Trials@uspto.gov
571-272-7822

Paper 17
Entered: August 10, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC.,
Petitioner,

v.

AT HOME BONDHOLDERS' LIQUIDATING TRUST,
Patent Owner.

Case IPR2015-00662[1]
Patent 6,014,698

Before KARL D. EASTHOM, JUSTIN T. ARBES, and MIRIAM L. QUINN, *Administrative Patent Judges*.

ARBES, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

[1] Case IPR2015-00666 has been consolidated with this proceeding.

I. BACKGROUND

Petitioner Google Inc. filed two Petitions requesting *inter partes* review of claims 1–3, 5–7, 9, 11–20, 22–31, 34–39, 41–47, and 49 of U.S. Patent No. 6,014,698 (Ex. 1001, "the '698 patent")[2] pursuant to 35 U.S.C. §§ 311–19, as listed in the following chart.

Case Number	Challenged Claims	Petition
IPR2015-00662	1–3, 5–7, 9, 11–16, and 23	Paper 2 ("Pet.")
IPR2015-00666	17–20, 22–31, 34–39, 41–47, and 49	Paper 2 ("-666 Pet.")

On August 14, 2015, we instituted an *inter partes* review of claims 1–3, 5–7, 9, 11–20, 22, 24–31, 34–39, 41–47, and 49 on two grounds of unpatentability and consolidated Case IPR2015-00666 with Case IPR2015-00662 (Paper 14, "Dec. on Inst."). Patent Owner At Home Bondholders' Liquidating Trust filed a Patent Owner Response (Paper 22, "PO Resp."), and Petitioner filed a Reply (Paper 34, "Reply"). A combined oral hearing for this proceeding and Case IPR2015-00657 was held on April 7, 2016, and a transcript of the hearing is included in the record (Paper 39, "Tr.").

We have jurisdiction under 35 U.S.C. § 6(c). This final written decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has not shown by a preponderance of the evidence that claims 1–3, 5–7, 9, 11–20, 22, 24–31, 34–39, 41–47, and 49 are unpatentable.

[2] Unless otherwise specified, references to papers and exhibits are to those filed in Case IPR2015-00662.

A. The '698 Patent[3]

The '698 patent describes a "system for the storage, management, and delivery of information on a computer network" that provides for the "efficient and accurate counting of advertising information displayed on terminals connected to the computer network." Ex. 1001, col. 1, ll. 19–23. According to the '698 patent, prior art systems could not count accurately the number of times a banner (e.g., a graphic of an advertisement) is displayed to users due to the use of caching. *Id.* at col. 3, ll. 16–37, col. 6, ll. 22–29, col. 7, ll. 9–20. For example, when a web page and associated banner are stored on a user's terminal or an intermediary proxy server connected to the user's terminal, a subsequent request for the information may be satisfied from the cache, such that no request is forwarded over the computer network to a server and the server cannot obtain an accurate count of banner displays. *Id.* at col. 13, ll. 1–14, Fig. 3. Prior art systems attempted to overcome this problem by prohibiting caching on the user's terminal or proxy server, but doing so introduced other problems, such as increased network traffic and increased retrieval time due to the need to retransmit the information over the network every time it is requested. *Id.* at col. 13, l. 40–col. 14, l. 44.

The '698 patent states that its disclosed system is able to count accurately banner displays while at the same time taking advantage of the performance gains obtained from caching. *Id.* at col. 14, ll. 45–57. The user's terminal first requests and receives a web page that has an associated banner. *Id.* at col. 9, ll. 38–49. The terminal then sends an initial banner

[3] The '698 patent is a continuation-in-part of U.S. Patent No. 6,286,045 B1 ("the '045 patent"), which is being challenged in Case IPR2015-00657.

request signal, which may include a general content Uniform Resource Locator ("URL") address that does not specify which banner is to be displayed. *Id.* at col. 17, ll. 34–38, Fig. 4 (step 112). Because software on the user's terminal (e.g., web browser) or a proxy server might block the initial banner request signal if the banner had been cached previously, the strings "cgi-bin" and "?" may be included in the signal to "prevent[] the terminal from blocking" the signal. *Id.* at col. 19, ll. 24–57. Then, rather than returning the banner itself (as in the prior art), the recipient of the initial banner request signal selects which banner is to be displayed on the terminal, increments the count of displays, and returns a banner address to the user's terminal. *Id.* at col. 15, ll. 42–56, Fig. 4 (steps 113 and 114). The return information may be, for example, a specific content URL address in the form of a "Status HTTP 302 Redirect (temporary) signal" indicating where the selected banner is stored. *Id.* at col. 17, ll. 38–49. The user's terminal then retrieves the banner, either from a local cache or proxy server cache, or a remote server if the banner had not been cached. *Id.* at col. 15, l. 60–col. 16, l. 34. In that way, the disclosed system is able to maintain an accurate count of banner displays, while also retaining the performance benefits of caching. *Id.* at col. 14, ll. 45–57.

B. Illustrative Claim

Claim 1 of the '698 patent recites:

> 1. A method for delivering information to a terminal connected to a computer network, wherein information delivered over the computer network from a primary server to the terminal contains references to other information to be delivered to the terminal from the primary server or from one or

more other servers connected to the computer network, comprising:

serving a first portion of information to the terminal, wherein said first portion of information contains a reference to a second portion of information;

sending a first request signal from the terminal to the primary server requesting a location address for said second portion of information from which said second portion of information can be served to the terminal, wherein said first request signal cannot be blocked from reaching said primary server by either the terminal or any intermediary device located topologically between the terminal and the primary server as a result of previous caching or storing of said first portion of information or said second portion of information by the terminal or said intermediary device;

sending a location signal from the primary server to the terminal providing said location address of said second portion of information; and

determining if said second portion of information is already stored on the terminal and, if said second portion of information is not already stored on the terminal, sending a second request signal from the terminal containing said location address of said second portion of information and requesting that said second portion of information be served to the terminal for display on the terminal, and, if said second portion of information is already stored on the terminal, displaying said second portion of information on the terminal.

C. Prior Art

The pending grounds of unpatentability in the instant *inter partes* review are based on the following prior art:

U.S. Patent No. 5,796,952, filed Mar. 21, 1997, issued Aug. 18, 1998 (Ex. 1014, "Davis");

U.S. Patent No. 5,933,811, filed Aug. 20, 1996, issued Aug. 3, 1999 (Ex. 1012, "Angles");

U.S. Patent No. 5,948,061, filed Oct. 29, 1996, issued Sept. 7, 1999 (Ex. 1013, "Merriman"); and

T. Berners-Lee *et al*., HYPERTEXT TRANSFER PROTOCOL – HTTP/1.0, HTTP Working Group INTERNET-DRAFT, Feb. 19, 1996 (Ex. 1008, "HTTP1.0").[4]

D. Pending Grounds of Unpatentability

The instant *inter partes* review involves the following grounds of unpatentability:

References	Basis	Claims
Angles, Merriman, and HTTP1.0	35 U.S.C. § 103(a)	1–3, 5–7, 9, 11–20, 22, 24–30, 34–39, and 41–47
Angles, Merriman, HTTP1.0, and Davis	35 U.S.C. § 103(a)	31 and 49

II. ANALYSIS

A. Claim Interpretation

The Board interprets claims using the "broadest reasonable construction in light of the specification of the patent in which [they] appear[]." 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 as the claim interpretation standard to be applied in *inter partes* reviews). Under this standard, we interpret claim terms using "the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking

[4] When citing HTTP1.0, we refer to the page numbers at the bottom of each page. *See* 37 C.F.R. § 42.63(d)(2).

into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant's specification." *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). We presume that claim terms have their ordinary and customary meaning. *See Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016) ("Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history."); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) ("The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question." (internal quotation marks omitted)). A patentee, however, may rebut this presumption by acting as his or her own lexicographer, providing a definition of the term in the specification with "reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

In the Decision on Institution, we interpreted the term "banner" in the challenged claims to mean information displayed in conjunction with a web page, and concluded that no further interpretation was necessary.[5] Dec. on Inst. 7–9. The parties do not dispute this interpretation in their Patent Owner Response and Reply, and we do not perceive any reason or evidence that

[5] We also interpreted "content specific request signal" in dependent claims 7 and 20, and resolved various antecedent basis issues in dependent claims 9 and 23. Dec. on Inst. 9–12. Because Petitioner has not shown, by a preponderance of the evidence, that the challenged independent claims are unpatentable for the reasons explained herein, we need not revisit the interpretation of the dependent claims.

compels any deviation from the earlier interpretation. Accordingly, we adopt our previous analysis for purposes of this Decision.

