

**UNITED STATES DISTRICT COURT  
WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

WSOU INVESTMENTS, LLC D/B/A  
BRAZOS LICENSING AND DEVELOPMENT,

Civil Action No. 6:20-cv-00814-ADA

**JURY TRIAL DEMANDED**

Plaintiff,

v.

JUNIPER NETWORKS, INC.,

Defendant.

**BRAZOS'S FIRST AMENDED COMPLAINT AGAINST JUNIPER FOR  
INFRINGEMENT OF U.S. PATENT NO. 7,518,990**

Plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development (“Brazos”), by and through its attorneys, files this First Amended Complaint for Patent Infringement against defendant Juniper Networks, Inc. (“Juniper”) and alleges:

**NATURE OF THE ACTION**

1. This is a civil action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 1 *et seq.*, including §§ 271, 281, 284, and 285.

**THE PARTIES**

2. Brazos is a limited liability company organized and existing under the laws of Delaware, with its principal place of business at 605 Austin Avenue, Suite 6, Waco, Texas 76701.

3. On information and belief, Juniper is a corporation organized and existing under the laws of Delaware. At least as of the filing of the initial complaint, Juniper had a regular and established place of business located at 1120 South Capital of Texas Highway, Suite 120, First Floor, Building 2, Austin, Texas 78746. Juniper may be served through its designated agent for

service of process, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas, 75201. On information and belief, Juniper is registered to do business in the State of Texas and has been since at least April 27, 2017.

**JURISDICTION AND VENUE**

4. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has specific and general personal jurisdiction over Juniper pursuant to due process and/or the Texas Long Arm Statute because Juniper has committed and continues to commit acts of patent infringement, including acts giving rise to this action, within the State of Texas and this Judicial District. The Court's exercise of jurisdiction over Juniper would not offend traditional notions of fair play and substantial justice because Juniper has established minimum contacts with the forum. For example, on information and belief, Juniper has committed acts of infringement in this Judicial District, directly and/or through intermediaries, by, among other things, making, using, offering to sell, selling, and/or importing products and/or services that infringe the Asserted Patent, as alleged herein.

6. Upon information and belief, Juniper has continuous and systematic business contacts with the State of Texas. Juniper is registered to do business in the State of Texas, has offices and facilities in the State of Texas, and actively directs its activities to customers located in the State of Texas. Juniper, directly and/or through affiliates and/or intermediaries, conducts its business extensively throughout the State of Texas, by shipping, importing, manufacturing, distributing, offering for sale, selling, and/or advertising its products and services in the State of Texas and this Judicial District.

7. Venue is proper in this Court pursuant to 28 U.S.C. § 1400(b). Juniper is registered to do business in the State of Texas, and, upon information and belief, Juniper has

transacted business in this Judicial District, and has committed acts of direct and indirect infringement in this Judicial District by, among other things, making, using, distributing, installing, configuring, importing, offering to sell, and selling products that infringe the Asserted Patent. Juniper has regular and established places of business in this Judicial District, as set forth below.

8. Juniper maintains a regular and established place of business in this Judicial District, at least at 1120 South Capital of Texas Highway, Suite 120, First Floor, Building 2, Austin, Texas 78746. Upon information and belief, Juniper conducts business, serves customers, and markets and/or sells its products from its regular and established place of business in Austin, Texas, in this Judicial District.

9. Upon information and belief, Juniper maintains additional regular and established places of business in the State of Texas, nearby to this Judicial District, including at Granite Park V, 5830 Granite Pkwy #850, Plano, Texas 75024.

10. Juniper's Form 10-K for the fiscal year ended December 31, 2019 states, in part:

Juniper Networks designs, develops, and sells products and services for high-performance networks to enable customers to build scalable, reliable, secure and cost-effective networks for their businesses . . . . We organize and manage our business by major functional departments on a consolidated basis as one operating segment. We sell our high-performance network products and service offerings across routing, switching, and security technologies. In addition to our products, we offer our customers services, including maintenance and support, professional services, and education and training programs.<sup>1</sup>

11. Upon information and belief, Juniper designs, manufactures, uses, imports into the United States, sells, and/or offers for sale in the United States products that infringe the Asserted Patent, directly and or through intermediaries, as alleged herein. Juniper markets, sells, and/or offers to sell its products and services, including those accused herein of infringement, to

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<sup>1</sup> See [https://s1.q4cdn.com/608738804/files/doc\\_financials/2019/q4/2019-10-K-Final.pdf](https://s1.q4cdn.com/608738804/files/doc_financials/2019/q4/2019-10-K-Final.pdf) at 3.

actual and potential customers and end-users located in the State of Texas and in this Judicial District, as alleged herein.

