UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE INC.,
Petitioner

v.

PATRICK ZUILI,
Patent Owner.

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Case CBM2016-00008
Patent 8,671,057 B1

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Before KARL D. EASTHOM, SCOTT A. DANIELS, and
STACEY G. WHITE, *Administrative Patent Judges.*

WHITE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
Covered Business Method Patent Review
35 U.S.C. § 328 and 37 C.F.R. § 42.73

I. INTRODUCTION

A. *Background*

Google Inc. ("Petitioner") filed a Petition (Paper 1, "Pet.") requesting covered business method patent review of claims 1, 5, 9, and 11 ("challenged claims") of U.S. Patent No. 8,671,057 B1 (Ex. 1001, "the '057 patent") pursuant to § 18 of the Leahy-Smith America Invents Act ("AIA"). Patrick Zuili ("Patent Owner") filed a Preliminary Response. Paper 12 ("Prelim. Resp."). Pursuant to 35 U.S.C. § 324, we instituted a covered business method patent review on the following grounds (Paper 18, "Dec.", Paper 22, "Reh'g Dec."):

References	Basis	Claims Challenged
N/A	§ 101	1, 5, 9, and 11
IAB 1[1,2] and IAB 2[3]	§ 103	1, 5, and 9
IAB 1, IAB 2, and Laurent[4]	§ 103	5 and 11

Patent Owner filed a Patent Owner's Response. Paper 23 ("PO Resp."). Petitioner filed a Reply to Patent Owner's Response. Paper 29 ("Reply"). An oral hearing was held on December 1, 2016. Paper 48

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[1] *Interactive Audience Measurement and Advertising Campaign Reporting and Audit Guidelines*, Interactive Advertising Bureau, Jan. 2002 (Ex. 1004, "IAB 1").

[2] The Petition cites IAB Study ("Ex. 1037). This Exhibit is a combination of Exhibits 1004 and 1005. IAB 1 (Ex. 1004) in its entirety is found on pages 1–12 of Exhibit 1037 and IAB 2 (Ex. 1005) in its entirety is found on pages 13–64 of Exhibit 1037. As discussed in our Decision on Patent Owner's Motion to Exclude, Exhibit 1037 is improper because it combines two documents. Paper 55, 12. Thus, we refer to the individual exhibits IAB 1 (Ex. 1004) and IAB 2 (Ex. 1005).

[3] *IAB Online Ad Measurement Study*, Dec. 2001 (Ex. 1005, "IAB 2").

[4] Simon St. Laurent, *Cookies*, Mar. 1998 (Ex. 1009, "Laurent").

("Tr."). We have jurisdiction over this proceeding pursuant to 35 U.S.C.
§ 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 328(a)
and 37 C.F.R. § 42.73. For the reasons that follow, we determine[5] that
Petitioner has shown by a preponderance of the evidence that claims 1, 5, 9,
and 11 of the '057 patent are unpatentable.

B. Related Matters

The '057 patent is the subject of *Brite Smart Corp. v. Google Inc.,* No.
2:14-cv-760-JRG (E.D. Tex.). Pet. 3 (citing Ex. 1007). Petitioner and
Patent Owner are party to covered business method patent reviews of two
related patents, U.S. Patent Nos. 7,953,667 (CBM2016-00021) and
8,326,763 (CBM2016-00022), which are pending before the Board. *Id.*

C. The '057 Patent

The '057 patent, titled "Method and System to Detect Invalid and
Fraudulent Impressions and Clicks in Web-Based Advertisement Schemes"
issued March 11, 2014. The patent focuses on "web-traffic [as it is] used in
online advertising." Ex. 1001, Abstract. Specifically "[i]t discloses a
system to detect invalid and fraudulent impressions and clicks and method[s]
of pay-per-click (when advertisers pay upon users actually clicking) and
pay-per-impression (when advertisers pay based on number of views)
advertising arrangements, which periodically generates a code associated
with the search-engine users." *Id.* The challenged claims are directed to a
method for identifying invalid clicks on links associated with merchants.

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[5] Patent Owner's Response includes a request for an expanded panel to
render the decision in this matter. PO Resp. 166. The panel does not have
authority to expand the panel. The Chief Judge, however, was informed of
Patent Owner's request and has declined to expand the panel.

Ex. 1001, 5:16–37, 6:11–13, 6:24–26, 6:32–34. Figure 1 of the '057 patent
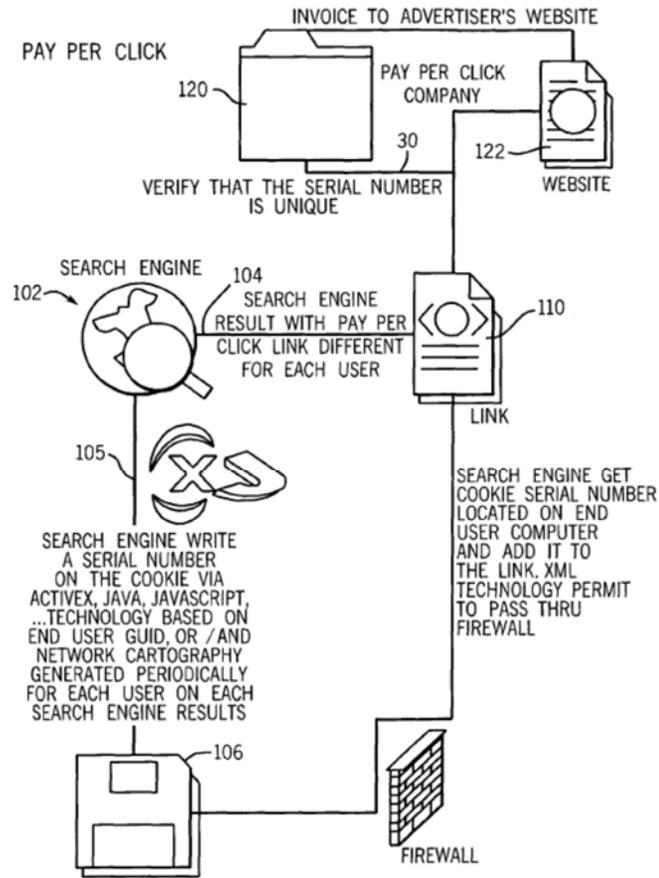
is reproduced below.

FIG. 1

Figure 1 illustrates a preferred embodiment of the '057 patent's system. *Id.*

at 3:18–20. Search engine 102 provides search results to a user including

some number of links. *Id.* at 3:55–59. The search engine also "generates a

code, preferably in the form of a number, utilizing a cookie." *Id.* at 3:60–62.

"The number could be a serial number, a globally unique identifier (GUID)

or a pseudo-random number." *Id.* at 3:63–64. This code is stored by the

user's device and it may be stored within "the end-user graphical user

interface device (for example, a web browser like Microsoft Internet

Explorer)." *Id.* at 4:1–4. The code could be modified at the user device and

such "modifications to the code could include adding timestamp, identity information like MAC address of the device, other MAC addresses in the subnet of the device or any changes made to the MAC addresses." *Id.* at 4:11–14. In addition, or in alternative to such modifications, "network cartography may be generated periodically for each user based upon their use of the search engine 102," and such cartography may include "the user device's IP and MAC address or the network route information between the device and the pay-per-click system." *Id.* at 4:15–20.

