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

WINTERSPRING DIGITAL LLC,	§	
	§	
	§	Case No.
Plaintiff,	§	
	§	**JURY TRIAL DEMANDED**
v.	§	
	§	
MEDIATEK INC.,	§	
	§	
Defendant.	§	
	§	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Winterspring Digital LLC ("Winterspring" or "Plaintiff") for its Complaint against MediaTek Inc. ("MediaTek" or "Defendant") alleges as follows:

THE PARTIES

1. Winterspring is a limited liability company organized and existing under the laws of the State of Texas, with its principal place of business located at 104 East Houston Street, Marshall, Texas 75670

2. Upon information and belief, MediaTek is a Taiwanese corporation with its principal place of business located at No. 1, Dusing 1st Road, Hsinchu Science Park, Hsinchu City 30078 Taiwan, Republic of China. Upon information and belief, MediaTek does business in Texas and in the Eastern District of Texas, directly or through intermediaries.

JURISDICTION

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq*. This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant. Defendant regularly conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this Judicial District and/or has contributed to patent infringement by others in this Judicial District, the State of Texas, and elsewhere in the United States.

5. Venue is proper in this Judicial District pursuant to 28 U.S.C. § 1391 because, among other things, Defendant is not a resident in the United States, and thus may be sued in any judicial district pursuant to 28 U.S.C. § 1391(c)(3).

6. Defendant is subject to this Court's jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to its substantial business in this State and Judicial District, including (a) at least part of its past infringing activities, (b) regularly doing or soliciting business in Texas, and/or (c) engaging in persistent conduct and/or deriving substantial revenue from goods and services provided to customers in Texas.

PATENTS-IN-SUIT

7. On January 16, 2007, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,164,692 (the "'692 Patent") entitled "Apparatus and Method for Transmitting 10 Gigabit Ethernet LAN Signals Over a Transport System." A true and correct copy of the '692 Patent is available at http://pdfpiw.uspto.gov/.piw?docid=7164692.

8. On September 2, 2008, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,420,975 (the "'975 Patent") entitled "Method and Apparatus For High-Speed Frame Tagger." A true and correct copy of the '975 Patent is available at http://pdfpiw.uspto.gov/.piw?docid=7420975.

9. On August 10, 2010, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,774,468 (the "'468 Patent") entitled "Network Traffic Admission

Control." A true and correct copy of the '468 Patent is available at http://pdfpiw.uspto.gov/.piw?docid=7774468.

10. Winterspring is the sole and exclusive owner of all right, title, and interest in the '692, '975, and '468, Patents (the "Patents-in-Suit") and holds the exclusive right to take all actions necessary to enforce its rights to the Patent-in-Suit, including the filing of this patent infringement lawsuit. Winterspring also has the right to recover all damages for past, present, and future infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

FACTUAL ALLEGATIONS

11. The Patents-in-Suit generally cover systems and methods for routing data over a network.

12. The '692 Patent generally discloses an apparatus and method for transmitting LAN signals over a transport system. A system sends or receives a signal to or from a transport system, converts the signal to an intermediate form, re-clocks the intermediate signal, reconverts and then transmits the signal. The technology described in the '692 Patent was developed by Jeffrey Lloyd Cox and Samir Satish Seth. By way of example, this technology is implemented today in microchips, SoCs and ASICs that detect and convert 10-Gigabit LAN signals.

13. The '975 Patent discloses an apparatus and methods for examining a packet, determining a protocol type and tagging the packet. The technology described in the '975 Patent was developed by Velamur Krishnamachari and Dinesh Annayya from Cypress Semiconductor Corporation. By way of example, this technology is implemented today in microchips, SoCs and ASICs which implement packet tagging.

14. The '468 Patent discloses systems and methods for traffic admission control using real time bandwidth allocation. The technology described in the '468 Patent was developed by

Siddhartha Nag, and Srikanth S. Kumar. By way of example, this technology is implemented today in microchips, SoCs, and ASICs that perform traffic admission control using real time bandwidth allocation.

15. MediaTek has infringed and is continuing to infringe the Patents-in-Suit by making, using, offering to sell, selling, and/or importing network switches, routers, and software which implement the technology disclosed in the above patents-in-suit.