12. Juniper’s website advertises and promotes its products and services to customers nationwide and permits customers to request a quote or buy directly from Juniper by requesting a direct call or email from a Juniper representative.<sup>2</sup>

**COUNT I**  
**Infringement of U.S. Patent No. 7,518,990**

13. Brazos re-alleges and incorporates by reference the preceding Paragraphs 1–12 of this Complaint.

14. On April 14, 2009, the U.S. Patent & Trademark Office duly and legally issued U.S. Patent No. 7,518,990 (the “’990 Patent”), entitled “Route Determination Method and Apparatus for Virtually-Concatenated Data Traffic.” A true and correct copy of the ’990 Patent is attached as Exhibit A to this Complaint.

15. The ’990 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

16. Brazos is the owner of all rights, title, and interest in and to the ’990 Patent, including the right to assert all causes of action arising under the ’990 Patent and the right to any remedies for the infringement of the ’990 Patent, including the exclusive right to recover for past infringement.

17. The Accused Products that infringes at least one claim of the ’990 Patent include but are not limited to, operations support systems (OSS) traffic management and traffic engineering solutions, including, but not limited to, WANDL IP/MPLSView<sup>3</sup> (the “Accused

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<sup>2</sup> See <https://www.juniper.net/us/en/how-to-buy/>.

<sup>3</sup> See <https://www.juniper.net/assets/us/en/local/pdf/datasheets/1000500-en.pdf>.

Products”). The Accused Products include “a multivendor, multiprotocol, and multilayer operations support systems (OSS) traffic management and traffic engineering solution for IP and/or MPLS networks.”<sup>4</sup>

18. Juniper makes, uses, sells, offers for sale, imports, and/or distributes the Accused Products in the United States, including within this Judicial District.

19. The Accused Products are configured to perform each element of and infringe at least the exemplary claim 6 of the '990 Patent.

20. The Accused Products are configured to practice a method of routing virtually-concatenated data traffic in a network comprising at least first and second nodes. The Accused Products use virtual concatenation to carry ethernet links over long distances on the transport network by packing into the SDH/SONET frames or containers. Virtual Concatenation (“VCAT”) involves transmitting a data payload by creating a large capacity payload container distributed over multiple smaller capacity signals.<sup>5</sup> Using Virtual Concatenation, the ethernet link gets split into several smaller containers that may be routed over different paths in the transport network and then re-combined and re-buffered at the destination node.<sup>6</sup>

21. In addition, the Accused Products incorporate the NPAT transport module, which is targeted at network planners from carriers and service providers performing routing, failure simulation, and design analysis on a transport network. NPAT also provides the tools needed for modeling multiservice provisioning platforms (“MSPP”) and handling protection options.<sup>7</sup> It

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<sup>4</sup> See <https://www.juniper.net/us/en/products-services/sdn/wandl/>.

<sup>5</sup> See [https://www.juniper.net/documentation/en\\_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf](https://www.juniper.net/documentation/en_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf) at 2–3.

<sup>6</sup> *Id.*

<sup>7</sup> See *id.* at 1.

supports virtual concatenated channels that can be used to model Ethernet services.<sup>8</sup> The NPAT transport model is applicable to the network that consists of multiple nodes including source node and destination node.<sup>9</sup>

22. The Accused Products practice the method step of identifying a traffic demand. The NPAT transport module of the Accused Products include design capabilities that can be used for capacity planning purposes to meet the traffic requirements for a network under various scenarios.<sup>10</sup> Accordingly, to meet the traffic requirements it must identify the traffic demand.<sup>11</sup>

23. The Accused Products practice the method step of determining a plurality of routes for routing the traffic demand through the network, with each of the routes corresponding to a member of a virtually-concatenated group, such that different portions of the traffic demand are assigned to different members of the virtually-concatenated group. The Ethernet link needs to be transported over the network. Using VCAT, the Accused Products determine a plurality of routes over the transport network.<sup>12</sup> For example, 100-Mbps Fast-Ethernet link would be carried over 3 VC channels and each channel will be assigned to carry 34 Mbps. Accordingly, different portions of traffic are assigned to different routes, *i.e.*, members of the virtually-concatenated group of the transport network.

24. In the method practiced by the Accused Product, the routes are determined utilizing a routing algorithm that determines the routes by processing a representation of the network. The network traffic is split into portions or “demands.” Each demand corresponds to a

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<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at 3.

