IN THE UNITED STATES BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE

In re: SEARCHMETRICS, INC., Debtor.	Chapter 11 Case No. 17-11032 (CSS)
Searchmetrics, Inc. and Searchmetrics GmbH, Plaintiffs, v. BrightEdge Technologies, Inc., Defendant.	Adv. No. 17-50478 (CSS)

SEARCHMETRICS, INC. AND SEARCHMETRICS GMBH'S MEMORANDUM OF LAW IN SUPPORT OF MOTION FOR JUDGMENT ON THE PLEADINGS THAT U.S. PATENT NOS. 8,135,706; 8,478,700; 8,478,746; 8,577,863; AND 8,671,089 DO NOT CLAIM PATENTABLE SUBJECT MATTER

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I. INTRODUCTION

Searchmetrics, Inc. and Searchmetrics GmbH (collectively "**Searchmetrics**") respectfully move for a determination[1] that the asserted claims of five patents, U.S. Patent Nos. 8,135,706 ("**the '706 patent**"), 8,478,700 ("**the '700 patent**"), 8,478,746 ("**the '746 patent**"), 8,577,863 ("**the '863 patent**"), and 8,671,089 ("**the '089 patent**") (collectively, the "**Patents-in-Suit**") are invalid because they do not claim patentable subject matter. BrightEdge Technologies Inc. ("**BrightEdge**") has asserted these five patents against Searchmetrics.

II. NATURE AND STAGE OF PROCEEDINGS

In March 2014, BrightEdge filed a lawsuit in district court in the Northern District of California alleging that Searchmetrics infringes the Patents-in-Suit. Ex. A,[2] Compl. At a high level, the Patents-in-Suit purport to relate to search engine optimization ("**SEO**"), which refers to processes or analyses a company may use to attempt to increase the visibility and relevance of its online presence.[3] Searchmetrics answered BrightEdge's complaint, asserting affirmative defenses that it did not perform (*i.e.*, infringe) the Patents-in-Suit and that the Patents-in-Suit are invalid. Ex. B, Answer. Under the statutes related to patent infringement, a court shall award damages adequate to compensate for patent infringement *only if* a patent is both (1) infringed and (2) not invalid. 35 U.S.C. § 284. Because the patents that BrightEdge has asserted against Searchmetrics are invalid (and also not infringed), BrightEdge is not entitled to any damages from Searchmetrics.

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1 Courts may resolve challenges to patent validity under Federal Rule of Civil Procedure 12(c) based on the pleadings. Federal Rule of Civil Procedure 12(h)(2)(B) permits a motion for judgment on the pleadings under 12(c) for failure to state a claim upon which relief can be granted.

2 All exhibits referenced in this memorandum are exhibits to the *Declaration of William E. Chipman, Jr. in Support of Searchmetrics' Motion for Judgment on the Pleadings,* filed concurrently.

3 For example, if one searches the Internet with a search engine (*e.g.*, Google) for dog grooming, the search engine will return tens, hundreds, or thousands of hits relating to dog grooming, including companies that may offer dog grooming or services. A company (in this example, a pet store) may use SEO to have its website appear more frequently in or closer to the top of the list of results (for example, in the first 5 results rather than only after the first 50 results).

While there are several different reasons why the BrightEdge Patents-in-Suit are invalid, this memorandum focuses on just one of those reasons: the Patents-in-Suit cover subject matter that is unpatentable.

On May 8, 2017, (the "**Petition Date**"), the Debtor filed with this Court a voluntary petition for relief under chapter 11 of the Bankruptcy Code. The Debtor continues to be in possession of its property and to operate its business and manage its property as debtor-in-possession pursuant to sections 1107(a) and 1108 of the Bankruptcy Code. No trustee, examiner, or official committee of unsecured creditors has been appointed in the Debtor's chapter 11 case.

III. BACKGROUND AND SUMMARY OF THE ARGUMENT

Patent rights exist to create incentives for innovation. Because a patent grants the inventor an exclusive monopoly on the invention for the life of the patent (thus raising the cost on society for the use of the invention), the law has defined the scope of subject matter that can and cannot be patented. Section 101 of the Patent Act provides that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. The Supreme Court has long held that this provision contains an "important implicit exception: Laws of nature, natural phenomena, and abstract ideas are not patentable." *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 70 (2012) (quoting *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)). The reasoning for exempting this subject matter from patentability is that they are "the basic tools of scientific and technological work that lie beyond the domain of patent protection." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2116 (2013) (citation and quotation omitted). Permitting patents on these subjects would "tie up" the use of such tools and thereby "inhibit future innovation premised upon them."

Id. at 2116. This would be "at odds with the very point of patents, which exist to promote creation." *Id.*

The prohibition on patenting abstract ideas is the basis for Searchmetrics' current motion. Since the Patents-in-Suit issued, the Supreme Court clarified in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l* that a two-step test should be applied to assess whether a patent covers unpatentable subject matter and is thus invalid under Section 101 of the Patent Act: (1) determine whether a claim is directed to a patent-ineligible concept, such as an "abstract idea" and (2) determine whether the claim elements transform the nature of the claims into a patent-eligible "inventive concept." 134 S.Ct. 2347, 2355 (2014). The Supreme Court further clarified that writing a patent claim directed to an abstract idea to include a generic computer (*e.g.*, a generic computer performs the abstract idea) is not enough to establish patentability. *Id.* at 2358.

Patents that issued *prior* to the June 2014 *Alice* decision (including the Patents-in-Suit) were not subject to the *Alice* test *before* the patents were granted by the United States Patent and Trademark Office ("**USPTO**"). As a result, the *Alice* decision has sent shockwaves through patent litigation as many courts now applying the *Alice* two-step test to patents that are currently being asserted in litigation have determined that many of those patents are invalid because they claim abstract ideas with no inventive concept. Indeed, in the two years after the *Alice* decision, courts issued 287 total decisions on patent eligibility under section 101, finding patents in those cases were invalid 70 percent of the time (201 of 287 cases).[4] Furthermore, from June – December 2016, courts invalidated patents under section 101 in at least 40 cases.[5]

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[4] *See* Ex. H, Robert R. Sachs, *Two Years After Alice: A Survey of the Impact of a "Minor Case,"* Fenwick & West Bilskiblog (June 16, 2016), http://www.bilskiblog.com/blog/2016/06/two-years-after-alice-a-survey-of-the-impact-of-a-minor-case.html.

[5] Ex. I, Brian C. Howard & Jason Maples, Lex Machina Patent Litigation Year in Review 2016 27 (2017).

Under the *Alice* two-step test, the Patents-in-Suit are unpatentable because they claim abstract ideas and do not involve inventive concepts. *First*, the asserted claims of the Patents-in-Suit are directed to an abstract idea: market share analysis and analysis regarding marketing effectiveness. The claims purport to perform this analysis via non-specific data gathering and mathematical calculations—prime examples of unpatentable subject matter under *Alice*. These calculations involve use of certain indicators, such as search terms, to perform "correlations" as market share analysis for businesses. These calculations also could be performed with the human mind using pen and paper by a person with access to the relevant data, which is yet another indicator that the claims are abstract. Moreover, the steps recited in the asserted claims lack specificity as to the specific means and method of their performance. They do not identify specific means for gathering the relevant data, nor do they recite any specific methods or algorithms for calculating the claimed correlations. For these reasons, the claims are directed to abstract ideas.

Second, the asserted claims of the Patents-in-Suit do not recite any inventive concept that transforms the claims that are directed to market analysis into patentable subject matter. The elements of the claim, either alone or in combination, do not transform the nature of the claim from something abstract (data gathering and correlations that lack specificity) into patent-eligible subject matter. The asserted claims recite steps of "correlating" and "multiplying" without tying these steps to any specific hardware or application. Moreover, while certain of the asserted claims may refer to computer implementations of the processes, these are merely generic computer components (*e.g.*, "a processor configured to execute computer instructions to cause the system to perform operations") used for their most basic functions in the most conventional ways. As discussed below, the fact that a claim includes generic computer functions does not transform an abstract idea into an inventive concept. As market share analysis and statistics have been

implemented commonly by businesses since well before the advent of computers, the asserted claims do not claim an inventive concept and are therefore invalid.

For these reasons, and the reasons explained in further detail in this memorandum, the asserted claims of the Patents-in-Suit are invalid under 35 U.S.C. § 101 for their failure to claim patentable subject matter, and as a result, BrightEdge has failed to state a valid claim for infringement of the Patents-in-Suit.

A. SUMMARY OF ARGUMENT

1. In *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2355 (2014), the Supreme Court confirmed that courts should apply a two-step test to assess whether a patent that is directed to an abstract idea is patentable. First, the court assesses whether the claims are directed to an abstract idea. *Id.* Second, the court should consider whether the claims contain an inventive concept. *Id.* If the claims are abstract and do not contain an inventive concept, the patent is invalid as directed to unpatentable subject matter. *Id.*

2. The Patents-in-Suit, all of which issued before the June 2014 *Alice* decision, were not subject to the *Alice* test before the patents issued.

3. Under Step 1 of the *Alice* test, the Patents-in-Suit are directed to an abstract idea. Under Step 2 of the *Alice* test, the Patents-in-Suit do not contain an inventive concept. As a result, the Patents-in-Suit are invalid under section 101 of the Patent Act.

IV. THE PATENTS-IN-SUIT

As discussed below, the asserted claims are directed to the same abstract idea. Consequently, the Court may rely on an analysis of one or two claims from one or more of the asserted patents in deciding this motion. *See Content Extraction and Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014), *cert. denied*, 136 S.Ct. 119 (2015) (affirming the district court's invalidation of claims of four patents based on analysis of two

representative claims from two of the patents when the other asserted claims were "substantially similar and linked to the same abstract idea"); *Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1319, 1326-1332 and n.7 (Fed. Cir. 2017) (considering two claims as representative of one patent and one claim as representative of a second patent and determining all claims of both patents were invalid).

A. THE '706 PATENT

The '706 patent, titled "Operationalizing search engine optimization," issued on March 13, 2012 and generally relates to "a method for managing references to an entity on a network." Ex. C, '706 patent, 14:18-19. The '706 patent describes a way to analyze the quantity and quality of references to an entity (*e.g.*, a company, an individual, a brand or a product) by performing several generic steps. BrightEdge asserts that Searchmetrics infringes claims 1-16 and 20-21 of the '706 patent.[6] The '706 patent has two independent claims (claims 1 and 11) of which claim 1 is representative and recites:

> 1. A method for managing references to an entity on a network, comprising:
>
> [a] ***determining*** shares of voice for an entity and other entities across a plurality of channels with respect to a plurality of search terms, wherein determining shares of voice includes determining rank positions for the search terms with respect to the entity and the other entities and multiplying the rank positions by products of estimated click rates and volumes of traffic on the network for the entity and the other entities;
>
> [b] ***correlating*** shares of voice for the entity and the other entities with respect the search terms to determine a relative change in share of voice for the entity with respect to the other entities;
>
> [c] ***correlating*** shares of voice for the entity across the plurality of channels to determine relative changes in share of voice for the entity within each of the channels; and
>
> [d] ***displaying*** the relative change in share of voice for the entity with respect to the other entities and the relative changes in share of voice for the entity within each of the channels.

[6] Claims 2-10 depend on claim 1, generally meaning that claim 1 has to be performed in addition to the individual requirements of claims 2-10 also being performed. Similarly, claims 12-16 and 20-21 depend on claim 11.

Ex. C, ’706 patent, cl. 1 (emphasis added).