When a user clicks a link in the search results, the code and any network cartography information will be sent to the search engine. *Id.* at 4:41–44. This information "will be interpreted by pay-per-click system 120 to determine various parameters like the frequency of clicks from that user or device, interval between clicks etc." *Id.* at 4:44–47. "[B]y observing a metric like the number of clicks for a given period of time, . . . the system can automatically determine if certain clicks are illegitimate. This allows the search engine company to fairly invoice the merchants, thereby preventing fraudulent over use." *Id.* at Abstract. The system will share information about users or devices with merchants and a directory of fraudsters also will be published. *Id.* at 4:50–52. "This method is also effective in identifying competitor fraud, where merchants employ humans or machines to cause unnecessary clicks or impressions on a competitor's link, thus resulting in excessive billing." *Id.* at 4:55–58.

Claim 1 of the '057 patent is the only independent claim and it is illustrative of the claims at issue. It reads as follows:

> 1. A method for identifying invalid click(s) by a system
>   including at least one web page on a server side
>   computing device, the at least web page providing a

> plurality of links associated with a plurality of other web
> pages associated with a plurality of merchants, the
> method comprising the steps of:

> generating a first code on the server side computing device, the
> first code identifying at least one device on a client side;

> sending said first code to said at least one device over a
> communication network;

> obtaining from the device on the client side, a second code
> when said at least one user performs a first click on at
> least one of said links associated with at least one of said
> other web pages at a first time;

> obtaining from the device on the client side, a third code when
> said at least one user performs a second click on said at
> least one link associated with said at least one other web
> page at a second time; and

> determining, by the server side computing device, whether said
> second click is invalid by examining a difference
> between said first time and said second time.

Id. at 5:16–37.

II. ANALYSIS

A. *Grounds for Standing*

Section 18 of the AIA created a transitional program, limited to persons or their privies that have been sued or charged with infringement of a "covered business method patent," which does not include patents for "technological inventions." AIA §§ 18(a)(1)(B), 18(d)(1), Pub. L. No. 112-29, 125 Stat. 284, 329–331 (2011); *see* 37 C.F.R. § 42.302. In light of the recent decision in *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 1376 (Fed. Cir. 2016), we ordered the parties to provide additional briefing as to whether the '057 patent is eligible for covered business method patent review. Paper 45 ("PO CBM Brief"), Paper 46 ("Pet. CBM Brief").

1. *Covered Business Method*

A covered business method is "a method or corresponding apparatus for performing data processing or other operations used in the practice, administration, or management of a financial product or service." AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a). A patent need have only one claim directed to a covered business method to be eligible for review. *See Transitional Program for Covered Business Method Patents—Definitions of Covered Business Method Patent and Technological Invention; Final Rule,* 77 Fed. Reg. 48,734, 48,736 (Aug. 14, 2012) ("CBM Rules") (Comment 8). Patents directed to technological inventions, however, are excluded from covered business method patent review. AIA § 18(d)(1); *see* 37 C.F.R. § 42.301(a).

The parties dispute whether the '057 patent is a "covered business method patent," as defined in the AIA and 37 C.F.R. § 42.301. *See* Pet. 11–22; PO Resp. 27–32, 92–116. For reasons explained below, we conclude that the '057 patent meets the definition of a "covered business method patent."

2. *Financial Product or Service*

Petitioner bears the burden of demonstrating that the '057 patent claims a method "used in the practice, administration, or management of a financial product or service." AIA § 18(d)(1); 37 C.F.R. § 42.304(a). In making this determination, our focus is on the claims. *See* 77 Fed. Reg. at 48,736 (Aug. 14, 2012 Final Rule). In addressing this requirement, the Federal Circuit has construed covered business method patents as encompassing "a wide range of finance-related activities" and "not limited to products and services of only the financial industry, or to patents owned

by or directly affecting the activities of financial institutions such as banks and brokerage houses." *Versata Dev. Grp. v. SAP Am., Inc.*, 793 F.3d 1306, 1325 (Fed. Cir. 2015). This definition, however, is not without limits. As the court recently emphasized, under AIA § 18(d), "CBM patents are limited to those with claims that are directed to methods and apparatuses of particular types and with particular uses 'in the practice administration, or management of a financial product or service.'" *Unwired Planet*, 841 F.3d 1376 1382.

Petitioner contends that claim 1 establishes that the '057 patent is eligible for covered business method patent review. Pet. 11. Claim 1 is "[a] method for identifying invalid click(s) by a system including at least one web page" and claim 1 further recites that the web page provides "a plurality of links associated with a plurality of other web pages associated with a plurality of merchants." Ex. 1001, 5:17–21. According to Petitioner, claim 1 satisfies the "financial product or service" prong for at least the following reasons:

> (1) claim 1 is directed to a system for 'providing a plurality of links associated with a plurality of web pages associated with a plurality of merchants'; (2) claim 1 provides access to these merchant web page through links, and (3) the stated goal of the patent relates to web-based advertising schemes and pay-per-click systems.

Pet. 12 (citing Ex. 1006 ¶ 73). As noted in the specification, "[t]his invention describes pay-per-click and pay-per-impression arrangements periodically generating a code associated with the search-engine users." Ex. 1001, 2:61–63. A pay-per-click ("PPC") system is one in which "advertisers pay upon users actually clicking" and a pay-per-impression system is one in which "advertisers pay based on [the] number of views." *Id.* at Abstract. In

addition, Figure 1 of the '057 patent depicts a preferred embodiment of the present invention, which includes sending an "invoice to [an] advertiser's website." *Id.* at Fig. 1.

Patent Owner disputes Petitioner's contention that the '057 patent meets the financial product or service requirement. PO Resp. 100–111. Patent Owner argues that the '057 patent is not eligible for covered business method patent review because "determination of invalid clicks is not 'used in the practice, administration, or management of a financial product or service.'" *Id.* at 101. Patent Owner explains that the invention of claim 1 could be used to determine invalid clicks on web sites other than those belonging to merchants. *Id.* at 102. Patent Owner also asserts that while the specification describes using the claimed invention in the context of advertising, the claims themselves are not limited to advertising. *Id.* at 105. Finally, Patent Owner argues that claim 1 does not meet the financial requirement because there is no charge for detecting an invalid click. *Id.* at 109.

Petitioner responds by pointing to the preamble of claim 1 which recites "providing a plurality of **links** associated with a plurality of other web pages **associated with** a plurality of **merchants**." Pet. CBM Brief 2 (quoting Ex. 1001, 5:17–37). According to Petitioner, "[t]his limitation in and of itself constitutes advertising by merchants." *Id.* at 3. Petitioner also notes that during prosecution of the '057 patent, Patent Owner (who is also the named inventor) "confirmed that the claims are directed to advertising systems by stating that the claims 'are directed to methods for identifying fraudulent clicks in a web-based advertisement environment.'" *Id.* (quoting Ex. 1002, 118). Further, Petitioner asserts that the "clicks" in claim 1 are

themselves financial transactions because the amount of money paid for the advertisement is based directly on the number of clicks. *Id.* In support of this argument, Petitioner points to Patent Owner's statement during prosecution that "it can be gathered that for **web-based advertising systems,** one of the problems with the state of the art has been identified as *over-clicking* on a particular link [that] would result **in extra expenditure** by entities who host/sponsor such links." *Id.* at 4 (quoting Ex. 1002, 120). Thus, Petitioner argues that claim 1 is financial in nature because (1) it recites advertising which is a financial product or service and (2) it recites clicks which are financial transactions. *Id.*

Upon consideration of the parties' contentions and supporting evidence, we determine that Petitioner has established that claim 1 of the '057 patent recites a method for performing data processing or other operations used in the practice, administration, or management of a financial product or service. Patent Owner's arguments do not overcome the showing made by Petitioner, and we determine that claim 1 of the '057 meets the financial requirement of CBM eligibility because it recites a financial transaction. We do not reach Petitioner's argument that claim 1 is financial in nature because it recites advertising.