<sup>10</sup> *Id.* at 1.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 2–3.

portion of the total traffic. These demands in the Virtual Concatenation Group (“VCG”) are routed using the Constrained Shortest Path First algorithm (“CSPF”).<sup>13</sup>

25. In the method practiced by the Accused Product, the routing algorithm determines the routes in a manner that ensures that a failure of a single link in the network will affect a minimum amount of a bandwidth B of the traffic demand. The NPAT module of the Accused Products support network design such as site-disjoint, link-disjoint, and facility-disjoint traffic paths.<sup>14</sup> As discussed in the above, NPAT supports virtual concatenated channels that are in use to model Ethernet services and handles diverse path design for virtual concatenated channels. The Accused Products provide a feature of configuring Virtual Concatenation Diverse (“VCATD”) for the demands.<sup>15</sup> When VCATD is configured, the mechanism splits/divides the demand into containers. The containers are then paired, and each container of a pair is routed diversely.

26. For example, as shown in Figure A below, an IP network is upgraded to Gigabit-Ethernet to split to be carried over seven “demands” or “containers.”<sup>16</sup> The seven containers are paired to form three container pairs, and one container is left unpaired.<sup>17</sup> Each container of a pair is individually routed over diverse paths, which ensures that every individual container of the pair will have an alternate. In case of a link failure, only one container of the pair is down and the

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<sup>13</sup> *Id.* at 3; *see also* [https://www.juniper.net/documentation/en\\_US/junos/topics/topic-map/lsp-computation.html#id-how-cspf-selects-a-path](https://www.juniper.net/documentation/en_US/junos/topics/topic-map/lsp-computation.html#id-how-cspf-selects-a-path).

<sup>14</sup> *See* [https://www.juniper.net/documentation/en\\_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf](https://www.juniper.net/documentation/en_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf) at 1.

<sup>15</sup> *See id.* at 48.

<sup>16</sup> *See id.* at 48–51.

<sup>17</sup> *Id.*

traffic can still be served over the other container.<sup>18</sup> In such a scenario, the containers of the pairs are diverse and can be considered to be protected, and therefore the routing algorithm determines the routes in a manner that ensures that failure of a single link in the network affects a minimum amount of a bandwidth  $B$  of the traffic demand.

Name	Path1 Name	Path2 Name	Div Type	Div Level	Path1 BW	Path1 NodeA	Path1 NodeZ	Current Path1
IP_LINK_678	IP_LINK_678	IP_LINK_678	1+1	SITE	OC3	HALIFAX	MONTREAL	HALIFAX-QUEB... HAL
IP_LINK_688	IP_LINK_688	IP_LINK_688	VCAT	SITE	OC3	HALIFAX	TORONTO2	HALIFAX-QUEB... HAL
IP_LINK_688.1	IP_LINK_688	IP_LINK_688	VCAT	Link	OC3	HALIFAX	TORONTO2	HALIFAX-BOST... HAL
IP_LINK_688.2	IP_LINK_688	IP_LINK_688	VCAT	Link	OC3	HALIFAX	TORONTO2	HALIFAX-QUEB... HAL
IP_LINK_714	IP_LINK_714	IP_LINK_714	VCAT	SITE	OC3	TROISRIME	TORONTO2	TROISRMERE... TR
IP_LINK_714.1	IP_LINK_714	IP_LINK_714	VCAT	Link	OC3	TROISRIME	TORONTO2	TROISRMERE... TR
IP_LINK_714.2	IP_LINK_714	IP_LINK_714	VCAT	Link	OC3	TROISRIME	TORONTO2	TROISRMERE... TR
IP_LINK_726	IP_LINK_726	IP_LINK_726	VCAT	SITE	OC3	OTTAWA	TORONTO	OTTAWA-HULL... OTT

Total # of records : 70 records(start-end indices) : 1 - 70

Filter... Tune Selected... Tune All... Show Paths View Path Details... Close

**Figure A**

27. In the above scenario, when the container of 10 Mbps demand needs to be served, it is split into two 5 Mbps containers. VCATD mechanism pairs the two 5 Mbps containers and routes them over diverse paths, and when a link in the network fails, one of the 5 Mbps containers might fail. Even in such a case, 50% of the demand is still being served. Accordingly, the Accused Products always try to maintain diverse paths for the containers to maintain connectivity even in case of any failures, *i.e.*, failure of a single link in the network affects a minimum amount of a bandwidth  $B$ .<sup>19</sup>

