

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

CAPELLA PHOTONICS, INC.,

Plaintiff,

v.

FUJITSU NETWORK
COMMUNICATIONS, INC.,

Defendant.

Case No. 2:20cv76

JURY TRIAL DEMANDED

**PLAINTIFF CAPELLA PHOTONICS, INC.'S COMPLAINT FOR PATENT
INFRINGEMENT**

Plaintiff Capella Photonics, Inc. (“Capella”), by and through its counsel, files this complaint for patent infringement and demand for jury trial (“Complaint”) against Defendant Fujitsu Network Communications, Inc. Corporation (“Defendant” / “FNC”). Capella alleges as follows:

PARTIES

1. Capella is a Delaware corporation with an office located at 1100 La Avenida Building A, Mountain View Ca 94043.
2. On information and belief, Defendant FNC is a California corporation that shares a place of business with Fujitsu America, Inc. at 1250 E. Arques Ave., Sunnyvale, California.
3. On information and belief, FNC is a U.S.-based manufacturer of network equipment with a regular and established place of business in this district, including at 2821 Telecom Parkway, Richardson, TX 75082.

JURISDICTION AND VENUE

4. This is a civil action for patent infringement under the patent laws of the United States, 35 U.S.C. § 1 *et. seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§1331 and 1138(a).
5. This Court has personal jurisdiction over FNC in this action because FNC has committed acts within this district giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over FNC would not offend traditional notions of fair play and substantial justice. On information and belief, FNC, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this district by, among other things, making, selling, offering for sale, and/or importing products and/or services that infringe the asserted patents, and also through its own use and testing of products and/or services that infringe the asserted patents.
6. Venue is proper in this judicial district pursuant to 28 U.S.C. §§1391(b)-(d) and 1400(b). FNC has committed acts of infringement in this district and has a regular and established place of business in this district.

7. This Court has personal jurisdiction over FNC at least by virtue of FNC residing in this district and having engaged in substantial and not isolated business activity in this state and also by having engaged in acts of infringement in this state and specifically in this district.

8. FNC is subject to personal jurisdiction by this Court under Texas law.

FACTUAL BACKGROUND

9. Founded in 2000, Capella is a pioneer of breakthrough optical switching technologies for use in optical transmission networks. Those technologies include Dense Wavelength Division Multiplexing (DWDM) transport platforms that include reconfigurable optical add and drop multiplexers (ROADMs). Capella has designed, developed, produced and sold switching devices for optical transmission networks, including its CR50™ and CR100™ products.

10. As a result of many years of research and development, Capella has been granted an extensive portfolio of patents, including but not limited to those in suit.

I. THE TECHNOLOGY

11. Optical fiber is used by telecommunications companies to transmit telephone signals, Internet communications, and cable television signals. Optical fiber is a fast and efficient medium for conducting data in the form of light. Various wavelengths of light travel along optical fiber at the same time, with each wavelength carrying specific data intended for delivery to a specific location. An optical fiber is able to carry Internet traffic, cellular communications, and digital television transmissions simultaneously by using different wavelengths of light to carry the data.

12. Fiber-optics were first developed in the 1970s. Fiber-optics have revolutionized telecommunications and have played a major role in the development of the Internet. Because of numerous advantages over electrical transmission, including speed and bandwidth, optical fibers have largely replaced copper wire communications in networks around the world.

13. As is generally known, the process of communicating using fiber-optics has

involved the following basic steps:

- a) creating the optical signal involving the use of a laser transmitter, usually from an electrical signal from a traditional copper based telephone network;
- b) relaying the optical signal along the fiber;
- c) receiving the optical signal at an optical receiver; and
- d) converting the optical signal back into an electrical signal.

