IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THE NIELSEN COMPANY (US), LLC, Plaintiff, v. HYPHAMETRICS, INC., Defendant.	)))))))))	C.A. No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

The Nielsen Company (US), LLC ("Nielsen" or "Plaintiff"), for its Complaint against HyphaMetrics, Inc. ("HyphaMetrics" or "Defendant"), alleges as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement brought against Defendant for infringement of United States Patent No. 10,970,588 (the "'588 Patent").

PARTIES

2. Nielsen is a limited liability company organized and existing under the laws of the state of Delaware.

3. HyphaMetrics is a corporation organized and existing under the laws of the state of Delaware.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the Patent Act, 35 U.S.C. §§ 1 *et seq.* This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1331 (federal question) and 28 U.S.C. § 1338(a) (action arising under the Patent Act).

5. This Court has personal jurisdiction over Defendant because Defendant is a Delaware corporation.

6. Venue is proper pursuant to 28 U.S.C. § 1400(b) because Defendant is a Delaware corporation.

FACTUAL BACKGROUND

7. Founded in 1923 by Arthur C. Nielsen, Nielsen is the media industry's leading data and analytics company. Nielsen fuels the industry with an accurate understanding of what people watch and listen to.

8. Measuring across all channels and platforms – from traditional linear television to streaming TV to social media and on-line video/audio platforms – Nielsen helps its clients and partners optimize the value of their marketing investments and growth strategies. Nielsen offers measurement and analytics in nearly 60 countries.

9. Nielsen, including through its subsidiaries, has been a leading innovator in automatic content recognition ("ACR") technology and has incorporated its technology into audience measurement devices to recognize content being watched by viewers. As part of its gold standard, industry leading audience measurement products and services, Nielsen has developed technologies to, among other things, automatically segment linear broadcast media and other content into its constituent components of program segments and advertisements interspersed between the program segments. Nielsen's automated segmenting technology makes use of certain audio and video features generated from feeds of linear broadcast channels to identify segments in the media content, including the position and existence of overlays or logos within each video frame.

THE ASSERTED PATENT

10. The '588 Patent, entitled "Recurrent Deep Neural Network System for Detecting Overlays in Images," was duly and legally issued on April 6, 2021. A true and correct copy of the '588 Patent is attached hereto as Exhibit A.

11. Nielsen is the assignee and owner of all right, title, and interest in the '588 Patent. The '588 Patent is valid and enforceable.

12. The declaration of Pierre Moulin ("Moulin Decl."), attached hereto as Exhibit B, is incorporated by reference into this Complaint.

13. The '588 Patent relates to, among other things, the detection of semitransparent or opaque overlays (such as logos or text) in images (such as stills captured from television programs) and taking action based on that detection. (Moulin Decl., Ex. B, ¶ 25 (citing '588 Patent, 2:48-51).) In certain aspects of the '588 Patent, a probability map is generated based on an image, and an overlay is identified. (*Id*. (citing '588 Patent, 2:58-63).) Based on the identification of the overlay, actions such as channel recognition may be taken. (*Id*. (citing '588 Patent, 2:63-67).)

14. As the specification of the '588 Patent points out, "[a] typical overlay is a feature having one or more shapes, logos, and/or characters (*e.g.* letters and/or numbers) that are co-located within a portion of the image (generally not in the center of the image) and that may be, but need not be, of a single, homogeneous color, grayscale, and/or pattern, for example." (*Id*. at ¶ 26 (quoting '588 Patent, 6:47-52).)

15. The invention of the '588 Patent "provides an improvement to the technical field of image processing, and, in particular, to improving speed and reliability of detecting overlays in images, with reduced or eliminated human oversight." (*Id*. at ¶ 27 (quoting '588 Patent, 3:18-22).)

