

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

BOSTON SCIENTIFIC CORPORATION and  
BOSTON SCIENTIFIC SCIMED, INC.  
Petitioner

v.

VASCULAR SOLUTIONS, INC.  
Patent Owner

---

Case IPR: Unassigned  
Patent 8,048,032

---

Attorney Docket No. 0025216-00057

---

**PETITION FOR INTER PARTES REVIEW  
UNDER 37 C.F.R. § 42.100**

## TABLE OF CONTENTS

	<u>Page</u>
I. MANDATORY NOTICES (37 C.F.R. § 42.8(a)(1)).....	1
A. Real Party-In-Interest (37 C.F.R. § 42.8(b)(1)) .....	1
B. Related Matters (37 C.F.R. § 42.8(b)(2)).....	1
C. Lead And Back-Up Counsel (37 C.F.R. §§ 42.8(b)(3), 42.10(a)).....	2
D. Service Information (37 C.F.R. § 42.8(b)(4)) .....	2
II. PAYMENT OF FEES (37 C.F.R. § 42.103).....	2
III. SUMMARY OF RELEVANT TECHNOLOGY AND ‘032 PATENT .....	3
A. Overview Of Interventional Cardiology Procedures .....	3
B. Description Of The Alleged Invention Of The ‘032 Patent.....	4
C. Summary of the Prosecution History of the ‘032 Patent .....	6
IV. REQUIREMENTS FOR INTER PARTES REVIEW .....	9
A. Grounds for Standing Under 37 C.F.R. § 42.104(a).....	9
B. Identification of Challenge and Relief Requested .....	10
C. Claims for Which <i>Inter Partes</i> Review Is Requested.....	10
D. The Specific Art and Statutory Ground(s) on Which the Challenge Is Based Under 37 C.F.R. § 42.104(b)(2) .....	10
E. Construction Of The Challenged Claims .....	11
1. “rail structure without a lumen”.....	12
2. “interventional cardiology device(s)” .....	13
3. “to receive an interventional cardiology device into the coaxial lumen while the proximal portion remains within the lumen of the guide catheter” / “adapted to receive an interventional cardiology device passed through continuous lumen of the guide catheter and into the coaxial lumen while the device is inserted into the continuous lumen” .....	14
4. “adapted to be extended beyond the distal end of the guide catheter while a proximal portion remains within the lumen of the guide catheter, such that the device assists in resisting axial and shear forces exerted by the interventional cardiology device passed through and beyond the coaxial lumen that would otherwise tend to dislodge the guide catheter from the branch artery” .....	16
F. Non-Redundancy of Proposed Alternative Grounds .....	17
G. Level of Skill In the Art .....	20
H. The Prior Art References.....	20

1.	Adams ‘292 .....	21
2.	Klein .....	22
3.	Adams ‘452 .....	22
4.	Steinke .....	23
5.	Takahashi .....	23
I.	How The Construed Claim(s) Are Unpatentable .....	24
V.	SUPPORTING EVIDENCE UNDER 37 C.F.R. § 42.104(B)(5) .....	24
VI.	ANTICIPATION OF THE CHALLENGED CLAIMS .....	24
A.	Claims 1, 2, 8, 11, And 17 Are Anticipated Under 35 U.S.C. § 102(b) By Adams’292 .....	25
1.	Claim 1 .....	25
2.	Claim 2 .....	27
3.	Claim 11 .....	27
4.	Claims 8 and 17 .....	27
VII.	OBVIOUSNESS OF CHALLENGED CLAIMS .....	39
A.	Claims 1-4, 8, 11, 13 And 17 Are Obvious Under 35 U.S.C. § 103 Over Adams ‘292 In View Of Klein .....	40
B.	Claims 1-4, 8, 11, 13 And 17 Are Obvious Under 35 U.S.C. § 103 Over Adams ‘292 In View Of Adams ‘452 .....	46
C.	Claims 1-4, 8, 11, 13 and 17 Are Obvious Under 35 U.S.C. § 103 Over Adams ‘292 In View Of Steinke .....	51
D.	Claims 8 And 17 Are Obvious Under 35 U.S.C. § 103 Over Adams ‘292 In View Of The Knowledge of One Of Skill In The Art .....	57
E.	Claims 1, 2, 8, 11 And 17 Are Obvious Under 35 U.S.C. § 103 Over Adams In View Of Takahashi .....	58
VIII.	CONCLUSION .....	60