B. Level of Ordinary Skill in the Art

> Section 103(a) forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007) (quoting 35 U.S.C. § 103(a)). Petitioner argued in its Petition that a person of ordinary skill in the art would have had "at least (a) a Bachelor of Science degree in computer science and/or a similar field or (b) at least 3 years of experience in web-based information management and delivery systems." Pet. 14 (citing Ex. 1003 ¶¶ 13–14, Ex. 1005 ¶ 13). In its Preliminary Responses, Patent Owner disputed this definition because it would encompass "a person with 3 years of experience designing web pages," and instead proposed a person with "at least (a) a Bachelor of Science degree in computer science or a similar field or (b) 3 years of experience in *programming* web-based information management and delivery systems." Paper 10, 17. We agreed with Patent Owner for purposes of the Decision on Institution. Dec. on Inst. 17–18.

During trial, the parties continued to dispute whether "programming" web-based information management and delivery systems is part of the level of ordinary skill in the art. *See* PO Resp. 32; Reply 19–20. We conclude that it is. The '698 patent describes a "system for the storage, management, and delivery of information on a computer network," in particular a system

that provides for "efficient and accurate counting of advertising information displayed on terminals connected to the computer network." Ex. 1001, col. 1, ll. 18–22. It discloses an exemplary computer network with terminals, web servers, and proxy servers that communicate with each other, and describes various problems and solutions, all of which pertain to how the system components are programmed to facilitate the accurate counting of advertising information. *Id.* at col. 5, l. 16–col. 14, l. 44, Figs. 1, 3, 4. For example, the '698 patent discloses that in prior art systems, "not all requests for . . . banner information are forwarded by the user's terminal or respective proxy server," resulting in the inaccurate counting of banner displays, and one potential solution is to program the system to "prevent banner information from being stored or cached on either the user's terminal or the proxy server." *Id.* at col. 13, ll. 1–57. Doing so, however, increases network traffic and reduces the "speed at which the information is displayed on the user's terminal." *Id.* at col. 13, l. 58–col. 14, l. 31. The disclosed method purports to solves the problems in the prior art by accurately counting banner displays while at the same time "taking advantage of the performance gains possible with caching proxy servers." *Id.* at col. 14, ll. 45–57. The cited prior art similarly discloses problems and potential solutions that pertain to how web-based information management and delivery systems are programmed to operate. *See, e.g.*, Ex. 1012, col. 7, l. 43–col. 16, l. 44; Ex. 1013, col. 2, l. 59–col. 4, l. 43.

Based on our review of the '698 patent, the types of problems and solutions described in the '698 patent and cited prior art, and the testimony of the parties' declarants, we conclude that a person of ordinary skill in the art would have had at least a bachelor's degree in computer science or a

similar field, or three years of experience in programming web-based information management and delivery systems. We apply this level of ordinary skill in the art for purposes of this Decision.[6]

C. Obviousness Ground Based on Angles, Merriman, and HTTP1.0

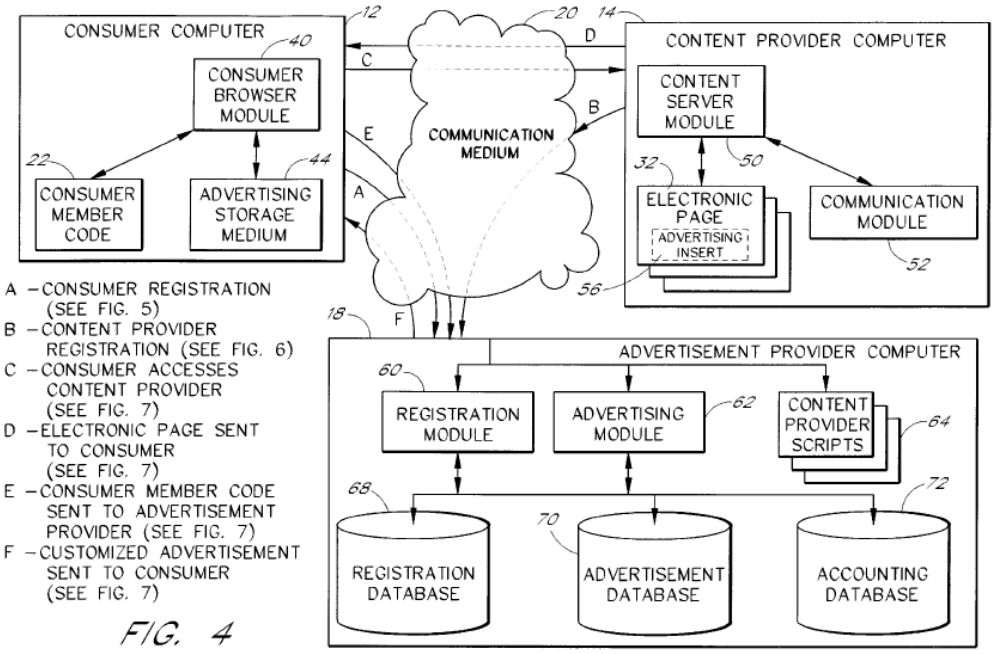
Petitioner argues that claims 1–3, 5–7, 9, 11–20, 22, 24–30, 34–39, and 41–47 are unpatentable over Angles, Merriman, and HTTP1.0 under 35 U.S.C. § 103(a). *See* Pet. 16–39; -666 Pet. 16–38. We have reviewed the Petitions, Patent Owner Response, and Reply, as well as the evidence discussed in each of those papers, and are not persuaded, by a preponderance of the evidence, that the challenged claims are unpatentable based on the asserted ground.

1. Angles

Angles describes a method and system for "delivering customized electronic advertisements in an interactive communication system." Ex. 1012, Abstract. Angles's system interconnects multiple consumer computers, content provider computers, and Internet provider computers

[6] Given the level of ordinary skill in the art set forth above, we are not persuaded that the testimony of Petitioner's declarant, Peter Kent, is entitled to little or no weight, as Patent Owner argues, merely because Mr. Kent "admits that he has little experience programming web servers." *See* PO Resp. 32. Rather, we are persuaded by Petitioner's arguments that Mr. Kent has been programming web sites (including e-commerce sites) since 1993, worked with scripting languages, and has authored books on programming JavaScript—all of which fall under the rubric of experience in programming web-based information management and delivery systems. *See* Reply 19. Nevertheless, whether an expert's opinion is entitled to any particular weight is an inquiry we exercise on an issue-by-issue basis.

with an advertisement provider computer. *Id.* Figure 4 of Angles is reproduced below.



As depicted in Figure 4, consumer computer 12 registers with advertisement provider computer 18 (event A), which assigns the consumer a consumer member code 22, content provider computer 14 registers with advertisement provider computer 18 (event B), and consumer computer 12 establishes a communication link with content provider computer 14 (event C) to request information. *Id.* at col. 16, l. 56–col. 18, l. 41.

