



3. Samsung Electronics America, Inc. is a New York corporation and a subsidiary of Samsung Electronics Co., Ltd. This Defendant's principal place of business is located at 1200 New Hampshire Ave., Suite 500, Washington, DC 20036. It may be served with process through its registered agent in the Commonwealth of Virginia, CT Corporation System, 4701 Cox Rd., Suite 301, Glen Allen, Virginia 23060-6802. This Defendant has answered.

4. Samsung Telecommunications America LLC is a Delaware corporation and a subsidiary of Samsung Electronics Co., Ltd. This Defendant's principal place of business is located at 1301 E. Lookout Drive, Richardson, Texas 75082. It may be served with process through its registered agent in the Commonwealth of Virginia, Corporation Service Company, 11 S. 12th St., PO Box 1463, Richmond, Virginia 23218. This Defendant has answered.

#### **JURISDICTION AND VENUE**

5. Virginia Innovation Sciences brings this action for patent infringement under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338(a), and 1367.

6. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(c) and 1400(b). On information and belief, each Defendant is deemed to reside in this judicial district, has committed acts of infringement in this judicial district, has purposely transacted business involving their accused products in this judicial district, and/or has regular and established places of business in this judicial district. This Court has found venue to be proper.

7. Each Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Virginia Long Arm Statute, due at least to its substantial business in this State and judicial district, including: (A) at least part of its infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other

persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Virginia residents.

**COUNT I**

**(INFRINGEMENT OF U.S. PATENT NO. 7,899,492)**

8. Virginia Innovation Sciences incorporates paragraphs 1 through 7 herein by reference.

9. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

10. Virginia Innovation Sciences is the owner of the '492 patent, entitled "Methods, Systems and Apparatus for Displaying the Multimedia Information From Wireless Communication Networks," with ownership of all substantial rights in the '492 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the '492 patent was previously filed in this matter at Doc. 1-1.

11. The '492 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

**DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

12. Defendants have directly infringed, and continue to directly infringe, one or more claims of the '492 patent in this judicial district and elsewhere in Virginia and the United States.

13. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 23, 24, 26, and 33 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using MHL and/or HDMI. Such devices include, but are not limited to the Nexus i515, Droid Charge, Galaxy Note, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S III, and Infuse 4G ("Accused MHL Smartphones").

14. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 23, 24, 26, and 33 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using either DLNA and/or Samsung's AllShare software. Such devices include, but are not limited to, the Droid Charge Smartphone, Epic, Galaxy Note, Galaxy S 4G, Galaxy S II, Galaxy S II Epic 4G Touch, Galaxy S II Skyrocket, Galaxy S III, Infuse 4G, and Stratosphere ("Accused DLNA Smartphones").

15. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 23, 26, and 33 by, among other things, making, using, offering for sale, selling, and/or importing tablets that capable of receiving a video signal via a cellular network communication and support video output using MHL and/or HDMI. Such devices include, but are not limited to, the Galaxy Tab 8.9 (cellular) and the Galaxy Tab 10.1 (cellular).

16. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 23, 26, and 33 by, among other things, making, using, offering for sale, selling, and/or importing tablets that capable of receiving a video signal via a cellular network communication and support video output using DLNA and/or Samsung's AllShare software. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular) and Galaxy Tab 10.1 (cellular).

17. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 23, 24, 26, and 33 by, among other things, making, using, offering for sale, selling, and/or importing adapters, docking stations and the AllShare Hub that are capable of operating in conjunction with mobile terminals to provide video content to an alternative display ("Intermediate Devices"). Such Intermediate Devices include, but are not limited to, the HDMI Smart Adapters, the HDTV Smart Adapters, the Galaxy Tab HDTV Adapter, the Galaxy Tab

10.1 Multimedia Dock and the AllShare Hub. The Intermediate Devices infringe when used in conjunction with compatible mobile terminals with cellular capability.

18. Defendants are liable for these direct infringements of the '492 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

19. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '492 patent by inducing direct infringement by users who use the products accused of infringing the '492 patent ("the '492 Accused Products").

