

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

VI TECHNOLOGIES, LLC,

Plaintiff,

v.

LG ELECTRONICS INC., and
LG ELECTRONICS U.S.A., INC.,
Defendant.

CIVIL ACTION NO. 6:21-cv-00314

ORIGINAL COMPLAINT FOR PATENT
INFRINGEMENT

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff VI Technologies, LLC (“VI” or “Plaintiff”) files this Complaint against Defendants LG Electronics Inc. (“LGE”) and LG Electronics U.S.A., Inc. (“LG USA”) (collectively “LG” or “Defendants,” each a “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 LG Electronics Inc. is a corporation organized and existing under the laws of the Republic of Korea. It has its principal place of business at LG Twin Towers, 128 Yeouidaero, Yeongdungpo-gu, Seoul, South Korea. LGE designs, manufactures, makes, uses, imports into the United States, sells, and/or offers for sale in the United States LGE smartphones and tablets. LGE’s smartphones and tablets are marketed, used, offered for sale, and/or sold throughout the United States, including within this district.

3. Defendant LG Electronics U.S.A., Inc. is a corporation organized under the laws of the State of Delaware. It has a principal place of business at 1000 Sylvan Avenue Englewood Cliffs, New Jersey 07632. LG USA is a wholly owned subsidiary of LGE and oversees domestic sales and distribution of LG's consumer electronics products, including the products accused of infringement in this case.

JURISDICTION AND VENUE

4. VI repeats and re-alleges the allegations in Paragraphs 1-3 as though fully set forth in their entirety.

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

6. Specifically, LG 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. LG USA maintains a regular and established place of business in this District, including at 9420 Research Blvd, Austin, Texas 78759, and a representative office at 9600 Great Hills Trail, Suite 150W, Austin, Texas 78759. LG USA maintains additional regular and established places of business at 21251-2155 Eagle Parkway, Fort Worth, Texas 76177 and 14901 Beach St, Fort Worth, TX 76177. LG USA may be served with process through its registered agent for service in Texas: United States Corporation Co. 211 E. 7th Street, Suite 620, Austin, Texas 78701.

8. Venue is proper against LGE pursuant to 28 U.S.C. § 1391(c)(3) because venue is proper in any judicial district against a foreign corporation. *See In re HTC Corp.*, 889 F.3d 1349, 1354 (Fed. Cir. 2018).

9. Venue is proper against LG USA in this District pursuant to 28 U.S.C. § 1400(b) because it has maintained established and regular places of business in this District and has committed acts of patent infringement in the District. *See In re Cray Inc.*, 871 F.3d 1355, 1362-63 (Fed. Cir. 2017).

THE TECHNOLOGY

10. VI repeats and re-alleges the allegations in Paragraphs 1-9 as though fully set forth in their entirety.

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

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

13. 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.

14. 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.

15. 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.

16. The patents-in-suit, U.S. Patent Nos. 6,928,194 (the “194 patent”), 7,725,258 (the “258 patent”), 7,925,114 (the “114 patent”), 8,483,960 (the “960 patent”), 9,389,298 (the “298 patent”), 9,797,980 (the “980 patent”) (collectively, the “Asserted Patents”), are generally directed to systems and methods for collection of image data using a plurality of sensors and for processing the collected image data to generate high quality output images.

THE ACCUSED PRODUCTS

17. VI repeats and re-alleges the allegations in Paragraphs 1-16 as though fully set forth in their entirety.

18. LG infringes the asserted by making, using, selling, offering to sell, and importing its smartphones and tablets. Exemplary accused smartphones and tablets include, but are not limited to, the LG G Pad F 8.0 2nd Gen ACG, LG G Pad 5 10.1, LG Wing, LG G8X ThinQ, LG G8 ThinQ, LG Q70, LG Stylo 6, LG K51, LG K31, LG Stylo 5, LG Dual Screen for LG Velvet 5G, LG K31 Rebel, LG K92, LG Velvet 5G, LG Velvet 5G UW, LG V60 ThinQ, LG V50 ThinQ, LG V30, LG V40, LG V50, LG V35 ThinQ, LG V40 ThinQ, LG G7 ThinQ, LG G6, LG V20, LG Xpression Plus 3, and LG Phoenix 5 (collectively the “Accused Products”).

