

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION

VI TECHNOLOGIES, LLC,

Plaintiff,

v.

WOOLPERT, INC.

Defendant.

CIVIL ACTION NO. 6:21-cv-00318

ORIGINAL COMPLAINT FOR PATENT  
INFRINGEMENT

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff VI Technologies, LLC (“VI” or “Plaintiff”) files this Complaint against Woolpert, Inc. (“Defendant”) alleging, based on its own knowledge as to itself and its own actions, and based on information and belief as to all other matters, as follows:

**PARTIES**

1. VI is a corporation filed under the laws of the State of Texas, with its principal place of business at 7800 Washington Avenue, Suite 700, Houston, TX 77007.
2. Defendant is a company incorporated in Ohio with its headquarters at 4454 Idea Center Boulevard, Beavercreek, OH 45430.

**JURISDICTION AND VENUE**

3. This is an action for infringement of United States patents arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under 28 U.S.C. § 1331 and § 1338(a).
4. Venue is proper in this district pursuant to 28 U.S.C. §§ 1400(b) and 1391(c).

5. Defendant is subject to this Court's specific and general personal jurisdiction due at least to Defendant's substantial business in this forum, including (i) at least a portion of the infringement alleged herein; and/or (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this district.

6. Specifically, Defendant intends to and does business in Texas, directly or through intermediaries and offers its products or services, including those accused herein of infringement, to customers and potential customers located in Texas, including in the Western District of Texas.

7. Defendant maintains a regular and established place of business in this district, including at 13785 Research Boulevard, Suite 125, Austin, TX 78750, from which it performs infringing activities and provides infringing products. Defendant may be served with process through its registered agent for service in Texas: National Registered Agents, Inc., 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

### **THE TECHNOLOGY**

8. For seventeen years, Texas-based VI has been an innovator and industry thought-leader in mapping software and sensor technologies.

9. VI manufactures and sells digital geoimaging technology, including, but not limited to, systems for aerial surveying.

10. VI provides a platform for the development of world-class metric 3D sensor solutions and information delivery workflows for large airborne systems, drones, and mobile applications.

11. VI has been awarded fourteen United States patents in the fields of aerial surveying, survey data processing and data management, and mapping systems. VI has also been awarded numerous international patents on its ground-breaking technologies.

12. Using the principles of computer vision and photogrammetry, VI's patented technology transforms an array of cameras into a wide field image with accurate 3D measurement systems and brings ultra-high-definition capabilities to numerous industries.

13. The patents-in-suit, U.S. Patent Nos. 7,127,348 (the "'348 patent"), 7,212,938 (the "'938 patent"), 7,725,258 (the "'258 patent"), 8,483,960 (the "'960 patent"), 8,994,822 (the "'822 patent"), and 9,389,298 (the "'298 patent") (collectively, the "Asserted Patents"), are generally directed to systems and methods for collection of data relating to a target area to be mapped and for processing the collected data to provide advanced mapping of the target area.

#### **THE ACCUSED INSTRUMENTALITIES**

14. Defendant provides aerial photography, videography, and mapping services and products to its customers.

15. Defendant uses a global positioning transmitter in providing mapping services.

16. Defendant uses a global positioning antenna in providing mapping services.

17. Defendant employs airplanes and other vehicles in providing mapping services.

18. Defendant uses an altimeter, or other device for measuring elevation, in providing mapping services.

19. Defendant uses an attitude indicator in providing mapping services.

20. Defendant uses one or more cameras in providing mapping services.

21. Defendant uses cameras that include more than one image sensor in providing mapping services.

22. In providing mapping services, Defendant mounts, or causes others to mount, a camera to a plane.

23. Defendant uses image sensors to generate two-dimensional representations of subject surfaces or areas.

24. Defendant uses image sensors to generate three-dimensional representations of subject surfaces or areas.

25. Defendant uses information received by an altimeter, or other device for measuring elevation, among other information, to correlate data collected from an image sensor to a position on a surface.

