

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

NEXTGEN INNOVATIONS, LLC,

Plaintiff,

v.

AT&T SERVICES, INC. AND AT&T CORP.,

Defendants.

Case No. 2:22-cv-00308

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT  
AGAINST AT&T CORP., AND AT&T SERVICES, INC.**

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.*, in which Plaintiff NextGen Innovations, LLC (“Plaintiff” or “NextGen”) makes the following allegations against Defendants AT&T Services, Inc. and AT&T Corp. (“Defendants” or “AT&T”):

**INTRODUCTION**

1. AT&T infringes the following United States patents that relate to improvements to optical networking systems: United States Patent No. 9,887,795 (the “795 patent”), United States Patent No. 10,263,723 (the “723 patent”), United States Patent No. 10,771,181 (the “181 patent”), and United States Patent No. 8,374,508 (the “508 patent”) (collectively, the “Asserted Patents”). Plaintiff is the exclusive licensee of the Asserted Patents.

**PARTIES**

2. NextGen is a Nevada limited liability company with its principal place of business at 5348 Vegas Drive, No. 396, Las Vegas, Nevada 89108. NextGen is the exclusive licensee of all right, title, and interest in the Asserted Patents.

3. On information and belief, AT&T Services, Inc. is a corporation organized and existing under the laws of the State of Delaware, with a principal place of business at 208 South Akard Street, Dallas, Texas 75202.

4. On information and belief, AT&T Corp. is a corporation organized and existing under the laws of the State of New York, with a principal place of business at One AT&T Way, Bedminster, New Jersey 07921-0752.

5. On information and belief, AT&T owns and operates a foundry at 2900 West Plano Parkway, Plano, Texas 75075. *E.g.*, [https://about.att.com/story/2018/plano\\_foundry.html](https://about.att.com/story/2018/plano_foundry.html).

### **JURISDICTION AND VENUE**

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

7. This Court has personal jurisdiction over Defendants in this action because Defendants have committed acts within this District giving rise to this action and have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Defendants, directly and through subsidiaries or intermediaries, have committed and continue to commit acts of infringement in this District by, among other things, importing, offering to sell, and selling products that infringe the Asserted Patents.

8. Venue is proper in this District under 28 U.S.C. §§ 1391(b)-(c) and 1400(b). Defendants are registered to do business in Texas. Additionally, upon information and belief, Defendants have transacted business in this District and have committed acts of direct and indirect infringement in this District by, among other things, making, using, offering to sell, selling, and

importing products that infringe the Asserted Patents. Moreover, on information and belief, Defendants have regular and established places of business in this District, including at (1) 2900 West Plano Parkway, Plano, Texas 75075 (e.g., [https://about.att.com/story/2018/plano\\_foundry.html](https://about.att.com/story/2018/plano_foundry.html)); (2) 900 Guardians Way Allen, Texas; (3) 5200 Legacy Drive, Plano, Texas 75024; (4) 7010 Elm Street, Frisco, Texas 75034; and (5) 705 East Virginia Street, McKinney, Texas 75069.

### **FACTUAL BACKGROUND**

9. Walter Soto and Alexander Soto are brothers, and the inventors of the claimed subject matter described in the Asserted Patents. Walter Soto has a bachelor's degree in Electrical Engineering, and has worked in the telecommunications industry since 1991. Alexander Soto has a master's degree in Electrical Engineering, and has worked in the telecommunications industry since 2000. The Sotos are the principals of Plaintiff, NextGen Innovations, LLC. As a result of their novel and useful inventions, the United States Patent and Trademark Office ("USPTO") has, to date, granted approximately thirty-four patents to the Sotos, including all of the Asserted Patents.

10. For much of their careers, the Sotos worked for various engineering firms and defense contractors, including but not limited to Hughes Aircraft, Agere, and AT&T, working on projects of various types in multiple subject matter areas such as signal processing, network protocol processing, wireline communications, wireless communications, optical communications, and application specific integrated circuit chip design.