Content provider computer 14 sends electronic page 32 to consumer computer 12 (event D). *Id.* at col. 12, ll. 51–60, col. 18, l. 41–43. Electronic page 32 contains advertising insert 56, which is a place-holder configured to contain customized advertisement 30 generated by advertisement provider computer 18. *Id.* at col. 12, ll. 54–58. Advertising insert 56 contains advertisement request 26, which references a content provider Common Gateway Interface (CGI) script 64 that exists on advertisement provider

computer 18. *Id.* at col. 12, l. 67–col. 13, l. 4. "Preferably, the advertising request 26 is an HTML [HyperText Markup Language] tag which identifies 1) the content provider script and 2) the content provider member code and 3) the Internet address or URL of the advertisement provider computer 18." *Id.* at col. 13, ll. 4–7. Consumer computer 12 processes advertising insert 56 and, based on the HTML tag, sends a signal to advertisement provider computer 18 requesting execution of the CGI script (event E). *Id.* at col. 3, ll. 39–51, col. 18, l. 44–57, col. 19, ll. 31–40. Consumer computer 12 also provides consumer member code 22 to advertisement provider computer 18. *Id.* at col. 18, l. 59–60.

Advertisement provider computer 18 executes content provider script 64, identifies the consumer, identifies the content provider being accessed by the consumer, selects a particular advertisement for the consumer, and sends customized advertisement 30 to consumer computer 12 (event F). *Id.* at col. 8, ll. 56–61, col. 13, ll. 16–19, col. 18, l. 61–col. 19, l. 1. Consumer computer 12 merges and displays electronic page 32 with customized advertisement 30. *Id.* at col. 8, ll. 62–65, col. 19, ll. 1–3.

Angles further describes an embodiment in which consumer computer 12 includes advertising storage medium 44, which can be a compact disk drive and compact disk, to store a variety of advertisements that can be retrieved and displayed by consumer computer 12. *Id.* at col. 11, ll. 50–55. In this embodiment, an "advertisement command" is returned in event F, rather than customized advertisement 30. *Id.* at col. 11, l. 66–col. 12, l. 2, col. 23, ll. 28–56. The advertisement command "identifies a particular location on the advertising storage medium 44, such as the particular track

and sector where an advertisement is located," and consumer computer 12 retrieves the advertisement from advertising storage medium 44. *Id.*

2. Merriman

Merriman describes a method and system for "targeting the delivery of advertisements over a network such as the Internet." Ex. 1013, Abstract. Figure 1 of Merriman is reproduced below.

FIG. 1

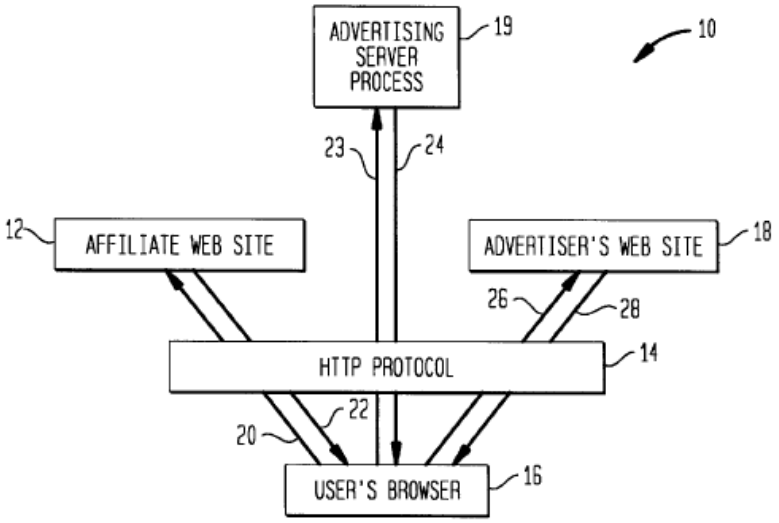


Figure 1 depicts affiliate web site 12, advertisement ("ad") server web site 19, and advertiser web site 18. *Id.* at col. 2, ll. 59–62. A user operates a web browser to generate request 20 directed to affiliate web site 12. *Id.* at col. 3, ll. 24–28. Affiliate web site 12 sends messages 22 containing the information available at the particular web site for the requested page to be displayed by user browser 16, except for one or more advertising objects, such as banner advertisements. *Id.* at col. 3, ll. 30–34. Instead of sending the advertising objects, affiliate web site 12 sends a link to the node running advertising server process 19, where the link refers to an inline image, such

as a banner. *Id.* at col. 3, ll. 34–41. User browser 16 sends message 23 to advertising server process 19 to access the object. *Id.* at col. 3, ll. 41–52.

Upon receiving message 23, advertising server process 19 determines which advertisement or other object to provide to user browser 16 and transmits message 24 containing the object. *Id.* at col. 3, ll. 52–57. The advertisement object then is displayed "as a composite of the received affiliate's web page plus the object transmitted back by the advertising web server." *Id.* at col. 3, ll. 59–63. "As part of the 'click through' process, when the user clicks on the banner or other advertising object displayed by the user's browser 16, the user's browser again transmits a message [23] to the ad server." *Id.* at col. 3, ll. 64–67. Advertising server process 19 notes the address of the computer that generated message 23 and transmits back the URL of the advertiser's web page so that user browser 16 can generate message 26 to contact advertiser web site 18. *Id.* at col. 3, l. 67–col. 4, l. 5.

3. HTTP1.0

HTTP1.0 is a working document of the Hypertext Transfer Protocol (HTTP) Working Group. Ex. 1008, 1. The document describes specifications for the protocol referred to as "HTTP/1.0," and describes a cache as a "program's local store of response messages and the subsystem that controls its message storage, retrieval, and deletion," which "stores cachable responses in order to reduce the response time and network bandwidth consumption on future, equivalent requests." *Id.* at 1, 5. HTTP1.0 states that "[a]ny client or server may include a cache." *Id.* at 5.

HTTP1.0 further discloses the use of a "Pragma general-header field." *Id.* at 35. "All pragma directives specify optional behavior from the

viewpoint of the protocol; however, some systems may require that behavior be consistent with the directives." *Id.* One pragma directive is a "no-cache" directive, which is described as follows:

> When the "no-cache" directive is present in a request message, an application should forward the request toward the origin server even if it has a cached copy of what is being requested. This allows a client to insist upon receiving an authoritative response to its request. It also allows a client to refresh a cached copy which is known to be corrupted or stale.

Id. at 35–36.

4. Whether the Cited References Teach All Limitations of the Challenged Claims

a. Claim 1

i. Petitioner's Contentions

Petitioner argues that claim 1 would have been obvious over Angles, Merriman, and HTTP1.0, relying on Angles for the majority of the limitations in the claim. Pet. 16–31. Petitioner argues that Angles teaches serving a "first portion of information" (i.e., web page) to consumer computer 12 that includes a reference to a "second portion of information" (i.e., banner advertisement), sending a non-blockable "first request signal" (i.e., a CGI request) from consumer computer 12 to advertisement provider computer 18, and returning a "location signal" (i.e., advertisement command) that allows consumer computer 12 to retrieve the advertisement from advertising storage medium 44. *Id.* at 16–18, 23–28.

Although Angles retrieves the advertisement from local storage, Petitioner argues that it would have been obvious instead to have the location signal point to an external storage device, such as another server.

