

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

ENTROPIC COMMUNICATIONS, LLC,

Plaintiff,

v.

DIRECTV, LLC, AT&T, INC., AT&T
SERVICES, INC., and AT&T
COMMUNICATIONS, LLC.

Defendants.

Case No. 2:22-cv-00075-JRG

DEMAND FOR JURY TRIAL

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Entropic Communications, LLC (“Entropic”), files this first amended complaint for patent infringement against DirecTV, LLC, AT&T, Inc., AT&T Services, Inc., and AT&T Communications, LLC (collectively, “Defendants”) and in support thereof alleges and avers as follows:

NATURE OF THE ACTION

1. This is a civil action arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including, specifically, 35 U.S.C. § 271, based on infringement of U.S. Patent Nos. 7,130,576 (“the ’576 Patent”), 7,542,715 (“the ’715 Patent”), and 8,792,008 (“the ’008 Patent”) (collectively “the Patents-in-Suit”).

THE PARTIES

2. Entropic is a corporation existing under the laws of the State of Texas, having its principle office at 7150 Preston Rd. Suite 300, Plano, Texas 75024.

3. DirecTV, LLC (“DirecTV”) is a limited liability company organized and existing under the laws of California with a principal place of business at 2260 E. Imperial Hwy., El Segundo, California 90245.

4. AT&T Services, Inc. and AT&T Communications, LLC are wholly owned by AT&T, Inc. (collectively “AT&T”).

5. AT&T, Inc. is a corporation organized and existing under the laws of the State of Delaware with a principal place of business at 208 S. Akard St., Dallas, Texas 75202.

6. AT&T Services, Inc. is a Delaware corporation with a place of business at 208 South Akard Street, Dallas, Texas 75202.

7. AT&T Communications, LLC is a Delaware limited liability company with a place of business at 208 South Akard Street, Dallas, Texas 75202.

8. DirecTV maintains locations in Texas, including at least in the following towns: Arlington, Longview, and Dallas.

9. DirecTV maintains facilities in Texas, including in the following towns: Abilene, Amarillo, Austin, Vidor, Corpus Christi, Richardson, El Paso, McAllen, Marshall, Houston, Laredo, Lubbock, Midland, San Antonio, Denison, Tyler, Waco, and Wichita Falls, among others.

10. DirecTV may be served through its registered agent CT Corp. System at 1999 Bryan St. Suite 900, Dallas, Texas 75201.

11. AT&T maintains physical locations in at least the following towns in the district: Anna, Athens, Beaumont, Bonham, Canton, Carthage, Center, Crockett, Gun Barrel City, Denison, Frisco, Gainesville, Henderson, Jackson, Kilgore, Liberty, Lindale, Longview, Lufkin, Lumberton, Marshall, McKinney, Mount Pleasant, Nacogdoches, Palestine, Port Arthur, Princeton, Propser, Sherman, Sulphur Springs, Texarkana, Tyler and West Orange, among others.

12. AT&T may be served through its registered agent CT Corporation System at 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

13. DirecTV, through its related entity, DirecTV Enterprises LLC, also maintains a regional headquarters at 1010 N Saint Mary's St. Rm. 9-Y01, San Antonio, Texas 78215.

14. DirecTV offers its products via storefronts, including at 1712 E Grand Ave, Marshall, Texas 75670.

15. DirecTV maintains a physical, regular and established place of business at 3111 S US Hwy 75, Sherman, Texas 75090.

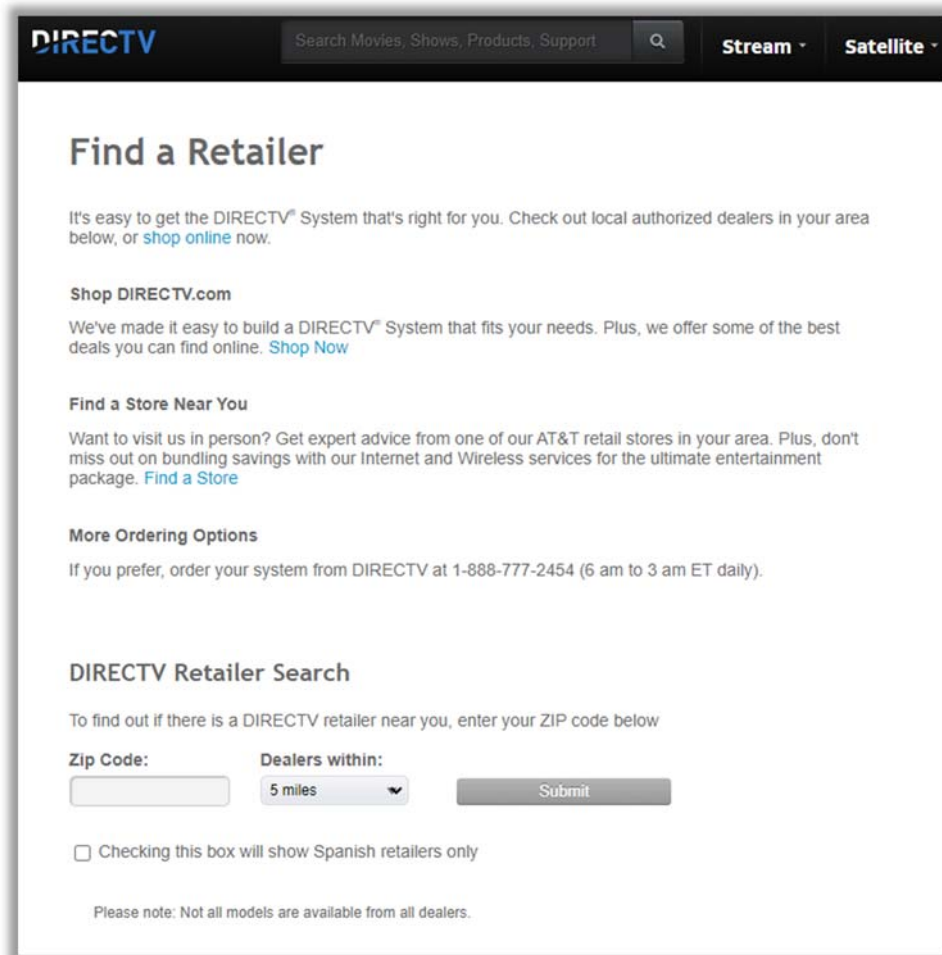
16. DirecTV sells, leases, and distributes its infringing technology in this district.