The first step [a] of Claim 1 is to perform a method to analyze the effectiveness of an entity’s marketing by “determining shares of voice for an entity and other entities across a plurality of channels with respect to a plurality of search terms” by “determining rank positions for the search terms with respect to the entity and other entities” and “multiplying the rank positions by products of estimated click rates and volumes of traffic for the entity and the other entities.” *Id.* at 14:20-27. This step is essentially gathering and organizing data and performing calculations on that data. The second and third steps of claim 1 [b] and [c] are “correlating shares of voice for the entity” with respect to the search terms and across multiple channels, calculations without any explanation as how that correlation occurs. *Id.* at 14:28-34. The last step of claim 1 [d] is “displaying the relative change in share of voice,” again with no explanation as to how the display occurs. *Id.* at 14:35.

Dependent claims 2-10 of the ’706 patent are directed to the same abstract idea of market analysis but purport to identify different channels (*e.g.*, display advertisements, page searches, email, banner advertisements, social news, organic searches, paid searches) and metrics that can be used in performing the market analysis. Like claim 1, these dependent claims 2-10 do not provide specific means and methods of performing that market analysis. *Id.* at 14:39-15:06. By way of example, claim 2 includes the method of claim 1 but states that “determining shares of voice includes retrieving search results associated with different geographic locations,” (which is data gathering). Ex. C, ’706 patent, 14:39-41. Claim 3 requires the method of claim 1, “wherein calculating shares of voice includes determining the volatility of search results for search terms,” with no explanation as to how to determine the “volatility.” *Id.* at 14:42-44. Claim 6 requires the method of claim 1 and specifies how the search terms are determined (which is related to data

gathering and organization), but again offers no additional explanation as to how the calculations of claim 1 are performed. *Id.* at 14:55-62.

Claims 11-22 of the '706 patent also claim "a system for optimizing the online references to an entity" by implementing the method described in claim 1 and its dependent claims on a processor configured to execute computer instructions (*e.g.*, a generic computer). *Id.* at 15:07-16:45. Specifically, independent claim 11 is "a system for optimizing online references to an entity" where the system comprises "a processor configured to execute computer instructions to cause the system to perform operations." *Id.* at 15:07-11. Those operations include searching a channel for references to an entity to generate search results, "scoring" the references with the search terms, "correlating conversions to determine a conversion rate," and performing the steps above discussed under claim 1. *Id.* at 15:13-38. Again, independent claim 11 and dependent claims 12-16 and 20-21 are directed to data gathering and performing calculations, but offer no additional explanation as to how the calculations are performed.

Essentially, the '706 patent claims the process of using a simple computation and a predetermined set of key indicators to determine market analysis and market share growth between competitors in a given space— without explaining the means or method of how the analysis will be performed. Moreover, market share analysis has been performed using other forms of media for years, and implementing a simple statistical process using the Internet does not transform the market share analysis into a patentable idea.

B. THE '746 PATENT

The '746 patent, which has the same title as the '706 patent, "Operationalizing search engine optimization," was issued on July 2, 2013 and is a continuation[7] of the '706 patent. Ex. D,

[7] A continuation patent is a patent that stems from the same application as an earlier-filed patent application.

'746 patent, 1:07-09. BrightEdge asserts that Searchmetrics infringes claims 1-13, 17-18 and 20 of the '746 patent. The '746 patent has three independent claims (claim 1, 10 and 20) of which claim 1 is representative and recites:

> 1. A ***computer implemented method*** of managing references to an entity on a network, the computer including a non-transitory computer storage medium, the method comprising:
>
> [a] ***determining*** a score for each of a plurality of search terms with respect to an entity and one or more other entities, the score for each of the plurality of search terms for the entity being based on at least a position of a reference to the entity within search results generated using the respective search term and the score for each of the plurality of search terms for the other entities being based on at least a position of a reference to the other entities within the search results generated using the respective search term;
>
> [b] ***determining*** shares of voice for the entity and the other entities across at least two of a plurality of organic search channels with respect to the plurality of search terms based on the scores for the plurality of search terms, the plurality of organic search channels selected from a group including blogs, social media, video sharing, mobile content, and search engines; [*Similar to '706 patent step [a]*]
>
> [c] ***correlating*** shares of voice for the entity and the other entities with respect to the search terms to determine a relative change in share of voice for the entity with respect to the other entities; and [*Same as '706 patent step [b]*]
>
> [d] ***correlating*** shares of voice for the entity across the plurality of channels with respect to the search terms to determine relative changes in share of voice for the entity within each of the channels. [*Similar to 706 patent step [c]*]

Ex. D., '746 patent, cl. 1 (emphasis added).

The '746 patent purports to narrow the method described in the '706 patent by claiming a "method of managing references to an entity on a network" that is "computer implemented." *Id.* at 14:22. According to the claim, the computer includes merely a "a non-transitory computer storage medium." *Id.* at 14:22-24. In addition to the calculation steps that are either identical or substantially similar to claim 1 of the '706 patent, claim 1 of the '746 patent describes determining a "score for each of the plurality of search terms for the entity being based on at least a position of a reference to the entity within search results generated using the respective search term." *Id.* at 14:28-30. Claim 1 of the '746 patent also specifies a "plurality of organic search channels selected

from a group including blogs, social media, video sharing, mobile content, and search engines." *Id.* at 14:40-42. However, neither these additional limitations nor the generic references to a computer readable medium in the preamble of claim 1 provide any more specificity about *how* the determination and correlation of the shares of voice occur as required by the claim. Dependent claims 2-9, 11-13 and 17-18 similarly do not provide more specificity about how the determination and correlation occur; as a result, these claims are substantially similar and linked to the same abstract idea as claim 1.

While the claims in the '746 patent make the mathematical formula taken from the '706 patent slightly more narrow, they do not elevate what is claimed beyond simple computation and do not explain how the idea or method will be performed. Aside from being "implemented" on a computer, they do nothing to improve how the computer operates or provide an inventive concept that changes the way market share analysis is performed.

C. THE '700 PATENT

The '700 patent, titled "Opportunity identification and forecasting for search engine optimization" issued on July 2, 2013 and generally relates to "a method for optimizing online references to an entity that are non-paid advertisements." Ex. E, '700 patent, 9:1-3. BrightEdge asserts that Searchmetrics infringes claims 1-6 and 11-13 of the '700 patent.

The '700 patent has two independent claims (claims 1 and 11) of which claim 1 is representative and recites:

> 1. A method for optimizing online references to an entity that are non-paid advertisements, the method comprising:
>
> [a] ***searching*** at least one channel unassociated with paid advertisements on a network for references to the entity unassociated with paid advertisements using a plurality of search terms to generate search results that include a plurality of references;

> [b] ***scoring*** the references to the entity associated with each of the plurality of search terms from the plurality of references to generate scores for the references to the entity;
>
> [c] ***correlating*** conversions by one or more visits to a website of the entity through the reference with the search terms that directed the visits to the entity to determine a conversion rate;
>
> [d] ***determining*** a total value of the conversions to the entity;
>
> [e] ***correlating*** at least the total value of the conversions to the entity associated with the references to the entity and the scores for the references to the entity to identify one or more of the plurality of search terms; and
>
> [f] for the identified one or more of the plurality of search terms, ***forecasting*** an increase in conversions for the references to the entity associated with an increase in the scores for the references to the entity.

Ex. E., '700 patent, cl. 1 (emphasis added).

The first step [a] of the first independent claim, claim 1, is a data gathering step - "searching at least one channel unassociated with paid advertisements on a network for references to the entity unassociated with paid advertisements using a plurality of search terms to generate search results that include a plurality of references." *Id.* at 9:04-05. The second step [b] is to "scor[e] the references to the entity associated with each of the plurality of search terms from the plurality of references to generate scores for the references to the entity" without any further explanation about how to "score" the references. *Id.* at 9:8-11. The third step [c] is a mathematical calculation — "correlating conversions by one or more visits to a website of the entity through the reference with the search terms that directed the visits to the entity to determine a conversion rate" — without any explanation about how to "correlate conversations." *Id.* at 9:12-14. The fourth [d] and fifth [e] steps are "determining a total value of the conversions to the entity" and "correlating at least the total value of the conversions to the entity associated with the references to the entity and the scores for the references to the entity to identify one or more of the plurality of the search terms," which are further calculation steps. *Id.* at 9:15-19. The claim does not specify how to "determine a total value of the conversions to the entity" nor does it specify how to "correlate at least the total

value of the conversations" with "references to the entity" and "the scores for the references to the entity." In the sixth and final step [f], the method requires "forecasting an increase in conversions" associated with an increase in scores of references to an entity. *Id.* at 9:20-23. Yet again, there is no specificity about how this "forecasting" is performed.

Dependent claims 2-6 require that claim 1 be performed but add some additional requirements, such as identifying different channels and vague metrics that can be used in performing analysis (very similar to the dependent claims in the '706 patent). *Id.* at 9:24-10:11. However, none of these additional requirements explain how the key functionalities ("scoring the references," "correlating conversions," "determining a total value of the conversions," "correlating at least the total value of the conversions," or "forecasting" of claim 1) will be performed. For example, claim 2 requires the method of claim 1 and simply adds that the channel in step 1 that is searched is at least one of "organic searches, paid searches, email, blogs, social networks, social news, affiliate marketing, discussion forums, news sites, rich media and social bookmarks." *Id.* at 9:24-28. Claims 2-6 are substantially similar to and linked to the same abstract idea as claim 1.

Claim 11 of the '700 patent is almost identical to claim 1, where the only difference between the two claims is that claim 11 begins with a "a non-transitory computer readable storage medium configured to cause a system to perform operations of optimizing online references to an entity that are non-paid advertisements, the operations comprising: [the same steps of claim 1]." *Id.* at 10:12-64. In other words, claim 11 simply requires that the method of claim 1 is performed by a generic "non-transitory computer readable storage medium" that causes "a system" to perform the operations of claim 1. Similarly, claims 12 and 13 of the '700 patent are almost identical to claims 5 and 6, respectively, but because they depend on claim 11, they require that the "non-transitory computer readable storage medium" cause a system to perform operations. Claims 11-

13 are substantially similar and linked to the same abstract idea as claim 1 as these claims are directed to the same abstract idea.

Like the ’706 patent, the ’700 patent attempts to claim a basic mathematical process through its application to the Internet. Fundamentally, this process simply counts the number of times a business is named outside of advertisements paid for by the business and uses statistical analysis to compare those numbers to the number of visits to the business’ website. Companies have long understood the importance of informal marketing channels, and almost never limit performance metrics to paid advertising alone. Applying a basic mathematical formula to the idea of measuring a business’ market penetration outside of paid advertisements, and putting it on a computer, does not make it patentable.

D. THE ’863 PATENT

The ’863 patent, titled “Correlating web page visits and conversions with external references,” was issued on November 5, 2013 and generally relates to “a method of correlating an external reference to a Web Page with a conversion performed on the Web Page to provide information regarding an effectiveness of an organic marketing campaign.” Ex. F, ’863 patent, 16:48-51. BrightEdge asserts that Searchmetrics infringes claims 1-6 of the ’863 patent. The ’863 patent has one independent claim (claim 1) that recites:

> 1. A method of correlating an external reference to a Web Page with a conversion performed on the Web Page to provide information regarding an effectiveness of an organic marketing campaign, the method comprising:
>
> [a] ***identifying*** a Web Page;#
>
> [b] ***identifying*** a plurality of visitors to the Web Page;#
>
> [c] ***identifying*** a plurality of conversions on the Web Page, each conversion performed by one of the plurality of visitors;
>
> [d] for each conversion on the Web Page, ***identifying*** a search results page that includes an organic link to the Web Page that directed the one of the plurality of visitors associated with the respective conversion to the Web Page, wherein identifying the search results page includes parsing a search referral header

> contained in the Web Page when accessed using the organic link from the search results page;
>
> [e] ***identifying*** a plurality of keywords, each of the keywords used in at least one search that produced one of the identified search results pages;
>
> [f] ***identifying*** a ranking of the Web Page on each of the identified search results pages by crawling each of the identified search results pages; and
>
> [g] ***determining a correlation*** between the ranking of the Web Page on each of the identified search results pages, the plurality of conversions on the Web Page, and the plurality of keywords.