In *Unwired Planet,* the subject patent claim recited "[a] method of controlling access to location information for wireless communications devices." *Unwired Planet,* 841 F.3d at 1377. The specification of the subject patent noted that restaurants or stores could use this location information so that "relevant advertising may be transmitted to the wireless device." *Id.* at 1378. In the underlying decision, the "Board determined that the '752 patent was a CBM patent because the location service could involve

an eventual sale of services." *Id.* at 1379. "Indeed, the finding that sales could result from advertising related to the practice of the patent is the sole evidence the Board relied on to find that the '752 patent is a CBM patent." *Id.* The Federal Circuit found this determination to be in error because it was based on an overly broad interpretation of the statute that relied on legislative history in place of the terms of the statute. *Id.* at 1380-81. The Federal Circuit also cautioned that "[i]t is not enough that a sale has occurred or may occur, or even that the specification speculates such a potential sale might occur." *Id.* at 1382.

In *Secure Axcess, LLC v. PNC Bank National Association*, 848 F.3d 1370 (Fed. Cir. 2017), the Federal Circuit again found it to be error to base CBM eligibility on statements in the legislative history of the AIA and noted that CBM eligibility "will not lie based on non-statutory phrases like 'incidental to' or 'complementary to' financial activity." 848 F.3d at 1381. In that case, the subject patents were directed "to computer security, and more particularly, to systems and methods for authenticating a web page." *Id.* at 1373. The specification of the subject patents generally discussed computer security but "on occasion, the written description contain[ed] references that might be considered to concern (at least facially) activities that are financial in nature." *Id.* One such reference was the use of "www.bigbank.com" as an exemplar of a web site that could use the claimed invention. *Id.* at 1374. In the underlying decision,

> the Board reasoned that because "[t]he '191 patent is directed to solving problems related to providing a web site to customers of financial institutions . . . the '191 patent covers the ancillary activity related to a financial product or service of Web site management and functionality and so, according to the legislative history of the AIA, the method and apparatus of the

'191 patent perform operations used in the administration of a financial product or service."

Id. at 1375. The Federal Circuit reversed the Board's determination that the subject patents were CBM eligible and stated that "just because an invention could be used by various institutions that include a financial institution, among others, does not mean a patent on the invention qualifies under the proper definition of a CBM patent." *Id.* at 1382.

The subject patents in both *Unwired Planet* and *Secure Axcess,* contained claims that had an attenuated relationship to the alleged financial product or service. In *Unwired Planet,* the CBM determination was based on an "eventual sale of services." *Unwired Planet,* 841 F.3d 1376, 1377. Similarly, in *Secure Axcess,* one of the possible uses for the subject patents could be to provide customers of financial institutions with confidence that the financial institution's web page is authentic. *Secure Axcess*, 848 F.3d at 1376.

Here, we are not faced with an attenuated relationship between the financial activity contemplated by the '057 patent and language of claim 1. The preamble of claim 1 recites "[a] method for identifying invalid click(s) by a system including at least one web page on a server side computing device, the at [one] least web page providing a plurality of links associated with a plurality of other web pages associated with a plurality of merchants." Ex. 1001, 5:16–21. This language from the preamble is key to the claim. It provides antecedent basis for the links and web pages recited in the body of the claim. *See id* at 5:26–31 ("when said at least one user performs a first click on at least one of said links associated with at least one of said other web pages"). In addition, it defines what links and web pages would meet

the limitations of the claim and thus, it "recites essential structure [and] it is 'necessary to give life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). Thus, on its face, claim 1 is directed to identifying invalid clicks on the web sites of merchants.

That leads to the question of what is an invalid click? The specification states that the method of the '057 patent is for "protecting the providers of pay-per-click services from multiple illegitimate usages." Ex. 1001, 1:18–20. As described therein,

> [v]arious providers of goods and services register their websites with the search engine and these are provided to the user in a list which is prioritized by the level of compensation which the merchant will give the pay-per-click or pay-per-impression company if the user is routed to their site. For example, using such a system, if a user types in the keyword "binoculars," the pay-per-click or pay-per-impression system might return five potential links or banners, with the most prominent one being associated with that supplier of binoculars which will compensate for a penny or a few cents more than the links/banners presented below.

Id. at 1:37–47. Thus, as described in the '057 patent, the act of clicking a link is one in which "commercial enterprises" profit from by attaching an "incremental monetary value" to that act. *Id.* at 1:28–31. Further, the problem sought to be solved by the '057 patent

> is that a user may cause an undesirable level of expenditure on the part of the merchant by over-clicking on a particular link. In some cases, it has been known that some users have done this simply for the purpose of undermining a particular provider or competitor. Since the *existing systems have no way of knowing whether a link through is legitimate or bogus, the provider of the goods/services winds up having to pay the pay-per-click provider excess sums*, with the fraudulent perpetrator remaining un-

> reprimanded.   Similarly in pay-per-impression systems, the
> fraudster would just keep searching for the same keyword so as
> to have many unnecessary impressions.   These fraudulent
> impressions could adversely impact the competitor's finances.

Id. at 1:48–61 (emphasis added). The '057 sets out to "allow[] the pay-per-click company to fairly invoice the merchants, thereby preventing fraudulent over use, and also identify which networks the fraudulent users use." *Id.* at 3:2–5. Thus, as described in the specification, an invalid or illegitimate click is one that should not be counted by the pay-per-click system and that click should not be charged to the user. We are mindful of the caution that limitations should not be read in from the specification, however, the claim limitations are to be understood in light of the specification. Here, the '057 patent's title, abstract, drawings, and written description all place the claims in the context of a detecting invalid click transactions in web-based advertising. Further, when asked whether the '057 patent has any utility outside of advertising, Mr. Zuili, Patent Owner and named inventor, did not identify any other usage for this patent. *See* Tr. 79:21–81:22. As such, we find that the clicks recited in claim 1 are on their face financial transactions because each valid click is a transaction for which the merchant is charged a fee and each invalid click is a fraudulent transaction that should be deducted from the merchant's invoice. We, therefore, agree with Petitioner's argument that claim 1 of the '057 patent meets the financial requirement of CBM eligibility because the clicks recited in the claim are financial transactions.

