IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PEGASUS WIRELESS INNOVATION LLC,

Plaintiff,

v.

AT&T INC., AT&T CORP., AT&T SERVICES, INC., AT&T MOBILITY LLC, AT&T MOBILITY II LLC, NEW CINGULAR WIRELESS PCS, LLC, and CRICKET WIRELESS LLC,

Defendants.

Civil Action No. _____

PATENT CASE

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement in which plaintiff Pegasus Wireless Innovation LLC ("Pegasus"), makes the following allegations against defendants AT&T Inc., AT&T Corp., AT&T Services, Inc., AT&T Mobility LLC, AT&T Mobility II LLC, New Cingular Wireless PCS, LLC, and Cricket Wireless LLC (collectively "AT&T").

BACKGROUND

1. This Complaint asserts causes of action for infringement of the following United States Patents owned by Pegasus: United States Patent Nos. 10,925,079 ("'079 Patent"), 11,569,958 ("'958 Patent"), 10,897,720 ("'720 Patent"), 10,791,530 ("'530 Patent"), and 11,671,218 ("'218 Patent") (collectively, the "Asserted Patents").

2. The Asserted Patents were invented by researchers at KT Corporation ("KT"). KT and Pegasus entered into an "Exclusive License Agreement," and KT transferred to Pegasus all substantial rights in the Asserted Patents. The Asserted Patents are fundamental to a variety of core technologies relating to wireless telecommunications.

3. KT is a leading provider of mobile voice and data telecommunications, fixed-line telephone services, broadband internet access services, and media and content services. KT was the first provider in the world to launch a commercially available 5G network.

4. KT has invested heavily in research and development to advance and improve telecommunication technology, including the implementation of fourth-generation/Long Term Evolution ("4G/LTE") and fifth-generation ("5G") technologies—the technologies at issue in this case. KT spends roughly $150 million annually on research and development and invests even more supporting its thousands of research engineers, who have made important contributions researching, developing, inventing, and standardizing critical telecommunications technologies. As a result, KT has developed one of the industry's strongest intellectual property portfolios, which includes more than 3,000 patents and patent applications worldwide that relate to wireless technology.

5. KT has actively contributed to the development of advanced telecommunications platforms including 4G/LTE and 5G. KT participated in dozens of meetings with standard-setting organizations to help standardize wireless technology, including 4G/LTE and 5G. KT has declared over 720 patent families as essential to wireless telecommunications standards to the European Telecommunications Standards Institute ("ETSI").

6. Before filing this Complaint, Pegasus repeatedly provided AT&T with notice of the Asserted Patents. Pegasus made a fair, reasonable, and non-discriminatory offer to AT&T, but AT&T did not respond with a counteroffer.

7. Pegasus brings this suit against AT&T seeking the Court's protection of its valuable intellectual property rights.

THE PARTIES

8. Plaintiff Pegasus Wireless Innovation LLC is a limited liability company organized and existing under the laws of Virginia, with its principal place of business at 20319 Kiawah Island Drive, Ashburn, Virginia 20147.

9. Defendant AT&T Inc. ("AT&T Inc.") is a Delaware corporation with a principal place of business at 208 S. Akard Street, Dallas, Texas 75202.

10. Defendant AT&T Corp. ("AT&T Corp.") is a New York corporation with a principal place of business at One AT&T Way, Bedminster, New Jersey 07921.

11. Defendant AT&T Services, Inc. ("AT&T Services") is a Delaware corporation with a principal place of business at 208 S. Akard Street, Dallas, Texas 75202.

12. Defendant AT&T Mobility LLC ("AT&T Mobility") is a Delaware limited liability company with a principal place of business at 1025 Lenox Park Boulevard NE, Atlanta, Georgia 30319.

13. Defendant AT&T Mobility II LLC ("AT&T Mobility II") is a Delaware limited liability company with a principal place of business at 1025 Lenox Park Boulevard NE, Atlanta, Georgia 30319.

14. Defendant New Cingular Wireless PCS, LLC ("Cingular Wireless") is a Delaware limited liability company with a principal place of business at 1025 Lenox Park Boulevard NE, Atlanta, Georgia 30319.

15. Defendant Cricket Wireless LLC ("Cricket Wireless") is a Delaware limited liability company with a principal place of business at 1025 Lenox Park Boulevard NE, Atlanta, Georgia 30319.

16. AT&T is doing business, either directly or acting through its agents or agent subsidiaries, on an ongoing basis in this judicial district and elsewhere in the United States, and

has a regular and established place of business in this judicial district. AT&T can be served with process through its registered agent, The Corporation Trust Center, 1209 Orange Street, City of Wilmington, County of New Castle, Delaware 19808.

JURISDICTION AND VENUE

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

18. This Court has personal jurisdiction over AT&T because, among other things, AT&T has minimum contacts with Texas and this district such that this venue is a fair and reasonable one. AT&T conducts substantial business in this forum, including (i) engaging in the infringing conduct alleged below and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Texas and in this district. This cause of action arises, at least in part, from AT&T's contacts with and activities in the Eastern District of Texas and the State of Texas.

19. Venue in the Eastern District of Texas is proper under 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

20. Upon information and belief, AT&T has committed infringing acts in this judicial district by making, using, offering for sale, selling, or importing products or services that infringe the Asserted Patents (as defined above), or by inducing others to infringe the Asserted Patents. On information and belief, AT&T maintains a "regular and established" place of business in this district, including by (a) maintaining or controlling retail stores in this district, (b) maintaining and operating infringing base stations in this district, including on cellular towers and other installation sites owned or leased by them, and (c) maintaining and operating other places of business in this district, including those where research, development, or sales are conducted, where customer service is provided, or where repairs are made.

21. Upon information and belief, AT&T has a regular and established physical presence in the district, including but not limited to, ownership of or control over property, inventory, or infrastructure. AT&T's website (http://www.att.com/stores/) displays information for retail stores located at 1712 E. Grand Avenue, Marshall, Texas 75670; 4901 N. Stateline Avenue, Suite 900, Texarkana, Texas 75503; 5112 Summerhill Road, Texarkana, Texas 75503; 4757 South Broadway Avenue, Tyler, Texas 75703; 2028 E. Southeast Loop 323, Tyler, Texas 75701; and 8922 South Broadway Avenue, Tyler, Texas 75703 (among others), all of which lie within this federal judicial district.

22. AT&T is registered to do business in the State of Texas.

23. Upon information and belief, AT&T also has offices, including what it refers to as AT&T Foundry in Plano, Texas, which it uses to design, test, use and sell telecommunications services, including services that infringe the Asserted Patents.

24. In other recent actions, AT&T has either admitted or not contested that this federal judicial district is a proper venue for patent infringement actions against it. *See*, *e.g.*, Answer at ¶ 19, *Pegasus Wireless Innovation LLC v. Cellco P'ship d/b/a Verizon Wireless et al.*, No. 2:23-cv-00640 (E.D. Tex. Mar. 25, 2024), ECF No. 39; Answer at 2, 3, ¶ 6, *Finesse Wireless LLC v. AT&T Mobility LLC*, No. 2:21-cv-316 (E.D. Tex. Sep. 03, 2021), ECF No. 14; Answer at 2, ¶ 6, *Ramrod Licensing LLC v. AT&T Mobility LLC*, No. 2:21-cv-117 (E.D. Tex. Jul. 08, 2021), ECF No. 21; Answer at 2, 3, ¶ 6, *Finesse Wireless LLC v. AT&T Mobility LLC*, No. 2:21-cv-063 (E.D. Tex. May 04, 2021), ECF No. 24; Answer ¶¶ 12–13 & Counterclaims ¶ 2, *IPCom, Gmbh & Co. KG v. AT&T Inc., et al.*, No. 2:20-cv-322 (E.D. Tex. Dec. 18, 2020), ECF No. 21; Answer at 3, ¶ 14, *Kaifi, LLC v. AT&T Corp. et al.*, No. 2:19-cv-138 (E.D. Tex. Jul. 08, 2019), ECF No. 17; Answer to Am. Compl. ¶¶ 14, 17, *Sol IP v. AT&T Mobility LLC*, No. 2:18-cv-526 (E.D. Tex. Apr.

4, 2019), ECF No. 113. AT&T has also admitted or failed to contest that it has transacted business in this district. *See, e.g.*, *Sol IP*, Answer to Am. Compl. ¶¶ 15–17; *IPCom*, Answer ¶¶ 11–13.

25. AT&T derives benefits from its presence in this federal judicial district, including, but not limited to, sales revenue and serving customers using its mobile network in this district. For example, AT&T receives revenue from its corporate stores in this district, by selling network access, phones/products, and services, and by receiving payment for network access, phones/products, and services.

