**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF DELAWARE**

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| AEGIS 11 S.A.,<br><br>Plaintiff,<br><br>v.<br><br>NETGEAR, INC.,<br><br>Defendant. | **Civil Action No. _____**<br><br>**JURY TRIAL DEMANDED** |

# COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Aegis 11 S.A. ("Aegis 11" or "Plaintiff"), for its Complaint against Defendant Netgear, Inc., ("Netgear" or "Defendant"), alleges the following:

## NATURE OF THE ACTION

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq*.

## THE PARTIES

2. Aegis 11 is a corporation organized under the laws of Luxembourg with a place of business at 6, Avenue Marie Thérèse 2132 Luxembourg, Grand Duchy of Luxembourg.

3. Upon information and belief, Netgear is a corporation organized and existing under the laws of the State of Delaware, with a place of business at 350 E. Plumeria Drive, San Jose, CA 95134, and can be served through its registered agent, Incorporating Services, Ltd., 3500 S. DuPont Hwy., Dover, DE 19901. Upon information and belief, Netgear sells and offers to sell products and services throughout the United States, including in this judicial district, and introduces products and services that into the stream of commerce and that incorporate infringing

technology knowing that they would be sold in this judicial district and elsewhere in the United States.

## JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

6. Venue is proper in this judicial district under 28 U.S.C. § 1400(b). On information and belief, Netgear is incorporated in the State of Delaware.

7. On information and belief, Defendant is subject to this Court's general and specific personal jurisdiction because Defendant has sufficient minimum contacts within the State of Delaware and this District, pursuant to due process and/or the Del. Code. Ann. Tit. 3, § 3104, because Defendant purposefully availed itself of the privileges of conducting business in the State of Delaware and in this District, because Defendant regularly conducts and solicits business within the State of Delaware and within this District, and because Plaintiff's causes of action arise directly from each of Defendant's business contacts and other activities in the State of Delaware and this District. Further, this Court has personal jurisdiction over Defendant because it is incorporated in Delaware and has purposely availed itself of the privileges and benefits of the laws of the State of Delaware.

## BACKGROUND

8. This action involves three patents, described in detail in the counts below (collectively, the "Asserted Patents").

9. U.S. Patent No. 6,839,553 ("the '553 patent"), claims technologies for managing operational parameters in terminal devices in wireless networks that were developed in the late 1990s by LG scientist Hyoung Sun Park.

10. U.S. Patent No. 9,848,443 ("the '443 patent") claims technologies for accessing a channel to support wideband in a wireless communication system that were developed in the late 2000s by LG scientist Yong Ho Seok.

11. U.S. Patent No. 9,584,200 ("the '200 patent") claims technologies for transmitting control information in a wireless communication system that were developed in the late 2000s by LG scientists Hyun Soo Ko and others.

12. LG was actively involved with standards-development organizations that developed industry standards relevant to LG's product portfolios, including LG's Wi-Fi enabled consumer electronic goods.

13. The Institute of Electrical and Electronics Engineers (IEEE) is a leading standards-development organization for the development of industrial standards (having developed over 900 active industry technical standards) in a broad range of disciplines, including electric power and energy, telecommunications, consumer electronics, biomedical technology and healthcare-information technology, information assurance, transportation, aerospace, and nanotechnology.

14. Today, IEEE is the world's largest association of technical professionals with more than 420,000 members in over 160 countries around the world. Its objectives are the educational and technical advancement of electrical and electronic engineering, telecommunications, computer engineering, and allied disciplines.

15. The IEEE 802.11 standards, created by the IEEE, are a set of media access control (MAC) and physical layer (PHY) specifications for implementing wireless local area network (WLAN) computer communication in the 900 MHz and 2.4, 3.6, 5, and 60 GHz frequency bands.

16. The IEEE 802.11 standards are created and maintained by the IEEE LAN/MAN Standards Committee (IEEE 802). The base version of IEEE 802.11 was released in 1997 and has had subsequent amendments. The standard and amendments provide the basis for wireless network products using the Wi-Fi brand.

