IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

DIGIMEDIA TECH, LLC, Plaintiff, v. LENOVO (UNITED STATES) INC., and MOTOROLA MOBILITY LLC, Defendants.	CIVIL ACTION NO. 1:21-CV-00227-MN **Jury Trial Demanded**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff DigiMedia Tech, LLC ("Plaintiff") files this First Amended Complaint for Patent Infringement against Defendants, and states as follows:

THE PARTIES

1. Plaintiff is a limited liability company organized and existing under the laws of the State of Georgia, having its principal office at 44 Milton Ave., Suite 254, Alpharetta, GA 30009. By acquiring and licensing patents, Plaintiff provides a valuable service to inventors and patent owners, and those who wish to use their inventions.

2. The law, and the patent system generally, recognizes that inventors and patent owners are not always willing or able to develop and market products embodying their patented inventions. This can be for many reasons, including barriers to entry into markets dominated by companies with monopoly-like power and the rise of the philosophy of "efficient infringement" among many companies (which holds that it is cheaper to fight off legal challenges from patent owners than to license a patent).

3. The law, recognizing the reality that a person or company may develop valuable intellectual property without being in a position to themselves commercialize it, has always

allowed inventors and patent owners to sell for valuable consideration the rights to their patents to others, such as Plaintiff, who may be better positioned to license those patents to individuals and entities that may wish to use or are already using the patented inventions, and, if necessary, to assert those patents in litigation. Indeed, this is often the only way that inventors and their investors may be compensated for their innovation. The ability to freely sell and license intellectual property rights, including patents, therefore encourages innovation.

4. If purchasers of intellectual property rights, including patents, could not enforce them against infringers, it would effectively destroy the ability of inventors to receive compensation for their innovation by selling their intellectual property rights. No one would buy a home if they were not allowed to repel burglars simply because they purchased the home from the builder instead of building it themselves. Similarly, few would buy a patent that could not be enforced by the purchaser against others, except perhaps to avoid litigation or paying a reasonable license fee. Thus, inventors would be harmed if the legal system discriminated against patent owners simply because they purchased patents from inventors rather than developing the technology themselves. This is true regardless of whether the prohibition on purchasers enforcing patents was through official operation of the law or through quasi-legal stigma.

5. Defendant LENOVO (UNITED STATES), INC. ("Lenovo") is a corporation organized under the laws of the State of Delaware. Upon information and belief, Lenovo sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States. Lenovo is a serial patent infringer, having been sued numerous times for patent

infringement. In those cases, Lenovo frequently refuses to engage in good-faith licensing discussions and instead files motions to dismiss attacking the asserted patents and/or the sufficiency of the infringement allegations. In other words, in Lenovo's eyes any patent asserted against it must be defective, yet Lenovo and its affiliated companies own thousands upon thousands of patents, filing for thousands more every year. https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html. Upon information and belief, Lenovo routinely files motions to dismiss in cases in which a patent owner dares to claim patent infringement by Lenovo, all in an effort by Lenovo to stifle lawful claims of infringement and increase the costs of litigation for patent owners, presumably in order to avoid paying reasonable license fees. But Lenovo acts inconsistently in maintaining thousands of patents of its own, and continually seeking to obtain additional patents, many of which would be held invalid if the same standards were applied to them that Lenovo seeks to apply to patents asserted against it.

6. Defendant MOTOROLA MOBILITY LLC ("Motorola") is a limited liability company organized under the laws of the State of Delaware. Upon information and belief, Motorola sells, offers to sell, and/or uses products and services throughout the United States, including in this judicial district, and introduces infringing products and services into the stream of commerce knowing that they would be sold and/or used in this judicial district and elsewhere in the United States. Motorola is a serial patent infringer, having been sued numerous times for patent infringement. In those cases, Motorola frequently refuses to engage in good-faith licensing discussions and instead files motions to dismiss attacking the asserted patents and/or the sufficiency of the infringement allegations. In other words, in Motorola's eyes any patent asserted against it must be defective, yet Motorola and its affiliated companies (including

Lenovo) own thousands upon thousands of patents, filing for thousands more every year. https://www.wipo.int/wipo_magazine/en/2015/03/article_0002.html. Upon information and belief, Motorola routinely files motions to dismiss in cases in which a patent owner dares to claim patent infringement by Motorola, all in an effort by Motorola to stifle lawful claims of infringement and increase the costs of litigation for patent owners, presumably in order to avoid paying reasonable license fees. But Motorola acts inconsistently in maintaining thousands of patents of its own, and continually seeking to obtain additional patents, many of which would be held invalid if the same standards were applied to them that Motorola seeks to apply to patents asserted against it.