16. Claim 1 of the '588 Patent recites a specific method of overlay detection and subsequent action. Claim 10 of the '588 Patent recites a specific non-transitory computer-readable medium having program instructions for a particular approach to overlay detection and subsequent action. (*Id*. at ¶ 28.)

17. Claim 1 recites applying a feature map network to an image to create a feature map, wherein the feature map comprises a grid of vectors characterizing at least one feature in the image (the "Feature Map Element"). (*Id*. at ¶ 29.) The specification of the '588 Patent describes examples of how this may be accomplished at 7:50-67, 8:1-67, and 9:1-24. (*Id*.) Claim 10 recites an element that is identical in relevant respects to the Feature Map Element. (*Id*.)

18. Claim 1 further recites creating a probability map for the image that assigns a probability to the at least one feature in the image, where the assigned probability corresponds to a likelihood that the at least one feature is an overlay (the "Probability Map Element"). (*Id*. at ¶ 32.) The specification of the '588 Patent describes examples of how this may be accomplished at 9:25-67, 10:1-67, and 11:1-54. (*Id*.) Claim 10 recites an element that is identical in relevant respects to the Probability Map Element. (*Id*.)

19. Claim 1 and Claim 10 also recite determining that the assigned probability exceeds a threshold probability value (the "Probability Threshold Element"). (*Id*. at ¶ 34.) The specification of the '588 Patent describes an example of this at 9:35-38. (*Id*.)

20. Finally, Claim 1 and Claim 10 recite taking particular action responsive to determining that the assigned probability exceeds the probability threshold (the "Action Element"). (*Id*. at ¶ 36.) Specifically, the Action Element recites (i) determining compliance with an advertising requirement, (ii) performing optical character recognition (OCR) on the at least one feature, (iii) determining a channel associated with the at least one feature, (iv) determining a show

associated with the at least one feature, (v) determining a hyperlink associated with the at least one feature, or (vi) accessing a hyperlinked object associated with the at least one feature. (*Id*.)

21. The '588 Patent is based on two provisional patent applications filed in November 2016. As of that time (*i.e.*, in the prior art), the Probability Map Element and the Probability Threshold Element were not routine, conventional, or well-understood. (*Id*. at ¶ 37.)

22. Even though the prior art describes substantial efforts in general image classification, the problem of classification with localization (*i.e.*, showing the location of an object of interest in an image using, for example, a bounding box), as is required for overlay detection, adds a level of complexity relative to the basic image classification problem. (*Id*. at ¶ 38.) Accordingly, the problem of detecting overlays is very specialized and has received limited attention in the prior art. (*Id*.)

23. In the prior art, probability maps (as recited in the Probability Map Element and the Probability Threshold Element) were not used to detect overlays. (*Id*. at ¶ 39.) Also, in the prior art, only regions of interest of an image were analyzed. (*Id*.) The use of probability maps and the analysis of an image (as recited in the Probability Map Element and the Probability Threshold Element) are significant technological improvements over the prior art. (*Id*.) The Probability Map Element and the Probability Threshold Element were not well-understood, routine, or conventional in the prior art. (*Id*.)

24. The prior art approach of examining only regions of interest is less accurate than examining the image (as recited in Claims 1 and 10 of the '588 Patent) because finding regions of interest is an error-prone process. (*Id*. at ¶ 40.) Accordingly, the Probability Map Element and the Probability Threshold Element of Claim 1 are an improvement over the prior art. (*Id*.) As

stated above, the Probability Map Element and the Probability Threshold Element were not well-understood, routine, or conventional in the prior art. (*Id.*)

25. In addition, instead of assigning probabilities (and determining whether they exceed thresholds) as recited in the Probability Map Element and the Probability Threshold Element, in the prior art, binary linear classifiers were assigned to the above-described regions of interest. (*Id.* at ¶ 41.) The output of such classifiers does not allow the ascertaining of actual probability. (*Id.*) The use of probability maps and probability thresholds (as recited in the Probability Map Element and the Probability Threshold Element) inherently results in a more accurate detection of an overlay (*i.e.*, having lower error) than the prior art approach of using binary linear classifiers. (*Id.*) Thus, the Probability Map Element and the Probability Threshold Element are an improvement over the prior art. (*Id.*) As stated above, the Probability Map Element and the Probability Threshold Element were not well-understood, routine, or conventional in the prior art. (*Id.*)

