

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

EXEGY INCORPORATED)
)
 Plaintiff,)
)
 v.)
)
 NOVASPARKS SA and)
 NOVASPARKS, INC.,)
)
 Defendants.)

Case No:

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Exegy Incorporated (“Exegy” or “Plaintiff”), by and through its counsel, hereby files this Complaint against NovaSparks SA and NovaSparks, Inc. (collectively “NovaSparks” or “Defendants”), and alleges as follows:

THE PARTIES

1. Plaintiff Exegy Incorporated is a Delaware corporation having its principal place of business at 349 Marshall Ave., Suite 100, St. Louis, MO 63119.
2. On information and belief, Defendant NovaSparks SA is a corporation organized and existing under the laws of France with a principal place of business in Paris, France.
3. On information and belief, Defendant NovaSparks, Inc. is a Massachusetts corporation with a principal place of business at 225 W 35th Street, Suite 1204, New York, New York 10001.

JURISDICTION AND VENUE

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

5. This Court has personal jurisdiction over Defendants because Defendants have regularly transacted business in this District, have engaged in acts of infringement in this District, and Defendant NovaSparks, Inc. is incorporated in this District.

6. Venue is proper in this District because Defendants have regularly transacted business in this District, have engaged in acts of infringement in this District, Defendant NovaSparks SA is a foreign corporation and is therefore subject to venue in any District under 28 U.S.C. § 1391(c)(3), and Defendant NovaSparks, Inc. is incorporated in Massachusetts and is therefore subject to venue in this District under 28 U.S.C. § 1400(b).

FACTUAL BACKGROUND

A. Exegy Incorporated

7. Exegy is the sole owner of all right, title, and interest in the seven patents at issue in this litigation, as set forth in paragraphs 17-30, below (“the Asserted Patents”).

8. Exegy is a leading provider of technology for high-speed processing of financial information. Specifically, Exegy markets hardware-accelerated computing appliances for real-time market data processing, using field programmable gate array (“FPGA”) devices. These FPGA devices allow Exegy’s products to operate over ten times faster and more efficiently than commodity servers running software.

9. As the sole owner of the Asserted Patents, Exegy has the right to sue for infringement of the Asserted Patents by anyone who makes, uses, offers for sale, sells, or imports products and/or services that practice the claims of the Asserted Patents.

B. NovaSparks SA and NovaSparks, Inc.

10. NovaSparks is a provider of “FPGA-based high performance and ultra-low latency trading solutions for financial markets.” <https://novasparks.com/> See Exhibit 8, p. 1.

11. NovaSparks designs, offers for sale, and sells FPGA processors that are used in systems that enable high-speed processing of financial information, including in NovaSparks’ “NovaTick” Ticker Plant product. <https://novasparks.com/> See Exhibit 8, pp. 1-2.

12. NovaSparks’ website touts the benefits of its FPGA processors, as follows: “NovaSparks FPGA approach delivers normalized market data, including book building and consolidation in less than one micro-second, even during market peaks period. This level of performance is extended to the whole trading cycle with the NovaSparks pure FPGA Tick-to-Trade solutions or can be leveraged for custom projects through the NovaSparks open FPGA trading development platform.” <https://novasparks.com/> See Exhibit 8, p. 1.

13. Exhibit 8 to this Complaint contains a series of screen captures from NovaSparks’ website that set forth the details relating to NovaSparks’ products and/or services that process real-time financial market data feeds that are created by or destined for financial market exchanges using FPGAs. These products and services include the products and services identified on NovaSparks’ website as its NovaTick Ticker Plant, NovaTick Appliance, NovaTick Stand-Alone PCIe Card, NovaLink API, NovaSparks API, NovaSparks Wire Format (NSWF), NovaTick NBBO Calculator, and ETF Calculator products (the “Accused Products”). <https://novasparks.com/> See Exhibit 8.

14. NovaSparks has derived and continues to derive substantial value through, among other things, sales of the Accused Products.

15. NovaSparks and Exegy are competitors.

16. The Accused Products offered by NovaSparks compete with Exegy's patented products and services.

C. Exegy's Asserted Patents

17. On April 5, 2011, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 7,921,046 ("the '046 Patent"), entitled "High Speed Processing of Financial Information Using FPGA Devices." Exegy owns, by assignment, all right, title and interest in and to the '046 Patent, including all rights of recovery. A true and accurate copy of the '046 Patent is attached as Exhibit 1.