ACCUSED STANDARDS AND INSTRUMENTALITIES

26. The Third Generation Partnership Project ("3GPP") is an organization that maintains and develops globally applicable technical specifications for cellular telecommunications technologies, including the specifications for implementation and use of mobile wireless communications for high-speed data referred to as the 4G/LTE and 5G Standards. Organizational partners of 3GPP include standard-development organizations from around the world, including (among others) the Alliance for Telecommunications Industry Solutions ("ATIS"), which represents North America in 3GPP, the European Telecommunications Standards Institute ("ETSI"), which represents Europe in 3GPP, and the Telecommunications Technology Association ("TTA"), which represents Korea in 3GPP.

27. Implementation and use of the 4G/LTE and 5G Standards, including but not limited to use of wireless communications products and services compliant with the 4G/LTE and 5G specifications as detailed in various 3GPP technical specification series, has increased in recent years and continues to increase at a rapid pace.

28. 3GPP uses a system of "releases" to provide developers with a stable platform for the implementation of features. 3GPP makes its technical specifications available through the 3GPP website, including Releases 8–19, which outline the 4G/LTE Standards and/or 5G

Standards. In North America, ATIS publishes the same standards with an ATIS cover page. Accordingly, references to 3GPP technical specifications in this Complaint should be understood to include the corresponding ATIS documents. Each new release improves upon past releases and provides new standardized functionalities. Release 8 was the basis for the deployment of the standard technology known as 4G/LTE. Subsequent enhancements were incorporated into the 4G/LTE standards in later releases. Release 10, which includes the technology of Release 8, was the basis for the deployment of an advanced form of 4G/LTE called LTE-Advanced ("LTE-A"). Releases 9, 11, 12, 13, and 14 included important updates to the 4G/LTE and LTE-A standards.

29. Release 15 introduced the first full set of 5G standards and was the basis for deploying the entire suite of 5G functionalities. Release 16 introduced additional 5G functionalities, including enhancements to many aspects of the 5G system, such as coverage, capacity, latency, power, mobility, reliability, and ease of deployment. Release 17 further enhanced 5G's technological foundations and broadened 5G's reach to new use cases, deployments, and network topologies. Release 18, with additional improvements called 5G-Advanced, has entered frozen status within 3GPP, and work on future Release 19 pertaining to more advanced 5G and 6G technologies is ongoing.

KT CONTRIBUTIONS TO WIRELESS TECHNOLOGY

30. Founded in 1981, KT has served Korea and the world as a leading provider of mobile voice and data telecommunications, fixed-line telephone services, broadband internet access, and media and content services. Before 1991, KT was the sole provider of local, domestic long-distance, and international long-distance telephone services in Korea. KT continues to serve

Korea and the world as a leading provider of mobile voice and data telecommunications, fixed-line telephone services, broadband internet access services, and media and content services.[1]

31. KT is committed to investing in research and development to advance and improve telecommunication technology, including the implementation of 5G technologies. From 2021 to 2023, KT invested over $467 million in research and development.[2] This $467 million does not include KT's compensation to its thousands of research engineers.

32. In March 2015, KT's Chairman Hwang Chang-Gyu delivered a keynote address titled "5G and Beyond, Accelerating the Future," at the 2015 Mobile World Congress in Barcelona, Spain announcing KT's "5G Vision."[3] During his address, Chairman Hwang proclaimed, "In the era of the Internet of Things (IoT), where all devices are connected through a network, an ultra large 5G network with real-time hyper speed is a must."[4]

33. In July 2015, KT, in collaboration with 6 global mobile vendors, opened its 5G R&D Center in the Woomyon Research Center in Seoul, Korea, "to take the lead in development of 5G ecosystem around the world."[5]

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[1] KT Corporation, Annual Report (Form 20-F), at 20–22 (Apr. 30, 2024).

[2] KT Corporation, Annual Report (Form 20-F), at 47–48 (Apr. 30, 2024).

[3] *5G Vision*, KT Corporation, https://m.corp.kt.com/eng/html/biz/services/vision.html (last visited Mar. 7, 2025); Ji-young, Sohn, *KT Shows Off Futuristic 5G Technologies at MWC*, The Korea Herald (Mar. 6, 2015), https://www.koreaherald.com/view.php?ud=20150306000357 (last visited Mar. 7, 2025).

[4] *KT CEO Hwang Chang-Gyu, The Only CEO in the Asia Region, Gives Keynote Speech at the MWC*, Netmanias (Mar. 4, 2015), https://www.netmanias.com/en/post/korea_ict_news/7338/5g-iot-kt-mwc-2015/kt-ceo-hwang-chang-gyu-the-only-ceo-in-the-asia-region-gives-keynote-speech-at-the-mwc (last visited Mar. 7, 2025).

[5] *KT Opened 5G R&D Center with 6 Global Mobile Vendors*, Netmanias (July 16, 2015), https://www.netmanias.com/en/post/korea_ict_news/7682/5g-kt-korea/kt-opened-5g-r-d-center-with-6-global-mobile-vendors (last visited Mar. 7, 2025).

34. During the 2018 Winter Olympics in PyongChang, Korea, KT led the world's first broad-scale trial of 5G technology powered by KT's mobile network. For example, multiple 5G-connected cameras were placed along the cross-country course in Alpensia capturing skiers as they traveled along their path and transmitting the high-resolution video over KT's Olympic 5G network at gigabit speeds.[6]

35. On April 3, 2019, KT launched the first commercially available 5G network in the world.[7]

36. KT was actively involved in helping standard-setting organizations develop a range of essential 4G and 5G technology. For example, KT participated in many 3GPP meetings related to RAN 1, RAN 2, and RAN 3 technology.[8]

Meeting Info.	Title	contributors
3GPP RAN2#78	Discussion on continuing ROHC context after handover	Samsung, Alcatel-Lucent, KDDI, KT Corp., LGU+, SK Telecom
3GPP RAN2#78	Draft CR to 36.323 to support ROHC context continue	Samsung, Alcatel-Lucent, KDDI, KT Corp., LGU+, SK Telecom
3GPP RAN2#78	Draft CR to 36.331 to support ROHC context continue	Samsung, Alcatel-Lucent, KDDI, KT Corp., LGU+, SK Telecom
3GPP RAN2#78	Discussion on continuing ROHC context after handover	Samsung, Alcatel-Lucent, KT Corp., LGU+, Nokia Siemens Networks
3GPP RAN2#78	Draft CR to 36.323 to support ROHC context continue	Samsung, Alcatel-Lucent, KT Corp., LGU+, Nokia Siemens Networks
3GPP RAN2#78	Draft CR to 36.331 to support ROHC context continue	Samsung, Alcatel-Lucent, KT Corp., LGU+, Nokia Siemens Networks

[6] *Fans of the Olympic Winter Games 2018 to Experience World's First Broad-scale 5G Network*, International Olympic Committee (Feb. 9, 2018), https://olympics.com/ioc/news/fans-of-the-olympic-winter-games-2018-to-experience-world-s-first-broad-scale-5g-network (last visited Mar. 7, 2025); *KT Showcases 5G Innovation at the Olympics in PyeongChang*, International Telecommunications Union (Apr. 29, 2020), https://www.itu.int/hub/2020/04/kt-showcases-5g-innovation-at-the-olympics-in-pyeongchang (last visited Mar. 7, 2025).

[7] KT Corporation, *KT Launches World's First Commercial 5G Network*, Cision US (Apr. 11, 2019), https://www.prnewswire.com/news-releases/kt-launches-worlds-first-commercial-5g-network-300830635.html (last visited Mar. 7, 2025). AT&T and AT&T claimed to launch 5G networks before KT, but AT&T's network was only available in 12 cities via a mobile hotspot (not on a 5G mobile phone), and AT&T's network launched in only 2 cities after KT launched its 5G network. *See* Reuters, *Who was first to launch 5G? Depends who you ask* (Apr. 5, 2019), available at https://www.reuters.com/article/us-telecoms-5g/who-was-first-to-launch-5g-depends-who-you-ask-idUSKCN1RH1V1 (last visited Mar. 7, 2025).

[8] 3GPP Meetings for Group R1, https://www.3gpp.org/dynareport?code=Meetings-R1.htm (last visited Mar. 7, 2025).