3. *Technological Invention*

Petitioner also must show that the '057 patent is not directed to a "technological invention." To determine whether a patent is for a

technological invention, we consider "whether the claimed subject matter as a whole recites a technological feature that is novel and unobvious over the prior art; and solves a technical problem using a technical solution." 37 C.F.R. § 42.301(b). The following claim drafting techniques, for example, typically do not render a patent a "technological invention":

> (a) Mere recitation of known technologies, such as computer hardware, communication or computer networks, software, memory, computer-readable storage medium, scanners, display devices or databases, or specialized machines, such as an ATM or point of sale device.

> (b) Reciting the use of known prior art technology to accomplish a process or method, even if that process or method is novel and non-obvious.

> (c) Combining prior art structures to achieve the normal, expected, or predictable result of that combination.

Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,763–64 (Aug. 14, 2012).

Petitioner argues that claim 1 recites technical features that were known in the art prior to the time of application for the '057 patent. Pet. 17 (citing Ex. 1006 ¶¶ 72, 77–84). Petitioner also asserts that the claim as a whole fails to recite a novel or nonobvious technical feature. *Id.* (citing Ex. 1006 ¶¶ 77–84). Patent Owner disputes these contentions. PO. Resp. 111–116. Specifically, Patent Owner asserts that Petitioner has not argued that the claim elements lack novelty. PO Resp. 112. We disagree with Patent Owner. Petitioner has persuasively argued that the claim elements lack novelty. Pet. 17 (citing Ex. 1006 ¶¶ 72, 77–84). And we agree with Petitioner. Claim 1 recites, in relevant part, a web page, server side computing device, client side device, and a plurality of codes. Ex. 1001,

5:16–37. The specification describes each of these elements as existing in the prior art. *See, e.g.,* Ex. 1001, 1:32–47 (describing prior art pay-per-click systems), 1:63–2:57 (collecting prior art references regarding click fraud detection), 3:62–64 (noting that a code "could be a serial number"), 4:25–28 (noting that the user devices could be desktop or laptop computers, PDAs, smartphone, other internet capable devices). The claimed subject matter does not recite a technological invention, but instead, the recited elements constitute "[m]ere recitation of known technologies" that, as noted in our Trial Practice Guide, do not give rise to a technological invention. 77 Fed. Reg. at 48,756.

Petitioner asserts that claim 1 does not solve a technical problem, but rather it purports to solve the problem of overcharging merchant advertisers for invalid clicks. Pet. 21 (citing Ex. 1001, 1:4–61). Patent Owner argues that "technology for detecting fraudulent clicks [was] not known before the priority date of the claimed subject matter." PO Resp. 113. As evidence of its assertion, Patent Owner argues that Petitioner experienced billions of dollars in click fraud in 2005. *Id.* at 114. Patent Owner contends that "[n]one of the prior art or prior art combination[s] successfully [solved the problem of click fraud.]" *Id.* at 115. According to Patent Owner, in order to bring trust and credibility to web-based advertising, a technical solution was required, and Patent Owner asserts that that technical solution to the technical problem of click fraud is embodied in the '057 patent. *Id.* at 115–116.

Petitioner's arguments are persuasive. The specification states that "[o]ne problem with existing prior art systems, is that a user may cause an undesirable level of expenditure on the part of the merchant by over-clicking

the particular link." *Id.* at 1:48–50. The claimed method purportedly solves this problem by "allow[ing] the pay-per-click company to fairly invoice the merchants, thereby preventing fraudulent over use, and also identify which networks the fraudulent users use." *Id.* at 3:2–5. We find that this is a business problem and not a technical problem. Thus, Petitioner shows that at least claim 1 of the '057 patent is not directed toward solving a technical problem using a technical solution. In view of the foregoing, we conclude that the '057 patent is a covered business method patent under AIA § 18(d)(1) and is eligible for review using the transitional covered business method patent review program.

B. Claim Construction

Consistent with the statute and the legislative history of the AIA, we analyze patentability using the broadest reasonable construction of the claims in light of the specification. 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard under 37 C.F.R. § 42.100(b)). Neither party makes an explicit claim construction argument in the proceeding. *See generally* PO Resp., Reply. For purposes of this Final Written Decision, we determine that no claim terms require express construction. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.").

C. Asserted Ground Based on 35 U.S.C. § 101

Petitioner argues that claims 1, 5, 9, and 11 are unpatentable under 35 U.S.C. § 101. Pet. 45–57. Upon review of Petitioner's arguments and supporting evidence, we have determined that Petitioner has demonstrated

by a preponderance of the evidence that claims 1, 5, 9, and 11 are directed to patent-ineligible subject matter.

Our analysis begins with the statute. Patent eligible subject matter is defined in § 101 of the Patent Act, which recites

> [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.

There are, however, three limited, judicially created exceptions to the broad categories of patent-eligible subject matter in § 101: laws of nature; natural phenomena; and abstract ideas. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1293 (2012).

While an abstract idea by itself is not patentable, a practical application of an abstract idea may be deserving of patent protection. *Id.* at 1293–94; *Bilski v. Kappos*, 130 S. Ct. 3218, 3230 (2010); *Diamond v. Diehr*, 450 U.S. 175, 187 (1981). To be patent-eligible, a claim cannot state simply the abstract idea and add the words "apply it." *Mayo*, 132 S. Ct. at 1294. The claim must incorporate enough meaningful limitations to ensure that it claims more than just an abstract idea and is not merely a "drafting effort designed to monopolize the [abstract idea] itself." *See id.* at 1297.

In *Alice Corp. v. CLS Bank International*, 134 S. Ct. 2347, 2355 (2014), the Supreme Court endorsed the use of the *Mayo* framework, "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." First, "we determine whether the claims at issue are directed to one of those patent-ineligible concepts." *Id.* Second, we consider the elements of each claim both individually and as an ordered combination to

determine whether the additional elements transform the nature of the claim into a patent-eligible application. *Id.*

Step two of the analysis may be described as a search for an "inventive concept"—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself. *Id.* (citing *Mayo*, 132 S. Ct. at 1294). Limiting the claims to a particular technological environment or field of use, or adding insignificant pre- or post-solution activity, does not constitute meaningful limitations. *See Bilski*, 561 U.S. at 609–11; *Diehr*, 450 U.S. at 191–92; *Parker v. Flook*, 437 U.S. 584, 595 n.18 (1978). And, even when a claim requires the use of a computer, the claim may nonetheless be directed to patent-ineligible subject matter if it can be performed using a pen and paper or in the human mind. *See Versata*, 793 F.3d at 1335; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372–73 (Fed. Cir. 2011).