18. The '046 Patent is valid and enforceable.

19. On June 24, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,762,249 ("the '249 Patent"), entitled "Method and Apparatus for High-Speed Processing of Financial Market Depth Data." Exegy owns, by assignment, all right, title and interest in and to the '249 Patent, including all rights of recovery. A true and accurate copy of the '249 Patent is attached as Exhibit 2.

20. The '249 Patent is valid and enforceable.

21. On July 1, 2014, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,768,805 ("the '805 Patent"), entitled "Method and Apparatus for High-Speed Processing of Financial Market Depth Data." Exegy owns, by assignment, all right, title and interest in and to the '805 Patent, including all rights of recovery. A true and accurate copy of the '805 Patent is attached as Exhibit 3.

22. The '805 Patent is valid and enforceable.

23. On June 2, 2015, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,047,243 ("the '243 Patent"), entitled "Method and Apparatus for Low

Latency Data Distribution.” Exegy owns, by assignment, all right, title and interest in and to the ‘243 Patent, including all rights of recovery. A true and accurate copy of the ‘243 Patent is attached as Exhibit 4.

24. The ‘243 Patent is valid and enforceable.

25. On June 5, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,990,393 (“the ‘393 Patent”), entitled “Intelligent Feed Switch.” Exegy owns, by assignment, all right, title and interest in and to the ‘393 Patent, including all rights of recovery. A true and accurate copy of the ‘393 Patent is attached as Exhibit 5.

26. The ‘393 Patent is valid and enforceable.

27. On November 6, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,121,196 (“the ‘196 Patent”), entitled “Offload Processing of Data Packets Containing Financial Market Data.” Exegy owns, by assignment, all right, title and interest in and to the ‘196 Patent, including all rights of recovery. A true and accurate copy of the ‘196 Patent is attached as Exhibit 6.

28. The ‘196 Patent is valid and enforceable.

29. On March 12, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,229,453 (“the ‘453 Patent”), entitled “Method and System for Low Latency Basket Calculation.” Exegy owns, by assignment, all right, title and interest in and to the ‘453 Patent, including all rights of recovery. A true and accurate copy of the ‘453 Patent is attached as Exhibit 7.

30. The ‘453 Patent is valid and enforceable.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 7,921,046

31. Exegy repeats and realleges each and every allegation contained in paragraphs 1-30 as though fully stated herein.

32. The '046 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '046 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

33. A specific embodiment of the invention described and claimed in the '046 Patent is a ticker plant configured to process financial market data with a combination of software logic and firmware logic. Through firmware pipelines deployed on the ticker plant and efficient software control and management over data flows to and from the firmware logic, the ticker plant is capable of greatly accelerating the speed with which financial market data is processed.

34. Defendants have directly infringed one or more claims of the '046 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> See Exhibit 8.

35. Defendants have directly infringed at least claim 1 of the '046 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

36. The Accused Products satisfy each and every limitation recited in claim 1 of the '046 Patent. See Exhibit 9.

37. As a direct and proximate result of Defendants' infringement of the '046 Patent, Exegy has been damaged in an amount yet to be determined.

38. Defendants' infringement of the '046 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT II
INFRINGEMENT OF U.S. PATENT NO. 8,762,249

39. Exegy repeats and realleges each and every allegation contained in paragraphs 1-38 as though fully stated herein.

40. The '249 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '249 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

41. A specific embodiment of the invention described and claimed in the '249 Patent is a ticker plant configured to process financial market depth data with firmware logic. Through firmware pipelines deployed on the ticker plant, the ticker plant is capable of greatly accelerating the speed with which financial market depth data is processed.

42. Defendants have directly infringed one or more claims of the '249 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> See Exhibit 8.

43. Defendants have directly infringed at least claim 1 of the '249 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

44. The Accused Products satisfy each and every limitation recited in claim 1 of the '249 Patent. See Exhibit 10.

45. As a direct and proximate result of Defendants' infringement of the '249 Patent, Exegy has been damaged in an amount yet to be determined.