Meeting Info.	Title	contributors
3GPP RAN3#92	Motivation for standard interface between central and distributed units	NTT DOCOMO, INC., KT Corp, Softbank, TIM, Verizon, SKT, Deutsche Telekom, CMCC
3GPP RAN3#92	Motivation for standard interface between central and distributed units	NTT DOCOMO, INC., KT Corp, Softbank, TIM, Verizon, SKT, Deutsche Telekom, CMCC, AT&T
3GPP RAN3#93	C-plane and U-plane separation of NR RAN	Intel Corporation, KT Corp., Deutsche Telekom, AT&T, Samsung, Telecom Italia
3GPP RAN3#93	NR RAN internal functional split and interface	KT Corp
3GPP RAN3#93	Fronthaul transport network aspects	Intel Corporation, KT Corp
3GPP RAN3#93bis	Consideration for NR RAN internal interface for higher layer functional split	KT Corp

37. KT holds more than 3,000 worldwide patents and patent applications related to wireless technology. As a member of ETSI and 3GPP, KT has declared 721 patent families to be essential to the 4G/LTE and/or 5G standards. As detailed in Counts One through Five below, the Asserted Patents were incorporated into and are essential to the 4G/LTE and 5G standards.

38. AT&T is a 3GPP member organization or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard-essential patents and, through 3GPP, AT&T received notice of the standard-essential patents at issue here, including the Asserted Patents, when they were disclosed to 3GPP via its organizational partners, including ETSI.

DEFENDANTS' MOBILE NETWORK AND DEVICE OFFERINGS

39. AT&T operates and sells access to a mobile network that provides telecommunication, Internet, and other services to customers via cellular base stations located in this district and throughout the United States (the "AT&T Base Stations"). The AT&T Base Stations employ technology that infringes the Asserted Patents by operating in accordance with 3GPP 4G/LTE and 5G Standards, including Releases 8–15.

40. AT&T's mobile network, including the AT&T Base Stations, infringes the Asserted Patents by communicating with customers' mobile devices (also referred to as "terminals" or "user equipment"), such as mobile phones, smartphones, tablets, and mobile hotspots, in accordance with 4G/LTE and/or 5G mobile network standards. AT&T also sells mobile devices, through channels including its website and retail stores, that infringe the Asserted Patents by communicating in accordance with those 4G/LTE and/or 5G Standards for use on its

network. For the avoidance of any doubt, vehicles, smart utility meters, and/or aftermarket devices meant to be installed and/or used primarily in or on a vehicle that provide wireless connectivity that incorporate one or more of the 4G/LTE and/or 5G Standards, to the extent that AT&T sells or uses them, are not Accused Instrumentalities for purposes of this Complaint.

41. In public documents, AT&T states that it has a market-leading 4G/LTE and 5G mobile network, meaning that the network communicates in accordance with, at a minimum, 3GPP Releases 8–15, thereby infringing the Asserted Patents. According to AT&T's website, "[w]e cover more than 99% of the U.S. population."[9] The website also boasts that "AT&T continues to expand its 5G network and invest in new wireless technology."[10]

42. AT&T further infringes the Asserted Patents on its website by encouraging prospective customers and visitors to use its 4G or 5G network, stating, for example, "5G is the fifth-generation technology standard for broadband cellular networks. 5G technology enables faster data rates with lower latency in transmitting data than previous generations. Whenever you use your phone, tablet, or other connected device away from your home internet connection, you rely on wireless service for any task that requires data. That means the better your wireless network, the better performance you'll have for doing everything you love on your connected devices—whether that's online gaming, streaming videos, or downloading large files. Where 5G is available, it can help you enjoy better speeds with your 5G compatible device and rate plan with 5G access. . . . 5G is transforming our society in many ways. It's not just hosting smartphones and other wireless devices; it's also crucial for interconnecting smart healthcare technologies. In the

[9] AT&T, *Our Award-Winning Network*, AT&T Offers, https://www.att.com/offers/network.html (last visited Mar. 7, 2025).
[10] *Id.*

near- and mid- term future, 5G-connected medical tech is expected to revolutionize healthcare in ways that could benefit us all."[11]

43. AT&T also uses its website to advertise the infringing methods of its mobile network to actual and potential U.S. customers. AT&T's website advertises mobile devices identified as supporting 4G/LTE and/or 5G, meaning that they communicate in accordance with, at a minimum, 3GPP Releases 8–15. These devices include the Google Pixel 9 Pro, Google Pixel 9 Pro XL, Google Pixel 9, Google Pixel 7a, Google Pixel 8, Motorola razr+ 2024, Motorola moto g stylus 5G – 2024, and Motorola moto g stylus 5G – 2023 (collectively, the "Accused Devices").[12]

44. AT&T's website states that substantial portions of its mobile network are 5G and 4G/LTE. In addition, the website provides a coverage map that identifies the maximum cellular network speeds available by location nationwide, including within Texas. According to the map, a majority of the cities in this district have 4G/LTE and/or 5G coverage. Among the cities in this district identified with 5G coverage are Marshall, Beaumont, Lufkin, Sherman, Tyler, and Texarkana.[13]

[11] AT&T, *AT&T 5G*, AT&T Consumer, https://www.att.com/5g/consumer/ (last visited Mar. 7, 2025).

[12] AT&T, *Buy 5G Phones, Cell Phones & Smartphones*, https://www.att.com/buy/phones/browse/5g/ (last visited Mar. 7, 2025).

[13] AT&T, *Wireless Coverage Map for Voice and Data Coverage from AT&T*, AT&T Maps, https://www.att.com/maps/wireless-coverage.html (last visited Mar. 7, 2025).

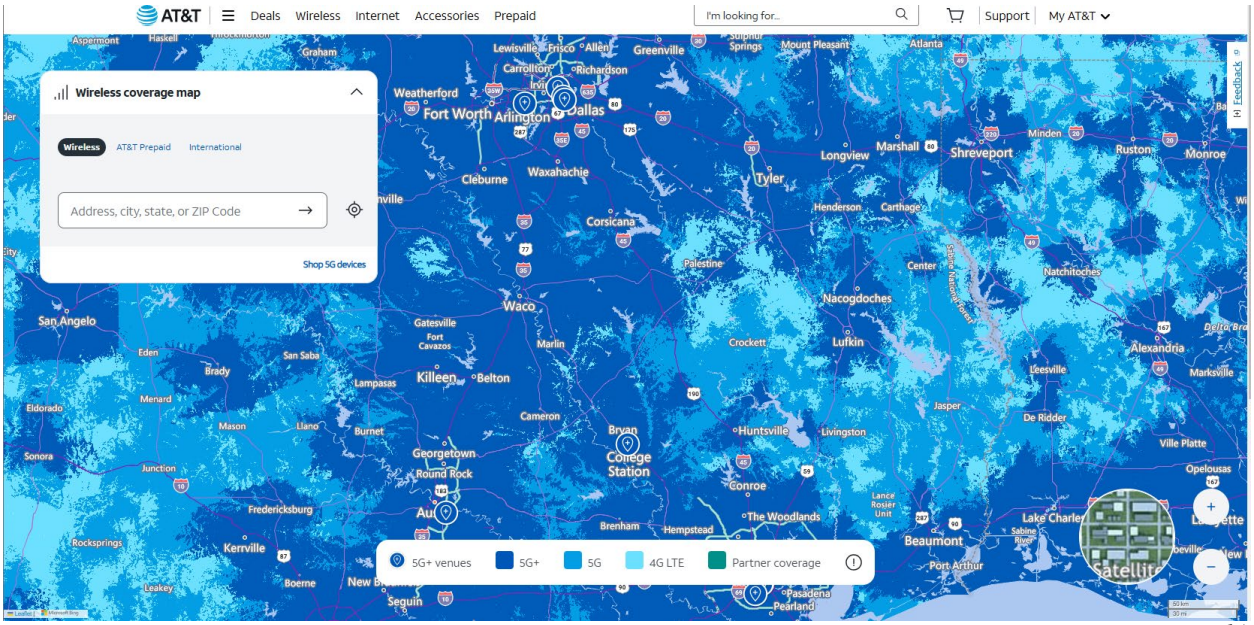

Figure 1: Coverage map from AT&T website showing 5G and 4G/LTE coverage in East Texas[14]

45. On information and belief, AT&T's mobile network, including the AT&T Base Stations, and the Accused Devices all operate in accordance with 4G/LTE and/or 5G standards, including Releases 8–15, thereby infringing the Asserted Patents. For example, on information and belief, AT&T sells access to AT&T's mobile network and AT&T Base Stations to customers, advertising to these customers that AT&T's network operates in accordance with 4G/LTE and 5G Standards.

46. On information and belief, AT&T also sells the Accused Devices, which are 4G/LTE and/or 5G capable phones that operate in accordance with 4G/LTE and/or 5G Standards and provide customers with access to AT&T's mobile network and the AT&T Base Stations.

[14] *Id.* (screenshot taken Mar. 7, 2025).