17. On information and belief, DirecTV employees work in this district, including but not limited to a Senior Area Sales Manager in Richardson, Texas, as well as other employees working in Allen, Texas.

18. On information and belief, these employees work both at DirecTV offices and AT&T offices, as well as under the control of DirecTV and AT&T at the employees' homes in this district.

19. On information and belief, both when working remotely in this district and at offices in this district, DirecTV and AT&T supply these employees with equipment, for example, a virtual office, computer equipment, and VPN access, to allow these employees to perform their duties.

20. DirecTV instructs potential customers that, if a potential customer wishes to consider DirecTV products in person, the potential customers should come to one of "our AT&T retail stores" (emphasis added):



https://www.directv.com/DTVAPP/global/findRetailer.jsp?assetId=cms_find_retailer.

21. There are numerous AT&T stores marketing DirecTV products in this district including, but not limited to, in: Anna, Athens, Beaumont, Bonham, Canton, Carthage, Center, Crockett, Gun Barrel City, Denison, Frisco, Gainesville, Henderson, Jackson, Kilgore, Liberty, Lindale, Longview, Lufkin, Lumberton, Marshall, McKinney, Mount Pleasant, Nacogdoches, Palestine, Port Arthur, Princeton, Proposer, Sherman, Sulphur Springs, Texarkana, Tyler, and West Orange.

22. DirecTV has authorized dealers in this district including, but not limited to, in: Texarkana, Mount Pleasant, Port Arthur, Beaumont, Frisco, Greenville, Point, and Sulphur Springs.

23. DirecTV, on information and belief, controls the aforementioned authorized dealers.

24. In order to become an authorized dealer, such dealers must go through an online application process and be qualified to properly represent the DirecTV brand.

25. An authorized dealer must regularly reapply and show that it continues to be an appropriate representative of the DirecTV and AT&T brands.

26. DirecTV regularly and consistently provides instruction concerning its products and services to authorized dealers in the district and send DirecTV employees including technicians and sales personnel to authorized dealers in this district, for example, to assist with marketing new products, to address technical issues, etc.

27. One of the many such dealers includes TNT Internet & TV, located in Marshall, Texas:





<https://tntsattellites.us/>.

28. DirecTV owns or leases, and maintains and operates several Local Receive Facilities (LRFs) in this district:

https://www.directv.com/DTVAPP/content/contact_us/local_receive_facilities

29. On information and belief, in each of those LRFs, DirecTV owns and stores equipment such as receivers and servers. Each of these LRFs are used to acquire and transmit local television channels over the DirecTV spectrum to DirecTV customers.

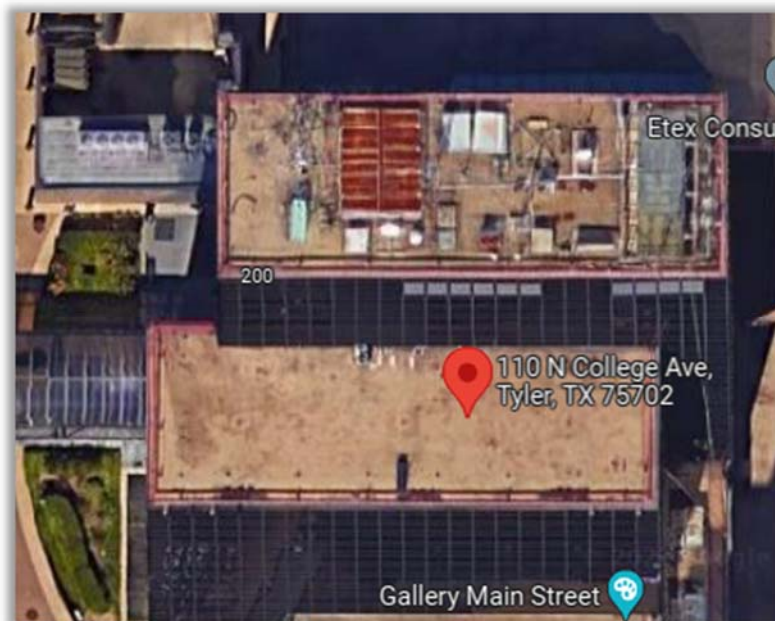
30. DirecTV operates LRFs at facilities located in this district at, at least, 1721 Evangeline Drive, Vidor, TX 77662; 10 High Point Circle, Denison, TX 75020; and 110 N. College Avenue, Tyler, TX 75702:



<https://www.google.com/maps/place/1721+Evangeline+Dr,+Vidor,+TX+77662/>



<https://www.google.com/maps/place/10+High+Point+Cir,+Denison,+TX+75020/>



<https://www.google.com/maps/place/110+N+College+Ave,+Tyler,+TX+75702>

31. On information and belief, DirecTV employs personnel that service, repair and/or replace equipment associated with the LRFs, as appropriate, in this district.

32. AT&T offers its products via storefronts, for example, the AT&T Store at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703.

33. AT&T offers for sale and sells DirecTV products and services at the AT&T Store at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703.

34. AT&T personnel at stores in this district sign up prospective customers for DirecTV service and schedule home installation for those customers in AT&T stores.

35. A prospective DirecTV customer can sign up for two types of DirecTV products, the “standard satellite service and the new streaming service,” at the AT&T Store at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703.

36. A prospective DirecTV customer can sign up for service, schedule install, and complete the entire onboarding process right in the AT&T store at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703.

