IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

CYWEE GROUP LTD., *Plaintiff,* MOTOROLA MOBILITY LLC, *Defendant.*	CASE NO. 1:17-cv-00780-GMS JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff CyWee Group Ltd. ("Plaintiff" or "CyWee"), by and through its undersigned counsel, files this Complaint against Defendant Motorola Mobility LLC. as follows:

THE PARTIES

2. CyWee is a corporation existing under the laws of the British Virgin Islands with a principal place of business at 3F, No.28, Lane 128, Jing Ye 1st Road, Taipei, Taiwan 10462.

3. CyWee is a world-leading technology company that focuses on building products and providing services for consumers and businesses. CyWee has one of the most significant patent portfolios in the industry, and is a market leader in its core development areas of motion processing, wireless high definition video delivery, and facial tracking technology.

4. On information and belief, Motorola Mobility LLC is a Delaware limited liability company with a principle place of business at 222 West

Merchandise Mart Plaza, Suite 1800, Chicago, Illinois 60654. Motorola Mobility LLC manufactures and provides to the United States a wide variety of products and services, including consumer electronics such as mobile phones and tablets.

5. Defendant Motorola Mobility LLC is referred to herein as "Defendant" or "Motorola." Motorola is doing business in the United States and, more particularly, in the State of Delaware by designing, marketing, making, using, selling, importing, and/or offering for sale products that infringe the patent claims involved in this action or by transacting other business in this District.

JURISDICTION AND VENUE

6. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.* This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has personal jurisdiction over Defendant. Defendant is incorporated in the State of Delaware and has conducted and does conduct business therein. Defendant has purposefully and voluntarily availed itself of the privileges of conducting business in the United States and the State of Delaware by continuously and systematically placing goods into the stream of commerce through an established distribution channel with the expectation that they will be purchased by consumers in Delaware. Plaintiff's causes of action arise directly from Defendant's business contacts and other activities in the State of Delaware.

8. Upon information and belief, Defendant has committed acts of infringement in this District giving rise to this action and does business in this District, including making sales and/or providing service and support for its customers in this District. Defendant purposefully and voluntarily sold one or more of its infringing products with the expectation that they would be purchased by consumers in this District. These infringing products have been and continue to be purchased by consumers in this District.

9. Venue is proper as to Defendant under 28 U.S.C. § 1400(b) in that Defendant is incorporated in Delaware and, therefore, resides in this District. *TC Heartland LLC v. Kraft Food Grps. Brands LLC*, 581 U.S. ___, 2017 WL 2216934, at *8 (2017).

BACKGROUND

10. The Industrial Technology Research Institute ("ITRI") is a Taiwanese government- and industry-funded research and development center. In 2007, CyWee, which was started at ITRI, was formed. Its goal was to provide innovative motion-sensing technologies, such as those claimed in the patents-in-suit. Dr. Shun-Nan Liu and Chin-Lung Li, two of the inventors of the patents-in-suit, came to CyWee from ITRI. The third inventor, Zhou "Joe" Ye joined CyWee from private industry as its President and served as CEO from 2006 to 2016.

11. The inventors, Zhou Ye, Chin-Lung Li, and Shun-Nan Liou,

conceived of the claims of the patents-in-suit—U.S. Patent No. 8,441,438 (the "'438 Patent") and U.S. Patent No. 8,552,978 (the "'978 Patent")—at CyWee Group Ltd., located at 3F, No. 28, Lane 128, Jing Ye Road, Taipei. A true and correct copy of the '438 Patent and the '938 Patent are attached hereto as Exhibit A and Exhibit B, respectively, in accordance with Local Rule 3.2.

12. Several claims of the patents-in-suit are entitled to a priority date of at least January 6, 2010 based on U.S. Provisional Application Serial No. 61/292,558, filed January 6, 2010 ("Provisional Application").

13. Before May 22, 2009, CyWee began working on the "JIL Game Phone Project" or "JIL Phone." Before July 29, 2009, CyWee developed a solution for the JIL Phone that practiced several claims of the '438 Patent. Those claims were diligently and constructively reduced to practice thereafter through the filing of the Provisional Application and were diligently and actually reduced to practice as discussed below. Accordingly, CyWee is entitled to a priority date of at least July 29, 2009 for several claims of the '438 Patent.