11. Early in 2003, with the U.S. silicon and telecommunication industry moving its projects and offices overseas, the Sotos decided to start their own company with the intention of innovating and producing high quality products in the U.S. The Sotos initially directed their work on passive optical network technologies because they expected that deployments of such

technologies would increase in the coming years, and that significant innovation in the space would be necessary and valuable. To this end, the Sotos worked to identify the most difficult and acute problems in the passive optical network-area. Because the Sotos recognized the value of their work, dedicating resources for patent protection for their innovations was a key business practice in their new company. This focus led to the filing of a number of patent applications, including provisional patent applications and utility patent applications.

12. In September 2003, the Sotos founded UBI Systems, Inc. to develop products and services for new enterprise services for passive optical LANs. The goal was to reduce the operational and capital expenses associated with enterprise-level fiber optic networks. For example, the Sotos sought to solve problems related to the elimination of Ethernet switches and copper-based Ethernet cables. Performance-wise, the Sotos believed they could develop and deploy solutions that would improve upon and replace existing enterprise solutions and, at worst, achieve performance parity with such systems while significantly reducing the electrical power consumed. The Sotos also believed that overall network security would be improved by their solutions, including, for example, eliminating security issues associated with traditional wiring closets by eliminating the need for such closets.

13. In approximately the first half of 2005, the Sotos began exploring other business models based on their expertise and innovations. In particular, the Sotos identified broadband access and related ecosystems as a space where their innovations would both add significant value and be attractive to potential investors. In May 2005, the Sotos founded iPON Systems, Inc. with the purpose of developing silicon and software products that reduced the operational and capital expenses associated with the deployment and maintenance of broadband access fiber optic networks.

14. One of the problems iPON sought to solve was how to scale passive optical network deployments. The Sotos believed that novel hardware and methods that allowed for the reuse of existing routers and switches would be beneficial. The Sotos sought to use small form-factor pluggable (SFP) modules that could effectively and efficiently convert a point-to-point SFP socket into a point-to-multipoint PON socket. Another problem iPON sought to solve was to eliminate the dependency on highly skilled technicians to deploy fiber optic networks. The Sotos believed that this problem could be addressed, at least in part, by reusing the wavelengths of a PON (passive optical network) to perform in-service optical time domain reflectometry (OTDR) tests, for example, that could be controlled by a network operation center (NOC) or remotely by technicians. Yet another problem the Sotos believed could be solved by iPON was eliminating problems related to powering a PON infrastructure. The Sotos believed that existing copper transmission lines (twisted wire-pair or Coax cables) could be used to provide not only broadband communications but also the power necessary for various optical network-specific equipment such as optical network terminals (ONTs) and optical network units (ONUs). Another problem identified by the Sotos was the need to eliminate wavelengths and the associated optical-to-electrical and electrical-to-optical conversion components being proposed for future networks at the time. The Sotos believed that m-ary technology could be used to solve this problem by increasing the number of bits per symbol in a given transmission.

15. To fund iPON's operations, the Sotos approached venture capitalists, self-funded, and sought partner companies to build an ecosystem of like-minded companies. For instance, the Sotos and iPON sought to build a network of partners that would build upon iPON's innovations to develop the necessary hardware and software components necessary to accomplish iPON's vision of lower cost and easy to deploy high performance fiber optic network product and services.

16. The efforts of the Sotos led to the development of an ecosystem of component suppliers, equipment vendors, and end user service providers comprised of companies such as Finisar, Alcatel-Lucent, and AT&T.

17. For example, beginning approximately in April 2005, iPON began working with AT&T (through the AT&T Access Technology Labs team). AT&T performed an intensive review of iPON's proposed products and services solutions, including proposed capital expense and operation expense savings implicated by iPON's novel solutions. The AT&T Access Technology Labs team is responsible for technical requirements used for AT&T wireline and wireless broadband access networks deployments. Members of AT&T that iPON worked with included, but were not limited to, Raj Savor (then general manager of AT&T Access Technology Lab), Steve Sposato (then Executive Director of AT&T Network Systems Engineering), Kent McCammon, Gene Edmon, Julie Lorentzen, and Estes Renee. AT&T recognized that iPON's proposed products and services solutions solved real problems, and iPON began to also work with a number of suppliers that could support deployments by AT&T, including but not limited to Alcatel-Lucent (now Nokia) and Finisar.