19. The Accused Products include a global positioning transmitter and global positioning antenna, which perform positioning functions and measure altitude.

20. The Accused Products include an attitude indicator, e.g., a gyro.

21. The Accused Products include one or more cameras, each including one or more image sensors. The image sensors generate representations of subject surfaces or areas.

22. The Accused Products use information received by global positioning systems and gyros, among other information, to correlate data collected from an image sensor to a position on a surface.

23. The Accused Products also include image processing features that assist in merging or fusing images taken from multiple image sensors into a single high-quality image.

COUNT I

DIRECT INFRINGEMENT OF U.S. PATENT NO. 6,928,194

24. VI repeats and re-alleges the allegations in Paragraphs 1-23 as though fully set forth in their entirety.

25. VI owns all substantial rights, interest, and title in and to the '194 patent, including the sole and exclusive right to prosecute this action and enforce the '194 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '194 patent on August 9, 2005. A copy of the '194 patent is attached as Exhibit A.

26. The '194 patent is entitled "System For Mosaicing Digital Ortho-Images." The '194 patent describes methods of rendering high-resolution digital images.

27. The claims of the '194 patent are not directed to an abstract idea and they recite an inventive concept.

28. The written description of the '194 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.

29. LG has infringed and continues to infringe the '194 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

30. The Accused Products perform a method of maintaining a desired image intensity in an imaging system.

31. The Accused Products evaluate a target image captured by the imaging system to identify green-dominant pixels in the target image.

32. The Accused Products determine an average intensity of the target image based on the green-dominant pixels.

33. The Accused Products evaluate the difference between the average intensity and the desired image intensity.

34. The Accused Products adjust exposure time of the imaging system responsive to the difference between the average intensity and the desired image intensity.

35. As described above, LG has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '194 patent. LG's infringement in this regard is ongoing.

36. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '194 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '194 patent, including, for example, claim 1 of the '194 patent. Such steps by LG included, among other things: advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '194 patent and with the knowledge that the induced acts constitute

infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '194 patent.

37. LG has knowledge of the '194 patent at least as of the date when it was notified of the filing of this action.

38. Furthermore, on information and belief, LG 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.

39. LG'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 LG.

40. LG's direct and indirect infringement of the '194 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

41. 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 '194 patent.

42. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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.

43. 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 LG's infringement of the '194 patent. LG'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. 7,725,258

44. VI repeats and re-alleges the allegations in Paragraphs 1-43 as though fully set forth in their entirety.

45. 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 B.

46. The '258 patent is entitled "Vehicle Based Data Collection And Processing System And Imaging Sensor System And Methods Thereof." The '258 patent describes data collection and processing systems.

47. The claims of the '258 patent are not directed to an abstract idea and they recite an inventive concept.

48. 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.

49. LG has infringed and continues to infringe the '258 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

50. The Accused Products include a system for generating a map.
51. The Accused Products include a global positioning receiver.
52. The Accused Products include a vehicle in alignment with a target area.
53. The Accused Products include an elevation measurement unit, in communication with the vehicle.
54. The Accused Products include a global positioning antenna, in communication with the vehicle.
55. The Accused Products include an attitude measurement unit, in communication with the vehicle.
56. The Accused Products include an imaging sensor system, disposed to the vehicle.
57. The imaging sensor system includes a rigid mount plate affixed to the vehicle.
58. The imaging sensor system includes a first rigid mount unit affixed to the mount plate and having a first and second imaging sensor disposed within the first mount unit, wherein 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, wherein each array of pixels is at least two dimensional.
59. The imaging sensor system includes a second rigid mount unit affixed to the mount plate and having a third imaging sensor disposed within the second mount unit.
60. 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; correlating 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 unit, the global positioning antenna and the attitude measurement unit.

61. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '258 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products 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 LG included, among other things, advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '258 patent and with the knowledge that the induced acts constitute infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '258 patent.

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

63. Furthermore, on information and belief, LG 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.

64. LG'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 LG.

65. LG'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.

66. 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.

67. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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.

68. 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 LG's infringement of the '258 patent. LG'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. 7,925,114

69. VI repeats and re-alleges the allegations in Paragraphs 1-68 as though fully set forth in their entirety.

70. VI owns all substantial rights, interest, and title in and to the '114 patent, including the sole and exclusive right to prosecute this action and enforce the '114 patent against infringers, and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '114 patent on April 12, 2011. A copy of the '114 patent is attached as Exhibit C.

71. The '114 patent is entitled "System And Method For Mosaicing Digital Ortho-Images." The '114 patent describes methods of rendering high-resolution digital images.

72. The claims of the '114 patent are not directed to an abstract idea and they recite an inventive concept.

73. The written description of the '114 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.

74. LG has infringed and continues to infringe the '114 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

75. The Accused Products perform a method of mosaicing two overlapping digital input images together to form an output image.

76. The Accused Products provide a reference image, comprising a number of green-dominant pixels having certain average color intensity and average elevation.

77. The Accused Products provide a secondary image, comprising a number of green-dominant pixels having certain average color intensity and average elevation, that overlaps the reference image in an overlap area.

78. The Accused Products scale pixel values of the secondary image within the overlap area such that the color intensity of the secondary image green-dominant pixels within the overlap area is equivalent to the average color intensity of the reference image green-dominant pixels within the overlap area.

79. The Accused Products select an initial seam line within the overlap area.

80. The Accused Products determine a position of an elevated feature in a small segment of the overlapping area from a digital elevation model.

81. The Accused Products establish the seam line within the overlap area, wherein the route of the seam line is altered based upon the position of an elevated feature.

82. As described above, LG has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '114 patent. LG's infringement in this regard is ongoing.

83. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '114 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '114 patent, including, for example, claim 1 of the '114 patent. Such steps by LG included, among other things, advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '114 patent and with the knowledge that the induced acts constitute infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '114 patent.

84. LG has knowledge of the '114 patent at least as of the date when it was notified of the filing of this action.

85. Furthermore, on information and belief, LG 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.

86. LG'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 LG.

87. LG's direct and indirect infringement of the '114 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

88. 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 '114 patent.

89. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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.

90. 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 LG's infringement of the '114 patent. LG'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

91. VI repeats and re-alleges the allegations in Paragraphs 1-90 as though fully set forth in their entirety.

92. 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.

93. The '960 patent is entitled "Self-Calibrated, Remote Imaging And Data Processing System." The '960 patent describes data collection and processing systems.

94. The claims of the '960 patent are not directed to an abstract idea and they recite an inventive concept.

95. 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.

96. LG has infringed and continues to infringe the '960 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

97. The Accused Products include a system for generating a map.

98. The Accused Products include a global positioning receiver.

99. The Accused Products include a vehicle in alignment with a target area.

100. The Accused Products include an elevation measurement unit, in communication with the vehicle.

101. The Accused Products include a global positioning antenna, in communication with the vehicle.

102. The Accused Products include an attitude measurement unit, in communication with the vehicle.

103. The Accused Products include an imaging sensor system, disposed to the vehicle.

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

105. 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.

106. 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.

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

108. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '960 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products 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 LG included, among other things,

advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '960 patent and with the knowledge that the induced acts constitute infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '960 patent.

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

110. Furthermore, on information and belief, LG 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.

111. LG'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 LG.

112. LG'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.

113. 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.

114. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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.