PEGASUS'S OFFERS TO LICENSE THE ASSERTED PATENTS ON FAIR, REASONABLE, AND NON-DISCRIMINATORY TERMS

47. On September 7, 2022, Pegasus entered into an "Exclusive License Agreement" and acquired from KT all substantial rights in and to the Asserted Patents, incuding the exclusive right to assert all causes of action under the Asserted Patents, the exclusive right to any remedies for the infringement of the Asserted Patents, and the exclusive right to sublicense the Asserted Patents.

48. In a December 16, 2022, letter to AT&T, counsel for Pegasus wrote that "we write to advise you that AT&T has been offering and selling products and services which implement 4G and/or 5G, commonly marketed as 4G/LTE, 4G, LTE, LTE-A, LTE-Advanced, 5G, and/or 5G NR. 4G and 5G depend on the technical teachings of numerous patents developed by KT Corporation (formerly Korea Telecom)." In the same letter, counsel for Pegasus informed AT&T that "[m]any of those patents have been declared essential to the 4G and/or 5G standards." Counsel referred to these patents as the "KT 4G and 5G Essential Patents."

49. Counsel attached to the December 2022 letter a list of the KT 4G and 5G Essential Patents. The attachment lists, among others, the patents referenced in Counts One through Eleven.

50. In the December 2022 letter, counsel further wrote that "[w]e believe that your company is infringing the KT 4G and 5G Essential Patents by making, using, offering for sale, selling, or importing products or services that implement the 4G and/or 5G standards, or by inducing others to infringe the KT 4G and 5G Essential Patents."

51. In the same December 2022 letter, counsel for Pegasus "offer[ed] a license to AT&T under the KT 4G and 5G Essential Patents, [including the Asserted Patents,] on fair, reasonable, and non-discriminatory terms" and expressed a willingness to negotiate details of a

license with AT&T. Between December 2022 and December 2023, Pegasus and AT&T continued discussions by phone and through several emails exchanges.

52. In 2024, Pegasus again initiated negotiations regarding its standard-essential patents, including the Asserted Patents. The parties engaged in at least three conference calls, and Pegasus offered to license its standard-essential patents, including the Asserted Patents, on fair, reasonable, and non-discriminatory terms. The negotiations were ultimately unsuccessful due to AT&T's refusal to provide a counteroffer or otherwise respond meaningfully to Pegasus's offer.

53. Pegasus negotiated with AT&T in good faith but, after engaging in multiple discussions, Pegasus and AT&T were unable to reach an agreement to license the Asserted Patents on fair, reasonable, and non-discriminatory terms.

54. Pursuant to 35 U.S.C. § 287(a), Pegasus notified AT&T of its infringement at least as early as December 16, 2022, and AT&T continued to infringe thereafter. Accordingly, Pegasus is entitled to recover pre-suit damages at least as early as December 16, 2022.

COUNT ONE
Infringement of the '079 Patent

55. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

56. On February 16, 2021, the United States Patent and Trademark Office duly and legally issued the '079 Patent entitled "Method and Device for Scheduling Uplink and Downlink Data Channel in Next Generation Wireless Network." A true and correct copy of the '079 Patent is attached as Exhibit 1 to this Complaint.

57. On March 29, 2019, Kyujin Park and Woo-jin Choi, the inventors of the '079 Patent, assigned all title, rights, and interest in and to the '079 Patent to KT. The assignment was recorded with the United States Patent and Trademark Office on April 9, 2021.

58. On September 7, 2022, KT and Pegasus entered the "Exclusive License Agreement," and KT assigned all substantial rights in and to the '079 Patent to Pegasus.

59. Pegasus holds all substantial rights in and to the '079 Patent, including the exclusive right to assert all causes of action under the '079 Patent and the exclusive right to any remedies for the infringement of the '079 Patent.

60. AT&T is not licensed under the '079 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '079 Patent whatsoever.

61. The '079 Patent generally relates to an apparatus and a method for scheduling an uplink signal and a downlink data channel in a 5G network. The claims of the '079 Patent recite novel and inventive systems and methods for numerology-aware scheduling of a downlink data channel and an uplink signal in a 5G network, and determining the slot index of the scheduled DL data channel based on timing gap and subcarrier spacing values.

62. Claims of the '079 Patent, including but not limited to independent claims 1, 6, and 8, are essential to certain 5G Standards, including Release 15 (and later) and its technical specifications, including but not limited to TS 38.211, TS 38.212, TS 38.213, TS 38.214, and TS 38.300, which include inventions covered by the '079 Patent. The claimed methods involve a user equipment scheduling an uplink (UL) signal or a downlink (DL) data channel by receiving from a base station scheduling information on the UL signal (including an UL control channel) and the DL data channel through a DL control channel, where the scheduling information includes timing relationship configuration information (including timing gap information) between particular channels, the numerology of a carrier for receiving particular channels are different, and a particular process is applied to determine the slot index of the scheduled DL data channel based on timing gap and subcarrier spacing values, such as in claims 1, 6 and 8.

63. AT&T has and continues, without authorization, to operate and use, and/or to induce and contribute to the operation and use by others of equipment and services that practice one or more claims of the '079 Patent literally or under the doctrine of equivalents (hereafter "'079 Accused Instrumentalities"). At a minimum, such '079 Accused Instrumentalities include (1) AT&T's mobile network, including the AT&T Base Stations and all base station equipment configured to operate in accordance with Release 15 (or later), and (2) all Accused Devices that are configured to operate in accordance with Release 15 (or later).

64. AT&T has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, method and apparatus at least claims 1, 6, and 8 of the '079 Patent under 35 U.S.C. § 271(a) by operating and using, and/or inducing and contributing to the operation and use by others of the '079 Accused Instrumentalities in the United States as described in paragraph 63 above. The '079 Accused Instrumentalities infringe at least claim 6 of the '079 Patent by practicing the 5G Standard, as indicated in AT&T's public statements in paragraphs 39-44 above. The '079 Accused Instrumentalities operate consistent with the 5G requirements of at least Release 15. This includes the ability to perform numerology-aware scheduling of a downlink data channel and an uplink signal in a 5G network, and determining the slot index of the scheduled DL data channel based on timing gap and subcarrier spacing values, as described in claim 6 of the '079 Patent. (See, e.g., TS 38.211, TS 38.212, TS 38.213, TS 38.214, and TS 38.300.)

65. For example, Release 15's technical specifications show that the 5G standard requires a 5G mobile network or device, such as the '079 Accused Instrumentalities, to have the ability to configure scheduling information for scheduling a UL control signal and a DL data channel and transmit the scheduling information from a base station (BS) to a user equipment (UE) using downlink control information (DCI) Format 1_0 on a physical DL control channel (PDCCH)

(e.g., TS 38.212 Sections 4.2 and 7.3.1.2.1, TS 38.213 Section 9.2.3 and TS 38.300 Sections 5.2.3 and 5.3.3). DCI Format 1_0 specifies timing relationship between the DL control channel and the DL data channel through time domain resource assignment. DCI Format 1_0 also specifies the transmission of timing relationship between the DL data channel and the UL control channel through PDSCH-to-HARQ_feedback timing indicator (e.g., TS 38.212 Section 7.3.1.2.1, TS 38.214 Section 5.1.2.1 and TS 38.213 Section 9.2.3). The 5G standard specifies different numerologies for the DL data channel and the DL control channel and a timing gap information, K_0 (e.g., TS 38.214 Section 5.1.2.1), as described in claim 6 of the '079 Patent. In particular, claim 6 of the '079 Patent discloses that the slot index of the DL data channel is computed as a particular function of: a slot index of the DL control channel, a value of a subcarrier spacing of the carrier for receiving the DL control channel, a value of a subcarrier spacing of a carrier of the DL data channel, and a value of the timing gap information (e.g., TS 38.214 Section 5.1.2.1 and TS 38.211 Section 4.2).

66. AT&T operates and sells within the United States access to its 5G mobile network that includes base stations that communicate with user mobile devices in accordance with Release 15 (or later), thereby infringing at least claims 1, 6, and 8 of the '079 Patent.

67. In addition, AT&T has indirectly infringed and continues to indirectly infringe the '079 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Devices with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the Accused Devices are not a staple article of commerce suitable for substantial non-infringing use.

68. For example, AT&T knew that the functionality included in the Accused Devices enables each to communicate in accordance with Release 15 (and later), and that such functionality infringes the ’079 Patent, including claims 1, 6, and 8.

69. The infringing aspects of the Accused Devices can be used only in a manner that infringes the ’079 Patent and thus have no substantial non-infringing uses. Those instrumentalities communicate in accordance with Release 15 (and later) specifically so that they can operate on AT&T’s mobile network. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

70. AT&T’s acts of infringement have caused and continue to cause damage to Pegasus, and Pegasus is entitled to recover from AT&T the damages it has sustained as a result of those wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty for the use made of the invention in the ’079 Patent, together with interest and costs as fixed by the Court.