26. Defendant uses information received by a global positioning antenna to correlate information collected from an image sensor, among other information, to a position on a surface.

27. Defendant uses information received by an attitude indicator, among other information, to correlate data collected from an image sensor to a position on a surface.

28. Defendant uses photography platforms, including airplanes, helicopters, and drones, that include various sensors, transmitters, and receivers (the “Platforms”).

29. The Platforms are fitted with high resolution digital aerial camera systems that include on-board flight management, georeferencing, and mobile mapping software and hardware.

30. Defendant uses and provides camera systems (the “Image Capture Systems”) equipped with flight management and georeferencing solutions, data processing software and hardware, and mapping software and hardware (the “Processing Software and Hardware”).

31. When the Complaint references “Accused Instrumentalities,” it refers to the combination of the Platforms, Image Capture Systems, and the Processing Software and Hardware.

## COUNT I

### **DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,127,348**

32. VI repeats and re-alleges the allegations in Paragraphs 1-31 as though fully set forth in their entirety.

33. VI owns all substantial rights, interest, and title in and to the '348 patent, including the sole and exclusive right to prosecute this action and enforce the '348 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '348 patent on October 24, 2006. A copy of the '348 patent is attached as Exhibit A.

34. The '348 patent is entitled "Vehicle Based Data Collection and Processing System." The '348 patent describes vehicle-based data collection and processing systems. The systems include, among other things, transmitters, sensors, and imaging arrays secured to a vehicle for generating maps of a surface.

35. The claims of the '348 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '348 patent recites a combination of physical devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

36. The written description of the '348 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

37. Defendant has infringed the '348 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

38. The Accused Instrumentalities include a system for generating a map of a surface.
39. The Accused Instrumentalities include a global position transmitter.
40. The Accused Instrumentalities include a vehicle, disposed over the surface.
41. The Accused Instrumentalities include an elevation measurement unit, secured to the vehicle.
42. The Accused Instrumentalities include a global positioning antenna, secured to the vehicle.
43. The Accused Instrumentalities include an attitude measurement unit, secured to the vehicle.
44. The Accused Instrumentalities include an imaging array, secured to the vehicle.
45. The Accused Instrumentalities include a housing.
46. The Accused Instrumentalities include an aperture, disposed in the housing, having an intersection area therein.
47. The Accused Instrumentalities include a first imaging sensor, coupled to the housing, having a first focal axis passing through the aperture within the intersection area, generating a first array of pixels, wherein the first array of pixels is at least two dimensional.
48. The Accused Instrumentalities include a second imaging sensor, coupled to the housing and offset from the first imaging sensor, having a second focal axis passing through the aperture and intersecting the first focal axis within the intersection area, generating a second array of pixels, wherein the second array of pixels is at least two dimensional.
49. The Accused Instrumentalities include a computer, connected to the elevation measurement unit, the global positioning antenna, the attitude measurement unit, and first and second imaging sensors; correlating at least a portion of the image data from the first and second

imaging sensors to a portion of the surface based on input from one or more of: the elevation measurement unit, the global positioning antenna, and the attitude measurement unit.

50. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '348 patent. Defendant's infringement in this regard is ongoing.

51. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

52. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '348 patent.

53. Defendant has also indirectly infringed one or more of the claims of the '348 patent by inducing others to directly infringe the '348 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '348 patent by making and using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Instrumentalities in a manner that infringes one or more claims of the '348 patent, including, for example, claim 1 of the '348 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to make or use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information

and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '348 patent and with the knowledge that the induced acts constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '348 patent. Defendant's inducement is ongoing.

54. Defendant has also indirectly infringed by contributing to the infringement of the '348 patent. Defendant has contributed to the direct infringement of the '348 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '348 patent, including, for example, claim 1 of the '348 patent. The special features include, for example, the physical devices and data processing components recited in claim 1, including the interrelation between those devices and components, that allow the claimed system to generate a map of a surface. The special features constitute a material part of the invention of one or more of the claims of the '348 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

55. Defendant has knowledge of the '348 patent at least as of the date when it was notified of the filing of this action.

56. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

57. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.



58. Defendant's direct and indirect infringement of the '348 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

59. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

60. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '348 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

## **COUNT II**

### **DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,212,938**

61. VI repeats and re-alleges the allegations in Paragraphs 1-60 as though fully set forth in their entirety.

62. VI owns all substantial rights, interest, and title in and to the '938 patent, including the sole and exclusive right to prosecute this action and enforce the '938 patent against infringers, and to collect damages for all relevant times.

63. The United States Patent and Trademark Office duly issued the '938 patent on May 1, 2007. A copy of the '938 patent is attached as Exhibit B.

64. The '938 patent is entitled "Method Of Using A Self-locking Travel Pattern To Achieve Calibration Of Remote Sensors Using Conventionally Collected Data." The '938 patent describes systems and methods for calibrating remote sensing systems using a self-locking travel pattern and target remote sensing data.

65. The claims of the '938 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '938 patent recites a combination of physical devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

66. The written description of the '938 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

67. Defendant has infringed the '938 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

68. Using the Accused Instrumentalities, Defendant calibrates a remote sensor system.

69. Defendant mounts at least one remote sensor on a vehicle.

70. Using the Accused Instrumentalities, Defendant moves the vehicle in a self-locking pattern over a target area to calibrate the remote sensor. The movement comprises a pattern that produces at least three substantially parallel travel lines out of a group of three or more lines, at least one of which travel lines is in an opposing direction to the other substantially parallel travel lines.

71. Using the Accused Instrumentalities, Defendant generates swath widths for each substantially parallel travel line with the remote sensor device.

72. Using the Accused Instrumentalities, Defendant collects remote sensing data of the target area during vehicle movement.

73. Defendant inputs the remote sensing data into a computer to calculate calibration data.

74. Using the Accused Instrumentalities, Defendant applies the calibration data to the remote sensing data to remove bias in a displayable image output or in an electrical strength signal.

75. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '938 patent. Defendant's infringement in this regard is ongoing.

76. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

77. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '938 patent.

78. Defendant has also indirectly infringed one or more claims of the '938 patent by inducing others to directly infringe the '938 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '938 patent using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to

use the Accused Instrumentalities in a manner that infringes one or more claims of the '938 patent, including, for example, claim 1 of the '938 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '938 patent and with the knowledge that the induced acts constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '938 patent. Defendant's inducement is ongoing.

79. Defendant has also indirectly infringed by contributing to the infringement of the '938 patent. Defendant has contributed to the direct infringement of the '938 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities, which are provided by Defendant to its personnel, contractors, and suppliers, have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '938 patent, including, for example, claim 1 of the '938 patent. The special features include, for example, the steps recited in claim 1. The special features constitute a material part of the invention of one or more of the claims of the '938 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

80. Defendant has knowledge of the '938 patent at least as of the date when it was notified of the filing of this action.

81. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

82. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

83. Defendant's direct and indirect infringement of the '938 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

84. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

85. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '938 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

### **COUNT III**

#### **DIRECT INFRINGEMENT OF U.S. PATENT NO. 7,725,258**

86. VI repeats and re-alleges the allegations in Paragraphs 1-85 as though fully set forth in their entirety.

87. VI owns all substantial rights, interest, and title in and to the '258 patent, including the sole and exclusive right to prosecute this action and enforce the '258 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '258 patent on May 25, 2010. A copy of the '258 patent is attached as Exhibit C.

