IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

ROBOTICVISIONTECH, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. _____
	)	
ABB INC.,	)	**DEMAND FOR JURY TRIAL**
	)	
Defendant.	)	

COMPLAINT

Plaintiff RoboticVISIONTech, Inc. (RVT), by its attorneys, demands a trial by jury on all issues so triable and, for its complaint against ABB Inc. (ABB), alleges as follows:

NATURE OF THIS ACTION

1. This is a civil action arising out of ABB's infringement of RVT's patents in violation of 35 U.S.C. §§ 271 *et seq*.; ABB's infringement of RVT's copyrighted works in violation of 17 U.S.C. §§ 101 *et seq*.; and ABB's misappropriation of RVT's trade secrets in violation of the Defend Trade Secrets Act (DTSA), 18 U.S.C. §§ 1836 *et seq*. and the Delaware Uniform Trade Secrets Act, 6 Del. C. §§ 2001 *et seq*.

PARTIES

2. Plaintiff RVT is a privately held corporation organized and existing under the laws of Delaware with a principal place of business at 1775 Tysons Boulevard, Fifth Floor, Suite 500, McLean, Virginia 22102.

3. On information and belief, Defendant ABB is a company organized and existing under the laws of the Delaware with a principal place of business at 305 Gregson Drive, Cary, North Carolina 27511.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, 35 U.S.C. §§ 100 *et seq.*, and this Court has subject-matter jurisdiction over RVT's patent-infringement claims under 28 U.S.C. §§ 1331 and 1338(a).

5. This action arises under the United States Copyright Act of 1976, as amended, 17 U.S.C. § 101 *et seq.*, and this Court has subject-matter jurisdiction over RVT's copyright-infringement claims under 28 U.S.C. §§ 1331 and 1338(a).

6. This action arises under the Defend Trade Secrets Act of 2016, 18 U.S.C. §§ 1836 *et seq*., and this Court has subject-matter jurisdiction over RVT's trade-secret claims under 28 U.S.C. § 1331.

7. This Court has supplemental jurisdiction over RVT's claims arising under the Delaware Uniform Trade Secrets Act because these state-law claims are so related to RVT's federal-law claims that they form part of the same case or controversy and derive from a common nucleus of operative fact.

8. On information and belief, this Court has personal jurisdiction over ABB at least because ABB is a Delaware corporation and has registered to do business in the State of Delaware.

9. Venue is properly laid in this District pursuant to 28 U.S.C. §§ 1391 and 1400 at least because, on information and belief, ABB is subject to personal jurisdiction in this District and is a resident and corporate citizen of this District.

BACKGROUND FACTS

A. RVT'S AND ABB'S BUSINESS DEALINGS

10. Braintech Canada, Inc. (Braintech), RVT's predecessor-in-interest, authored the original source code contained in the eVisionFactory (eVF) software product, which is the

commercial embodiment of the patents-in-suit and employs the asserted trade secrets. Braintech was the original assignee of the three patent applications resulting in each of U.S. Patent Nos. 6,816,755 (Exhibit 1); 7,336,814 (Exhibit 2); and 8,095,237 (Exhibit 3), which have all been assigned to RVT.

11. In May 2006, Braintech entered into an Exclusive Channel Partnership Agreement with ABB.

12. As part of this agreement, ABB purchased licenses from Braintech to market and sell Braintech's eVF software under the brand name "TrueView." On information and belief, ABB marketed and sold more than 167 TrueView units from 2006 to 2008, many of which were sold to the world's leading automotive manufacturing plants. On information and belief, ABB sold additional TrueView units after 2008.

13. In May 2010, RVT purchased all of Braintech's assets, including Braintech's eVF software product, the source code for eVF, the patents-in-suit, and any copyrights and trade secrets within Braintech's intellectual property portfolio. Since acquiring the Braintech assets in 2010, RVT has focused on optimizing, improving, selling, and distributing its robotic vision software products, including its eVF software product.

14. Under the explicit terms of the Exclusive Channel Partnership Agreement, ABB's right to market and sell TrueView products terminated once Braintech ceased operations in May 2010.

15. In July 2010, after ABB's right to market and sell TrueView products had expired, ABB sued RVT in the Eastern District of Michigan, claiming that ABB, not RVT, was the sole owner of the source code for eVF. ABB alleged that its payments to Braintech for the right to market and sell eVF under the Exclusive Channel Partnership Agreement were an

investment, not payments for a license, and that Braintech used that investment to develop eVF. *See ABB, Inc. v. Robotic VisionTech, LLC*, No. 5:10-cv-012626-JCO-PJK, ECF No. 1 at 10–11 (E.D. Mich. July 1, 2010) ("ABB Compl"); *see also id.*, ECF No. 16 (E.D. Mich. Aug. 17, 2010); *id.*, ECF No. 16-1 (E.D. Mich. Aug. 17, 2010). ABB's complaint sought a "judgment in ABB's favor awarding it ownership of the code and executables under a theory of constructive and/or equitable trust." ABB Compl. at 16. On information and belief, ABB's lawsuit in Eastern District of Michigan was an attempt to coerce RVT into relinquishing ownership and control over the eVF source code and software product.

16. ABB voluntarily dismissed its lawsuit against RVT in September 2010. *See ABB, Inc. v. Robotic VisionTech, LLC*, No. 5:10-cv-012626-JCO-PJK, ECF No. 21 (E.D. Mich. Sept. 16, 2010). As part of the settlement between ABB and RVT, ABB purchased 41 developer keys to RVT's eVF software and provided RVT with two ABB industrial robots. ABB also agreed to pay RVT's attorneys' fees up to $25,000. RVT did not provide ABB with the source code for RVT's eVF software product.

17. On information and belief, while ABB and RVT were in the process of negotiating their settlement, ABB—without RVT's knowledge—negotiated an employment contract with Dr. Remus Boca, RVT's Chief Scientist.

18. Dr. Boca began employment with Braintech on or around November 30, 2001. By 2008, Dr. Boca was promoted to Braintech's Chief Scientist. He continued as Chief Scientist when he started working for RVT after it acquired Braintech in May 2010. Dr. Boca was largely responsible for developing the eVF source code, including its roadmap of features, during his time with both Braintech and RVT.

19. Dr. Boca was subject to a Non-Disclosure Agreement (NDA) at all times during his employment at Braintech and RVT. Dr. Boca's original employment agreement with Braintech explicitly stated that any and all intellectual property conceived during his employment, including, for example, trade secrets, know-how, show-how, inventions, concepts, ideas, improvements, patents, and copyrights, were expressly regarded as works for hire and belonged to Braintech.

20. While at Braintech, Dr. Boca was one of the main architects of the eVF software product. During his employment with both Braintech and RVT, Dr. Boca had direct access to, or was in possession of, the source code underlying the eVF software product. Dr. Boca is also a named co-inventor of two of the three patents-in-suit.

21. At all times while at Braintech and RVT, Dr. Boca had full and unfettered access to the source code of eVF. When Dr. Boca left RVT and joined ABB in October 2010, he was in possession of two RVT-issued laptops and two RVT-issued external hard drives, which contained RVT's confidential and proprietary information, including the source code for RVT's eVF product. On information and belief, these laptops and hard drives contained at least versions 5.5 and 6.0 of the eVF source code. RVT's company policy required employees to return work-issued laptops and hard drives upon leaving the employ of RVT.

22. On multiple occasions, RVT requested that Dr. Boca immediately return the two RVT-issued laptops to RVT. Dr. Boca did not respond until late December 2010, more than two months after starting his new position at ABB. When RVT finally received the RVT-issued laptops and external hard drives in Dr. Boca's possession, all information had been deleted from them.

23. In October 2010, ABB's Manager of Business Development in its Robot Automation Systems Group presented to RVT a plan for collaboration with ABB and requested that RVT provide pricing information for the eVF software product.

24. In January 2011, in response to the October 2010 meeting, RVT sent a letter to ABB's Vice President of Automation Systems with a proposal including exclusive discount pricing based upon unit volume purchases by ABB of the eVF software. The proposal included the purchase of more than 51 eVF 6.0 software upgrade licenses for "a period of one year from February 28, 2011." ABB did not respond to RVT's proposal. Further, ABB chose not to purchase the eVF software.

25. In October 2012, the Vice-President & General Manager North America of ABB's Discrete Automation and Motion Group requested updated information on eVF 6.0 and expressed interest in purchasing multiple units of the eVF software. RVT responded to his request in an email dated October 22, 2012, containing the updated information on eVF 6.0 and the requested comparison of eVF 6.0 with eVF 5.0 and the commercially available Cognex machine-vision library. Also attached to the email was a copy of eVF's 6.0 general information brochure, which stated that eVF was "patent protected."

26. In September 2013, a Vice President in ABB's Robot Automation Systems Group approached RVT, expressing interest in purchasing licenses to market and sell RVT's eVF software.

27. Due in large part to ABB's previous history of purchasing eVF software licenses from Braintech and ABB's professed continued interest in purchasing the eVF software, RVT agreed to meet with ABB to discuss a potential licensing agreement. The meeting took place at RVT's Bloomfield Hills, Michigan office and robotic lab on October 10, 2013. ABB's principal

vision engineer, three ABB scientists, RVT's Sales & Business Development Director, and RVT's Chief Scientist all attended the October 10, 2013 meeting.

28. After the October 2013 meeting, RVT did not hear back from ABB until January 2014. ABB reiterated its promise to purchase RVT's eVF software product but had certain requests regarding RVT's eVF software. For example, on or around January 29, 2014, ABB requested RVT's help to test eVF 6.0—the newest version of eVF at the time—on ABB robots at their research facility in Auburn Hills, Michigan. RVT installed eVF 6.0 at ABB's request, with ABB's assurances that the install was for testing purposes only.

29. In the spirit of fostering licensing negotiations, RVT diligently complied with each of ABB's requests. Yet ABB chose not to license RVT's eVF software. Instead, ABB continued to ask for more details about RVT's eVF software, and ABB's methods for obtaining this information became increasingly aggressive.

30. In April 2014, for example, rather than go through the appropriate channels of communication, Louis LePage, ABB's principal vision engineer, repeatedly asked one of RVT's Michigan engineers to send ABB the latest software build for eVF.

31. In July 2014, without RVT management's knowledge or consent, ABB requested another meeting with RVT's new Chief Scientist and its engineers. ABB asked the RVT employees to come to ABB's Auburn Hills, Michigan office to share details about RVT's new software interface for eVF.

32. In August 2014, ABB requested that RVT provide updated pricing for eVF. Then, in June 2015, the Project Manager in ABB's Discrete Automation and Motion Division requested a meeting to obtain the current pricing for eVF's Runtime and Developer licenses. The meeting was held in ABB's Auburn Hills, Michigan office with high-level representatives of

ABB's Robotics Business Unit and two RVT engineers and RVT's chief scientist. Once again, however, ABB chose not to license RVT's eVF software.

33. On information and belief, ABB had no intention of purchasing or licensing RVT's eVF software product, despite promising to purchase licenses to market and sell the product (as ABB had done in the past with RVT's predecessor, Braintech). On information and belief, ABB's communications regarding licensing the eVF software were designed to obtain information regarding eVF's latest software builds and user interface for the purpose of integrating these functions and features into ABB's own competing product, FlexVision 3D.

34. ABB does not currently have a license to the eVF technology.

35. On information and belief, ABB launched its competing FlexVision product in 2015. However, information about commercial robotic vision technology is usually not publicly disseminated. Specifically, there is little or no information available to the general public about FlexVision's interface, operations, and capabilities. On information and belief, such information is available only to purchasers of that technology.

36. It was not until late 2020 that mutual customers of RVT and ABB informed RVT that the FlexVision software was very similar to RVT's eVF product. RVT, however, could not confirm the veracity of these reports because there was no publicly available technical information about ABB's FlexVision product that would have allowed RVT to do so.

37. In June 2021, an "integrator" (i.e., a services firm responsible for integrating machine technology and software from multiple providers, including robot hardware, camera hardware, and machine-vision software) provided RVT with a copy of the 2016 version of the FlexVision 3D User Manual ("User Manual"). A copy of the User Manual is attached as Exhibit 4. The FlexVision 3D User Manual was not otherwise available to RVT, as such manuals are

provided only to customers who purchase the FlexVision product. Only after reviewing the information in the User Manual and comparing it to eVF's source code could RVT confirm that FlexVision operates in the same or similar way as RVT's eVF product, and similarly, that FlexVision's interface and features are the same as or similar to RVT's eVF interface and features. Up until this review of the User Manual, RVT had regarded ABB as a former and potential future customer of its products and treated ABB accordingly.

B. RVT'S eVF SOFTWARE

38. RVT is the owner of copyrighted three-dimensional vision software known as eVisionFactory. The eVF source code and programming allows a robot to "SEE, THINK, & DO" and operate in a three-dimensional space based only on two-dimensional imaging. The software enables three-dimensional object location such that a robotic arm has the capability to choose, pick up, guide, and manipulate components in various manufacturing processes with high accuracy, speed, and consistency. Indeed, eVF can locate a target part in under a tenth of a second using just one image from a single camera. The eVF software is so reliable that more than 300 installations have run the eVF software for over the past two decades without a single warranty claim.

39. Industry leaders have long recognized the eVF software's unmatched performance and accuracy. In 2003, eVF won the Ford Motor Company's distinguished Henry Ford Technology Award.[1] Additionally, in a recent study conducted by one of the world's largest and most technologically advanced automakers, eVF performed 10 to 100 times more accurately

[1] *Braintech Wins Distinguished Henry Ford Technology Award*, HPC Wire (Oct. 3, 2003), https://www.hpcwire.com/2003/10/03/braintech-wins-distinguished-henry-ford-technology-award (last visited Aug. 5, 2022).

than its competitors, leading the automaker to select eVF for use in its manufacture of powertrain and transmission systems for its best-selling brand of automobiles. *See* Exhibit 5 at 1.

40. The eVF software performs three core processes necessary for determining the three-dimensional positions of an object: camera calibration, object training, and pose estimation.