71. AT&T has had knowledge and notice of the ’079 Patent and its infringement from the time that KT declared to 3GPP or any of its organizational partners that the ’079 Patent was essential to the 4G/LTE Standard and/or 5G Standard because AT&T is a member of 3GPP and/or its organizational partners. In addition, AT&T has had knowledge and notice of the ’079 Patent and its infringement since (i) at least December 2022, when it received the 2022 Notice Letter, and/or when it received subsequent correspondence identifying the patent, (ii) at least late 2024, when it engaged in ultimately unsuccessful negotiations for licenses on fair, reasonable, and non-discriminatory terms for Pegasus’s standard-essential patents, and (iii) at least, and through, the filing and service of the Complaint. Despite this knowledge, AT&T continued to commit the infringing acts mentioned above.

72. Upon information and belief, AT&T's infringement of the '079 Patent is willful and deliberate, entitling Pegasus to the recovery of enhanced damages under 35 U.S.C. § 284. AT&T has infringed and continues to infringe the '079 Patent despite the risk of infringement being either known or so obvious that it should have been known to AT&T.

COUNT TWO
Infringement of the '958 Patent

73. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

74. On January 31, 2023, the United States Patent and Trademark Office duly and legally issued the '958 Patent entitled "Method and Apparatus for Transmitting Reference Signal or Frequency Offset Estimation in New Wireless Communication System." A true and correct copy of the '958 Patent is attached as Exhibit 2 to this Complaint.

75. On December 23, 2022, Ki-tae Kim and Woo-jin Choi, the inventors of the '958 Patent, assigned all title, rights, and interest in and to the '958 Patent to KT. The assignment was recorded with the United States Patent and Trademark Office on October 11, 2023.

76. On September 7, 2022, KT and Pegasus entered the "Exclusive License Agreement," and KT assigned all substantial rights in and to the '958 Patent to Pegasus.

77. Pegasus holds all substantial rights in and to the '958 Patent, including the exclusive right to assert all causes of action under the '958 Patent and the exclusive right to any remedies for the infringement of the '958 Patent.

78. AT&T is not licensed under the '958 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '958 Patent whatsoever.

79. The '958 Patent generally relates to an apparatus that efficiently supports synchronization and reference signals in a 5G network. The claims of the '958 Patent recite novel

and inventive systems for synchronization and reference signal configuration, enabling support for 5G's flexible numerology.

80. Claims of the '958 Patent, including not limited to independent claims 1, 6, and 11 are essential to certain 5G Standards, including Release 15 (and later) and its technical specifications, including but not limited to TS 38.214, TS 38.211 and TS 38.331, which include inventions covered by the '958 Patent. The claimed apparatus claims involve a transmitter or a receiver to either transmit or receive a synchronization signal in a first set of one or more symbols, a radio resource control (RRC) signal including configuration about a reference signal, and a reference signal in a second set of one more symbols, where the referenced signal is configured based on a numerology, such as in claims 1, 6 and 11.

81. AT&T has and continues, without authorization, to operate and use, and/or to induce and contribute to the operation and use by others of equipment and services that practice one or more claims of the '958 Patent literally or under the doctrine of equivalents (hereafter "'958 Accused Instrumentalities"). At a minimum, such '958 Accused Instrumentalities include (1) AT&T's mobile network, including the AT&T Base Stations and all base station equipment configured to operate in accordance with Release 15 (or later), and (2) all Accused Devices that are configured to operate in accordance with Release 15 (or later).

82. AT&T has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, at least independent claims 1, 6, and 11 of the '958 Patent under 35 U.S.C. § 271(a) by operating and using, and/or inducing and contributing to the operation and use by others of the '958 Accused Instrumentalities in the United States as described in paragraph 83 above. The '958 Accused Instrumentalities infringe at least claim 6 of the '958 Patent by practicing the 5G Standard, as indicated in AT&T's public statements in paragraphs 39-44 above.

The ’958 Accused Instrumentalities operate consistent with the 5G requirements of at least Release 15. This includes the ability to perform synchronization and reference signal configuration, enabling support for 5G’s flexible numerology, as described in claim 6 of the ’958 Patent. (See, e.g., TS 38.214, TS 38.211, and TS 38.331.)

83. For example, Release 15’s technical specifications show that the 5G standard requires a 5G mobile network or device, such as the ’958 Accused Instrumentalities, to comprise a controller that controls a transmitter and receiver to transmit a synchronization signal in a first set of one or more symbols (e.g., TS 38.211 Section 7.4.3.1), a radio resource control (RRC) signal including configuration information about a reference signal (e.g., TS 38.214 Section 5.1.6.1.1 and TS 38.331 on NZP-CSI-RS-ResourceSet), and a reference signal in a second set of one or more symbols based on the configuration information (e.g., TS 38.214 Section 5.1.6.1.1 and TS 38.211 Section 7.4.1.5.3), as described in claim 6 of the ’958 Patent. In particular, claim 6 of the ’958 Patent discloses the reference signal is configured based on a numerology (e.g., TS 38.211 Section 7.4.1.5.3).

84. AT&T operates and sells within the United States access to its 5G mobile network that includes base stations that communicate with user mobile devices in accordance with Release 15 (or later), thereby infringing at least claims 1, 6, and 11 of the ’958 Patent.

85. In addition, AT&T has indirectly infringed and continues to indirectly infringe the ’958 Patent in violation of 35 U.S.C. § 271(b) by taking active steps to encourage and facilitate direct infringement by others, including OEMs, agent-subsidiaries, affiliates, partners, service providers, manufacturers, importers, resellers, customers, and/or end users, in this district and elsewhere in the United States, through the dissemination of the ’958 Accused Instrumentalities and the creation and dissemination of promotional and marketing materials, supporting materials,

instructions, product manuals, and/or technical information relating to such products with knowledge and the specific intent that its efforts will result in the direct infringement of the '958 Patent.

86. For example, AT&T took active steps to encourage end users to utilize its mobile network in the United States in a manner it knows will directly infringe each element of at least independent claims 1, 6, and 11 of the '958 Patent, including by selling access to its 4G/LTE mobile network and encouraging users to operate Accused Devices on that network despite knowing of the patent and the fact that such usage of its network in accordance with Release 15 (and later) will cause the user to use their mobile device in a manner that infringes the '958 Patent.

87. AT&T undertook and continues to undertake the above-identified active steps after receiving notice of the '958 Patent and how those steps induce infringement of that patent.

88. In addition, AT&T has indirectly infringed and continues to indirectly infringe the '958 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Devices with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the Accused Devices are not a staple article of commerce suitable for substantial non-infringing use.

89. For example, AT&T knew that the functionality included in the Accused Devices enables each to communicate in accordance with Release 15 (and later), and that such functionality infringes the '958 Patent, including at least independent claims 1, 6, and 11.

90. The infringing aspects of the Accused Devices can be used only in a manner that infringes the '958 Patent and thus have no substantial non-infringing uses. Those instrumentalities communicate in accordance with Release 15 (and later) specifically so that they can operate on

AT&T's mobile network. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

91. AT&T's acts of infringement have caused and continue to cause damage to Pegasus, and Pegasus is entitled to recover from AT&T the damages it has sustained as a result of those wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty for the use made of the invention in the '958 Patent, together with interest and costs as fixed by the Court.

92. AT&T has had knowledge and notice of the '958 Patent and its infringement from the time that KT declared to 3GPP or any of its organizational partners that the '958 Patent was essential to the 4G/LTE Standard and/or 5G Standard because AT&T is a member of 3GPP and/or its organizational partners. In addition, AT&T has had knowledge and notice of the '958 Patent and its infringement since (i) at least December 2022, when it received the 2022 Notice Letter, and/or when it received subsequent correspondence identifying the patent, (ii) at least late 2024, when it engaged in ultimately unsuccessful negotiations for licenses on fair, reasonable, and non-discriminatory terms for Pegasus's standard-essential patents, and (iii) at least, and through, the filing and service of the Complaint. Despite this knowledge, AT&T continued to commit the infringing acts mentioned above.

93. Upon information and belief, AT&T's infringement of the '958 Patent is willful and deliberate, entitling Pegasus to the recovery of enhanced damages under 35 U.S.C. § 284. AT&T has infringed and continues to infringe the '958 Patent despite the risk of infringement being either known or so obvious that it should have been known to AT&T.

COUNT THREE
Infringement of the ’720 Patent

94. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

95. On January 19, 2021, the United States Patent and Trademark Office duly and legally issued the ’720 Patent entitled “Method and Apparatus for Transmitting and Receiving Downlink Pre-emption Indication Data in Next Generation Wireless Network.” A true and correct copy of the ’720 Patent is attached as Exhibit 3 to this Complaint.