Ex. F, ’863 patent, 16:48-17:7 (emphasis added).

Claim 1 of the ’863 patent identifies a web page and provides a simple multi-step method to correlate visits to the website with the ranking of that website on a search result page after a specific keyword is searched. *Id.* As the language of the claim makes clear, steps [a] – [f] are merely directed to “identifying” information that are data gathering steps. The last step [g] of the ’863 patent requires “determining a correlation” without specifying how that determination will be performed.

The ’863 patent does not claim the underlying technology that allows you to decipher how to link a website with a search term but rather claims simply how to compute a statistical correlation between the website and a search term. Again, this is a simple mathematical formula, designed for market analysis, that cannot be transformed into a patentable invention simply because it is used on the Internet.

Claims 2–6 of the ’863 patent depend on claim 1, meaning they require claim 1 to be performed in addition to the requirements of claims 2–6. Ex. F, ’863 patent, cl. 2-6. These dependent claims provide some additional specificity about how to gather and identify information but still perform data gathering and do not provide any more specificity about the means and method of performing the required correlating in claim 1. *Id*. For example, claim 2 requires that the Web Page of claim 1 “includes one or more entry pages” that “includes one or more links to

additional pages within the Web Page." *Id.* at 17:8-11. Claim 3 requires that the conversion in claim 1 "includes a purchase by the visitor of an item from the Web Page." *Id.* at 17:12-14. Claims 2–6 of the '863 patent are substantially similar to and linked to the same abstract idea as claim 1.

E. THE '089 PATENT

The '089 patent, titled "Correlating web page visits and conversions with external references," was issued on March 14, 2014 and generally relates to "[a] method of correlating an external reference to one or more entry web pages with one or more conversions performed as a result of visits to the entry web pages to provide information regarding an effectiveness of an organic marketing campaign." Ex. G, '089 patent, 16:41-45. BrightEdge asserts that Searchmetrics infringes all claims of the '089 patent (claims 1-17). The '863 patent, discussed above, is a continuation of the '089 patent.

The '089 patent has three independent claims (claim 1, 7 and 13) of which claim 1 is representative and recites:

> 1. A method of correlating an external reference to one or more entry web pages with one or more conversions performed as a result of visits to the entry web pages to provide information regarding an effectiveness of an organic marketing campaign, the method comprising:
>
> [a] ***identifying*** a plurality of entry web pages;#
>
> [b] ***by a computing device***, ***identifying*** a plurality of visitors to the entry web pages;#
>
> [c] ***by the computing device***, ***identifying*** a plurality of conversions performed as a result of visits to the entry web pages, each conversion performed by one of the visitors;
>
> [d] ***by the computing device***, ***analyzing*** information regarding the conversions and the visits, wherein the information regarding the conversions and the visits were generated by an independent system;
>
> [e] ***by the computing device***, for each visit to one of the entry web pages, ***identifying*** an organic referral originating from a search engine that directed the one of the visitors associated with the respective visit to the web page, wherein identifying the organic referral from the search engine comprises parsing a referral header associated with the entry web page;

> [f] ***by the computing device***, ***requesting***, using one or more keywords, organic search results from the search engine that originated the organic search referral;
>
> [g] ***by the computing device***, ***receiving*** the organic search results from the search engine;
>
> [h] ***by the computing device***, ***analyzing*** the organic search results to determine rank positions of the entry web pages;
>
> [i] ***by the computing device***, ***determining a correlation*** between the rank positions of the entry web pages, the conversions, and the keywords.

Ex. G, '089 patent, 16:41-17:6.

Like the '863 patent, the '089 patent provides a series of steps, this time implemented on "a computing device," to analyze and value how often a search of a set of specific keywords results in a visit to a webpage, in an attempt to create data on how effective a marketing campaign has been. *Id.* at 16:47. Again, as the plain language of the claim makes clear, steps [a]-[c] and [e]-[g] are merely directed to data gathering as these steps refer to "identifying," "requesting," and "receiving" information. Additionally, steps [d] and [h] refer to "analyzing" information without explain how this analyzing occurs. The last step [i] of claim 1 of the '089 patent is very similar to step [g] of claim 1 of the '863 patent as it requires "determining a correlation" without specifying how that determination will be performed other than being performed by the computing device. This is simple statistical analysis of data already available on a computer, and a form of market analysis used by businesses in various types of media before the Internet even existed.

Dependent claims 2–6, 8–12 and 14–17 are directed to the same abstract idea as claim 1 of the '089 patent. Ex. G, '089 patent. These claims are substantially similar to claim 1 and are linked to the same abstract idea as claim 1.

V. LEGAL STANDARDS

A. MOTION FOR JUDGMENT ON THE PLEADINGS

Federal Rule of Civil Procedure 12(c) provides that a party may move for judgment on the pleadings "[a]fter pleadings are closed—but early enough not to delay trial." Fed. R. Civ. P. 12(c).

"The purpose of judgment on the pleadings is to dispose of claims where the material facts are undisputed and judgment can be entered on the competing pleadings and exhibits thereto, and documents incorporated by reference." *Venetec Int'l, Inc. v. Nexus Med., LLC*, 541 F. Supp. 2d 612, 617 (D. Del. 2008).

When deciding a Rule 12(c) motion, the Court "does not consider matters outside the pleadings, and it must accept the non-moving party's allegations as true, drawing all reasonable factual inferences in the non-movant's favor." *Id.* (citing *Mele v. Fed. Reserve Bank of N.Y.*, 359 F.3d 251, 257 (3d Cir. 2004)). Here, the relevant pleadings are BrightEdge's complaint alleging patent infringement (to which the patents were attached as exhibits) and Searchmetrics' answer to BrightEdge's complaint.

B. INVALIDITY UNDER 35 U.S.C. § 101 IS A QUESTION OF LAW

Whether a patent is invalid for claiming unpatentable subject matter under 35 U.S.C. § 101 is a "threshold inquiry" and a question of law. *See In re Bilski*, 545 F.3d 943, 950-51 (Fed. Cir. 2008). District courts often rule on such issues of patentability at the outset of a case under either Rule 12(b)(6) or Rule 12(c), and the Federal Circuit has repeatedly affirmed district court decisions granting such motions challenging patentability under 35 U.S.C. § 101. *See, e.g., Intellectual Ventures I LLC v. Erie Indem. Co.*, 850 F.3d 1315, 1319 (Fed. Cir. 2017) (affirming 12(b)(6) dismissal of the patent claims as directed to ineligible subject matter under 35 U.S.C § 101); *RecogniCorp, LLC v. Nintendo Co.*, No. 2016-1499, 2017 WL 1521590, at *2 (Fed. Cir. Apr. 28, 2017) (affirming 12(c) judgment on the pleadings of invalidity on § 101 grounds); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1364 (Fed. Cir. 2015); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1351 (Fed. Cir. 2014); *Control v. Dig. Playground, Inc.*, 2016 WL 5793745, at *7 (S.D.N.Y. Sept. 30, 2016); *Open Text S.A. v. Box, Inc.*, 78 F. Supp. 3d 1043, 1051 (N.D. Cal.

2015); *Morsa v. Facebook, Inc.*, 77 F. Supp. 3d 1007, 1014 (C.D. Cal. 2014). This is because "[a]ddressing 35 U.S.C. § 101 at the outset not only conserves scarce judicial resources and spares litigants the staggering costs associated with discovery and protracted claim construction litigation, it also works to stem the tide of vexatious suits brought by the owners of vague and overbroad business method patents." *OIP Techs., Inc.*, 788 F.3d at 1364 (Mayer, J., concurring); *see also I/P Engine, Inc. v. AOL Inc.*, 2014 WL 3973501, at *12 (Fed. Cir. Aug. 15, 2014) (Mayer, J. concurring) ("Patent eligibility issues can often be resolved without lengthy claim construction, and an early determination that the subject matter of the asserted claims is patent ineligible can spare both litigants and courts years of needless litigation.").

C. BURDEN OF PROOF FOR MOTION FOR JUDGMENT ON PLEADINGS REGARDING PATENT ELIGIBLE SUBJECT MATTER

Because patent eligibility is a question of law, "[w]hatever evidentiary standard should be applied would only apply to subsidiary 'questions of fact and not to questions of law.'" *Intellectual Ventures I LLC v. AT&T Mobility LLC et al*., Case No. 12-193-LPS, 2016 WL 7491806, at *5 (D. Del. Dec. 30, 2016) (citation and quotation omitted). Here, there are no disputes of material fact that bear on the Court's analysis of whether the BrightEdge Patents-in-Suit are patent-ineligible under Section 101. As a result, "the Court's decision is made purely as a matter of law and does not turn on questions of fact, obviating the need for the Court to choose a particular standard of proof." *Id.* (citing *Rosenau v. Unifund Corp.*, 539 F.3d 218, 221 (3d Cir. 2008)).

D. THE *ALICE* DECISION

In *Alice*, the Supreme Court concluded that all of the asserted claims in four patents were invalid because they were directed to patent ineligible subject matter. *Alice*, 134 S. Ct. at 2349-50. At issue in *Alice* was the following representative claim:

> 33. A method of exchanging obligations as between parties, each party holding a credit record and a debit record with an exchange

> institution, the credit records and debit records for exchange of predetermined obligations, the method comprising the steps of:
>
> (a) creating a shadow credit record and a shadow debit record for each stakeholder party to be held independently by a supervisory institution from the exchange institutions;
>
> (b) obtaining from each exchange institution a start-of-day balance for each shadow credit record and shadow debit record;
>
> (c) for every transaction resulting in an exchange obligation, the supervisory institution adjusting each respective party's shadow credit record or shadow debit record, allowing only these transactions that do not result in the value of the shadow debit record being less than the value of the shadow credit record at any time, each said adjustment taking place in chronological order, and
>
> (d) at the end-of-day, the supervisory institution instructing on[e] of the exchange institutions to exchange credits or debits to the credit record and debit record of the respective parties in accordance with the adjustments of the said permitted transactions, the credits and debits being irrevocable, time invariant obligations placed on the exchange institutions.

Id. at 1252, n.2. The method claims of the patents claimed a method for exchanging obligations; the system claims claimed "a computer system configured to carry out the method for exchanging obligations"; and the media claims claimed a "computer-readable medium containing program code for performing the method of exchanging obligations." *Id.* at 2353.