COUNT I
(Infringement of the '692 Patent)

16. Paragraphs 1 through 15 are incorporated by reference as if fully set forth herein.

17. Winterspring has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the '692 Patent.

18. Defendant has and continues to directly infringe the '692 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '692 Patent. Such products microchips, SoCs and ASICs that receive, convert, monitor, and send 10GE LAN signals, including but not limited to the MediaTek MT3729 SoC, available as a standalone SoC or in an ASIC design.

19. For example, Defendant has and continues to directly infringe at least claim 10 of the '692 Patent by making, using, offering to sell, selling, and/or importing into the United States products that receive, convert, and monitor 10GE LAN signals.

20. For example, the MT3729 performs a method transferring 10GE LAN client signals from a transport system to a client system comprising receiving the 10GE LAN client signal transmitted over the transport system, converting the 10GE LAN client signal to an intermediate signal, recovering clock data from the intermediate signal, recovering a data stream from the

intermediate signal, reconverting the intermediate signal to the 10GE LAN client signal; transferring the 10GE LAN client signal to a client system; and monitoring the intermediate form with a monitoring device wherein the monitoring device is a 10GE LAN media access controller.

MT3729

MT3729

The MT3729 is an 800GbE (Dual 400GbE) MACsec Retimer PHY (16-lane bi-directional PHY device with 56G PAM4 or 28G NRZ Serdes) for applications such as Data Center switch SoC to Retimer companion chip. MT3729 can be used in line cards or switch fabrics in conjunction with network controller ASICs to build multi-terabit network servers, switches, and routers.

The MT3729 is available as a standard product or in a semi-custom ASIC design.

MT3729

Key Features

- Retimer Mode: signal reinforcement that extends the SerDes connection distance and transmission to the edge.
- Forward/Reverse GearBox Mode: bitrate translation between 56G and 28G links without replacing the facility during the transition.
- MUX/DeMUX Mode as a redundancy requirement for hitless MUX and Broadcast.
- IEEE 802.1AE MACSec for secure communications with AES128/256 encryption from 1G to 400GbE per port and highly accurate PTP timestamping.

Product Highlights

- Up to 800GbE throughput (Dual 400GbE)
- IEEE standards compliance for 400GbE, 200GGbE, 100GbE, 50GbE, 40GbE, 25GbE, 10GbE, and 1GbE
- Support for 400GAUI-8 electrical interfaces for QSFP-DD & OSFP optical modules
- 16 bi-directional links at 56G PAM4, up to 28G NRZ SerDes and 1G SGMII options
- PCS with various FEC modes to support FEC termination and regeneration.
- Support for IEEE 1588v2 and SyncE up to Class-C to meet stringent 5G infrastructure timing requirements to provide more flexibility and accuracy

[1]

[1] https://www.mediatek.com/products/ethernetphy/mt3729.

21. Defendant has and continues to indirectly infringe one or more claims of the ’692 Patent by knowingly and intentionally inducing others, including MediaTek customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States inventory tracking systems, such as products that that receive, convert, monitor, and send 10GE LAN signals.

22. Defendant, with knowledge that these products, or the use thereof, infringe the ’692 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the ’692 Patent by providing these products to end users for use in an infringing manner.

23. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the ’692 Patent, but while remaining willfully blind to the infringement.

24. Winterspring has suffered damages as a result of Defendant’s direct and indirect infringement of the ’692 Patent in an amount to be proved at trial.

25. Winterspring has suffered, and will continue to suffer, irreparable harm as a result of Defendant’s infringement of the ’692 Patent, for which there is no adequate remedy at law, unless Defendant’s infringement is enjoined by this Court.

COUNT II
(Infringement of the ’975 Patent)