37. The following DirecTV literature is available to prospective DirecTV customers at the AT&T store in Tyler, Texas:

DIRECTV
PACKAGES & CHANNEL LINEUP
 Effective 8/24/21

Package	Channel Name	Channel #	HD	SD	4K	3D
• ENTERTAINMENT CHOICE™	ESPN	654				
	ESPN2	268				
	ESPN College Extra	788-798				
	ESPN2	709				
	ESPN3	337				
	ESPN4	358				
	ESPN5	370				
	FLS	356				
	FX	366				
	FX2	231				
	FX3	319				
	FX4	348				
	FX5	418				
	FX6	211				
	FX7	311				
• ULTIMATE PREMIER™	FX8	331				
	FX9	348				
	FX10	337				
	FX11	348				
	FX12	358				
	FX13	368				
	FX14	218				
	FX15	328				
	FX16	233				
	FX17	312				
	FX18	565				
	FX19	507				
	FX20	508				
	FX21	811				

DIRECTV
PACKAGES & CHANNEL LINEUP
 (CONTINUED)
 Effective 8/24/21

Package	Channel Name	Channel #	HD	SD	4K	3D
• ENTERTAINMENT CHOICE™	Se Young	843				
	Spectrum Channel	485				
	STARZ	128				
	STARZ Encore	131				
	STARZ Encore HD	138				
	STARZ Edge	139				
	STARZ Encore	136				
	STARZ Encore Action	141				
	STARZ Encore Black	140				
	STARZ Encore Classic	137				
	STARZ Encore Family	142				
	STARZ Encore Supreme	139				
	STARZ Encore West	134				
	STARZ Encore Wetlands	138				
	STARZ Encore Sports	135				
• ULTIMATE PREMIER™	STARZ Encore Kids & Family	137				
	STARZ Encore	136				
	STARZ Encore	137				
	STARZ Encore	138				
	STARZ Encore	139				
	STARZ Encore	140				
	STARZ Encore	141				
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	STARZ Encore	146				
	STARZ Encore	147				
	STARZ Encore	148				
	• ULTIMATE PREMIER™	STARZ Encore	149			
STARZ Encore		150				
STARZ Encore		151				
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STARZ Encore		159				
STARZ Encore		160				
STARZ Encore		161				
STARZ Encore		162				

MOVIES EXTRA PACK
 Effective 8/24/21

Crime & Investigation	871	MTV Live	977
Historical Document	844	Shout! TV HD	978
Hulmark Movies & Mystery	545	Sundance Channel	979
HD Channel	544	Sony Movies	548
Hulu	547		

To access DIRECTV HD programming, HD equipment required. ALL PROGRAMMING AND FEATURES SUBJECT TO CHANGE AT ANY TIME. Certain channels may not be available in all areas. For the latest updates and information about your area, see [http://directv.com](#).

Usage restrictions apply to DIRECTV. See guidelines at [http://directv.com/terms](#). Eligibility for local channels based on service address. Not available in all areas and subject to change without notice. Some channels are available in your area, but not in all areas. A third party may own the rights to certain content. All rights reserved. ©2021 DIRECTV. DIRECTV and all other DIRECTV marks are trademarks of DIRECTV, L.L.C. All other marks are the property of their respective owners. All Rights Reserved.

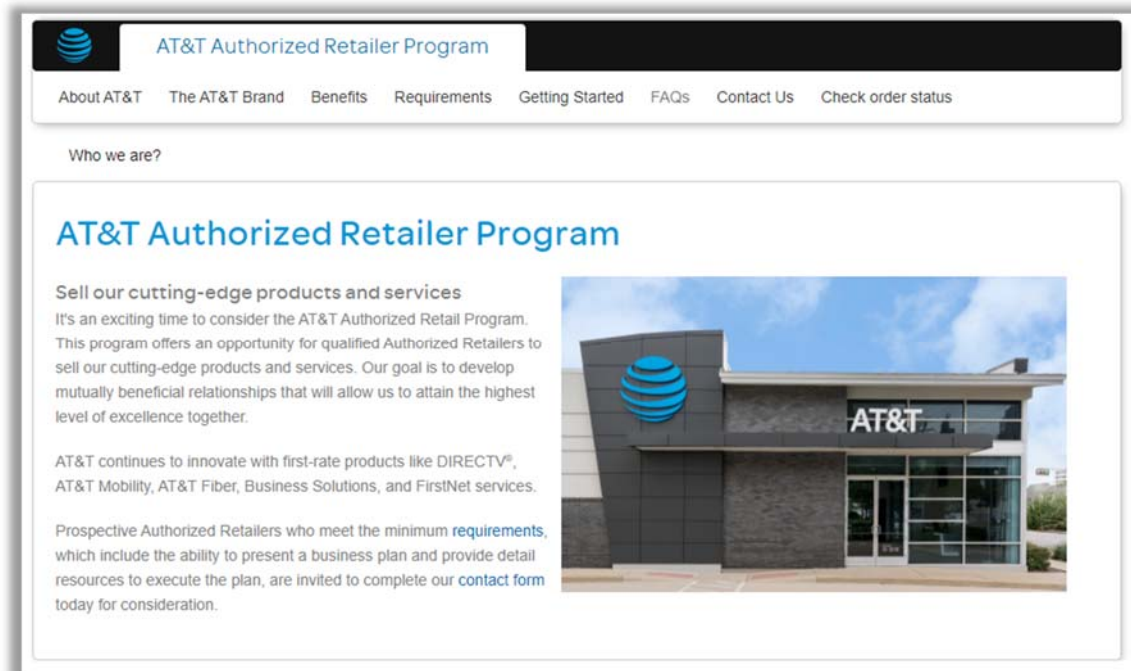
38. AT&T and DirecTV co-mingle websites. See <https://www.att.com/>, which includes hyperlinks with the word “TV” that redirect customers to the DirecTV website (<https://www.directv.com/>) so that customers can purchase DirecTV satellite products and services.

39. On information and belief, AT&T has in the past offered for sale, sold, used, and distributed, as well as does offer for sale, sells, uses and distributes its infringing technology in this district, including DirecTV branded products, services, and systems.

40. On information and belief, AT&T has in the past leased, and does lease, the infringing technology, including in connection with product bundles of fiber internet products and satellite television equipment.

41. On information and belief, AT&T has in the past received, evaluated, and approved, and does receive, evaluate, and approve, applications to become an authorized dealer for DirecTV.

42. On information and belief, DirecTV does not have a separate web portal for authorized dealer applications and instead offers the application for authorized dealers through a web portal maintained by AT&T:



<https://www.att.com/att/newdealer/>.