88. The '258 patent is entitled "Vehicle Based Data Collection and Processing System And Imaging Sensor System And Methods Thereof." The '258 patent describes vehicle-based data collection and processing systems. The systems include receivers and imaging arrays secured to a vehicle for generating maps of a surface

89. The claims of the '258 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '258 patent recites a combination of physical devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

90. The written description of the '258 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

91. Defendant has infringed the '258 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

92. The Accused Instrumentalities include a system for generating a map of a surface.

93. The Accused Instrumentalities include a global positioning receiver.

94. The Accused Instrumentalities include a vehicle in alignment with a target area.

95. The Accused Instrumentalities include an elevation measurement unit in communication with the vehicle.

96. The Accused Instrumentalities include a global positioning antenna in communication with the vehicle.

97. The Accused Instrumentalities include an attitude measurement unit in communication with the vehicle.

98. The Accused Instrumentalities include an imaging sensor system disposed to the vehicle. The imaging sensor system includes a rigid mount plate affixed to the vehicle, a first rigid mount unit affixed to the mount plate, and having a first and second imaging sensor disposed within the first mount unit. The first imaging and second imaging sensors each have a focal axis passing through an aperture in the first mount unit and the mount plate, wherein the first and second imaging sensors each generate a first array of pixels, and wherein each array of pixels is at least two dimensional.

99. The imaging sensor system includes a second rigid mount unit affixed to the mount plate and a third imaging sensor disposed within the second mount unit.

100. The imaging sensor system further includes a computer in communication with the elevation measurement unit, the global positioning antenna, the attitude measurement unit, the first imaging sensor, and the second imaging sensor. The computer correlates at least a portion of the image data from the first imaging sensor and the second imaging sensor to a portion of the target area based on input from one or more of the elevation measurement units, the global positioning antenna, and the attitude measurement unit.

101. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '258 patent. Defendant's infringement in this regard is ongoing.

102. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

103. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '258 patent.

104. Defendant has also indirectly infringed one or more of the claims of the '258 patent by inducing others to directly infringe the '258 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '258 patent by making and using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Instrumentalities in a manner that infringes one or more claims of the '258 patent, including, for example, claim 1 of the '258 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to make or use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '258 patent and with the knowledge that the induced acts



constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '258 patent. Defendant's inducement is ongoing.

105. Defendant has also indirectly infringed by contributing to the infringement of the '258 patent. Defendant has contributed to the direct infringement of the '258 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '258 patent, including, for example, claim 1 of the '258 patent. The special features include, for example, the physical devices and data processing components recited in claim 1, including the interrelation between those devices and components, that allow the claimed system to generate a map of a surface. The special features constitute a material part of the invention of one or more of the claims of the '258 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

106. Defendant has knowledge of the '258 patent at least as of the date when it was notified of the filing of this action.

107. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

108. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

109. Defendant's direct and indirect infringement of the '258 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

110. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

111. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '258 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

#### **COUNT IV**

##### **DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,483,960**

112. VI repeats and re-alleges the allegations in Paragraphs 1-111 as though fully set forth in their entirety.

113. VI owns all substantial rights, interest, and title in and to the '960 patent, including the sole and exclusive right to prosecute this action and enforce the '960 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '960 patent on July 9, 2013. A copy of the '960 patent is attached as Exhibit D.

114. The '960 patent is entitled "Self-Calibrated, Remote Imaging And Data Processing System." The '960 patent describes systems for generating maps of a surface. The systems include a vehicle, sensors, and an antenna secured to a vehicle for generating a map of a target area.

115. The claims of the '960 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '960 patent recites a combination of physical

devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

116. The written description of the '960 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

117. Defendant has infringed the '960 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

118. The Accused Instrumentalities include a system for generating a map.

119. The Accused Instrumentalities include a global positioning receiver.

120. The Accused Instrumentalities include a vehicle in alignment with a target area.

121. The Accused Instrumentalities include an elevation measurement unit, in communication with the vehicle.

122. The Accused Instrumentalities include a global positioning antenna, in communication with the vehicle.

123. The Accused Instrumentalities include an attitude measurement unit, in communication with the vehicle.

124. The Accused Instrumentalities include an imaging sensor system, disposed to the vehicle.

125. The imaging sensor system includes a rigid mount plate affixed to the vehicle.

126. The imaging sensor system includes a first rigid mount unit affixed to the mount plate and has at least two imaging sensors disposed within the first mount unit, wherein a first