18. iPON approached Alcatel-Lucent's Internet Products Division (IPD) in approximately the July 2005 timeframe. iPON and Alcatel-Lucent extensively discussed iPON's technology and innovations, including its development of novel PON technology to be integrated into Alcatel-Lucent's 7x50 family of switches and routers. In approximately August 2007, the companies agreed to partner in the development and sale of iPON's technology (along with a third company, Finisar). The parties agreed to a lab trial based on iPON's GPON silicon within an XFP optical transceiver provided by Finisar that plugged into one of IPD's 7x50 products. The goal was to use this work, as well as iPON's work with potential customers (such as AT&T and Verizon),

to develop field trials as an early introduction of the novel GPON OLT functionality into Alcatel-Lucent's 7x50 family of switches and routers. Among others at Alcatel-Lucent, iPON worked with Basil Alwan (then-president of IPD), Ralph Ballart (then-IPD CTO), Sunil Khandekar (then-IPD switches product group lead), Kevin Macaluso (then-IPD service router product group lead), Ken Kutzler (then-IPD VP of Engineering), and Linda Garbanati. On information and belief, Nokia agreed to acquire Alcatel-Lucent in 2015 and Nokia closed the acquisition of Alcatel-Lucent in 2016.

19. Many venture capitalists were impressed with iPON's technology and the ecosystem the Sotos were building, particularly given the entrepreneurial, self-funded nature of the Sotos' efforts. Indeed, iPON and the Sotos had poured significant resources into developing their innovations, including patenting their inventions, exploring partnership opportunities with various network suppliers and providers, and getting fabrication work quotes from large manufacturing firms such as the Taiwanese firm TSMC.

20. Despite their efforts, the Sotos saw other companies, including former partners such as Finisar, Alcatel-Lucent, and AT&T, bring their innovations to market. As a result, the Sotos formed NextGen in October of 2018 for the purpose of licensing the significant and valuable patent portfolio protecting the innovations that they had conceived.

21. NextGen has complied with the marking and other requirements of 35 U.S.C. § 287 for the Asserted Patents.

## **COUNT I**

### **INFRINGEMENT OF U.S. PATENT NO. 9,887,795**

22. Plaintiff realleges and incorporates by reference paragraphs 1 through 21 as if fully set forth herein.

23. On February 6, 2018, the USPTO duly and legally issued the '795 patent, entitled "System And Method For Performing High-Speed Communications Over Fiber Optical Networks." The named inventors are Alexander Soto and Walter Soto. A true and correct copy of the '795 patent is attached as Exhibit A.

24. On November 29, 2018, the Sotos granted Plaintiff an exclusive license to the '795 patent. Under the exclusive license, Plaintiff was granted all substantial rights in the '795 patent until its expiration date including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

25. The '795 patent relates to, among other things, optical fiber communications generally, and more specifically to m-ary modulation in optical communication network. The claimed invention of the '795 patent sought to solve problems with, and improve upon, optical networking systems. For example, the specification of the '795 patent teaches the following:

The performance of a fiber optic network can be measured by the maximum data throughput rate (or information carrying capacity) and the maximum distance between source and destination achievable (or reach). For Passive Optical Networks (PONs) in particular, additional measures of performance are the maximum number of Optical Networking Units (ONUs) and/or Optical Networking Terminals (ONTs) possible on a network and the minimum and maximum distance between the Optical Line Terminator (OLT) and an ONU/ONT. These performance metrics are constrained by, among other things, amplitude degradation and temporal distortions as a result of light traveling through an optical fiber.



Amplitude degradation is substantially a function of length or distance between two end points of an optical fiber. Temporal distortion mechanisms include intramodal (chromatic) dispersion and intermodal (modal) dispersion. Intramodal dispersion is the dominant temporal dispersion on Single-mode fiber (SMF), while intermodal dispersion is dominant on Multi-mode fiber (MMF). Both types of temporal distortions are measured as functions of frequency or rate of transmission (also referred as line rate of a communication protocol) over distance in MHz·km. Temporal distortions are greater, hence a constraint on network performance, with increasing frequency transmission.