1. *Abstract Idea Analysis*

Petitioner contends that the challenged claims are "drawn to a patent-ineligible abstract idea, specifically the concept of detecting invalid clicks based on the time between two requests by the same device." Pet. 46 (citing Ex. 1006 ¶ 123. Petitioner argues that this is analogous to "[t]he concept of determining whether requests are legitimate or invalid based on the time between two requests from the same source." *Id.* Petitioner's declarant, Stephen Gray, testifies that this concept can be implemented as a purely mental process. Ex. 1006 ¶ 58. He provides the example of a pharmacist determining whether a prescription request is fraudulent by examining when a patient makes a request for a drug and flagging the request as fraudulent if

the patient asks for the same drug within a too-short period of time. *Id.* As
further support for its argument, Petitioner cites a Kentucky statute that
requires pharmacists to track a "patient identifier" for each individual
requesting a controlled substance and the date that the medication was
dispensed. Pet. 47 (citing Ex. 1034 (Ky. Rev. Stat. Ann. § 218A.202(3),
(4)(a), (6)(e) (West 1999)). Petitioner asserts that a pharmacist could use
this information to determine whether a request for medication was valid
"solely through the exercise of human intelligence." *Id.* For example "[i]f a
particular patient sought to fill a prescription for the same controlled
substance (such as OxyContin™) twice in too short a period of time, it
indicates that the patient may be engaging in invalid activity to obtain the
controlled substance for abuse." *Id.* (citing Ex. 1006 ¶ 124). Petitioner
argues that this is similar to what happens when determining the validity of
clicks in a PPC system. *Id.* According to Petitioner, a person using a
"purely mental process" could determine the validity of clicks by examining
a log of all clicks made over time in order to identify clicks that occur in
short periods of time that do not indicate a bona fide interest in the
underlying information. *Id.* (citing Ex. 1006 ¶ 125).

Petitioner also argues that the concept embodied in these claims is
abstract because it relates to the commercial activity of generating interest
by advertising. *Id.* at 48 (citing *Content Extraction & Transmission LLC* v.
Wells Fargo Bank, N.A., 776 F.3d 1343, 1347 (Fed. Cir. 2014)).
"Advertising, like the practices of hedging in *Bilski* and intermediated
settlement in *Alice*, is a fundamental economic practice, and methods
associated with advertising inevitably address the 'human activity' of
generating market interest in products or services." *Id.* (citing *Ultramercial,*

Inc. v. Hulu, LLC, 772 F.3d 709, 715 (Fed. Cir. 2014)). Patent Owner

disputes these contentions and asserts that the claims of '057 patent, as a

whole, are not directed to an abstract idea. PO. Resp. 125.

Patent Owner contends that the claims are "directed towards

collecting click-through traffic information to determine traffic quality." *Id.*

at 126. Patent Owner argues that the challenged claims include a series of

specific steps in a specific order that are more than "a mere abstraction, or a

mere mental idea, or an operation capable of being done by a human." *Id.* at

127. Further, Patent Owner contends that the challenged claims do not

preempt all click fraud detection techniques. *Id.* Patent Owner also

contends that Petitioner over simplifies the '057 patent's claims in order to

make them appear to be an abstract idea. *Id.* at 128–129.

First, we review the challenged claims to ascertain the "focus of the

claimed advance over the prior art" and to determine if the claim's

"character as a whole" is directed to excluded subject matter. *Affinity Labs*

of Tex., LLC v. DIRECTV, LLC, 838 F.3d 1253, 1257 (Fed. Cir. 2016). As

described in the specification, the "invention relates generally to network

computing of the type which occurs over the Internet and World Wide Web,

for example, and, more particularly, to a method of protecting the providers

of pay-per-click services from multiple illegitimate usages." Ex. 1001,

1:16–21. The method is described as follows:

> This invention describes pay-per-click and pay-per-impression
> arrangements periodically generating a code associated with the
> search-engine users. This code, preferably in the form of a
> number which could be encrypted or in clear, is compared to the
> user of the website, such that by observing a metric like the
> number of clicks for a given period of time, be it a short time or
> a longer period, such as a day or a week, the system can
> automatically determine if certain clicks are illegitimate. This

> allows the pay-per-click company to fairly invoice the merchants, thereby preventing fraudulent over use, and also identify which networks the fraudulent users use.

Id. at 2:60–3:5. Along these lines, claim 1 recites "[a] method for identifying invalid clicks" the steps of this claim may be summarized as follows: (1) generating a first code, (2) sending the first code to a device, (3) obtaining a second code from the device when a user clicks a link at a first time, (4) obtaining a third code from the device when the user clicks a second link at a second time and (5) determining whether the second click was invalid by examining the difference between the first and second time. Ex. 1001, 5:16–37. Dependent claims 5, 9, and 11 recite additional limitations including sending the second code to a device, storing the first code on a cookie, and encoding the second and third codes. Ex. 1001, 6:11–12, 6:24–26, 6:32–34. Based on our review of the claim language and the specification we determine that the challenged claims are directed to method for determining the validity of clicks based on the time elapsed between clicks. Patent Owner's assertion that the claims are directed to "collecting click-through traffic information to determine traffic quality" is not supported by the evidence. *See* PO Resp. 126. The only determination made by the claims is whether a click is invalid based on an examination of the time between clicks. *See* Ex. 1001, 5:35–37. Thus, Petitioner is correct in asserting that these claims are directed to the concept of detecting invalid clicks based on the time between two requests by the same device.

The question before us then is whether "the focus of the claimed advance over the prior art," i.e., detecting invalid clicks based on the time between two requests by the same device, renders the "claim's character as a whole," *id.* (citation omitted), patent ineligible subject matter. *See*

Intellectual Ventures I LLC v. Erie Indemnity Co., 850 F.3d 1315, 1325
(Fed. Cir. 2017) (citation omitted). Thus, we must determine whether the
claims are directed to "longstanding conduct that existed well before the
advent of computers and the Internet." *Id.* at 1327. What we are presented
with is a system for marking the occurrence of two events and making a
determination about the validity of the second occurrence based on the time
elapsed between occurrences. We find that this is a longstanding business
practice as exemplified by Petitioner's pharmacy example. *See* Pet. 47.
Patent Owner asserts that the '057 patent is different from the sort of fraud
detection that may be performed by a pharmacist because the challenged
claims are "able to handle millions of clicks in real time whether from the
same or different users." PO Resp. 90. We do not agree. The claims recite
only two data points, a time associated with click one and a time associated
with click two. Thus, a pharmacist comparing the dates or times for two
prescription requests is performing the same comparison as the one recited
in the claims. There is no requirement in the claims that the system be able
to handle millions of data points. Further, there is no discussion of the
determination being made in real time and to the contrary the specification
states that "by observing a metric like the number of clicks for a given
period of time, *be it a short time or a longer period, such as a day or a week*,
the system can automatically determine if certain clicks are illegitimate."
Ex. 1001, 2:64–3:2. In addition, while the claims recite the creation of codes
and encoded codes none of this is used by the claimed method to perform its
determination. That data merely is sent from one place to another while the
system marks the time associated with a click. The only information used in
the determination is the time of the two clicks. The claims are not directed

to improving the function of the computer or its associated software; instead, they are directed to using a computer to perform a well-known business task. *See Bancorp Servs., LLC v. Sun Life Assurance Co.,* 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter."). Therefore, we are persuaded that the challenged claims are directed to a longstanding economic task and not to an improvement to the computer functionality itself. *Cf. Enfish, LLC v. Microsoft Corp.,* 822 F.3d 1327, 1336 (Fed. Cir. 2016).

For all of the foregoing reasons, we find that Petitioner has established that claims 1, 5, 9, and 11 are directed to an abstract idea.