96. On December 23, 2022, Kyujin Park and Woo-jin Choi, the inventors of the ’720 Patent, assigned all title, rights, and interest in and to the ’720 Patent to KT. The assignment was recorded with the United States Patent and Trademark Office on October 11, 2023.

97. On September 7, 2022, KT and Pegasus entered the “Exclusive License Agreement,” and KT assigned all substantial rights in and to the ’720 Patent to Pegasus.

98. Pegasus holds all substantial rights in and to the ’720 Patent, including the exclusive right to assert all causes of action under the ’720 Patent and the exclusive right to any remedies for the infringement of the ’720 Patent.

99. AT&T is not licensed under the ’720 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the ’720 Patent whatsoever.

100. The ’720 Patent generally relates to an apparatus and a method for transmitting/receiving downlink preemption indication information in a 5G network. The claims of the ’720 Patent recite novel and inventive systems and methods for efficient preemption implementation by receiving monitoring configuration information on the downlink (DL) preemption indication information that includes whether to monitor the DL preemption indication information and monitoring the DL preemption indication information. Furthermore, the DL

preemption indication information is indicated through group-common DL control information (DCI), and the group-common DCI is received through a resource after the preempted resource indicated by the DL preemption indication information.

101. Claims of the '720 Patent, including but not limited to claims 1, 4, and 7, are essential to certain 5G Standards, including Release 15 (and later) and its technical specifications, including but not limited to TS 38.212, TS 38.213, TS 38.300, and TS 38.331, which include inventions covered by the '720 Patent. The claimed methods involve a user equipment for receiving monitoring configuration information on the DL preemption indication information (which includes information on whether to monitor the DL preemption indication information) and monitoring the DL preemption indication information indicated through group-common DCI, which is received through a resource after the preempted resource indicated by the DL preemption indication information, such as at least in claims 1, 4 and 7.

102. AT&T has and continues, without authorization, to operate and use, and/or to induce and contribute to the operation and use by others of equipment and services that practice one or more claims of the '720 Patent literally or under the doctrine of equivalents (hereafter "'720 Accused Instrumentalities"). At a minimum, such '720 Accused Instrumentalities include (1) AT&T's mobile network, including the AT&T Base Stations and all base station equipment configured to operate in accordance with Release 15 (or later), and (2) all Accused Devices that are configured to operate in accordance with Release 15 (or later).

103. AT&T has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, at least method and apparatus claims 1, 4, and 7 of the '720 Patent under 35 U.S.C. § 271(a) by operating and using, and/or inducing and contributing to the operation and use by others of the '720 Accused Instrumentalities in the United States as described

in paragraph 104 above. The '720 Accused Instrumentalities infringe at least claim 4 of the '720 Patent by practicing the 5G Standard, as indicated in AT&T's public statements in paragraphs 39-44 above. The '720 Accused Instrumentalities operate consistent with the 5G requirements of at least Release 15. This includes the ability to configure monitoring configuration information on the DL preemption indication information that includes whether to monitor the DL preemption indication information and transmitting the DL preemption indication information after preemption, as described in claim 4 of the '720 Patent. (See, e.g., TS 38.212, TS 38.213, TS 38.300, and TS 38.331.)

104. For example, Release 15's technical specifications show that the 5G standard requires a 5G mobile network or device, such as the '720 Accused Instrumentalities, to have the ability to configure monitoring configuration information on the DL preemption indication information, which includes information on whether to monitor the DL preemption indication information (e.g., TS 38.300 Section 10.2 and TS 38.331 Section 6.3.2 on PDCCH-Config and DownlinkPreemption), transmitting the monitoring configuration information and, when DL is preempted, transmitting the DL preemption indication information to a UE (e.g., TS 38.331 Section 6.3.2 on PDCCH-Config and DownlinkPreemption), as described in claim 4 of the '720 Patent. In particular, claim 4 of the '720 Patent discloses the DL preemption indication information is indicated through a group-common DCI, received through a resource after the preempted resource indicated by the DL preemption indication information (e.g., TS 38.212 Section 7.3.1, TS 38.213 Section 11.2 and TS 38.331 Section 6.3.2 on DownlinkPreemption).

105. AT&T operates and sells within the United States access to its 5G mobile network that includes base stations that communicate with user mobile devices in accordance with Release 15 (or later), thereby infringing at least claims 1, 4, and 7 of the '720 Patent.

106. In addition, AT&T has indirectly infringed and continues to indirectly infringe the '720 Patent in violation of 35 U.S.C. § 271(b) by taking active steps to encourage and facilitate direct infringement by others, including OEMs, agent-subsidiaries, affiliates, partners, service providers, manufacturers, importers, resellers, customers, and/or end users, in this district and elsewhere in the United States, through the dissemination of the '720 Accused Instrumentalities and the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to such products with knowledge and the specific intent that its efforts will result in the direct infringement of the '720 Patent.

107. For example, AT&T took active steps to encourage end users to utilize its mobile network in the United States in a manner it knows will directly infringe each element of at least claims 1, 4, and 7 of the '720 Patent, including by selling access to its 5G mobile network and encouraging users to operate Accused Devices on that network despite knowing of the patent and the fact that such usage of its network in accordance with Release 15 (and later) will cause the user to use their mobile device in a manner that infringes the '720 Patent.

108. AT&T undertook and continues to undertake the above-identified active steps after receiving notice of the '720 Patent and how those steps induce infringement of that patent.

109. In addition, AT&T has indirectly infringed and continues to indirectly infringe the '720 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Devices with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the Accused Devices are not a staple article of commerce suitable for substantial non-infringing use.

110. For example, AT&T knew that the functionality included in the Accused Devices enables each to communicate in accordance with Release 15 (and later), and that such functionality infringes the '720 Patent, including claims 1, 4, and 7.

111. The infringing aspects of the Accused Devices can be used only in a manner that infringes the '720 Patent and thus have no substantial non-infringing uses. Those instrumentalities communicate in accordance with Release 15 (and later) specifically so that they can operate on AT&T's mobile network. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

112. AT&T's acts of infringement have caused and continue to cause damage to Pegasus, and Pegasus is entitled to recover from AT&T the damages it has sustained as a result of those wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty for the use made of the invention in the '720 Patent, together with interest and costs as fixed by the Court.

113. AT&T has had knowledge and notice of the '720 Patent and its infringement from the time that KT declared to 3GPP or any of its organizational partners that the '720 Patent was essential to the 4G/LTE Standard and/or 5G Standard because AT&T is a member of 3GPP and/or its organizational partners. In addition, AT&T has had knowledge and notice of the '720 Patent and its infringement since (i) at least December 2022, when it received the 2022 Notice Letter, and/or when it received subsequent correspondence identifying the patent, (ii) at least late 2024, when it engaged in ultimately unsuccessful negotiations for licenses on fair, reasonable, and non-discriminatory terms for Pegasus's standard-essential patents, and (iii) at least, and through, the filing and service of the Complaint. Despite this knowledge, AT&T continued to commit the infringing acts mentioned above.

114. Upon information and belief, AT&T's infringement of the '720 Patent is willful and deliberate, entitling Pegasus to the recovery of enhanced damages under 35 U.S.C. § 284. AT&T has infringed and continues to infringe the '720 Patent despite the risk of infringement being either known or so obvious that it should have been known to AT&T.

COUNT FOUR
Infringement of the '530 Patent

115. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

116. On September 29, 2020, the United States Patent and Trademark Office duly and legally issued the '530 Patent entitled "Method and Device for Transmitting/Receiving Synchronization Signal and System Information for Terminal in New Wireless Access Network." A true and correct copy of the '530 Patent is attached as Exhibit 4 to this Complaint.

117. On December 23, 2022, Kyujin Park and Woo-jin Choi, the inventors of the '530 Patent, assigned all title, rights, and interest in and to the '530 Patent to KT. The assignment was recorded with the United States Patent and Trademark Office on October 11, 2023.

118. On September 7, 2022, KT and Pegasus entered the "Exclusive License Agreement," and KT assigned all substantial rights in and to the '530 Patent to Pegasus.

119. Pegasus holds all substantial rights in and to the '530 Patent, including the exclusive right to assert all causes of action under the '530 Patent and the exclusive right to any remedies for the infringement of the '530 Patent.

120. AT&T is not licensed under the '530 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the '530 Patent whatsoever.

121. The '530 Patent generally relates to an apparatus and a method for defining subcarrier spacings and transmitting or receiving a synchronization signal and system information

in a 5G network. The claims of the '530 Patent recite novel and inventive systems and methods for transmitting synchronization signals and system information transmission channel in an 5G network through one or more defined subcarrier spacings. The subcarrier spacing used for system information not transmitted via a physical broadcasting channel is signaled through the physical broadcasting channel.