43. The AT&T Authorized Retailer Program web portal touts AT&T's "first-rate products like DIRECTV®."

44. On information and belief, AT&T is responsible for evaluating and approving employment applications for employees of DirecTV:



AT&T will consider for employment qualified applicants in a manner consistent with the requirements of federal, state and local laws

<https://jobs.directv.com/job/dallas/principal-system-engineer/390/22390566240>.

45. On information and belief, AT&T owns all substantial rights, interest, and title in and to certain DirecTV trademarks.

46. For example, Trademark Registration No. 5835109 is a DirecTV trademark covering goods and services related to satellite dishes and installation for satellite dishes and lists the owner as AT&T Intellectual Property II, L.P.

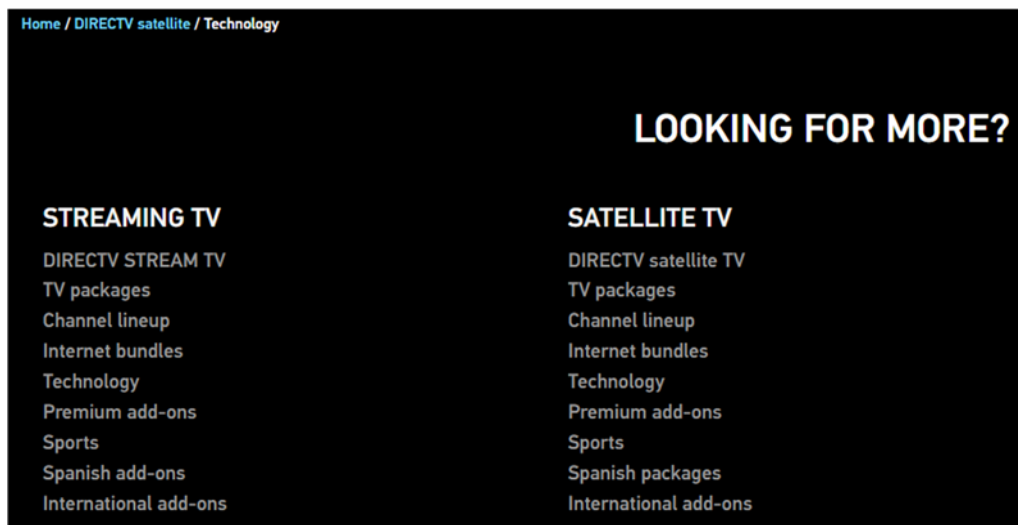
47. On information and belief, DirecTV and AT&T commingle leadership, office space, employees, products, and other operational resources and assets all within this district.

48. For example, numerous AT&T employees are on the Board of Directors for DirecTV.

49. On information and belief, various employees have shared responsibilities for both AT&T and DirecTV.

50. Moreover, on information and belief, DirecTV employees occupy offices at office spaces including in this district ostensibly owned or leased by AT&T.

51. In addition, AT&T and DirecTV bundle together services (e.g., satellite TV and internet) via DirecTV websites:



<https://www.directv.com/satellite/technology/>.

52. Clicking the “Internet bundles” link under “SATELLITE TV” on the <https://www.directv.com/satellite/technology/> website redirects customers to the following AT&T website: <https://www.att.com/bundles/directv-internet/>.

JURISDICTION AND VENUE

53. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the claims herein arise under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. § 271.

54. This Court has personal jurisdiction over AT&T and DirecTV in this action because AT&T and DirecTV have committed acts of infringement within the State of Texas and within this district through, for example, the provision of satellite television services by both AT&T and DirecTV as described in the counts herein (“Accused Satellite Television Services”). The Accused Satellite Television Services include the provision of signals, programming, and content to AT&T and DirecTV’s customers via various products, including Outdoor Units (“ODU”), DirecTV

antennas, feed horns, low-noise block converters (“LNB” or “LNBF”), processing units, and signal selector and combiners (“SSC”).

55. The Accused Satellite Television Services are available for subscription online from the respective websites of both AT&T and DirecTV.

56. The Accused Satellite Television Services are also available for subscription from various physical stores, including AT&T Stores offering DirecTV branded products, services, and systems in this district, including at 1712 E Grand Ave, Marshall, Texas 75670.

57. The devices provided by AT&T and DirecTV to supply the Accused Satellite Television Services are provided to customers in this district and may be obtained by customers from physical locations in this district, including the AT&T Store at 1712 E Grand Ave, Marshall, Texas 75670.

58. DirecTV regularly transacts business in the State of Texas and within this district.

59. DirecTV engages in other persistent courses of conduct and derives substantial revenue from products and/or services provided in this district and in Texas, and has purposefully established substantial, systematic, and continuous contacts within this district and should reasonably expect to be sued in a court in this district.

60. For example, DirecTV regularly transacts business out of a store in this district and has a Texas registered agent for service.

61. DirecTV operates a website and various advertising campaigns that solicit customers to lease, buy, and use the Accused Satellite Television Services in this district and in Texas.

62. Given these contacts, the Court’s exercise of jurisdiction over DirecTV will not offend traditional notions of fair play and substantial justice.

63. With respect to DirecTV, venue in the Eastern district of Texas is proper pursuant to 28 U.S.C. § 1400(b).

64. DirecTV has a regular and established place of business at the AT&T location located at 1712 E Grand Ave, Marshall, Texas 75670.

65. At the AT&T location at 1712 E Grand Ave, Marshall, Texas 75670, DirecTV sells and markets the Accused Satellite Television Services to customers in this district.

66. On information and belief, at the location at 1712 E Grand Ave, Marshall, Texas 75670, DirecTV provides pick-up service for the Accused Satellite Television Services to customers who have ordered the Accused Satellite Television Services online or over the phone.

67. DirecTV has additional regular and established places of business in this district, including in Tyler, Marshall, Longview, and Atlanta, Texas, where DirecTV sells and markets the Accused Satellite Television Services to customers in this district.

68. DirecTV has committed acts within this judicial district giving rise to this action at the stores in Tyler, Marshall, Longview, and Atlanta, Texas.

69. DirecTV targets its advertisements towards residents of this district.

70. DirecTV continues to conduct business in this judicial district, including one or more acts of making, selling, using, importing and/or offering for sale the Accused Satellite Television Services and providing support service to customers in this district.