14. Networks using optical fiber span the globe. Networks on a continent or within a country form a grid. Line segments of fiber optic cable intersect at hubs or nodes. At these hubs or nodes, there are DWDM transport platforms. In modern networks, such as those traversing the United States, the DWDM transport platforms are typically modular in nature with optical switching at the individual wavelength level carried out by one or more ROADM modules using the pioneering technology invented and patented by Capella. The ROADM modules may, in turn, be comprised of one or more modules. The modules are sold by defendant and other manufacturers in various configurations, and also individually, with specific instructions and guidance on how to build infringing platforms. The instructions and guidance are set forth in FNC marketing materials and, on information and belief, are provided directly by FNC sales representatives and system engineers to customers of the platforms and components.

15. DWDM transport platforms and their ROADM modules are the backbone of advanced fiberoptic networks because they route (or switch) signals traveling along fiber optic cables in the directions they need to go. The switching occurs on the wavelength level, which means that a ROADM can separate all the wavelengths of light entering the device and direct them to go in different directions depending on the platform configuration. Certain wavelengths can be dropped from a fiber altogether and new wavelengths can be added onto fibers. ROADMs can also control flow across fiber optic cables. If traffic along one cable is particularly heavy at certain times, then a ROADM can manage that load by sending traffic along one fiber at certain times and another fiber at other times.

16. The development of ROADMs and their subsequent introduction into networks

enabled video to be sent over the Internet. Before ROADMs, service providers had to use Optical to Electrical to Optical switches (“OEO switches”), which meant that data carried along optical cables had to be converted into electrical signals to be routed. In addition, OEO switches were very slow, expensive and difficult to house due to their refrigerator-like size. The introduction of ROADMs by service providers into their networks in about 2005 changed this, by allowing video to be transmitted at the speed of light through the ROADM instead of at the speed of electronics which is approximately 1000 times slower. ROADMs are also significantly less expensive than OEO switches and much easier to house based their compact size.

17. As their name suggests, ROADMs are reconfigurable, which means that they can be adjusted to send traffic or wavelengths in different directions at different times.

18. To ensure network reliability, ROADMs are subjected to a lengthy approval process before they are deployed. In addition, for most networks, more than one vendor is selected.

19. On information and belief, FNC has offered for sale, sold and/or imported into the United States DWDM transport platforms and modules for optical networks deployed around the world including specifically in this District that infringe the ‘905 and ‘906 patents and continues to do so.

II. THE PATENTS IN SUIT

20. Capella is the owner of United States Patent No. 6,879,750 entitled, “Reconfigurable Optical Add-Drop Multiplexers with Servo Control and Dynamic Spectral Power Management Capabilities” (the “’750 patent”). The ‘750 patent issued April 12, 2005 to Capella and claims priority to applications filed in 2001. The ‘750 was reissued to Capella on May 17, 2011 as United States Patent No. RE 42,368 (the “’368 patent”). The ‘368 patent was reissued to Capella on March 17, 2020 as United States Patent No. RE 47,905 (the “’905 patent”). A true and correct copy of the ‘905 Issue Notification is attached hereto as **Exhibit A**.

21. One or more claims of the ‘905 patent is substantially identical to one or more claims of the original ‘368 patent.

22. Preferred embodiments of inventions recited in the '905 patent provide an optical add-drop apparatus comprising a multi-wavelength input port, a wavelength-selective device for spatially separating spectral channels, and an array of beam deflecting elements to reflect the spectral channels to selected ports. The inventions provide many advantages over prior art devices including the capability of routing spectral channels on a channel-by-channel basis and directing any spectral channel into any one of the output ports. Its underlying operation is dynamically reconfigurable, and its underlying architecture is intrinsically scalable to a large number of channel counts.

23. Capella is the owner of United States Patent No. 6,625,346 entitled, "Reconfigurable Optical Add-Drop Multiplexers with Servo Control and Dynamic Spectral Power Management Capabilities" (the "'346 patent"). The '346 patent issued September 23, 2003 to Capella and claims priority to applications filed in 2001. The '346 patent was reissued to Capella on November 14, 2006 as United States Patent No. RE 39,397 (the "'397 patent"). The '397 was reissued to Capella on September 6, 2011 as United States Patent No. RE 42,678 (the "'678 patent"). The '678 patent was reissued to Capella on March 17, 2020 as United States Patent No. RE 47,906 (the "'906 patent"). A true and correct copy of the '906 Issue Notification is attached hereto as **Exhibit B**.