Id. at 18–21, 26–30. Specifically, Petitioner contends that it would have been obvious to "replace [Angles's] advertising command identifying a location of an advertisement on local storage with Merriman's HTTP redirect message identifying a location of an advertisement on networked storage," such that consumer computer 12 would send a "second request signal" to a second advertisement provider computer to retrieve the advertisement. *Id.* at 18–21. Petitioner also argues that, before doing so, "a determination must be made regarding whether the advertisement has already been cached locally on the consumer computer," and it would have been obvious to use a "standard cache function" based on HTTP1.0. *Id.* at 21–23, 28–30. Thus, Petitioner's obviousness theory is premised on Angles teaching most of the limitations of claim 1, and a person of ordinary skill in the art having reason to modify Angles's system to (1) use an HTTP redirect message pointing to an external device, as taught by Merriman, instead of Angles's advertisement command pointing to local storage, and (2) determining if the advertisement is stored locally in a cache, as taught by HTTP1.0, prior to sending a request to the external device to retrieve the advertisement.[7]

[7] We note that Petitioner incorrectly recites the last limitation of claim 1 as "serving said second portion of information to the terminal," rather than "if said second portion of information is already stored on the terminal, displaying said second portion of information on the terminal." *See* Pet. 30–31. Petitioner explains elsewhere in its Petition, however, how the advertisement would be displayed in the modified Angles system. *See id.* at 18, 21–23 (arguing that "if there is a cached local copy of the customized advertisement in the consumer computer, . . . the cached customized advertisement is served and displayed on the consumer's computer").

We focus on the following limitation of claim 1 in particular, which we refer to generally as "the non-blockable first request limitation," because in this case it is dispositive:

> sending a first request signal from the terminal to the primary server requesting a location address for said second portion of information from which said second portion of information can be served to the terminal, wherein said first request signal cannot be blocked from reaching said primary server by either the terminal or any intermediary device located topologically between the terminal and the primary server as a result of previous caching or storing of said first portion of information or said second portion of information by the terminal or said intermediary device.

Petitioner argues that Angles teaches the non-blockable first request limitation by describing the use of an advertisement request. Pet. 17–18 ("The advertisement request in Angles is an unblockable signal."), 24–27. In particular, Petitioner argues that Angles's consumer computer 12 sends a request to invoke content provider CGI script 64 (event E in Figure 4) to advertisement provider computer 18, which executes the script, selects an advertisement appropriate for the requesting user, and returns to consumer computer 12 an advertisement command (event F in Figure 4) that identifies a particular location on advertising storage medium 44 where the advertisement may be retrieved. *Id.* As support for its position that the use of a CGI request in Angles prevents blocking as a result of previous caching or storing, Petitioner cites the following disclosures in Angles:

> [T]he embedded advertisement request 26 directs the advertisement provider computer 18 to execute a content provider script (not shown). . . .
>
> . . . The advertisement request 26 references a content provider CGI script 64 which exists on the advertisement provider computer 18.

Ex. 1012, col. 7, l. 65–col. 8, l. 1, col. 13, ll. 2–4; *see* Pet. 26. According to Petitioner, the CGI request in Angles is "one of the exact same types of request that is described in the '698 patent." Pet. 17. Petitioner also relies on the following testimony from its declarant, Mr. Kent:

> [A person of ordinary skill in the art] would have recognized that a server (such as the advertisement provider computer in Angles) executes a requested CGI script to dynamically generate content (e.g., the redirecting advertisement command identifying a customized advertisement) and the resulting content would not be cached by the consumer computer or by the intermediate proxy.
>
> Because the consumer computer or the proxy would not maintain copies of the requested dynamic content (*e.g.*, the redirecting advertisement command), a [person of ordinary skill in the art] would also have recognized that referencing a CGI script in the advertising request prevents the advertising request—*i.e.*, from being "cache-blocked" from reaching the advertisement provider computer 18.

Ex. 1003 ¶¶ 58–59.[8]

ii. Petitioner Has Not Shown That the Cited References Teach the Non-Blockable First Request Limitation

For the reasons explained below, we conclude that Petitioner has not shown, by a preponderance of the evidence, that the cited references teach the non-blockable first request limitation of claim 1. We begin by noting that Angles does not state expressly that the advertisement request to execute the CGI script, which is sent by the consumer computer, cannot be "blocked" from reaching the advertisement provider computer due to

[8] Some of Petitioner's citations to Mr. Kent's declaration appear to be incorrect. *See, e.g.*, Pet. 17–18, 26 (citing Ex. 1003 ¶¶ 60–61). Nevertheless, we are able to identify the relevant portions, as stated herein.

previous caching or storing of the electronic page or advertisement. *See, e.g.*, Ex. 1012, col. 13, ll. 2–4. Thus, the dispositive issue is whether a person of ordinary skill in the art reading the disclosure of Angles would have understood the advertisement request to be non-blockable. *See* Tr. 36:1–9 (Petitioner acknowledging that its position is not that the advertisement request "must" operate in such a way as to be non-blockable, but rather that "a person of ordinary skill in the art reading [Angles] would have understood it to be that way"). We are not persuaded that an ordinarily skilled artisan would have understood Angles's advertisement request to be non-blockable.

Angles merely discloses that advertisement request 26, which is sent to the consumer computer with the electronic page, references a "CGI script." Ex. 1012, col. 12, l. 54–col. 13, l. 4. As both parties acknowledge, not all requests to execute a CGI script are non-blockable due to previous caching. *See* PO Resp. 26–27; Tr. 28:5–10, 44:23–45:18. Whether such a request is non-blockable depends on the particular syntax used for the request. *See* PO Resp. 26–27; Tr. 45:3–13. Patent Owner's declarant, Kevin C. Almeroth, Ph.D., explains that applications use certain heuristics to designate whether a response will be cacheable or not, one of which is the set of strings "cgi-bin" and "?". Ex. 2015 ¶¶ 87–88 (citing Ex. 1008, 7). This is consistent with the '698 patent, which discloses that including variable components in the request (e.g., a random number) or the strings "cgi-bin" and "?" will prevent the request from being blocked due to caching. *See* Ex. 1001, col. 18, l. 30–col. 19, l. 6, col. 19, ll. 49–53 ("the use of 'cgi-bin' and '?' strings in the signal sent by the terminal . . . prevents the terminal from blocking the signal"), claim 8 ("The method of claim 1,

wherein said first request signal includes the strings 'cgi-bin' and '?'."); *see also* Ex. 2008.008 (2001 document stating that "[m]any proxy servers recognize tags with question marks as elements that must not be cached").

Angles, however, does not disclose the syntax of the advertisement request. *See* PO Resp. 27. It does not state that the request includes, for example, any variable component like a random number, or the strings "cgi-bin" and "?".[9] Angles only specifies that advertisement request 26 references a "CGI script" and is preferably an HTML tag that identifies the script, the content provider member code, and the URL of the advertisement provider computer. *See* Ex. 1012, col. 13, ll. 2–7. Angles is silent on, and Petitioner does not show, that any of the parameters in Angles's advertisement request change at all, such that the request would operate as Petitioner argues—a non-blockable request. *See, e.g.*, Tr. 50:13–52:9 (Patent Owner arguing that under Petitioner's theory of how Angles operates, using a GET command, the advertisement request would be blockable). That is, we can only infer from Angles that the format of the advertisement request is sufficient to execute, at the advertisement provider computer, a CGI script associated with the content provider member code. The disclosure of Angles, however, suggests nothing more regarding whether blocking of the advertisement request due to previous caching

[9] To be sure, claim 1 does not require particular content for the first request signal, such as "cgi-bin" and "?"; it only requires that the first request signal be non-blockable as a result of previous caching or storing. *See* Reply 18. The fact that Angles says nothing about the syntax of its reference to the CGI script, though, supports Patent Owner's position that a person of ordinary skill in the art would not have assumed automatically that the request includes information making it non-blockable.

would or would not occur. Thus, the actual disclosure of Angles is inconclusive as to whether the advertisement request is non-blockable.