71. AT&T is headquartered in the State of Texas and regularly transacts business within this district.

72. AT&T engages in other persistent courses of conduct and derives substantial revenue from products and/or services provided in this district and in Texas, and has purposefully

established substantial, systematic, and continuous contacts within this district and should reasonably expect to be sued in a court in this district.

73. For example, AT&T regularly transacts business out of several stores in this district and has a Texas registered agent for service.

74. AT&T has numerous storefronts and corporate offices in this district.

75. AT&T operates a website and various advertising campaigns that solicit customers to lease, buy, and use the Accused Satellite Television Services in this district and in Texas.

76. Given these contacts, the Court's exercise of jurisdiction over AT&T will not offend traditional notions of fair play and substantial justice.

77. With respect to AT&T, venue in this district is proper pursuant to 28 U.S.C. § 1400(b).

78. AT&T has a regular and established place of business at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703.

79. AT&T also maintains locations in the following towns in this district: Anna, Athens, Beaumont, Bonham, Canton, Carthage, Center, Crockett, Gun Barrel City, Denison, Frisco, Gainesville, Henderson, Jackson, Kilgore, Liberty, Lindale, Longview, Lufkin, Lumberton, Marshall, McKinney, Mount Pleasant, Nacogdoches, Palestine, Port Arthur, Princeton, Propser, Sherman, Sulphur Springs, Texarkana, Tyler and West Orange, among others.

80. At the location at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703, AT&T sells and markets the Accused Satellite Television Services, as defined herein, to customers in this district.

81. At 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703, and others in this district, AT&T has leased and leases the Accused Satellite Television Services bundled with its fiber internet products.

82. AT&T targets DirecTV advertisements towards residents of this district.

83. On information and belief, at the location at 8922 S Broadway Ave Ste. 112, Tyler, Texas 75703, AT&T provides pick-up service for the Accused Satellite Television Services to customers who have ordered their Accused Satellite Television Services online or over the phone.

84. AT&T has additional regular and established places of business in this district, including in Anna, Athens, Beaumont, Bonham, Canton, Carthage, Center, Crockett, Gun Barrel City, Denison, Frisco, Gainesville, Henderson, Jackson, Kilgore, Liberty, Lindale, Longview, Lufkin, Lumberton, Marshall, McKinney, Mount Pleasant, Nacogdoches, Palestine, Port Arthur, Princeton, Propser, Sherman, Sulphur Springs, Texarkana, Tyler and West Orange where AT&T offers to sell and sells the Accused Satellite Television Services to customers in this district.

85. AT&T continues to conduct business in this judicial district, including one or more acts of making, selling, using, importing or offering for sale Accused Satellite Television Services and providing support service to customers in this district.

THE PATENTS-IN-SUIT

86. On October 31, 2006, the '576 Patent, entitled "Signal Selector and Combiner for Broadband Content Distribution," was duly and legally issued by the United States Patent and Trademark Office.

87. On August 11, 2009, the United States Patent and Trademark Office issued a Reexamination Certification of the '576 Patent.

88. The '576 Patent was duly assigned to Entropic. A true and accurate copy of the '576 Patent is attached hereto as Exhibit A.

89. On June 2, 2009, the '715 Patent, entitled "Signal Selector and Combiner for Broadband Content Distribution," was duly and legally issued by the United States Patent and Trademark Office. The '715 Patent was duly assigned to Entropic. A true and accurate copy of the '715 Patent is attached hereto as Exhibit B.

90. On July 29, 2014, the '008 Patent, entitled "Method and Apparatus for Spectrum Monitoring," was duly and legally issued by the United States Patent and Trademark Office. The '008 Patent was duly assigned to Entropic. A true and accurate copy of the '008 Patent is attached hereto as Exhibit C.

91. Entropic is the owner by assignment of all rights, title, and interest in the Patents-in-Suit.

ENTROPIC'S LEGACY AS A SATELLITE INNOVATOR

92. Entropic Communications Inc., the predecessor-in-interest to Entropic, was founded in San Diego, California in 2001 by Dr. Anton Monk, Itzhak Gurantz, Ladd El Wardani and others. Entropic Communications Inc. was instrumental in the development of the Multimedia over Coax Alliance ("MoCA") standard, Direct Broadcast Satellite ("DBS") ODU single wire technology, and System-on-Chip ("SoC") solutions for set-top boxes ("STBs") in the home television and home video markets.

93. Dr. Monk received his Bachelor of Science degree and Doctorate in Electrical Engineering from the University of California San Diego and a Master of Science in Electrical Engineering from the California Institute of Technology.

94. Under the guidance of Dr. Monk, Entropic Communications Inc. grew to an eventual public listing on the NASDAQ in 2007. After the public listing, the company acquired RF Magic, Inc. in 2007, a company specializing in DBS ODU technology and hardware.

95. Additional growth between 2007 and 2015 bolstered the technical expertise of Entropic Communications Inc., including satellite signal acquisition, digital signal stacking, and signal distribution.

96. For years, Entropic Communications Inc. pioneered cutting edge DBS ODU technology. This technology simplified the installation required to support simultaneous reception of multiple channels from multiple satellites over a single cable. The company's DBS ODU products include various integrated circuits and SoCs for band translation switches, channel stacking switches, and digital channel stacking switches. The DBS ODU technology was deployed as an industry leading solution in global DBS operators, including AT&T and DirecTV.

97. In 2015, MaxLinear, Inc.—a leading provider of radio-frequency (RF), analog, digital, and mixed-signal semiconductor solutions—acquired Entropic Communications Inc. and the pioneering intellectual property developed by Dr. Monk and his team.

98. For years, satellite providers such as AT&T and DirecTV relied upon products produced in whole or in part by Entropic Communications Inc. (and later MaxLinear, Inc.) to enable their services for customers.

99. The Patents-in-Suit are the result of years of research and development in satellite and cable technology. These innovations have enabled AT&T and DirecTV to provide enhanced

and expanded services to customers, which in turn has increased revenues for AT&T and DirecTV while at the same time reducing the costs.