24. One or more claims of the '906 patent is substantially identical to one or more claims of the original '678 patent.

25. Preferred embodiments of inventions recited in the '906 patent provide wavelength-separating-routing apparatus comprising an input port for a multiple wavelength optical signal, a wavelength-separator for separating the multiwavelength optical signal, and an array of channel micromirrors to reflect the spectral channels to selected ports. The inventions provide many advantages over prior art devices including the capability of routing spectral channels on a channel-by-channel basis and directing any spectral channel into any one of the output ports. Its underlying operation is dynamically reconfigurable, and its underlying architecture is intrinsically scalable to a large number of channel counts.

26. The '905 and '906 patents, and all members of the chain discussed above, are assigned to Capella and Capella holds the right to sue and to recover damages for infringement, including past infringement, of each of the '905 and '906 patents (collectively, the "Asserted Patents").

III. FNC'S DIRECT INFRINGEMENT

a. Selling, Testing and Related Activities

27. On information and belief, FNC, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement by, among other things, making, selling, offering for sale, and/or importing products and/or services that infringe the Asserted Patents, and also through its own use and testing of products and/or services that infringe the Asserted Patents.

IV. FNC'S INDIRECT INFRINGEMENT

a. FNC's Knowledge of the Capella Patents

28. FNC's infringement began long ago and has continued willfully.

29. FNC has been on notice of infringement since at least 2014 when Capella filed suit for infringement of the '368 and '678 patents against FNC in the U.S. District Court for the Southern District of Florida in an action entitled *Capella Photonics, Inc. v. Fujitsu Network Communications, Inc.* (Case No. 1:14-cv-20531-KMM). That action was consolidated with other actions and subsequently transferred to the Northern District of California, where it was assigned Case No. 14-cv-3351 EMC. In connection with its defense of that action, FNC has followed and participated in post-grant proceedings for the '368 and '678 patents since 2014 and its counsel reported to the court on those post-grant proceedings. Since December 2019, FNC has been on notice of the PTO's decision to reissue the '368 and '678 patents and the scope of the reissued claims. On information and belief, since February 2020, FNC has known about the March 17, 2020 issuance of the '905 and '906 patents and the scope of the reissued claims.

b. FNC's Knowledge of & Specific Intent to Cause Third-Party Actions Infringing the '905 and '906 Patents

30. FNC is a known market leader and one of the dominant players in optical transport platforms.

31. FNC knows that it provides and markets products to customers that, when used, directly infringe the '905 and '906 patents. On information and belief, these products include, without limitation, FNC's FLASHWAVE optical platforms (Flashwave)(collectively "Infringing Products" and/or "Accused Instrumentalities").

32. FNC actively encourages the installation and use of its Infringing Products. For example, FNC explains to customers the individual modules that are available to customers as well as standard and custom configurations. See

9500 <https://www.fujitsu.com/us/products/network/products/flashwave-9500/index.html>

<https://www.fujitsu.com/us/Images/flashwave9500.pdf>

7500 <https://www.fujitsu.com/us/products/network/products/flashwave-7500/index.html>

<https://www.fujitsu.com/us/Images/flashwave7500.pdf>

where FNC describes standard and custom platform configurations.

33. On information and belief, FNC has designed, marketed, and sold its Infringing Products to third parties with knowledge and the specific intent to cause the third parties to make, use, offer to sell, or sell in the United States, and/or import into the United States the Infringing Products.

34. On information and belief, FNC actively encourages its customers and end users to directly infringe the '905 and '906 patents by encouraging them to use the Infringing Products.

35. On information and belief, FNC promoted and continues to promote the sales of the Accused Instrumentalities, e.g., through FNC's user manuals, product support, marketing materials, demonstrations, installation support, and training materials to actively induce the users of the accused products to infringe the '905 and '906 patents.