26. The Action Element of Claim 1 of the '588 Patent was not routine, conventional, or well-understood in the prior art. (*Id.* at ¶ 42.) In the prior art, the actions recited in the claim were not taken as a result of threshold probability of the presence of an overlay being exceeded or as a result of applying an analysis to an image. (*Id.*)

27. Claims 1 and 10 (and their dependent claims) of the '588 Patent are not directed to an abstract idea. Rather, they are directed to specific technical solutions to the prior art problem of the requirement for human involvement in the overlay detection process and the prior art problems with low speed, accuracy, and reliability in detecting overlays in images. In other words, instead of a general result, Claims 1 and 10 of the '588 Patent are directed to a specific technological approach to obtain a result – *i.e.*, a real-world application.

THE INFRINGING PRODUCT

28. HyphaMetrics is an audience measurement company. (Rafi Cohen, *Hyphametrics Comes Out Swinging with Hyper-surveillance Attribution*, March 25, 2021, https://rethinkresearch.biz/articles/hyphametrics-comes-swinging-hyper-surveillance-attribution/ ("Cohen Article"), attached hereto as Exhibit C.)

29. According to press accounts, HyphaMetrics performs audience measurement via boxes attached to each television in its member households. (Jon Lafayette, *HyphaMetrics Issued Patent for Cross-Platform Measurement*, March 10, 2021, https://www.nexttv.com/news/hyphametrics-issued-patent-for-cross-platform-measurement ("Lafayette Article"), attached hereto as Exhibit D.) Each household contains a HyphaMetrics "coreMeter" box, which collects data from each of the boxes attached to the household's televisions. (Cohen Article, Ex. C.)

30. According to HyphaMetrics co-founder and CEO Joanna Drews, HyphaMetrics' systems and methods (the "Infringing Products and Methods") "can facilitate the measurement of everything occurring in someone's home." (Lafayette Article, Ex. D.)

31. As part of HypaMetrics' measurement activities, using its coreMeter box, "[a] set top feed [is] examined for broadcaster logos." (Cohen Article, Ex. C.)

32. HyphaMetrics is the listed assignee of U.S. Patent No. 10,932,002 (the "'002 Patent"), attached hereto as Exhibit E.

33. HyphaMetrics' CEO and co-founder Joanna Drews has been reported to say that the '002 Patent describes the Infringing Products and Methods. (Lafayette Article, Ex. D ("Patent No. 10,932,002 covers [HyphaMetrics'] unique coreMeter hardware, its methodology for collecting data from all media sources in a household, and how the company determines individuals' media

consumption within a household."); Cohen Article, Ex. C ("HyphaMetrics has just been issued its first patent, which [HyphaMetrics co-founder and CEO Joanna] Drews said covers 15 unique elements of its methodology, including the tracking of IP traffic, the use of certain ML algorithms, as well as the proprietary hardware, software and cloud technologies that are used.").)

34. According to the patent that Defendant acknowledges covers its products and methods, the Infringing Products and Methods detect network logos through machine learning. ('002 Patent, Ex. E, 31:36-56 ("[D]etection of network logos is a machine-learned process . . . . The network logos that may be detected by the gateway 110 include the network logos that appear on any of various programming content, including that delivered by cable/satellite television providers (*e.g.*, AT&T, Comcast, [DirecTV,] etc.), OTT providers (*e.g.*, Netflix, Amazon Prime, Hulu) video game console brands and game titles (*e.g.*, Xbox, PlayStation), and various other providers."); 34:41-59 ("[T]he network logo identification module may be trained to detect the occurrence of network logos in a video frame."); 35:5-11 ("The machine-learning modules may be trained as neural networks with various layers (*e.g.*, input layer, hidden layers, output layer) and nodes within each layer, as well as various weights applied to the nodes within each layer based on the training. It will be recognized that any number of different parameters and weights may be assigned to the various nodes in order to arrive at the probabilistic output.").)