FIRST CAUSE OF ACTION

(Infringement of the '576 Patent by AT&T and DirecTV)

100. Entropic incorporates by reference and realleges each and every allegation of Paragraphs 1 through 99 as if set forth herein.

101. Entropic owns all substantial rights, interest, and title in and to the '576 Patent, including the sole and exclusive right to prosecute this action and enforce the '576 Patent against infringers, and to collect damages for all relevant times.

102. An outdoor unit or "ODU" is typically located, as the name suggests, outside of a customer's home. For example, an ODU often includes a dish antenna, one or more feed horns, one or more LNB or LNBF, and one or more processing units. The processing units can be located within the ODU itself or in a multi-switch unit located between the ODU and devices within the customer's home. An ODU is generally responsible for receiving satellite broadband signals from one or more satellites, processing the received signals, and providing the processed signals to one or more devices, such as an integrated receiver decoder unit, located within the customer's home. These in-home devices can decode (or otherwise process) the signals received from the ODU. The in-home devices can output television programming to a customer's television and provide video recording functionality.

103. The '576 Patent generally describes the process of an ODU receiving satellite broadband signals, combining certain extracted signals into a composite signal, and transmitting that composite signal from the ODU to an integrated receiver decoder unit, without changing the modulation of the signal. This transmission historically required separate wires running from the

ODU to each integrated receiver decoder unit. The '576 Patent provides the benefit of single wire transmission from the ODU to interior integrated receiver decoder units. AT&T and DirecTV implement this single wire transmission to provide the Accused Satellite Television Services by supplying and using, for example, SSC products.

104. AT&T and DirecTV have used, sold, and offered for sale the Accused Satellite Television Services that utilize SSC products, which include SSC-enabled LNBs (for example, SWM5-21 LNB and SWM-13 LNB) and switches (for example, SWM8, SWM16, and SWM30).

105. AT&T and DirecTV further have made, used, imported, supplied, distributed, sold, offered for sale, and leased SSC devices that perform the Accused Satellite Television Services.

106. AT&T and DirecTV directly infringe the method of at least Claim 14 of the '576 Patent during provision of the Accused Satellite Television Services by utilizing, for example, the SSC devices provided by AT&T and DirecTV.

107. The SSC devices remain the property of AT&T and DirecTV even when deployed at the property of a customer.

108. The Accused Satellite Television Services operate in a manner controlled and intended by AT&T and DirecTV.

109. As set forth in the attached non-limiting claim chart (Exhibit D), AT&T and DirecTV have directly infringed and are infringing at least Claim 14 of the '576 Patent by using, selling, and offering for sale the Accused Satellite Television Services.

110. Additionally, the use of the Accused Satellite Television Services by AT&T and DirecTV to, for example, demonstrate products in brick-and-mortar stores in Marshall, Texas or to, for example, test those products, constitute acts of direct infringement of at least Claim 14 of the '576 Patent.

111. AT&T and DirecTV have been aware that they infringe the '576 Patent since at least March 9, 2022 upon receipt of the letters attached as Exhibit G and Exhibit H, as well as the receipt of copies of the Original Complaint filed in this case on March 9, 2022 and served on March 10, 2022. Since obtaining knowledge of its infringing activities, AT&T and DirecTV have failed to cease their infringing activities.

112. Customers and subscribers of AT&T and DirecTV infringe at least claim 14 of the '576 Patent by using the claimed method, at least during the receipt of Accused Television Services utilizing, for example, SSC products, which include SSC-enabled LNBS (for example, SWM5-21 LNB and SWM-13 LNB) and switches (for example, SWM8, SWM16, and SWM30).

113. AT&T and DirecTV actively induce customers' direct infringement. For example, AT&T and DirecTV actively induce infringement of at least Claim 14 of the '576 Patent by providing the ODU and SSC products to AT&T and DirecTV customers, with specific instructions and/or assistance (including installation) regarding the use of the ODU and SSC products in a manner that infringes the '576 Patent in accordance with the ordinary course of operation of the Accused Satellite Television Services. AT&T and DirecTV provide the "satellite broadcast signals" claimed by the '576 Patent via the Accused Television Services, which enable and induce its customers to directly infringe the claim. AT&T and DirecTV knew that customer use of the ODU, the SSC products and the Accused Satellite Television Services provided by AT&T and DirecTV infringe at least Claim 14 of the '576 Patent. For at least the above-listed reasons, AT&T and DirecTV aid, instruct, support and otherwise acts with the intent to cause an end user to use the ODU and SSC products in a manner that infringes at least Claim 14 of the '576 Patent.

114. Furthermore, AT&T and DirecTV actively induce third parties to infringe by selling and offering for sale AT&T and DirecTV's products and services. For example, AT&T

and DirecTV actively induces third party internet service providers (“ISP’s”), such as CenturyTel Service Group, LLC d/b/a CenturyLink, to sell and offer for sale the Accused Satellite Television Services and the associated products and services provided via AT&T and DirecTV, which directly infringe at least Claim 14 of the ’576 Patent.

115. Additionally, AT&T and DirecTV contribute to the customers’ direct infringement. AT&T and DirecTV provide apparatuses, namely the ODU and SSC products, used by customers to perform at least Claim 14 of the ’576 Patent.

116. The ODU and SSC products have no substantial non-infringing uses. When an end user uses the ODU and SSC products in combination with, for example, the Accused Satellite Television Services, the end user directly infringes Claim 14 of the ’576 Patent. AT&T and DirecTV knew that the ODU and SSC products were especially made for use in an infringing manner prior to the filing of this lawsuit.

117. AT&T and DirecTV’s indirect infringement of at least Claim 14 of the ’576 Patent is continuous and ongoing via the provision of the Accused Satellite Television Services as well as technical assistance, support, installation, repair and replacement services provided by AT&T and DirecTV in support of the provision of the Accused Satellite Television Services.

118. The ’576 Patent is cited on the face of a number of DirecTV patents. These include U.S. Patent Nos. 8,997,157, 8,238,813, and 8,024,759. In U.S. Patent No. 8,024,759, the ’576 Patent was explicitly used by the examiner in the first non-final office action rejecting the then-pending claims of DirecTV’s patent application that led to U.S. Patent No. 8,024,759.