JURISDICTION AND VENUE

7. This Court has exclusive subject matter jurisdiction over this case pursuant to 28 U.S.C. §§ 1331 and 1338(a) on the grounds that this action arises under the Patent Laws of the United States, 35 U.S.C. § 1 et seq., including, without limitation, 35 U.S.C. §§ 271, 281, 284, and 285.

8. This Court has general and specific personal jurisdiction over Defendants, consistent with due process, because Defendants are entities formed and existing under the laws of the State of Delaware. Further, Defendants have minimum contacts with the State of Delaware, and Defendants have purposefully availed themselves of the privileges of conducting business in the State of Delaware, including through the sale and offer for sale of the Accused Products throughout the State of Delaware and this judicial district.

9. Venue is proper in this Court as to Defendants pursuant to 28 U.S.C. § 1400(b) on the grounds that Defendants reside in this judicial district.

FACTUAL BACKGROUND

The '532 Patent

10. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,473,532, entitled "Method and Apparatus for Visual Lossless Image Syntactic Encoding" ("the '532 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

11. A true and correct copy of the '532 patent is attached hereto as Exhibit A. The '532 patent is incorporated herein by reference.

12. The application that became the '532 patent was filed on March 14, 2000.

13. The '532 patent issued on October 29, 2002, after a full and fair examination by the USPTO.

14. A true and correct copy of the prosecution history for the '532 patent is attached hereto as Exhibit B and is incorporated herein by reference.

15. The '532 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

16. The elements recited in the asserted claims of the '532 patent were not well-understood, routine, or conventional when the application that became the '532 patent was filed.

17. The claims of the '532 patent are directed to technical solutions to the technical problem of providing a visually lossless video compression method and apparatus. One of the reasons this is important is for storing video in a compressed format, where the compression does not reduce the quality of the video in a visually detectable manner. Since recording video programs onto Blu-ray disks must balance the competing features of both high quality video and limited or practical video file sizes, the problem calls for technical solutions. The '532 patent discloses and claims such technical solutions.

18. For example, the ’532 patent recognized that video encoding can compress the source video input in a manner that is visually lossless. The ’532 patent discloses and claims a number of techniques which include defining visual perception thresholds and classifying picture elements into subclasses using the visual perception thresholds. The picture elements can be transformed according to the subclass. Consequently, the technology in the ’532 patent enables both visually lossless encoding and efficient compression of recorded video.

19. Specifically, the asserted claim 6 of the ’532 patent claims:

> 6. A method of visual lossless encoding of frames of a video signal, the method comprising steps of:
>
> spatially and temporally separating and analyzing details of said frames;
>
> estimating parameters of said details;
>
> defining a visual perception threshold for each of said details in accordance with said estimated detail parameters;
>
> classifying said frame picture details into subclasses in accordance with said visual perception thresholds and said detail parameters; and
>
> transforming each said frame detail in accordance with its associate subclass.

20. The sequence of steps set forth in asserted claim 6 of the ’532 patent provides a technical solution to the technical problem of providing a visually lossless video compression method.

21. The claimed sequence of steps set forth in asserted claim 6 constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the competing goals of video compression and visually lossless video encoding.

22. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The '250 Patent

23. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,741,250 entitled "Method and System for Generation of Multiple Viewpoints into a Scene Viewed by Motionless Cameras and for Presentation of a View Path" ("the '250 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

24. A true and correct copy of the '250 patent is attached hereto as Exhibit C. The '250 patent is incorporated herein by reference.

25. The application that became the '250 patent was filed on October 17, 2001.

26. The '250 patent issued on May 25, 2004, after a full and fair examination by the USPTO.

27. A true and correct copy of the prosecution history for the '250 patent is attached hereto as Exhibit D and is incorporated herein by reference.

28. The '250 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

29. The elements recited in the asserted claims of the '250 patent were not well-understood, routine, or conventional when the application that became the '250 patent was filed.