14. The JIL Phone was reduced to practice by at least September 25, 2009. The JIL Phone practiced several claims of both patents-in-suit. Accordingly, CyWee is entitled to a priority date of at least September 25, 2009 for several claims of the patents-in-suit.

PATENT INFRINGEMENT OF U.S. PATENT NO. 8,441,438

15. Plaintiff repeats and re-alleges each and every allegation of paragraphs 1-14 as though fully set forth herein.

16. The ’438 Patent, titled “3D Pointing Device and Method for Compensating Movement Thereof,” was duly and legally issued by the United States Patent and Trademark Office on May 14, 2013 to CyWee Group Limited, as assignee of named inventors Zhou Ye, Chin-Lung Li, and Shun-Nan Liou.

17. CyWee is the owner of all right, title, and interest in and to the ’438 Patent with full right to bring suit to enforce the patent, including the right to recover for past infringement damages.

18. The ’438 Patent claims, *inter alia*, a machine capable of detecting, measuring, and calculating the movements and rotations of the machine—utilizing, *inter alia*, a six-axis motion sensor module, a data transmitting unit, and a computing processor in one or more claimed configurations—and methods for measuring and calculating the movements and rotations of a device within a spatial reference frame. The Declaration of Nicholas Gans, Ph.D. (the “Gans Decl.”) regarding the nature of the ’438 Patent and the ’978 Patent and the technologies claimed therein is attached hereto as “Exhibit E” and is incorporated by reference as if fully set forth herein.

19. The ’438 Patent is directed to useful and novel particular

embodiments and methods for detecting, measuring, and calculating motion within a spatial reference frame. *See* Gans. Decl. ¶ 16. Specifically, the ’438 Patent claims a novel system involving multiple sensor types and a novel method for using those sensors to overcome the limitations of the individual sensor types in accurately determining the orientation of a device. *See id.* ¶¶ 13-26. The ’438 Patent is not intended to, and does not, claim every possible means of detecting, measuring, and calculating motion within a spatial reference frame. There are alternative methods to determining orientation within a spatial reference frame, such as systems and methods utilizing computer vision algorithms and/or cameras. *See id.* ¶¶ 23-26. Accordingly, the ’438 Patent is not directed to, and does not claim, the mere concept of motion sensing or of detecting, measuring, and calculating motion within a spatial reference frame.

20. Each and every claim of the ’438 Patent is valid and enforceable and each enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. § 282.

21. CyWee is informed and believes, and thereupon alleges, that Motorola has been, and is currently directly and/or indirectly infringing one or more claims of the ’438 Patent in violation of 35 U.S.C. § 271, including as stated below.

22. CyWee is informed and believes, and thereupon alleges, that Motorola

has directly infringed, literally and/or under the doctrine of equivalents, and will continue to directly infringe claims of the ’438 Patent by making, using, selling, offering to sell, and/or importing into the United States products that embody or practice the apparatus and/or method covered by one or more claims of the ’438 Patent, including but not limited to Defendant’s following devices

Motorola Moto G Plus (5th Gen)

Motorola Moto G Plus (4th Gen)

Motorola Moto G (4th Gen)

Motorola Moto Z

Motorola Moto Z Droid

Motorola Moto Z Force Droid

Motorola Z Play

Motorola Z Play Droid

Motorola Droid Turbo 2

23. The foregoing devices are collectively referred to as the “’438 Accused Products” and include the below specifications and features.

24. On information and belief, Motorola indirectly infringes the ’438 Patent by inducing others to infringe one or more claims of the ’438 Patent through sale and/or use of the ’438 Accused Products. On information and belief, at least as a result of the filing of this action, Motorola is aware of the ’438 Patent; is aware that its actions with regards to distributors, resellers, and/or end users of the ’438 Accused Products would induce infringement; and despite such awareness will continue to take active steps—such as, creating and disseminating the ’438 Accused Products, and product manuals, instructions, promotional and marketing materials, and/or technical materials to distributors, resellers, and end users—encouraging other’s infringement of the ’438 Patent with the specific intent to induce such infringement.

25. The Motorola Moto G Plus (5th Gen) includes a display screen.

26. The Motorola Moto G Plus (5th Gen) includes a housing.

27. The Motorola Moto G Plus (5th Gen) includes a 3-axis accelerometer.

28. The Motorola Moto G Plus (5th Gen) includes a 3-axis gyroscope.

29. The Motorola Moto G Plus (5th Gen) includes at least one printed circuit board (“PCB”).

30. The Motorola Moto G Plus (5th Gen) includes a 3-axis accelerometer attached to a PCB.

31. The Motorola Moto G Plus (5th Gen) includes a 3-axis gyroscope

attached to a PCB.