17. IEEE Std. 802.11-2016, commonly shortened to 802.11-2016, is a revision based on the IEEE 802.11-2012 wireless-networking standard, and further incorporates five amendments, including 802.11ac-2013 (commonly shortened to 802.11ac).

18. 802.11ac is an amendment to IEEE 802.11, published in December 2013, and builds on 802.11n. The goal of 802.11n was to improve network throughput over the two previous standards—802.11a and 802.11g—with a significant increase in the maximum net data rate from 54 Mbit/s to 600 Mbit/s (slightly higher gross bit rate, including, for example, error-correction codes, and slightly lower maximum throughput) with the use of four spatial streams at a channel width of 40 MHz.

19. Changes in 802.11ac compared to 802.11n include wider channels (80 or 160 MHz versus 40 MHz) in the 5 GHz band, more spatial streams (up to eight versus four), higher-order modulation (up to 256-QAM vs. 64-QAM), and the addition of Multi-user MIMO (MU-MIMO). While initial implementations supported 80 MHz channels, three spatial streams, and 256-QAM, in 80 MHz channels in the 5 GHz band, more recent devices support 160 MHz channels, four spatial streams, and MU-MIMO.

20. The 802.11ac standard has enabled increased efficiency, as evidenced by the fact that most high-end, Wi-Fi-enabled consumer electronics on the market are 802.11ac compliant. The majority of products adopting this technological advance are advertised as being compliant

with the standard, and companies regularly list their product as compliant with this particular standard on trade group web sites (such as the Wi-Fi Alliance website).

21. In or about May 2018, Sisvel International S.A. ("Sisvel") acquired the '553 patent from LG.

22. In or about June 2019, Aegis 11 acquired the '553 patent from Sisvel.

23. In or about April 2019, Aegis 11 acquired the remaining Asserted Patents from LG.

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. 6,839,553**

24. The allegations set forth in the foregoing paragraphs 1 through 23 are incorporated into this First Claim for Relief.

25. On January 4, 2005, U.S. Patent No. 6,839,553 ("the '553 patent"), entitled "Method of Managing Mobile Station Operational Parameters," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '553 patent is attached as Exhibit A.

26. Aegis 11 holds the exclusive right to assert all causes of action arising under the '553 patent and the right to collect any remedies for infringement thereof.

27. The inventions claimed in the '553 patent relate to technologies for managing operational parameters in terminal devices in wireless networks. Such technologies are a required part of Wi-Fi Protected Access 2 ("WPA2") and Wi-Fi Protected Access 3 ("WPA3") network security protocols that were first incorporated into IEEE Standard 802.11i-2004 ("802.11i") and were subsequently incorporated into later versions of the 802.11 standard, including 802.11-2007, 802.11-2012, and 802.11-2016. In fact, "Since 2006, all Wi-Fi CERTIFIED™ devices implement WPA2." (https://www.wi-fi.org/discover-wi-fi/security, last accessed May 10, 2019.) Furthermore, WPA3 retains interoperability with WPA2. (*Id.*) Thus,

Wi-Fi CERTIFIED™ devices and uncertified devices that nonetheless implement the mandatory WPA2 and WPA3 features of the 802.11 standard necessarily meet the claim limitations of the '553 patent.

28. The inventions claimed in the '553 patent provide many advantages over the prior art, and in particular improve the ability of network administrators to wirelessly change operational parameters installed in a communication apparatus such as base station or mobile station. One advantage of the patented inventions is providing a mutual authentication procedure for the mobile station such that operational parameters may not be changed by unauthorized persons, while maintaining the same number of updating steps as before. (*See* Ex. A at 1:42-51; 2:3-10.)

29. The patented inventions disclosed in the '553 patent resolve technical problems related to wirelessly updating operational parameters of a communication apparatus, particularly problems related to the authentication procedure at a mobile station before an over-the-air update can be run. As the '553 patent explains, one of the limitations of the prior art regarding authentication for over-the-air updates was that an authentication procedure performed independently at the mobile station would elongate the update process and increase the load in the network. (*See* Ex. A at 1:53-59.)