To differentiate between patentable and unpatentable inventions, the Supreme Court followed a two-step framework. *Id.* at 2354. First, the Court considered whether the claims were directed to a patent-ineligible concept, such as an abstract idea. *Id.* at 2354. The Court analyzed the claims, noting that they "involve a method of exchanging financial obligations between two parties using a third-party intermediary to mitigate settlement risk." *Id.* at 2356. Because "the concept of intermediated settlement is a fundamental economic practice long prevalent in our system of commerce," the Court found that the claims were directed to "an abstract idea beyond the scope of § 101." *Id.* (citation and quotation omitted). Second, the Court considered whether

the claims contained an "inventive concept" sufficient to "transform" the claimed abstract idea into a patent-eligible application. *Id.* at 2357 (citation and quotation omitted). The Court concluded that the method claims, "which merely require generic computer implementation," failed to transfer the abstract idea into a patent-eligible invention. *Id.* at 2357. The Court noted that looking at the claim elements separately, each step was "'[p]urely conventional'" and that each was "[u]sing a computer to create and maintain 'shadow' accounts amounts to electronic recordkeeping—one of the most basic functions of a computer. The same is true with respect to the use of a computer to obtain data, adjust account balances, and issue automated instructions; all of these computer functions are 'well-understood, routine, conventional activities' previously known to the industry. In short, each step does no more than require a generic computer to perform generic functions." *Id.* at 2359 (citations omitted). The Court further considered the claim elements as a whole and noted that the claims "do not, for example, purport to improve the functioning of the computer itself. Nor do they effect an improvement in any other technology or technical field." *Id.*

Finally, the Court considered the system claims and concluded that those claims were no different than the method claims in substance. Although the system claims recite a "data processing system" with a "communications controller" and "data storage unit," the Court noted this was "purely functional and generic" as "[n]early every computer will include a 'communications controller' and 'data storage unit' capable of performing the basic calculation, storage and transmission functions required by the method claims." *Id.* at 2360. "As a result, none of the hardware recited by the system claims offers a meaningful limitation beyond generally linking the use of the method to a particular technological environment, that is implementation via computers." *Id.* (citations and quotations omitted). "The method claims recite the abstract idea

implemented on a generic computer; the system claims recite a handful of generic computer components configured to implement the same idea."

1. ***The Two-Step Test for Patentable Subject Matter Under 35 U.S.C. § 101***

a. Step 1: Abstract Idea.

As discussed above, the first step in the *Alice* test is to determine whether a claim is directed to a "patent-ineligible concept" like laws of nature, natural phenomena, or abstract ideas. The abstract-idea inquiry asks "whether the claims . . . focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). This prevents patenting a result where "it matters not by what process or machinery the result is accomplished." *Id.* (quoting *O'Reilly v. Morse*, 56 U.S. 62, 113 (1853)). This is because such patents "would prohibit all other persons from making the same thing by any means whatsoever." *McRO, Inc.*, 837 F.3d at 1314 (quoting *Le Roy v. Tatham*, 55 U.S. 156, 175 (1852)).

"The 'abstract ideas' category embodies the 'longstanding rule that an idea of itself is not patentable.'" *Alice*, 134 S. Ct. at 2355 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). A new mineral discovered in the earth or a new plant found in the wild is not patentable subject matter. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). "Likewise, Einstein could not patent his celebrated law that E=mc2; nor could Newton have patented the law of gravity." *Id.* Nor can one patent "a novel and useful mathematical formula," *see, e.g., Parker v. Flook*, 437 U.S. 584, 585 (1978); electromagnetism or steam power, *see e.g., Morse*, 56 U.S. at 113-114; or "[t]he qualities of . . . bacteria, . . . the heat of the sun, electricity, or the qualities of metals," *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).

A mathematical formula is a classic example of an abstract idea. For example, a method for hedging against the financial risk of price fluctuations based on a "simple mathematical formula" was held to be an impermissibly abstract idea, as "hedging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class." *Bilski v. Kappos*, 561 U.S. 593, 599, 611 (2010). Thus, the unpatentable category of abstract ideas includes "fundamental economic practice[s] long prevalent in our system of commerce," "longstanding commercial practice[s]," and "method[s] of organizing human activity." *Alice*, 134 S. Ct. at 2356.

Another example of an abstract idea is a mental process. Mental processes are abstract ideas because "they are the basic tools of scientific and technological work." *Benson*, 409 U.S. at 67; *see also CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011) (finding claims for using the internet to identify credit card fraud were unpatentable because the claim "can be performed in the human mind, or by a human using a pen and paper"); *Planet Bingo, LLC v. VKGS LLC*, 576 F. App'x, 1005, 1007 (Fed. Cir. 2014) (finding claims abstract because they "consist[] solely of mental steps which can be carried out by a human using pen and paper") (citation omitted).

Finally, to be concrete (rather than an unpatentable abstract idea), the law requires more than stating "only a result-oriented solution, with insufficient detail for how" that result is accomplished. *Intellectual Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1342 (Fed. Cir. 2017).

b. Step 2: Inventive Concept.

The second step in the *Alice* test is to determine whether a claim that recites an abstract idea nevertheless contains an "inventive concept" sufficient to "transform" the claimed abstract

idea into a patent-eligible application. *Alice*, 134 S. Ct. at 2357. The Court must consider the elements of a claim individually and as an ordered combination to determine whether claim elements "simply recite 'well-understood, routine, conventional activities.'" *Bascom Glob. Internet Servs., Inc., v. AT&T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016) (quoting *Alice*, 134 S. Ct. at 2359).

The *Alice* Court noted that "the introduction of a computer into the claims does not alter the analysis, because simply implementing a mathematical principle on a physical machine, namely a computer, is not a patentable application of that principle." *Alice*, 134 S. Ct. at 2357 (quoting *Benson*, 409 U.S. at 64). The prohibition against patenting abstract ideas similarly cannot be circumvented by "implementing a principle in some specific fashion" or "attempting to limit the use of the idea to a particular technological environment." *Id.* at 1258 (quoting *Flook*, 437 U.S. at 594; *Bilski*, 561 U.S. at 610-11). In contrast, the Court noted, methods that used a computer in a "process designed to solve a technological problem" and that "improved an existing technological process, not merely because they were implemented on a computer" were found to be patent eligible. *Id.* at 2358 (citing *Diehr*, 450 U.S. at 177-78). The Court concluded that "[t]hese cases demonstrate that the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Id.* "[I]f a patent's recitation of a computer amounts to a mere instruction to 'implement' an abstract idea 'on . . . a computer,' that addition cannot impart patent eligibility." *Id.* (quoting *Mayo*, 132 S. Ct. at 1301). Thus, a patentable idea must go beyond implementing a well-known mathematical process on a computer; it must improve the functioning of the computer itself. *Id.* at 2358-59.

In sum, adding "well-understood, routine, conventional activities previously known to the industry" to the claim, limiting the claim to a particular field of use or technological environment,

reciting data-gathering steps, or adding other token post-solution activities do not transform an abstract idea into one that is patentable. *Id.* at 2357-59.

E. SIMILAR PATENTS INVALIDATED UNDER *ALICE*

The Federal Circuit has noted that "the decisional mechanism courts now apply [in assessing whether claims are invalid under Section 101] is to examine earlier cases in which a similar or parallel descriptive nature can be seen." *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1294 (Fed. Cir. 2016). As a result, it is important to consider how other courts have evaluated similar patents and determined those patents were invalid as they were directed to unpatentable subject matter.

In *OpenTV, Inc. v. Netflix Inc.*, for example, the court considered a patent directed to methods for "allow[ing] advertisers to direct customized ads to individuals based on data gathered as to those [individuals'] specific interests and possible needs." 76 F. Supp. 3d 886, 892 (N.D. Cal. 2014). Claim 1 of that patent stated:

> A method for providing targeted programming to a user outside of the user's home, the method comprising:
>
> [a] ***receiving*** a user identification associated with a user, the user identification comprising an identifier corresponding to an account number used in a transaction;
>
> [b] ***receiving*** reception site information to identify a user action and a site at which the user action is taking place;
>
> [c] ***capturing*** additional user information from the identified user action and the reception site information;
>
> [d] ***updating*** a user profile to include the captured additional user information;
>
> [e] ***receiving*** the updated user profile based upon the user identification and the additional user information, the user profile including information characteristic of the user;
>
> [f] ***processing*** the updated user profile to provide user determinations regarding user actions;
>
> [g] ***selecting*** a targeted program based on the reception site information and the updated user profile and the user determinations, and

> [h] ***providing*** the targeted program for presentation to a user outside of the user's home.

Id. at 892-93 (emphasis added).

Applying the *Alice* framework, the court first concluded that the patent was abstract:

> The concept of gathering information about one's intended market and attempting to customize the information then provided is as old as the saying, "know your audience." Like the concepts in *Bilski* and *Alice*, the mere fact that generic computer processors, databases, and internet technology, can now be used to implement the basic idea, with certain perceived greater advantages, does not give rise to a patentable method. The '691 patent simply takes "long prevalent" concepts and, in the specification, proposes using the data and communication resources that are available through the internet to carry them out more effectively.

Id. at 893. The court then concluded that "no limitations exist in the claims to provide an 'inventive concept' sufficient to transform the idea into patent-eligible subject matter," as the claim language itself did not even call for use of computers or the internet. *Id.* The court noted that *even if* the patent expressly taught the use of internet and related technology, "the use of the Internet is not sufficient to save otherwise abstract claims from ineligibility under § 101." *Id.* (quoting *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715-16 (Fed. Cir. 2014)).

The O*penTV* court considered another similar patent:

> A method of scheduling delivery of multiple items of content selectively to a plurality of online users, comprising:
>
> [a] ***determining expected values*** relating to each user being online to access information over the Internet during a given time period;
>
> [b] ***generating an ordered list*** of the items of content to be selectively delivered to the users based on the expected values, said ordered list being prioritized to meet delivery requirements associated with said items of content; and
>
> [c] ***generating*** an individual list of items of content to be delivered to each user based on the ordered list, wherein said individual list is dynamically generated for each user on user login.

Id. at 894 (emphasis added). The court reasoned that this patent was also abstract because the claims do not "describe anything more than the abstract idea of attempting to provide as much

appropriately-selected content to users as possible, based on predictions as to their ***online availability*** and other information gathered about them." *Id.* (emphasis added). The court determined that the claims "'describe an abstract idea, devoid of a concrete or tangible application'" and there were no additional claim limitations sufficient to transform the abstract idea into patent-eligible subject matter, as the "mere use of general purpose computers ***and/or the internet*** does not suffice." *Id.* (quoting *Ultramercial*, 772 F.3d at 714-15) (emphasis added).

In *Intellectual Ventures I LLC v. Erie Indem. Co.*, the Federal Circuit considered the following claim "relating to methods and apparatuses that use an index to locate desired information in a computer database":

> A ***method for searching a database of information***, comprising the steps of:
>
> [a] ***receiving*** a request for information from a client, the request having a first term;
>
> [b] ***identifying*** a first XML tag that is associated with the first term;
>
> [c] ***determining*** whether a first metafile corresponds to the first XML tag;
>
> [d] if the first metafile corresponds to the first XML tag, then ***transmitting*** the first XML tag, the first metafile and query code to the client;
>
> [e] once the client conducts a query by executing the query code using the first XML tag and the first metafile, then ***receiving*** query results including a first set of XML tags from the client;
>
> [f] ***combining*** the first set of XML tags into a key;
>
> [g] using the key to search the database to locate records including the first set of XML tags, and ***delivering*** the records.