imaging sensor and a second imaging sensor each has a focal axis passing through an aperture in the first mount unit and the mount plate, wherein the first and second imaging sensor each generates a first data array of pixels, wherein each data array of pixels is at least two dimensional, wherein the first and second imaging sensors are offset to have a first image overlap area in the target area, wherein the first sensor's image data bisects the second sensor's image data in the first image overlap area.

127. The imaging sensor system includes a computer in communication with the elevation measurement unit, the global positioning antenna, the attitude measurement unit, the first imaging sensor, and the second imaging sensor, and correlates at least a portion of the image areas from the first imaging sensor and the second imaging sensor to a portion of the target area based on input from one or more of: the elevation measurement unit, the global positioning antenna, and the attitude measurement unit.

128. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '960 patent. Defendant's infringement in this regard is ongoing.

129. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

130. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '960 patent.

131. Defendant has also indirectly infringed one or more of the claims of '960 patent by inducing others to directly infringe the '960 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '960 patent by making and using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Instrumentalities in a manner that infringes one or more claims of the '960 patent, including, for example, claim 1 of the '960 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to make or use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '960 patent and with the knowledge that the induced acts constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '960 patent. Defendant's inducement is ongoing.

132. Defendant has also indirectly infringed by contributing to the infringement of the '960 patent. Defendant has contributed to the direct infringement of the '960 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '960 patent, including, for example, claim 1 of the '960 patent. The special features include, for example, the physical devices and data processing components recited in claim 1, including the interrelation between those devices and components, that allow the claimed system to generate a map of a surface. The special features constitute a

material part of the invention of one or more of the claims of the '960 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

133. Defendant has knowledge of the '960 patent at least as of the date when it was notified of the filing of this action.

134. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

135. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

136. Defendant's direct and indirect infringement of the '960 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

137. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

138. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '960 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

**COUNT V**

**DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,994,822**

139. VI repeats and re-alleges the allegations in Paragraphs 1-138 as though fully set forth in their entirety.

140. VI owns all substantial rights, interest, and title in and to the '822 patent, including the sole and exclusive right to prosecute this action and enforce the '822 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '822 patent on March 31, 2015. A copy of the '822 patent is attached as Exhibit E.

141. The '822 patent is entitled "Infrastructure Mapping System and Method." The '822 patent describes systems for generating a map of a target area. The systems include, among other things, a vehicle, a receiver, and sensors for generating a map of a target area.

142. The claims of the '822 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '822 patent recites a combination of physical devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

143. The written description of the '822 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

144. Defendant has infringed the '822 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

145. The Accused Instrumentalities include a system for generating a map of a target area.

146. The Accused Instrumentalities include a global position receiver.

147. The Accused Instrumentalities include an elevation measurement unit, adaptably mountable to a vehicle or a platform.

148. The Accused Instrumentalities include a global positioning antenna, adaptably mountable to the vehicle or the platform.

149. The Accused Instrumentalities include an attitude measurement unit, adaptably mountable to the vehicle or the platform.

150. The Accused Instrumentalities include an imaging sensor system, adaptably mountable to the vehicle or the platform having a view of the target area.

151. The imaging sensor system includes a mount unit, having at least three imaging sensors disposed within the mount unit, wherein a first imaging sensor, a second imaging sensor, and a third imaging sensor each has a focal axis passing through an aperture in the mount unit, wherein the first imaging sensor generates a first image area of the target area comprising a first data array of pixels, the second imaging sensor generates a second image area of the target area comprising a second data array of pixels, and the third imaging sensor generates a third image area of the target area comprising a third data array of pixels, wherein the second imaging sensor is offset from the first imaging sensor along a first array axis in across track, cross-eyed fashion to have a first image overlap area in the target area, wherein the third imaging sensor is offset from the first imaging sensor along the first array axis opposite the second imaging sensor.