30. The claims of the '250 patent are directed to technical solutions to the technical problem of using a single camera to provide a view path through one or more video segments to determine which video frames in the video segments are used to generate a view. One of the reasons this is important is that users of a camera with a wide field of view may prefer to select

and view (or have selected for them) only portions of the supported wide field of view. The camera's field of view may be sufficiently wide to create distorted images on a rectangular screen. Users may prefer portions with reduced distortion, which calls for technical solutions. The '250 patent discloses and claims such technical solutions. The camera can record a video stream over the wide field of view. The camera and/or a user can designate a portion of the video stream to be a video segment and subsequently designate a view path through the video segment. Consequently, the technology in the '250 patent enables the view of portions of the camera's wide field of view with reduced distortion.

31. Specifically, asserted claim 1 of the '250 patent claims:

> 1. A method of:
>
> recording a video stream comprising a plurality of frames, wherein said plurality of frames define a plurality of distorted images;
>
> designating a portion of said video stream to be a video segment; and
>
> specifying a view path through said video segment.

32. The sequence of steps set forth in asserted claim 1 of the '250 patent provides a technical solution to the technical problem of providing view paths without distortion.

33. The claimed sequence of steps set forth in the '250 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for providing view paths without distortion.

34. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The '818 Patent

35. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,744,818 entitled "Method and Apparatus for Visual Perception Encoding" ("the '818 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

36. A true and correct copy of the '818 patent is attached hereto as Exhibit E. The '818 patent is incorporated herein by reference.

37. The application that became the '818 patent was filed on December 27, 2000.

38. The '818 patent issued on June 1, 2004, after a full and fair examination by the USPTO.

39. A true and correct copy of the prosecution history for the '818 patent is attached hereto as Exhibit F and is incorporated herein by reference.

40. The '818 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

41. The elements recited in the asserted claims of the '818 patent were not well-understood, routine, or conventional when the application that became the '818 patent was filed.

42. The claims of the '818 patent are directed to technical solutions to the technical problem of reducing perceptual redundancy independent of other video compression techniques. One of the reasons this is important is for storing video in a compressed format, where the compression should also support subsequent viewing of the video at high quality. Since video streaming services must balance the competing features of both high-quality video and limited or practical video file sizes, the problem calls for technical solutions. The '818 patent discloses and claims such technical solutions. For example, the '818 patent recognized that video encoding

can compress the source video input with a visual perception estimator and a perception threshold. The '818 patent discloses a number of techniques which include (i) a compression dependent threshold estimator using the perception threshold and (ii) a filter for pixels using the compression dependent threshold. Consequently, the technology in the '818 patent enables smaller video file sizes for a specified level of video quality.

43. Specifically, the asserted claims 1, 2, and 5 of the '818 patent claim:

> 1. A video encoding system comprising:
>
> a visual perception estimator adapted to estimate a perception threshold for a pixel of a current frame of a videostream;
>
> an encoder adapted to encode said current frame;
>
> a compression dependent threshold estimator adapted to estimate a compression dependent threshold for said pixel at least from said perception threshold and information from said encoder; and
>
> a filter unit adapted to filter said pixel at least according to said compression dependent threshold.
>
> 2. A system according to claim 1 and wherein said compression dependent threshold estimator also estimates at least one parameter from the following group of parameters:
>
> whether or not a new frame NwFr has been defined by said encoder as an I frame;
>
> whether an ith pixel is in the foreground FG or the background BG of a picture;
>
> whether an ith pixel forms part of an edge Ed around an object in the picture;
>
> whether or not the ith pixel forms part of a single detail SD;
>
> whether or not the ith pixel is part of a group Gr of generally periodic details;
>
> the contrast level Lv of the detail for the ith pixel;

> the duration τ of a detail within a picture;
>
> how full said encoder is; and the distance DP of the ith pixel from the center of the frame.
>
> 5. A system according to claim 1 and wherein said filter unit is a non-linear filter.

44. The sequence of steps set forth in the asserted claims of the ’818 patent provide a technical solution to the technical problem of providing a visually lossless video compression method.

45. The claimed sequence of steps set forth in the asserted claims constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the competing goals of video compression and visually lossless video encoding.

46. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The ’220 Patent

47. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,684,220 entitled “Method and System for Automatic Information Exchange” (“the ’220 patent”), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

48. A true and correct copy of the ’220 patent is attached hereto as Exhibit G. The ’220 patent is incorporated herein by reference.

49. The application that became the ’220 patent was filed on September 20, 2000.

50. The ’220 patent issued on January 27, 2004, after a full and fair examination by the USPTO.

51. A true and correct copy of the prosecution history for the ‘220 patent is attached hereto as Exhibit H and is incorporated herein by reference.