850 F.3d 1315, 1325 (Fed. Cir. 2017) (emphasis added). The Federal Circuit held that the patent was directed to unpatentable subject matter. Under *Alice* step one, the claims were "drawn to the abstract idea of creating an index and using that index to search for and retrieve data." *Id.* at 1327. The court noted that "[t]his type of activity, *i.e.*, organizing and accessing records through the creation of an index-searchable database, includes longstanding conduct that existed well before the advent of computers and the Internet." *Id.* The use of XML tags did not transform the claims into patentable subject matter as the claims were "not focused on *how* usage of the XML tags alters

the database in a way that leads to an improvement in the technology of computer databases." *Id.* at 1328. Instead, the claims were directed to "abstract concepts that merely collect, classify, or otherwise filter data." *Id.* at 1327. The claims also failed *Alice* step two. The court noted that the use of XML tags and metafiles "do not transform the claim into something beyond a conventional computer practice for facilitating searches." *Id.* at 1329. "Thus, while the claims necessarily cabin the idea of a categorical data search and retrieval to a computer environment, the claimed computer functionality can only be described as generic or conventional." *Id.* For this reason, the claims did not "sufficiently recite how the inclusion of XML tags or metadata leads to an improvement in computer database technology through some non-conventional and non-generic arrangement of known, conventional pieces." *Id.*

Similarly, in *Collarity, Inc. v. Google, Inc.*, the court considered following claim:

> A ***computer-implemented method*** comprising:
>
> [a] ***receiving***, by a search system, from a user a search query comprising keywords;
>
> [b] using at least one association graph comprising keywords, ***identifying***, by the search system, one or more suggested replacement keywords for one or more of the keywords of the search query;
>
> [c] ***presenting*** the suggested replacement keywords to the user;
>
> [d] responsively to a selection of one of the suggested replacement keywords by the user, ***substituting***, by the search system, the selected suggested replacement keyword for the corresponding one of the keywords of the search query, to generate a refined search query; and
>
> [e] ***presenting*** search results to the user responsively to the refined search query, wherein ***identifying*** the one or more suggested replacement keywords comprises. . .

Case No. 11-1103-MPT, 2015 WL 7597413, at *3 (D. Del. Nov. 25, 2015). The court concluded that under Step 1 of the *Alice* test, the claims were abstract for several reasons. First, claim 1 was not limited to use on a specific computer as claim 1 contains no computer-based or technological requirements, and the court noted "the claim simply recites a method with certain steps, such as 'receiving' a search query and 'presenting search results,' but imposes no tangible limitations on

those steps. *Id.* at *5. Second, the court agreed that the claim was abstract because it could be "practiced using only the human mind and with pen and paper." *Id.* at *6. The court then turned to Step 2 of the *Alice* test, inventive concept. The court concluded that claim was not "rooted in computer technology" and "other than stating the method is 'computer-implemented' in the non-limiting preamble, it has no computer requirements." *Id.* at *8-9. Furthermore, the court noted that "librarians and other researchers have long known to improve a search query." Consequently, there was no inventive concept. The court further noted that the dependent claims merely limited identification steps in claim 1 and did not have an inventive concept. *Id* at *9. As a result, the patent was invalid under 35 U.S.C. § 101. *Id.* at *12.

Furthermore, the court in *Tuxis Techs., LLC v. Amazon.com, Inc.*, considered whether the following claim was invalid under Section 101:

> A method for providing offers in real time of an item constituting a good or a service in the form of offers for purchase of the item to prospective customers as users of the system, utilizing an electronic communications device, comprising the steps of:
>
> [a] ***establishing a communication via the electronic communications device*** between the user and the system for [the] purpose of a user initiated primary transaction for purchase of a specific good or service,
>
> [b] ***obtaining primary transaction data*** with respect to the primary transaction, including the identity of the prospective customer and of the good or service for purchase in the primary transaction,
>
> [c] ***generating an upsell offer*** as a result of the user initiated primary transaction by: utilizing the identity of the prospective customer to obtain at least a second data element relating to the user, utilizing at least in part the primary transaction data including the identity of the good or service of the primary transaction and the second data element and determining at least one item for a prospective upsell transaction with the prospective customer, and offering the item to the prospective customer and receiving an acceptance of the offer from at least one user in real time during the course of the user initiated communication.

Case No. 13-1771-RGA, 2014 WL 4382446, at *1-2 (D. Del. Sept. 3, 2014) (emphasis added). The court concluded the claim was abstract because it "claims the fundamental concept of upselling—a marketing technique as old as the field itself," noting that it "simply deconstructs the

abstract concept of cross-selling into a series of constituent and inherent steps according to which a customer makes contact with a merchant for the purpose of one purchase transaction, and the merchant offers a second purchase transaction." *Id.* at *3. The court also concluded that there was no inventive concept as "[s]hrewd sales representatives have long made their living off of this basic practice" by, for example, offering a customer a pair of suspenders to match the new pants he just purchased. *Id.* at *5. The court also concluded that the addition of an "electronic communication device" could not save the claim from invalidity because it performed "nothing more than purely conventional steps" that are well-understood, routine and previously known to the industry." *Id.* Finally, the court concluded the claim was not sufficiently specific or limited to a particular use and would thus preempt the use of upselling in any field. *Id.* at *4.

Finally, in *Open Text S.A. v. Alfresco Software Ltd.*, the court determined the patents were directed to "a very simple abstract marketing idea that uses generic computer and Internet technology, and contain[ed] no additional inventive concept." Case No. 13-CV-04843-JD, 2014 WL 4684429, at *1 (N.D. Cal. Sept. 19, 2014). Specifically, when considering *Alice* Step 1, the court noted that the claims "recite a very simple computer-driven method to engage in the commonplace and time-honored practice of interacting with customers to promote marketing and sales," and "[o]n its face, asking a customer about his or her experience and replying 'Thank You' to those who respond positively and 'I'm sorry, what can we do better?' to those who respond negatively is an unpatentable abstract idea." *Id.* at *4. The court further concluded that there was no inventive concept under Step 2 because the claims "implement the basic marketing scheme on a generic computer system without any meaningful limitations." *Id.* at *5.

VI. THE ASSERTED CLAIMS OF THE PATENTS-IN-SUIT DO NOT RECITE PATENTABLE SUBJECT MATTER

A. *ALICE* STEP 1: THE BRIGHTEDGE CLAIMS ARE DIRECTED TO THE ABSTRACT IDEAS OF MARKET SHARE ANALYSIS AND MARKET SHARE GROWTH PERFORMED BY GATHERING DATA AND MAKING MATHEMATICAL CALCULATIONS

"Fundamental economic practices[s] long prevalent in our system of commerce" are abstract ideas that are not patent eligible. *Alice,* 134 S. Ct. at 2356. Statistical market analysis and market share growth are examples of these fundamental economic practices. Broadly speaking, the Patents-in-Suit are directed to the abstract idea of gathering data and performing mathematical calculations or even merely drawing relationships with that data to purportedly address effectiveness of marketing activities. Gathering data about customer or user behavior is not a new idea. Indeed, as the *OpenTV* court recognized, "the concept of gathering information about one's intended market and attempting to customize the information then provided is as old as the saying, 'know your audience.'" *OpenTV,* 76 F. Supp. 3d at 893. *See also Tuxis Techs., LLC,* 2014 WL 4382446 at *3 (invalidating a patent that "simply deconstructs the abstract concept of cross-selling into a series of constituent and inherent steps").

As identified below, the asserted claims of each of the Patents-in-Suit purport to perform this statistical market analysis and market share growth via the abstract ideas of (1) data gathering and mathematical formulas or calculations and (2) mental processes. The asserted claims of each of the Patents-in-Suit recite a few basic steps, which are then repeated in different forms across the five patents: (1) gather data, keyword searches, and page rankings; and (2) perform a mathematical calculation to correlate and/or valuate this data to provide insight into the effectiveness of a marketing campaign.

1. ***The '706 Patent Claims Are Directed to Market Share Analysis Performed by Data Gathering and Calculations.***

Claim 1 of the '706 patent is a method for analyzing marketing effectiveness by (1) "determining" shares of voice (step [a]) (data gathering and a calculation) and (2) "correlating" shares of voice with respect to certain search terms and channels to calculate and display a relative change in share of voice (steps [b] – [d]) (use of a mathematical formula or calculation). *See* Ex. C, '706 patent, 14:18-34, 15:7-38; *see also* Figs. 1-2; *see* Section IV.A for a discussion of how each step in claim 1 is data gathering and calculations. In short, these claims merely cover ways of gathering and organizing information, which have been held to be abstract by many courts (as discussed in Section VI.A.6 below).

The following table illustrates how an individual could perform the data gathering and correlation activities claimed in the '706 patent using pen and paper:

Claim 1 of '706 Patent	Step
[1a] determining shares of voice for an entity and other entities across a plurality of channels with respect to a plurality of search terms, wherein determining shares of voice includes determining rank positions for the search terms with respect to the entity and the other entities and multiplying the rank positions by products of estimated click rates and volumes of traffic on the network for the entity and the other entities;	Alice works for clothing outlet store X. Alice searches Google for results paid by companies (paid search) and for results based on relevancy (organic search) (the plurality of channels) using the search terms "clothing outlet" and "clothing store." She looks at the search results from Google for each search term, and writes in her notebook rankings (*i.e.*, how high in the list of the search results) store X's home website, competitor store Y's home website, and competitor store Z's home website each appear. Alice finds information from the Google search engine regarding how many people perform searches for the search terms "clothing outlet" and "clothing store." She also receives information indicating how often a user, after performing a search, follows the link to each of store X, store Y, and store Z's home website, from Google. For example, she finds that through the Google search engine, people search for "clothing outlet" 100,000 times per

	week and click on a search result (corresponding to the home websites of companies X, Y, and Z) 50,000 times. This leads to an estimated click rate of 50%. Alice then uses a calculator to multiply each website ranking by the product of estimated click rates and volume of traffic and writes those calculations in her notebook. The result is the share of voice for each company.
[1b] correlating shares of voice for the entity and the other entities with respect the search terms to determine a relative change in share of voice for the entity with respect to the other entities;	A week later, Alice performs the same step of determining shares of voice, as described in step [1a], and records the new information in her notebook. Alice then reads her notes and visually compares the values obtained from multiplying the rankings by pre-determined, known values (*i.e.*, the "products of estimated click rates and volumes of traffic"). She does this for both week 1 and week 2 and compares the results to determine a relative change in share of voice for the entity and the other entities.
[1c] correlating shares of voice for the entity across the plurality of channels to determine relative changes in share of voice for the entity within each of the channels; and	Alice visually compares the values obtained from multiplying the rankings by pre-determined, known values (*i.e.*, the "products of estimated click rates and volumes of traffic") to determine how company X's shares of voice have changed when using the search terms on Google for paid search and organic search.
[1d] displaying the relative change in share of voice for the entity with respect to the other entities and the relative changes in share of voice for the entity within each of the channels.	Alice prepares a summary of her notes, and displays her summary at an internal marketing meeting using a projector. The summary includes her analysis performed for steps [1b] and [1c], including competitor comparisons and company X's website performance in Google for paid search and organic search.

In this example, Alice gathers data regarding her company and her competitors (*e.g.*, rankings) and applies a calculation to the ranking to assess market share. She performs that same calculation again later and then compares any changes to the results of the two calculations.

Dependent claims 2–10,12–16 and 21–22 similarly include abstract ideas, including additional data gathering and mathematical calculations, and are substantially similar to and linked

to the same abstract idea as claim 1. Ex. C, '706 patent. By way of example, claim 5 requires the method of claim 1, but merely adds that the "channels" of claim 1 that are searched "include at least one of ***display advertisements***, organic searches, page searches, . . . social news, ***affiliate marketing***, mobile advertisements, ***media advertisements***, video advertisements, discussion forums, news sites, rich media, social bookmarks, paid searches and in-game advertisements." *Id.* at cl. 5. This new claim merely defines a source for data gathering. Furthermore, by defining these channels so broadly ("display advertisements, affiliate marketing," and "media advertisements"), claim 5 emphasizes the fact that that claim 1 could be performed by searching virtually any kind of advertisement. In short, these claims recite data gathering steps (that are abstract ideas) or calculations but fail to provide specificity as to how the calculation is performed or the data is gathered.