*See* '795 patent at 1:47-2:4. The specification also teaches the following:

Implementations of the invention may include one or more of the following advantages.

A system is proposed that provides for high-speed communications over fiber optic networks. The system may include the use of the one or more of the following techniques either individually or in combination: m-ary modulation; channel equalization; demultiplexing across multiple fibers, coding and error correction. M-ary modulation allows for increased data throughput for a given line rate due to an increase in the number of bits per symbol transmitted. Channel equalization reduces the effects of temporal distortions allowing for increased reach. Demultiplexing across multiple fibers allows lower lines rates for a given data throughput rate due to the increased aggregate data throughput from the multiplexing. Coding and error correction allows for a greater selection of qualifying optical components that can be used in the network and complements m-ary modulation and channel

equalization for overall system performance improvement as measured by transmit energy per bit. These methods when combined (in part or in total) increase the data throughput and reach for fiber optic networks. For PONs in particular, these methods may increase the number of ONU/ONTs and the distance between OLT and ONU/ONT by decreasing the line rate as compared to a conventional communication system of equivalent data throughput.

*See* '795 patent at 6:1-26.

26. The inventions claimed in the '795 patent solve various technological problems inherent in the optical network systems including, by among other things, teaching how to (1) increase data throughput due to an increase in the number of bits per symbol transmitted, (2) reduce the effects of temporal distortions allowing for increased reach, (3) allow lower lines rates for a given data throughput rate due to the increased aggregate data throughput, (4) allow for a greater selection of qualifying optical components that can be used in the network, (5) complement m-ary modulation and channel equalization for overall system performance improvement as measured by transmit energy per bit, (6) increase the data throughput and reach for fiber optic networks, and (7) increase the number of ONU/ONTs and the distance between OLT and ONU/ONTs by decreasing the line rate as compared to other communication systems of equivalent data throughput.

27. On information and belief, AT&T makes, uses, offers for sale, sells, and/or imports certain products ("795 Accused Products"), such as pluggable optical transceiver modules using formats such as QSFP, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the '795 patent.

28. AT&T also knowingly and intentionally induces infringement of at least claim 1 of the '795 patent in violation of 35 U.S.C. § 271(b). Through at least its previous relationship with

iPON and the Sotos, and the filing and service of this Complaint, AT&T has had knowledge of the '795 patent and the infringing nature of the '795 Accused Products. Despite this knowledge of the '795 patent, AT&T continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '795 Accused Products in ways that directly infringe the '795 patent. AT&T does so knowing and intending that its customers and end users will commit these infringing acts. AT&T also continues to make, use, offer for sale, sell, and/or import the '795 Accused Products, despite its knowledge of the '795 patent, thereby specifically intending for and inducing its customers to infringe the '795 patent through the customers' normal and customary use of the '795 Accused Products.

29. AT&T has also infringed, and continues to infringe, at least claim 1 of the '795 patent by selling, offering for sale, or importing into the United States, the '795 Accused Products, knowing that the '795 Accused Products constitute a material part of the inventions claimed in the '795 patent, are especially made or adapted to infringe the '795 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. AT&T has been, and currently is, contributorily infringing the '795 patent in violation of 35 U.S.C. §§ 271(c) and (f).

30. The '795 Accused Products satisfy all claim limitations of one or more claims of the '795 patent. A claim chart comparing independent claim 1 of the '795 patent to a representative Accused Product is attached as Exhibit B, which is hereby incorporated by reference in its entirety.

31. By making, using, offering for sale, selling and/or importing into the United States the '795 Accused Products, AT&T has injured Plaintiff and is liable for infringement of the '795 patent pursuant to 35 U.S.C. § 271.

32. As a result of AT&T's infringement of the '795 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for AT&T's infringement, but in no event

less than a reasonable royalty for the use made of the invention by AT&T, together with interest and costs as fixed by the Court.

33. AT&T's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '795 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

## **COUNT II**

### **INFRINGEMENT OF U.S. PATENT NO. 10,263,723**

34. Plaintiff realleges and incorporates by reference paragraphs 1 through 21 as if fully set forth herein.

35. On April 16, 2019, the USPTO duly and legally issued the '723 patent, entitled "System And Method For Performing High-Speed Communications Over Fiber Optical Networks." The named inventors are Alexander Soto and Walter Soto. A true and correct copy of the '723 patent is attached as Exhibit C.