119. Entropic has been damaged as a result of the infringing conduct alleged above. AT&T and DirecTV are liable to Entropic in an amount that compensates Entropic for AT&T and

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

120. AT&T and DirecTV's infringement of the '576 Patent is, has been, and continues to be, willful, intentional, deliberate, and/or in conscious disregard of Entropic's rights under the patent.

121. Entropic has complied with 35 U.S.C. § 287 with respect to the '576 Patent.

SECOND CAUSE OF ACTION

(Infringement of the '715 Patent by AT&T and DirecTV)

122. Entropic incorporates by reference and realleges each and every allegation of Paragraphs 1 through 121 as if set forth herein.

123. Entropic owns all substantial rights, interest, and title in and to the '715 Patent, including the sole and exclusive right to prosecute this action and enforce the '715 Patent against infringers, and to collect damages for all relevant times.

124. The '715 Patent generally describes a system that receives a plurality of channels from an LNB, a frequency translator that shifts channels to new carrier frequencies, a signal combiner capable of combining at least two signals to produce a composite signal having the same modulation as the LNB channels, where the composite signal is transmitted on a coax cable to a gateway (for example, HR54/Genie and HS17/Genie 2).

125. AT&T and DirecTV have used, sold, and offered for sale the Accused Satellite Television Services that utilize gateway systems, which include SSC-enabled LNBs (for example, SWM5-21 LNB and SWM-13 LNB) and switches (for example, SWM8, SWM16, and SWM30) used with gateways such as the HR54/Genie and HS17/Genie 2.

126. AT&T and DirecTV further have made, used, imported, supplied, distributed, sold, offered for sale, and leased gateway systems that perform the Accused Satellite Television Services.

127. AT&T and DirecTV directly infringe at least Claim 9 of the '715 Patent during provision of the Accused Satellite Television Services by utilizing, for example, the gateway devices provided by AT&T and DirecTV.

128. The gateway systems remain the property of AT&T and DirecTV even when deployed at the property of a customer.

129. The Accused Satellite Television Services operate in a manner controlled and intended by AT&T and DirecTV.

130. As set forth in the attached non-limiting claim chart (Exhibit E), AT&T and DirecTV have directly infringed and are infringing at least Claim 9 of the '715 Patent by using, importing, selling, leasing, and offering for sale the Accused Satellite Television Services.

131. Additionally, the use of the Accused Satellite Television Services by AT&T and DirecTV to, for example, demonstrate products in brick-and-mortar stores in Marshall, Texas or to, for example, test those products, constitute acts of direct infringement of at least Claim 9 of the '715 Patent.

132. AT&T and DirecTV have been aware that they infringe the '715 Patent since at least March 9, 2022 upon receipt of the letters attached as Exhibit G and Exhibit H, as well as the receipt of copies of the Original Complaint filed in this case on March 9, 2022 and served on March 10, 2022. Since obtaining knowledge of its infringing activities, AT&T and DirecTV have failed to cease their infringing activities.

133. Customers and subscribers of AT&T and DirecTV infringe at least claim 9 of the '715 Patent by using the claimed system, at least during the receipt of Accused Television Services utilizing, for example, SSC products, which include SSC-enabled LNBs (for example, SWM5-21 LNB and SWM-13 LNB) and switches (for example, SWM8, SWM16, and SWM30) as arranged in a manner directed by AT&T and DirecTV.

134. AT&T and DirecTV actively induce customers' direct infringement. For example, AT&T and DirecTV actively induces infringement of at least Claim 9 of the '715 Patent by providing the ODU and SSC products to AT&T and DirecTV customers, with specific instructions and/or assistance (including installation) regarding the use of the ODU and SSC products in a manner that infringes the '715 Patent in accordance with the ordinary course of operation of the Accused Satellite Television Services. AT&T and DirecTV provide the "gateway in communication with [an] ODU," "signal selector," "frequency translator," and "signal combiner" claimed by the '715 Patent via the Accused Television Services, which enable and induce its customers to directly infringe the claim. For at least the above-listed reasons, AT&T and DirecTV aids, instructs, supports and otherwise acts with the intent to cause an end user to use the ODU and SSC products in a manner that infringes at least Claim 9 of the '715 Patent.

135. Furthermore, AT&T and DirecTV actively induce third parties to infringe by selling and offering for sale AT&T and DirecTV's products and services. For example, AT&T and DirecTV actively induces third party ISP's, such as CenturyTel Service Group, LLC d/b/a CenturyLink, to sell and offer for sale the Accused Satellite Television Services and the associated products and services provided via AT&T and DirecTV, which directly infringe at least Claim 9 of the '715 Patent.

136. Additionally, AT&T and DirecTV contribute to the customers' direct infringement. AT&T and DirecTV provide apparatuses, namely the ODU and SSC products, used by customers to perform at least Claim 9 of the '715 Patent.

137. The gateway systems and switches have no substantial non-infringing uses. When an end user uses the gateway systems and switches in combination with, for example, the Accused Satellite Television Services, the end user directly infringes at least Claim 9 of the '715 Patent. AT&T and DirecTV knew that the gateway systems and switches were especially made for use in an infringing manner prior to the filing of this lawsuit.

138. The '715 Patent is cited on the face of a number of DirecTV patents. These patents include U.S. Patent Nos. 7,987,486, 8,238,813, and 8,789,115. In U.S. Patent No. 8,238,813, the '715 Patent was explicitly used by the examiner in the first non-final office action rejecting the then-pending claims of DirecTV's patent application that led to U.S. Patent No. 8,238,813.

139. Entropic has been damaged as a result of the infringing conduct alleged above. AT&T and DirecTV are liable to Entropic in an amount that compensates Entropic for AT&T and DirecTV's infringement, which by law cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

140. AT&T and DirecTV's infringement of the '715 Patent is, has been, and continues to be, willful, intentional, deliberate, and/or in conscious disregard of Entropic's rights under the patent.

141. Entropic has complied with 35 U.S.C. § 287 with respect to the '715 Patent.

THIRD CAUSE OF ACTION

(Infringement of the '008 Patent by AT&T and DirecTV)

142. Entropic incorporates by reference and realleges each and every allegation of Paragraphs 1 through 141 as if set forth herein.