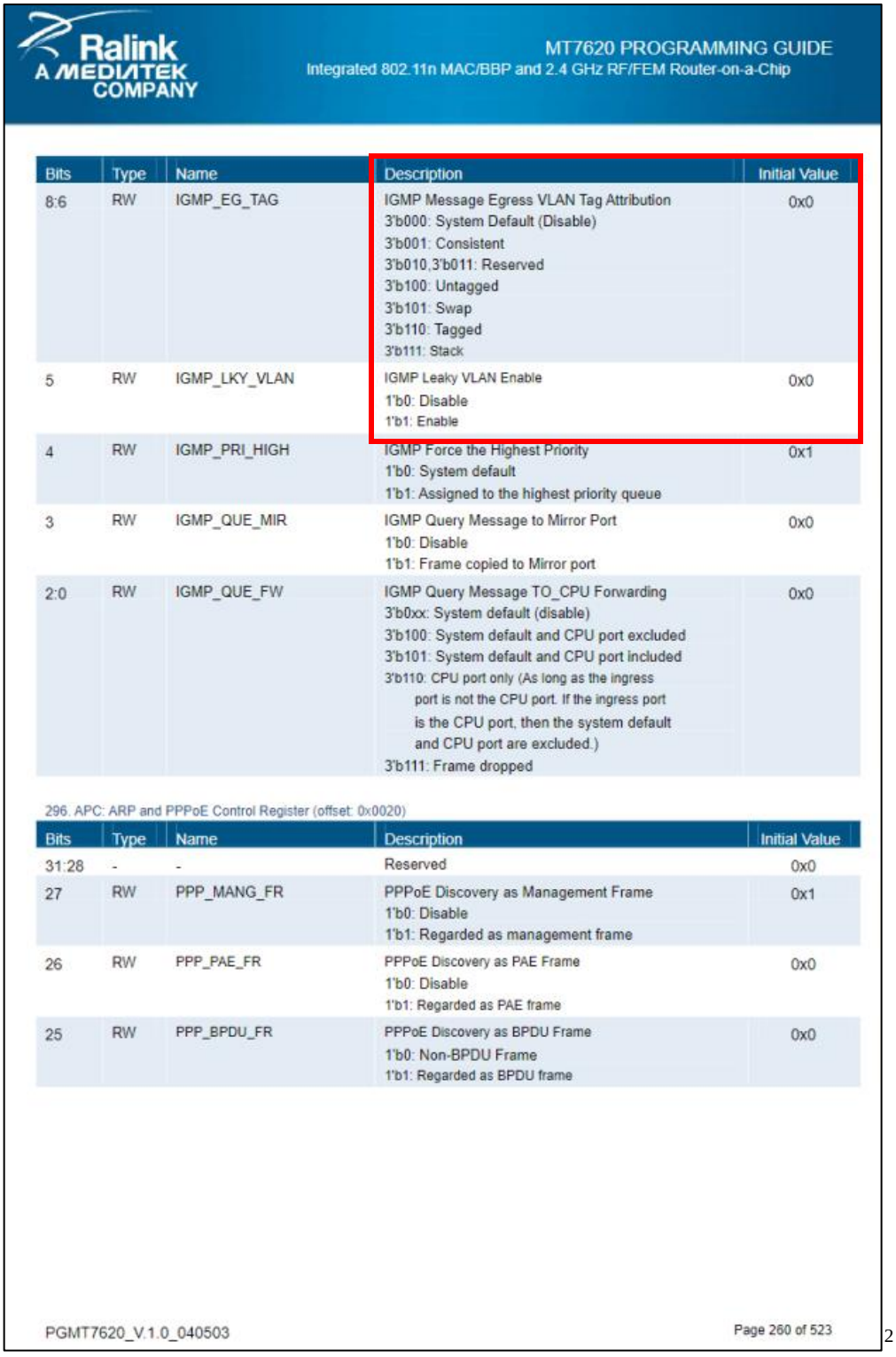
26. Paragraphs 1 through 15 are incorporated by reference as if fully set forth herein.

27. Winterspring has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the ’975 Patent.

28. Defendant has directly infringed the ’975 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the ’975 Patent. Such products include but are not limited to microchips, SoCs, and ASICs that implement packet tagging, such as the Mediatek MT7620.

29. For example, Defendant has directly infringed at least claim 5 of the ’975 Patent by making, using, offering to sell, selling, and/or importing into the United States products that perform packet tagging:

30. For example, the MT7620 includes an apparatus comprising a network processor interface suitable for coupling to a network processor and a central processor interface suitable for coupling to a central processor. Upon information and belief, the MT7620 further includes a protocol determination logic block to determine a protocol type of data in a packet, wherein the protocol determination logic compares the protocol information in a first pass to predetermined values to procedure a first result and, if the first result is positive, compares the protocol information in a second pass to predetermined values to produce a second result, the first and second results forming a set of results. Upon information and belief, the MT7620 further comprises a tag select logic block to apply a tag to the packet indicating that the packet has an unknown protocol type if the first result is negative and if the first result is positive, the packet should be sent to either the central processor interface or the network processor interface based on the set of results.