20. Defendants have had knowledge of the '492 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

21. On information and belief, despite having knowledge of the '492 patent, Defendants have specifically intended for persons who acquire and use the '492 Accused Products, including Defendants' customers, to acquire and use such devices in such a way that infringes the '492 patent, including at least claims 23, 24, 26, and 33, and Defendants knew or should have known that their actions were inducing infringement.

22. Specifically, Defendants instruct and encourage users of the '492 Accused Products to use those products in a manner that infringes the '492 patent. For example, Defendants instruct and encourage users of the AllShare software located on Samsung DLNA compliant smartphones and tablets, such as those identified in this Count, to use the software in a manner that infringes the '492 patent. *See, e.g.*, <http://www.samsung.com/global/allshare/pcsw/>

and [http://support-us.samsung.com/cyber/popup/iframe/pop\\_trouble\\_shooting\\_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session\\_id](http://support-us.samsung.com/cyber/popup/iframe/pop_trouble_shooting_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session_id).

23. Further, Defendants instruct users to use the Samsung HDMI Smart Adapter in a manner that infringes the '492 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '492 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '492 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

24. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '492 patent.

25. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

## **COUNT II**

### **(INFRINGEMENT OF U.S. PATENT NO. 8,050,711)**

26. Virginia Innovation Sciences incorporates paragraphs 1 through 25 herein by reference.

27. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

28. Virginia Innovation Sciences is the owner of the '711 patent, entitled "Methods, Systems and Apparatus for Displaying the Multimedia Information From Wireless

Communication Networks,” with ownership of all substantial rights in the ’711 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the ’711 patent was previously filed in this matter at Doc. 1-2.

29. The ’711 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

**DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

30. Defendants have directly infringed, and continue to directly infringe, one or more claims of the ’711 patent in this judicial district and elsewhere in Virginia and the United States.

31. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 16 and 18 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using MHL. Such devices include, but are not limited to the Accused MHL Smartphones.

32. Further, Defendants have directly infringed, and continue to directly infringe, at least claim 16 and 18 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using either DLNA and/or Samsung’s AllShare software. Such devices include, but are not limited to, the Accused DLNA Smartphones.

33. Further, Defendants have directly infringed, and continue to directly infringe, at least claim 18 by, among other things, making, using, offering for sale, selling, and/or importing tablets that are capable of receiving a video signal via a cellular network communication and support video output using MHL and/or HDMI. Such devices include, but are not limited to, the Galaxy Tab 8.9 (cellular) and the Galaxy Tab 10.1 (cellular).

34. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 16 and 18 by, among other things, making, using, offering for sale, selling, and/or

importing the Intermediate Devices. The Intermediate Devices infringe when used in conjunction with compatible mobile terminals with cellular capability.

35. Defendants are liable for these direct infringements of the '711 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

36. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '711 patent by inducing direct infringement by users who use the products accused herein of infringing the '711 patent ("the '711 Accused Products").

37. Defendants have had knowledge of the '711 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

38. On information and belief, despite having knowledge of the '711 patent, Defendants have specifically intended for persons who acquire and use the '711 Accused Products, including Defendants' customers, to acquire and use such devices in a way that infringes the '711 patent, including at least claims 16 and 18, and Defendants knew or should have known that their actions were inducing infringement.

39. Specifically, Defendants instruct and encourage end users of the '711 Accused Products to use those products in a manner that infringes the '711 patent. For example, Defendants instruct and encourage users of the AllShare software located on Samsung DLNA compliant smartphones and tablets, such as those identified in this Count, to use the software in a manner that infringes the '711 patent. *See, e.g.*, <http://www.samsung.com/global/allshare/pcsw/>



and [http://support-us.samsung.com/cyber/popup/iframe/pop\\_trouble\\_shooting\\_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session\\_id](http://support-us.samsung.com/cyber/popup/iframe/pop_trouble_shooting_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session_id).

40. Further, Defendants instruct users to use the Samsung HDMI Smart Adapter in a manner that infringes the '711 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '711 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '711 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

41. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '711 patent.

42. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

### **COUNT III**

#### **(INFRINGEMENT OF U.S. PATENT NO. 8,145,268)**

43. Virginia Innovation Sciences incorporates paragraphs 1 through 42 herein by reference.

44. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

45. Virginia Innovation Sciences is the owner of the '268 patent, entitled "Methods, Systems and Apparatus for Displaying the Multimedia Information From Wireless

Communication Networks,” with ownership of all substantial rights in the ’268 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the ’268 patent was previously filed in this matter at Doc. 1-3.

46. The ’268 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

**DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

47. Defendants have directly infringed, and continue to directly infringe, one or more claims of the ’268 patent in this judicial district and elsewhere in Virginia and the United States.

48. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 21, 22, 25, 28, and 29 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using MHL. Such devices include, but are not limited to the Accused MHL Smartphones.

49. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 21, 22, 25, 28, and 29 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support video output using either DLNA and/or Samsung’s AllShare software. Such devices include, but are not limited to, the Accused DLNA Smartphones.

50. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 21, 28, and 29 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support video output using MHL and/or HDMI. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

51. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 21, 28, and 29 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support video output using either DLNA and/or Samsung's AllShare software. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

52. Further, Defendants have directly infringed, and continue to directly infringe, at least claim 25 by, among other things, making, using, offering for sale, selling, and/or importing tablets that are capable of receiving a video signal via a cellular network communication and support video output using MHL, HDMI, DLNA, and/or Samsung's AllShare software. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular) and Galaxy Tab 10.1 (cellular).

53. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 21, 22, 25, 27, and 29 by, among other things, making, using, offering for sale, selling, and/or importing the Intermediate Devices. The Intermediate Devices infringe when used in conjunction with compatible mobile terminals.

54. Defendants are liable for these direct infringements of the '268 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

55. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '268 patent by inducing direct infringement by users who use the products accused herein of infringing the '268 patent ("the '268 Accused Products").

56. Defendants have had knowledge of the '268 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

57. On information and belief, despite having knowledge of the '268 patent, Defendants have specifically intended for persons who acquire and use the '268 Accused Products, including Defendants' customers, to acquire and use such devices in such a way that infringes the '268 patent, including at least claims 21, 22, 25, 27, 28, and 29, and Defendants knew or should have known that their actions were inducing infringement.

58. Specifically, Defendants instruct and encourage users of the '268 Accused Products to use those products in a manner that infringes the '268 patent. For example, Defendants instruct and encourage users of the AllShare software located on Samsung DLNA compliant smartphones and tablets, such as those identified in this Count, to use the software in a manner that infringes the '268 patent. *See, e.g.*, <http://www.samsung.com/global/allshare/pcsw/> and [http://support-us.samsung.com/cyber/popup/iframe/pop\\_trouble\\_shooting\\_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session\\_id](http://support-us.samsung.com/cyber/popup/iframe/pop_trouble_shooting_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session_id).

59. Further, Defendants instruct users to use the Samsung HDMI Smart Adapter in a manner that infringes the '268 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '268 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '268 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

60. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '268 patent.

61. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

**COUNT IV**

**(INFRINGEMENT OF U.S. PATENT NO. 8,224,381)**

62. Virginia Innovation Sciences incorporates paragraphs 1 through 61 herein by reference.

63. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

64. Virginia Innovation Sciences is the owner of the '381 patent, entitled "Methods, Systems and Apparatus for Displaying the Multimedia Information From Wireless Communication Networks," with ownership of all substantial rights in the '381 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the '381 patent was previously filed in this matter at Doc. 1-4.

65. The '381 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

**DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

66. Defendants have directly infringed, and continue to directly infringe, one or more claims of the '381 patent in this judicial district and elsewhere in Virginia and the United States.

67. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 19, 20, 22, 26, 30, 33, 34, 37, 38, 39, 40, 43, and 44 by, among other things, making, using, offering for sale, selling, and/or importing the Accused MHL Smartphones.

68. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 19, 22, 30, 33, 35, 37, 40, 43, and 44 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support video output using MHL and/or HDMI. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

69. Further, Defendants have directly infringed, and continue to directly infringe, at least claim 38 by, among other things, making, using, offering for sale, selling, and/or importing tablets that are capable of receiving a video signal via a cellular network communication and support video output using MHL and/or HDMI. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular) and Galaxy Tab 10.1 (cellular).

70. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 19, 20, 22, 26, 30, 32, 33, 34, 35, 37, 38, 39, 40, 43, 44, 46, and 47 by, among other things, making, using, offering for sale, selling, and/or importing the Intermediate Devices. The Intermediate Devices infringe when used in conjunction with compatible mobile terminals.

71. Defendants are liable for these direct infringements of the '381 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

72. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '381

patent by inducing direct infringement by users who use the products accused herein of infringing the '381 patent ("the '381 Accused Products").

73. Defendants have had knowledge of the '381 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

74. On information and belief, despite having knowledge of the '381 patent, Defendants have specifically intended for persons who acquire and use the '381 Accused Products, including Defendants' customers, to acquire and use such devices in such a way that infringes the '381 patent, including at least claims 19, 20, 22, 26, 30, 32, 33, 34, 35, 37, 38, 39, 40, 43, 44, 46, and 47, and Defendants knew or should have known that their actions were inducing infringement.

75. Specifically, Defendants instruct and encourage users of the '381 Accused Products to use those products in a manner that infringes the '381 patent. For example, Defendants instruct and encourage users to use the Samsung HDMI Smart Adapter in a manner that infringes the '381 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '381 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '381 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

76. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '381 patent.

77. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation

Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

**COUNT V**

**(INFRINGEMENT OF U.S. PATENT NO. 7,957,733)**

78. Virginia Innovation Sciences incorporates paragraphs 1 through 77 herein by reference.

79. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

80. Virginia Innovation Sciences is the owner of the '733 patent, entitled "Methods and Apparatus for Multimedia Communications with Different User Terminals," with ownership of all substantial rights in the '733 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the '733 patent was previously filed in this matter at Doc. 1-5.

81. The '733 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

**DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

82. Defendants have directly infringed, and continue to directly infringe, one or more claims of the '733 patent in this judicial district and elsewhere in Virginia and the United States.

83. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 4 and 43 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support multimedia content output using MHL including, but not limited to, the Accused MHL Smartphones.



84. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 4 and 43 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support multimedia content output using DLNA and/or Samsung's AllShare software including, but not limited to, the Accused DLNA Smartphones.

85. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 4 and 43 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support multimedia content output using MHL and/or HDMI. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

86. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 4 and 43 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support multimedia content output using either DLNA and/or Samsung's AllShare software. Such devices include, but are not limited to, the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

87. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 4 and 43 by, among other things, making, using, offering for sale, selling, and/or importing the Intermediate Devices. The Intermediate Devices infringe in and of themselves, and/or when used in conjunction with a compatible mobile terminal.

88. Defendants are liable for these direct infringements of the '733 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

89. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '733

patent by inducing direct infringement by users who use the products accused herein of infringing the '733 patent ("the '733 Accused Products").

90. Defendants have had knowledge of the '733 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

91. On information and belief, despite having knowledge of the '733 patent, Defendants have specifically intended for persons who acquire and use the '733 Accused Products, including Defendants' customers, to acquire and use such devices in such a way that infringes the '733 patent, including at least claims 4 and 43, and Defendants knew or should have known that their actions were inducing infringement.

92. Specifically, Defendants instruct and encourage users of the '733 Accused Products to use those products in a manner that infringes the '733 patent. For example, Defendants instruct and encourage users of the AllShare software located on Samsung DLNA compliant smartphones and tablets, such as those identified in this Count, to use the software in a manner that infringes the '733 patent. *See, e.g.*, <http://www.samsung.com/global/allshare/pcsw/> and [http://support-us.samsung.com/cyber/popup/iframe/pop\\_trouble\\_shooting\\_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session\\_id](http://support-us.samsung.com/cyber/popup/iframe/pop_trouble_shooting_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session_id).

93. Further, Defendants instruct and encourage users to use the Samsung HDMI Smart Adapter in a manner that infringes the '733 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '733 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '733 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

94. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '733 patent.

95. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

### **COUNT V**

#### **(INFRINGEMENT OF U.S. PATENT NO. 8,135,398)**

96. Virginia Innovation Sciences incorporates paragraphs 1 through 95 herein by reference.

97. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

98. Virginia Innovation Sciences is the owner of the '398 patent, entitled "Methods and Apparatus for Multimedia Communications with Different User Terminals," with ownership of all substantial rights in the '398 patent, including the right to exclude others and to enforce, sue, and recover damages for past and future infringement. A true and correct copy of the '398 patent was previously filed in this matter at Doc. 1-6.

99. The '398 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

#### **DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

100. Defendants have directly infringed, and continue to directly infringe, one or more claims of the '398 patent in this judicial district and elsewhere in Virginia and the United States.

101. In particular, Defendants have directly infringed, and continue to directly infringe, at least claims 15, 19, 57, 58, 60, 61, and 62 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support multimedia content output using MHL including, but not limited to, the Accused MHL Smartphones.

102. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 15, 19, 57, 58, 60, 61, and 62 by, among other things, making, using, offering for sale, selling, and/or importing smartphones that support multimedia content output using either DLNA and/or Samsung's AllShare software including, but not limited to, the Accused DLNA Smartphones.

103. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 15, 57, 58, 61, and 62 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support multimedia content output using MHL and/or HDMI. Such devices include, but are not limited to the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

104. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 15, 57, 58, 61, and 62 by, among other things, making, using, offering for sale, selling, and/or importing tablets that support multimedia content output using either DLNA and/or Samsung's AllShare software. Such devices include, but are not limited to, the Galaxy Tab 8.9 (cellular), Galaxy Tab 10.1 (cellular), Galaxy Tab 10.1 (WiFi only), and Galaxy Tab 2 10.1 (WiFi only).

105. Further, Defendants have directly infringed, and continue to directly infringe, at least claims 15, 19, 57, 58, 60, 61, 62, 63, and 65 by, among other things, making, using, offering for sale, selling, and/or importing the Intermediate Devices. The Intermediate Devices infringe in and of themselves, and/or when used in conjunction with a compatible mobile terminal.

106. Defendants are liable for these direct infringements of the '398 patent pursuant to 35 U.S.C. § 271.

**INDIRECT INFRINGEMENT (INDUCEMENT - 35 U.S.C. § 271(b))**

107. Based on the information presently available to Virginia Innovation Sciences, and in the alternative to direct infringement, Virginia Innovation Sciences contends that Defendants have indirectly infringed, and continue to indirectly infringe, one or more claims of the '398 patent by inducing direct infringement by users who use the products accused herein of infringing the '398 patent ("the '398 Accused Products").

108. Defendants have had knowledge of the '398 patent and the infringing nature of their activities at least as early as October 23, 2012, when Virginia Innovation Sciences effected service of the Original Complaint in this matter.

109. On information and belief, despite having knowledge of the '398 patent, Defendants have specifically intended for persons who acquire and use the '398 Accused Products, including Defendants' customers, to acquire and use such devices in such a way that infringes the '398 patent, including at least claims 15, 19, 57, 58, 60, 61, 62, 63, and 65, and Defendants knew or should have known that their actions were inducing infringement.

110. Specifically, Defendants instruct and encourage users of the '398 Accused Products to use those products in a manner that infringes the '398 patent. For example, Defendants instruct and encourage users of the AllShare software located on Samsung DLNA compliant smartphones and tablets, such as those identified in this Count, to use the software in a manner that infringes the '398 patent. *See, e.g.*, <http://www.samsung.com/global/allshare/pcsw/> and [http://support-us.samsung.com/cyber/popup/iframe/pop\\_trouble\\_shooting\\_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session\\_id](http://support-us.samsung.com/cyber/popup/iframe/pop_trouble_shooting_fr.jsp?idx=167364&modelname=LN40C650L1F&modelcode&session_id).

111. Further, Defendants instruct and encourage users to use the Samsung HDMI Smart Adapter in a manner that infringes the '398 patent by providing an instruction and/or user manual with the Samsung HDMI Smart Adapter. Defendants instruct users to use the Samsung HDTV Smart Adapter in a manner that infringes the '398 patent by providing an instruction and/or user manual with the Samsung HDTV Smart Adapter. And Defendants instruct users to use the Samsung Galaxy Tab HDTV Adapter in a manner that infringes the '398 patent by providing an instruction and/or user manual with the Samsung Galaxy Tab HDTV Adapter.