36. On November 29, 2018, the Sotos granted Plaintiff an exclusive license to the '723 patent. Under the exclusive license, Plaintiff was granted all substantial rights in the '723 patent until its expiration date including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

37. The '723 patent is a continuation of the '795 patent and therefore contains the same teachings. Plaintiff therefore realleges and incorporates by reference paragraphs 25 through 26 as if fully set forth herein.

38. On information and belief, AT&T makes, uses, offers for sale, sells, and/or imports certain products ("'723 Accused Products"), such as pluggable optical transceiver modules using

formats such as QSFP, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the '723 patent.

39. AT&T also knowingly and intentionally induces infringement of at least claim 1 of the '723 patent in violation of 35 U.S.C. § 271(b). Through at least its previous relationship with iPON and the Sotos, and the filing and service of this Complaint, AT&T has had knowledge of the '723 patent and the infringing nature of the '723 Accused Products. Despite this knowledge of the '723 patent, AT&T continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '723 Accused Products in ways that directly infringe the '723 patent. AT&T does so knowing and intending that its customers and end users will commit these infringing acts. AT&T also continues to make, use, offer for sale, sell, and/or import the '723 Accused Products, despite its knowledge of the '723 patent, thereby specifically intending for and inducing its customers to infringe the '723 patent through the customers' normal and customary use of the '723 Accused Products.

40. AT&T has also infringed, and continues to infringe, at least claim 1 of the '723 patent by selling, offering for sale, or importing into the United States, the '723 Accused Products, knowing that the '723 Accused Products constitute a material part of the inventions claimed in the '723 patent, are especially made or adapted to infringe the '723 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. AT&T has been, and currently is, contributorily infringing the '723 patent in violation of 35 U.S.C. §§ 271(c) and (f).

41. The '723 Accused Products satisfy all claim limitations of one or more claims of the '723 patent. A claim chart comparing independent claim 1 of the '723 patent to a representative Accused Product is attached as Exhibit D, which is hereby incorporated by reference in its entirety.

42. By making, using, offering for sale, selling and/or importing into the United States the '723 Accused Products, AT&T has injured Plaintiff and is liable for infringement of the '723 patent pursuant to 35 U.S.C. § 271.

43. As a result of AT&T's infringement of the '723 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for AT&T's infringement, but in no event less than a reasonable royalty for the use made of the invention by AT&T, together with interest and costs as fixed by the Court.

44. AT&T's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '723 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

### **COUNT III**

#### **INFRINGEMENT OF U.S. PATENT NO. 10,771,181**

45. Plaintiff realleges and incorporates by reference paragraphs 1 through 21 as if fully set forth herein.

46. On September 8, 2020, the USPTO duly and legally issued the '181 patent, entitled "System And Method For Performing High-Speed Communications Over Fiber Optical Networks." The named inventors are Alexander Soto and Walter Soto. A true and correct copy of the '181 patent is attached as Exhibit E.

47. On November 29, 2018, the Sotos granted Plaintiff an exclusive license to the '181 patent. Under the exclusive license, Plaintiff was granted all substantial rights in the '181 patent until its expiration date including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

48. The '181 patent is a continuation of the '723 and '795 patents, and therefore contains the same teachings. Plaintiff therefore realleges and incorporates by reference paragraphs 25 through 26 as if fully set forth herein.

49. On information and belief, AT&T makes, uses, offers for sale, sells, and/or imports certain products ("'181 Accused Products"), such as pluggable optical transceiver modules using formats such as QSFP, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 1 of the '181 patent.

50. AT&T also knowingly and intentionally induces infringement of at least claim 1 of the '181 patent in violation of 35 U.S.C. § 271(b). Through at least its previous relationship with iPON and the Sotos, and the filing and service of this Complaint, AT&T has had knowledge of the '181 patent and the infringing nature of the '181 Accused Products. Despite this knowledge of the '181 patent, AT&T continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '181 Accused Products in ways that directly infringe the '181 patent. AT&T does so knowing and intending that its customers and end users will commit these infringing acts. AT&T also continues to make, use, offer for sale, sell, and/or import the '181 Accused Products, despite its knowledge of the '181 patent, thereby specifically intending for and inducing its customers to infringe the '181 patent through the customers' normal and customary use of the '181 Accused Products.