52. The ’220 patent is and is legally presumed to be valid, enforceable and directed to patent eligible subject matter.

53. The elements recited in the asserted claims of the ’220 patent were not well-understood, routine, or conventional when the application that became the ’220 patent was filed.

54. The claims the ’220 patent are directed to technical solutions to the technical problem of a server system conducting automated information exchanges. One of the reasons this is important is to support automated and accurate server generated responses to customer inquiries in online chat systems. With accurate and automated information exchange, routine customer inquiries can be answered directly by a server system. The ’220 patent discloses and claims such technical solutions for automated information exchange. For example, the ’220 patent couples an information source to a processor that stores a data model. The ’220 patent discloses a loading engine for automatically creating object links between input variables and output variables for the data objects in the data model. Consequently, the technology in the ’220 patent enables automated and accurate online responses from a server system to customer support inquiries without requiring answers from customer support representatives.

55. Specifically, asserted claim 1 of the ’220 patent claims:

> 1. A system for automatic information exchange, comprising:
>
> a processor;
>
> an information source coupled to the processor and operable to store a model, the model comprising a plurality of objects, each of the plurality of objects comprising an input variable and an output variable; and
>
> a loading engine residing in a memory and executable by the processor, the loading engine operable to automatically create object links between

corresponding input variables and output variables of each of the plurality of objects.

56. The sequence of steps set forth in the asserted claim of the ’220 patent provide a technical solution to the technical problem of a server system conducting automated information.

57. The claimed sequence of steps set forth in the ‘220 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the goal of accurate and automated information exchange.

58. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The ’706 Patent

59. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,545,706, entitled “System, Method and Article of Manufacture for Tracking a Head of a Camera-Generated Image of a Person” (“the ’706 patent”), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

60. A true and correct copy of the ’706 patent is attached hereto as Exhibit I. The ’706 patent is incorporated herein by reference.

61. The application that became the ’706 patent was filed on July 30, 1999.

62. The ’706 patent issued on April 8, 2008, after a full and fair examination by the USPTO.

63. A true and correct copy of the prosecution history for the ‘706 patent is attached hereto as Exhibit J and is incorporated herein by reference.

64. The ’706 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

65. The elements recited in the asserted claims of the ’706 patent were not well-understood, routine, or conventional when the application that became the ’706 patent was filed.

66. The claims of the ’706 patent are directed to technical solutions to the technical problem of how to identify a head in an image. One of various reasons this is important is to assist in focusing a digital camera. Since many camera users are not trained in how to properly focus a camera, and because many photographs are candid shots of moving subjects, the problem calls for technical solutions. The ’706 patent discloses and claims such technical solutions. For example, the ’706 patent recognized that while a number of different techniques could be used to identify a head portion of a subject in an image, no single technique is foolproof. Thus, the ’706 patent discloses applying at least two techniques to identify a head portion and basing the detection of heads on the results of the two techniques. This approach overcomes a problem that any particular technique may be fooled by or rendered inapplicable by particular circumstances (e.g., lighting conditions, orientation of the subject to the camera, etc.).

67. Specifically, asserted claim 19 of the ’706 patent claims:

> 19. A computer program embodied on a computer readable medium for tracking a head portion of a person image in video images, comprising:
>
> a code segment for receiving video images;
>
> a code segment for executing a first head tracking operation for generating a first confidence value representative of a confidence that a head portion of a person image in the video images is located, the first head tracking operation comprising identifying a point of separation between a torso portion of the person image and the head portion of the person image;
>
> a code segment for executing a second head tracking operation for generating a second confidence value representative of a confidence that the head portion of the person image in the video images is located; and

> a code segment for outputting the first confidence value and the second confidence value, wherein the depiction of the head portion of the person image in the video images is based on the first confidence value and the second confidence value.

68. The sequence of steps set forth in the asserted claims of the ‘706 patent provide a technical solution to the technical problem of head portion focus.

69. The claimed sequence of steps set forth in the ‘706 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the goal of accurate and automated information exchange.

70. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The ’476 Patent

71. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 7,715,476, entitled “System, Method and Article of Manufacture for Tracking a Head of a Camera-Generated Image of a Person” (“the ’476 patent”), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

72. A true and correct copy of the ’476 patent is attached hereto as Exhibit K. The ’476 patent is incorporated herein by reference.