36. At least by the time of trial, FNC will have known and intended that its continued

actions would infringe and actively induce and contribute to the infringement of the claims of the '368 and '678 patents as reissued in the '905 and '906 patents.

COUNT I

(Infringement of the '905 Patent)

37. Paragraphs 1- 36 are incorporated by reference as if fully set forth herein.

38. Pursuant to 35 U.S.C. § 282, the '905 patent is presumed valid.

39. On information and belief, FNC directly infringes the '905 patent by having made, making, using, offering for sale, selling and/or importing into the United States the Infringing Products and Accused Instrumentalities, and continues to do so.

40. On information and belief, the Infringing Products directly infringe at least claim 23 of the '905 patent at least in the exemplary manner described below.

41. The Infringing Products comprise an optical add-drop apparatus comprising: [a] the fiber collimator input port for an input multi-wavelength optical signal having first spectral channels the fiber collimator one or more other ports for second spectral channels the output port for an output multi-wavelength optical signal; [b] a wavelength-selective device for spatially separating said spectral channels; [c] a spatial array of beam-deflecting elements positioned such that each element receives a corresponding one of said spectral channels, each of said elements being individually and continuously controllable in two dimensions to reflect its corresponding spectral channel to a selected one of said output port or the fiber collimator ports and to control the power of the spectral channel reflected to said output port or the fiber collimator selected port.

42. FNC offers Flashwave optical platforms. Flashwave are modular Dense Wavelength Division Multiplexing (DWDM) add-drop optical transport platforms designed for metro, regional and long-haul networks.

43. The FLASHWAVE® 9500 Packet Optical Networking Platform (Packet ONP) is a modular add-drop optical platform that supports integrated DWDM, ROADM, MEF 2.0 certified Carrier Ethernet, OTN, and SONET/SDH technologies. The FLASHWAVE 7500

optical transport system is a modular add-drop optical platform that offers DWDM, ROADM and network design capabilities to deliver and manage growing metro and regional networks.

See

9500 <https://www.fujitsu.com/us/products/network/products/flashwave-9500/index.html>
<https://www.fujitsu.com/us/Images/flashwave9500.pdf>
 7500 <https://www.fujitsu.com/us/products/network/products/flashwave-7500/index.html>
<https://www.fujitsu.com/us/Images/flashwave7500.pdf>
<https://www.fujitsu.com/us/products/network/technologies/roadmwss/index.html>
<https://www.fujitsu.com/global/documents/about/resources/publications/fstj/archives/vol42-4/paper06.pdf>

44. FLASHWAVE uses a flexible ROADM architecture. The ROADM functionality is delivered using Wavelength Selective Switch (WSS), a module of the Flashwave platform. Fujitsu asserts that ROADMs “are the key network element enabling these advanced networks, along with a key technology component called a Wavelength Selective Switch (WSS).” *See Id.*

45. According to Fujitsu, the keys to any ROADM are the optical switch fabric and optical switching technology. Fujitsu employs an advanced Wavelength Selective Switch (WSS) module as its optical switching “engine.” The WSS provides wavelength selection, switching, power monitoring, and auto-power balancing all within a single device. In addition, the WSS allows Fujitsu ROADMs to support advanced network architectures such as multi-degree hub nodes and mesh architectures. *See Id.*

46. The WSS enables dynamic optical branching to multiple different optical paths, in addition to facilitating local add/drop of individual wavelengths. The ROADM includes multiple fiber collimator in/out ports. The fiber collimators provide and serve as input ports for multi-wavelength optical signals and as output and other ports. *See Id.*

47. The WSS use a wavelength separator or diffraction grating as a wavelength selective device for separating the multi-wavelength optical signal from a fiber collimator input port into multiple spectral channels. This splits the signal into multiple wavelengths for optical

branching. The WSS enables optical branching to multiple different optical paths, in addition to facilitating local add/drop of individual wavelengths. *See Id.*