35. According to the patent that Defendant acknowledges covers its products and methods, the Infringing Products and Methods determine the presence of network logos by obtaining a "probabilistic output" that indicates the probability of the presence of a logo. ('002 Patent, Ex. E, 35:9-22.) After detecting the presence of a logo in this manner, the Infringing Products and Methods analyze the logo to determine what channel the viewer is watching. (*Id.* at 31:59-61 ("[T]he presence of the network logo indicates the currently tuned network . . . .").)

36. HyphaMetrics' chief revenue officer Mike Bologna has been quoted as saying that HyphaMetrics performs, makes, uses, sells, and offers for sale the Infringing Products and Methods. (Lafayette Article, Ex. D. ("'We are about to launch a field trial,' [HyphaMetrics' chief revenue officer Mike Bologna] said, putting [HyphaMetrics'] coreMeter boxes into about 100 homes while working with a few select partners.").) Upon information and belief, HyphaMetrics tests and demonstrates the Infringing Products and Methods. (*See id.*)

37. The press has reported that HyphaMetrics has concluded a deal with audience measurement company VideoAmp (the "VideoAmp Deal"). (Jon Lafayette, *VideoAmp Incorporates HyphaMetrics Panel Data into Audience Measurement*, October 13, 2021, https://www.nexttv.com/news/videoamp-incorporates-hyphametrics-panel-data-into-audience-measurement, attached hereto as Exhibit F.) Pursuant to this deal, VideoAmp will incorporate data derived from HyphaMetrics' Infringing Products and Methods into its measurement products. (*Id.*) Upon information and belief, VideoAmp chose to pursue the VideoAmp Deal at least in part due to HyphaMetrics' activities that constitute infringement of the '588 Patent. (*See id.* ("'[VideoAmp has] been especially impressed with HyphaMetrics' innovative, patented measurement tech stack . . . .'").)

38. By performing, making, using, offering to sell, and selling the Infringing Products and Methods, HyphaMetrics infringes claims 1 and 10 of the '588 Patent. HyphaMetrics' infringement has harmed, and will continue to harm, Nielsen. (*See id.* ("ViacomCBS said it would use a currency based on VideoAmp measurement as a currency to plan, transact and measure national media campaigns . . . .").)

39. By this lawsuit, Nielsen seeks to enjoin HyphaMetrics from any further unauthorized performance, making, use, sale, or offering for sale of Nielsen's patented technology,

and it seeks to recover damages, including lost profits, treble damages, reasonable attorneys' fees, and other such and further relief as the Court deems just and proper against HyphaMetrics' violation of federal law.

COUNT I
INFRINGEMENT OF THE '588 Patent

40. Nielsen repeats and re-alleges paragraphs 1-39 as if fully set forth herein.

41. HyphaMetrics has infringed and continues to infringe, literally or under the doctrine of equivalents, claims 1 and 10 of the '588 Patent under 35 U.S.C. § 271(a) by performing, making, using, selling and/or offering to sell in the United States the Infringing Products and Methods.

42. As of the filing date of this Complaint, HyphaMetrics is aware of the '588 Patent and the manner in which Infringing Products and Methods practice claims 1 and 10. Accordingly, since that date, HyphaMetrics has willfully infringed those claims.