51. AT&T has also infringed, and continues to infringe, at least claim 1 of the '181 patent by selling, offering for sale, or importing into the United States, the '181 Accused Products, knowing that the '181 Accused Products constitute a material part of the inventions claimed in the '181 patent, are especially made or adapted to infringe the '181 patent, and are not staple

articles or commodities of commerce suitable for non-infringing use. AT&T has been, and currently is, contributorily infringing the '181 patent in violation of 35 U.S.C. §§ 271(c) and (f).

52. The '181 Accused Products satisfy all claim limitations of one or more claims of the '181 patent. A claim chart comparing independent claim 1 of the '181 patent to a representative Accused Product is attached as Exhibit F, which is hereby incorporated by reference in its entirety.

53. By making, using, offering for sale, selling and/or importing into the United States the '181 Accused Products, AT&T has injured Plaintiff and is liable for infringement of the '181 patent pursuant to 35 U.S.C. § 271.

54. As a result of AT&T's infringement of the '181 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for AT&T's infringement, but in no event less than a reasonable royalty for the use made of the invention by AT&T, together with interest and costs as fixed by the Court.

55. AT&T's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '181 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

#### **COUNT IV**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,374,508**

56. Plaintiff realleges and incorporates by reference paragraphs 1 through 21 as if fully set forth herein.

57. On February 2, 2013, the USPTO duly and legally issued the '508 patent, entitled "Augmenting Passive Optical Networks." The named inventors are Alexander Soto and Walter Soto. A true and correct copy of the '508 patent is attached as Exhibit G.



58. On November 29, 2018, the Sotos granted Plaintiff an exclusive license to the '508 patent. Under the exclusive license, Plaintiff was granted all substantial rights in the '508 patent until its expiration date including, without limitation, the exclusive right to sublicense, sue for infringement, and collect all past, present, and future damages.

59. The '508 patent relates to, among other things, optical fiber communications generally, and more specifically to the combination of passive optical networking and wireless networking (such as Wifi). The claimed invention of the '508 patent sought to solve problems with, and improve upon, optical networking systems. For example, the specification of the '508 patent teaches the following:

One problem for Service Providers of broadband service links stems from requirements to connect different types of communication equipment using multiple protocol conversions and communication link conversions. Typically, conversions are a large source of expense for ILECs, CLECs and other Service Providers.

For example, a broadband service link between a network's core and a building or premise may consist of three communication segments (fiber-wireless-fiber) each with multiple protocol and communication link conversions. At the network core, a SONET/SDH fiber may be connected to ATM communication equipment that performs add-drop-mux (ADM) functions in accordance with a SONET/SDH protocol. Line cards within the ATM communication equipment aggregate, switch and convert traffic to other protocols such as Ethernet, which are used across fiber distribution links such as Gigabit Ethernet (GbE). The fiber distribution links are connected to other communication equipment that perform wireless base-station

functions that may include yet another protocol conversion to support the broadband wireless access (BWA) protocol in-use. The broadband service link propagates over the air. A wireless terminal terminates the BWA protocol in-use and converts back to an Ethernet or SONET/SDH protocol. The wireless terminal distributes broadband services across fiber links to a network terminal equipment residing at a building or premise. In this example, the broadband service links undergoes multiple protocol conversions and communication link conversions between the network's core and a premise. Each protocol conversion increases a Service Provider's CAPEX and OPEX expense of a fiber network.

*See* '508 patent at 1:36-67. The specification also teaches the following:

Additionally, Service Providers are encumbered with obtaining physical rights of way when deploying fiber. The fiber can be directly buried, placed in ducts or strung aurally along the right of way. Licenses for rights of way may need to be negotiated with several municipalities or local governments, and may require the purchase or lease of property. Deploying fiber around rivers, water ways, canyons, mountains and other physical obstacles adds to the complexity of securing right of ways. Rights of way issues increase the deployment cost, a Service Provider's CAPEX and OPEX, of a fiber network.