As discussed earlier, claims 11–22 of the '706 patent also claim "a system for optimizing the online references to an entity" by implementing the method described in claim 1 and its dependent claims on a generic computer. *Id.* at 15:07-16:45. That claim 11 is written as a system and recites a physical "processor" component does not save it. *See e.g.*, *Alice*, 134 S. Ct. at 2360 ("the system claims are no different from the method claims in substance."); *CyberSource*, 654 F.3d at 1375 ("the basic character of a process claim drawn to an abstract idea is not changed by claiming only its performance by computers"); *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 614 (Fed. Cir. 2016) ("mere recitation of concrete, tangible components is insufficient to confer patent eligibility to an otherwise abstract idea"); *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) ("[s]teps that do nothing more than spell out what it means to 'apply it on a computer' cannot confer patent-eligibility."); *Accenture Glob. Servs., GmbH v. Guidewire Software, Inc.*, 728 F.3d 1336, 1341 (Fed. Cir. 2013) ("none of the

recited hardware offers a meaningful limitation beyond generally linking 'the use of the [method] to a particular technological environment,' that is, implementation via computers.") (internal citation omitted); *Bancorp Servs., L.L.C. v. Sun Life Assur. Co. of Canada (U.S.)*, 687 F.3d 1266, 1276-77 (Fed. Cir. 2012) (treating system and method claims the same for the purposes of § 101 because their equivalence was "readily apparent"). In short, all of the asserted claims of the '706 patent (claims 1–16 and 20–21) are directed to data gathering and use of a mathematical formula or calculations to perform market share analysis — all abstract ideas.

2. ***The '746 Patent Claims Are Directed to Market Share Analysis Performed by Data Gathering and Calculations.***

Claim 1 recites a generic "computer implemented method" of market share analysis by (1) determining a "score" for search terms and "shares of voice" for an entity (data gathering) and (2) correlating that data to determine relative change in share of voice (use of a mathematical formula). Ex. D, '746 patent, 14:28-42, 15:14-50 and 16:28-17:3; *see also* Section IV.B for an explanation of how each step involves data gathering or calculations. These claims merely cover ways of gathering and organizing information, which have been held to be abstract by many courts (as discussed in Section VI.A.6 below). Much like the '706 patent (as the '706 and '746 are related patents), these claims involve gathering data regarding a company and competitors (*e.g.*, rankings), applying a calculation to the ranking to assess market share, and performing that same calculation again later to compare any changes to the results of the two calculations. While claim 1 refers to a computer-implemented method, merely referring to a generic "computer-implemented method" or performing something on the Internet does not save an abstract idea. *Capital One Bank (USA)*, 792 F.3d at 1370 ("[s]teps that do nothing more than spell out what it means to 'apply it on a computer' cannot confer patent-eligibility.").

Dependent claims 2–9 and 11–19 are substantially similar and linked to the same abstract idea as claim 1. Ex. D, ’746 patent. Indeed, none of the claims provides any more specificity about *how* these determinations and correlations of the shares of voice occur as required by the claim. *Id*.

3. ***The ’700 Patent Claims Are Directed to Analysis of Marketing Effectiveness Performed by Data Gathering and Calculations.***

Claim 1 recites (1) “searching” for references to an entity on a network (data gathering) and (2) scoring those references and using the scores to correlate those references with visits to the entity’s website and forecasting an increase in conversions (use of a mathematical formula). Ex. E, ’700 patent, 9:08-14 and 10:12-36; *see also* Section IV.C above for a discussion of how the steps of the claim refer to data gathering and using a mathematical formula. Again, this is gathering and organizing information, a concept that has been held to be abstract by many courts (as discussed in Section VI.A.6 below).

The following table illustrates how an individual could perform the data gathering and correlation activities claimed in the ’700 patent using pen and paper:

Claim 1 of ’700 Patent	Step
[1a] searching at least one channel unassociated with paid advertisements on a network for references to the entity unassociated with paid advertisements using a plurality of search terms to generate search results that include a plurality of references;	Alice works at clothing outlet store X. The website of clothing outlet store X is xclothingstore.com. Alice searches Google using the search terms “clothing outlet” and “clothing store” and obtains search result pages for each term and the results in the search result pages do not include paid advertisements.
[1b] scoring the references to the entity associated with each of the plurality of search terms from the plurality of references to generate scores for the references to the entity;	Alice reviews the search results obtained from Google for each respective term “clothing outlet” and “clothing store,” and then identifies how high in the list of search results xclothingstore.com appears (*i.e.*, the rank within the search results). She writes down the rank information in a notebook.

[1c] correlating conversions by one or more visits to a website of the entity through the reference with the search terms that directed the visits to the entity to determine a conversion rate;	Alice contacts the web server that hosts xclothingstore.com to ask for the following information: (1) the total number of visitors to xclothingstore.com from Google search results (using the terms "clothing outlet" or "clothing store"); and (2) the total number of visitors who bought an item after visiting the website xclothingstore.com (*i.e.*, conversions). Alice writes this information down in her notebook. Using a calculator, Alice divides the total number of conversions by the total number of visitors to xclothingstore.com (for each term), and writes these numbers in her notebook (conversion rate).
[1d] determining a total value of the conversions to the entity;	Alice goes back to check the records of sales from xclothingstore.com and looks up the dollar amount of each conversion (each sale from the website). She writes these numbers in her notebook and totals the number of sales to determine a total value of the conversions.
[1e] correlating at least the total value of the conversions to the entity associated with the references to the entity and the scores for the references to the entity to identify one or more of the plurality of search terms; and	Alice reads her notebook and visually compares the total sales to the rank obtained from searching Google using the terms "clothing outlet" and "clothing store."
[1f] for the identified one or more of the plurality of search terms, forecasting an increase in conversions for the references to the entity associated with an increase in the scores for the references to the entity.	Using a known probabilistic model (*e.g.*, a higher ranked search result will lead to an increase of conversions), Alice estimates (or forecasts) an increase in ranking for xclothingstore.com for each term. Alice does this by looking at the rankings previously obtained and tries to predict the effect of increasing the ranking for each term. As an example, Alice sees in her notebook that when searching for "clothing outlet" xclothingstore.com is the sixth webpage in the list of results and there have been 50 conversions. In contrast, when searching for "clothing store," xclothingstore.com is the 20th website in the list of results, and there have been 25 conversions. Alice predicts (or forecasts) that, by increasing the ranking of xclothingstore.com using the term "clothing store" in the Google search results, this will increase conversions.

As illustrated in the example above, the ’700 patent does not claim a way to increase conversions; rather, it is directed to the idea of gathering data about visitors who, for example, buy something on a website and predicting, or forecasting, an increase in conversion that would be associated with an increase in higher rankings in search results.

Furthermore, dependent claims 2–10 and 12–15 are directed to the same abstract idea and do not provide any additional details about how the key functionalities are to be performed. *See* Section IV.C.

4. ***The ’863 Patent Claims Are Directed to Analysis of Marketing Effectiveness Performed by Data Gathering and Calculations.***

Claim 1 of the ’863 patent involves (1) “identifying” numerous things (web page, visitors to the web page, conversions on the web page, a search results page, and keywords) (data gathering) and (2) “determining a correlation” between that data (use of a mathematical formula). Ex. F, ’863 patent, 16:48-17:07; *see* Section IV.D discussing how the steps involve data gathering and calculations. Like the other patents discussed above, these claims merely cover gathering and organizing information, which have been held to be abstract by many courts (as discussed in Section VI.A.6 below). The following table illustrates how an individual could perform the data gathering and correlation activities claimed in the ’863 patent using pen and paper:

Claim 1 (Method) of ’863 Patent	Step
[1a] identifying a Web Page;	Alice works at clothing outlet store X. The website of clothing outlet store X is xclothingstore.com.
[1b] identifying a plurality of visitors to the Web Page;	Alice contacts the web server that hosts xclothingstore.com to ask for an identification of who has visited the website xclothingstore.com.
[1c] identifying a plurality of conversions on the Web Page, each conversion performed by one of the plurality of visitors;	Alice contacts the web server that hosts xclothingstore.com to identify the number of visitors of the website xclothingstore.com that

	purchased an item while browsing the website. Alice creates a 3-column chart in a notebook and writes down in the first column the visitors who purchased an item while browsing the website (*i.e.*, "conversions").
[1d] for each conversion on the Web Page, identifying a search results page that includes an organic link to the Web Page that directed the one of the plurality of visitors associated with the respective conversion to the Web Page, wherein identifying the search results page includes parsing a search referral header contained in the Web Page when accessed using the organic link from the search results page;	For each time where a visitor purchased an item while browsing the website [identified in step 1c], Alice asks for a search referral header from the web server that hosts xclothingstore.com. A search referral is information that a search engine (like Google) will send to the web server when a user clicks on a link in search results, resulting in the user visiting the "hit" website. Looking at the search referral headers, Alice can see which search results pages (and search engines) the visitor had accessed before clicking on the link directing the visitor to xclothingstore.com.
[1e] identifying a plurality of keywords, each of the keywords used in at least one search that produced one of the identified search results pages;	Using the same search referral headers, Alice can see the terms (keywords) that visitors used in their searches to access xclothingstore.com via the search results pages. In a column next to each search result page that each visitor accessed, Alice writes down in her notebook in the second column the keywords in the search used to reach each page.
[1f] identifying a ranking of the Web Page on each of the identified search results pages by crawling each of the identified search results pages; and	Using the same keywords that the visitors used, Alice performs a search in a search engine to access the search results pages that correspond to the page identified in the search referral headers. Alice then writes down in her notebook in the third column how high the webpage is in the list of search results page (*i.e.*, the ranking).
[1g] determining a correlation between the ranking of the Web Page on each of the identified search results pages, the plurality of conversions on the Web Page, and the plurality of keywords.	Alice reads her notebook and visually compares to determine relationships between the three columns in her chart: (1) how high xclothingstore.com was on the search results page (*i.e.*, the ranking of the Web Page); (2) the instances when visitors purchased something from xclothingstore.com (*i.e.*, conversions); and (3) the keywords in the search that led the visitor to xclothingstore.com.

As illustrated in the example above, the '863 patent does not claim a way to increase conversions; rather, it is directed to the idea of gathering data about visitors who, for example, buy something

on a website and predicting, or forecasting, an increase in conversion that would be associated with an increase in higher rankings in search results.

Claims 2–6 are all dependent on claim 1 and are directed to the same abstract idea. Moreover, they do not provide any additional details about how the key functionalities are to be performed. *See* Section IV.D.

5. ***The '089 Patent Claims Are Directed to Analysis of Marketing Effectiveness Performed by Data Gathering and Calculations.***

As discussed above in Section IV.D and IV.E, the claims of the '089 patent follow a nearly identical formula as the '863 patent, except this time the steps are performed "by a computing device." Ex. G, '089 patent, 16:41-17:07, 17:31-64 and 18:23-51. The similarity of the claims of the '098 and '863 patents makes sense because they are related patents. Merely performing abstract steps on a computer device does not mean that the idea is not abstract. *See Capital One Bank (USA)*, 792 F.3d at 1370 ("[s]teps that do nothing more than spell out what it means to 'apply it on a computer' cannot confer patent-eligibility."); *Accenture*, 728 F.3d at 1341 ("none of the recited hardware offers a meaningful limitation beyond generally linking 'the use of the [method] to a particular technological environment,' that is, implementation via computers.") (internal citation omitted). For the same reasons the '863 patent is abstract, the '089 patent is abstract. Furthermore, dependent claims 2–6, 8–12 and 14–17 are directed to the same abstract idea and do not provide any additional details about how the key functionalities are to be performed.

