirated (i.e., "blood return"). Ex. 2005 (Brown Supp. Decl.) at ¶¶80-86. I disagree.

A. Syringes And Receptacles Can Be Used For Blood Return

22. Patent Owner and Mr. Brown also argues that Garrison's rapid aspiration method is incompatible with blood return because the blood may be aspirated into a receptacle or a syringe, where it remains "static" and "exposed to air" such that it could not be reinfused into the patient. Ex. 2005 (Brown Supp. Decl.) at ¶80. I do not believe this argument is supported by the evidence for several reasons.

23. First, Mr. Brown bases his argument on the following statement from Garrison:

> One disadvantage of current sources of aspiration is that the aspirated blood is received into an external reservoir or syringe. This blood is generally discarded at the end of the procedure, and as such represents blood loss from the patient. In addition, pumps such as centrifugal or peristaltic pumps are known to cause damage to blood cells. Although it is possible to return blood from the external reservoir to the patient, the blood has been exposed to air or has been static for a period of time, and there is risk of thrombus formation or damage to the blood cells. Usually, aspirated blood is not returned to the patient to avoid risk of thromboembolism.

Ex. 1006 (Garrison) at [0135]. However, even this passage of Garrison recognizes that "it is possible to return blood from the external reservoir to the patient." *Id.* Thus, while this passage does refer to risks of thrombus formation if the blood is exposed to air or static "for a period of time," a person of ordinary skill in the art would not have interpreted this portion of Garrison to mean that blood aspirated into a syringe or receptacle is ***always*** unsuitable for reinfusion.

24. Second, Mr. Brown's argument is also contradicted by the testimony of PO's other expert, Dr. Morris. Dr. Morris testified that he frequently reinfuses blood into patients that is aspirated into a syringe. Ex. 1065 (Morris Dep. Tr.) at 94:10-98:20. Specifically, Dr. Morris testified that Inari's FlowTriever system uses a syringe as its aspiration source, and he further testified that he always reinfuses the patient's aspirated blood when using the FlowTriever system. *Id.*

25. Third, Mr. Brown's argument is also inconsistent with my own experience. Prior to 2018, I observed many intravascular medical procedures in which physicians reinfused a patient's blood that had been collected in a syringe. For example, during procedures with the MitraClip device that I developed, the operating physicians would reinfuse the patient's blood. After inserting the Steerable Guide Catheter, the physicians would aspirate blood out of the catheter via a syringe to assure that no air was inside, and they would then reinfuse that blood by injecting it back into the patient via the Guide Catheter.

26. Accordingly, a person of ordinary skill in the art would not have believed that blood aspirated into a syringe or receptable is unsuitable for reinfusion as Mr. Brown argues.

B. Building Up Pressure With Garrison's Valve Is Compatible With Blood Return

27. Patent Owner and Mr. Brown also argue that Garrison's valve would cause blood to remain "static" while the valve is closed and vacuum is built-up in the system, which would also make the aspirated blood unsuitable for reinfusion. Ex. 2005 (Brown Supp. Decl.) at ¶83. I disagree.

28. Garrison discloses that the valve is temporarily closed to build up aspiration in the system prior to applying the built-up aspiration once "the tip of the aspiration device … is near or at the face of the occlusion." Ex. 1006 (Garrison) at [0134]. A person of ordinary skill in the art would have recognized that this would be a relatively short, temporary step in the procedure. Consequently, to the extent that blood entered the portion of Garrison's, Laub's, or Aklog's systems that are proximal to the valve during this temporary step, a person of ordinary skill in the art would not have expected that any substantial thrombus formation would occur in that blood during this short period.

29. In addition, a person of ordinary skill in the art would have understood that once Garrison's valve is opened, the aspiration could be applied continuously until the thrombus is removed as disclosed in Laub and Aklog,

particularly if the aspiration source is a pump. As a result, temporarily closing the valve to build up vacuum before aspiration begins as Garrison teaches would not prohibit continuous blood return once aspiration is applied as disclosed in Laub and Aklog.

V. CONCLUSION

30. For the above reasons and the reasons I explained in my previous Declaration (Ex. 1003), it is my opinion that challenged claims 1, 5-6, 9-30, and 33-34 of the '580 patent are unpatentable because they are anticipated or obvious in view of the prior art.

31. I declare that the foregoing is true and correct, and further that the foregoing statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Executed on June 3, 2026 in San Francisco, CA.

troy thornton

Troy Thornton