41. eVF performs camera calibration via an automatic software tool called "AutoCal." In robot-mounted camera configurations, this tool is a one-button solution that automatically moves the camera around a calibration grid. It then calculates both the intrinsic and extrinsic properties of the camera. Intrinsic properties include, e.g., the size of the pixels, the pixel count, the distortion or skew of the image, and the resolution of the image. Extrinsic properties include, e.g., the location of the camera in world or robot coordinates on the end of the robot arm, or in a static 3D space (in cases of a stationary mounted camera). The following image is an example of a calibration grid that the eVF software uses for camera calibration:

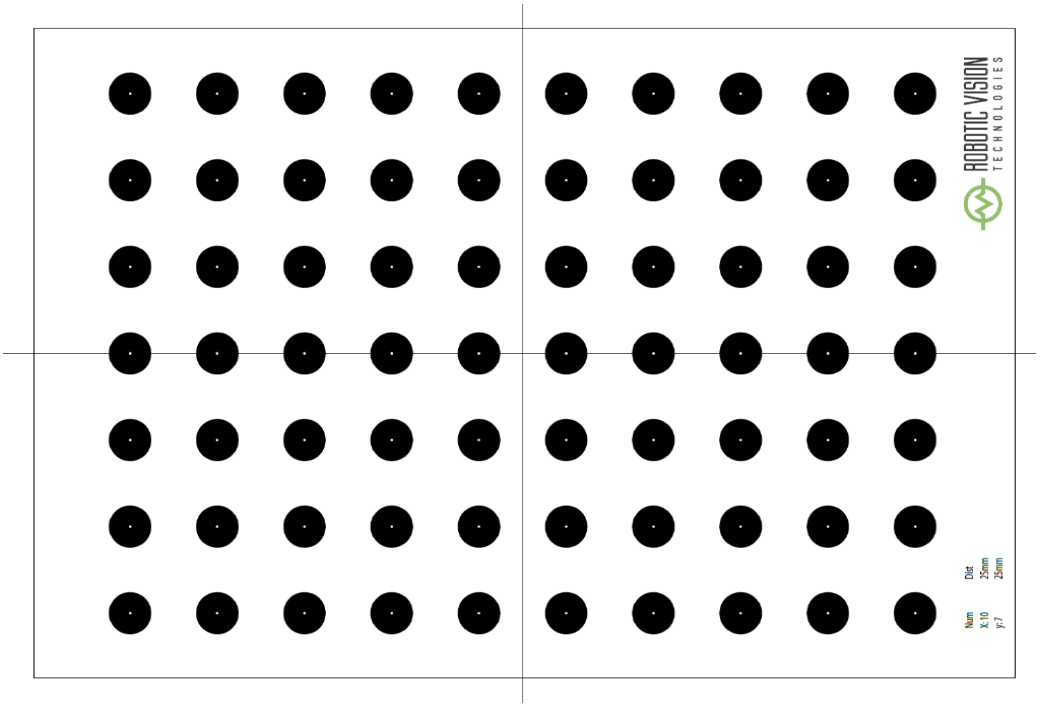

Figure 1: Example of a calibration grid

42. After the camera has been calibrated, eVF's "AutoTrain" tool is used to "train" the object in a nominal position in which eVF will be locating the part. First, eVF takes a reference image of the object. The user operating eVF then defines, in the reference image, patterns on the part for eVF to identify when it takes a picture during operation. The user selects a number of features for the software to calculate three-dimensional information.

43. There are two categories of features: "anchor" features and "GeoPatterns." An anchor feature is a unique pattern defined by the object. GeoPatterns are smaller, non-unique, but predefined patterns that are found in predetermined locations with respect to the anchor feature. The relationship between the patterns automatically trains the software to calculate the object's three-dimensional position and orientation. The following image is an example of a reference image with patterns defined on the object:

Figure 2: Example of a reference image

44. After the object has been trained, eVF performs pose estimation. The software takes an image of the object in the training space, uses the camera-calibration data, combines it with the data from the object-training process, locates the object in three-dimensional space, and calculates the deviations with respect to the originally trained location. The pose-estimation information guides the robot in locating the object and performing various operations, such as handling or manipulating the object. The image below is an example of eVF calculating an object's position.

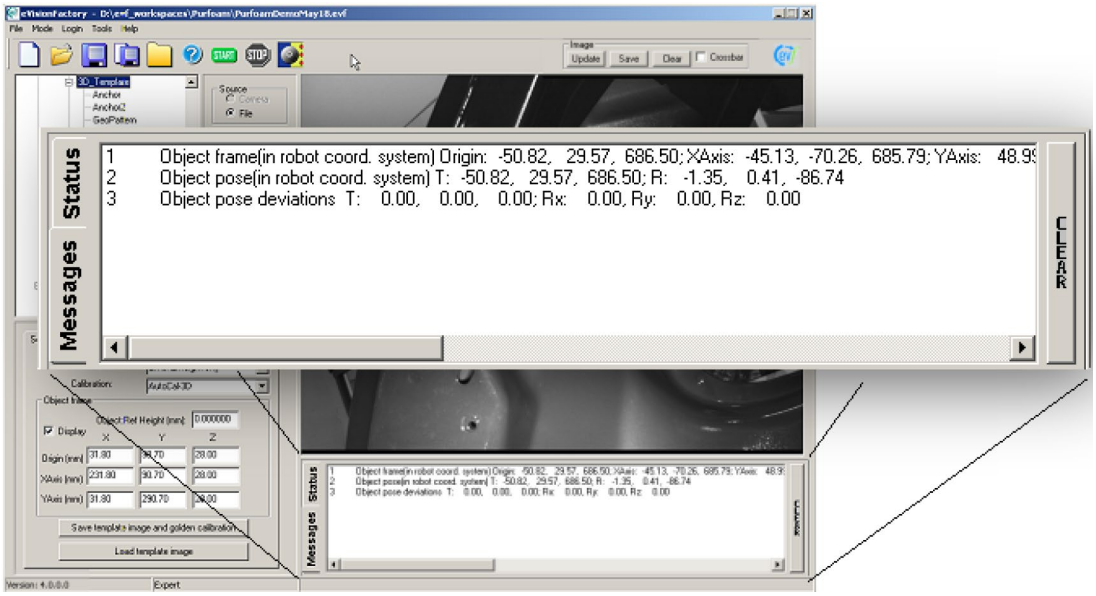

Figure 3: Example of eVF software output calculating object's position

45. RVT's success and superior performance are by-products of technological innovations over the past two decades, including, for example, the eVF software. RVT continues to implement these innovations today, for example, by continuing to improve eVF and releasing new versions of the software.

C. RVT'S COPYRIGHTED SOURCE CODE

46. In the early 2000s, Braintech created and authored the initial version of the eVF source code, drafting the source code and implementing it through the first iteration of the eVF

product. The eVF source code, while incorporating snippets of open-source code and licensed code libraries, is otherwise an original, creative work and is wholly original in its arrangement and architecture.

47. RVT purchased Braintech's intellectual property portfolio, including all copyrights and copyright rights, applications, and registrations, in May 2010. Therefore, RVT owns all copyright rights in the eVF source code.

48. The source code for RVT's eVF technology is an original work fixed in a tangible medium containing copyrightable subject matter for which copyright protection exists under the Copyright Act, 17 U.S.C. §§ 101 *et. seq*. RVT is the exclusive owner of the eVF source code and owns a valid and subsisting United States Copyright Registration No. TX 9-169-843 for the eVF source code, issued by the United States Copyright Office on September 16, 2022, a copy of which is attached as Exhibit 6.

49. At no time has RVT or Braintech granted permission to any party to copy, modify, or distribute the eVF source code.

D. THE PATENTS-IN-SUIT

50. U.S. Patent No. 6,816,755 (the '755 patent), entitled "Method and Apparatus for Single Camera 3D Vision Guided Robotics," was duly and legally issued by the United States Patent and Trademark Office (PTO) on November 9, 2004. A true and correct copy of the '755 patent is attached as Exhibit 1.

51. RVT is the sole owner of the entire right, title, and interest in the '755 patent, including the right to bring suit and recover damages for past infringement. The '755 patent was originally assigned to Braintech Canada, Inc. The patent was subsequently assigned from Braintech Canada, Inc. to Braintech, Inc. on February 20, 2009; from Braintech, Inc. to

RoboticVISIONTech LLC on May 24, 2010; and from RoboticVISIONTech LLC to RoboticVISIONTech, Inc. on July 27, 2015.

52. U.S. Patent No. 7,336,814 (the '814 patent), entitled "Method and Apparatus for Machine-Vision," was duly and legally issued by the PTO on February 26, 2008. A true and correct copy of the '814 patent is attached as Exhibit 2.

53. RVT is the sole owner of the entire right, title, and interest in the '814 patent, including the right to bring suit and recover damages for past infringement. The '814 patent was originally assigned to Braintech Canada, Inc. The patent was subsequently assigned from Braintech Canada, Inc. to Braintech, Inc. on February 20, 2009; from Braintech, Inc. to RoboticVISIONTech LLC on May 24, 2010; and from RoboticVISIONTech LLC to RoboticVISIONTech, Inc. on July 27, 2015.

54. U.S. Patent No. 8,095,237 (the '237 patent), entitled "Method and Apparatus for Single Image 3D Vision Guided Robotics," was duly and legally issued by the PTO on January 10, 2012. A true and correct copy of the '237 patent is attached as Exhibit 3. The '237 patent is a continuation-in-part of application No. 10/153,680, filed on May 24, 2002, now the '755 patent.

55. RVT is the sole owner of the entire right, title, and interest in the '237 patent, including the right to bring suit and recover damages for past infringement. The '237 patent was originally assigned to Braintech Canada, Inc. in 2005. The patent was subsequently assigned from Braintech Canada, Inc. to Braintech, Inc. on February 20, 2009; from Braintech, Inc. to RoboticVISIONTech LLC on May 24, 2010; and from RoboticVISIONTech LLC to RoboticVISIONTech, Inc. on July 27, 2015.

56. The '755, '814, and '237 patents (collectively, "the Asserted Patents") are generally directed to methods and features that have been incorporated into RVT's eVF software.

These patented features have contributed to the success of eVF in the United States and have allowed RVT to establish itself as a market leader in the machine vision robotics industry. All three patent numbers have been marked on eVF's splash screen upon startup of all relevant versions of the software.

E. RVT'S TRADE-SECRET METHODS

57. In addition to its patented technology and copyrighted source code, RVT employs various trade-secret methods and algorithms through confidential portions of its eVF source code. These trade secrets facilitate the precision, reproducibility, and performance of the machine vision robotics capabilities of eVF. Examples of such trade secrets include, but are not limited to, (i) feature qualification; (ii) reprojection; (iii) inverse projection; (iv) use of multiple pose-calculation methods to minimize feature count; and (v) determination and use of the so-called "golden position" in creating the 3D model.

58. **Feature qualification.** eVF uses trade-secret methods to qualify the features used during pose estimation. These methods have certain thresholds, some of which are set by the user, and eVF runs statistical calculations against these thresholds to determine whether any underperforming features should not be used during pose calculation at runtime. eVF will also discard at runtime features that it detects are not co-planar, to an optimized degree, for resiliency against optical skew. These methods have benefits over known methods by reducing noise, skew, and errors resulting from large pose deviations or lighting changes during the pose-estimation process. The ability to offer these benefits, where competitors cannot, gives RVT an advantage in the marketplace.

59. **Reprojection.** eVF uses a method for improving the pose estimation during feature qualification, training the model, and pose calculation known as "reprojection." Reprojection is the process of running the inverse projection process (described below) multiple

times during the pose-estimation algorithm, but with a pattern or feature eliminated. Statistical analyses are performed on the newly estimated poses and outlying features are discarded for the final calculation. This gives the software resiliency against feature error (e.g., from variability between parts) that allows it to improve the quality of the calculation or to identify features that should be eliminated during the model-training process.

60. **Inverse projection.** To calculate a pose, eVF also uses a trade-secret technique called "inverse projection" with sparse model data (that is, without the typical usage of a depth map). Inverse projection improves accuracy in estimating the 3D location of a part with respect to a 2D camera image. It finds the camera position that minimizes the error of the locations of the features if the camera were looking at trained 3D sparse model. The software then performs a gradient descent minimization technique to find the optimal camera position. Minimizing the location of the camera (as opposed to the conventional method of minimizing the location of the part) improves cycle times over known techniques.

61. If this technique fails to find a confident pose, eVF will try a second algorithm that uses a trade-secret 2D-to-3D center-of-mass registration (i.e. feature correspondences) process utilizing the Levenberg–Marquardt algorithm designed to find a solution efficiently even with starting parameter values far from the optimal solution. The traditional approach is to use only a gradient descent algorithm, which is less accurate in larger deviations.

62. eVF's use of inverse projection is further enhanced by its leveraging of extrinsic camera-calibration algorithms to rapidly perform inverse projections with a calibrated camera. This technique increases efficiency gains to more direct methods of solving for pose estimation by setting up complex linear equations.

63. **Use of multiple pose-calculation methods to minimize feature count.** After RVT disclosed its patented method requiring a minimum of six features to calculate a 3D pose with a single camera, RVT developed a trade-secret method to perform robust, single-camera 3D pose estimations with only four part features. These methods, which include dynamically using multiple pose-calculation methods at runtime, allow RVT to perform its trade-secret feature qualification techniques without risk of having too few features. These methods also allow RVT's eVF product to work on smaller parts with fewer reliable features.

64. **Golden position.** To extrapolate 3D part information from a 2D image, eVF uses a sparse 3D model of the part instead of a 3D geometric or point-cloud model of the entire part itself (i.e., a CAD file). In RVT's trade-secret method, the location of the part in 3D space with respect to the camera position and the location of each feature within the part are collectively referred to as the "golden position." The golden position is thereafter used as the reference and basis for a series of equations that accomplish pose estimation. For example, during inverse projection, features are assumed to be in their "golden position," allowing the system of equations to produce an accurate estimation for the optimal camera location. Each computed pose is further defined by its deviation from the part's global golden position, instead of by its coordinates in 3D space (the traditional approach). Locating each pose relative to the golden position instead of locating each pose in 3D space allows for more accurate and robust pose estimation based on more limited information. It also simplifies calculations in a way that allows pose estimation to be conducted just as accurately at any starting camera position.