43. Claim 1 of the '588 Patent recites "a processor applying a feature map network to an image to create a feature map." Upon information and belief, the Infringing Products and Methods perform this method step. As explained above, according to the patent that Defendant acknowledges covers its products and methods, the Infringing Products and Methods use machine learning. (*See* '002 Patent, Ex. E, 31:36-56, 34:41-59, 35:5-11.) Commonly, machine-learning modules for image recognition and detections tasks are convolutional neural networks (CNNs). (*See Image Recognition with Deep Neural Networks and its Use Cases*, Dec. 11, 2019, https://www.altexsoft.com/blog/image-recognition-neural-networks-use-cases/, attached hereto as Exhibit G; *see also* Gaudenz Boesch, *Deep Neural Network: The 3 Popular Types, (MLP, CNN and RNN)*, April, 8, 2021, https://viso.ai/deep-learning/deep-neural-network-three-popular-types/, attached hereto as Exhibit H.) Accordingly, upon information and belief, the Infringing Products and Methods use CNNs. The image is provided to the input layer of a CNN that forms part of a

feature map network applied to the image to create a feature map that characterizes different features in the image. (*See* Renu Khandelwal, *Convolution Neural Network: Feature Map and Filter Visualization*, May, 18, 2020, https://towardsdatascience.com/convolutional-neural-network-feature-map-and-filter-visualization-f75012a5a49c, attached hereto as Exhibit I ("Apply filters or feature detectors to the input image to generate the feature maps . . . . Feature detectors or filters help identify different features present in an image like edges, vertical lines, horizontal lines, bends, etc."); *see also* Jason Brownlee, *How do Convolutional Layers Work in Deep Learning Neural Networks*, April 17, 2019, https://machinelearningmastery.com/convolutional-layers-for-deep-learning-neural-networks/, attached hereto as Exhibit J ("A convolution is the simple application of a filter to an input that results in an activation. Repeated application of the same filter to an input results in a map of activations called a feature map, indicating the locations and strength of a detected feature in an input, such as an image.").)

44. Claim 1 of the '588 Patent also recites "wherein the feature map comprises a grid of vectors characterizing at least one feature in the image." Upon information and belief, the Infringing Products and Methods perform this method step. As explained above, upon information and belief, the Infringing Products and Methods use CNNs. CNNs learn multiple filters in parallel, and thus, HyphaMetrics' feature map network includes multiple filters, such that the feature map consists of a two-dimensional array of vectors, with the respective vector for a given position of the array representing the output of the multiple filters based on a corresponding part of the image. (*See* https://machinelearningmastery.com/convolutional-layers-for-deep-learning-neural-networks/, Ex. J ("Convolutional neural networks do not learn a single filter; they, in fact, learn multiple features in parallel for a given input. For example, it is common for a convolutional layer to learn from 32 to 512 filters in parallel for a given input."); *see also* George Seif, *Visualising*

Filters and Feature Maps for Deep Learning, May 14, 2019, https://towardsdatascience.com/visualising-filters-and-feature-maps-for-deep-learning-d814e13bd671, attached hereto as Exhibit K ("The feature maps of a CNN capture the result of applying the filters to an input image. I.e[.] at each layer, the feature map is the output of that layer.").)

45. Claim 1 of the '588 Patent also recites "the processor applying a probability map network to the feature map to create a probability map assigning a probability to the at least one feature in the image, wherein the assigned probability corresponds to a likelihood that the at least one feature is an overlay." Upon information and belief, the Infringing Products and Methods perform this method step. As explained above, the output of the machine-learning modules implemented by HyphaMetrics is a "probabilistic output" indicative of the probability of the presence of a network logo. ('002 Patent, Ex. E, 35:20-22.) Moreover, CNNs (which, as explained above, upon information and belief, the Infringing Products and Methods use) include a probability map network that is applied to the feature map. (*See* Jason Brownlee, *A Gentle Introduction to Object Recognition with Deep Learning*, May 22, 2019, https://machinelearningmastery.com/object-recognition-with-deep-learning/, attached hereto as Exhibit L ("The RPN works by taking the output of a pre-trained deep CNN, such as VGG-16, and passing a small network over the feature map and outputting multiple region proposals and a class prediction for each. Region proposals are bounding boxes, based on so-called anchor boxes or pre-defined shapes designed to accelerate and improve the proposal of regions.").)