122. Claims of the '530 Patent, including but not limited to claims 1, 5, and 9, are essential to certain 5G Standards, including Release 15 (and later) and its technical specifications, including but not limited to TS 38.300, TS 38.213, TS 38.211, TS 38.212, and TS 38.331, which include inventions covered by the '530 Patent. The claimed methods involve a base station equipment for defining one or more subcarrier spacings to transmit a synchronization signal and system information transmission channel in a 5G network, and determining a subcarrier spacing to transmit the synchronization signal and system information transmission channel. The subcarrier spacing used for system information not transmitted via a physical broadcasting channel is signaled through the physical broadcasting channel, including but not limited to in claims 1, 5, and 9.

123. AT&T has and continues, without authorization, to operate and use, and/or to induce and contribute to the operation and use by others of equipment and services that practice one or more claims of the '530 Patent literally or under the doctrine of equivalents (hereafter "'530 Accused Instrumentalities"). At a minimum, such '530 Accused Instrumentalities include (1) AT&T's mobile network, including the AT&T Base Stations and all base station equipment configured to operate in accordance with Release 15 (or later), and (2) all Accused Devices that are configured to operate in accordance with Release 15 (or later).

124. AT&T has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, at least method and apparatus claims 1, 5, and 9 of the '530 Patent under 35 U.S.C. § 271(a) by operating and using, and/or inducing and contributing to the operation and use by others of the '530 Accused Instrumentalities in the United States as described in paragraph 125 above. The '530 Accused Instrumentalities infringe at least claim 9 of the '530 Patent by practicing the 5G Standard, as indicated in AT&T's public statements in paragraphs 39-44 above. The '530 Accused Instrumentalities operate consistent with the 5G requirements of at least Release 15. This includes the ability to define one or more subcarrier spacings to transmit a synchronization signal and system information transmission channel in a 5G network, and determine a subcarrier spacing to transmit the synchronization signal and system information transmission channel. The subcarrier spacing used for system information not transmitted via a physical broadcasting channel is signaled through the physical broadcasting channel, as described in claim 9 of the '530 Patent. (See, e.g., TS 38.300, TS 38.213, TS 38.211, TS 38.212, and TS 38.331.)

125. For example, Release 15's technical specifications show that the 5G standard requires a 5G mobile network or device, such as the '530 Accused Instrumentalities, to have the ability to define subcarrier spacings and determine one subcarrier spacing to transmit at least one synchronization signal and at least one system information transmission channel (e.g., TS 38.213 Section 4.1 and TS 38.211 Section 7.4.3.1) and transmit the at least one synchronization signal and at least one system information transmission channel based on the determined subcarrier spacing (e.g., TS 38.211 Section 7.4.3.1 and TS 38.213 Section 4.1), as described in claim 9 of the '530 Patent. In particular, claim 9 of the '530 Patent discloses that the subcarrier spacing used for system information not transmitted via a physical broadcasting channel is signaled through the

physical broadcasting channel (e.g., TS 38.212 Section 4.2 and TS 38.331 Sections 5.2.1 and 6.2 on MIB).

126. AT&T operates and sells within the United States access to its 5G mobile network that includes base stations that communicate with user mobile devices in accordance with Release 15 (or later), thereby infringing at least claims 1, 5, and 9 of the ’530 Patent.

127. In addition, AT&T has indirectly infringed and continues to indirectly infringe the ’530 Patent in violation of 35 U.S.C. § 271(b) by taking active steps to encourage and facilitate direct infringement by others, including OEMs, agent-subsidiaries, affiliates, partners, service providers, manufacturers, importers, resellers, customers, and/or end users, in this district and elsewhere in the United States, through the dissemination of the ’530 Accused Instrumentalities and the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to such products with knowledge and the specific intent that its efforts will result in the direct infringement of the ‘530 Patent.

128. For example, AT&T took active steps to encourage end users to utilize its mobile network in the United States in a manner it knows will directly infringe each element of at least claims 1, 5, and 9 of the ’530 Patent, including by selling access to its 5G mobile network and encouraging users to operate Accused Devices on that network despite knowing of the patent and the fact that such usage of its network in accordance with Release 15 (and later) will cause the user to use their mobile device in a manner that infringes the ’530 Patent.

129. AT&T undertook and continues to undertake the above-identified active steps after receiving notice of the ’530 Patent and how those steps induce infringement of that patent.

130. In addition, AT&T has indirectly infringed and continues to indirectly infringe the '530 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Devices with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the Accused Devices are not a staple article of commerce suitable for substantial non-infringing use.

131. For example, AT&T knew that the functionality included in the Accused Devices enables each to communicate in accordance with Release 15 (and later), and that such functionality infringes the '530 Patent, including claims 1, 5, and 9.

132. The infringing aspects of the Accused Devices can be used only in a manner that infringes the '530 Patent and thus have no substantial non-infringing uses. Those instrumentalities communicate in accordance with Release 15 (and later) specifically so that they can operate on AT&T's mobile network. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

133. AT&T's acts of infringement have caused and continue to cause damage to Pegasus, and Pegasus is entitled to recover from AT&T the damages it has sustained as a result of those wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty for the use made of the invention in the '530 Patent, together with interest and costs as fixed by the Court.

134. AT&T has had knowledge and notice of the '530 Patent and its infringement from the time that KT declared to 3GPP or any of its organizational partners that the '530 Patent was essential to the 4G/LTE Standard and/or 5G Standard because AT&T is a member of 3GPP and/or its organizational partners. In addition, AT&T has had knowledge and notice of the '530 Patent

and its infringement since (i) at least December 2022, when it received the 2022 Notice Letter, and/or when it received subsequent correspondence identifying the patent, (ii) at least late 2024, when it engaged in ultimately unsuccessful negotiations for licenses on fair, reasonable, and non-discriminatory terms for Pegasus's standard-essential patents, and (iii) at least, and through, the filing and service of the Complaint. Despite this knowledge, AT&T continued to commit the infringing acts mentioned above.

135. Upon information and belief, AT&T's infringement of the '530 Patent is willful and deliberate, entitling Pegasus to the recovery of enhanced damages under 35 U.S.C. § 284. AT&T has infringed and continues to infringe the '530 Patent despite the risk of infringement being either known or so obvious that it should have been known to AT&T.

COUNT FIVE
Infringement of the '218 Patent

136. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

137. On June 6, 2023, the United States Patent and Trademark Office duly and legally issued the '218 Patent entitled "Method for Configuring Frequency Resource About Component Carrier for New Radio and Apparatuses Thereof." A true and correct copy of the '218 Patent is attached as Exhibit 5 to this Complaint.

138. On December 23, 2022, Kyujin Park and Woo-jin Choi, the inventors of the '218 Patent, assigned all title, rights, and interest in and to the '218 Patent to KT. The assignment was recorded with the United States Patent and Trademark Office on October 11, 2023.

139. On September 7, 2022, KT and Pegasus entered the "Exclusive License Agreement," and KT assigned all substantial rights in and to the '218 Patent to Pegasus.

140. Pegasus and holds all substantial rights in and to the ’218 Patent, including the exclusive right to assert all causes of action under the ’218 Patent and the exclusive right to any remedies for the infringement of the ’218 Patent.

141. AT&T is not licensed under the ’218 Patent, either expressly or implicitly, nor do they enjoy or benefit from any rights in or to the ’218 Patent whatsoever.

142. The ’218 Patent generally relates to an apparatus that support bandwidth parts (BWPs) within a component carrier (CC) in a 5G network. The claims of the ’218 Patent recite novel and inventive systems that obtain reference point information and details about one or more BWPs within a single CC, including starting Physical Resource Block (PRB) Index and number of PRBs in each BWP. Each BWP’s location is determined based on the reference point and at least one PRB where a synchronization signal (SS) block is received is determined based on the information on the reference point. Furthermore, the index of the starting PRB for each BWP is based on a common PRB index, numbered from a lowest frequency in one CC, and within each BWP, a BWP-specific PRB index is used.

143. Claims of the ’218 Patent, including but not limited to claims 1, 7, and 12, are essential to certain 5G Standards, including Release 15 (and later) and its technical specifications, including but not limited to TS 38.211, TS 38.300, TS 38.331, TS 38.213, TS 38.214, and TS 38.321, which include inventions covered by the ’218 Patent. For instance, the claimed wireless device in claim 1 involves the transmitter and receiver to receive information on a reference point and information on one or more BWPs, activate at least one BWP to receive downlink data and transmit uplink data and receive a SS block in at least one PRB. The one or more BWPs exist in one CC, each BWPs has a location that is determined based on the reference point, the information on the one or more BWPs includes an index of a starting PRB for each BWP and a number of

PRBs within each BWP, the index of the starting PRB for each BWP is based on a common PRB index, numbered from a lowest frequency in the one CC, and within each BWP a BWP-specific PRB index is used. Furthermore, the downlink data is received and the uplink data is transmitted based on the BWP-specific PRB index and the at least one PRB where the SS block is received is determined based on the information on the reference point, including but not limited to in claims 1, 7, and 12.