65. Use of the golden position is different than the industry-standard method for locating an object in 3D space, namely geometric model-fitting, typically implemented with a RANSAC algorithm. This traditional method of pose estimation uses two camera positions to

compute a dense depth image of an object. This depth image, along with a geometric model fitting algorithm, can be used to determine the location of the object. RVT's alternative method of creating a golden position through RVT's auto-train process, and then using that golden position as a reference point with which to define further pattern positions, enables pose estimation without a dense depth image, without computationally expensive model-fitting algorithms, and with a single camera.

66. These trade-secret methodologies set RVT's eVF product apart from the competition and have contributed to RVT's success in establishing itself as the best-in-class 3D vision-guided robotics software provider. The precision, accuracy, and reliability of RVT's proprietary technology is unparalleled in the industry and is a direct result of these secret features within confidential portions of RVT's source code.

67. For that reason, the engineers who developed the ideas for and implementations of these secret methods were strictly bound by nondisclosure agreements. RVT (and its predecessor Braintech) took extensive efforts to keep secret the calculations, algorithms, and methodologies embodied in RVT's confidential source code. These efforts included limiting the personnel who had access to the confidential source code, securing the equipment on which the confidential source code was stored, and ensuring that everyone with access to the code understood its trade-secret nature and their contractual obligation to protect its secrecy.

68. The trade-secret aspects of RVT's source code are not ascertainable to customers or competitors who merely interface with RVT's eVF product. To an outside observer, RVT's eVF product is simply more precise, robust, and reliable than competing products. Specifically, machines running RVT's software make fewer errors, calibrate more quickly with less need for error correction, and achieve more reproducible results. It is only by viewing or knowing the

contents of the confidential source code itself that one could see *why* RVT's products have these superior capabilities and understand how those capabilities are embodied in RVT's software.

ABB'S ALLEGED CONDUCT

69. On information and belief, ABB makes, offers for sale, and sells its FlexVision 3D software product (FlexVision) in the United States.[2]

70. On information and belief, ABB launched FlexVision in 2015.

71. On information and belief, ABB has sold over 2,000 copies of the FlexVision product in the United States, and more copies globally. On information and belief, the average sales price for FlexVision software in the United States is around $35,000, and the average sales price for the FlexVision product line package is over $200,000.

72. On information and belief, ABB continues to create new versions of the FlexVision product for sale and distribution in the United States.

A. ABB'S FLEXVISION PRODUCT

73. On information and belief, ABB's FlexVision product contains some or all portions of RVT's eVF source code or modified versions of RVT's eVF source code that are substantially similar to RVT's eVF source code. The offer for sale, sale, and distribution of FlexVision is therefore inherently a distribution of RVT's eVF source code and ABB does not have license, authorization, or permission from RVT to carry out such distribution.

74. FlexVision software allows robots to "see and react to changes within the industrial work environment." Exhibit 7 (FlexVision Pamphlet) at 1. Specifically, it enables "robots to precisely locate the grip points of a disoriented object within a 3D space." *Id.*

[2] https://new.abb.com/products/robotics/industries/automotive/powertrain-automation (last visited September 16, 2022) (offering FlexVision 3D as a featured solution for powertrain automation).

75. On information and belief, the FlexVision software product is similar to the TrueView software—a commercial embodiment of the Asserted Patents and the product ABB originally licensed from RVT using the eVF software. A comparison of a brochure for FlexVision (Exhibit 7) with a brochure for TrueView (Exhibit 8) shows the similarities between FlexVision and TrueView. Reproduced below is a table depicting, side-by-side, excerpts from these marketing materials for both TrueView and FlexVision.

TrueView (eVF) Pamphlet	FlexVision Pamphlet
TrueView transforms robotic manufacturing processes TrueView vision guided robotic (VGR) systems see and react to changes within the industrial work environment. TrueView enables ABB robots to precisely locate the grip points of a disoriented object within a 3D space. Exhibit 8 at 1.	**Augments Robotic Manufacturing Processes** FlexVision™ 3D vision guided robotic (VGR) systems see and react to changes within the industrial work environment. FlexVision™ 3D enables ABB robots to precisely locate the grip points of a disoriented object within a 3D space. Exhibit 7 at 1.
Vision guided robotics provides savings • Manage variation in part styles and location. • Eliminate costly precision fixturing, mechanical part crowding and dunnage. • Automate operations that previously required human interaction. • Increase "Up-Time" and eliminate robot crashes by seeing the part on racks. • Enhance quality via basic inspection and/or part identification. Exhibit 8 at 1.	**Vision Guided Robotics Provides Savings** • Manage variation in part styles and location • Eliminate costly precision fixturing, mechanical part crowding and dunnage • Automate operations that previously required human interaction • Increase up–time and eliminate robot crashes by seeing the part on racks Exhibit 7 at 1.

TrueView (eVF) Pamphlet	FlexVision Pamphlet
True View Function Package Features ▪ Easy to use TrueView eVF runtime software license ▪ Extended robot cabinet with factory monitor ▪ LED Lighting system, mounting brackets and power supply ▪ Camera, lens, lens protector, and protective camera enclosure ▪ Super high-flex, 4 part camera and light cables ▪ Cable management and robot dress package ▪ Vision computer and frame grabber ▪ TrueView API (with easy to build vision robot programs) ▪ TrueView Installation & Commissioning Manual ▪ TrueView Service Manual ▪ TrueView Standard Drawing Package Exhibit 8 at 2.	**Function Package Features** • FlexVision™ 3D VGR runtime software license • Extended robot cabinet with monitor • LED lighting system, mounting brackets and power supply • Camera, lens, and IP67 protective camera enclosure • Vision Computer • FlexVision™ 3D API (with easy to build vision robot programs) • FlexVision™ 3D installation and commissioning manual • Drawing package Exhibit 7 at 2.
MAIN APPLICATIONS Material handling Machine tending Glueing and sealing Press automation Powertrain assembly Body-in-white Exhibit 8 at 1.	**Main Applications** • Material handling • Machine tending • Dispensing & sealing • Press automation • Powertrain assembly • Body–in–White Exhibit 7 at 1.

TrueView (eVF) Pamphlet	FlexVision Pamphlet
TrueView makes robot vision simple TrueView systems include the ABB robot, vision hardware, the eVisionFactory™ (eVF) software platform and the ABB standard specifications in the areas of robot dress, mechanical and electrical integration, and robot-vision programming modules. The eVF software platform includes unique technologies such as AutoCal for easy calibration, and AccuTest and AccuTrain for quick and reliable integration. eVF is recognized by leading manufacturers as the most reliable and repeatable VGR software for ABB robots. Exhibit 8 at 1.	**FlexVision™ 3D Makes Robot Vision Simple** FlexVision™ 3D systems include the vision hardware, the FlexVision™ software platform and the ABB standard specifications in the areas of robot dress, mechanical and electrical integration, and robot–vision programming modules. The software platform includes unique technologies such for easy calibration, with quick and reliable integration. FlexVision™ leverages world class vision technology as the most reliable and repeated VGR software for ABB robots. Exhibit 7 at 1.

76. ABB publishes and distributes a user manual for its FlexVision product. *See* Exhibit 4.

77. On information and belief, ABB distributes the User Manual to customers who purchase ABB's FlexVision software and to operators who install the FlexVision software.

78. The User Manual describes in detail how FlexVision accomplishes machine vision. It states that "FlexVision™ software allows users to locate the object position in 3 dimensional space using 2D images." *Id.* at 126. The User Manual states elsewhere that the object or part "has features that can be *reliably and accurately found in 2D images* from one or more 3D-calibrated cameras." *Id.* at 149 (emphasis added).

79. The User Manual also discloses images depicting robotic hardware using FlexVision to accomplish machine vision. *See, e.g.*, *id.* at 108. As one example, the User Manual (on page 108) shows a robot with a mounted camera:

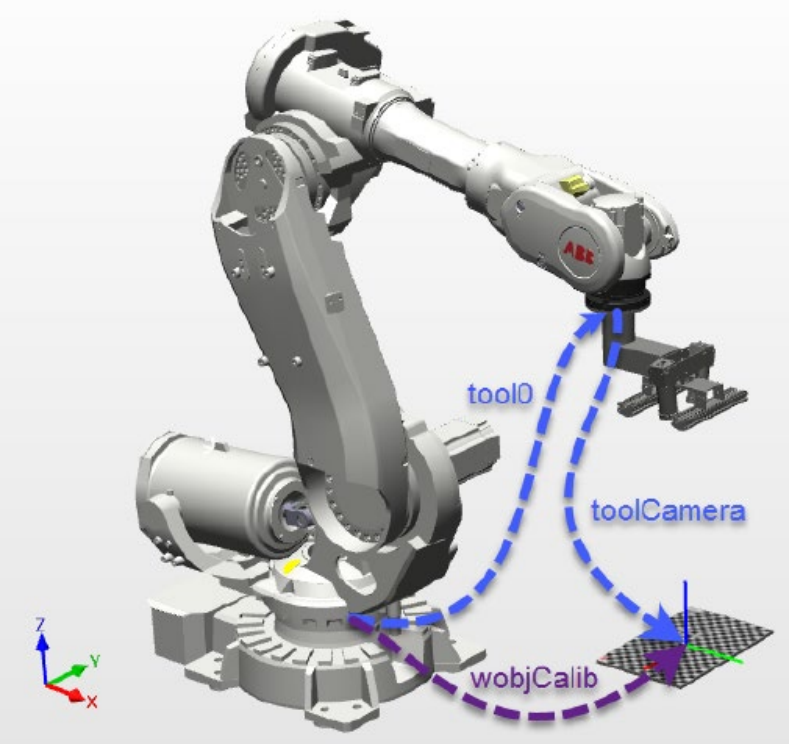

Figure 4: Robot with mounted camera (User Manual at 108)

80. ABB's User Manual states that calibrating one or more cameras or sensors is a necessary step in using FlexVision to accomplish machine vision of three-dimensional objects. "Calibration tasks are added to manage a camera calibration and the calibration settings. The Calibration produces three types of data – intrinsic, extrinsic and hand-eye calibration data." Exhibit 4 at 74. "Intrinsic Calibration Data" is the "[c]amera's intrinsic parameters," such as "camera focus length, image sensor format and camera principle point." *Id.* at 220. "Extrinsic Calibration Data" is "the transformation data of the object in world space to camera coordinate system." *Id.* "[H]and-eye" calibration data is described as "the transformation from robot hand [] to the calibrated camera." *Id.* at 77. The User Manual also discloses that calculating "the transformation between [the] cameras and ABB Robots' TCPs" is another part of the calibration process. *Id.* at 126. "TCP" stands for "Tool Center Point," which is "the point in relation to which all robot positioning is defined." *Id.* at 221.

81. On information and belief, for FlexVision to accomplish machine vision of three-dimensional objects, a camera or sensor mounted on the robot must capture at least one image of the "part." As an example, the User Manual states that "[a]fter finishing calibration, the robot position needs to be adjusted back to the[] original position *for acquiring images of the part*." *Id.* at 96 (emphasis added).

82. After the camera or sensor captures one or more images of the target part, FlexVision uses the image to teach the robot certain "features" of the part. For example, after the camera takes an image of the target part, "the user can configure the Feature detection tool," *id.* at 96, which "mark[s] a specific feature of the part that will be used in the 3D Pose Estimation," *id.* at 93. The User Manual states that a user must configure, at minimum, four of these feature-detection tools but recommends "us[ing] at least 10 or 12 features" to adequately teach the robot. *Id.* The User Manual further instructs that the features should consist of "at least 1 PMAlign tool, 1 fixture tool and at least 4 features." *Id.* at 149. The User Manual later defines the "PMAlign tool" as "the Anchor Feature" and states that "FlexVision™ software *searches for the anchor feature(s) in the search region (usually the whole image)*." *Id.* (emphasis added). The "fixture tool" is responsible for "fix[ing]" the PMAlign tool "to the correct point of the camera view." *Id.* at 66. After this, the remaining "feature tools will then be aligned to the part." *Id.* at 91.

83. FlexVision's feature-searching function is depicted in the User Manual on page 171. The software images below are described as having been captured by two cameras. *Id.* at 171. Both images separately depict 11 features (comprised of one anchor feature, one fixture tool feature, and nine pattern features) that have been identified on a part.