Patent Owner contends that, contrary to Petitioner's view, a person of ordinary skill in the art would not have understood Angles's advertisement request to be non-blockable due to previous caching, and submits evidence supporting its position. *See* PO Resp. 21–30. A 1996 textbook on CGI programming states the following:

> Most browsers cache (or store internally) the documents you access. This is a very positive feature that saves a lot of resources; the browser doesn't have to retrieve the document everytime you look at it. However, it can be a slight problem when you are dealing with virtual documents created by CGI programs. *Once the browser accesses a virtual document produced by a CGI program, it will cache it. The next time you try to access the same document, the browser will not make a request to the server, but will reload the document from its cache.*

Ex. 2007.009 (emphasis added). The textbook provides an example script that outputs a web page displaying the date and time, where the browser will cache the response and retrieve it from the cache when the user clicks the link to call the CGI script a second time.[10] *Id.*

Similarly, a 1995 publication of the World Wide Web Consortium (W3C) confirms that a URL did not have to include the strings "cgi-bin" and "?" to call a CGI script. Ex. 2009.001–.002. Rather, a normal URL prefix

[10] The textbook explains that the caching may be avoided by the script including the "Expires" or "Pragma" headers in the web page output, but "some browsers don't handle these headers correctly." Ex. 2007.010. Regardless, Petitioner does not argue that the output from the CGI script in Angles (or any other output disclosed in Merriman or HTTP1.0) would have included such headers.

(e.g., "/htbin/") could be mapped to a directory with CGI scripts (e.g., "/usr/etc/cgi-bin/"), in which case the request would be cache-blockable. *See id.* Angles's advertisement request, therefore, could request execution of a CGI script on the advertisement provider computer without using the strings "cgi-bin" and "?" that would make the request non-blockable. Again, Angles does not say specifically how its advertisement request is drafted. We agree with Patent Owner and Dr. Almeroth that these documents contradict Petitioner's position and show that a person of ordinary skill in the art would not have assumed automatically that Angles's advertisement request is non-blockable due to previous caching.[11] *See* PO Resp. 28–30; Ex. 2015 ¶¶ 90–93; Tr. 99:13–101:13 (Petitioner acknowledging that the W3C publication discloses one way to reference a CGI script without using "cgi-bin").

Petitioner discounts Patent Owner's evidence in its Reply, arguing that it is not representative of how Angles operates and that the "default" understanding for referencing a CGI script, like in Angles, would be to use a "cgi-bin" string and that such use renders the request non-blockable due to

[11] The parties also devote part of their briefing to what type of HTTP request the advertisement request in Angles would be (e.g., GET or POST). Patent Owner argues that it would be a POST request, but if it was a GET request, it would be blockable by a cache. PO Resp. 9–11, 16, 21–32; Tr. 49:12–50:24, 59:3–61:24. Petitioner contends that Angles's advertisement request would be a GET request. Reply 14; Tr. 36:24–37:2. We agree with Petitioner that a person of ordinary skill in the art would have understood it to be a GET request. *See* PO Resp. 22 (acknowledging that "HTTP1.0 contemplates GET requests for 'data-producing processes' such as CGI scripts," and citing Ex. 1008, 25); Ex. 1012, col. 6, ll. 55–58 (disclosing the use of GET requests, but not POST requests).

previous caching. *See* Reply 16–18. We are not persuaded. The essential problem with Angles is its lack of disclosure. The reference only discloses an advertisement request that references a "CGI script," but omits any detail of the functionality of that request or its response from the advertisement provider computer vis-à-vis caching, or how the request and response relate to any caching by the consumer computer or a proxy server (between the consumer computer and advertisement provider computer). *See* Ex. 1012, col. 13, ll. 2–4. Indeed, Angles discloses using standard web browsers available at the time, but fails to mention caching (suggesting that it was not concerned with problems associated with caching of the advertisement and potentially blocking the advertisement request due to previous caching). *See id.* at col. 10, ll. 46–53. Thus, we do not see a basis for concluding, as Petitioner suggests, that Patent Owner's evidence does *not* reflect how a person of ordinary skill in the art would have understood Angles to operate. At most, Petitioner's evidence shows that there are different ways in which a person of ordinary skill in the art may have understood Angles. Given the limited disclosure in the reference, we are not persuaded that the presented evidence is enough to satisfy Petitioner's burden to show that Angles's advertisement request, as understood by a person of ordinary skill in the art, meets the non-blockable first request limitation.

Petitioner in its Reply also cites the Specification of the '698 patent, the prosecution history of the '045 patent, testimony from the named inventor of the '698 patent, Michael John Griffiths, and testimony from Mr. Kent. Reply 13–20. After reviewing all of the cited evidence, we find Petitioner's evidence to be unpersuasive and contradicted by Patent Owner's evidence addressed above.

First, Petitioner argues that "the fact that CGI scripts are not cache blockable is admitted in the '698 patent's specification and prosecution history" of the '045 patent. *Id.* at 14–15. We disagree. Petitioner cites the statement in the Specification that the returned URL may include a "cgi-bin string." *Id.* The rest of the sentence states that the "URL address[] . . . can contain a variable component such as, for example, a random number, a time/date stamp, cgi-bin string, or a random page identifier." Ex. 1001, col. 18, ll. 35–41. Because such "variable component URL addresses are, by definition, different every time, the initial banner request signal . . . will be different every time, thereby preventing the terminal 36 or the proxy server 50 from blocking the transmission . . . of the initial banner request signal." *Id.* at col. 18, ll. 44–54. Thus, read in context, the cited portion of the Specification indicates that what makes the request non-blockable is the fact that the URL is variable over time (e.g., due to the inclusion of a "random number," "time/date stamp," or "cgi-bin string" that varies over time), not the fact that the URL calls a CGI script, regardless of content or format. *See id.* at col. 18, l. 30–col. 19, l. 57; Tr. 47:24–48:10. As discussed above, the mere fact that a URL references a CGI script does not make the request non-blockable; it is the particular syntax that matters, and Angles does not disclose the syntax of its CGI request. *See* PO Resp. 26–27; Ex. 2009.001–.002. The same applies to the reference to a "cgi-bin string" in the prosecution history. Ex. 1037, 175–76. Similar to the disclosure in the Specification, the applicant describes using "variable components in the links used by the terminal to request a response such as: a random number, a time/date stamp, [or] a cgi-bin string" as an exemplary cache-blocking technique. *Id.*

Second, Petitioner cites testimony from Mr. Griffiths allegedly showing that a person of ordinary skill in the art would have understood a generic reference to a "CGI script," like in Angles, to "mean a cgi-bin string that would default to a script in the cgi-bin directory" and be non-blockable. Reply 14–16. For example, Mr. Griffiths testified as follows:

> Q. . . . Let me ask it this way: At the time of the invention, if somebody said to you, you know, have it call it CGI script, would you have understood that to mean to be a cgi-bin string?
>
> A. Yes.
>
> Q. And as a matter – as a default matter, it would go to a script in the cgi-bin directory, correct?
>
> A. Correct.

Ex. 1033, 50:19–51:4. Again, the fact that the request references a CGI script, or results in the execution of a CGI script, is not what makes it non-blockable. It is the particular syntax used, such as the strings "cgi-bin" and "?", that makes it non-blockable.

The following testimony cited by Petitioner is more probative:

> Q. Based on your knowledge at the time, is it fair to say that the cache would have known not to cache the response to a cgi-bin request?
>
> . . .
>
> A. Generally speaking, cgi-bin requests – the answers to cgi-bin requests were not allowed to be cached. By definition, they were dynamic. So even though the request looked the same, the response could be dramatically different in every case, so it could not – it cannot remember the answers.