6. ***Data Gathering Steps Are Abstract.***

As explained above in Sections VI.A.1-VI.A.5, each of the Patents-in-Suit recites "data gathering" steps, which the Federal Circuit has repeatedly confirmed is abstract. *See e.g.*, *OpenTV*, 76 F. Supp. 3d at 893 ("gathering information about one's intended market" . . .is as old as the saying, "know your audience."); *Erie*, 850 F.3d at 1327 ("[t]his type of activity, i.e., organizing

and accessing records through the creation of an index-searchable database, includes longstanding conduct that existed well before the advent of computers and the Internet"); *Open Text S.A.*, 2014 WL 4684429 at *4 (gathering information about the customer's experience and responding is abstract); *Content Extraction*, 776 F.3d at1345-47 ("receiving output" and "recognizing" data is abstract); *In re TLI*, 823 F.3d at 610-12 ("receiving [] data" is abstract); *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) ("collecting information, analyzing it, and displaying certain results of the collection and analysis" are a "familiar class of claims 'directed to' a patent-ineligible concept"); *Intellectual Ventures I LLC v. Symantec Corp.*, 838 F.3d 1307, 1313-15 (Fed. Cir. 2016) ("receiving" data is abstract). Moreover, in *Content Extraction*, the Federal Circuit concluded that the claims were "drawn to the abstract idea of 1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory," and noted that "[t]he concept of data collection, recognition, and storage is undisputably well-known." 776 F.3d at 1347.

Furthermore, in *Evolutionary Intelligence LLC v. Sprint Nextel Corp., et. al.*, for example, the asserted patents claimed a system and method for allowing computers to process data that is modified based on external data such as location and time. 2017 WL 655442, at *1 (Fed. Cir. Feb. 17, 2017). The Federal Circuit held that the claims "are directed to selecting and sorting information by user interest or subject matter, a longstanding activity of libraries and other human enterprises." *Id.*

Information gathering steps are abstract even when the information collected is limited to "particular content" such as the "shares of voice" or "references to an entity," as claimed in the Patents-in-Suit. *See, e.g., Elec. Power Grp.*, 830 F.3d at 1353; *see also Bilski*, 561 U.S. at 610-11 ("[T]he prohibition against patenting abstract ideas 'cannot be circumvented by attempting to limit

the use of the formula to a particular technological environment' or adding 'insignificant post solution activity.'") (internal citation omitted). Importantly, the claims of the Patents-in-Suit do not specify how or by what means relevant data is gathered. Any and every means or method of gathering this data is within the scope of the claims (*e.g.*, Alice doing searches and writing things down in her notebook), so long as it is then used in the claimed formula. Because it "matters not by what process or machinery" correlation must be done, the data gathering claims are impermissibly abstract. *Morse*, 56 U.S. at 113; *McRO*, 837 F.3d at 1314.

7. ***The BrightEdge Patents-in-Suit Recite a Correlation Step Which is Abstract and Directed to Longstanding Commercial Practice.***

As explained above in in Sections VI.A.1-VI.A.5, each of the BrightEdge Patents in Suit include a correlating or correlation step with respect to the gathered data that is also abstract. Organizing data and correlating it has been found abstract. For example, in *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, the Federal Circuit invalidated an analogous patent describing a "device profile" comprised of two sets of data (color information and spatial information) used to render a digital image. 758 F.3d 1344, 1349 (Fed. Cir. 2014). The court found that the method described in the patent was abstract "because it describes a ***process of organizing information through mathematical correlations*** and is not tied to a specific structure or machine." *Id.* at 1350 (emphasis added). The claim recited "a process of taking two data sets and combining them into a single data set" where "[t]he two data sets are generated by taking existing information . . . and organizing the information into a new form." *Id.* at 1351. Similarly, the Patents-in-Suit purport to organize information and correlate that information.

Moreover, with respect to the correlations, the Patents-in-Suit lack specific details about the correlation (other than that correlations will occur). To be concrete (rather than an unpatentable abstract idea), the law requires more than stating "only a result-oriented solution, with insufficient

detail for how" that result is accomplished. *Intellectual Ventures I LLC*, 850 F.3d at 1342; see also *Collarity*, 2015 WL 7597413 at *5 (claims were abstract when the steps did not impose tangible limitations on those steps). Furthermore, while certain claims refer to a method being "computer implemented," the claims of the Patents-in-Suit contain no real technological requirements, nor is there any requirement as to what performs the correlating step. Instead, the claims simply recite method steps pertaining to a mathematical formula used to "correlate" the gathered data in order to analyze the effectiveness of marketing campaigns. This type of market analysis is an abstract and longstanding commercial practice which has repeatedly been held to be patent-ineligible. *See e.g., OpenTV*, 76 F. Supp. 3d at 893 ("gathering information about one's intended market" . . .is as old as the saying, "know your audience."); *Erie*, 850 F.3d at 1327 ("[t]his type of activity, i.e., organizing and accessing records through the creation of an index-searchable database, includes longstanding conduct that existed well before the advent of computers and the Internet"); *Open Text S.A.*, 2014 WL 4684429 at *4.

Ultramercial III is also instructive. There, the Federal Circuit found that the patent's claim of "receiving" copyrighted media and "facilitating" the display of a sponsor message described "an abstract idea, devoid of a concrete or tangible application." *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 715 (Fed. Cir. 2014) ("*Ultramercial III*"). Even though "certain additional limitations, such as consulting an activity log, add[ed] a degree of particularity," the court held that the claims described only "the abstract idea of showing an advertisement before delivering free content." *Id.* at 715. The asserted claims of the Patents-in-Suit are equally abstract in nature, broadly claiming "determining," "searching," "scoring," and "correlating" data without any concrete or tangible application, even if some terms may add a "degree of particularity." There is no requirement as to *how* the relevant data is determined.

Likewise, in *Morsa v. Facebook, Inc.*, the patents were "drawn to two abstract ideas: targeting advertisements to certain consumers, and using a bidding system to determine when and how advertisements will be displayed." 77 F. Supp. 3d at 1014. As the court explained, "both of these are fundamental, long-standing, well-known concepts, [and] they also have no particular concrete or tangible form." *Id*. (quotations omitted). The court reasoned that "advertisers [have] targeted consumers based on their demographic data long before the internet existed," and that indeed, "matching consumers with a given product or service 'has been practiced as long as markets have been in operation.'" *Id*. at 1013 (quoting *Tuxis Techs*., 2014 WL 4382446 at *5). After concluding that the claims failed both steps under *Alice*, the court found the claims invalid under § 101 and granted Facebook's motion for judgment on the pleadings. *Id.* at 1016.

The *OpenTV* case, discussed above, and *Morsa* are consistent with other cases holding patents directed to longstanding commercial practices invalid under § 101. *See, e.g., Bilski*, 561 U.S. at 611 (concluding that a patent directed to a "fundamental economic practice long prevalent in our system of commerce" claimed a patent-ineligible abstract idea) (citations and quotations omitted); *Tuxis Techs., LLC v. Amazon.com, Inc.*, Case No. 13-1771-RGA, 2015 WL 1387815, at *2 (D. Del. Mar. 25, 2015) (holding that a patent whose claims were "directed to the abstract idea of 'upselling,' which is a longstanding commercial practice," were invalid under § 101); *Tuxis Techs.*, 2014 WL 4382446 at *5 (explaining that "[t]his type of marketing strategy . . . has been practiced as long as markets have been in operation.").

Like the above cases, the asserted claims of the Patents-in-Suit are directed to the longstanding commercial practice of performing market analysis and assessing effectiveness of marketing efforts. As the claims of the Patents-in-Suit repeat an abstract data gathering step with an abstract result and a correlation step, and do not specify any means or method of achieving either, these claims are unpatentably abstract.

8. ***One Can Practice the Asserted Claims Using Only the Human Mind and With Pen and Paper.***

Routine and conventional methods that can be performed "by human thought alone" are abstract and unpatentable "not because there is anything wrong with claiming mental method steps" but rather because "computational methods which can be performed *entirely* in the human mind are the types of methods that embody the 'basic tools of scientific and technological work' that are free to all men and reserved exclusively to none." *CyberSource*, 654 F.3d at 1373 (quoting *Benson*, 409 U.S. at 67) (emphasis in original). The Patents-in-Suit are directed to methods for gathering data and then applying unspecified mathematical formulas to create "correlations" for that data. It does not matter that the data gathering may be about the webpages or behavior on the Internet; rather, the crux of the claims are about analyzing data and correlating the data — something that can be done with pen and paper (as demonstrated by the examples performed by "Alice" above in Sections VI.A.1, VI.A.3 and VI.A.4). Because a human can use a pen and paper to perform math on data (as explained in the examples above), the claimed method is inherently abstract. *See buySAFE, Inc. v. Google Inc.*, 964 F. Supp. 2d 331, 335 (D. Del. 2013), *aff'd*, 765 F.2d 1350 (Fed. Cir. 2014) ("A method that can be performed entirely in the human mind is an abstract idea and is not eligible for patent protection"); *Walker Digital, LLC v. Google Inc.*, Case No. 11-318-LPS, 2014 WL 4365245, at *9 (D. Del. Sept. 3, 2014) ("Because [the asserted claim] can be performed entirely in a person's mind using routine and conventional steps, it is not directed

to patentable subject matter."). While implementing this process on a computer might make it *easier*, it does not make it *patentable.*

For example, as discussed above in *Collarity,* the claim was abstract because it could be "practiced using only the human mind and with pen and paper." 2015 WL 7597413, at *6. Furthermore, in *Parus Holdings Inc. v. Sallie Mae Bank*, the Federal Circuit agreed that the patents at issue, which claimed a system that unified different types of electronic communications and solved incompatibility issues between applications, were invalid. *Parus Holdings, Inc. v. Sallie Mae Bank*, 137 F. Supp. 3d 660, 671 (D. Del. 2015), *aff'd* 2017 WL 744549, at *1 (Fed. Cir. Feb. 27, 2017). The court held that "[o]rganizing business functions based on commands provided by a user is tantamount to the automation of the management of business communications usually performed by human administrative assistants." *Id.* at 674. Responding to the plaintiff's contention that the patents "solve problems that specifically arise in communications technologies," the court noted that "[a]lthough at the time of issuance the challenges addressed by the patents-in-suit undoubtedly were considered to be Internet-centric, under the current analytical paradigm (i.e., in hindsight), the fact that there are pre-Internet analogs to the patent claims suggests methods of organizing human (business) activity and, therefore, an abstract idea." *Id.* at 672-73.

Accordingly, the claims of the Patents-in-Suit recite a method of computing market share analysis that qualifies as an unpatentable abstract idea since the methods may be performed only in the human mind and with pen and paper.

B. *ALICE* STEP 2: THE CLAIMS DO NOT CONTAIN AN INVENTIVE CONCEPT.

Having established the claims of the Patents-in-Suit are directed to an abstract idea, the next step in the *Alice* framework is to determine whether they recite an "inventive concept." 134

S. Ct. at 2355. These claims do not; they simply recite "well-understood, routine, conventional activities previously known to the industry." *Id.* at 2359 (quoting *Mayo*, 566 U.S. at 73).

The second step of the *Alice* test looks beyond whether or not an idea is abstract, and instead asks whether, despite being abstract, the patent claims something sufficiently "inventive" to transform an otherwise patent-ineligible idea into a patent-eligible one. *Id.* at 2355. The Supreme Court has established that a "generic computer implementation" cannot "transform [an] abstract idea into a patent-eligible invention," *id.* at 2352, and the Federal Circuit has held that implementing an abstract idea on a "ubiquitous information-transmitting medium" such as the Internet cannot save a patent. *Ultramercial III*, 772 F.3d at 716-17. Because the claims of the Patents-in-Suit represent a classic case of merely "[s]tating an abstract idea while adding the words 'apply it with a computer,'" it is invalid under § 101. *Alice*, 134 S. Ct. at 2358.