2. *Inventive Concept Analysis*

After determining that Petitioner has demonstrated that the claims are directed to a patent ineligible concept, the elements of each claim are considered "both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 134 S. Ct. at 2355. At this point we examine whether the claims do significantly more than simply describe the abstract method. *Ultramercial*, 772 F.3d at 715 (citing *Mayo* 132 S. Ct. at 1297). In other words, we must examine whether the claims contain an "inventive concept" to "transform" the claimed abstract idea into patent-eligible subject matter. *Id*. "A claim that recites an abstract idea must include 'additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea].'" *Alice*, 134 S. Ct. at 2357 (quoting *Mayo*, 132 S. Ct. at 1297). Those "additional features"

must be more than "well-understood, routine, conventional activity."
Ultramercial, 772 F.3d at 715.

Petitioner argues, with supporting documentation and testimony from
Mr. Gray, that each challenged claim fails to recite meaningful limitations
that would transform the claim into something more than the abstract idea to
which it is directed. Pet. 49–57. According to Petitioner, "the claims merely
recite a technological environment (interaction between 'server side' and a
'client side' computing device) and conventional data-gathering methods for
obtaining information about conduct in that environment." *Id.* at 49 (citing
Ex. 1006 ¶ 126).

Petitioner asserts that the claims recite an environment where a server
interacts with a client and provides a plurality of links associated with other
web pages. Pet. 49 (citing Ex. 1001, 5:17–37). In support of this
contention, Petitioner cites evidence from the specification, which we find to
be persuasive, showing that these elements were all in the prior art and thus,
could not be the inventive concept discussed in *Alice. Id.* at 49–50.
Petitioner also argues that the claimed first, second, and third codes do not
transform the subject matter of the claims into patentable subject matter
"because they add nothing but conventional extra-solution activity,
specifically data-gathering using generic computer implementation." *Id.* at
51 (citing *CyberSource*, 654 F.3d at 1370). Petitioner also contends that the
recited "generating," "sending," and "obtaining" steps are just "generic
functions to implement the abstract idea of determining whether conduct is
legitimate or invalid based on a period of time between two events." *Id.* at
52. As to the "determining" step, Petitioner asserts that this is "nothing
more than an instruction to apply the abstract idea to which the claims are

drawn." *Id.* at 53 (citing Ex. 1006 ¶ 133). Petitioner argues that nothing in the claims either individually or viewed as an ordered combination supplies an inventive concept sufficient to transform the embodied abstract idea into a patent-eligible invention. *See id.* at 54.

Patent Owner argues that the challenged claims define "a specific combination of technical computer functions" that remove the claims from the realm of mere abstract ideas. PO Resp. 138. Patent Owner asserts that the step of sending a code to a first device "transform[s] the conventional systems in the network computing to a different state to provide accuracy and robustness in detecting the invalid click." *Id.* at 136. In addition, Patent Owner contends that the step of obtaining a code "transform[s] the conventional systems in the network computing to a different state to improve efficiency in detecting fraudulent clicks." *Id.* at 137.

Contrary to Patent Owner's arguments, the recited codes do not cause any such "transformation." As recited in claim 1, a first code is sent to at least one device. After the code is sent, it is not referenced again in claim 1. There is no requirement in claim 1 that the code be received by any device, and the code is not used to perform any task. Claim 9 recites that the first code is stored as a cookie, but it does not state whether this storage occurs at the server or at one of the devices to which the code may have been sent. Here again, the code is not used to perform any task. Thus, the first code does not "transform[ ]" the claim. As to the second and third codes, they are obtained from a device and then they are not referenced again in claim 1. In claim 5, the second code is sent to at least one device, and in claim 11, the second and third codes are encoded. This is not sufficient to "transform" the claim. The steps of obtaining, sending, and encoding data are conventional

activity, and there is no support for Patent Owner's assertion that these conventional activities transform the claim into something patent eligible.

We determine that the subject matter of claims 1, 5, 9, and 11, when the elements of each claim are considered individually and as a whole, does not add meaningful limitations to the abstract idea of detecting invalid clicks based on the time between two requests by the same device. We are persuaded that the claimed methods do not require a particular apparatus beyond a general-purpose computer. *See* Ex. 1001, 4:25–28. Further the steps of "generating," "sending," and "obtaining" in claim 1 correspond to "basic calculation, storage, and transmission functions" that are within the capability of nearly every computer. *See Alice,* 134 S. Ct. at 2360. In addition, Petitioner has demonstrated that the underlying act of determining whether a request is valid could have been accomplished manually. *See* Pet. 48 (citing Ex. 1006 ¶ 125). Therefore, Petitioner has established that the limitations in the challenged claims do not transform the abstract concepts embodied in those claims into patentable subject matter.

For the reasons above, and having considered Petitioner's arguments and evidence and Patent Owner's Response, we determine that Petitioner has shown by a preponderance of the evidence that claims 1, 5, 9, and 11 are unpatentable as claiming patent-ineligible subject matter under 35 U.S.C. § 101.

D. Asserted Grounds of Obviousness

Petitioner contends that claims 1, 5, and 9 are unpatentable as obvious over IAB 1 and IAB 2 and claims 5 and 11 are unpatentable as obvious over IAB 1, IAB 2, and Laurent. Pet. 27–45. We determine Petitioner has demonstrated by a preponderance of the evidence that claims 1, 5, and 9

would have been obvious under 35 U.S.C. § 103 over IAB 1 and IAB 2 and that claims 5 and 11 would have been obvious over IAB 1, IAB 2, and Laurent.

1. *Overview of IAB 1 and IAB 2*

IAB 1 is a document containing online advertising reporting and auditing guidelines that was developed and published by Interactive Advertising Bureau ("IAB"). IAB 1's stated objective is to "establish[] detailed definitions for several key metrics used in Internet measurement and provide[] certain guidelines for Internet advertising sellers . . . and ad serving organizations for establishing consistent and accurate measurements." Ex. 1004. One portion of IAB 1 describes "Filtration Guidelines." *Id.* at 8. These guideline are used to conduct "[f]iltration of site or ad-serving transactions to remove non-human activity [and this] is highly critical to accurate, consistent counting." *Id.* One recommendation in the guidelines is to use "activity-based filtration ('pattern analysis') to identify robot-suspected activity." *Id.* In order to perform this pattern analysis, log files are examined to ascertain the number of ads, clicks, or pages accessed over a specified time period from one user. *Id.* One specific recommendation is to examine the interval of time between clicks or page/ad impressions from a user in order to determine whether the clicks are from robots. *Id.* at 9.