Ralink
A MEDIATEK COMPANY

MT7620 PROGRAMMING GUIDE
Integrated 802.11n MAC/BBP and 2.4 GHz RF/FEM Router-on-a-Chip

Bits	Type	Name	Description	Initial Value
8:6	RW	IGMP_EG_TAG	IGMP Message Egress VLAN Tag Attribution 3'b000: System Default (Disable) 3'b001: Consistent 3'b010,3'b011: Reserved 3'b100: Untagged 3'b101: Swap 3'b110: Tagged 3'b111: Stack	0x0
5	RW	IGMP_LKY_VLAN	IGMP Leaky VLAN Enable 1'b0: Disable 1'b1: Enable	0x0
4	RW	IGMP_PRI_HIGH	IGMP Force the Highest Priority 1'b0: System default 1'b1: Assigned to the highest priority queue	0x1
3	RW	IGMP_QUE_MIR	IGMP Query Message to Mirror Port 1'b0: Disable 1'b1: Frame copied to Mirror port	0x0
2:0	RW	IGMP_QUE_FW	IGMP Query Message TO_CPU Forwarding 3'b0xx: System default (disable) 3'b100: System default and CPU port excluded 3'b101: System default and CPU port included 3'b110: CPU port only (As long as the ingress port is not the CPU port. If the ingress port is the CPU port, then the system default and CPU port are excluded.) 3'b111: Frame dropped	0x0

296. APC: ARP and PPPoE Control Register (offset: 0x0020)

Bits	Type	Name	Description	Initial Value
31:28	-	-	Reserved	0x0
27	RW	PPP_MANG_FR	PPPoE Discovery as Management Frame 1'b0: Disable 1'b1: Regarded as management frame	0x1
26	RW	PPP_PAE_FR	PPPoE Discovery as PAE Frame 1'b0: Disable 1'b1: Regarded as PAE frame	0x0
25	RW	PPP_BPDU_FR	PPPoE Discovery as BPDU Frame 1'b0: Non-BPDU Frame 1'b1: Regarded as BPDU frame	0x0

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[2]

[2] https://www.manualslib.com/manual/1639995/Mediatek-Ralink-Mt7620.html?page=260

31. Defendant has indirectly infringed one or more claims of the ’975 Patent by knowingly and intentionally inducing others, including MediaTek customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using, offering to sell, selling and/or importing into the United States products that include microchips, SoCs, and ASICs that implement packet tagging.

32. Defendant, with knowledge that these products, or the use thereof, infringed the ’975 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the ’975 Patent by providing these products to end users for use in an infringing manner.

33. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the ’975 Patent, but while remaining willfully blind to the infringement.

COUNT III
(Infringement of the ’468 Patent)

34. Paragraphs 1 through 15 are incorporated by reference as if fully set forth herein.

35. Winterspring has not licensed or otherwise authorized Defendant to make, use, offer for sale, sell, or import any products that embody the inventions of the ’468 Patent.

36. Defendant has and continues to directly infringe the ’468 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the ’468 Patent. Such products include microchips, SoCs, and ASICs which allow for traffic admission control using real time bandwidth allocation, such as the MediaTek MT3729 SoC, available as a standalone SoC or in an ASIC design.

37. For example, Defendant has and continues to directly infringe at least claim 1 of the ’468 Patent by making, using, offering to sell, selling, and/or importing into the United States products that hardware and software which allow provide a user with a GUI to optimize routing decisions, including but not limited to the MT3729.

38. For example, the MT3729 performs a method of a first edge node requesting from a director node, an amount of bandwidth over a first of a plurality of paths in a network between the first edge node and a second edge node, wherein the director node is configured to maintain information indicative of bandwidth available along each of the plurality of paths. Upon information and belief, in response to the requested amount of bandwidth being available along the first path, the MT3729 performs the step of the first edge node receiving, from the director node, an allocation of bandwidth as a real-time bandwidth pool associated with network resources in the first path. Upon information and belief, the MT3729 performs the step of the first edge node receiving a connection request to establish a first real-time communication session between one of a first plurality of communication devices coupled to the first edge node and one of a second plurality of communication devices coupled to the second edge node. Upon information and belief, in response to determining that network resources in the real-time bandwidth pool are available to permit communication over the first path, the MT3729 performs the step of the first edge node responding to the connection request by allocating a portion of the real-time bandwidth pool to the first real-time communication session.