32. The Motorola Moto G Plus (5th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations.

33. The Motorola Moto G Plus (5th Gen) includes a 3-axis gyroscope that is capable of measuring rotation rates.

34. The Motorola Moto G Plus (5th Gen) runs an Android™ operating system.

35. The Motorola Moto G Plus (5th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

36. The Motorola Moto G Plus (5th Gen) includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

37. The Motorola Moto G Plus (5th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

38. The Motorola Moto G Plus (5th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

39. The Android™ operating system that runs on the Motorola Moto G

Plus (5th Gen) uses the measurement from a 3-axis accelerometer included in the device.

40. The Android™ operating system that runs on the Motorola Moto G Plus (5th Gen) uses the measurement from a 3-axis gyroscope included in the device.

41. The Android™ operating system that runs on the Motorola Moto G Plus (5th Gen) uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

42. The Motorola Moto G Plus (4th Gen) includes a display screen.

43. The Motorola Moto G Plus (4th Gen) includes a housing.

44. The Motorola Moto G Plus (4th Gen) includes a 3-axis accelerometer.

45. The Motorola Moto G Plus (4th Gen) includes a 3-axis gyroscope.

46. The Motorola Moto G Plus (4th Gen) includes at least one PCB.

47. The Motorola Moto G Plus (4th Gen) includes a 3-axis accelerometer attached to a PCB.

48. The Motorola Moto G Plus (4th Gen) includes a 3-axis gyroscope attached to a PCB.

49. The Motorola Moto G Plus (4th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations.

50. The Motorola Moto G Plus (4th Gen) includes a 3-axis gyroscope that

is capable of measuring rotation rates.

51. The Motorola Moto G Plus (4th Gen) runs an Android™ operating system.

52. The Motorola Moto G Plus (4th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

53. The Motorola Moto G Plus (4th Gen) includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

54. The Motorola Moto G Plus (4th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

55. The Motorola Moto G Plus (4th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

56. The Android™ operating system that runs on the Motorola Moto G Plus (4th Gen) uses the measurement from a 3-axis accelerometer included in the device.

57. The Android™ operating system that runs on the Motorola Moto G Plus (4th Gen) uses the measurement from a 3-axis gyroscope included in the

device.

58. The Android™ operating system that runs on the Motorola Moto G Plus (4th Gen) uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

59. The Motorola Moto G (4th Gen) includes a display screen.

60. The Motorola Moto G (4th Gen) includes a housing.

61. The Motorola Moto G (4th Gen) includes a 3-axis accelerometer.

62. The Motorola Moto G (4th Gen) includes a 3-axis gyroscope.

63. The Motorola Moto G (4th Gen) includes at least one PCB.

64. The Motorola Moto G (4th Gen) includes a 3-axis accelerometer attached to a PCB.

65. The Motorola Moto G (4th Gen) includes a 3-axis gyroscope attached to a PCB.

66. The Motorola Moto G (4th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations.

67. The Motorola Moto G (4th Gen) includes a 3-axis gyroscope that is capable of measuring rotation rates.

68. The Motorola Moto G (4th Gen) runs an Android™ operating system.

69. The Motorola Moto G (4th Gen) includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as

described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

70. The Motorola Moto G (4th Gen) includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

71. The Motorola Moto G (4th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

72. The Motorola Moto G (4th Gen) includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

73. The Android™ operating system that runs on the Motorola Moto G (4th Gen) uses the measurement from a 3-axis accelerometer included in the device.

74. The Android™ operating system that runs on the Motorola Moto G (4th Gen) uses the measurement from a 3-axis gyroscope included in the device.