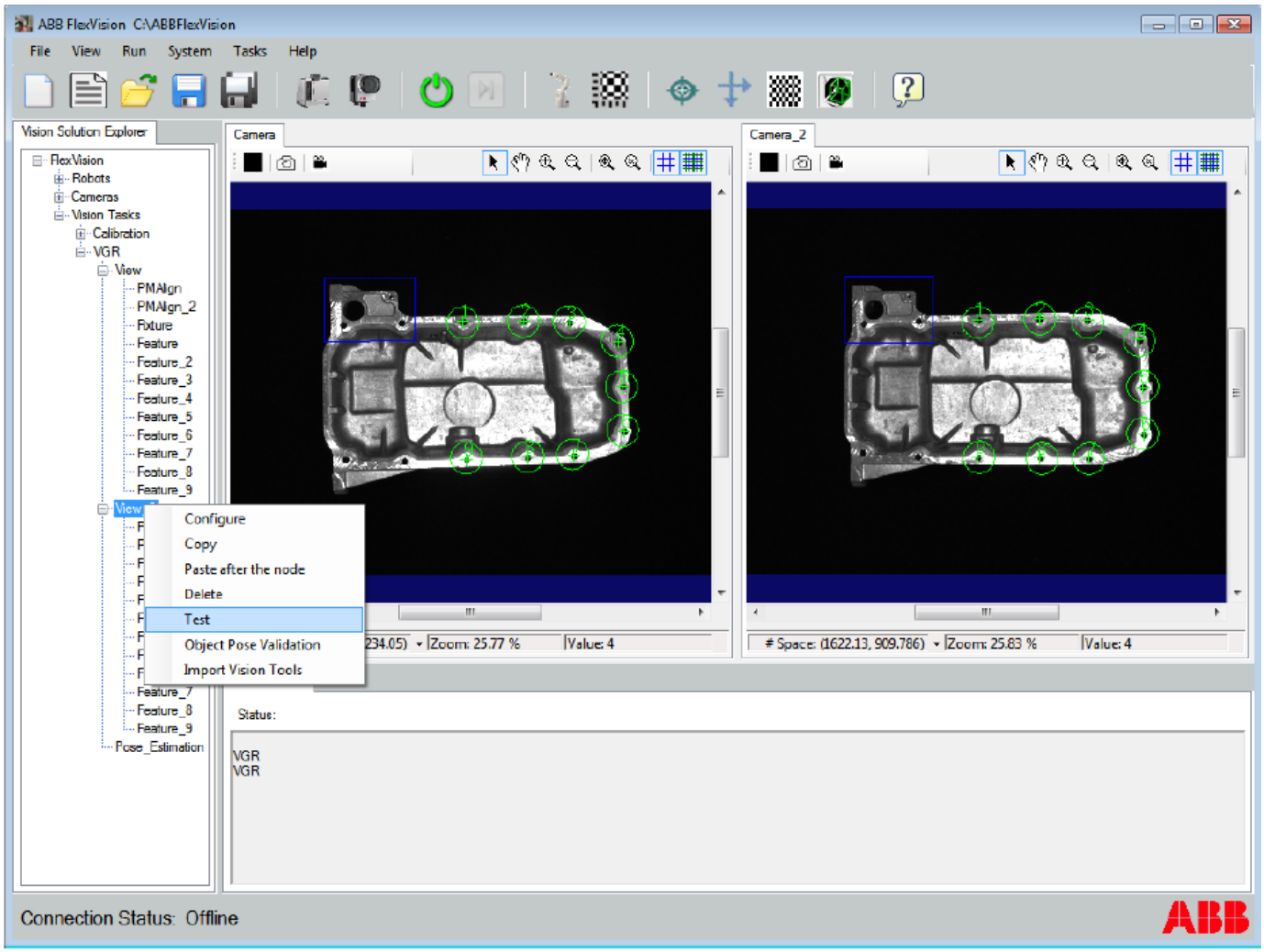

Figure 5: Interface of FlexVision (User Manual at 171)

84. After identifying a set of features from the two-dimensional image, FlexVision calculates the real-world, three-dimensional location of these features in a pre-determined space. *See* Exhibit 4 at 180. For example, the User Manual instructs that "model points must be generated" for FlexVision to "run a VGR Task." *Id.* at 172. "VGR" stands for "Vision Guided Robotics." *Id.* at 221. The User Manual states further that "[t]hese [model] points should be the *same defined points as the features that were created by the user*." *Id.* at 172 (emphasis added). FlexVision then "identif[ies]" the "relationship of the[se] feature points . . . based on the[se] 3D model points, *and the appearance of the features in the image*." *Id.* at 99 (emphasis added).

"[T]hese generated points tell the robot where the points are located in the work frame being used." *Id.* at 172.

85. Reproduced below is a picture from page 180 of the User Manual demonstrating FlexVision's ability to calculate the three-dimensional features of a target part using the identified, two-dimensional features of that part identified from the captured camera image. The screen-capture shows a table of three-dimensional coordinates generated by FlexVision using 9 features from a 2-D image. Column 1 represents the ID number of the specific feature. Column 2 represents the three-dimensional coordinates of the corresponding feature.

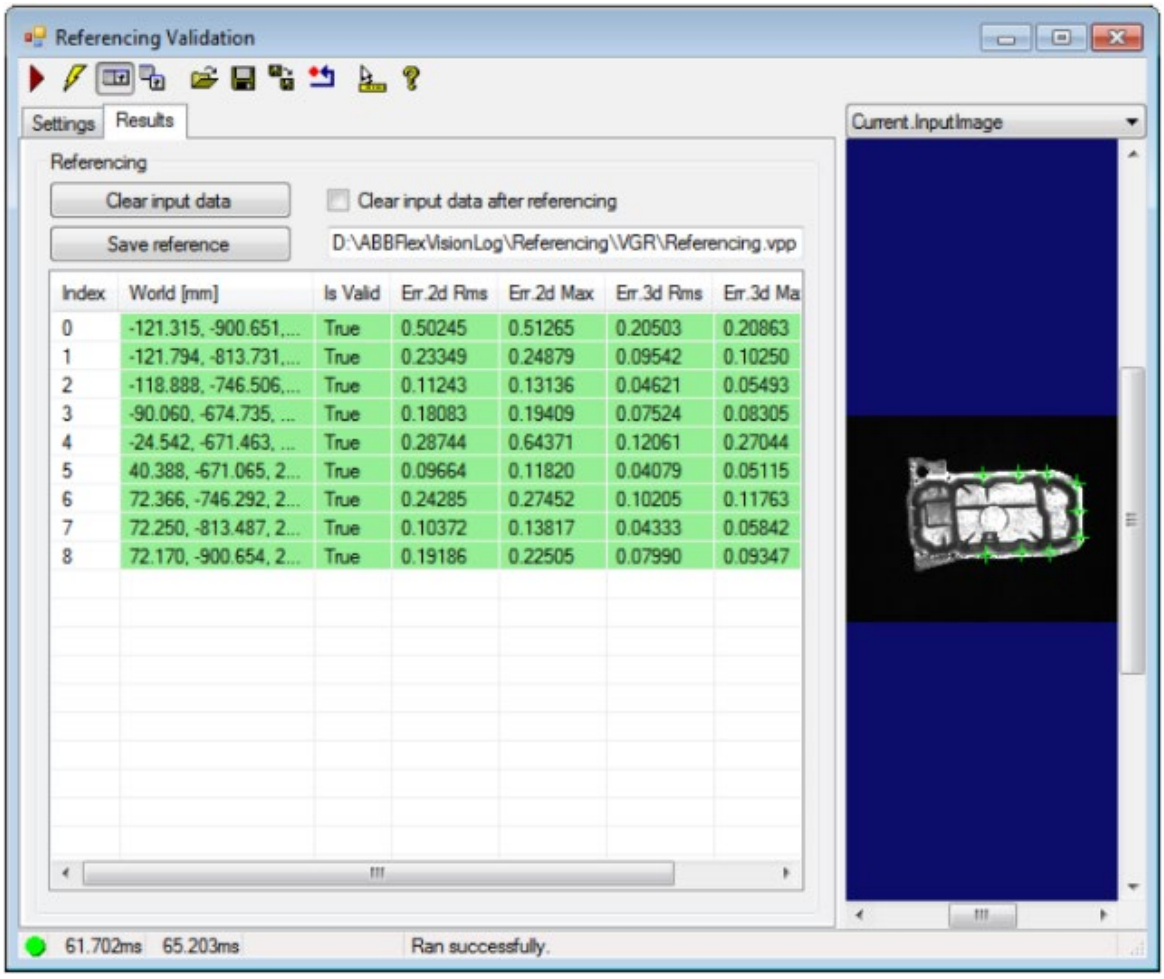

Figure 6: Referencing Validation data for FlexVision (User Manual at 180)

86. FlexVision uses these three-dimensional coordinates or "feature points" to estimate the pose of the part itself. The User Manual refers to a "referencing task" that "*generates the model points in 3D space*, which are *used by the VGR task for pose estimation*." *Id.* at 153 (emphasis added). The User Manual also describes a "Pose Estimation Tool," which involves identifying "[t]he relationship of the feature points . . . *based on the 3D model points*, and the appearance of the features in the image." *Id.* at 99 (emphasis added). The "Pose Estimation Tool is added to the VGR task by default." *Id.*

87. FlexVision also communicates the pose of the part to the robot. The User Manual defines "[a] 3D Vision Task" as "a vision process for acquiring images of the parts, like engine cylinder heads, transmission blocks, searching trained patterns, and estimat[ing] the 3D pose[] of the part[] and then *send[ing] the pose of the part to the robot*." *Id.* at 149 (emphasis added). Elsewhere the User Manual explains that "[s]ocked [sic] messaging is used to receive trigger signals and robot pose information from the ABB Robot, and *to send the calculated object pose back to the ABB Robot*." *Id.* at 126 (emphasis added).

88. By communicating to the robot the pose of the part, FlexVision enables the robot to locate that part in three-dimensional space. For instance, the User Manual states that the "generated points tell the robot where the points are located in the work frame being used. The robot can then properly initiate the next sequence in the tasks given to it and *accurately determine where the part being used is*." *Id.* at 172 (emphasis added). And the User Manual explains that the "PMAlign tool[] is used to configure a pattern to be recognized *to locate the part*." *Id.* at 88 (emphasis added).

89. On information and belief, the interface for FlexVision is the same as, or similar to, the interface for eVF, as depicted below.

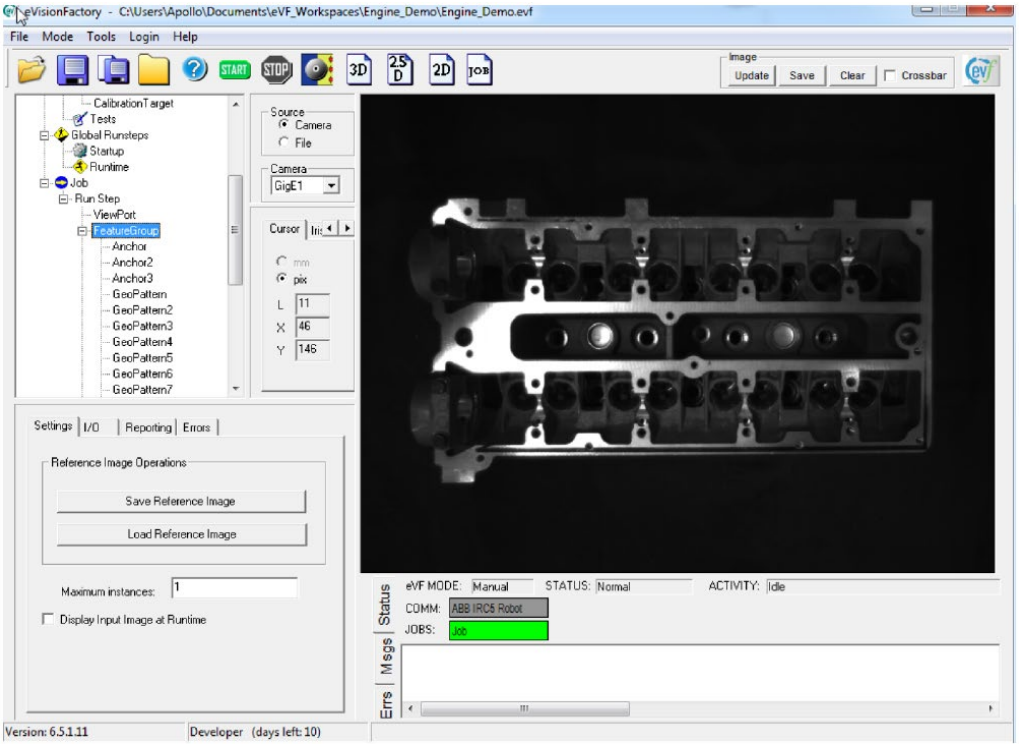

Figure 7: Interface of eVisionFactory

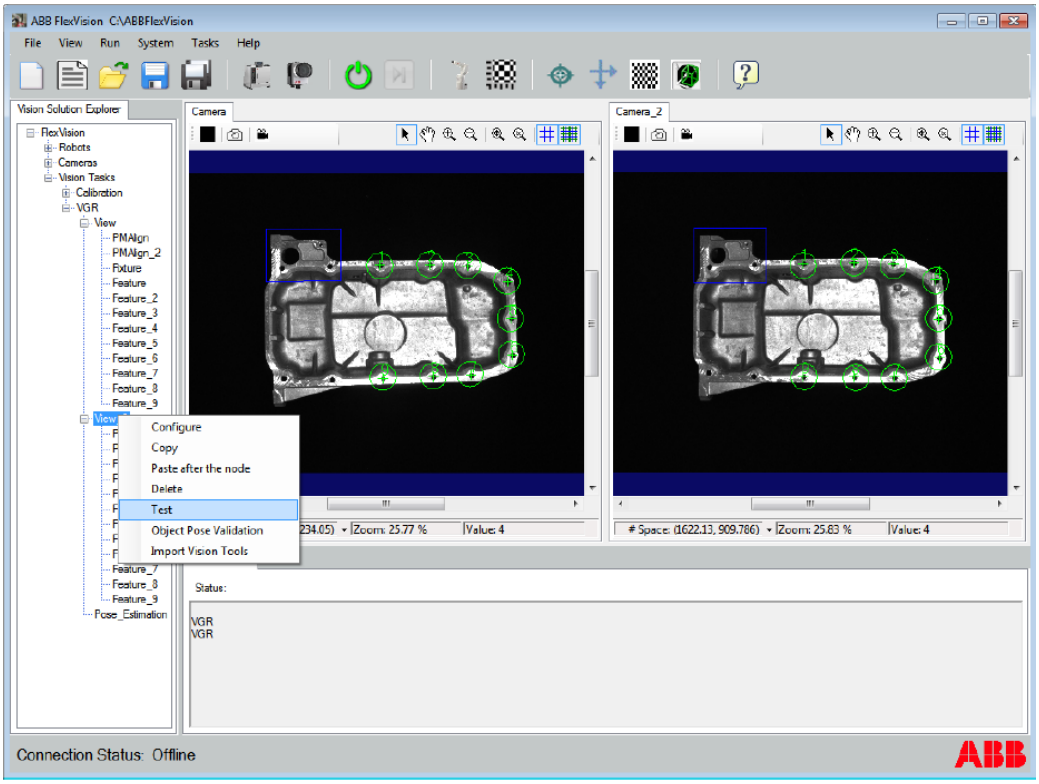

Figure 8: Interface of FlexVision (User Manual at 171)

90. As the figures above indicate, each of the FlexVision and eVF interfaces use a similar-looking software toolbar (top of each interface), similar-looking camera controls for each 2D image (upper right of each image), and a window containing a logic tree (on the left).