46. Claim 1 of the '588 Patent also recites "the processor determining that the assigned probability exceeds a threshold probability value." Upon information and belief, the Infringing Products and Methods perform this method step. As explained above, the output of HyphaMetrics'

machine-learning modules indicates the probability of the presence of a network logo. Thus, upon information and belief, the Infringing Products and Methods detect the presence of network logos by determining that the assigned probability exceeds a threshold probability value.

47. Claim 1 of the '588 Patent also recites "responsive to the processor determining that the assigned probability exceeds the threshold probability value, the processor (i) determining compliance with an advertising requirement, (ii) performing optical character recognition (OCR) on the at least one feature, (iii) determining a channel associated with the at least one feature, (iv) determining a show associated with the at least one feature, (v) determining a hyperlink associated with the at least one feature, or (vi) accessing a hyperlink object associated with the at least one feature." Upon information and belief, the Infringing Products and Methods perform this method step. According to the patent that Defendant acknowledges covers its products and methods, in the Infringing Products and Methods, as part of HyphaMetrics' video frame analysis routine, "[i]f a content grid or network logo is present [in a video frame], the method continues at step 565, and a machine-learned content grid analysis is performed and/or a machine-learned network logo analysis is performed." ('002 Patent, Ex. E, 19:8-21, Figs. 10 H-I.) Moreover, "the presence of the network logo indicates the currently tuned network." (*Id.* at 31:59-61.) As explained above, upon information and belief, this channel determination is done responsive to determining that the assigned probability exceeds the threshold probability value.

48. Claim 10 of the '588 Patent recites a non-transitory computer-readable medium with instructions causing a processor to perform the act of "applying a feature map network to an image to create a feature map, wherein the feature map includes data characterizing a feature in the image relative to other features in the image." Upon information and belief, the Infringing Products and Methods include such a non-transitory computer-readable medium. As explained

above, according to the patent that Defendant acknowledges covers its products and methods, the Infringing Products and Methods use machine learning. (*See* '002 Patent, Ex. E, 31:36-56, 34:41-59, 35:5-11.) Commonly, machine-learning modules for image recognition and detections tasks are convolutional neural networks (CNNs). (*See* https://www.altexsoft.com/blog/image-recognition-neural-networks-use-cases/, Ex. G; *see also* https://viso.ai/deep-learning/deep-neural-network-three-popular-types/, Ex. H.) The input layer of a CNN applies a feature map network to an image to create a feature map that characterizes different features in the image. (*See* https://towardsdatascience.com/convolutional-neural-network-feature-map-and-filter-visualization-f75012a5a49c, Ex. I ("Apply filters or feature detectors to the input image to generate the feature maps . . . . Feature detectors or filters help identify different features present in an image like edges, vertical lines, horizontal lines, bends, etc."); *see also* https://machinelearningmastery.com/convolutional-layers-for-deep-learning-neural-networks/, Ex. J ("A convolution is the simple application of a filter to an input that results in an activation. Repeated application of the same filter to an input results in a map of activations called a feature map, indicating the locations and strength of a detected feature in an input, such as an image.").)

49. Claim 10 of the '588 Patent also recites a non-transitory computer-readable medium with instructions causing a processor to perform the act of "applying a probability map network to the feature map to create a probability map assigning a probability to the feature in the image, wherein the assigned probability corresponds to a likelihood that the feature is an overlay." Upon information and belief, the Infringing Products and Methods include such a non-transitory computer-readable medium. As explained above, the output of the machine-learning modules implemented by HyphaMetrics is a "probabilistic output," indicative of the probability of the

presence of a network logo. ('002 Patent, Ex. E, 35:20-22.) Moreover, CNNs (which, as explained above, upon information and belief, the Infringing Products and Methods use) generally include a probability map network that is applied to the feature map. (*See* https://machinelearningmastery.com/object-recognition-with-deep-learning/, Ex. L ("The RPN works by taking the output of a pre-trained deep CNN, such as VGG-16, and passing a small network over the feature map and outputting multiple region proposals and a class prediction for each. Region proposals are bounding boxes, based on so-called anchor boxes or pre-defined shapes designed to accelerate and improve the proposal of regions.").)