46. Defendants' infringement of the '249 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT III
INFRINGEMENT OF U.S. PATENT NO. 8,768,805

47. Exegy repeats and realleges each and every allegation contained in paragraphs 1-46 as though fully stated herein.

48. The '805 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '805 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds.

49. A specific embodiment of the invention described and claimed in the '805 Patent is a ticker plant configured to process financial market depth data with firmware logic. Through firmware pipelines deployed on the ticker plant, the ticker plant is capable of greatly accelerating the speed with which financial market depth data is processed.

50. Defendants have directly infringed one or more claims of the '805 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> See Exhibit 8.

51. Defendants have directly infringed at least claim 1 of the '805 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

52. The Accused Products satisfy each and every limitation recited in claim 1 of the '805 Patent. *See* Exhibit 11.

53. As a direct and proximate result of Defendants' infringement of the '805 Patent, Exegy has been damaged in an amount yet to be determined.

54. Defendants' infringement of the '805 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT IV
INFRINGEMENT OF U.S. PATENT NO. 9,047,243

55. Exegy repeats and realleges each and every allegation contained in paragraphs 1-54 as though fully stated herein.

56. The '243 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '243 Patent teaches a variety of data processing pipelines implemented in firmware deployed on reconfigurable logic, wherein a stream of financial data can be processed through the logic at hardware speeds and distributed to data consumers at low latency.

57. A specific embodiment of the invention described and claimed in the '243 Patent is a method of distributing financial market data through data consumer specific data streams via direct memory access (DMA) write operations to shared memory.

58. Defendants have directly infringed one or more claims of the '243 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> *See* Exhibit 8.

59. Defendants have directly infringed at least claim 24 of the '243 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

60. The Accused Products satisfy each and every limitation recited in claim 24 of the '243 Patent. *See* Exhibit 12.

61. As a direct and proximate result of Defendants' infringement of the '243 Patent, Exegy has been damaged in an amount yet to be determined.

62. Defendants' infringement of the '243 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT V
INFRINGEMENT OF U.S. PATENT NO. 9,990,393

63. Exegy repeats and realleges each and every allegation contained in paragraphs 1-62 as though fully stated herein.

64. The '393 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '393 Patent teaches offloading data processing operations to an intelligent switch located upstream or downstream from an electronic trading platform.

65. A specific embodiment of the invention described and claimed in the '393 Patent is an intelligent feed switch for processing financial market data where both switching logic and a processor are co-resident within the intelligent feed switch and the processor includes at least one of a reconfigurable logic device, a graphics processor unit (GPU), or a chip multi-processor (CMP) with a processing pipeline that is configured to analyze message data on a data consumer-specific basis and repacketize messages into a plurality of outgoing data consumer-specific data packets.

66. Defendants have directly infringed one or more claims of the '393 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> *See* Exhibit 8.

67. Defendants have directly infringed at least claim 1 of the ‘393 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

68. The Accused Products satisfy each and every limitation recited in claim 1 of the ‘393 Patent. *See* Exhibit 13.

69. As a direct and proximate result of Defendants’ infringement of the ‘393 Patent, Exegy has been damaged in an amount yet to be determined.

70. Defendants’ infringement of the ‘393 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney’s fees and expenses incurred in bringing and in furtherance of this action.

COUNT VI
INFRINGEMENT OF U.S. PATENT NO. 10,121,196

71. Exegy repeats and realleges each and every allegation contained in paragraphs 1-70 as though fully stated herein.

72. The ‘196 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the ‘196 Patent teaches offloading data processing operations to an intelligent switch located upstream or downstream from an electronic trading platform.

73. A specific embodiment of the invention described and claimed in the ‘196 Patent is an intelligent feed switch for processing financial market data where both switching logic and a processor are co-resident within the intelligent feed switch and the processor includes at least one of a reconfigurable logic device, a graphics processor unit (GPU), or a chip multi-processor (CMP) for performing a packet mapping operation configured to (1) determine a financial market data feed associated with a received incoming data packet, (2) access metadata associated with the determined financial market data feed, and (3) associate the accessed metadata with that received incoming data packet.

74. Defendants have directly infringed one or more claims of the '196 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> See Exhibit 8.