143. Entropic owns all substantial rights, interest, and title in and to the '008 Patent, including the sole and exclusive right to prosecute this action and enforce the '008 Patent against infringers, and to collect damages for all relevant times.

144. The '008 Patent generally describes a system that receives a signal having a range of frequencies, the digitization of the received signal, and reporting of certain signal characteristics to the source of the received signal.

145. AT&T and DirecTV have used, sold, and offered for sale the Accused Satellite Television Services that utilize monitoring equipment, which include certain monitoring devices (for example, HR54/Genie and HS17/Genie 2).

146. AT&T and DirecTV further have made, used, imported, supplied, distributed, sold, offered for sale, and leased monitoring devices that perform the Accused Satellite Television Services.

147. AT&T and DirecTV directly infringe at least Claim 3 of the '008 Patent during provision of the Accused Satellite Television Services by utilizing, for example, the monitoring devices provided by AT&T and DirecTV.

148. The monitoring devices remain the property of AT&T and DirecTV even when deployed at the property of a customer.

149. The Accused Satellite Television Services operate in a manner controlled and intended by AT&T and DirecTV.

150. As set forth in the attached non-limiting claim chart (Exhibit F), AT&T and DirecTV have directly infringed and are infringing at least Claim 3 of the '008 Patent by using, importing, selling, leasing, and offering for sale the Accused Satellite Television Services.

151. Additionally, the use of the Accused Satellite Television Services by AT&T and DirecTV to, for example, demonstrate products in brick-and-mortar stores in Marshall, Texas or to, for example, test those products, constitute acts of direct infringement of at least Claim 3 of the '008 Patent.

152. AT&T and DirecTV have been aware that they infringe the '008 Patent since at least March 9, 2022 upon receipt of the letters attached as Exhibit G and Exhibit H as well as the receipt of copies of the Original Complaint filed in this case on March 9, 2022 and served on March 10, 2022. Since obtaining knowledge of its infringing activities, AT&T and DirecTV have failed to cease their infringing activities.

153. Customers and subscribers of AT&T and DirecTV infringe at least claim 3 of the '008 Patent by using the claimed method, at least during the use of the monitoring devices (for example, HR54/Genie and HS17/Genie 2).

154. AT&T and DirecTV actively induce customers' direct infringement. For example, AT&T and DirecTV actively induces infringement of at least Claim 3 of the '008 Patent by providing the LNB, LNBF, and SSC products to AT&T and DirecTV customers, with specific instructions and/or assistance (including installation) regarding the use of the LNB, LNBF, and SSC products in a manner that infringes the '008 Patent in accordance with the ordinary course of operation of the Accused Satellite Television Services. AT&T and DirecTV provide the signals claimed by the '008 Patent via the Accused Television Services, which enable and induce its customers to directly infringe the claim. For at least the above-listed reasons, AT&T and DirecTV

aid, instruct, support and otherwise act with the intent to cause an end user to use the LNB, LNBF, and SSC products in a manner that infringes at least Claim 3 of the '008 Patent.

155. Furthermore, AT&T and DirecTV actively induce third parties to infringe by selling and offering for sale AT&T and DirecTV's products and services. For example, AT&T and DirecTV actively induces third party internet service providers ISP's, such as CenturyTel Service Group, LLC d/b/a CenturyLink, to sell and offer for sale the Accused Satellite Television Services and the associated products and services provided via AT&T and DirecTV, which directly infringe at least Claim 3 of the '008 Patent.

156. Additionally, AT&T and DirecTV contribute to the customers' direct infringement. AT&T and DirecTV provides apparatuses, namely the monitoring devices, used by customers to perform at least Claim 3 of the '008 Patent.

157. The monitoring devices have no substantial non-infringing uses. When an end user uses the monitoring devices in combination with, for example, the Accused Satellite Television Services, the end user directly infringes at least Claim 3 of the '008 Patent. AT&T and DirecTV knew that the monitoring devices were especially made for use in an infringing manner prior to the filing of this lawsuit.

158. AT&T and DirecTV's indirect infringement of at least Claim 3 of the '008 Patent is continuous and ongoing via the provision of the Accused Satellite Television Services as well as technical assistance provided by AT&T and DirecTV for equipment it provides to its customers in support of the provision of the Accused Satellite Television Services.

159. Entropic has been damaged as a result of the infringing conduct alleged above. AT&T and DirecTV are liable to Entropic in an amount that compensates Entropic for AT&T and

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

160. AT&T and DirecTV's infringement of the '008 Patent is, has been, and continues to be, willful, intentional, deliberate, and/or in conscious disregard of Entropic's rights under the patent.

161. Entropic has complied with 35 U.S.C. § 287 with respect to the '008 Patent.

JURY DEMAND

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

PRAYER FOR RELIEF

WHEREFORE, Entropic requests that:

A. The Court find that AT&T and DirecTV have directly infringed the Patents-in-Suit and hold DirecTV liable for such infringement;

B. The Court find that AT&T and DirecTV have indirectly infringed the Patents-in-Suit by inducing its customers to directly infringe the Patents-in-Suit and hold AT&T and DirecTV liable for such infringement;

C. The Court find that AT&T and DirecTV have indirectly infringed the Patents-in-Suit by contributing to AT&T and DirecTV's Customer's direct infringement of the Patents-in-Suit and hold AT&T and DirecTV liable for such infringement;

D. The Court award damages pursuant to 35 U.S.C. § 284 adequate to compensate Entropic for past infringement by AT&T and DirecTV of the Patents-in-Suit, including both pre- and post-judgment interest and costs as fixed by the Court;

E. The Court increase the damages to be awarded to Entropic by three times the amount found by the jury or assessed by the Court;

F. The Court declare that this is an exceptional case entitling Entropic to its reasonable attorneys' fees under 35 U.S.C. § 285; and

G. The Court award such other relief as the Court may deem just and proper.

Dated: March 30, 2022

Respectfully submitted,

/s/ James Shimota by permission Wesley Hill

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**ATTORNEYS FOR PLAINTIFF
ENTROPIC COMMUNICATIONS, LLC**

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service on this the 30th day of March, 2022.

/s/ Wesley Hill