48. The WSS includes a spatial array of individually and continuously controllable beam-deflecting elements, including MEMs mirrors, positioned such that each element receives a corresponding one of the spectral channels, each of the elements being individually and continuously controllable in two dimensions to reflect its corresponding spectral channel to a selected one of the output port or the fiber collimator ports and to control the power of the spectral channel reflected to the output port or the fiber collimator selected port. *See Id.*

49. The Fujitsu WSS includes a multiwavelength fiber collimator input port. A grating is used to separate the wavelengths, and each wavelength is directed onto its own moveable mirror or beam deflecting element. This allows automatic power management of each wavelength and switching of individual wavelengths to selected fiber collimator output ports. The WSS also works in reverse to direct separate input signals of different wavelengths to a common fiber collimator port. *See*

<https://www.fujitsu.com/global/documents/about/resources/publications/fstj/archives/vol42-4/paper06.pdf>

50. FNC also directly infringes other claims of the '905 patent.

51. On information and belief, use of the Accused Instrumentalities results in infringement of the claims of the '905 patent.

52. FNC's affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way to infringe the claims of the '905 patent.

53. On information and belief, at least as of the filing of this Complaint and likely earlier as set forth above, FNC knew of the '905 patent, and knew that its activities would lead to infringement of the patent by its customers and end users.

54. For example, FNC sells the Accused Instrumentalities to customers and end users

with the intent that such customers and end users will use the Accused Instrumentalities in such a way to constitute direct infringement of at least Claim 23 of the '905 patent as set forth above.

55. For example, FNC explains to customers the individual modules that are available to customers as well as standard and custom configurations. See

9500 <https://www.fujitsu.com/us/products/network/products/flashwave-9500/index.html>

<https://www.fujitsu.com/us/Images/flashwave9500.pdf>

7500 <https://www.fujitsu.com/us/products/network/products/flashwave-7500/index.html>

<https://www.fujitsu.com/us/Images/flashwave7500.pdf>

where FNC describes standard and custom platform configurations.

56. FNC performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '905 patent and its claims and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement.

57. On information and belief, FNC engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.*, through FNC's user manuals, product support, marketing materials, demonstrations, installation support, and training materials to actively induce the users of the accused products to infringe the '905 patent.

58. Accordingly, FNC has induced and continues to induce end users of the accused products to use the accused products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '905 patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '905 patent. Accordingly, FNC has been and currently is inducing infringement of the '905 patent in violation of 35 U.S.C. § 271(b).

59. FNC has also contributorily infringed and continues to contribute to infringement of claims of the '905 patent by selling and offering to sell, offering to commercially distribute, commercially distributing, making, and/or importing the Accused Instrumentalities, which are used in practicing the process, or using the systems, claimed by the '905 patent, knowing the

Accused Instrumentalities to be especially made or especially adapted for use in an infringement of the '905 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

60. On information and belief, at least as of the filing of this Complaint and likely earlier as set forth above, FNC knew of the '905 patent, and knew that its activities would lead to infringement of the patent by its customers and end users.

61. FNC knows the modules in the Accused Instrumentalities to be especially made or especially adapted for use in infringement of the '905 patent, not a staple article, and not a commodity of commerce suitable for substantial noninfringing use. For example, the ordinary way of using the Accused Instrumentalities infringes the patent claims, and as such, is especially adapted for use in infringement. Accordingly, FNC has been, and currently is, contributorily infringing the '905 patent, in violation of 35 U.S.C. § 271(c).

62. Capella has suffered and will continue to suffer damage as a result of FNC's infringement of the '905 patent in an amount to be proven at trial.

63. Upon information and belief, FNC did not have and could not have had a reasonable belief that the Accused Instrumentalities did not infringe the Asserted Patents. Any manufacturing, sales, offers for sale, uses, or importation by Defendants of the Infringing Products reflects a deliberate and knowing decision to infringe the '905 patent or, at the very least, a reckless disregard of Capella's patent rights. By its prior action, Capella made known to FNC that FNC's activities in making, using, offering for sale, selling and/or importing into the United States the Infringing Products and Accused Instrumentalities constituted a sufficient risk of infringement that FNC should have ceased those activities. Under the circumstances, FNC knew or should have known the risk of infringement caused by FNC's activities related to the Accused Instrumentalities. Despite FNC's knowledge, FNC intentionally ignored or recklessly disregarded the risk that its activities infringed the Asserted Patents. FNC's conduct manifested deliberate or reckless disregard of Capella's rights in the Asserted Patents and was malicious, flagrant and in bad faith.