*See* '508 patent at 2:1-11. The specification also teaches the following:

Furthermore, optical signal transmissions in optical fiber networks have limited optical power and thus have limited range. In passive optical networks, optical signals are split passively to increase the number of end terminals or clients. However, limited optical power budgets limit the number of clients and the reach

of the network. There may be a trade-off between the number of clients on the network and the area of coverage of the network. For example, a Service Provider may need to choose between a network with twice as many clients but half the range of coverage and a network with half as many clients but with twice the range of coverage.

*See* '508 patent at 2:12-22.

60. The inventions claimed in the '508 patent solve various technological problems inherent in the optical network systems including, by among other things, teaching how to use "optical-to-radio and radio-to-optical converters in fiber links of the passive optical network." '508 patent at 2:35-37.

61. On information and belief, AT&T makes, uses, offers for sale, sells, and/or imports certain products ("'508 Accused Products"), such as ONTs with built-in WiFi capabilities and associated pluggable modules, that directly infringe, literally and/or under the doctrine of equivalents, at least claim 7 of the '508 patent.

62. AT&T also knowingly and intentionally induces infringement of at least claim 1 of the '508 patent in violation of 35 U.S.C. § 271(b). Through at least its previous relationship with iPON and the Sotos, and the filing and service of this Complaint, AT&T has had knowledge of the '508 patent and the infringing nature of the '508 Accused Products. Despite this knowledge of the '508 patent, AT&T continues to actively encourage and instruct its customers and end users (for example, through online customer-focused materials) to use the '508 Accused Products in ways that directly infringe the '508 patent. AT&T does so knowing and intending that its customers and end users will commit these infringing acts. AT&T also continues to make, use, offer for sale, sell, and/or import the '508 Accused Products, despite its knowledge of the '508 patent, thereby

specifically intending for and inducing its customers to infringe the '508 patent through the customers' normal and customary use of the '508 Accused Products.

63. AT&T has also infringed, and continues to infringe, at least claim 1 of the '508 patent by selling, offering for sale, or importing into the United States, the '508 Accused Products, knowing that the '508 Accused Products constitute a material part of the inventions claimed in the '508 patent, are especially made or adapted to infringe the '508 patent, and are not staple articles or commodities of commerce suitable for non-infringing use. AT&T has been, and currently is, contributorily infringing the '508 patent in violation of 35 U.S.C. §§ 271(c) and (f).

64. The '508 Accused Products satisfy all claim limitations of one or more claims of the '508 patent. A claim chart comparing independent claim 1 of the '508 patent to a representative Accused Product is attached as Exhibit H, which is hereby incorporated by reference in its entirety.

65. By making, using, offering for sale, selling and/or importing into the United States the '508 Accused Products, AT&T has injured Plaintiff and is liable for infringement of the '508 patent pursuant to 35 U.S.C. § 271.

66. As a result of AT&T's infringement of the '508 patent, Plaintiff is entitled to monetary damages in an amount adequate to compensate for AT&T's infringement, but in no event less than a reasonable royalty for the use made of the invention by AT&T, together with interest and costs as fixed by the Court.

67. AT&T's infringing activities have injured and will continue to injure Plaintiff, unless and until this Court enters an injunction prohibiting further infringement of the '508 patent, and, specifically, enjoining further manufacture, use, sale, importation, and/or offers for sale that come within the scope of the patent claims.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff respectfully requests that this Court enter:

- a. A judgment in favor of Plaintiff that AT&T has infringed, either literally and/or under the doctrine of equivalents, the Asserted Patents;
- b. A judgment and order requiring AT&T to pay Plaintiff its damages, costs, expenses, and pre-judgment and post-judgment interest for AT&T's infringement of the Asserted Patents;
- c. A judgment and order requiring AT&T to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;
- d. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Defendants; and
- e. Any and all other relief as the Court may deem appropriate and just under the circumstances.

**DEMAND FOR JURY TRIAL**

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: August 9, 2022

Respectfully submitted,

/s/ Benjamin T. Wang  
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