91. The logic tree in the eVF interface organizes the logical workflow of the workspace, organized in a hierarchical tree structure to facilitate operation of the eVF software and note the software's functions in a logical sequence.

92. On information and belief, the Vision Solution Explorer depicted in the FlexVision interface includes a logic tree that functions the same as, or similarly to, the logic tree exhibited in the eVF interface. On information and belief, the Vision Solution Explorer proceeds through a logical workflow to list tasks or functions of the FlexVision software. On information and belief, the logic tree in the FlexVision Vision Solution Explorer contains the same, or similar, procedures and functions as the eVF software, as illustrated below.

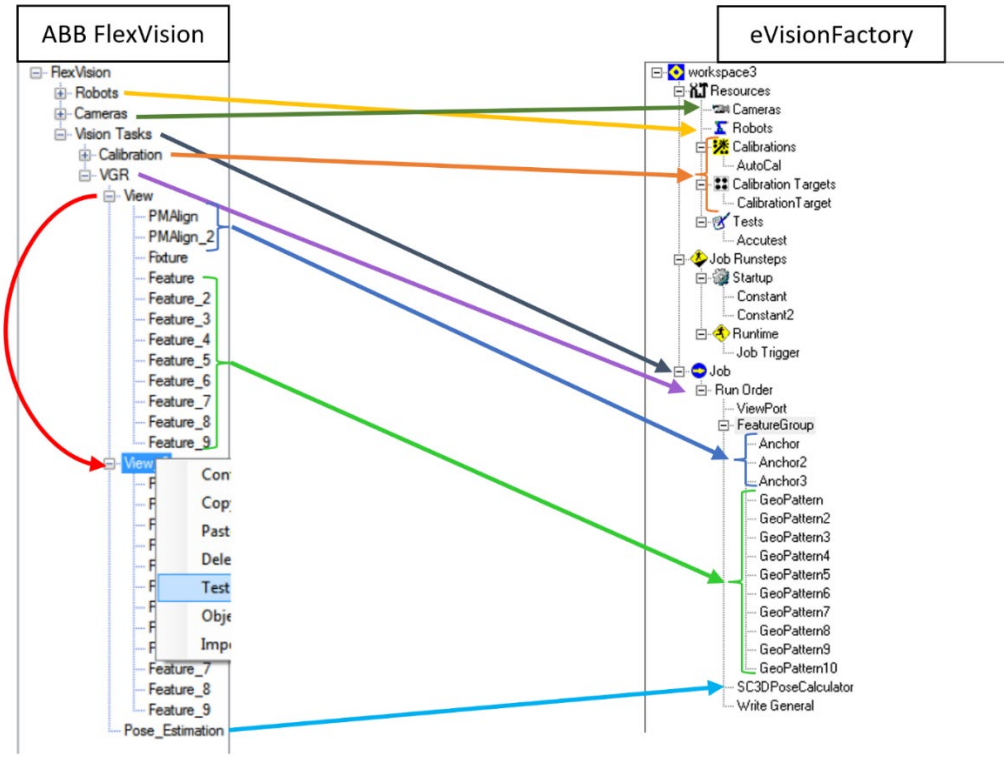

Figure 9: Comparison of FlexVision and eVF logic trees (annotated)

93. On information and belief, FlexVision software provides a status window similar to that which exists in the eVF software. On information and belief, the FlexVision status window displays the status of the operation of the machine vision and the data that the FlexVision software calculates, similar to the positional data shown in the eVF software status window, as depicted below.

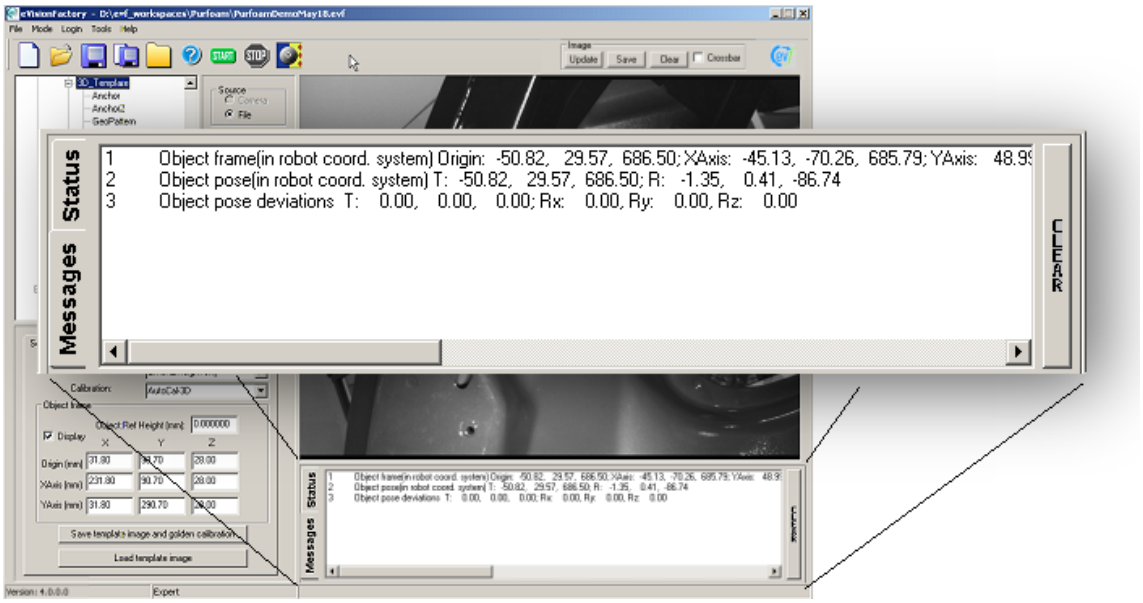

Figure 10: eVF status window

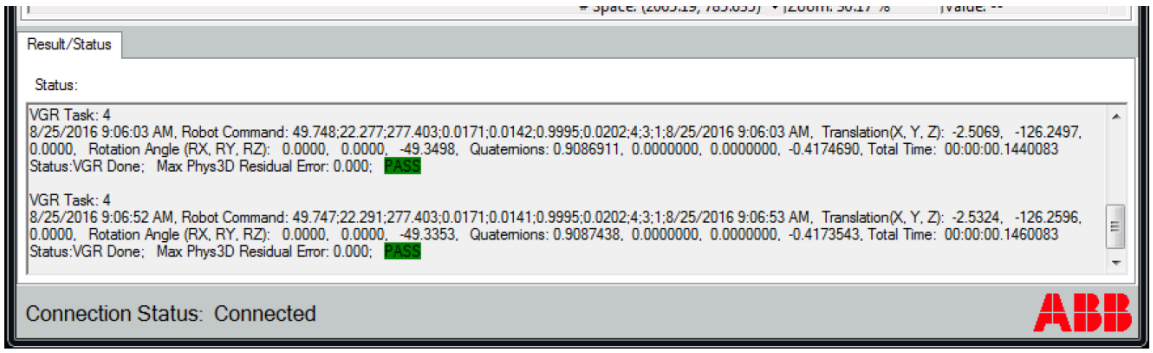

Figure 11: FlexVision status window (User Manual at 191)

94. The FlexVision User Manual references a PMAlign Tool that is, on information and belief, part of the Cognex machine-vision library. Exhibit 4 at 88. The User Manual

references the need for a Cognex license,[3] as well as other Cognex tools. *Id.* at 42, 72, 224. On information and belief, the PMAlign tool uses Cognex's PatMax technology.[4]

95. In a tutorial for the PatMax tool, Cognex stated that PatMax (PMAlign) "is not a 3D tool."[5]

96. On information and belief, the off-the-shelf version of the Cognex machine-vision software does not recommend using 2D images to estimate 3D pose because the sensitivity of its tools to skew and distortion means it cannot precisely locate an object with consistency and reliability. "In general, [] you will not be able to use 2D pattern alignment tools (such as PatMax…) for 3D vision."[6] Accordingly, the Cognex machine-vision library must be augmented or modified to locate a target part in 3D space from a 2D image with any kind of accuracy, consistency and reliability. On information and belief, ABB augmented or modified the off-the-shelf version of the Cognex machine-vision library so that the FlexVision software can achieve accurate and consistent camera calibration, object training, and pose estimation.

97. Instead of using Cognex's machine-vision tools, eVF employs a competing product, the Matrox Image Library (MIL). On information and belief, MIL has different capabilities from Cognex. For single-camera 3D VGR, MIL mainly provides basic image-processing and edge-finding capabilities, whereas Cognex has a more complete and comprehensive machine-vision offering. Many of eVF's processes and functions, such as Feature

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[3] https://www.cognex.com/industries/automation/robotic-system-integrators (stating "ABB Integrated Vision integrates with Cognex solutions").

[4] https://www.cognex.com/videos/vision-software/visionpro-pmalign-patmax

[5] https://www.cognex.com/videos/vision-software/visionpro-pmalign-patmax (minute 3:30) (referencing PatQuick, the first step to PatMax).

[6] https://support.cognex.com/docs/cvl_800/3d_guide.pdf (page 102).

Groups, Pose Calculators, Anchor Features, AutoCal, AutoTrain, AccuTest, etc., are RVT proprietary creations that combine basic imaging tools from MIL and proprietary source code. On information and belief, if one were to use Cognex to create a 3D-vision-guided robotics software, its structure and inputs would vary from eVF immensely. Yet, on information and belief, FlexVision—which uses Cognex, not MIL—has the same inputs, tools, components, automated processes, user workflow, and interface structure as eVF while achieving the purported same level of accuracy for single-camera 3D vision. In addition, the Cognex machine-vision tools (including VisionPro and the underlying Vision Library) provide a suite of tools to aid in machine vision. On information and belief, the Cognex machine-vision tools were developed to support vision tasks in all manner of manufacturing applications, and not specifically for 3D-vision-guided robotics. On information and belief, these processes are not specific to being mounted on a robot arm (except for hand-eye camera calibration, where the library suggests using robot motion to assist with calibration). However, on information and belief, FlexVision uses identical robot techniques, such as the robot movements in eVF's AutoCal and AutoTrain, to calibrate their cameras, build 3D models, and validate the pose estimations.

98. On information and belief, nearly all aspects of the FlexVision software not supplied by Cognex are identical or similar in process to eVF. On information and belief, FlexVision has adopted many techniques from eVF not found in Cognex, including but not limited to (1) the tree-based structure of its "vision solution explorer," (2) its collection of pattern-matching tools, (3) its usage of "anchor features" with search regions to achieve high levels of speed, (4) its computation of a "center of mass" to describe model origins, (5) its routines that are run on the robot controller itself, (6) its ability to identify the pose of multiple

parts in one application, (7) all of its pose-estimation and pattern-validation tools, (8) its abilities to re-run vision tasks with offline saved files, (9) its offering of not only 3D, but also 2D and 2.5D solutions, (10) its use of terms such as "Gold Point," Exhibit 4 at 220, and "Gold," which is believed to refer to the "golden position," (11) its building of 3D models with robot movements, etc. As described in paragraph 96, Cognex is very limited in its 3D accuracy when presented with various real-world pose distortions. On information and belief, FlexVision is able to achieve performance on par with eVF only by incorporating confidential features and processes of eVF that are not provided by Cognex.

99. On information and belief, the only plausible explanation for the appearance and operation of the FlexVision software is that ABB uses and copied some, or all, of RVT's eVF source code.

100. On information and belief, discovery and a review of the FlexVision source code will show that the FlexVision software and source code contain the same or similar software and system architecture as the eVF product.

101. On information and belief, no other competitor in the machine-vision market can achieve 3D pose estimation for target objects with the precision and accuracy of the eVF or FlexVision products.

B. ABB'S ACTS OF PATENT INFRINGEMENT

102. On information and belief, ABB's FlexVision product includes or performs each and every limitation of at least one claim of each Asserted Patent, either literally or under the doctrine of equivalents.

103. On information and belief, ABB directs customers and operators to use the FlexVision product to practice each and every limitation of at least one claim of each Asserted Patent, either literally or under the doctrine of equivalents.

104. On information and belief, ABB actively encourages, promotes, distributes, provides instruction for, and supports the use of the FlexVision product by its customers and operators in a manner that directly infringes the Asserted Patents, knowing and intending that its customers will commit infringing acts in such a manner as to directly infringe the Asserted Patents. For example, ABB, through the User Manual, provides customers with explicit instructions for installing, configuring, and operating the FlexVision product in a manner that infringes the Asserted Patents.

105. On information and belief, ABB also encourages, promotes, and instructs operators and customers to use FlexVision in an infringing manner by offering and providing installation support services and training classes at its offices in Auburn Hills, Michigan, including training classes on how to install, configure, and operate FlexVision on ABB industrial robots. *See* ABB US428 FlexVision Course Description 2022 (4.5 days course), *available at* https://new.abb.com/service/abb-university/united-states/robotics/course-descriptions (located by selecting "Advanced Applications" drop-down menu).

106. ABB's importation, use, offer for sale, and/or sale within the United States of the FlexVision product is continuing. ABB also continues to distribute product literature and website materials encouraging its customers and others to use the FlexVision product in the customary and intended manner, which infringes the Asserted Patents.

107. On information and belief, ABB has known of each of the Asserted Patents at least because RVT has marked its patented products in its sales and marketing literature concerning eVF, including the Asserted Patents. This marking has been continuous since eVF was first developed.

108. On information and belief, ABB has had knowledge of the Asserted Patents since at least 2006 when ABB entered into a (now terminated) licensing agreement with Braintech, the original assignee of the '755 and '814 patents and of the application that matured into the '237 patent. Through the license agreement, ABB acquired the right to market and sell eVF software, a commercial embodiment of the Asserted Patents, from 2006–2008.

109. On information and belief, ABB's infringement has been and continues to be willful.

110. On information and belief, ABB knew that Dr. Boca was a leading developer of Braintech and RVT's eVF software product through its prior licensing interactions with Braintech and RVT. On information and belief, ABB knew that Dr. Boca possessed confidential and proprietary information belonging to RVT and relating to RVT's eVF software product, such as the eVF source code. On information and belief, ABB negotiated an employment agreement with Dr. Boca to lure him away from RVT to ABB, where Dr. Boca helped develop ABB's FlexVision software.