64. FNC's manufacturing, sales, offers for sale, uses, or importation of the Infringing Products has been willful, and Capella is entitled to treble damages and attorneys' fees and costs incurred in this action, along with prejudgment interest under 35 U.S.C. §§ 284, 285.

65. FNC will continue to infringe the '905 patent unless and until it is enjoined by this Court.

66. FNC's acts of infringement have caused and will continue to cause irreparable harm to Capella unless and until FNC is enjoined by this Court.

COUNT II

(Infringement of the '906 Patent)

67. Paragraphs 1-66 are incorporated by reference as if fully set forth herein.

68. Pursuant to 35 U.S.C. § 282, the '906 patent is presumed valid.

69. On information and belief, FNC directly infringes the '906 patent by having made, making, using, offering for sale, selling and/or importing into the United States the Infringing Products and Accused Instrumentalities, and continues to do so.

70. On information and belief, the Infringing Products directly infringe at least claim 68 of the '906 patent at least in the exemplary manner described below.

71. The Infringing Products comprise a wavelength-separating-routing apparatus, comprising: a) multiple fiber collimators, providing and serving as an input port for a multi-wavelength optical signal and a plurality of output ports; b) a wavelength-separator, for separating said multi-wavelength optical signal from said fiber collimator input port into multiple spectral channels; c) a beam-focuser, for focusing said spectral channels into corresponding spectral spots; and d) a spatial array of channel micromirrors positioned such that each channel micromirror receives one of said spectral channels, said channel micromirrors being pivotal about two axes and being individually and continuously controllable to reflect corresponding received spectral channels into any selected ones of said fiber collimator output ports and to control the power of said received spectral channels coupled into said fiber collimator output ports.

72. FNC offers Flashwave optical platforms. Flashwave are modular Dense Wavelength Division Multiplexing (DWDM) add-drop optical transport platforms designed for metro, regional and long-haul networks.

73. The FLASHWAVE® 9500 Packet Optical Networking Platform (Packet ONP) is a modular wavelength-separating-routing platform that supports integrated DWDM, ROADM, MEF 2.0 certified Carrier Ethernet, OTN, and SONET/SDH technologies. The FLASHWAVE 7500 optical transport system is a modular wavelength-separating-routing platform that offers DWDM, ROADM and network design capabilities to deliver and manage growing metro and regional networks. *See*

9500 <https://www.fujitsu.com/us/products/network/products/flashwave-9500/index.html>

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7500 <https://www.fujitsu.com/us/products/network/products/flashwave-7500/index.html>

<https://www.fujitsu.com/us/Images/flashwave7500.pdf>

<https://www.fujitsu.com/us/products/network/technologies/roadmwss/index.html>

<https://www.fujitsu.com/global/documents/about/resources/publications/fstj/archives/vol42-4/paper06.pdf>

74. FLASHWAVE uses a flexible ROADM architecture. The ROADM functionality is delivered using Wavelength Selective Switch (WSS), a module of the Flashwave platform. Fujitsu asserts that ROADMs “are the key network element enabling these advanced networks, along with a key technology component called a Wavelength Selective Switch (WSS).” *See Id.*

75. According to Fujitsu, the keys to any ROADM are the optical switch fabric and optical switching technology. Fujitsu employs an advanced Wavelength Selective Switch (WSS) module as its optical switching “engine.” The WSS provides wavelength selection, switching, power monitoring, and auto-power balancing all within a single device. In addition, the WSS allows Fujitsu ROADMs to support advanced network architectures such as multi-degree hub nodes and mesh architectures. *See Id.*