73. The application that became the ’476 patent was filed on April 21, 2005.

74. The ’476 patent claims priority to the application that became the ’706 patent, filed on July 30, 1999.

75. The ’476 patent issued on May 11, 2010, after a full and fair examination by the USPTO.

76. A true and correct copy of the prosecution history for the ‘476 patent is attached hereto as Exhibit L and is incorporated herein by reference.

77. The ’476 patent is and is legally presumed to be valid, enforceable and directed to patent-eligible subject matter.

78. The elements recited in the asserted claims of the ’476 patent were not well-understood, routine, or conventional when the application that became the ’476 patent was filed.

79. The claims of the ’476 patent are directed to technical solutions to the technical problem of how to identify a head in an image. One of various reasons this is important is to assist in focusing a digital camera. Since many camera users are not trained in how to properly focus a camera, and because many photographs are candid shots of moving subjects, the problem calls for technical solutions. The ’476 patent discloses and claims such technical solutions. For example, the ’476 patent recognized that while a number of different techniques could be used to identify a head portion of a subject in an image, no single technique is foolproof. Thus, the ’476 patent discloses applying at least two techniques to identify a head portion and basing the detection of heads on the results of the two techniques. This approach overcomes a problem that any particular technique may be fooled by or rendered inapplicable by particular circumstances (e.g., lighting conditions, orientation of the subject to the camera, etc.).

80. Specifically, asserted claim 13 (which depends from and incorporates the elements of claim 1) of the ’476 patent claims:

> 1. A method performed by a computer for processing images to identify a head portion of a subject in the images comprising:
>
> obtaining images of a subject;
>
> generating, by the computer, a first confidence value representing a confidence that a first process has identified a location of a head portion of the subject in the images;

> generating, by the computer, a second confidence value representing a confidence that a second, different process has identified the location of the head portion of the subject in the images; and
>
> identifying, by the computer, the location of the head portion of the subject in the images based at least in part on the first confidence value and the second confidence value.
>
> 13. A method as recited in claim 1, wherein the first process includes identifying a point of separation between the head portion and a torso portion.

81. The sequence of steps set forth in asserted claim 13 of the '476 patent provides a technical solution to the technical problem of head portion focus.

82. The claimed sequence of steps set forth in the '476 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the goal of accurate and automated information exchange.

83. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The '287 Patent

84. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,606,287 entitled "Method and Apparatus for Compression Rate Selection" ("the '287 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

85. A true and correct copy of the '287 patent is attached hereto as Exhibit M. The '287 patent is incorporated herein by reference.

86. The application that became the '287 patent was filed on November 29, 2000.

87. The '287 patent issued on August 12, 2003, after a full and fair examination by the USPTO.

88. A true and correct copy of the prosecution history for the ‘287 patent is attached hereto as Exhibit N and is incorporated herein by reference.

89. The ’287 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

90. The elements recited in the asserted claims of the ’287 patent were not well-understood, routine, or conventional when the application that became the ’287 patent was filed.

91. The claims of the ’287 patent are directed to technical solutions to the technical problem of video compression rate selection, for example, in the field of home electronic entertainment with multiple types of media devices, including cellular phones. One of the reasons this is important is the rate selection for video compression should reduce the stored file size or bandwidth requirements while maintaining high quality for the video. The media devices can operate in a networked manner and share the compressed video over the network. Higher video compression rates reduce network bandwidth or file storage requirements, but also reduce video quality. The selection of an optimal or preferred video compression rate that maintains sufficient quality for sharing video over the network, calls for technical solutions. The ‘287 patent discloses and claims such technical solutions. For example, the ‘287 patent recognized that multiple data items can be associated with the video input, and a maximum compression rate can be determined from the data items. The video can be compressed at the maximum compression rate and stored. The media device can operate as client in a client/server architecture for storing the compressed video. This approach overcomes problems for video compression rates that result in either larger file sizes than necessary or unacceptable video quality. Consequently, the technology in the ‘287 patent enables networked media devices such

as cellular phones to compress video at sufficient quality for storing in a network with bandwidth and storage limitations.

92. The sequence of steps set forth in the asserted claims of the ‘287 patent provide a technical solution to the technical problem of determining a video compression rate for media devices to store video in a communications network.