144. AT&T has and continues, without authorization, to operate and use, and/or to induce and contribute to the operation and use by others of equipment and services that practice one or more claims of the ’218 Patent literally or under the doctrine of equivalents (hereafter “’218 Accused Instrumentalities”). At a minimum, such ’218 Accused Instrumentalities include (1) AT&T’s mobile network, including the AT&T Base Stations and all base station equipment configured to operate in accordance with Release 15 (or later), and (2) all Accused Devices that are configured to operate in accordance with Release 15 (or later).

145. AT&T has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, at least apparatus claims 1, 7, and 12 of the ’218 Patent under 35 U.S.C. § 271(a) by operating and using, and/or inducing and contributing to the operation and use by others of the ’218 Accused Instrumentalities in the United States as described in paragraph 146 above. The ’218 Accused Instrumentalities infringe at least claim 7 of the ’218 Patent by practicing the 5G Standard, as indicated in AT&T’s public statements in paragraphs 39-44 above. The ’218 Accused Instrumentalities operate consistent with the 5G requirements of at least Release 15. This includes systems that transmit reference point information and details about one or more BWPs within a single CC, including starting Physical Resource Block (PRB) Index and number of PRBs in each BWP. Each BWP’s location is determined based on the reference point and at

least one PRB where a synchronization signal SS block is transmitted is determined based on the information on the reference point. Furthermore, the index of the starting PRB for each BWP is based on a common PRB index, numbered from a lowest frequency in one CC, and within each BWP, a BWP-specific PRB index is used, as described in at least claim 7 of the ’218 Patent. (See, e.g., TS 38.211, TS 38.300, TS 38.331, TS 38.213, TS 38.214, and TS 38.321.)

146. For example, Release 15’s technical specifications show that the 5G standard requires a 5G mobile network or device, such as the ’218 Accused Instrumentalities, to have the ability to control the transmitter and receiver to transmit information on a reference point and information on one or more BWPs (e.g., TS 38.211 Section 4.4.4.2, TS 38.213 Section 12 and TS 38.331 Section 6.3.2 on BWP and SCS-SpecificCarrier), transmit downlink data and receive uplink data within at least one BWP (e.g., TS 38.321 Section 5.15 and TS 38.213 Section 12) and transmit a SS block in at least one PRB (e.g., TS 38.211 Section 4.4.4.2), as described in claim 7 of the ’218 Patent. In particular, claim 7 of the ’218 Patent discloses the one or more BWPs exist in one CC (e.g., TS 38.300 Sections 5.1 and 6.10), each BWPs has a location that is determined based on the reference point (e.g., TS 38.213 Section 12 and TS 38.331 Section 6.3.2 on BWP and SCS-SpecificCarrier), the information on the one or more BWPs includes an index of a starting PRB for each BWP and a number of PRBs within each BWP (e.g., TS 38.213 Section 12, TS 38.214 Section 5.1.2.2.2 and TS 38.331 Section 6.3.2 on BWP), the index of the starting PRB for each BWP is based on a common PRB index, numbered from a lowest frequency in the one CC (e.g., TS 38.331 Section 6.3.2 on BWP and TS 38.211 Sections 4.4.4.3 and 4.4.4.4), and within each BWP a BWP-specific PRB index is used (e.g., TS 38.211 Section 4.4.4.4 and TS 38.213 Section 12). Furthermore, downlink data is transmitted and the uplink data is received based on the BWP-specific PRB index (e.g., TS 38.211 Section 4.4.4.4 and TS 38.213 Section 12) and the

at least one PRB where the SS block is transmitted is determined based on the information on the reference point (TS 38.211 Sections 4.4.4.2 and 4.4.4.3).

147. AT&T operates and sells within the United States access to its 5G mobile network that includes base stations that communicate with user mobile devices in accordance with Release 15 (or later), thereby infringing at least claims 1, 7, and 12 of the ’218 Patent.

148. In addition, AT&T has indirectly infringed and continues to indirectly infringe the ’218 Patent in violation of 35 U.S.C. § 271(b) by taking active steps to encourage and facilitate direct infringement by others, including OEMs, agent-subsidiaries, affiliates, partners, service providers, manufacturers, importers, resellers, customers, and/or end users, in this district and elsewhere in the United States, through the dissemination of the ’218 Accused Instrumentalities and the creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to such products with knowledge and the specific intent that its efforts will result in the direct infringement of the ’218 Patent.

149. For example, AT&T took active steps to encourage end users to utilize its mobile network in the United States in a manner it knows will directly infringe each element of at least claims 1, 7, and 12 of the ’218 Patent, including by selling access to its 5G mobile network and encouraging users to operate Accused Devices on that network despite knowing of the patent and the fact that such usage of its network in accordance with Release 15 (and later) will cause the user to use their mobile device in a manner that infringes the ’218 Patent.

150. AT&T undertook and continues to undertake the above-identified active steps after receiving notice of the ’218 Patent and how those steps induce infringement of that patent.

151. In addition, AT&T has indirectly infringed and continues to indirectly infringe the ’218 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Devices with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the Accused Devices are not a staple article of commerce suitable for substantial non-infringing use.

152. For example, AT&T knew that the functionality included in the Accused Devices enables each to communicate in accordance with Release 15 (and later), and that such functionality infringes the ’218 Patent, including claims 1, 7, and 12.

153. The infringing aspects of the Accused Devices can be used only in a manner that infringes the ’218 Patent and thus have no substantial non-infringing uses. Those instrumentalities communicate in accordance with Release 15 (and later) specifically so that they can operate on AT&T’s mobile network. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

154. AT&T’s acts of infringement have caused and continue to cause damage to Pegasus, and Pegasus is entitled to recover from AT&T the damages it has sustained as a result of those wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty for the use made of the invention in the ’218 Patent, together with interest and costs as fixed by the Court.

155. AT&T has had knowledge and notice of the ’218 Patent and its infringement from the time that KT declared to 3GPP or any of its organizational partners that the ‘218 Patent was essential to the 4G/LTE Standard and/or 5G Standard because AT&T is a member of 3GPP and/or its organizational partners. In addition, AT&T has had knowledge and notice of the ’218 Patent

and its infringement since (i) at least December 2022, when it received the 2022 Notice Letter, and/or when it received subsequent correspondence identifying the patent, (ii) at least late 2024, when it engaged in ultimately unsuccessful negotiations for licenses on fair, reasonable, and non-discriminatory terms for Pegasus's standard-essential patents, and (iii) at least, and through, the filing and service of the Complaint. Despite this knowledge, AT&T continued to commit the infringing acts mentioned above.

156. Upon information and belief, AT&T's infringement of the '218 Patent is willful and deliberate, entitling Pegasus to the recovery of enhanced damages under 35 U.S.C. § 284. AT&T has infringed and continues to infringe the '218 Patent despite the risk of infringement being either known or so obvious that it should have been known to AT&T.

DEMAND FOR JURY TRIAL

157. Pegasus hereby demands a jury trial pursuant to Federal Rule of Civil Procedure 38.

FEES AND COSTS

158. To the extent that AT&T's willful and deliberate infringement or litigation conduct supports a finding that this is an "exceptional case," an award of attorneys' fees and costs to Pegasus is justified pursuant to 35 U.S.C. § 285.

PRAYER FOR RELIEF

WHEREFORE, Pegasus prays for relief against AT&T as follows:

a. Declaring that AT&T has directly infringed the Asserted Patents, contributed to the infringement of the Asserted Patents, and/or induced the infringement of the Asserted Patents;

b. Awarding Pegasus damages arising out of this infringement of the Asserted Patents, including enhanced damages pursuant to 35 U.S.C. § 284 and supplemental damages for any continuing post-verdict infringement through entry of the final judgment, in an amount according to proof;

c. Awarding Pegasus prejudgment and post-judgment interest, in an amount according to proof;

d. Awarding Pegasus a compulsory ongoing royalty, in an amount according to proof;

e. Awarding attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law;

f. Declaring that AT&T's infringement of the Asserted Patents is willful;

g. Awarding such other relief which may be requested and to which the Plaintiff is entitled; and

h. Awarding to Pegasus such other costs, equitable relief, and any other relief to which Pegasus is entitled and as the Court deems just and proper.

DATED: March 12, 2025

Respectfully submitted,

By: */s/ Max L. Tribble*

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