76. The WSS enables dynamic optical branching to multiple different optical paths,

in addition to facilitating local add/drop of individual wavelengths. The ROADM includes multiple fiber collimator in/out ports. The fiber collimators provide and serve as input ports for multi-wavelength optical signals and as output and other ports. *See Id.*

77. The WSS use a wavelength separator or diffraction grating as a wavelength-separator for separating a multi-wavelength optical signal from a fiber collimator input port into multiple spectral channels. This splits the signal into multiple wavelengths for optical branching. The WSS enables optical branching to multiple different optical paths, in addition to facilitating local add/drop of individual wavelengths. *See Id.*

78. The WSS includes a spatial array of individually and continuously controllable beam-deflecting elements, including MEMs mirrors, positioned such that each element receives a corresponding one of the spectral channels, each of the elements being individually and continuously controllable in two dimensions to reflect its corresponding spectral channel to a selected one of said output port or the fiber collimator ports and to control the power of the spectral channel reflected to the output port or the fiber collimator selected port. *See Id.*

79. The WSS includes a spatial array of individually and continuously controllable channel micromirrors, including MEMs mirrors, positioned such that each channel micromirror receives a spectral channels. The channel micromirrors are pivotal about two axes and are individually and continuously controllable to reflect corresponding received spectral channels into any selected ones of the fiber collimator output ports and to control the power of the received spectral channels coupled into the fiber collimator output ports. *See Id.*

80. The Fujitsu WSS includes a multiwavelength fiber collimator input port. A grating is used to separate the wavelengths, and each wavelength is directed onto its own moveable mirror or beam deflecting element. This allows automatic power management of each wavelength and switching of individual wavelengths to selected fiber collimator output ports. The WSS also works in reverse to direct separate input signals of different wavelengths to a common fiber collimator port. *See*

<https://www.fujitsu.com/global/documents/about/resources/publications/fstj/archives/vol42->

4/paper06.pdf

81. FNC also directly infringes other claims of the '906 patent.

82. On information and belief, use of the Accused Instrumentalities results in infringement of the claims of the '906 patent.

83. FNC's affirmative acts of making, using, selling, offering for sale, and/or importing the Accused Instrumentalities have induced and continue to induce users of the Accused Instrumentalities to use the Accused Instrumentalities in their normal and customary way to infringe the claims of the '906 patent.

84. On information and belief, at least as of the filing of this Complaint and likely earlier as set forth above, FNC knew of the '906 patent, and knew that its activities would lead to infringement of the patent by its customers and end users.

85. For example, FNC sells the Accused Instrumentalities to customers and end users with the intent that such customers and end users will use the Accused Instrumentalities in such a way to constitute direct infringement of at least Claim 68 of the '906 patent as set forth above.

86. For example, FNC explains to customers the individual modules that are available to customers as well as standard and custom configurations. See

9500 <https://www.fujitsu.com/us/products/network/products/flashwave-9500/index.html>

<https://www.fujitsu.com/us/Images/flashwave9500.pdf>

7500 <https://www.fujitsu.com/us/products/network/products/flashwave-7500/index.html>

<https://www.fujitsu.com/us/Images/flashwave7500.pdf>

where FNC similarly describes standard and custom platform configurations.

87. FNC performed the acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the '906 patent and its claims and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement.

88. On information and belief, FNC engaged in such inducement to promote the sales of the Accused Instrumentalities, *e.g.*, through FNC's user manuals, product support, marketing

materials, demonstrations, installation support, and training materials to actively induce the users of the accused products to infringe the '906 patent.

89. Accordingly, FNC has induced and continues to induce end users of the accused products to use the accused products in their ordinary and customary way with compatible systems to make and/or use systems infringing the '906 patent, knowing that such use of the Accused Instrumentalities with compatible systems will result in infringement of the '906 patent. Accordingly, FNC has been and currently is inducing infringement of the '906 patent in violation of 35 U.S.C. § 271(b).