28. In addition, the NPAT module of the Accused Products also provide the functionality for tuning the path configurations to automatically design a diverse path for demands in VCATD.<sup>20</sup> It also enables the planners to reserve a fixed percentage of link

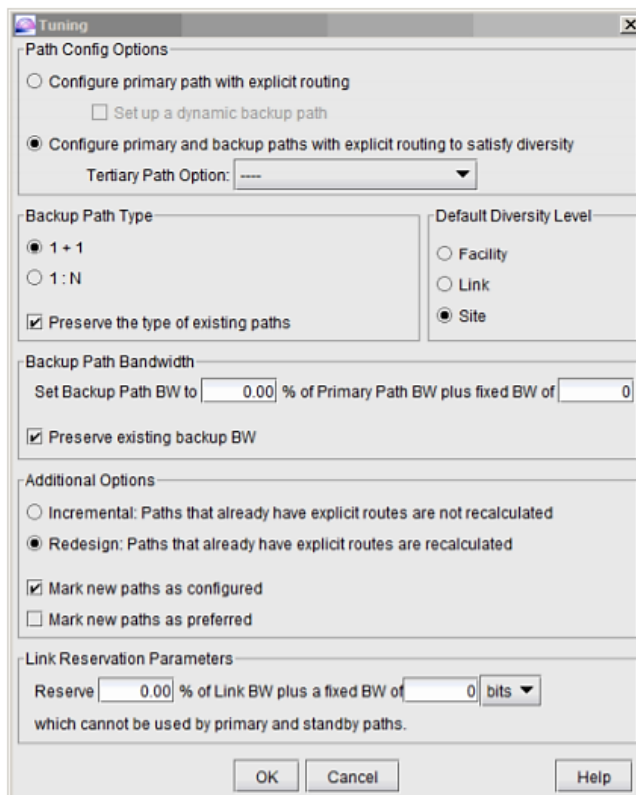
<sup>18</sup> *Id.*

<sup>19</sup> *See id.* at 3.

<sup>20</sup> *See id.* at 44–51.



bandwidth plus reserved bandwidth.<sup>21</sup> The reserved bandwidth or links will only be used for providing backup protection in case of a primary failure.<sup>22</sup> This is done by providing 1+1 protection to some of the existing routes.<sup>23</sup> See Figure B below:<sup>24</sup>



**Figure B**

29. In view of the preceding Paragraphs 19–28, the Accused Products are configured to practice each and every element of at least claim 6 of the '990 Patent.

30. Juniper has infringed, and continues to directly infringe at least one claim of the '990 Patent, literally or under the doctrine of equivalents, by making, using, selling, offering for sale, importing, and/or distributing the Accused Products in the United States, including within

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<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.* at 46.

this Judicial District, without the authority of Brazos. Juniper's infringing use of the Accused Products includes its internal use, testing, demonstration, and configuration of the Accused Products.

31. At least as of the date of service of the initial complaint, September 8, 2020, Juniper has had actual or constructive knowledge of the '990 Patent and has been on notice of its infringement of the '990 Patent and how the Accused Products infringe the '990 Patent. Notwithstanding this knowledge and notice, since at least that time, Juniper has continued to infringe the '990 Patent by making, using, selling, offering for sale, importing, and/or distributing the Accused Products in the United States.<sup>25</sup>

32. Since at least the date of service of the initial complaint, through its actions, Juniper, with knowledge of the '990 Patent, has actively and knowingly induced customers, product makers, distributors, retailers, and/or end users of the Accused Products to directly infringe one or more claims of the '990 Patent throughout the United States, including within this Judicial District. The Accused Products, as provided to Juniper's customers and end-users and used as intended and instructed, infringe the '990 Patent. Juniper was and is aware that the normal and customary use by end-users of the Accused Products infringe the '990 Patent. Upon information and belief, Juniper's customers and end-users have used and continue to use the Accused Products in the United States in this manner and directly infringe the '990 Patent. Despite Juniper's knowledge of the '990 Patent and knowledge and/or willful blindness that its

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<sup>25</sup> Juniper filed a Rule 12(c) motion for judgment on the pleadings that is mooted by this amended complaint. The Federal Circuit and courts in this District have recognized that post-suit knowledge is sufficient to state a claim for indirect infringement. *See In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1334-46 (Fed. Cir. 2012) (finding that district court erred in dismissing indirect infringement claims that alleged defendant had actual knowledge of asserted patent "at the latest . . . when [defendant] was served with the complaint"); *see also Meatrix IP, LLC v. Cisco Sys., Inc.*, 2018 WL 8261315, at \*3 (W.D. Tex. 2018) (denying motion to dismiss post-suit indirect infringement claims).

actions induce infringement by customers and/or end-users, Juniper has made, sold, and/or offered for sale the Accused Products, and is continuing to do so, with the specific intent to actively encourage customers and/or end-users to make, use, sell, offer for sale and/or import the Accused Products in a manner that Juniper knows to be infringing.