30. The claims of the '553 patent recite inventive concepts that are deeply rooted in wireless communication and networking technology, and overcome problems specifically arising out of how to optimize the time and complexity of authentication procedures for updating operational parameters at a mobile station.

31. Moreover, the claims of the '553 patent recite inventive concepts that are not merely routine or conventional use of wireless networking technology. Instead, the patented

inventions disclosed in the '553 patent provide novel solutions to specific problems related to authentication at a mobile station prior to updating operational parameters. The claims of the '553 patent thus specify how messages are transmitted in a wireless communication network are manipulated to yield the desired levels of authentication and network security.

32. Upon information and belief, Defendant has and continues to directly infringe at least claim 1 of the '553 patent by making, using, selling, importing and/or providing and causing to be used Wi-Fi CERTIFIED™ devices and 802.11-compliant devices ("the '553 Patent Accused Instrumentalities"), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit B.

33. For example, Defendant affirmatively represents that it makes and sells products that are Wi-Fi CERTIFIED™ and/or compliant with the 802.11 standard: *see, e.g.*, https://www.netgear.com/landings/AX-WIFI/default.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/networking/wifi-routers/RAX120.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/mobile-broadband/mobilerouters/MR1100.aspx (last accessed June 12, 2019). However, the '553 Patent Accused Instrumentalities are understood to include any and all products that Defendant has or continues to make, use, sell, import and/or provide and cause to be used that are Wi-Fi CERTIFIED™ or that perform the WPA2 and/or WPA3 features of the 802.11 standard.

34. On information and belief, the '553 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

35. Upon information and belief, since at least September 14, 2018, Defendant is liable as a contributory infringer of the '553 patent under 35 U.S.C. § 271(c) by offering to sell,

selling and importing into the United States components to be especially made or adapted for use in an infringement of the ’553 patent. The ’553 Patent Accused Instrumentalities are a material component for use in practicing the ’553 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

36. Plaintiff has been harmed by Defendant’s infringing activities.

**COUNT II – INFRINGEMENT OF U.S. PATENT NO. 9,848,443**

37. The allegations set forth in the foregoing paragraphs 1 through 36 are incorporated into this Second Claim for Relief.

38. On December 19, 2017, U.S. Patent No. 9,848,443 (“the ’443 patent”), entitled “Method and Apparatus of Accessing Channel in Wireless Communication System,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’443 patent is attached as Exhibit C.

39. Aegis 11 holds the exclusive right to assert all causes of action arising under the ’443 patent and the right to collect any remedies for infringement thereof.

40. The inventions claimed in the ’443 patent relate to technologies for accessing a channel to support wideband in a wireless communication system. Such technologies are a required part of the 802.11ac standard, subsequently incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the ’443 patent.

41. The inventions claimed in the ’443 patent provide many advantages over the prior art, and in particular improve the efficiency of radio resources by managing and using a wideband channel through a plurality of narrowband channels. One advantage of the patented inventions in efficiently operating a wideband VHT (Very High Throughput) system, as

disclosed by the 802.11 standard, is to segment a wideband channel into a plurality of narrowband channels for efficiency. (*See* Ex. C at 4:28-30.)

42. Upon information and belief, Defendant has and continues to directly infringe at least claims 1-10 of the '443 patent by making, using, selling, importing and/or providing and causing to be used 802.11ac-compliant devices ("the '443 Patent Accused Instrumentalities"), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit D.

43. For example, Defendant affirmatively represents that it makes and sells products compliant with the 802.11ac standard: *see, e.g.*, https://www.netgear.com/home/discover/fastest-wifi/ (last accessed June 12, 2019); https://www.netgear.com/landings/AX-WIFI/default.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/networking/wifi-routers/RAX120.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/mobile-broadband/mobilerouters/MR1100.aspx (last accessed June 12, 2019). However, the '443 Patent Accused Instrumentalities are understood to include any and all products that Defendant has or continues to make, use, sell, import and/or provide and cause to be used that incorporate the wideband channel access features of the 802.11 standard, whether certified for 802.11ac or other versions of the 802.11 standard.