152. The Accused Instrumentalities include a computer in communication with the elevation measurement unit, the global positioning antenna, the attitude measurement unit, and the



first, second, and third imaging sensors; correlating at least a portion of the image area from the first, second, and third imaging sensors to a portion of the target area based on input from one or more of: the elevation measurement unit, the global positioning antenna, and the attitude measurement unit.

153. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '822 patent. Defendant's infringement in this regard is ongoing.

154. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

155. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '822 patent.

156. Defendant has also indirectly infringed one or more of the claims of '822 patent by inducing others to directly infringe the '822 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '822 patent by making and using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Instrumentalities in a manner that infringes one or more claims of the '822 patent, including, for example, claim 1 of the '822 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to make or use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the

Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '822 patent and with the knowledge that the induced acts constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '822 patent. Defendant's inducement is ongoing.

157. Defendant has also indirectly infringed by contributing to the infringement of the '822 patent. Defendant has contributed to the direct infringement of the '822 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '822 patent, including, for example, claim 1 of the '822 patent. The special features include, for example, the physical devices and data processing components recited in claim 1, including the interrelation between those devices and components, that allow the claimed system to generate a map of a target area. The special features constitute a material part of the invention of one or more of the claims of the '822 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

158. Defendant has knowledge of the '822 patent at least as of the date when it was notified of the filing of this action.

159. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

160. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

161. Defendant's direct and indirect infringement of the '822 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

162. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

163. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '822 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

## **COUNT VI**

### **DIRECT INFRINGEMENT OF U.S. PATENT NO. 9,389,298**

164. VI repeats and re-alleges the allegations in Paragraphs 1-163 as though fully set forth in their entirety.

165. VI owns all substantial rights, interest, and title in and to the '298 patent, including the sole and exclusive right to prosecute this action and enforce the '298 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '298 patent on July 12, 2016. A copy of the '298 patent is attached as Exhibit F.

166. The '298 patent is entitled "Self-Calibrated, Remote Imaging And Data Processing System." The '298 patent describes systems for generating maps of a target area. The systems include, among other things, a receiver, a vehicle, sensors, and an antenna for generating maps of a target area.

167. The claims of the '298 patent are not directed to an abstract idea and also recite an inventive concept. For example, claim 1 of the '298 patent recites a combination of physical devices and data processing components, including inventive components that improve upon the functioning and operation of remote imaging systems.

168. The written description of the '298 patent describes in technical detail each of the limitations of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

169. Defendant has infringed the '298 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Instrumentalities for sale.

170. The Accused Instrumentalities include a system for generating a map of a target area.

171. The Accused Instrumentalities include a global positioning receiver.

172. The Accused Instrumentalities include an elevation measurement unit, adaptably mountable to a vehicle.

173. The Accused Instrumentalities include a global positioning antenna, adaptably mountable to the vehicle.

174. The Accused Instrumentalities include an attitude measurement unit, adaptably mountable to the vehicle.

175. The Accused Instrumentalities include an imaging sensor system, adaptably mountable to the vehicle having a view of the target area.

176. The imaging sensor systems includes a rigid mount unit having at least two imaging sensors disposed within the mount unit, wherein a first imaging sensor and a second imaging sensor each has a focal axis passing through an aperture in the mount unit, wherein the first imaging sensor generates a first image area comprising a first data array of pixels and the second imaging sensor generates a second image area comprising a second data array of pixels, wherein the first and second imaging sensors are offset to have a first image overlap area in the target area, wherein the first sensor's image data bisects the second sensor's image data in the first image overlap area.