33. Moreover, Juniper has taken and continues to take active steps to induce infringement of at least claim 6 of the '990 Patent, knowing that those steps will induce, encourage, and facilitate direct infringement by customers, product makers, distributors, retailers, and/or end-users. On information and belief, Juniper directs, controls, and/or encourages customers' and/or end-users' infringement of the '990 Patent by taking active steps that include, but are not limited to: making, using, configuring, and selling the Accused Products; instructing end-users to use the Accused Products; creating and disseminating advertising and promotional materials that encourage the use of the Accused Products, including product descriptions, operating manuals, configuration guides, support materials, technical materials, and other instructions on how to implement and configure the Accused Products. Juniper has known that such activities induce end-users to infringe at least claim 6 of the '990 Patent since at least the date of service of the initial complaint.

34. Examples of Juniper's advertisements, promotional materials, manuals, instructional and support materials, and/or configuration guides for the Accused Products, provided by Juniper on its website, that teach and instruct end-users to use and/or configure Accused Products, include but are not limited to:

- <https://www.juniper.net/us/en/products-services/sdn/wandl/>;
- [https://www.juniper.net/documentation/en\\_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf](https://www.juniper.net/documentation/en_US/ip-mplsview6.1.2/information-products/topic-collections/ip-mplsview-transport.pdf); and
- [https://www.juniper.net/documentation/en\\_US/junos/topics/topic-map/lsp-computation.html#id-how-cspf-selects-a-path](https://www.juniper.net/documentation/en_US/junos/topics/topic-map/lsp-computation.html#id-how-cspf-selects-a-path).

35. Juniper's inducement is ongoing. Juniper has continued to induce direct infringement by others, including by instructing end-users regarding the operation and/or use of the Accused Products in ways that practice the claimed invention, even after being put on actual notice of the infringement of the '990 Patent.

36. Since at least the date of service of the initial complaint, through its actions, Juniper has contributed to, and is contributing to, the infringement of the '990 Patent by having others sell, offer for sale, or use the Accused Products throughout the United States, including within this Judicial District, with knowledge that the Accused Products infringe the '990 Patent. Juniper has made and/or sold the Accused Products with knowledge that they have special features that are especially made or adapted for infringing the '990 Patent and are not staple articles of commerce suitable for substantial non-infringing use. For example, in view of the preceding paragraphs, the Accused Products contain functionality which is material to at least claim 6 of the '990 Patent.

37. The special features include the use of virtual concatenation and the NPAT module in a manner that infringes the '990 Patent.

38. The special features constitute a material part of the invention of one or more claims of the '990 Patent and are not staple articles of commerce suitable for substantial non-infringing uses. The Accused Products have no substantial non-infringing uses.

39. Brazos has suffered damages as a result of Juniper's direct and indirect infringement of the '990 Patent in an amount adequate to compensate for Juniper's infringement, but in no event less than a reasonable royalty for the use made of the invention by Juniper, together with interest and costs as fixed by the Court.

**JURY DEMAND**

Brazos hereby demands a jury on all issues so triable.

**PRAYER FOR RELIEF**

WHEREFORE, Brazos respectfully requests that the Court:

- (a) enter judgment that Juniper infringes one or more claims of the '990 Patent literally and/or under the doctrine of equivalents;
- (b) enter judgment that Juniper has induced infringement and continues to induce infringement of one or more claims of the '990 Patent;
- (c) enter judgment that Juniper has contributed to and continues to contribute to the infringement of one or more claims of the '990 Patent;
- (d) award Brazos damages, to be paid by Juniper in an amount adequate to compensate Brazos for such damages, together with pre-judgment and post-judgment interest for the infringement by Juniper of the '990 Patent through the date such judgment is entered in accordance with 35 U.S.C. § 284, and increase such award by up to three times the amount found or assessed in accordance with 35 U.S.C. § 284;
- (e) declare this case exceptional pursuant to 35 U.S.C. § 285; and
- (f) award Brazos its costs, disbursements, attorneys' fees, and such further and additional relief as is deemed appropriate by this Court.

Respectfully submitted,

Dated: May 12, 2021

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