Id. at 52:9–19. Although this testimony can be read as generally supporting Petitioner's position, it is counteracted by a number of factors. As explained above, the parties agree that not all requests to execute a CGI script are

non-blockable due to previous caching. *See* PO Resp. 26–27; Tr. 28:5–10, 44:23–45:18. Mr. Griffiths later acknowledged, on redirect examination, that although "CGI requests naturally were not cached," it is "possible that in some instances they were." Ex. 1033, 101:9–22. Moreover, the cited testimony from Mr. Griffiths appears in a larger discussion of what he invented and implemented in his TrueCount system. *See id.* at 45:7–52:19. Thus, Mr. Griffiths appears to be testifying more to his invention than the general understanding that a person of ordinary skill in the art would have had from Angles. Indeed, it does not appear that Mr. Griffiths was ever shown Angles or testified specifically about what it teaches.

Third, Petitioner and Mr. Kent rely heavily on the fact that the advertisement in Angles is customized, or "dynamically generated," for the particular consumer via execution of the CGI script. *See* Pet. 17–18, 26; Reply 15–16. Dynamically generating content and utilizing a non-blockable request, however, are two different things. The latter pertains to the *request* for information, whereas the former pertains to generating the *response* to that request (if it is received). Petitioner and Mr. Kent do not explain sufficiently why one mandates the other, particularly given the fact that not all references to a CGI script are non-blockable due to previous caching. In addition, the evidence cited by Mr. Kent is contradicted by the evidence provided by Patent Owner. *Compare* Ex. 1003 ¶¶ 16–17, Ex. 1017, 8 ("generating all pages dynamically through a cgi-script, the results of which do not get cached"), Ex. 1018, 2, *with* Ex. 2015 ¶¶ 90–94, Ex. 2007.009 ("Once the browser accesses a virtual document produced by a CGI program, it will cache it. The next time you try to access the same document, the browser will not make a request to the server, but will reload

the document from its cache."). As explained above, we find Patent Owner's evidence, and Dr. Almeroth's explanation regarding it, sufficiently detailed and persuasive. At minimum, the conflicting evidence shows that there would have been no common understanding of whether Angles's limited reference to a "CGI script" would have been cache-blockable or not.

iii. Conclusion

Angles does not state expressly that the advertisement request cannot be "blocked" from reaching the advertisement provider computer due to previous caching or storing of the electronic page or advertisement. Petitioner's arguments and evidence that a person of ordinary skill in the art would have understood the advertisement request to be non-blockable are not persuasive based on the full record. In particular, Patent Owner provides persuasive evidence to the contrary, or, at the very least, evidence calling into question Petitioner's reading of Angles. Upon review of all of the evidence, we do not find the disclosure in Angles to be sufficiently clear to allow a determination that the advertisement request "cannot be blocked from reaching said primary server by either the terminal or any intermediary device located topologically between the terminal and the primary server as a result of previous caching or storing of said first portion of information or said second portion of information by the terminal or said intermediary device," as recited in claim 1. Therefore, we are not persuaded, by a preponderance of the evidence, that the cited references teach all of the limitations of claim 1.

b. Claims 2, 3, 5–7, 9, 11–20, 22, 24–30, 34–39, and 41–47

Similar to independent claim 1, each of the remaining independent claims also recites sending a non-blockable first request. Claim 17 recites sending a "first banner request signal" that "cannot be blocked from reaching said server by either the client device or any intermediary device located topologically between the client device and the server as a result of previous caching or storing of said banner by the client device or said intermediary device." Claim 30 recites sending a "first banner request signal" that "cannot be blocked from reaching said first server by either the device or the intermediary server as a result of previous caching or storing of said banner by the device or the intermediary server." Claim 39 recites "causing a first TCP/IP compliant request for the banner containing at least a portion of the initial URL, to be sent from the client device to the primary server without allowing said first TCP/IP compliant request to be blocked from being received by the primary server." Claim 44 recites sending a "first banner request signal" that "cannot be blocked from reaching said first server by either the client device or the intermediary server as a result of previous caching or storing of said banner by the client device or the intermediary server."

The parties argue all of the independent claims together when addressing these limitations. *See* Pet. 17–20, 24–26; -666 Pet. 17–21, 24–25, 28–31; PO Resp. 21–32; Reply 13–20. For the reasons explained above, Petitioner has not shown, by a preponderance of the evidence, that the cited references teach sending a non-blockable first request. *See supra* Section II.C.4.a. Thus, we are not persuaded, by a preponderance of the evidence, that the cited references teach all of the limitations of independent

claims 1, 17, 30, 39, and 44, or dependent claims 2, 3, 5–7, 9, 11–16, 18–20, 22, 24–29, 34–38, 41–43, and 45–47.

5. Patent Owner's Evidence of Secondary Considerations of Nonobviousness is Persuasive

As explained above, Petitioner relies on a combination of teachings from Angles, Merriman, and HTTP1.0 as teaching the limitations of challenged independent claims 1, 17, 30, 39, and 44. *See* Pet. 16–31; -666 Pet. 16–31. We determined that the cited references were not shown to teach the non-blockable first request limitation in each claim. However, even if a person of ordinary skill in the art would have understood the references to teach the limitation, and could have combined the references' teachings in the manner proposed by Petitioner, Patent Owner has submitted persuasive evidence of secondary considerations that demonstrate the nonobviousness of the challenged claims.

As part of our analysis of whether the challenged claims would have been obvious, we evaluate Patent Owner's arguments and evidence of secondary indicia of nonobviousness. Factual inquiries for an obviousness determination include secondary considerations based on evaluation and crediting of objective evidence of nonobviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Notwithstanding what the teachings of the prior art would have suggested to one of ordinary skill in the art at the time of the invention, the totality of the evidence submitted, including objective evidence of nonobviousness, may lead to a conclusion that the challenged claims would not have been obvious to one of ordinary skill in the art. *In re Piasecki*, 745 F.2d 1468, 1471–72 (Fed. Cir. 1984). Objective evidence of

nonobviousness in any given case may be entitled to more or less weight depending on its nature and its relationship with the merits of the invention. *See Merck & Cie v. Gnosis S.P.A.*, 808 F.3d 829, 837 (Fed. Cir. 2015) ("To the extent that the patentee demonstrates the required nexus, his objective evidence of nonobviousness will be accorded more or less weight." (citation omitted)); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538–39 (Fed. Cir. 1983). "[E]vidence of secondary considerations may often be the most probative and cogent evidence in the record." *Stratoflex*, 713 F.2d at 1358.

To be relevant, however, evidence of nonobviousness must be reasonably commensurate in scope with the claimed invention. *In re Kao*, 639 F.3d 1057, 1068 (Fed. Cir. 2011) (citing *In re Tiffin*, 448 F.2d 791, 792 (CCPA 1971)); *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998). In addition, in order to be accorded sufficient weight to "carry the day," a "more fundamental requirement . . . must be met"—a showing of nexus between the merits of the claimed invention and the evidence of secondary considerations. *Kao*, 639 F.3d at 1068; *see also In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) (discussing nexus). "Nexus" is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining nonobviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). The burden of producing evidence showing that there is a nexus lies with the patent owner. *Prometheus Labs., Inc. v. Roxane Labs., Inc.*, 805 F.3d 1092, 1101–02 (Fed. Cir. 2015); *Demaco*, 851 F.2d at 1392.