50. Claim 10 of the '588 Patent also recites a non-transitory computer-readable medium with instructions causing a processor to perform the act of "determining that the assigned probability exceeds a threshold probability value." Upon information and belief, the Infringing Products and Methods include such a non-transitory computer-readable medium. As explained above, the output of HyphaMetrics' machine-learning modules indicates the probability of the presence of a network logo. Thus, upon information and belief, the Infringing Products and Methods detect the presence of network logos by determining that the assigned probability exceeds a threshold probability value.

51. Claim 10 of the '588 Patent also recites a non-transitory computer-readable medium with instructions causing a processor to perform the act of "responsive to determining that the assigned probability exceeds the threshold probability value, (i) determining compliance with an advertising requirement, (ii) performing optical character recognition (OCR) on the at least one feature, (iii) determining a channel associated with the at least one feature, (iv) determining a show associated with the at least one feature, (v) determining a hyperlink associated with the at least one feature, or (vi) accessing a hyperlink object associated with the at least one feature." Upon

information and belief, the Infringing Products and Methods perform this method step. According to the patent that Defendant acknowledges covers its products and methods, in the Infringing Products and Methods, as part of HyphaMetrics' video frame analysis routine, "[i]f a content grid or network logo is present [in a video frame], the method continues at step 565, and a machine-learned content grid analysis is performed and/or a machine-learned network logo analysis is performed." ('002 Patent, Ex. E, 19:8-21, Figs. 10 H-I.) Moreover, "the presence of the network logo indicates the currently tuned network." (*Id.* at 31:59-61.) As explained above, upon information and belief, this channel determination is done responsive to determining that the assigned probability exceeds the threshold probability value.

52. HyphaMetrics has willfully infringed the '588 Patent since the filing date of this Complaint.

53. Through the conduct alleged above, HyphaMetrics has caused and will in the absence of an injunction continue to cause Nielsen to suffer damages, which in no event are less than a reasonable royalty, and which include, but are not limited to, lost sales and sales opportunities.

54. HyphaMetrics has also irreparably harmed Nielsen. Unless and until HyphaMetrics is enjoined by this Court from further infringement, Nielsen will continue to suffer damages and irreparable injury for which it has no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, Nielsen prays for judgment against Defendant as follows:

1. A judgment declaring that Defendant has infringed the '588 Patent and that such infringement has been willful;

2. An order and judgment permanently enjoining Defendant and its officers, directors, agents, servants, employees, affiliates, and all others acting in privity or in concert with them, and their parents, subsidiaries, divisions, successors and assigns, from further acts of infringement of the '588 Patent;

3. A judgment awarding Nielsen all damages adequate to compensate for the Defendant's infringement of the '588 Patent, but in no event less than a reasonable royalty, for Defendant's acts of infringement, including all pre-judgment and post-judgment interest at the maximum rate permitted by law;

4. A judgment awarding Nielsen all damages, including treble damages, based on any infringement found to be willful and egregious, pursuant to 35 U.S.C. § 284, together with pre-judgment interest;

5. A finding that this case is "exceptional" within the meaning of 35 U.S.C. § 285;

6. A judgment ordering that Defendant pay Nielsen its reasonable attorneys' fees and expenses pursuant to 35 U.S.C. § 285; and

7. Such other and further relief as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38, Plaintiff demands a jury trial on all issues so triable.

Respectfully submitted,

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