75. Defendants have directly infringed at least claim 1 of the '196 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

76. The Accused Products satisfy each and every limitation recited in claim 1 of the '196 Patent. See Exhibit 14.

77. As a direct and proximate result of Defendants' infringement of the '196 Patent, Exegy has been damaged in an amount yet to be determined.

78. Defendants' infringement of the '196 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

COUNT VII
INFRINGEMENT OF U.S. PATENT NO. 10,229,453

79. Exegy repeats and realleges each and every allegation contained in paragraphs 1-78 as though fully stated herein.

80. The '453 Patent relates generally to the field of data processing platforms for financial market data. Specifically, the '453 Patent teaches a data processing platform with a basket calculation engine for processing financial market data and computing basket values for financial instruments.

81. A specific embodiment of the invention described and claimed in the '453 Patent is a method of streaming financial market data through a field programmable gate array (FPGA) having a pipeline configuration that includes a first hardware module and a second hardware

module that is arranged downstream of the first hardware module. The first hardware module performs the step(s) of writing a plurality of delta events to a delta event buffer in response to a plurality of the streaming financial market data messages, wherein each delta event comprises (1) data indicative of a basket determined by the first module, (2) data indicative of a price delta for the financial instrument pertaining to that determined basket, and (3) data indicative of a weight for that financial instrument within that determined basket. The second hardware module performs the step(s) of computing a plurality of net asset values (NAVs) for the determined baskets with respect to the read delta events using a delta calculation approach that is based on a contribution of the price information for the financial instruments to the NAVs.

82. Defendants have directly infringed one or more claims of the '453 Patent in violation of 35 U.S.C. § 271(a), by having made, used, offered for sale, sold and/or imported in this District and elsewhere in the United States the Accused Products. <https://novasparks.com/> See Exhibit 8.

83. Defendants have directly infringed at least claim 1 of the '453 Patent, in that they have made, used, offered for sale, sold, and/or imported the Accused Products.

84. The Accused Products satisfy each and every limitation recited in claim 1 of the '453 Patent. See Exhibit 15.

85. As a direct and proximate result of Defendants' infringement of the '453 Patent, Exegy has been damaged in an amount yet to be determined.

86. Defendants' infringement of the '453 Patent has been willful and this is an exceptional case such that Exegy should be entitled to its reasonable attorney's fees and expenses incurred in bringing and in furtherance of this action.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38(b), Exegy hereby demands a trial by jury for each and every issue so permitted by law and statute.

PRAYER FOR RELIEF

WHEREFORE, Exegy prays for relief against Defendants as follows:

- (a) A judgment that Defendants have directly infringed the ‘046, ‘249, ‘805, ‘243, ‘393, ‘196, and ‘453 Patents;
- (b) A judgment and order requiring Defendants to pay Exegy damages under 35 U.S.C. § 284, together with pre-judgment and post-judgment interest;
- (c) A judgment declaring Defendants’ infringement has been willful and awarding Exegy treble damages under 35 U.S.C. § 284;
- (d) Entry of a preliminary and permanent injunction under 35 U.S.C. § 283 and Rule 65 of the Fed. R. Civ. P., enjoining Defendants and their officers, agents, attorneys, and employees, and those acting in privity or concert with them, from any further acts of infringement until the expiration of the injunction;
- (e) Entry of an Order requiring Defendants to file with this Court and to serve upon Exegy’s counsel, within thirty (30) days after the entry and service of any injunction issued, a report in writing and under oath setting forth in detail the manner and form in which it has complied with the injunction;
- (f) Entry of an Order requiring Defendants to post an appropriate bond and Order any other appropriate relief to assure compliance with any injunctive provision or other provision Ordered by the Court;

(g) Entry of an Order directing Defendants and their agents, servants, employees, partners, attorneys, successors and assigns, and all those acting in concert with them, to deliver to this Court or to Exegy for destruction, or show proof of said destruction, of all infringing products;

(h) A judgment declaring that this case is exceptional and awarding Exegy its expenses, costs, and attorneys' fees incurred prosecuting this action pursuant to 35 U.S.C. § 285; and

(i) Such other and further relief as the Court deems just and equitable.

Dated: November 23, 2022

Respectfully submitted,

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