The guidelines found in IAB 1 are based on IAB 2, which is a study that was conducted by Price Waterhouse. Ex. 1004, 2 ("[t]he definitions and guidelines contained in [IAB 1] originated from Phase 1 of the Interactive Advertising Bureau's (IAB's) Ad Campaign Measurement Project, conducted from May through December 2001 ["IAB 2"]."). IAB 2 describes

the "Page Impression Delivery and Measurement Process." Ex. 1005, 39.
In this process the user accesses a web page and the web server renders
content to the user's browser and also creates or updates a cookie on the
user's device. *Id.*

The "Click Request and Counting Process" also is described in IAB 2.
Id. at 31. The Figure reproduced below is from page 19 of IAB 2.
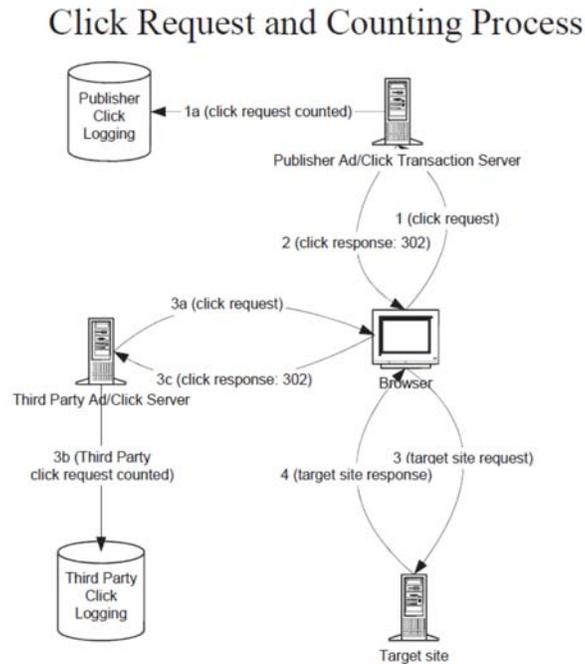
The Click Request and Counting Process is depicted in the Figure above. *Id.*
In this process, a user views an advertisement via a web browser and the
user clicks on that advertisement. *Id.* That browser click "causes [the]
browser to request a target site from the Publisher Ad/Click Transaction
Server." *Id.* The request sent to the Publisher Ad/Click Transaction server
typically includes the target site URL. *Id.* The Ad/Click Transaction server
records the click and responds to the browser by redirecting the browser to
the target site location. *Id.*

2. *Analysis of claims 1, 5, and 9 over IAB 1 and IAB 2*

As to independent claim 1, Petitioner asserts that the generation of the first code is taught by the cited prior art's discussion of a "'cost-per-action pricing model' that based revenue on click results." Pet. 30 (citing Ex. 1005, 8). This model is described as using cookies to track clicks. *Id.* (citing Ex. 1004, 5). Petitioner's declarant testifies that these cookies are generated by the web server and they uniquely identify the client on which the cookie has been stored. *Id.* (citing Ex. 1006 ¶ 105). As to the second code, Petitioner asserts that the request sent from the browser to the Publisher Ad/Click Transaction Server typically also includes a target site URL. *Id*. According to Petitioner, "this step clearly shows that the second code [the target site URL] is obtained from the client because it is included in the request from the client device [the browser]." Req. Reh'g 5; *see* Ex. 1006 ¶ 108. As to the third code, it is Petitioner's assertion that this code is also taught by the target site URL. *Id.* at 32. Petitioner contends that Patent Owner has stated that "if the codes identify the device, the two clicks from the same device would result in the first code being the same as the second code, because both codes identify the device being used by the user." *Id.* (quoting Ex. 1035, 1–2 (Brite Smart's[6] Opening Claim Construction Brief)). Petitioner extends this analysis (that was based on claim construction arguments for a related patent) to claim 1's third code by arguing that the third code would be the same as the second code if the two clicks were on the same advertisement. *Id.* Thus, Petitioner argues that IAB 2's disclosure of a

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[6] Brite Smart was the previous owner of the '057 patent. Subsequent to the filing of that claim construction brief, the '057 patent was assigned to Patrick Zuili.

target site URL included in the communication with the Publisher Ad/Click Transaction Server would have rendered obvious both the claimed second and third codes that are obtained after the user clicks an advertisement at a first and second time. Ex. 1006 ¶ 109. Finally, IAB 1 and IAB 2 are asserted to teach examining the difference between the first and second time through its disclosure of filtering out invalid clicks by reviewing the interval between clicks. Pet. 33–35 (citing Ex. 1004, 6, 8–9, Ex. 1005, 18–19, 28, 36).

Claims 5 and 9 depend from claim 1 and, respectively, further recite sending the second code to a device and storing the first code as a cookie. Petitioner relies on IAB 2 to teach sending the second code to a device. Pet. 35–36. Specifically, Petitioner contends that the second code ("target site URL") is sent to the user's browser by the Publisher Ad/Click Transaction Server. This URL is part of the redirection request that is sent in response to the communication sent to the server to facilitate the counting of clicks. *Id.* at 35; *see* Ex. 1005, 19). As to claim 9, Petitioner relies on IAB 2's disclosure of "[t]he web server respond[ing] to the user browser by checking for an existing cookie and creating one if one does not exist" to teach storing the first code as a cookie. Pet. 41 (quoting Ex. 1005, 27).

Petitioner argues that the teachings of IAB 1 and IAB 2 would have been combined because IAB 1 includes guidelines that were developed based on the study results published in IAB 2. Pet. 29; *See* Ex. 1004, 2 ("[t]he definitions and guidelines contained in [IAB 1] originated from Phase 1 of the Interactive Advertising Bureau's (IAB's) Ad Campaign Measurement Project, conducted from May through December 2001 ["IAB 2"]."). This assertion also is supported by testimony from Stephen Gray

where he notes that IAB published IAB 1 and IAB 2 together and cites a
press release from IAB to support his testimony. Ex. 1006 ¶ 93 (citing Ex.
1011, 1 ("The full text of both the IAB Ad Campaign Measurement and
Audit Guidelines and the IAB/PWC Online Ad Measurement Study can be
found at www.iab.net.")).

Patent Owner asserts that the cited references do not teach "generating
a first code on the server side computing device . . . sending said first code to
said at least one device over a communication network. PO Resp. 144.
According to Patent Owner, Petitioner "inconsistently pointed [] to cookies
as constituting a first code," and Patent Owner alleges that this is insufficient
because claim 1 does not discuss cookies. *Id.* at 146. Patent Owner
contends that Petitioner has equated code generation with cookies and that is
improper because cookies are used only to store the code after it has been
generated. *Id.* We do not agree with Patent Owner's analysis. Petitioner's
declarant, Stephen Gray, asserts that "[c]ookies are set by servers that store
the cookie in the client. That cookie is then transmitted back from the client
to the server upon subsequent accesses by the user to the origin server that
set the cookie." Ex. 1006 ¶ 60. Gray opines that one of ordinary skill in the
art would have known that "when a user clicks a cookie-enabled website, a
cookie is generated on the server and this cookie is stored on the client
computer along with all of the information." Ex. 1006 ¶ 105. We find that
this comports with IAB 1's description of measuring the number of visits to
a web site by using a "Unique Cookie with Heuristic." Ex. 1004, 5. IAB 1's
server stores "a small piece of information with a browser." *Id.* IAB 2 notes
that "[t]he web server responds to the user browser by checking for an
existing cookie *and creating one if one does not exist.*" Ex. 1005, 27

(emphasis added). As described in the IAB references, cookies are designed to be unique to each browser, or if possible, the cookies should be unique to each user. Ex. 1004, 5, Ex. 1005, 21–22, 27. We find that these disclosures from IAB 1 and IAB 2 would have taught one of ordinary skill in the art the claimed first code.

Patent Owner contends that the target site URL described in IAB 1 and IAB 2 does not teach the recited second and third codes. PO Resp. 87. Petitioner's declarant testifies that "[t]he target site URL included in the HTTP request corresponds to the 'second code' because it is obtained "from the device on the client side . . . when said at least one user performs a first click on at least one of said links associated with at least one of said other web pages at a first time," as recited in claim 1." Ex. 1006 ¶ 108 (citing Ex. 1001, 5:26–30. "Patent Owner argues that there is a huge difference between Target site URL and second or third code. Second and third codes are encoded in nature and at least includes network cartography, timestamps and number of previous clicks." *Id.* We are persuaded by Petitioner's arguments, and we disagree with Patent Owner's assertions because we find that they are not supported by the claims or the specification.