Patent Owner proffers three contentions allegedly demonstrating nonobviousness of the claimed subject matter: solution of a long-felt need

in the art, "unexpectedly superior performance," and widespread industry adoption. PO Resp. 36–44. Petitioner challenges these contentions, arguing that Patent Owner's evidence fails to show a nexus to the challenged claims and paints an inaccurate or incomplete picture. Reply 21–25. We evaluate each of the presented contentions of nonobviousness in turn.

a. Patent Owner's Evidence of Nexus to the '698 Patent Claims

As a predicate to further arguments concerning nonobviousness, Patent Owner contends that a service called "TrueCount" offered by MatchLogic, Inc. ("MatchLogic") embodied the challenged claims of the '698 patent. PO Resp. 37–38. In support of its contention, Patent Owner proffers evidence in the form of declarations of Dr. Almeroth and Mr. Griffiths, the named inventor of the '698 patent. *See* Ex. 2015 ¶¶ 104–12; Ex. 2016. Petitioner cross-examined both witnesses and argues that based on the cross-examination testimony, the Board should give little to no weight to the testimony of both declarants. Reply 21–25. For the reasons explained below, we find that Patent Owner has shown sufficiently, via the testimony of Dr. Almeroth and Mr. Griffiths, that the TrueCount service practiced the methods recited in at least independent claims 1, 17, 30, 39, and 44 of the '698 patent.

i. Mr. Griffiths's Testimony (Exs. 2016, 1033)

Mr. Griffiths asserts that, in early 1997, he was the Chief Technology Officer of MatchLogic, an Internet advertising company, and that he "personally did much of the work in implementing the technology of the

’045 and ’698 Patents in a MatchLogic service that became known as TrueCount.” Ex. 2016 ¶¶ 1–2.

Mr. Griffiths declares that the service used HTML code referencing a banner ad, where the HTML code was included in the web pages of MatchLogic’s customers using the TrueCount technology. *Id.* ¶ 5. That HTML code would “cause the viewer’s browser to send a TrueCount request for a banner ad to a MatchLogic server.” *Id.* That request “included information to prevent the request from being blocked by a cache (whether at the user’s device or on an intermediate server)” and “often included random numbers and date/time stamps to prevent a request from being blocked.” *Id.* ¶ 6. Mr. Griffiths states that the MatchLogic server did not respond directly with the banner, and, instead, would select a link to a banner and a MatchLogic server that could provide the banner. *Id.* ¶¶ 7–8. The response to the TrueCount request was “an HTTP 302 redirect message that contained a URL for the selected banner on the selected server.” *Id.* ¶ 8. Mr. Griffiths explains the significance of providing an HTTP 302 redirect message with the banner’s URL in accordance with the scope of the claims:

> If the banner was already stored in the viewer’s browser’s cache, it would be displayed from that cache, . . . [i]f the banner was not stored in the browser’s cache, the browser would send an HTTP request for the banner [and] be satisfied by an intermediate network cache, such as a proxy cache server, . . . [and i]f the banner was not in the browser’s cache, and not in any intermediate cache, then the banner would be provided by the MatchLogic server identified in the HTTP 302 redirect message.

Id. ¶¶ 10–12. In the end, irrespective of where the banner would be served from, the MatchLogic server that received the initial TrueCount request

would count the banner identified by the URL as being served to a viewer's computer. *Id.* ¶ 13.

Mr. Griffiths's testimony also cites three articles regarding TrueCount. Specifically, Mr. Griffiths states that he reviewed a New York Times article,[12] titled "Updates/Media and Technology; Software to Track Business Prospects by Web Visits," dated October 6, 1997. *Id.* ¶ 15. That article discusses MatchLogic's software, which Mr. Griffiths identifies as TrueCount. *Id.*, Ex. A. He also states that he reviewed an Advertising Age article, dated October 13, 1997,[13] and a Wall Street Journal article, dated November 21, 1997,[14] both of which also describe TrueCount. *Id.* ¶¶ 16–17.

During cross-examination, Mr. Griffiths testified that the New York Times article is short and does not describe how TrueCount worked. Ex. 1033, 88:21–89:9. With respect to the Wall Street Journal article, Mr. Griffiths acknowledged that part of the description of TrueCount "appears" to be wrong—but he stated that the article nevertheless refers, in a rudimentary manner, to TrueCount including variable header values, where the actual media is cached, but the first part of the transaction is a non-cacheable request. *Id.* at 89:10–91:11. Regarding the Advertising Age article, Mr. Griffiths testified that the article provides a brief description of how part of TrueCount works. *Id.* at 93:8–18.

We have considered Petitioner's argument that Mr. Griffiths "admitted that the articles did not actually describe how TrueCount worked, and in some cases described it incorrectly." Reply 23. Petitioner's

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[12] In the record as Ex. 2002, and Exhibit A of Ex. 2016.

[13] In the record as Ex. 2003, and Exhibit B of Ex. 2016.

[14] In the record as Ex. 2001, and Exhibit C of Ex. 2016.

argument does not identify how each of the proffered articles is irrelevant or inaccurate. Although we agree that the New York Times article does not describe completely the operation of TrueCount, the article is relevant to corroborate the testimony of Mr. Griffiths regarding MatchLogic's claim that TrueCount "solve[d] the problem [of the use of caching that results in unaccounted for displays of web pages], allowing accurate counts of how many people see a Web ad." *See* Ex. 2002.001; Ex. 2016 ¶¶ 13–14. As for the Wall Street Journal article, we do not find that the cross-examination of Mr. Griffiths establishes that the description of TrueCount is wrong. As we noted above, Mr. Griffiths explained that the description was rudimentary, but did state that TrueCount used variable header values, where the actual media is cached, but the first part of the transaction is a non-cacheable request. This explanation reasonably tracks the limitations of the challenged independent claims where the first request signal cannot be blocked from reaching the primary server as a result of previous caching or storing, and the location signal causes the browser or the intermediary server to determine first if the requested information is in cache.[15]

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[15] *See* claims 1 ("said first request signal cannot be blocked from reaching said primary server by either the terminal or any intermediary device located topologically between the terminal and the primary server as a result of previous caching or storing of said first portion of information or said second portion of information by the terminal or said intermediary device," "sending a location signal from the primary server to the terminal," and "determining if said second portion of information is already stored on the terminal"), 17 ("said first banner request signal cannot be blocked from reaching said server by either the client device or any intermediary device located topologically between the client device and the server as a result of previous caching or storing of said banner by the client device or said intermediary device," "sending a banner location signal," and "determining

Finally, the cross-examination of Mr. Griffiths did not reveal any inaccuracy in the Advertising Age article:

> Q. And does this article describe how TrueCount worked?
>
> A. (Reviewing document.) It has a brief description of a part of it.

Ex. 1033, 93:11–14. Petitioner does not explain how this testimony shows that the article inaccurately describes TrueCount or why it does not corroborate Mr. Griffiths's testimony.

As a whole, we find that Mr. Griffiths provides a reasonable and credible walk-though of how the TrueCount service worked that is tied to the recited features of the challenged independent claims.

Now we consider Petitioner's contention that uncorroborated inventor testimony should be given no weight. Reply 22–23. We have reviewed the legal authority Petitioner proffers as supporting its contention. We do not find it persuasive. Petitioner does not cite any case where corroboration was

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if said specified banner is stored on the client device"), 30 ("said first banner request signal cannot be blocked from reaching said first server by either the device or the intermediary server as a result of previous caching or storing of said banner by the device or the intermediary server," "sending a banner location signal," and "determining if said specified banner is stored on the device"), 39 ("causing a first TCP/IP compliant request for the banner containing at least a portion of the initial URL, to be sent from the client device to the primary server without allowing said first TCP/IP compliant request to be blocked from being received by the primary server," "serving a signal from the primary server to the client device that includes a second URL associated with the banner's location," and "determining if the banner is stored on the client device"), 44 ("said first banner request signal cannot be blocked from reaching said first server by either the client device or the intermediary server as a result of previous caching or storing of said banner by the client device or the intermediary server," "sending a banner location signal," and "determining if said specified banner is stored on the client device").

required for an inventor's factual testimony about a commercial product that allegedly embodies the claims of a patent. Rather, the cases Petitioner cites mostly relate to the well-established principle that an inventor's testimony offered to prove conception, diligence, and reduction to practice (i.e., testimony to establish a date of invention earlier than that of the date of filing or priority) requires corroboration. *See Chen v. Bouchard*, 347 F.3d 1299, 1309 (Fed. Cir. 2003) ("when a party seeks to prove conception via the oral testimony of a putative inventor, the party must proffer evidence corroborating that testimony"); *Hahn v. Wong*, 892 F.2d 1028, 1032 (Fed. Cir. 1989) (stating that in order to establish reduction to practice in an interference, the inventor "must provide independent corroborating evidence in addition to his own statements and documents"); *Reese v. Hurst*, 661 F.2d 1222, 1230–34 (Fed. Cir. 1981) (applying corroboration requirement to inventor's testimony on whether the inventor reduced the invention to practice).