93. Specifically, asserted claim 1 of the ’287 patent claims:

> 1. A method for recording a media signal comprising:
>
> generating one or more data items wherein said data items are associated with said media signal;
>
> determining a maximum compression rate from said data items wherein recording said media signal compressed at said maximum compression rate does not result in an unacceptable loss of quality of said media signal;
>
> compressing said media signal at said maximum rate into a compressed media signal; and
>
> storing said compressed media signal, wherein said step of determining is performed at a client in a client/server architecture.

94. The claimed sequence of steps set forth in the ‘287 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the goal of accurate and automated information exchange.

95. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

The ’086 Patent

96. Plaintiff is the owner by assignment of all right, title, and interest in and to United States Patent No. 6,567,086 entitled “Immersive Video System Using Multiple Video Streams”

("the '086 patent"), including the right to sue for all past, present, and future infringement, which assignment was duly recorded in the USPTO.

97. A true and correct copy of the '086 patent is attached hereto as Exhibit O. The '086 patent is incorporated herein by reference.

98. The application that became the '086 patent was filed on July 25, 2000.

99. The '086 patent issued on May 20, 2003, after a full and fair examination by the USPTO.

100. A true and correct copy of the prosecution history for the '086 patent is attached hereto as Exhibit P and is incorporated herein by reference.

101. The '086 patent is and is legally presumed to be valid, enforceable, and directed to patent-eligible subject matter.

102. The elements recited in the asserted claims of the '086 patent were not well-understood, routine, or conventional when the application that became the '086 patent was filed.

103. The claims of the ' 086 patent are directed to technical solutions to the technical problem of how to increase the resolution and quality of immersive video for environment display systems that use multiple video streams and conventional video components. One of the reasons this is important is that, for camera systems with 360 degrees of view, users may prefer to view video at different angles with higher resolution. The video display system may not "know" or be set to a preferred angle for the users when the camera system starts processing video. Supporting higher resolution views for user selectable angles from a camera with a 360 degree field of view calls for technical solutions. The '086 patent discloses and claims such technical solutions. For example, an immersive video system can produce a plurality of video streams using associated environment data, and a user can select a preferred video stream. First

environment data, such as camera settings, can be shared between the plurality of video streams to reduce data processing or data storage requirements. Second environment data, such as directional audio, can be for a first video stream, where the second environment data does not overlap another video stream. This approach overcomes a problem that using the same environment data for all views results in lower quality. Consequently, the technology in the '086 patent enables both efficient operation while also supporting preferred user features, such as selecting a view angle with higher resolution from the 360 field of view.

104. The sequence of steps set forth in the asserted claims of the '086 patent provide a technical solution to the technical problem of supporting high quality views for user selectable angles from a camera with 360-degree field of view.

105. Specifically, asserted claims 1, 2, and 7 of the '086 patent claim:

> 1. An immersive video system for displaying a view window of an environment, the immersive video system comprising:
>
> a video source configured to produce a plurality of video streams;
>
> a video decoder coupled to the video source and configured to decode an active video stream; and
>
> an immersive video decoder coupled to the video decoder and configured to select the active video stream from the plurality of video streams;
>
> wherein each of the plurality of video streams includes environment data for recreating a viewable range of the environment, the environment data for each video stream including first data that overlaps at least one other video stream and second data that does not overlap the at least one other video stream.
>
> 2. The immersive video system of claim 1, wherein the environment encompasses 360 degrees of viewing angle.
>
> 7. The immersive video system of claim 1, further comprising a view control interface coupled to the immersive video decoder.

106. The claimed sequence of steps set forth in the ‘086 patent constitutes patent-eligible subject matter, is not directed to an abstract idea, law of nature, or natural phenomenon, and contains one or more inventive concepts for accomplishing the goal of accurate and automated information exchange.

107. This claimed sequence was not well-understood, routine, or conventional at the time of the invention.

COUNT I – INFRINGEMENT OF THE ’532 PATENT

108. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

109. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’532 patent.

110. For example, Defendants infringe at least claim 6 of the ’532 patent, either literally or under the doctrine of equivalents, in connection with Defendants’ MotoG7 Power smartphone with video recording and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit Q and incorporated herein by reference.

111. Defendants’ infringing activities are and have been without authority or license under the ’532 patent.

112. Plaintiff has been, and continues to be, damaged by Defendants’ infringement of the ’532 patent, and Plaintiff is entitled to recover damages for Defendants’ infringement, which damages cannot be less than a reasonable royalty.