75. The Android™ operating system that runs on the Motorola Moto G (4th Gen) uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

76. The Motorola Droid Turbo 2 includes a display screen.

77. The Motorola Droid Turbo 2 includes a housing.

78. The Motorola Droid Turbo 2 includes a 3-axis accelerometer.

79. The Motorola Droid Turbo 2 includes a 3-axis gyroscope.

80. The Motorola Droid Turbo 2 includes at least one PCB.

81. The Motorola Droid Turbo 2 includes a 3-axis accelerometer attached to a PCB.

82. The Motorola Droid Turbo 2 includes a 3-axis gyroscope attached to a PCB.

83. The Motorola Droid Turbo 2 includes a 3-axis accelerometer that is capable of measuring accelerations.

84. The Motorola Droid Turbo 2 includes a 3-axis gyroscope that is capable of measuring rotation rates.

85. The Motorola Droid Turbo 2 runs an Android™ operating system.

86. The Motorola Droid Turbo 2 includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

87. The Motorola Droid Turbo 2 includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

88. The Motorola Droid Turbo 2 includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

89. The Motorola Droid Turbo 2 includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

90. The Android™ operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis accelerometer included in the device.

91. The Android™ operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis gyroscope included in the device.

92. The Android™ operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

93. The Motorola Moto Z includes a display screen.

94. The Motorola Moto Z includes a housing.

95. The Motorola Moto Z includes a 3-axis accelerometer.

96. The Motorola Moto Z includes a 3-axis gyroscope.

97. The Motorola Moto Z includes at least one PCB.

98. The Motorola Moto Z includes a 3-axis accelerometer attached to a PCB.

99. The Motorola Moto Z includes a 3-axis gyroscope attached to a PCB.

100. The Motorola Moto Z includes a 3-axis accelerometer that is capable of measuring accelerations.

101. The Motorola Moto Z includes a 3-axis gyroscope that is capable of

measuring rotation rates.

102. The Motorola Moto Z runs an Android™ operating system.

103. The Motorola Moto Z includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

104. The Motorola Moto Z includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

105. The Motorola Moto Z includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

106. The Motorola Moto Z includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

107. The Android™ operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis accelerometer included in the device.

108. The Android™ operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis gyroscope included in the device.

109. The Android™ operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

110. The Motorola Moto Z Droid includes a display screen.

111. The Motorola Moto Z Droid includes a housing.

112. The Motorola Moto Z Droid includes a 3-axis accelerometer.

113. The Motorola Moto Z Droid includes a 3-axis gyroscope.

114. The Motorola Moto Z Droid includes at least one PCB.

115. The Motorola Moto Z Droid includes a 3-axis accelerometer attached to a PCB.

116. The Motorola Moto Z Droid includes a 3-axis gyroscope attached to a PCB.

117. The Motorola Moto Z Droid includes a 3-axis accelerometer that is capable of measuring accelerations.

118. The Motorola Moto Z Droid includes a 3-axis gyroscope that is capable of measuring rotation rates.

119. The Motorola Moto Z Droid runs an Android™ operating system.

120. The Motorola Moto Z Droid includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

121. The Motorola Moto Z Droid includes a 3-axis gyroscope that is

capable of measuring rotation rates using a "Sensor Coordinate System."

122. The Motorola Moto Z Droid includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

123. The Motorola Moto Z Droid includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

124. The Android™ operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis accelerometer included in the device.

125. The Android™ operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis gyroscope included in the device.

126. The Android™ operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

127. The Motorola Moto Z Force Droid includes a display screen.

128. The Motorola Moto Z Force Droid includes a housing.

129. The Motorola Moto Z Force Droid includes a 3-axis accelerometer.

130. The Motorola Moto Z Force Droid includes a 3-axis gyroscope.

131. The Motorola Moto Z Force Droid includes at least one PCB.

132. The Motorola Moto Z Force Droid includes a 3-axis accelerometer attached to a PCB.

133. The Motorola Moto Z Force Droid includes a 3-axis gyroscope

attached to a PCB.

134. The Motorola Moto Z Force Droid includes a 3-axis accelerometer that is capable of measuring accelerations.

135. The Motorola Moto Z Force Droid includes a 3-axis gyroscope that is capable of measuring rotation rates.

136. The Motorola Moto Z Force Droid runs an Android™ operating system.

137. The Motorola Moto Z Force Droid includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

138. The Motorola Moto Z Force Droid includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

139. The Motorola Moto Z Force Droid includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

140. The Motorola Moto Z Force Droid includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

141. The Android™ operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis accelerometer included in the

device.