90. FNC has also contributorily infringed and continues to contribute to infringement of claims of the '906 patent by selling and offering to sell, offering to commercially distribute, commercially distributing, making, and/or importing the Accused Instrumentalities, which are used in practicing the process, or using the systems, claimed by the '906 patent, knowing the Accused Instrumentalities to be especially made or especially adapted for use in an infringement of the '906 patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use.

91. On information and belief, at least as of the filing of this Complaint and likely earlier as set forth above, FNC knew of the '906 patent, and knew that its activities would lead to infringement of the patent by its customers and end users.

92. FNC knows the modules in the Accused Instrumentalities to be especially made or especially adapted for use in infringement of the '906 patent, not a staple article, and not a commodity of commerce suitable for substantial noninfringing use. For example, the ordinary way of using the Accused Instrumentalities infringes the patent claims, and as such, is especially adapted for use in infringement. Accordingly, FNC has been, and currently is, contributorily infringing the '906 patent, in violation of 35 U.S.C. § 271(c).

93. Capella has suffered and will continue to suffer damage as a result of FNC's infringement of the '906 patent in an amount to be proven at trial.

94. Upon information and belief, FNC did not have and could not have had a

reasonable belief that the Accused Instrumentalities did not infringe the Asserted Patents. Any manufacturing, sales, offers for sale, uses, or importation by Defendants of the Infringing Products reflects a deliberate and knowing decision to infringe the '906 patent or, at the very least, a reckless disregard of Capella's patent rights. By its prior action, Capella made known to FNC that FNC's activities in making using, offering for sale, selling and/or importing into the United States the Infringing Products and Accused Instrumentalities constituted a sufficient risk of infringement that FNC should have ceased those activities. Under the circumstances, FNC knew or should have known the risk of infringement caused by FNC's activities related to the Accused Instrumentalities. Despite FNC's knowledge, FNC intentionally ignored or recklessly disregarded the risk that its activities infringed the Asserted Patents. FNC's conduct manifested deliberate or reckless disregard of Capella's rights in the Asserted Patents and was malicious, flagrant and in bad faith.

95. FNC's manufacturing, sales, offers for sale, uses, or importation of the Infringing Products has been willful, and Capella is entitled to treble damages and attorneys' fees and costs incurred in this action, along with prejudgment interest under 35 U.S.C. §§ 284, 285. FNC will continue to infringe the '906 patent unless and until it is enjoined by this Court.

96. FNC's acts of infringement have caused and will continue to cause irreparable harm to Capella unless and until FNC is enjoined by this Court.

EXCEPTIONAL CASE

97. The allegations contained in paragraphs 1-96 above are repeated and realleged as if fully set forth herein.

98. Based on, among other things, the facts alleged in paragraphs 1-96, including Defendants' intentional use of the Asserted Patents, Defendants' knowledge of its infringement, and Defendants' continued direct and/or indirect infringement, this case is exceptional under 35 U.S.C. § 285, and Capella is entitled to its reasonable costs and expenses of litigation.

REQUEST FOR RELIEF

WHEREFORE, Capella respectfully requests that this Court enter:

- (a) A Judgment in favor of Plaintiff that FNC has infringed, either literally and/or under the doctrine of equivalents, the '905 patent and the '906 patent;
- (b) An order enjoining FNC from further acts of infringement of the Asserted Patents;
- (c) A judgment and order requiring FNC to pay Plaintiff its damages, costs, expenses, and prejudgment and post-judgment interest for its infringement of the Asserted Patents, as provided under 35 U.S.C. § 284; and, if necessary to compensate Capella for FNC's infringement adequately, an accounting;
- (d) Awarding increased damages for Defendants' willful infringement;
- (e) Declaring that this case is exceptional under 35 U.S.C. § 285 and awarding Capella its reasonable costs and expenses of litigation, including attorneys' and experts' fees; and
- (f) Awarding Capella such equitable, other, different, and additional relief as this Court deems equitable and proper under the circumstances.

DEMAND FOR JURY TRIAL

Capella hereby demands trial by jury on all claims and issues so triable.

Dated: March 17, 2020

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