COUNT II – INFRINGEMENT OF THE ’250 PATENT

113. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

114. Defendant Lenovo has been and is now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’250 patent.

115. Lenovo has known about the ’250 patent since at least as early as May 27, 2020, and has been aware of Plaintiff’s claims of infringement since receiving a copy of the original complaint filed in this action. Despite this knowledge, Lenovo continues to make, use, sell, offer for sale, and/or import products that infringe the ’250 patent directly, and/or that infringe the ’250 patent when used as directed or encouraged by Lenovo. As a result, Lenovo has directly infringed one or more claims of the ‘250 patent, and has indirectly infringed one or more claims of the ’250 patent by actively inducing users of its products to infringe the ’250 patent by encouraging, aiding, or otherwise causing persons or entities to infringe the ’250 patent with actual knowledge of the patent and intent for such actions to result in infringement, and/or by contributing to such infringement by providing a part or component that has a particular use covered by the ’250 patent, and that is not a staple article or commodity of commerce suitable for substantial noninfringing use.

116. For example, Defendant Lenovo infringes at least claim 1of the ’250 patent, either literally or under the doctrine of equivalents, directly or indirectly, in connection with Lenovo’s VOIP 360 Camera Speaker and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit R and incorporated herein by reference.

117. Defendant Lenovo’s infringing activities are and have been without authority or license under the ’250 patent.

118. Plaintiff has been, and continues to be, damaged by Lenovo's infringement of the '250 patent, and Plaintiff is entitled to recover damages for Lenovo's infringement, which damages cannot be less than a reasonable royalty.

COUNT III – INFRINGEMENT OF THE '818 PATENT

119. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

120. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '818 patent.

121. Defendants have known about the '818 patent since at least as early as May 27, 2020, and has been aware of Plaintiff's claims of infringement since at least as early as August 14, 2020 when Plaintiff provided a detailed claim chart showing Defendants' infringement, and again upon receiving a copy of the original complaint filed in this action. Despite this knowledge, Defendants continue to make, use, sell, offer for sale, and/or import products that infringe the '818 patent directly, and/or that infringe the '818 patent when used as directed or encouraged by Defendants. As a result, Defendants have directly infringed one or more claims of the '818 patent, and have indirectly infringed one or more claims of the '818 patent by actively inducing users of their products to infringe the '818 patent by encouraging, aiding, or otherwise causing persons or entities to infringe the '818 patent with actual knowledge of the patent and intent for such actions to result in infringement, and/or by contributing to such infringement by providing a part or component that has a particular use covered by the '818 patent, and that is not a staple article or commodity of commerce suitable for substantial noninfringing use.

122. For example, Defendants infringe at least claims 1, 2, and 5 of the ’818 patent, either literally or under the doctrine of equivalents, directly or indirectly, in connection with Defendants’ Moto G7 Power Smartphones with H.264/AVC and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit S and incorporated herein by reference.

123. Defendants’ infringing activities are and have been without authority or license under the ’818 patent.

124. Plaintiff has been, and continues to be, damaged by Defendants’ infringement of the ’818 patent, and Plaintiff is entitled to recover damages for Defendants’ infringement, which damages cannot be less than a reasonable royalty.

COUNT IV – INFRINGEMENT OF THE ’220 PATENT

125. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

126. Defendant Lenovo has been and is now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’220 patent.

127. Lenovo has known about the ’220 patent since at least as early as May 27, 2020, and has been aware of Plaintiff’s claims of infringement since at least as early as August 14, 2020, when Plaintiff provided a detailed claim chart showing Defendants’ infringement, and again upon receiving a copy of the original complaint filed in this action. Despite this knowledge, Lenovo continues to make, use, sell, offer for sale, and/or import products that infringe the ’220 patent directly, and/or that infringe the ’220 patent when used as directed or encouraged by Lenovo. As a result, Lenovo has directly infringed one or more claims of the ’220 patent, and has indirectly infringed one or more claims of the ’220 patent by actively

inducing users of its products to infringe the ’220 patent by encouraging, aiding, or otherwise causing persons or entities to infringe the ’220 patent with actual knowledge of the patent and intent for such actions to result in infringement, and/or by contributing to such infringement by providing a part or component that has a particular use covered by the ’220 patent, and that is not a staple article or commodity of commerce suitable for substantial noninfringing use.

128. For example, Defendant Lenovo infringes at least claim 1 of the ’220 patent, either literally or under the doctrine of equivalents, directly or indirectly, in connection with Lenovo’s Customer Relationship Management (CRM) platform and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit T and incorporated herein by reference.