**Exhibit List for Inter Partes Review of U.S. Patent No. 8,048,032**

<b>Exhibit Description</b>	<b>Exhibit No.</b>
U.S. Patent No. 8,048,032 to Root, et al.	1001
File History for U.S. Patent No. 8,048,032	1002
Declaration of Ronald Jay Solar, Ph.D., with attached Appendix 1: Curriculum Vitae of Ronald Jay Solar, Ph.D. and attached Appendix 2: Prior Expert Testimony of Ronald Jay Solar, Ph.D	1003
U.S. Patent No. 8,292,850 to Root, et al.	1004
U.S. Patent No. 8,142,413 to Root, et al.	1005
File History for U.S. Patent No. 8,292,850	1006
File History for U.S. Patent No. 8,142,413	1007
Copy of a Second Petition (excluding exhibits) for <i>Inter Partes</i> Review Filed Concurrently by Petitioner on the '032 Patent	1008
U.S. Publication No. 2004/0236215 A1 to Mihara et al.	1009
Translation of Japanese Patent Application No. 2003-070808	1010
U.S. Patent No. 5,527,292 to Adams et al.	1011
U.S. Publication No. 2003/0195546 A1 to Solar, et al.	1012
U.S. Patent No. 6,638,268 to Niazi	1013
U.S. Publication No. 2005/0004523 A1 to Osborne, et al.	1014
U.S. Publication No. 2004/0127927 to Adams	1015
U.S. Patent No. 6,338,725 B1 to Hermann et al.	1016
U.S. Patent No. 5,776,141 to Klein et al.	1017
U.S. Patent No. 7,232,452 to Adams et al.	1018
U.S. Patent No. 5,328,472 to Steinke et al.	1019
Takahashi et al., "New Method to Increase a Backup Support of a 6 French Guiding Coronary Catheter," <i>Catherization and Cardiovascular Interventions</i> 63:452-456 (2004)	1020
U.S. Patent No. 5,690,613 to Verbeek	1021
U.S. Patent No. 5,156,594 to Keith	1022
U.S. Patent No. 5,102,403 to Alt	1023
Kucklick, Theodore R., <i>The Medical Device R&amp;D Handbook</i> (2006)	1024
Amended Complaint filed by Vascular Solutions, Inc. in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (May 28, 2013)	1025
Memorandum In Support of Motion for Preliminary Injunction filed by Vascular Solutions, Inc. in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (June 10, 2013)	1026

Declaration of Howard Root In Support of Vascular Solution, Inc.'s Motion for Preliminary Injunction with Non-Confidential Exhibits filed in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (June 10, 2013)	1027
Boston Scientific Corporation Opposition to Vascular Solutions, Inc.'s Motion for Preliminary Injunction filed in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (July 28, 2013)	1028
Non-Confidential Memorandum Opinion and Order Granting In Part Plaintiff's Motion for Preliminary Injunction filed in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (December 19, 2013)	1029
Boston Scientific Corporation's Motion for An Interim Stay and Stay Pending Appeal, No. 2014-1185 (Fed. Cir.) filed December 27, 2013	1030
Vascular Solutions, Inc.'s Opposition to Boston Scientific Corporation's Motion for An Interim Stay and Stay Pending Appeal, No. 2014-1185 (Fed. Cir.) filed January 3, 2014	1031
Boston Scientific Corporation's Non-Confidential Opening Brief, No. 2014-1185 (Fed. Cir.) filed January 7, 2014	1032
Vascular Solutions, Inc.'s Non-Confidential Responsive Brief, No. 2014-1185 (Fed. Cir.) filed January 29, 2014	1033
Boston Scientific Corporation's Reply Brief, No. 2014-1185 (Fed. Cir.) filed February 3, 2014	1034
Transcript of Oral Argument Proceedings held on April 8, 2014 (Fed. Cir.)	1035
Federal Circuit Order Vacating Preliminary Injunction (April 15, 2014)	1036
Joint Claim Construction Statement filed in <i>Vascular Solutions, Inc. v. Boston Scientific Corporation</i> , No. 13-cv-1172 (JRT-SER) (D. Minn.) (February 21, 2014)	1037
U.S. Patent No. 6,997,908 B2 to Carrillo, Jr., et al.	1038
Monorail Piccolino Publication, Introducing the Schneider MONORAIL-GEX™ Guidewire Exchange Catheter Brochure	1039
U.S. Publication No. 2002/0165598 A1 to Wahr et al.	1040
U.S. Patent No. 5,267,958 to Buchbinder et al.	1041

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.