142. The Android™ operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis gyroscope included in the device.

143. The Android™ operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

144. The Motorola Moto Z Play includes a display screen.

145. The Motorola Moto Z Play includes a housing.

146. The Motorola Moto Z Play includes a 3-axis accelerometer.

147. The Motorola Moto Z Play includes a 3-axis gyroscope.

148. The Motorola Moto Z Play includes at least one PCB.

149. The Motorola Moto Z Play includes a 3-axis accelerometer attached to a PCB.

150. The Motorola Moto Z Play includes a 3-axis gyroscope attached to a PCB.

151. The Motorola Moto Z Play includes a 3-axis accelerometer that is capable of measuring accelerations.

152. The Motorola Moto Z Play includes a 3-axis gyroscope that is capable of measuring rotation rates.

153. The Motorola Moto Z Play runs an Android™ operating system.

154. The Motorola Moto Z Play includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

155. The Motorola Moto Z Play includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

156. The Motorola Moto Z Play includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

157. The Motorola Moto Z Play includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

158. The Android™ operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis accelerometer included in the device.

159. The Android™ operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis gyroscope included in the device.

160. The Android™ operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

161. The Motorola Moto Z Play Droid includes a display screen.

162. The Motorola Moto Z Play Droid includes a housing.

163. The Motorola Moto Z Play Droid includes a 3-axis accelerometer.

164. The Motorola Moto Z Play Droid includes a 3-axis gyroscope.

165. The Motorola Moto Z Play Droid includes at least one PCB.

166. The Motorola Moto Z Play Droid includes a 3-axis accelerometer attached to a PCB.

167. The Motorola Moto Z Play Droid includes a 3-axis gyroscope attached to a PCB.

168. The Motorola Moto Z Play Droid includes a 3-axis accelerometer that is capable of measuring accelerations.

169. The Motorola Moto Z Play Droid includes a 3-axis gyroscope that is capable of measuring rotation rates.

170. The Motorola Moto Z Play Droid runs an Android™ operating system.

171. The Motorola Moto Z Play Droid includes a 3-axis accelerometer that is capable of measuring accelerations using a "Sensor Coordinate System" as described in the Android™ developer library. *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

172. The Motorola Moto Z Play Droid includes a 3-axis gyroscope that is capable of measuring rotation rates using a "Sensor Coordinate System."

173. The Motorola Moto Z Play Droid includes a processor that is capable of processing data associated with measurement from a 3-axis accelerometer.

174. The Motorola Moto Z Play Droid includes a processor that is capable of processing data associated with measurement from a 3-axis gyroscope.

175. The Android™ operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis accelerometer included in the device.

176. The Android™ operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis gyroscope included in the device.

177. The Android™ operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis accelerometer and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

178. CyWee adopts, and incorporates by reference, as if fully stated herein, the attached claim chart for claim 14 of the ’438 Patent, which is attached hereto as Exhibit C. The claim chart describes and demonstrates how Motorola infringes the ’438 Patent. In addition, CyWee alleges that Motorola infringes one or more additional claims of the ’438 Patent in a similar manner.

179. Defendant’s acts of infringement have caused and will continue to cause substantial and irreparable damage to CyWee.

180. As a result of Defendant’s infringement of the ’438 Patent, CyWee

has been damaged. CyWee is, therefore, entitled to damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be pled but that will be determined at trial.

PATENT INFRINGEMENT OF U.S. PATENT NO. 8,552,978

181. Plaintiff repeats and re-alleges each and every allegation of paragraphs 1-180 as though fully set forth herein.

182. The ’978 Patent, titled “3D Pointing Device and Method for Compensating Rotations of the 3D Pointing Device Thereof,” was duly and legally issued by the United States Patent and Trademark Office on October 8, 2013 to CyWee Group Limited, as assignee of named inventors Zhou Ye, Chin-Lung Li, and Shun-Nan Liou.

183. CyWee is the owner of all right, title, and interest in and to the ’978 Patent with full right to bring suit to enforce the patent, including the right to recover for past infringement damages.

184. The ’978 Patent claims, *inter alia*, a machine capable of detecting, measuring, and calculating the movements and rotations of the machine—utilizing, *inter alia*, a nine-axes motion sensor module and two computing processors in one or more claimed configurations—and methods for measuring and calculating the movements and rotations of a device within a spatial reference frame. *See, generally*, Gans Decl., p. 2-4, ¶¶ 8-12.