1. ***Market Research is Old.***

The Patents-in-Suit purport to solve an age-old problem; namely, that businesses with "limited marketing budgets" cannot "accurately determine the effectiveness of their marketing efforts" without "understanding key attributes of their performance []." Ex. F, '863 patent, 2:08-11; 2:24; Ex. G, '089 patent, 2:01-04, 2:16; *see also* Ex. C, '706 patent, 1:34-35, 1:47; Ex. E, '700 patent, 1:36-37, 1:49; Ex. D, '746 patent, 1:38-39, 1:51. This problem is allegedly solved by the patented technology "accurately determining the number and behavior of visitors, how the visitors got to the web page, and correlating this with the marketing campaigns." Ex. G, '089 patent, 1:54-57; *see also* Ex. F, '863 patent, 1:61-65. The claims of the Patents-in-Suit do not describe any underlying *technology* that makes gathering this information possible, however, instead using preexisting technology to gather the data necessary for performing the claimed methods. Once the data is gathered, a mathematical formula is used to calculate potentially useful marketing statistics.

Performing market research of this kind has been around for decades, if not centuries. Indeed, as the *OpenTV* court recognized, "the concept of gathering information about one's intended market and attempting to customize the information then provided is as old as the saying, 'know your audience.'" *OpenTV*, 76 F. Supp. 3d at 893. Changes in technology that revolutionized the way we gather data, from the transition of the census to punchcards in the 1890s to collecting *Nielsen* data through television sets, greatly impacted and expanded the field of market research. The more data, the more that could be potentially analyzed and sculpted to the benefit of business owners. Performing market research on the Internet itself has been around for decades, starting with counter tracking in the early 1990s. *See* Ex. E, '700 patent, at 1:22-28 (describing prior art search engines and marketing channels), 1:27-29 (describing prior art tracking of website performance in search engines based on keyword), 1:58-61 (describing prior art websites tracking visitors and visitor behavior). Thus, while rapid advances in technology have allowed for *new types* and *greater amounts* of data (Ex. E, '700 patent, at 1:9-10, "[t]he Internet has changed the way people gather information," 1:18-20 ("the number and types of channels that a marketer can leverage has also exploded")), the basic formula (gather data and use statistics to analyze) has not changed. And this is precisely the formula that the Patents-in-Suit attempt to claim.

2. ***Using Key Indicators to Analyze Market Share and Marketing Effectiveness for a Business is Conventional and Generic.***

The language of the patents indicates that the inventive concept is derived from the fact that "many Web Pages do not have a good way of tracking how visitors have come to find their Web Pages and the details concerning the reference that drove the visitor to come to the web page." Ex. F, '863 patent, 1:29-32; Ex. G, '089 patent, 1:22-25; *see also* Ex. C, '706 patent, 1:25-29; Ex. E, '700 patent, 1:27-31; Ex. D, '746 patent, 1:29-33. As previously discussed, the Patents-in-Suit

do not claim technology that *enables* this type of tracking; rather, the Patents-in-Suit claim merely a process, sometimes implemented on a computer, that gathers pre-existing data and uses math to create correlations among the data. Indeed, with respect to the '700, '089 and '863 patents, these claims are substantially similar to asking a customer who purchased something (*e.g.*, a conversion) how he or she learned about the company (*e.g.*, looking at keyword data) and then performing analysis regarding that data (*e.g.*, correlation). Similarly, with respect to the '706 and '746 patents, these claims are substantially similar to a company looking at its own marketing as well as its competitors' marketing and assessing each company's market share, along with changes to that market share. Businesses conventionally engage in this type of analysis, and market research techniques of this type are taught in business classes around the country. Academics have for years researched better empirical and mathematical techniques to analyze important customer data, such as the in-store conversion rate of visitors of a retail store to customers who purchase products.

Furthermore, following *Alice*, the Federal Circuit has consistently invalidated information-gathering patents such as the Patents-in-Suit because they lack an "inventive concept." In *Digitech*, after finding that the patent was abstract "because it describes a process of organizing information through mathematical correlations and is not tied to a specific structure or machine," the court held, "[w]ithout additional limitations, a process that . . . manipulate[s] existing information to generate additional information is not patent eligible." 758 F.3d at 1350. Like the "device profile" in *Digitech*, BrightEdge's claimed methods are nothing more than a "process of organizing information" that is "not tied to a specific structure or machine." *Id.* at 1350-51. As such, it cannot qualify as the requisite "inventive concept."

In another instructive case, *Hewlett Packard Co. v. ServiceNow, Inc.*, HP argued that its abstract idea was patentable because its patent claimed "specific, specialized data structures,"

recited in the claims as "derived containers." 2015 WL 1133244, at *7 (N.D. Cal. Mar. 10, 2015). The court evaluated HP's proposed constructions for "derived containers" and concluded that they claimed, "nothing more than a data structure containing information for accessing the information repository hierarchically and a data structure for using that information," which described "every conceivable implementation of the abstract idea." *Id.* at *9. Although HP's proposed construction for "derived container" was "phrased in technical terms," the court determined that it was still not patent-eligible because it said nothing of "*how* the data structure is capable of performing [the claimed] operations." *Id.* at *8 (emphasis in original). Like the "derived container" claim in *ServiceNow*, the claimed methods in the Patents-in-Suit fail to transform the otherwise abstract idea of search engine optimization into something patentable because it says nothing of *how* a computer is to perform the proposed methods (and as described in the examples above, the methods are so broad as to cover a person performing the methods with pen and paper). Rather than restricting the patent claims to a concrete and tangible application, the patent language remains purely functional and generic.

3. ***The Patents Invoke Computers and the Internet as a Tool.***

If the asserted claims of the Patents-in-Suit are directed to computer-related subject matter — in this case, optimizing search engine results — determining whether such a claim recites an abstract idea with an inventive concept involves analyzing "whether the claims are directed to 'an improvement in the functioning of a computer,' or merely 'adding conventional computer components to well-known business practices.'" *Affinity Labs of Tex., LLC v. Amazon.com, Inc.*, 838 F.3d 1266, 1270 (Fed. Cir. 2016) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1338 (Fed. Cir. 2016)). In other words, the question is whether the claims recite a "specific asserted improvement in computer capabilities . . . or, instead, . . . a process that qualifies as an 'abstract idea' for which computers are invoked merely as a tool." *Enfish*, 822 F.3d at 1335-

36. The Federal Circuit has explained that "a computer [that] receives and sends the information over a network – with no further specification – is not even arguably inventive." *buySAFE, Inc.*, 765 F.3d at 1355. For example, in *Smartflash LLC v. Apple Inc.*, the asserted patents covered technology that restricted access to data via terminals that can receive and validate payments from users. 2017 WL 786431, at *1 (Fed. Cir. Mar. 1, 2017). The Federal Circuit found that "the asserted claims are all directed to the abstract idea of conditioning and controlling access to data based on payment," and those claims were abstract because they "invoke computers merely as tools to execute fundamental economic practices." *Id*. at *4, *6; *see also Erie*, 850 F.3d at 1329 ("while the claims necessarily cabin the idea of a categorical data search and retrieval to a computer environment, the claimed computer functionality can only be described as generic or conventional.").

Moreover, as discussed above in *Collarity*, there was no inventive concept when the claim was not "rooted in computer technology" and "other than stating the method is 'computer-implemented' in the non-limiting preamble, it has no computer requirements." 2015 WL 7597413 at *8-9. Similarly, as discussed above in *Tuxis Techs.*, adding "electronic communication device" could not save the claim from invalidity because it performed "nothing more than purely conventional steps" that are well-understood, routine and previously known to the industry." 2014 WL 438 2446 at *5. And as discussed in *Open Text S.A.*, "implement[ing a] basic marketing scheme on a generic computer system without any meaningful limitations" was not an inventive concept. 2014 WL 4684429 at *5.

To the extent computers or the Internet are invoked in the claims of the Patents-in-Suit, like the cases above, they are invoked merely as a tool to execute the abstract steps recited in the claims. The claims on their face do not recite any improvement to the way computers or the

Internet operates and are not "necessarily rooted" in computer technology. Instead, the Patents-in-Suit merely implement the claimed methods on "a processor configured to execute computer instructions to cause the system to perform operations," Ex. 1, '706 patent, 15:09-10; in "a non-transitory computer readable storage medium configured to cause a system to perform operations," Ex. 2, '700 patent, 10:12-13; by "a computing device," Ex. 5, '089 patent, 16:47; or using a "computer implemented method." Ex. 3, '746 patent, 14:22. Furthermore, to the extent the claims involve the Internet, as discussed in *OpenTV*, "the use of the Internet is not sufficient to save otherwise abstract claims from ineligibility under § 101." 76 F. Supp. 3d at 893.

4. ***The Patents-in-Suit Inappropriately Preempt Innovation.***

The abstract nature of the claims of the BrightEdge Patents-in-Suit present the exact preemption concern highlighted in *Alice*: "We have repeatedly emphasized this concern that patent law not inhibit further discovery by improperly tying up the future use of these building blocks of human ingenuity." *Alice*, 134 S. Ct. at 2354 (internal citation and quotation omitted). Aside from vague assertions that the claims are implemented in computers or computer systems, the asserted claims recite no concrete or tangible technology that would limit their scope, and they impose no bounds on how the claimed method determines or identifies the appropriate data necessary for the claimed correlations. Indeed, the asserted claims are not only divorced from any technological innovation, they also seek to monopolize the general concept of using the Internet (and pre-existing search engines) to gather data, and then analyze that data.

Following the Supreme Court's guidance in *Alice*, courts have invalidated analogous patents that "tie up" too much innovation. *See, e.g., Joao Bock Transaction Sys., LLC v. Jack Henry & Assocs., Inc.*, 76 F. Supp. 3d 513, 524 (D. Del. 2014), aff'd, 803 F.3d 667 (Fed. Cir. 2015) (invalidating several patents claiming a method for real-time authorization of credit card

transactions because "[a]llowing the asserted claims to survive would tie up any innovation related to performing banking transactions on computers"); *Money Suite Co. v. 21st Century Ins. & Fin. Servs., Inc.*, No. CV 13-1747-GMS, 2015 WL 436160, at *5-*6 (D. Del. Jan. 27, 2015) (invalidating a patent claiming a computerized method for generating price quotes that would have monopolized many price quoting methods, because leaving open only one or two methods did "not assuage fears of blocking further innovation"). But a patent "need not preempt an entire field in order to be ineligible; rather, the question is whether 'upholding the patents would risk *disproportionately* tying up the use of the underlying [abstract ideas or] natural laws, inhibiting their use in the making of further discoveries.'" *Id*. at *5 (quoting *Mayo*, 132 S. Ct. at 1294) (emphasis and alteration in original). Here, the Patents-in-Suit disproportionately monopolize the concept of using a few generic key indicators, like web pages, search terms, and search rankings, to conduct statistical market research.

VII. CONCLUSION

As established above, the asserted claims of the Patents-in-Suit are directed to the abstract idea of performing market share analysis and assessing the effectiveness of marketing using data gathering and mathematical calculations. These claims fail to recite patentable subject matter above and beyond that abstract concept and do not contain an inventive concept. For that and the foregoing reasons, Searchmetrics respectfully requests that the Court grant its motion that the asserted claims of the Patents-in-Suit are invalid under 35 U.S.C. § 101 for their failure to recite patentable subject matter.

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