111. RVT has been injured by ABB's infringement of the Asserted Patents and will suffer irreparable harm unless ABB is enjoined from infringing the Asserted Patents.

C. ABB'S ACTS OF COPYRIGHT INFRINGEMENT

112. On information and belief, ABB's FlexVision product relies on, incorporates, and uses portions of, or substantially similar portions of, eVF's copyrighted source code.

113. On information and belief, ABB has reproduced and caused to be publicly sold, licensed, and distributed portions of eVF's copyrighted source code without RVT's authorization, consent, or knowledge, without any compensation to RVT.

114. On information and belief, since ABB has exploited portions of the copyrighted eVF source code, ABB has sold thousands of copies of the FlexVision software product within

the United States. On information and belief, ABB continues to develop and sell the FlexVision software product using portions of the copyrighted eVF source code, including creating different versions of the FlexVision software.

115. On information and belief, ABB had access to RVT's copyrighted eVF source code when Dr. Boca left RVT's employ to begin employment with ABB in 2010.

116. On information and belief, ABB hired Dr. Boca due to his familiarity with, and access to, the eVF source code and software product.

117. On information and belief, ABB knew of RVT's copyright to the eVF source code due to its purchase of a (now-expired) license to the eVF software granted by RVT's predecessor-in-interest, Braintech, in 2006.

118. On information and belief, ABB also knew of RVT's ownership of the copyright to the eVF source code because ABB demanded RVT escrow the eVF source code in 2009 as a condition-precedent for payment owed by ABB to RVT. Dr. Boca assisted in setting up the escrow for the source code.

119. Through ABB's conduct, ABB has directly infringed RVT's exclusive right to (1) reproduce the eVF source code, (2) prepare derivative works based on the eVF source code, and (3) distribute or sell the eVF product.

120. On information and belief, ABB actively induced, encouraged, caused, and materially contributed to Dr. Boca's unauthorized use of RVT's copyrighted eVF source code to form the basis of, develop, and create ABB's FlexVision product by offering Dr. Boca employment in 2010.

121. On information and belief, ABB controls Dr. Boca's employment duties and activities, including the efforts and activities contributing to the development of the FlexVision

product. On information and belief, ABB has directly benefited from Dr. Boca's employment and his efforts to develop the FlexVision product, at least because Dr. Boca is intimately familiar with the eVF source code and eVF product and Dr. Boca had ample access to the eVF source code prior to, and during, his employment at ABB in 2010, when he still had the RVT-issued laptops and hard drives in his possession. On information and belief, ABB has sold thousands of copies of the FlexVision software in the United States alone.

122. On information and belief, ABB knew of RVT's copyright in the eVF source code. For example, the eVF splashscreen, marketing materials, and user manual all provide notice of RVT's copyright. Moreover, ABB previously licensed the eVF product from RVT and Braintech.

123. On information and belief, ABB's copying and exploitation of RVT's copyrighted eVF source code was willful and indifferent to RVT's rights. On information and belief, ABB acted with intent to reap the know-how and value associated with the eVF source code.

124. RVT has been injured by ABB's infringement of RVT's registered copyright and will suffer irreparable harm unless ABB is enjoined from further infringement.

D. ABB'S ACTS OF TRADE-SECRET MISAPPROPRIATION

125. ABB deliberately hired Dr. Boca, one of the main architects of RVT's proprietary source code, following a dispute between ABB and RVT over ownership and access to that same confidential source code. As part of that dispute, ABB sought to obtain RVT's confidential source code for itself but RVT prevented ABB from doing so.

126. Dr. Boca had access to RVT's proprietary source code, both within his own knowledge as an architect of the code, as well as on two laptop computers and two external hard drives containing the code that Dr. Boca failed to return to RVT upon terminating his employment.

127. When the two laptops were finally returned, two months after Dr. Boca began his employment with ABB, they had been completely wiped of all data. The same is true for the external hard drives, which were returned about 3–4 months after Dr. Boca began employment with ABB. The deletion of all information from the laptop and external hard drives made it impossible for RVT to determine exactly what source code Dr. Boca had access to via the laptop computers and external hard drives while employed by ABB.

128. In 2016, one of the world's largest and most technologically sophisticated Original Equipment Manufacturers conducted a Gage Repeatability and Reproducibility (Gage R&R) test to determine the most accurate pose estimation tool among leading 3D-vision products, of which RVT's eVF product was one candidate. RVT's eVF product implements RVT's trade-secret methods and algorithms as embodied in its confidential source code. According to that test, eVF was the most precise on all dimensions tested. *See* Exhibit 5 at 1.

129. Since then, ABB has publicly stated that its machine-vision technology, FlexVision 3D, achieves +/- 0.1 millimeters to +/-0.3 millimeters accuracy and calculates positions in 0.3 seconds to 1.0 second. *See* Exhibit 7 at 2. The accuracy and processing time that FlexVision 3D achieves is nearly identical to that of eVF. On information and belief, ABB keeps confidential the methods and algorithms used in FlexVision 3D. On information and belief, ABB also tightly controls who can see the user manuals that describe the features and capabilities of FlexVision 3D.

130. In 2020, multiple RVT customers reported to RVT that ABB's machine-vision technology FlexVision 3D operated in a manner strikingly similar to RVT's proprietary technology eVF.

131. In 2021, an integrator provided RVT with a copy of ABB's user manual, which shows the striking similarity between ABB's machine-vision robotics technology and RVT's trade-secret technology. Obtaining this manual was the first time RVT was able to learn some of the details of how FlexVision 3D operates.

132. Based on the information in this manual, information reported from RVT's customers, and information about FlexVision's claimed accuracy and processing time, RVT believes that at least five of RVT's secret methods and techniques have been incorporated into FlexVision: (i) feature qualification, (ii) reprojection, (iii) inverse projection, (iv) use of multiple pose-calculation methods to minimize feature count, and (v) use of the "golden position."

133. **Feature qualification.** On information and belief, FlexVision uses a method to qualify features used during pose estimation, known as "Pose Optimization," that is similar to the method used in eVF. Indeed, even some of the thresholds employed are similar to eVF, such as the minimum number of features and maximum error threshold. *See* Figure 12 (below).

134. **Reprojection.** On information and belief, FlexVision uses the same or similar method of reprojection that is used in eVF. Reprojection occurs with the "Max. 3D residual error" setting, implying that the features contributing greater than that level of error will be eliminated, and another projection (i.e., reprojection) should occur. This appears to be the feature-elimination technique used in RVT's trade-secret reprojection method. ABB's claimed accuracy also suggests that ABB is using the same technique, as ABB's claimed accuracy approaches the same accuracy that set RVT apart from all others in the industry, according to the Gage R&R results. *See, e.g.*, Exhibit 5 at 1–2.

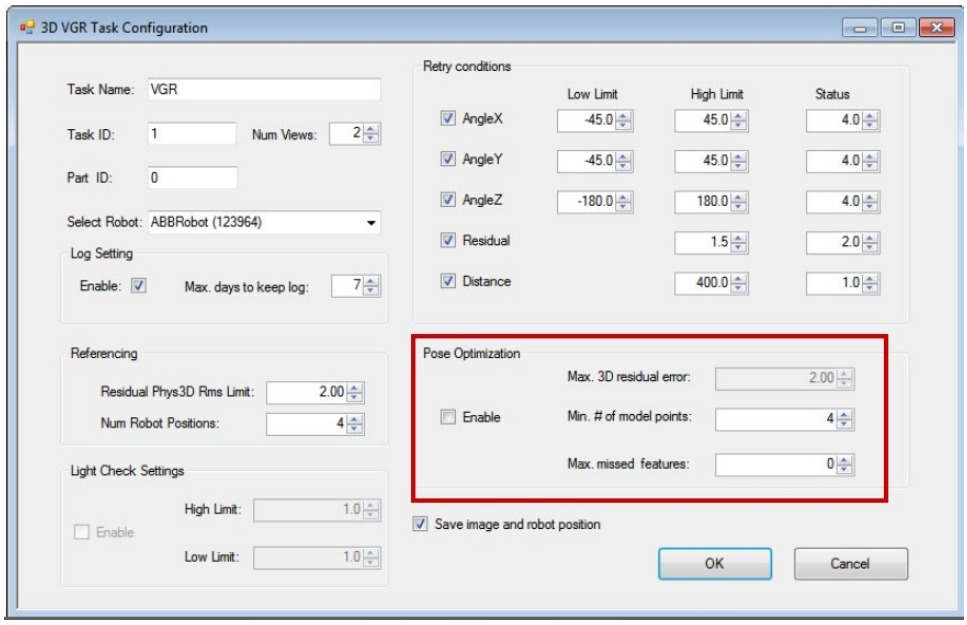

Figure 12: FlexVision 3D VGR Task Configuration dialog box showing "Pose Optimization" fields (User Manual at 186) (annotated)

135. **Inverse projection.** On information and belief, FlexVision 3D, like eVF, also uses the inverse projection of 2D images for calculating the 3D position of parts. On information and belief, ABB leverages camera-calibration routines to perform this inverse projection. Specifically, the ABB User Manual states that ABB performs pose calculations using an inverse projection technique. *See* Exhibit 4 at 194 (describing "Object pose validation" and "Camera calibration"). The fact that RVT uses inverse projection and camera-calibration routines in its pose estimation is not public information, but is an important source of eVF's accuracy and repeatability. On information and belief, because of the nature of pattern skew in 3D vision, FlexVision would not be able to achieve either the accuracy or cycle time required to match eVF's accuracy without using RVT's trade-secret technique. In addition, the FlexVision User Manual mentions inverse projection in both the object-pose-validation and camera-calibration sections. *See id.*

136. Dr. Boca contributed to the creation of these inverse-projection and camera-calibration routines while employed at Braintech and RVT.

137. **Use of multiple pose-calculation methods to minimize feature count.** On information and belief, FlexVision, like eVF, uses multiple pose-calculation algorithms to achieve pose calculation with as few features as possible. Specifically, on information and belief, FlexVision's use of RVT's trade-secret methods allow it to perform pose calculation with six total features and only four part features (though the use of more part features is recommended). *See* Exhibit 4 at 93.

138. **Golden position.** On information and belief, at the time of FlexVision's release, the term "golden position" and the usage of the term "gold" to refer to a trained 3D model of feature locations was in common usage only at Braintech and RVT. The term was used frequently by RVT vision scientists, including Dr. Boca. The term is also found over 100 times throughout the source code of eVF. Importantly, however, this term is not used in the interface, patents, or published documentation for eVF.

139. On information and belief, the use of the term "gold" or "golden position" to refer to a 3D model is unique to RVT and is not a term of art in the industry. ABB's User Manual shows that FlexVision uses the term "gold" to refer to the 3D model created with the same training procedure as eVF. In the image below, taken from page 172 of the User Manual, when configuring the pose-estimation tool, the options include a box to supply a model file. The figure below shows that the model file is named "VGR_2_1_Gold.xml." On information and belief, the "VGR_2_1_Gold.xml" is a reference to the same "golden position" concept used internally at RVT.

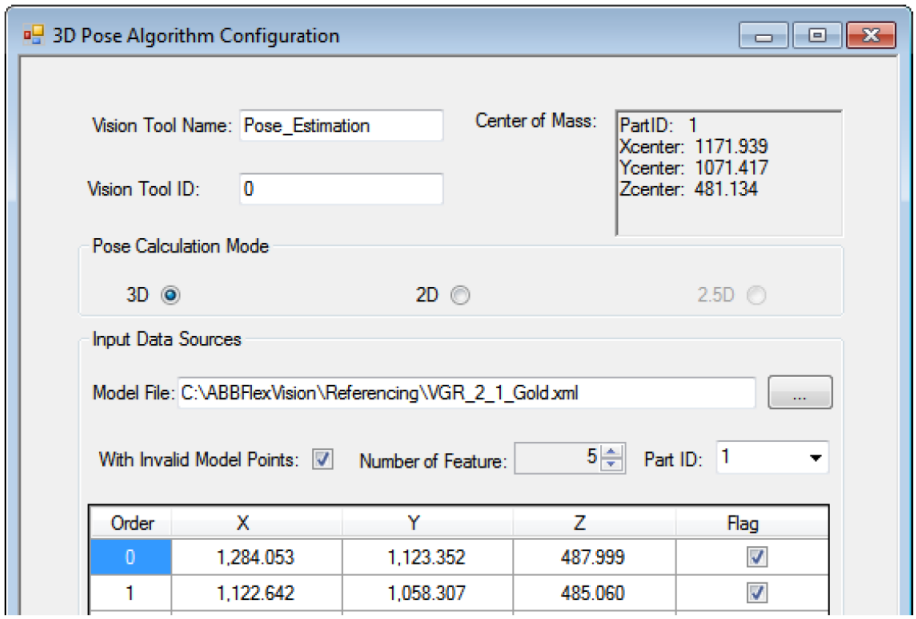

Figure 13: FlexVision 3D Pose Algorithm Configuration dialog box (User Manual at 172)

140. Page 220 of ABB's User Manual defines the term "Gold Point Data" as "a set of points in a given coordinate system generated through Referencing Task in Flex Vision™." On information and belief, "gold point" refers to the same concept as a pattern, or 2D point, in the "golden position" commonly used by RVT before the FlexVision product's release and used in its trade-secret method.