185. The ’978 Patent is directed to useful and novel particular embodiments and methods for detecting, measuring, and calculating motion within a spatial reference frame. *Id.* ¶ 16. Specifically, the ’978 Patent claims a novel system involving multiple sensor types and a novel method for using those sensors to overcome the limitations of the individual sensor types in accurately determining the orientation of a device. *See id.* ¶¶ 13-26. The ’978 Patent is not intended to, and does not, claim every possible means of detecting, measuring, and calculating motion within a spatial reference frame. There are alternative methods to determining orientation within a spatial reference frame, such as systems and methods utilizing computer vision algorithms and/or cameras. *See id.* ¶¶ 23-26. Accordingly, the ’978 Patent is not directed to, and does not claim, the mere concept of motion sensing or of detecting, measuring, and calculating motion within a spatial reference frame.

186. Each and every claim of the ’978 Patent is valid and enforceable and each enjoys a statutory presumption of validity separate, apart, and in addition to the statutory presumption of validity enjoyed by every other of its claims. 35 U.S.C. § 282.

187. CyWee is informed and believes, and thereupon alleges, that Motorola has been, and is currently, directly and/or indirectly infringing one or more claims of the ’978 Patent in violation of 35 U.S.C. § 271, including as stated below.

188. CyWee is informed and believes, and thereupon alleges, that Motorola has directly infringed, literally and/or under the doctrine of equivalents, and will continue to directly infringe claims of the ’978 Patent by making, using, selling, offering to sell, and/or importing into the United States products that embody or practice the apparatus and/or method covered by one or more claims of the ’978 Patent, including but not limited to Defendant’s following devices:

Motorola Moto Z

Motorola Moto Z Droid

Motorola Moto Z Force Droid

Motorola Z Play

Motorola Z Play Droid

Motorola Droid Turbo 2

Motorola Moto G Plus (5th Gen)

189. The foregoing devices are collectively referred to as the “’978

Accused Products" and include the below specifications and features.

190. On information and belief, Motorola indirectly infringes the '978 Patent by inducing others to infringe one or more claims of the '978 Patent through sale and/or use of the '978 Accused Products. On information and belief, at least as a result of the filing of this action, Motorola is aware of the '978 Patent; is aware that its actions with regards to distributors, resellers, and/or end users of the '978 Accused Products would induce infringement; and despite such awareness will continue to take active steps—such as, creating and disseminating the '978 Accused Products, and product manuals, instructions, promotional and marketing materials, and/or technical materials to distributors, resellers, and end users—encouraging other's infringement of the '978 Patent with the specific intent to induce such infringement.

191. The Motorola G Plus (5th Gen) includes a 3-axis geomagnetic sensor.

192. The Motorola G Plus (5th Gen) includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

193. The Motorola G Plus (5th Gen) includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

194. The Android operating system that runs on the Motorola G Plus (5th

Gen) uses the measurement from a 3-axis geomagnetic sensor included in the device.

195. The Android operating system that runs on the Motorola G Plus (5th Gen) uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

196. The Android operating system that runs on the Motorola G Plus (5th Gen) uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

197. The Motorola G Plus (5th Gen) has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

198. The Motorola G Plus (5th Gen) has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

199. The Motorola Droid Turbo 2 includes a 3-axis geomagnetic sensor.

200. The Motorola Droid Turbo 2 includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

201. The Motorola Droid Turbo 2 includes a 3-axis geomagnetic field

sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

202. The Android operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis geomagnetic sensor included in the device.

203. The Android operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

204. The Android operating system that runs on the Motorola Droid Turbo 2 uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

205. The Motorola Droid Turbo 2 has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

206. The Motorola Droid Turbo 2 has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

207. The Motorola Moto Z includes a 3-axis geomagnetic sensor.

208. The Motorola Moto Z includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

209. The Motorola Moto Z includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

210. The Android operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis geomagnetic sensor included in the device.

211. The Android operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

212. The Android operating system that runs on the Motorola Moto Z uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

213. The Motorola Moto Z has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

214. The Motorola Moto Z has the ability to run apps that can provide

information based on the direction your device is facing, such as a map or navigation app.

215. The Motorola Moto Z Droid includes a 3-axis geomagnetic sensor.

216. The Motorola Moto Z Droid includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

217. The Motorola Moto Z Droid includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

218. The Android operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis geomagnetic sensor included in the device.

219. The Android operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

220. The Android operating system that runs on the Motorola Moto Z Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a

pitch angle, and a roll angle.