Claim 1 recites that the second and third codes are obtained from a device on the client side. Claim 11 recites that the second and third codes are encoded. The claims provide no further description of the codes. We do, however, glean from the specific recitation of encoding in dependent claim 11 that the codes in claim 1 are not necessarily encoded. Thus, we disagree with Patent Owner's assertion that the second and third codes "are encoded in nature." *See* PO. Resp. 87; *see also* Ex. 1001, 2:63–64 (noting

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that the code is "preferably in the form of a number which could be encrypted or in clear).

As to the other limitations that Patent Owner ascribes to the second and third codes, we find that Patent Owner's assertions are not supported by the specification. As described in the specification, "the search engine generates a code, preferably in the form of a number, utilizing a cookie. The number could be a serial number, a globally unique identifier (GUID) or a pseudo-random number." Ex. 1001, 3:61−64. Thus, the codes as described in the preferred embodiment could be a simple serial number without the additional information asserted by Patent Owner. This is supported by other portions of the specification. For example, the specification notes that the code could be modified to "include adding timestamp, identity information like MAC address of the device, other MAC addresses in the subnet of the device or any changes made to the MAC addresses." *Id.* at 4:12–14. Thus, the timestamp is an optional modification to the code, and we see no limitation in the claims that would require a timestamp. Similarly, the specification describes network cartography as including information, such as a MAC address, and as noted above, the MAC address is an optional modification to the code. *See id.* at 4:20–24. In addition, the specification states that "[w]hen the user clicks on a link within the browser 210, *the code 240 with information like* network cartography, timestamps and number of previous clicks, will be sent to the search engine 102 and will be interpreted by the pay-per-click system 120 to determine various parameters like the frequency of clicks from that user or device, interval between clicks etc." Ex. 1001, 4:41–47. We read this disclosure as meaning that the code may be transmitted along with additional information. The claims, however, do not

specify that any additional information be transmitted along with the code. Thus, we do not agree with Patent Owner's assertion that the code "includes network cartography, timestamps and number of previous clicks." *See* PO. Resp. 87.

For the reasons above, and having considered Petitioner's arguments and evidence and Patent Owner's Response, we find that Petitioner has shown by a preponderance of the evidence that claims 1, 5, and 9 are unpatentable under 35 U.S.C. § 103 as obvious over the teachings of IAB 1 and IAB 2.

3. *Analysis of claims 5 and 11 over IAB 1, IAB 2, and Laurent*

Petitioner challenges claims 5 and 11 over the teachings of IAB 1, IAB 2, and Laurent. Pet. 41–44. Claims 5 and 11 depend from claim 1. Claim 5 further recites "sending said second code to said at least one device." Laurent is a book authored by Simon St. Laurent that is titled *Cookies*. Ex. 1009. Laurent discloses that cookies are a tool that may be used to store information between web page retrievals and to provide a context for transactions. *Id.* at 2. Laurent provides an example of a system in which a target site URL is sent to a client in a redirect response. Pet. 42 (citing Ex. 1009, 101; Ex. 1006 ¶ 120). Petitioner argues that this disclosure when viewed in conjunction with the teachings of IAB 1 and IAB 2 would have taught sending the second code to a device as recited in dependent claim 5. Claim 11 depends from claim 1 and further recites that the second and third code are encoded. Petitioner relies upon Laurent's disclosure of encrypted cookies to teach this limitation. Pet. 43–44 (citing Ex. 1009, 22).

Petitioner persuasively argues that one of ordinary skill in the art would have combined the teachings of IAB 1, IAB 2, and Laurent because

the references all "disclose using cookies and target site URLs and are discussing the same functionality." Pet. 43 (citing Ex. 1009, 101; Ex. 1005, 19; Ex. 1006 ¶ 121). Gray testifies that Laurent discloses one option for secure communications and it would have been obvious to one of ordinary skill to combine Laurent with the IAB references because the combination of these references would "ensure secure communication between the client and the server disclosed in the IAB Study." Ex. 1006 ¶ 122. He further opines that "the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. This modification could be made with routine skill and without the expenditure of any unreasonable resources." Ex. 1006 ¶ 121. We are persuaded by Petitioner's reasonable argument and supporting evidence.

In addition to the arguments discussed above in regards to the challenges based on IAB 1 and IAB 2, Patent Owner asserts as to claim 5 that "[n]owhere does Laurent teach or suggest that a code has been sent to a device." PO Resp. 158–159. Petitioner contends that

> Laurent discloses that "[t]he entryway to the maze checks to see if the user already has a MazeID cookie. If there is one, the entryway redirects the user to the next page, submit.pl, which presents a welcome to the maze." Ex. 1009 at 101. Thus, Laurent explains that upon a subsequent visit to the same site that set the "MazeID" cookie, the server detects the cookie and redirects the user by sending a target site URL to the user device. *See id.* ("redirect ('http:l/127.0.0.1/cgi-bin/maze/submit.pl');" *see also* Ex. 1006, Gray Decl. ¶ 120. Thus, Laurent explicitly discloses sending a second code to said at least one device by disclosing that a target site URL is sent to the client in a redirect response.

Pet. 42. We find Petitioner's explanation to be persuasive. As to the cited portion of Laurent, Patent Owner asserts that "[c]learly, Laurent teach[es] or suggest[s] that whether a user possesses a MazeID, and in an event the user has the MazeID, user is redirected to the webpage." PO Resp. 158. Patent Owner's assertions, however, overlook the import of the cited redirect operation. Ex. 1009, 101 ("redirect('http:l/127.0.0.1/cgi-bin/maze/submit.pl')"). Petitioner cites the "redirect" as evidence that Laurent sends the target site URL to at least one device. Ex. 1006 ¶ 120. We find that the redirect command contains the target site URL and that target site URL ("second code") is sent to the client in order for the client to navigate to the next web page. Thus, we are persuaded that Petitioner has demonstrated that the disputed limitation is taught by the cited art.

For the reasons above, and having considered Petitioner's arguments and evidence and Patent Owner's Response, we determine that Petitioner has shown by a preponderance of the evidence that claims 5 and 11 are unpatentable under 35 U.S.C. § 103 as obvious over the teachings of IAB 1, IAB 2, and Laurent.

III. CONCLUSION

Based on the arguments in the Petition, as well as the evidence of record, we determine that Petitioner has demonstrated by a preponderance of the evidence that claims 1, 5, 9, and 11 are unpatentable over 35 U.S.C. § 101. Petitioner has demonstrated by a preponderance of the evidence that claims 1, 5, and 9 would have been obvious over IAB 1 and IAB 2 and claims 5 and 11 would have been obvious over IAB 1, IAB 2, and Laurent.

<div align="center">IV. ORDER</div>

For the reasons given, it is

ORDERED that claims 1, 5, 9, and 11 of the '057 patent are unpatentable;

FURTHER ORDERED that, because this is a final written decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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