141. RVT's trade-secret methods as implemented in the confidential portions of RVT's source code set RVT's eVF product apart from the competition by providing faster, more accurate, more reproducible results. ABB's misappropriation of these trade secrets has allowed ABB's competing FlexVision product to approach RVT's otherwise unparalleled superior performance.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,816,755

142. RVT realleges and incorporates by reference paragraphs 1 through 141 as if fully set forth herein.

143. The '755 patent is directed to "[a] method of three-dimensional handling of an object by a robot us[ing] a tool and one camera mounted on the robot and at least six target features which are normal features of the object." '755 patent, Abstract. For example, claim 8 of the '755 patent recites:

> 8. A method of three-dimensional handling of an object by a robot using a tool and one camera mounted on the robot, comprising:
>
> i) calibrating the camera by finding
>
> a) the camera intrinsic parameters;
>
> b) the position of the camera relative to the tool of the robot ("hand-eye" calibration);
>
> ii) teaching the object features by
>
> a) putting the object in the field of view of the camera and capturing an image of the object;
>
> b) selecting at least 6 visible features from the image;
>
> c) calculating the 3D position in real world coordinates of said selected features inside a space connected to the object ("Object Space");
>
> d) computing the "Object Space to Camera" transformation using the 3D position of the features inside this space and the position in the image;
>
> e) defining an "Object Frame," inside "Object Space" to be used for teaching the handling path;
>
> f) computing the "Object Frame" position and orientation in "Tool Frame" using the transformation from "Object Frame to Camera" and "Camera to Tool";
>
> g) sending the computed "Object Frame" to the robot; and
>
> h) training the intended operation path inside the "Object Frame";
>
> iii) carrying out object finding and positioning by
>
> a) positioning the robot in a predefined position above the bin containing the target object;

> b) if an insufficient number of selected features are in the field of view, moving the robot until at least 6 features can be located;
>
> c) with the positions of features from the image and their corresponding position in "Object Space" as calculated in the training session, computing the object location as the transformation between the "Object Space" and "Camera Space";
>
> d) using the said transformation to calculate the movement of the robot to position the camera so that it appears orthogonal to the object;
>
> e) finding the "Object Space to Camera Space" transformation in the same way as in step d);
>
> f) computing the object frame memorized at training using the found transformation and "Camera to Tool" transformation;
>
> g) sending the computed "Object Frame" to the robot,
>
> h) using the "Tool" position to define the frame in "Robot Space" and performing the intended operation path on the object inside the "Robot Space".

144. ABB's FlexVision product implements or contains each and every element of at least claims 8–10 of the '755 patent. Exhibit 9 (Claim Chart).

145. By making, using, offering to sell, selling, and importing into the United States FlexVision products, ABB has directly infringed, literally or by doctrine of equivalents, one or more claims of the '755 patent, including but not limited to claims 8–10, under 35 U.S.C. § 271(a).

146. ABB has induced infringement by inducing ABB customers to directly infringe one or more claims of the '755 patent, including for example, claims 8–10, by making, offering to sell, importing, and selling infringing FlexVision products in and into the United States under 35 U.S.C. § 271(b). ABB instructs, recommends, and encourages ABB customers to use ABB's FlexVision product in a manner that directly infringes the '755 patent. ABB provides customers with instructions for installing, configuring, and operating the FlexVision product in a directly

infringing manner. By publishing and distributing its User Manual, ABB has intentionally encouraged customers to use the FlexVision product in a manner that directly infringes the '755 patent. On information and belief, ABB has intentionally encouraged direct infringement of the '755 patent with knowledge of the '755 patent and knowledge that its acts are encouraging infringement.

147. On information and belief, ABB had actual knowledge of the '755 patent since at least 2006, when ABB entered into a licensing agreement with the original assignee of the '755 patent, Braintech, to market and sell TrueView, an incarnation of the eVF software. For example, a 2009 pamphlet for ABB's TrueView product states that TrueView uses "[p]atented single camera 3D technology." Exhibit 10 at 2.

148. ABB's direct and induced infringement of the '755 patent has been willful and egregious. On information and belief, ABB has been aware of the '755 patent since at least 2006 and has willfully infringed the '755 patent, knowing such conduct to be in violation of 35 U.S.C. § 271.

149. ABB's infringement of the '755 patent has damaged RVT in an amount yet to be determined, of at least a reasonable royalty and lost profits that RVT would have made but for ABB's infringing acts as provided by 35 U.S.C. § 284.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,336,814

150. RVT realleges and incorporates by reference paragraphs 1 through 149 as if fully set forth herein.

151. The '814 patent covers a system and method for "three-dimensional pose estimation for target objects, using one or more images sensors to acquire images of the target object at one or more positions." '814 patent, Abstract. For example, claim 1 of the '814 patent recites:

1. A method useful in machine-vision of objects, the method comprising:

acquiring a number of images of a first view of a training object from a number of image sensors;

identifying a number of features of the training object in the acquired at least one image of the first view;

determining a number of additional views to be obtained based at least in part on the number of image sensors, the number of features identified, the number of features having an invariant physical relationship associated thereto, and a type of the invariant physical relationship associated with the features, sufficient to provide a system of equations and unknowns where the number of unknowns is not greater than the number of equations;

acquiring at least one image of each of the number of additional views of the training object by the at least one camera; and

identifying at least some of the number of features of the training object in the acquired at least one image of the number of additional views of the training object

employing at least one of a consistency of physical relationships between some of the identified features to set up the system of equations; and

automatically computationally solving the system of equations.

152. ABB's FlexVision product implements or contains each and every element of at least claims 1, 7, and 13 of the '814 patent. Exhibit 11 (Claim Chart).

153. By making, using, offering to sell, selling, and importing into the United States FlexVision products, ABB has directly infringed, and continues to directly infringe, literally or by doctrine of equivalents, one or more claims of the '814 patent, including but not limited to claims 1, 7, and 13 under 35 U.S.C. § 271(a).

154. ABB has induced, and continues to induce, infringement by inducing ABB customers to directly infringe one or more claims of the '814 patent, including, for example, claims 1, 7, and 13, by making, offering to sell, importing, and selling infringing FlexVision products in and into the United States under 35 U.S.C. § 271(b). ABB instructs, recommends,

and encourages ABB customers to use ABB's FlexVision product in a manner that directly infringes the '814 patent. ABB provides customers with instructions for installing, configuring, and operating the FlexVision product in a directly infringing manner. By publishing and distributing its User Manual, ABB has intentionally encouraged, and will continue to intentionally encourage, customers to use the FlexVision product in a manner that directly infringes the '814 patent. On information and belief, ABB has intentionally encouraged, and will continue to intentionally encourage, direct infringement of the '814 patent with knowledge of the '814 patent and knowledge that its acts are encouraging infringement.

155. On information and belief, ABB had actual knowledge of the '814 patent since at least 2008, when the '814 patent issued. Indeed, in 2009 (approximately one year after the '814 patent issued), ABB published a pamphlet for its TrueView product, which stated that TrueView uses "[p]atented single camera 3D technology." Exhibit 10 at 2. And in 2010, ABB recruited and hired Dr. Boca—one of the co-inventors of the '814 patent—to help develop the accused product in this case.

156. ABB's direct and induced infringement of the '814 patent has been, and continues to be, willful and egregious. On information and belief, ABB has been aware of the '814 patent since at least 2008 and has willfully infringed the '814 patent, knowing such conduct to be in violation of 35 U.S.C. § 271. On information and belief, ABB will continue to willfully infringe the '814 patent.

157. ABB's infringement of the '814 patent has damaged, and continues to damage, RVT in an amount yet to be determined, of at least a reasonable royalty and/or lost profits that RVT would have made but for ABB's infringing acts as provided by 35 U.S.C. § 284.

158. RVT will suffer irreparable harm unless ABB is enjoined from infringing the '814 patent.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 8,095,237

159. RVT realleges and incorporates by reference paragraphs 1 through 158 as if fully set forth herein.

160. The '237 patent covers "[a] method of three-dimensional object location and guidance to allow robotic manipulation of an object with variable position and orientation using a sensor array which is a collection of one or more sensors capable of forming a single image." '237 patent, Abstract. For example, claim 1 of the '237 patent recites:

> 1. A method useful in three-dimensional pose estimation for use with a single camera mounted to a movable portion of a robot, the method comprising:
>
> capturing a two-dimensional image of a volume containing a target object;
>
> locating a number of features in the captured image of the target object; and
>
> determining by a processor an object space-to-camera space transformation for the target object based at least in part on a position of at least some of the located features using only the single captured image and an algorithm that employs a known or determinable physical relationship between at least some of the located features.

161. ABB's FlexVision product implements or contains each and every element of at least claims 1, 2, 3, 7, and 10 of the '237 patent. Exhibit 12 (Claim Chart).

162. By making, using, offering to sell, selling, and/or importing into the United States FlexVision products, ABB has directly infringed and continues to directly infringe, literally or by doctrine of equivalents, one or more claims of the '237 patent, including but not limited to claims 1, 2, 3, 7, and 10, under 35 U.S.C. § 271(a).

163. ABB has induced, and continues to induce, infringement of ABB customers to directly infringe one or more claims of the '237 patent, including for example, claims 1, 2, 3, 7,

and 10, by making, offering to sell, importing, and/or selling infringing FlexVision products in and into the United States under 35 U.S.C. § 271(b). ABB instructs, recommends, and encourages ABB customers to use ABB's FlexVision product in a manner that directly infringes the '237 patent. ABB provides customers with instructions for installing, configuring, and operating the FlexVision product in a directly infringing manner. By publishing and distributing its User Manual, ABB has intentionally encouraged, and will continue to intentionally encourage, customers to use the FlexVision product in a manner that directly infringes the '237 patent. On information and belief, ABB has intentionally encouraged, and will continue to intentionally encourage, direct infringement of the '237 patent with knowledge of the '237 patent and knowledge that its acts are encouraging infringement.

164. On information and belief, ABB had actual knowledge of the '237 patent since at least January 10, 2012, when the '237 patent issued. The '237 patent is a continuation-in-part of the '755 patent. ABB entered into a licensing agreement with Braintech, the original assignee of the '755 and '814 patents, to market and sell TrueView, an incarnation of the eVF software. ABB later recruited and hired Dr. Boca—a co-inventor of the '237 patent—in 2010 to help develop the accused product in this case, and Dr. Boca was employed by ABB when the '237 patent issued in 2012.

165. ABB's direct and induced infringement of the '237 patent has been, and continues to be, willful and egregious. On information and belief, ABB has been aware of the '237 patent since at least 2012 and has willfully infringed the '237 patent, knowing such conduct to be in violation of 35 U.S.C. § 271. On information and belief, ABB will continue to willfully infringe the '237 patent.

166. ABB's infringement of the '237 patent has damaged, and continues to damage, RVT in an amount yet to be determined, of at least a reasonable royalty and/or lost profits that RVT would have made but for ABB's infringing acts as provided by 35 U.S.C. § 284.

167. RVT will suffer irreparable harm unless ABB is enjoined from infringing the '237 patent.

COUNT IV: DIRECT COPYRIGHT INFRINGEMENT

168. RVT realleges and incorporates by reference paragraphs 1–167 as if fully set forth herein.

169. RVT is the copyright holder in the eVF source code and software under United States copyright law and has been since May 2010.

170. On information and belief, ABB's FlexVision technology provides the same or substantially similar output as RVT's eVF technology, implemented through substantially similar means, including through at least the use of calibration, training, and pose-estimation modules.

171. Through ABB's alleged conduct, including ABB's reproduction, distribution, and sale of FlexVision, which is the same or substantially similar to RVT's eVF product and source code, ABB has directly infringed RVT's exclusive rights in the eVF source code in violation of Section 501 of the Copyright Act, 17 U.S.C. § 501.

172. ABB has directly infringed RVT's exclusive right to (1) reproduce the eVF source code, (2) prepare derivative works based on the eVF source code, and (3) distribute or sell the eVF product. ABB has infringed, and continues to infringe, on these exclusive rights by copying, selling, and licensing FlexVision and by creating additional derivative works, such as new versions of FlexVision. All allegedly infringing ABB activities were, and are, without the consent of RVT.

173. On information and belief, ABB has and will continue to infringe on RVT's copyright of the eVF source code by selling, marketing, and developing technology based wholly or in part on RVT's eVF source code.

174. On information and belief, ABB's infringing conduct was, and continues to be, willful and with full knowledge of RVT's rights in the copyrighted eVF source code. On information and belief, ABB knew of the copyright to the eVF source code as early as May 5, 2006, when it entered in the Exclusive Global Channel Partner Agreement with Braintech. ABB was also aware of the transfer of ownership in the copyright to RVT, as exhibited by ABB's lawsuit against RVT in the Eastern District of Michigan seeking ownership of the eVF source code.

175. As a result of ABB's infringing conduct alleged herein, RVT has been harmed and is entitled to damages in an amount to be proven at trial. Pursuant to 17 U.S.C. § 504(b), RVT is entitled to recovery of damages and ABB's profits, including from any and all sales of the FlexVision product and any products incorporating or embodying the copyrighted eVF source code.

176. Alternatively, RVT is entitled to the maximum statutory damages pursuant to 17 U.S.C. § 504(c), in the amount of $150,000 for ABB's willful infringing conduct, and for such other amount as may be proper.

177. RVT will suffer irreparable harm unless ABB is enjoined from infringing RVT's copyright in the eVF source code.

COUNT V: CONTRIBUTORY COPYRIGHT INFRINGEMENT

178. RVT realleges and incorporates by reference paragraphs 1–177 as if fully set forth herein.

179. RVT is the copyright holder in the eVF source code and software under United States copyright law and has been since May 2010.

180. On information and belief, ABB's FlexVision technology provides the same or substantially similar output as RVT's eVF technology, implemented through substantially similar means, including through at least the use of calibration, training, and pose-estimation modules.

181. Throughout his employment at Braintech and RVT, Dr. Boca had access to the eVF source code. Upon information and belief, Dr. Boca used and copied some, or all, of RVT's eVF source code without RVT's permission or knowledge.

182. Through Dr. Boca's alleged conduct, including ABB's reproduction, distribution, and sale of FlexVision, which is the same or substantially similar to RVT's eVF product and source code, Dr. Boca has directly infringed RVT's exclusive rights in the eVF source code in violation of Section 501 of the Copyright Act, 17 U.S.C. § 501.

183. Dr. Boca has directly infringed RVT's exclusive right to (1) reproduce the eVF source code and (2) prepare derivative works based on the eVF source code. Dr. Boca has infringed, and continues to infringe, on these exclusive rights by copying the eVF source code, developing FlexVision, and creating additional derivative works, such as new versions of FlexVision. All of Dr. Boca's activities since leaving the employ of RVT were, and are, without the consent of RVT.