177. The Accused Instrumentalities include a computer in communication with the elevation measurement unit, the global positioning antenna, the attitude measurement unit, the first imaging sensor, and the second imaging sensor. The computer correlates at least a portion of the image areas from the first imaging sensor and the second imaging sensor to a portion of the target area based on input from one or more of: the elevation measurement unit, the global positioning antenna, and the attitude measurement unit.

178. As described above, Defendant has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '298 patent. Defendant's infringement in this regard is ongoing.

179. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to Plaintiff in an amount that compensates it for such

infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

180. Plaintiff and/or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '298 patent.

181. Defendant has also indirectly infringed one or more of the claims of '298 patent by inducing others to directly infringe the '298 patent. Defendant has induced end-users, including Defendant's personnel and contractors, to directly infringe (literally or under the doctrine of equivalents) the '298 patent by making and using the Accused Instrumentalities. Defendant took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Instrumentalities in a manner that infringes one or more claims of the '298 patent, including, for example, claim 1 of the '298 patent. Such steps by Defendant included, among other things, advising or directing personnel or contractors to make or use the Accused Instrumentalities in an infringing manner; advertising and promoting the use of the Accused Instrumentalities in an infringing manner; or distributing instructions that guide personnel or contractors to use the Accused Instrumentalities in an infringing manner. Upon information and belief, Defendant has been and continues to perform these steps, which constitute induced infringement with the knowledge of the '298 patent and with the knowledge that the induced acts constitute infringement. Defendant is aware that the normal and customary use of the Accused Instrumentalities by others would infringe the '298 patent. Defendant's inducement is ongoing.

182. Defendant has also indirectly infringed by contributing to the infringement of the '298 patent. Defendant has contributed to the direct infringement of the '298 patent by its personnel, contractors, and suppliers. The Accused Instrumentalities have special features that are

specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe one or more claims of the '298 patent, including, for example, claim 1 of the '298 patent. The special features include, for example, the physical devices and data processing components recited in claim 1, including the interrelation between those devices and components, that allow the claimed system to generate a map of a target area. The special features constitute a material part of the invention of one or more of the claims of the '298 patent and are not staple articles of commerce suitable for substantial non-infringing use. Defendant's contributory infringement is ongoing.

183. Defendant has knowledge of the '298 patent at least as of the date when it was notified of the filing of this action.

184. Furthermore, on information and belief, Defendant has a policy or practice of not reviewing the patents of others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Plaintiff's patent rights.

185. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

186. Defendant's direct and indirect infringement of the '298 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

187. Plaintiff has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to VI in an amount that compensates it for such infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

188. VI has suffered irreparable harm, through its loss of market share and goodwill, for which there is no adequate remedy at law. VI has and will continue to suffer this harm by virtue of Defendant's infringement of the '298 patent. Defendant's actions have interfered with and will interfere with VI's ability to license technology. The balance of hardships favors VI's ability to commercialize its own ideas and technology. The public interest in allowing VI to enforce its right to exclude outweighs other public interests, which supports injunctive relief in this case.

### **JURY DEMAND**

Plaintiff hereby requests a trial by jury on all issues so triable by right.

### **PRAYER FOR RELIEF**

VI requests that the Court find in its favor and against Defendant, and that the Court grant VI the following relief:

a. Judgment that one or more claims of the Asserted Patents have been infringed, either literally or under the doctrine of equivalents, by Defendant or all others acting in concert therewith;

b. A permanent injunction enjoining Defendant and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '348, '938, '258, '960, '822, and '298 patents; or, in the alternative, an award of a reasonable ongoing royalty for future infringement of the Asserted Patents by such entities;

c. Judgment that Defendant accounts for and pays to VI all damages to and costs incurred by VI because of Defendant's infringing activities and other conduct complained of herein;

d. Judgment that Defendant's infringement be found willful, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;



e. Pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

f. That the Court declare this an exceptional case and award VI its reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and

g. All other and further relief as the Court may deem just and proper under the circumstances.

Dated: March 31, 2021

Respectfully submitted,

By: /s/ Fred I. Williams

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