221. The Motorola Moto Z Droid has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

222. Motorola Moto Z Droid has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

223. The Motorola Moto Z Force Droid includes a 3-axis geomagnetic sensor.

224. The Motorola Moto Z Force Droid includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

225. The Motorola Moto Z Force Droid includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview .html (describing "Sensor Coordinate System").

226. The Android operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis geomagnetic sensor included in the device.

227. The Android operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis

gyroscope to calculate an attitude of the device.

228. The Android operating system that runs on the Motorola Moto Z Force Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

229. The Motorola Moto Z Force Droid has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

230. The Motorola Moto Z Force Droid has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

231. The Motorola Moto Z Play includes a 3-axis geomagnetic sensor.

232. The Motorola Moto Z Play includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

233. The Motorola Moto Z Play includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See* https://developer.android.com/guide/topics/sensors/sensors_overview.html (describing "Sensor Coordinate System").

234. The Android operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis geomagnetic sensor included in the device.

235. The Android operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

236. The Android operating system that runs on the Motorola Moto Z Play uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

237. The Motorola Moto Z Play has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

238. Motorola Moto Z Play has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

239. The Motorola Moto Z Play Droid includes a 3-axis geomagnetic sensor.

240. The Motorola Moto Z Play Droid includes a 3-axis geomagnetic sensor that is capable of measuring a geomagnetic field.

241. The Motorola Moto Z Play Droid includes a 3-axis geomagnetic field sensor to measure a geomagnetic field using a "Sensor Coordinate System." *See*

https://developer.android.com/guide/topics/sensors/sensors_overview .html (describing "Sensor Coordinate System").

242. The Android operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis geomagnetic sensor included in the device.

243. The Android operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device.

244. The Android operating system that runs on the Motorola Moto Z Play Droid uses the measurement from a 3-axis accelerometer, the measurement from a 3-axis geomagnetic field sensor, and the measurement from a 3-axis gyroscope to calculate an attitude of the device that can be represented by an azimuth angle, a pitch angle, and a roll angle.

245. The Motorola Moto Z Play Droid has the ability to directly control apps by moving or rotating the device (for example, racing game apps).

246. The Motorola Moto Z Play Droid has the ability to run apps that can provide information based on the direction your device is facing, such as a map or navigation app.

247. CyWee adopts, and incorporates by reference, as if fully stated herein,

the attached claim chart for claim 10 of the ’978 Patent, which is attached hereto as Exhibit D. The claim chart describes and demonstrates how Motorola infringes the ’978 Patent. In addition, CyWee alleges that Motorola infringes one or more additional claims of the ’978 Patent in a similar manner.

248. Defendant’s acts of infringement have caused and will continue to cause substantial and irreparable damage to CyWee.

249. As a result of Defendant’s infringement of the ’978 Patent, CyWee has been damaged. CyWee is, therefore, entitled to damages pursuant to 35 U.S.C. § 284 in an amount that presently cannot be pled but that will be determined at trial.

PRAYER FOR RELIEF

WHEREFORE, PREMISES CONSIDERED, Plaintiff prays for entry of judgment against Defendant as follows:

A. A judgment that Defendant has infringed and continues to infringe the ’438 Patent and ’978 Patent, directly and/or indirectly, as alleged herein;

B. That Defendant provide to CyWee an accounting of all gains, profits, and advantages derived by Defendant’s infringement of the ’438 Patent and ’978 Patent, and that CyWee be awarded damages adequate to compensate them for the wrongful infringement by Defendant, in accordance with 35 U.S.C. § 284;

C. That CyWee be awarded any other supplemental damages and interest on all damages, including, but not limited to, attorney fees available under 35 U.S.C. § 285;

D. That the Court permanently enjoin Defendant and all those in privity with Defendant from making, having made, selling, offering for sale, distributing, and/or using products that infringe the ’438 Patent and ’978 Patent, including the ’438 Accused Products and/or ’978 Accused Products, in the United States; and

E. That CyWee be awarded such other and further relief and all remedies available at law.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), CyWee hereby demands a trial by jury on all issues triable to a jury.

Dated: July 6, 2017

Respectfully submitted,

/s/ Stamatios Stamoulis
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CERTIFICATE OF SERVICE

The undersigned certifies that, on July 6, 2017, a true and correct copy of the foregoing First Amended Complaint for Patent Infringement was served upon Defendant, via Certified Mail, Return Receipt Requested, in accordance with Fed. R. Civ. P. 5.

/s/ Stamatios Stamoulis
Stamatios Stamoulis