112. Furthermore, Defendants have not implemented a design around or otherwise taken any remedial action with respect to the '398 patent.

113. Virginia Innovation Sciences has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Virginia Innovation Sciences in an amount that adequately compensates Virginia Innovation Sciences for their infringements, 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.

### **COUNT VIII**

#### **(WILLFUL INFRINGEMENT)**

114. Since at least the respective issue dates of each of the VIS Patents, Defendants have been, or should have been, aware of each VIS Patent.

115. Prior to issuance the '492 patent was published on April 13, 2006 as U.S. Publication No. 2006/0077310 ("Wang").

116. On or about March 11, 2005, Lai King Tee, Cornelius van Rensburg and Joseph Cleveland ("Samsung Named Inventors") filed U.S. Provisional Application No. 60/661,267 ("the '267 Prov. Appl.") by submitting to the United States Patent and Trademark Office ("PTO") a Samsung Telecommunications America, L.P. Invention Disclosure Form. At the time

of this filing, the Samsung Named Inventors were employees of Samsung Telecommunications America, L.P. (“Defendant”).

117. On or about September 27, 2005, the Samsung Named Inventors filed U.S. Patent Application No. 11/237,357 (“the Samsung Appl.”). The Samsung Appl. claimed priority pursuant to 35 U.S.C. § 119(e) to the ’267 Prov. Appl. The Samsung Appl. was being prosecuted on behalf of Defendant and Defendant was aware of the prosecution of the Samsung Appl.

118. The Samsung Appl. was titled “Mobile Terminal for Relaying Multimedia Data to an External Display Device.”

119. On September 18, 2008, all claims of the Samsung Appl. were rejected by the PTO as anticipated by Wang or as obvious in light of Wang in view of other references.

120. At least Samsung Telecommunication America, LLC (“STA”) received a copy of the September 18, 2008 Office Action.

121. On March 5, 2009, all claims of the Samsung Appl. were rejected by the PTO as anticipated by Wang or as obvious in light of Wang in view of other references. At least STA received a copy of the March 5, 2009 Office Action.

122. On August 17, 2009, all claims of the Samsung Appl. were rejected by the PTO as anticipated by Wang or as obvious in light of Wang in view of other references. At least STA received a copy of the August 17, 2009 Office Action.

123. On January 26, 2010, all claims of the Samsung Appl. were rejected by the PTO as anticipated by Wang or as obvious in light of Wang in view of other references. At least STA received a copy of the January 26, 2010 Office Action.

124. On September 16, 2010, all claims of the Samsung Appl. were rejected by the PTO as anticipated by Wang or as obvious in light of Wang in view of other references. At least STA received a copy of the September 16, 2010 Office Action.

125. On March 1, 2011, Wang issued as the '492 patent. The notice of allowance for the '492 patent was published, and publicly available, at least as early as October 28, 2010.

126. On April 26, 2011, Defendants officially abandoned the Samsung Appl. by failing to file any reply to the September 16, 2010 Office Action rejecting all claims in light of Wang or Wang in combination with other references. This was done after the '492 patent issued and at the direction of Samsung Electronics Co., Ltd. ("Samsung Electronics").

127. Defendants each have a patent prosecution team that is tasked with monitoring Defendants patent prosecution matters. For example, the patent prosecution team at Samsung Electronics consists of over 250 Samsung Electronics employees.

128. At least the patent prosecution team at STA monitored the prosecution of the Samsung Appl. and was on notice of Wang at least as early as the date STA received the September 18, 2008 Office Action during prosecution of the Samsung Appl.

129. At least the patent prosecution team at STA monitored and participated in the prosecution of the Samsung Appl. including review of Office Actions received from the PTO and preparation of responses to such Office Actions.

130. Defendants knew, or should have known, of the existence of the '492 patent at least as early as its issuance date. To the extent Defendants did not have knowledge of the '492 patent as of, or around, its issuance date, then such lack of knowledge is the result of Defendants reckless conduct and deliberate action to avoid knowledge of the '492 patent and avoid confirming a high probability of wrongdoing.