115. 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 LG's infringement of the '960 patent. LG'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. 9,389,298

116. VI repeats and re-alleges the allegations in Paragraphs 1-115 as though fully set forth in their entirety.

117. 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 E.

118. The '298 patent is entitled "Self-Calibrated, Remote Imaging And Data Processing System." The '298 patent describes data collection and processing systems.

119. The claims of the '298 patent are not directed to an abstract idea and they recite an inventive concept.

120. 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.

121. LG has infringed and continues to infringe the '298 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

122. The Accused Products include a system for generating a map of a target area.

123. The Accused Products include a global positioning receiver.

124. The Accused Products include an elevation measurement unit, adaptably mountable to a vehicle.

125. The Accused Products include a global positioning antenna, adaptably mountable to the vehicle.

126. The Accused Products include an attitude measurement unit, adaptably mountable to the vehicle.

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

128. The imaging sensor system 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 sensors image data bisects the second sensors image data in the first image overlap area.

129. 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; correlating 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.

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

131. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '298 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products 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 LG included, among other things, advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '298 patent and with the knowledge that the induced acts constitute infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '298 patent.

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

133. Furthermore, on information and belief, LG 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.

134. LG'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 LG.

135. LG'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.

136. 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.

137. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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 LG's infringement of the '298 patent. LG'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. 9,797,980

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 '980 patent, including the sole and exclusive right to prosecute this action and enforce the '980 patent against infringers,

and to collect damages for all relevant times. The United States Patent and Trademark Office duly issued the '980 patent on Oct. 24, 2017. A copy of the '980 patent is attached as Exhibit F.

141. The '980 patent is entitled "Self-Calibrated, Remote Imaging And Data Processing System." The '980 patent describes data collection and processing systems.

142. The claims of the '980 patent are not directed to an abstract idea and they recite an inventive concept.

143. The written description of the '980 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. LG has infringed and continues to infringe the '980 patent by making, having made, using, importing, providing, supplying, distributing, selling, or offering the Accused Products for sale.

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

146. The Accused Products include a global positioning receiver.

147. The Accused Products include an imaging sensor system having a view of the target area.

148. The imaging sensor system 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 sensors image data bisects the second sensors image data in the first image overlap area.

149. The imaging sensor system includes a computer in communication with the global positioning antenna, the first imaging sensor, and the second imaging sensor; correlating 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 the global positioning antenna.

150. As described above, LG has directly infringed (literally or under the doctrine of equivalents) at least claim 1 of the '980 patent. LG's infringement in this regard is ongoing.

151. LG has induced end-users and other third parties to directly infringe (literally or under the doctrine of equivalents) the '980 patent by using the Accused Products. LG took active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringes one or more claims of the '980 patent, including, for example, claim 1 of the '980 patent. Such steps by LG included, among other things, advising or directing end-users and other third parties to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide end-users and other third parties to use the Accused Products in an infringing manner. LG performed these steps, which constitute induced infringement with the knowledge of the '980 patent and with the knowledge that the induced acts constitute infringement. LG was aware that the normal and customary use of the Accused Products by others would infringe the '980 patent.

152. LG has knowledge of the '980 patent at least as of the date when it was notified of the filing of this action.

153. Furthermore, on information and belief, LG 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.

154. LG'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 LG.

155. LG's direct and indirect infringement of the '980 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of Plaintiff's rights under the patent.

156. 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 '980 patent.

157. Plaintiff has been damaged as a result of the infringing conduct by LG alleged above. Thus, LG 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.

158. 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 LG's infringement of the '980 patent. LG'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 LG, 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 LG or all others acting in concert therewith;

b. A permanent injunction enjoining LG and its officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '194, '258, '114, '960, '298, and '980 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 LG accounts for and pays to VI all damages to and costs incurred by VI because of LG's infringing activities and other conduct complained of herein;

d. Judgment that LG'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 LG'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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