129. Defendant Lenovo’s infringing activities are and have been without authority or license under the ’220 patent.

130. Plaintiff has been, and continues to be, damaged by Defendant Lenovo’s infringement of the ’220 patent, and Plaintiff is entitled to recover damages for Defendant Lenovo’s infringement, which damages cannot be less than a reasonable royalty.

COUNT V – INFRINGEMENT OF THE ’706 PATENT

131. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

132. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’706 patent.

133. For example, Defendants infringes at least claim 19 of the ’706 patent, either literally or under the doctrine of equivalents, in connection with Defendants’ Motorola G7 Power

and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit U incorporated herein by reference.

134. Defendants' infringing activities are and have been without authority or license under the '706 patent.

135. Plaintiff has been, and continues to be, damaged by Defendants' infringement of the '706 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

COUNT VI – INFRINGEMENT OF THE '476 PATENT

136. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

137. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the '476 patent.

138. For example, Defendants infringes at least claim 13 of the '476 patent, either literally or under the doctrine of equivalents, in connection with Defendants' Motorola G7 Power and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit V and incorporated herein by reference.

139. Defendants' infringing activities are and have been without authority or license under the '476 patent.

140. Plaintiff has been, and continues to be, damaged by Defendants' infringement of the '476 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

COUNT VII – INFRINGEMENT OF THE ’287 PATENT

141. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

142. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’287 patent.

143. For example, Defendants infringes at least claim 1 of the ’287 patent, either literally or under the doctrine of equivalents, in connection with Defendants’ Moto Smartphones Video Recording with Cloud Storage and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit W incorporated herein by reference.

144. Defendants’ infringing activities are and have been without authority or license under the ’287 patent.

145. Plaintiff has been, and continues to be, damaged by Defendants’ infringement of the ’287 patent, and Plaintiff is entitled to recover damages for Defendants’ infringement, which damages cannot be less than a reasonable royalty.

COUNT VIII – INFRINGEMENT OF THE ’086 PATENT

146. Plaintiff realleges and incorporates by reference the allegations set forth above, as if set forth verbatim herein.

147. Defendants have been and are now making, using, selling, offering for sale, and/or importing products that incorporate one or more of the inventions claimed in the ’086 patent.

148. For example, Defendants infringes at least claims 1, 2, and 7 of the ‘086 patent, either literally or under the doctrine of equivalents, in connection with Defendants’ Lenovo VoIP

360 Camera Speaker and similar products, as detailed in the preliminary claim chart attached hereto as Exhibit X incorporated herein by reference.

149. Defendants' infringing activities are and have been without authority or license under the '086 patent.

150. Plaintiff has been, and continues to be, damaged by Defendants' infringement of the '086 patent, and Plaintiff is entitled to recover damages for Defendants' infringement, which damages cannot be less than a reasonable royalty.

JURY DEMAND

Plaintiff demands a trial by jury of all issues so triable.

PRAYER FOR RELIEF

Plaintiff respectfully requests that the Court find in its favor and against Defendants, and that the Court grant Plaintiff the following relief:

A. Entry of judgment that Defendants have infringed one or more claims of the '532 patent,

B. Entry of judgment that Defendants have infringed one or more claims of the '250 patent and that this infringement has been willful,

C. Entry of judgment that Defendants have infringed one or more claims of the '818 patent and that this infringement has been willful,

D. Entry of judgment that Defendants have infringed one or more claims of the '220 patent and that this infringement has been willful,

E. Entry of judgment that Defendants have infringed one or more claims of the '706 patent,

F. Entry of judgment that defendants have infringed one or more claims of the '476 patent,

G. Entry of judgment that defendants have infringed one or more claims of the '287 patent,

H. Entry of judgment that defendants have infringed one or more claims of the '086 patent,

I. Damages in an amount to be determined at trial for Defendant's infringement, which amount cannot be less than a reasonable royalty,

J. A determination that this case is exceptional, and an award of enhanced damages and attorney's fees,

K. All costs of this action,

L. Pre-judgment and post-judgment interest on the damages assessed, and

M. Such other and further relief, both at law and in equity, to which Plaintiff may be entitled and which the Court deems just and proper.

This 25th day of June, 2021.

STAMOULIS & WEINBLATT LLC

/s/ Richard C. Weinblatt

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