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Product Highlights

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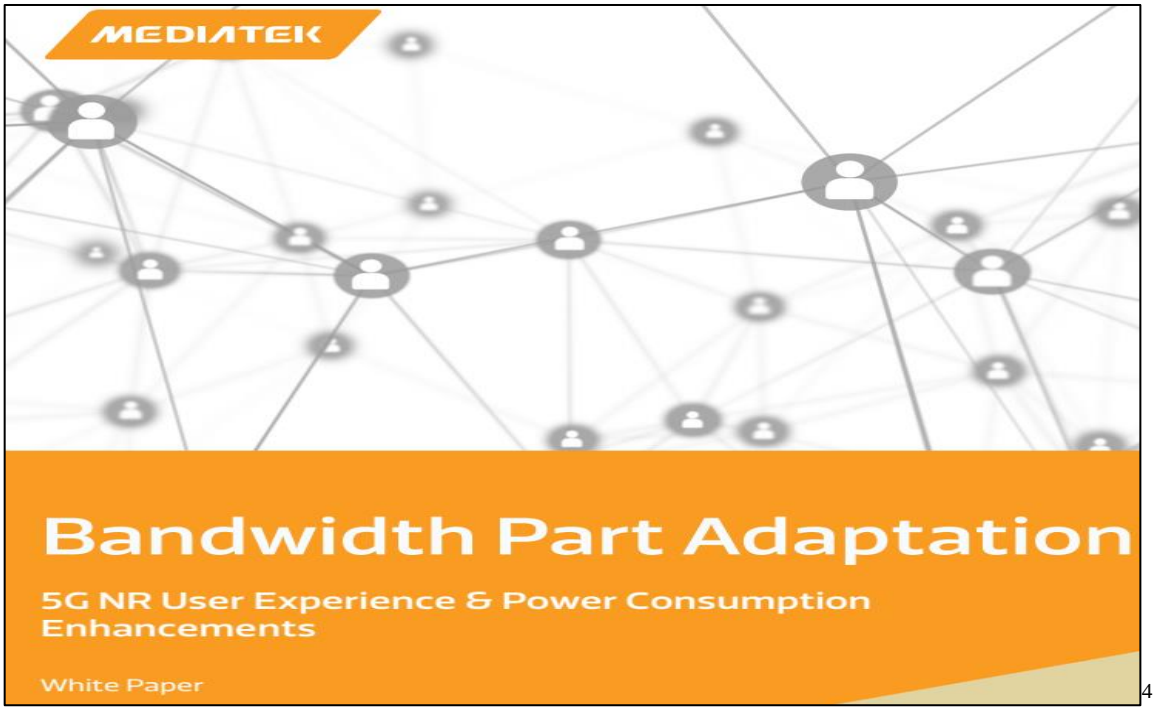
- Support for 400GAUI-8 electrical interfaces for QSFP-DD & OSFP optical modules
- 16 bi-directional links at 56G PAM4, up to 28G NRZ SerDes and 1G SGMII options
- PCS with various FEC modes to support FEC termination and regeneration.
- Support for IEEE 1588v2 and SyncE up to Class-C to meet stringent 5G infrastructure timing requirements to provide more flexibility and accuracy

[3]

[3] https://www.mediatek.com/products/ethernetphy/mt3729.