184. On information and belief, ABB induced, caused, and materially contributed to Dr. Boca's infringement by seeking out Dr. Boca for employment at ABB and hiring him to develop the FlexVision product.

185. On information and belief, ABB induced, caused, and materially contributed to Dr. Boca's infringement with the intent to profit from the unauthorized use of RVT's eVF source code through the development, sale, and marketing of technology based wholly or in part on RVT's eVF source code.

186. On information and belief, ABB's infringing conduct was, and continues to be, willful and with full knowledge of RVT's rights in the copyrighted eVF source code. On information and belief, ABB knew of the copyright to the eVF source code as early as May 5, 2006, when it entered in the Exclusive Global Channel Partner Agreement with Braintech. ABB was also aware of the transfer of ownership in the copyright to RVT, as exhibited by ABB's lawsuit against RVT in the Eastern District of Michigan seeking ownership of the eVF source code. ABB was also aware of Dr. Boca's employment with Braintech and RVT, as well as Dr. Boca's involvement in the development and creation of the eVF source code.

187. As a result of ABB's infringing conduct alleged herein, RVT has been harmed and is entitled to damages in an amount to be proven at trial. Pursuant to 17 U.S.C. § 504(b), RVT is entitled to recovery of damages and ABB's profits, including from any and all sales of the FlexVision product and any products incorporating or embodying the copyrighted eVF source code.

188. Alternatively, RVT is entitled to the maximum statutory damages pursuant to 17 U.S.C. § 504(c), in the amount of $150,000 for ABB's willful infringing conduct, and for such other amount as may be proper.

189. RVT will suffer irreparable harm unless ABB is enjoined from infringing RVT's copyright in the eVF source code.

COUNT VI: VICARIOUS COPYRIGHT INFRINGEMENT

190. RVT realleges and incorporates by reference paragraphs 1–189 as if fully set forth herein.

191. RVT is the copyright holder under United States copyright law in the eVF source code and software and has been since May 2010.

192. On information and belief, ABB's FlexVision technology provides the same or substantially similar output as RVT's eVF technology, implemented through substantially similar means, including through at least the use of calibration, training, and pose-estimation modules.

193. Throughout his employment at Braintech and RVT, Dr. Boca had access to the eVF source code. Upon information and belief, Dr. Boca used and copied some, or all, of RVT's eVF source code without RVT's permission or knowledge.

194. Through Dr. Boca's alleged conduct, including ABB's reproduction, distribution, and sale of FlexVision, which is the same or substantially similar to RVT's eVF product and source code, Dr. Boca has directly infringed RVT's exclusive rights in the eVF source code in violation of Section 501 of the Copyright Act, 17 U.S.C. § 501.

195. Dr. Boca has directly infringed RVT's exclusive right to (1) reproduce the eVF source code and (2) prepare derivative works based on the eVF source code. Dr. Boca has infringed, and continues to infringe, on these exclusive rights by copying the eVF source code, developing FlexVision, and creating additional derivative works, such as new versions of FlexVision. All of Dr. Boca's activities since leaving the employ of RVT were, and are, without the consent of RVT.

196. On information and belief, ABB, as Dr. Boca's employer, has the right and ability to control Dr. Boca's employment activities and duties, including Dr. Boca's use of RVT's eVF source code to form the basis of ABB's FlexVision product. ABB sought Dr. Boca for employment at ABB and hired him to develop the FlexVision product because of Dr. Boca's intimate knowledge of the eVF product and source code. On information and belief, ABB has a direct financial interest in sale of its FlexVision product, which Dr. Boca helped develop as a direct result of his prior experience with and knowledge of the eVF product source code.

197. On information and belief, ABB has a financial interest in the unauthorized use of RVT's eVF source code by developing, selling, marketing, and profiting off technology based wholly or in part on RVT's eVF source code wholly or in part on RVT's evF source code.

198. On information and belief, ABB's infringing conduct was, and continues to be, willful and with full knowledge of RVT's rights in the copyrighted eVF source code. On information and belief, ABB knew of the copyright to the eVF source code as early as May 5, 2006, when it entered in the Exclusive Global Channel Partner Agreement with Braintech. ABB was also aware of the transfer of ownership in the copyright to RVT, as exhibited by ABB's lawsuit against RVT in the Eastern District of Michigan seeking ownership of the eVF source code. ABB was also aware of Dr. Boca's employment with Braintech and RVT, as well as Dr. Boca's involvement in the development and creation of the eVF source code.

199. As a result of ABB's infringing conduct alleged herein, RVT has been harmed and is entitled to damages in an amount to be proven at trial. Pursuant to 17 U.S.C. § 504(b), RVT is entitled to recovery of damages and ABB's profits, including from any and all sales of the FlexVision product and any products incorporating or embodying the copyrighted eVF source code.

200. Alternatively, RVT is entitled to the maximum statutory damages pursuant to 17 U.S.C. § 504(c), in the amount of $150,000 for ABB's willful infringing conduct, and for such other amount as may be proper.

201. RVT will suffer irreparable harm unless ABB is enjoined from infringing RVT's copyright in the eVF source code.

COUNT VII: TRADE-SECRET MISAPPROPRIATION UNDER DTSA

202. RVT realleges and incorporates by reference paragraphs 1 through 201 as if fully set forth herein.

203. ABB's use of RVT's trade secrets amounts to misappropriation under 18 U.S.C. § 1836(b)(1).

204. RVT took great care to safeguard its trade secrets, disclosing them only to RVT personnel and only as needed for RVT's legitimate business interests. Materials containing trade secrets were marked as confidential and kept secret. All employees with access to RVT trade secrets, including all former employees of Braintech, were subject to non-disclosure agreements designed to keep RVT's trade secrets confidential.

205. On information and belief, ABB has misappropriated RVT's valuable trade secrets, incorporated them into ABB's product source code, is using them, and intends to continue using them, to further its business interests and to damage RVT's market standing.

206. RVT did not authorize or consent to ABB, Dr. Boca, or anyone else using its trade secrets. Dr. Boca's access to RVT's protected information was strictly confidential and subject to an NDA. This NDA made clear that Dr. Boca was under an obligation not to disclose those secrets or use RVT's confidential information for the benefit of anyone other than RVT.

207. Prior to the acts complained of herein, RVT's trade secrets had, and continue to have, independent economic value deriving from the fact that such information is not readily

ascertainable through proper means nor known to RVT's competitors, their customers, or the public at large who could obtain economic value from their use or disclosure.

208. ABB has used RVT's trade secrets to modify and develop the source code used to control ABB's machine vision robotic products. This misappropriation has destroyed the secrecy of this information vis-à-vis ABB, RVT's main competitor. ABB's use of RVT's trade secrets have given ABB an unfair advantage in the marketplace and undermined RVT's ability to distinguish its products as superior to the competition.

209. RVT first discovered the misappropriation of its trade-secret information in June 2021, when an integrator with access to ABB's confidential user manual notified RVT of the striking similarities between ABB's product and RVT's underlying technology. RVT has brought this action within the three-year period prescribed by 18 U.S.C. § 1836(d), and its claims are not time barred.

210. As a direct and proximate result of ABB's misappropriation and use of RVT's trade secrets, RVT has suffered irreparable harm subject to proof at trial.

211. In addition to said damages, ABB has been unjustly enriched by its misappropriation and use of RVT's trade secrets.

212. ABB's misappropriation of RVT's trade secrets was willful and malicious, so as to justify an award of additional punitive damages pursuant to 18 U.S.C. § 1836(b)(3)(C), in a sum sufficient to punish ABB and deter others from engaging in similar misconduct.

213. Because the misappropriation by ABB was willful and malicious, RVT is also entitled to an award of reasonable attorney's fees and costs incurred during litigation pursuant to 18 U.S.C. § 1836(b)(3)(D).

214. RVT is further entitled to an order enjoining ABB, its agents and employees, and all persons acting in concert or participation with it, from using RVT's trade secrets going forward to unfairly compete with RVT, and to an order further compelling ABB to turn over to RVT all copies of RVT's trade secrets in its possession, custody, or control.

COUNT VIII: MISAPPROPRIATION UNDER THE DELAWARE UNIFORM TRADE SECRETS ACT

215. RVT re-alleges and incorporates by reference paragraphs 1 through 214 as if fully set forth herein.

216. ABB's acts constitute misappropriation under the Delaware Uniform Trade Secrets Act, 6 Del. C. § 2001, *et seq.*

217. RVT possessed confidential information, including calculations, algorithms, and other methods embodied in its source code, which constitute trade secrets.

218. This confidential information is and has been continuously used in connection with RVT's products and services, which are offered across the country and throughout the world.

219. RVT took reasonable measures to maintain the secrecy and confidentiality of such information, including by requiring contracts that prohibited, among other things, unauthorized access, use, or disclosure of RVT's confidential information. This information cannot be properly acquired or duplicated because of the limited number of individuals who can access the information and the contractual limitations imposed on such individuals.

220. Dr. Boca was subject to such an agreement and had a duty to maintain the confidentiality of the materials that he had access to pursuant to his relationship with RVT. At least through the knowledge of Dr. Boca, ABB was aware of Dr. Boca's obligations with respect RVT's confidential information.

221. RVT's confidential information derives independent economic value from not being generally known to, and not being readily ascertainable through proper means by, others because such information is extremely valuable to RVT, crucial to the operation of RVT's business, and, if available to others, would enable others to compete with RVT to RVT's detriment.

222. ABB knowingly and improperly obtained and used RVT's trade secrets through its recruitment and employment of Dr. Boca. ABB continues to do so by using RVT's confidential information to promote the sales of ABB competing products.

223. As such, ABB used improper means to acquire knowledge of RVT's confidential information, and, at the time of its appropriation and use, knew or had reason to know that the trade secret was acquired subject to a duty to maintain secrecy or limit use, or derived from a person who owed such a duty.

224. ABB's conduct constitutes knowing, willful, and malicious misappropriation.

225. As a direct and proximate result of ABB's wrongful conduct, RVT has suffered, and will continue to suffer, extensive, irreparable injury, loss of goodwill, harm to reputation, irreparable loss of the confidentiality of its confidential, proprietary, and trade-secret information, and other injury and harm in an amount not readily capable of determination. RVT will continue to suffer such injury until the misappropriations are preliminarily and permanently enjoined.

226. RVT is entitled to injunctive relief enjoining ABB, its agents and employees, and all persons acting in concert or participation with it, from engaging in any further use of RVT's confidential information.

227. As a result of ABB's actions, RVT has suffered direct and consequential damages, and is entitled to recover compensatory damages, including opportunity costs and enhanced damages in an amount to be proven at trial.

228. Because ABB's misappropriation of RVT's trade secrets was willful and malicious, RVT is entitled to twice the amount of damages awarded for ABB's misappropriation, in accordance with 6 Del. C. § 2003(b).

PRAYER FOR RELIEF

229. RVT respectfully requests that this Court enter judgment against ABB as follows:

A. That ABB has directly infringed one or more claims of the '755, '814, and '237 patents in violation of 35 U.S.C. § 271(a);

B. That ABB has induced infringement of one or more claims of the '755, '814, and '237 patents in violation of 35 U.S.C. § 271(b);

C. That ABB's infringement of one or more claims of the '755, '814, and '237 patents has been and is willful;

D. That ABB violated § 501 of the Copyright Act (17 U.S.C. § 501);

E. That ABB's copyright infringement has been and is willful;

F. That ABB violated the DTSA, 18 U.S.C. § 1836, and Delaware Uniform Trade Secrets Act, 6 Del. C. § 2001, *et seq*;

G. That ABB's trade-secret misappropriation has been and is willful;

H. An award of damages adequate to compensate RVT for patent infringement that has occurred;

I. An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages

found by reason of the intentional and willful nature of ABB's patent infringement;

J. An award of ABB's profits attributable to ABB's infringement of RVT's copyrighted source code, including ABB's profits from sales and any other exploitation of RVT's copyrighted source code;

K. Damages sustained by RVT as a result of ABB's copyright infringement, in an amount to be proven at trial;

L. Damages sustained by RVT as a result of ABB's trade-secret misappropriation, in an amount to be proven at trial;

M. An award of pre- and post-judgment interest of any monetary damages at the highest rate allowed by law;

N. A preliminary and permanent injunction against ABB from infringing the Asserted Patents;

O. A preliminary and permanent injunction against ABB from manufacturing, distributing, marketing, advertising, promoting, displaying, performing, selling or authorizing any third-party to manufacture, distribute, market, advertise, promote, perform, or sell the FlexVision product and any products, works, or other materials that include, copy, are derived from, or otherwise embody RVT's copyrighted source code;

P. A preliminary and permanent injunction against ABB from manufacturing, distributing, marketing, advertising, promoting, displaying, performing, selling or authorizing any third-party to manufacture, distribute, market, advertise, promote, perform, or sell the FlexVision product and any products,

works, or other materials that include or are derived from, or otherwise embody RVT's trade secrets;

Q. A finding that this is an exceptional case and an award to RVT of its costs and reasonable attorneys' fees incurred in this actions as provided by 35 U.S.C. § 285 and 17 U.S.C. § 505; and

R. Any such other and further relief as the Court deems just and proper.

JURY DEMAND

Under Rule 38 of the Federal Rules of Civil Procedure, Plaintiff RVT respectfully demands a trial by jury of any issues triable of right by jury.

/s/ John W. Shaw

John W. Shaw (No. 3362)
Nathan R. Hoeschen (No. 6232)
SHAW KELLER LLP
I.M. Pei Building
1105 North Market Street, 12th Floor
Wilmington, DE 19801
(302) 298-0700
jshaw@shawkeller.com
nhoeschen@shawkeller.com
Attorneys for Plaintiff

OF COUNSEL:
J.C. Rozendaal
Michael E. Joffre
William H. Milliken
Kristina Caggiano Kelly
Anna G. Phillips
William Rodenberg
STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1100 New York Ave, NW
Suite 600
Washington, DC 20005
(202) 371-2600

Dated: September 22, 2022