131. All of the VIS Patents are related to and claim priority to the '492 patent.



132. Defendants knew, or should have known, of the existence of the VIS Patents at least as early as their respective issuance dates. To the extent Defendants did not have knowledge of the VIS Patents as of, or around, their respective issuance dates, then such lack of knowledge is the result of Defendants reckless conduct and deliberate action to avoid knowledge of the VIS Patents and avoid confirming a high probability of wrongdoing.

133. Further, On December 29, 2006, Sang-do Park, Moon-jeong Choi and Jun-kyeong Kim filed U.S. Patent Application No. 11/647,153 (“the ’153 Appl.”). On information and belief, as of December 29, 2006, Sang-do Park, Moon-jeong Choi and Jun-kyeong Kim were employees of Samsung Electronics Co., Ltd.

134. On October 24, 2008, the ’153 Appl. was officially assigned to Samsung Electronics Co. Ltd. (“Samsung Electronics”).

135. On April 27, 2012, the examiner Whipple submitted a Notice of References Cited in connection with the ’153 Appl. identifying prior art considered pertinent to the ’153 Appl. Included in the Notice of References cited was the ’398 patent to Wang, et al.

136. On information and belief, at least Samsung Electronics was on notice of the ’398 patent to Wang, et al., prior to the filing of this lawsuit.

137. On information and belief, Defendants’ infringement of the VIS Patents described herein has been, and continues to be, willful because Defendants, with knowledge of the VIS Patents, have continued to act and infringe despite an objectively high likelihood that their actions constitute infringement of the VIS Patents. Further, this objectively high risk was either known by Defendants or should have been known by Defendants due to its obvious nature.

138. The Samsung Appl. was rejected five times by the PTO in light of Wang.

139. Following issuance of Wang (i.e., the ’492 patent), Samsung abandoned the Samsung Appl.

140. In April of 2012, the PTO specifically identified the '398 patent as "pertinent" prior art pertaining to Samsung's '153 Appl.

141. Despite this, Defendants never contacted the inventors of the patents-in-suit or VIS to obtain a license or other permission to use the inventions claimed in the VIS patents, and instead went forward with making and selling the Accused Products without a license from VIS at great profit.

142. Defendants have, and continue to, infringe the VIS Patents despite an objectively high likelihood that Defendants actions constituted infringement of valid patents (i.e., the VIS Patents).

**JURY DEMAND**

Virginia Innovation Sciences requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

Virginia Innovation Sciences asks that the Court find in its favor and against Defendants, and that the Court grant Virginia Innovation Sciences the following relief:

- a. Judgment that one or more claims of the '492 patent, the '711 patent, the '268 patent, the '381 patent, the '733 patent, and/or the '398 patent have been infringed, either literally and/or under the doctrine of equivalents, by one or more Defendants;
- b. Judgment that one or more claims of the '492 patent, the '711 patent, the '268 patent, the '381 patent, the '733 patent, and/or the '398 patent have been willfully infringed, either literally and/or under the doctrine of equivalents, by one or more Defendants;
- c. Judgment that Defendants account for and pay to Virginia Innovation Sciences all damages and costs incurred by Virginia Innovation Sciences because of Defendants' infringing activities and other conduct complained of herein;
- d. Judgment that Defendants account for and pay to Virginia Innovation Sciences a reasonable, on-going, post judgment royalty because of Defendants' infringing activities and other conduct complained of herein;
- e. That Virginia Innovation Sciences be granted pre-judgment and post judgment interest on the damages caused by Defendants' infringing activities and other conduct complained of herein;
- f. Find this case exceptional under the provisions of 35 U.S.C. § 285 and award enhanced damages;
- g. Deny Defendants' claims in their entirety; and
- h. That Virginia Innovation Sciences be granted such other and further relief as the Court may deem just and proper under the circumstances.

**DATED: July 24, 2013**

VIRGINIA INNOVATION SCIENCES, INC.

By:                 /s/ David C. Hartnett                  
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**CERTIFICATE OF SERVICE**

I hereby certify that on this 24th day of July 2013, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will send notification to the following:

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