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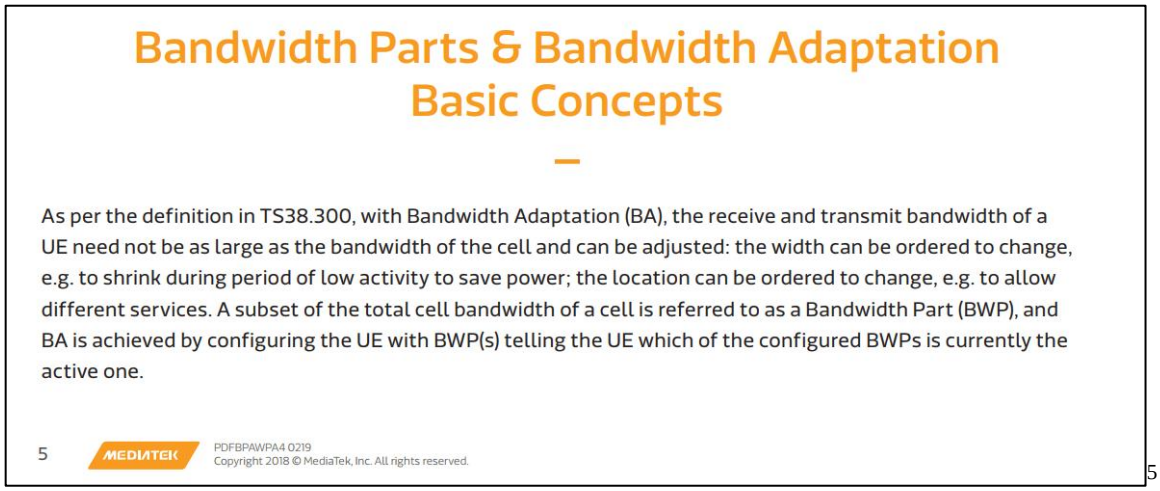

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39. Defendant has and continues to indirectly infringe one or more claims of the '468 Patent by knowingly and intentionally inducing others, including MediaTek customers and end-users, to directly infringe, either literally or under the doctrine of equivalents, by making, using,

[4] https://newsletter.mediatek.com/hubfs/mwc/download/bandwidth-part-adaptation.pdf. (Pg. 1)
[5] https://newsletter.mediatek.com/hubfs/mwc/download/bandwidth-part-adaptation.pdf. (Pg. 5)

offering to sell, selling and/or importing into the United States products that include microchips, SoCs, and ASICs which allow for traffic admission control using real time bandwidth allocation.

40. Defendant, with knowledge that these products, or the use thereof, infringe the '468 Patent at least as of the date of this Complaint, knowingly and intentionally induced, and continues to knowingly and intentionally induce, direct infringement of the '468 Patent by providing these products to end users for use in an infringing manner.

41. Defendant induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '468 Patent, but while remaining willfully blind to the infringement.

42. Winterspring has suffered damages as a result of Defendant's direct and indirect infringement of the '468 Patent in an amount to be proved at trial.

43. Winterspring has suffered, and will continue to suffer, irreparable harm as a result of Defendant's infringement of the '468 Patent, for which there is no adequate remedy at law, unless Defendant's infringement is enjoined by this Court.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Winterspring prays for relief against Defendant as follows:

a. Entry of judgment declaring that Defendant has directly and/or indirectly infringed one or more claims of the Patents-in-Suit;

b. An order pursuant to 35 U.S.C. § 283 permanently enjoining Defendant, its officers, agents, servants, employees, attorneys, and those persons in active concert or

participation with it, from further acts of infringement of one or more of the Patents-in-Suit;

c. An order awarding damages sufficient to compensate Winterspring for Defendant's infringement of the Patents-in-Suit, but in no event less than a reasonable royalty, together with interest and costs;

d. Entry of judgment declaring that this case is exceptional and awarding Winterspring its costs and reasonable attorney fees under 35 U.S.C. § 285; and,

e. Such other and further relief as the Court deems just and proper.

Dated: January 12, 2023

Respectfully submitted,

/s/ *Vincent J. Rubino, III*

Alfred R. Fabricant
NY Bar No. 2219392
Email: ffabricant@fabricantllp.com
Peter Lambrianakos
NY Bar No. 2894392
Email: plambrianakos@fabricantllp.com
Vincent J. Rubino, III
NY Bar No. 4557435
Email: vrubino@fabricantllp.com
FABRICANT LLP
411 Theodore Fremd Road, Suite 206 South
Rye, NY 10580
Telephone: (212) 257-5797
Facsimile: (212) 257-5796

Justin Kurt Truelove
Texas Bar No. 24013653
Email: kurt@truelovelawfirm.com
TRUELOVE LAW FIRM, PLLC
100 West Houston
Marshall, Texas 75670
Telephone: (903) 938-8321
Facsimile: (903) 215-8510

ATTORNEYS FOR PLAINTIFF WINTERSPRING DIGITAL LLC.