44. On information and belief, the '443 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

45. Upon information and belief, since at least the date of this Complaint, Defendant is liable as a contributory infringer of the '443 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States components to be especially made or adapted for use in an infringement of the '443 patent. The '443 Patent Accused Instrumentalities are a

material component for use in practicing the ’443 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

46. Plaintiff has been harmed by Defendant’s infringing activities.

**COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,584,200**

47. The allegations set forth in the foregoing paragraphs 1 through 46 are incorporated into this Third Claim for Relief.

48. On February 28, 2017, U.S. Patent No. 9,584,200 (“the ’200 patent”), entitled “Method for Transmitting Control Information in Multiple Antenna System,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’200 patent is attached as Exhibit E.

49. Aegis 11 holds the exclusive right to assert all causes of action arising under the ’200 patent and the right to collect any remedies for infringement thereof.

50. The inventions claimed in the ’200 patent relate to technologies for transmitting control information in a wireless communication system, comprising dividing frequency bandwidth into ranges to which a precoding matrix index (PMI) is applied, obtaining multiple antenna information by the range to which the same PMI is applied, and transmitting the multiple antenna information. Such technologies are a required part of the 802.11ac standard, subsequently incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the ’200 patent.

51. The inventions claimed in the ’200 patent provide many advantages over the prior art, and in particular improve data transmission efficiency in a wireless communication network by transmitting multiple antenna information by the unit of a range to which the same PMI is applied. (*See* Ex. E at 2:44-48.)

52. Upon information and belief, Defendant has and continues to directly infringe at least claims 1, 4, 5, 6, 7, 10, 11, and 12 of the '200 patent by making, using, selling, importing and/or providing and causing to be used 802.11ac-compliant devices ("the '200 Patent Accused Instrumentalities"), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit F.

53. For example, Defendant affirmatively represents that it makes and sells products compliant with the 802.11ac standard: *see, e.g.*, https://www.netgear.com/home/discover/fastest-wifi/ (last accessed June 12, 2019); https://www.netgear.com/landings/AX-WIFI/default.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/networking/wifi-routers/RAX120.aspx (last accessed June 12, 2019); https://www.netgear.com/home/products/mobile-broadband/mobilerouters/MR1100.aspx (last accessed June 12, 2019). However, the '200 Patent Accused Instrumentalities are understood to include any and all products that Defendant has or continues to make, use, sell, import and/or provide and cause to be used that incorporate the wideband channel access features of the 802.11 standard, whether certified for 802.11ac or other versions of the 802.11 standard.

54. On information and belief, the '200 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Defendant's partners, clients, customers and end users across the country and in this District.

55. Upon information and belief, since at least the date of this Complaint, Defendant is liable as a contributory infringer of the '200 patent under 35 U.S.C. § 271(c) by offering to sell, selling and importing into the United States components to be especially made or adapted for use in an infringement of the '200 patent. The '200 Patent Accused Instrumentalities are a

material component for use in practicing the ’200 patent and are specifically made and are not a staple article of commerce suitable for substantial non-infringing use.

56. Plaintiff has been harmed by Defendant’s infringing activities.

## STATEMENT REGARDING RAND OBLIGATION

57. Plaintiff contends that, pursuant to relevant IEEE bylaws, the ’553, ’443, and ’200 patents are subject to Reasonable and Non-Discriminatory (“RAND”) licensing obligations to willing licensees.

58. To the extent Defendant refuses to willingly license the ’553, ’443, and ’200 patents under RAND terms, Plaintiff reserves the right to treat Defendant as an unwilling licensee, such that Plaintiff would not be bound by any RAND licensing obligation for purposes of this action or any license to Defendant. Accordingly, Plaintiff seeks the maximum available reasonable royalty damages to compensate for Defendant’s infringing activities.

## JURY DEMAND

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

## PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment for itself and against Defendant as follows:

A. An adjudication that Defendant has infringed the ’553, ’443, and ’200 patents;

B. An award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant’s infringement of the ’553, ’443, and ’200 patents, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff’s reasonable attorneys’ fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: June 21, 2019

DEVLIN LAW FIRM LLC

*/s/ Timothy Devlin*

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