Petitioner also relies on *Markman v. Westview Instruments Inc.*, 52 F.3d 967, 983 (Fed. Cir. 1995), for the proposition that inventor testimony on claim construction is given no deference. Reply 23. But this proposition rests on the role of the court to assess whether the testimony amounts to "legal opinion[s]" because claim construction is an issue of law, and the court has discretion to disregard or adopt legal opinions in this regard. *Id.* We do not see *Markman* as applicable to our factual determination of "nexus" between the claimed subject matter and Patent

Owner's evidence of nonobviousness. Nor does Petitioner make a cogent argument that *Markman* presents legal authority on the "nexus" issue.[16]

We are further guided by the restraint in the corroboration requirement that the Federal Circuit expressed in *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831 (Fed. Cir. 2010), *aff'd,* 564 U.S. 91 (2011). In particular, we heed the rule that "[c]orroboration is required in certain circumstances . . . . However, this is not a case where witness testimony was being used to overcome prior art by establishing an earlier date of invention." *Id.* at 847. For example, the Federal Circuit held in *i4i* that there is no corroboration requirement for inventor testimony "offered in response to a claim of anticipation and pertain[ing] to whether the prior art practiced the claimed invention." *Id.* Similarly, the testimony of Mr. Griffiths is offered to show that the TrueCount service embodied the limitations of the challenged claims. Mr. Griffiths has been shown to have personal knowledge of TrueCount and its development and operation. *See, e.g.*, Ex. 2016 ¶¶ 1–2. Although Mr. Griffiths is the named inventor of the

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[16] Petitioner also relies on *Ex parte Hogue Indus. LLC*, Appeal No. 2009-006020 (PTAB Sept. 2, 2010) (decision on appeal in Reexamination Control No. 90/008,119). Reply 23. In *Hogue*, the Board addressed the appellant's contention that the Examiner ignored the inventor's testimony. *Ex parte Hogue*, slip op. at 25 ("Hogue argues that the Examiner improperly ignored, discounted or dismissed G.W. Hogue's testimony and the attached exhibits A–E."). The Board found that the inventor testimony had not been ignored, as the appellant argued, but, rather, that the Examiner weighed the testimony taking into account credibility in light of the inventor's interest in the outcome, among other considerations. *Id.* at 26. Therefore, *Hogue* does not support what Petitioner requests of us: to afford Mr. Griffiths's testimony, *ipso facto*, no weight, unless the testimony is corroborated. *See* Reply 23 ("his declaration should be given no weight").

’698 patent, his testimony is not offered to establish an earlier date of invention. Instead, his testimony’s relevance is limited to TrueCount’s operation vis-à-vis the features in the challenged claims. Further, Petitioner has neither argued nor pointed to anything in the record showing that Mr. Griffiths stands to gain anything sufficiently material to show bias or that his credibility is impacted adversely by the mere fact that he is the named inventor of the ’698 patent. *See, e.g.*, Ex. 1033, 14:2–22 (Mr. Griffiths testifying that he was paid by Patent Owner’s counsel for his time on this proceeding, but has never had contact with Patent Owner itself). Therefore, we do not agree that Mr. Griffiths’s testimony is entitled to no weight. Instead, we credit Mr. Griffiths’s testimony as evidence that establishes the operation of TrueCount and, in combination with Dr. Almeroth’s testimony, a nexus between Patent Owner’s evidence regarding TrueCount and the challenged independent claims.[17]

ii. Dr. Almeroth’s Testimony (Exs. 2015, 1034)

Dr. Almeroth relies on Mr. Griffiths’s testimony and on his own understanding to opine that the TrueCount technology embodied the claims of the ’698 patent. Ex. 2015 ¶¶ 104–12; PO Resp. 37–38. In particular, Dr. Almeroth compares Mr. Griffiths’s description of TrueCount with limitations of representative claim 17 of the ’698 patent. Ex. 2015 ¶¶ 104–12; PO Resp. 37–38 (“Dr. Almeroth explains that TrueCount practiced at least claim 17 of the 698 Patent.”). With regard to the

[17] Further, even assuming *arguendo* that corroboration were necessary, two of the articles discussed above do describe TrueCount with sufficient detail to corroborate Mr. Griffiths’s testimony describing the service, such that we find the testimony credible. *See* Exs. 2001, 2003.

challenged independent claims of the ’698 patent, we are persuaded that, at a minimum, Dr. Almeroth’s testimony shows that TrueCount practiced the salient limitations of (1) sending a first request for a banner that cannot be blocked as a result of previous caching or storing, (2) sending a banner location signal, and (3) serving the banner from a cache or otherwise from a server. For example, Dr. Almeroth opines that TrueCount “provides a method for distributing a banner over the Internet (a computer network) to a user’s computer (i.e., client device).” Ex. 2015 ¶ 105. With respect to the claimed non-blockable first request, we find relevant Dr. Almeroth’s statement that “[t]he TrueCount banner request signal was configured so that it could not be blocked by caching at the user’s computer or at an intermediate server,” such that “the MatchLogic server would always receive the TrueCount banner request.” *Id.* ¶¶ 108–109. As to the limitation of the banner location signal, we note that Dr. Almeroth states that the “MatchLogic server responded with [a] redirect including a URL for a banner on a MatchLogic server.” *Id.* ¶ 110. And finally, regarding serving the banner, Dr. Almeroth testifies that if the banner was not served out of the user-browser cache, then a second signal would be sent to “the MatchLogic server requesting that the banner be served to the user’s computer,” and the server “would serve the specified banner upon receipt of the second request.” *Id.* ¶ 111. We find that Dr. Almeroth’s testimony, as described above, reasonably explains that the operation of the TrueCount service matches the limitations of the challenged independent claims.

Petitioner urges the Board to give no weight to Dr. Almeroth’s declaration because he did not review any documentation regarding TrueCount (other than Mr. Griffiths’s declaration and the three articles) and

the supporting articles are inaccurate. Reply 22 n.7. Based on our consideration of the full record, these arguments are not persuasive.

First, as stated above, we find that Mr. Griffiths's testimony and his cited supporting documentation establish the operation of TrueCount. Therefore, we are not persuaded that Dr. Almeroth's testimony fails because he relied on Mr. Griffiths's account of how TrueCount worked. Second, Dr. Almeroth reasonably summarized Mr. Griffiths's testimony to highlight the limitations of representative claim 17 of the '698 patent, which we agree has significant overlapping scope to the other challenged independent claims of the '698 patent. *See* PO Resp. 37–38. We have explained above, for example, that Dr. Almeroth's summary of TrueCount matches the limitations of the challenged independent claims. Further, we have reviewed the articles relied upon by Mr. Griffiths and we do not find evidence that they are inaccurate or misleading.

Therefore, Patent Owner has shown that it is entitled to a presumption of nexus, and Petitioner fails to rebut that presumption with evidence, as discussed further below. *See WBIP, LLC v. Kohler Co.*, No. 2015-1038, – F.3d –, 2016 WL 3902668, at *6 (Fed. Cir. July 19, 2016) ("[T]here is a presumption of nexus for objective considerations when the patentee shows that the asserted objective evidence is tied to a specific product and that product 'is the invention disclosed and claimed in the patent.'" (quotation omitted)). Similar to the situation in *WBIP*, Patent Owner has shown a nexus to the "'claimed invention as a whole.'" *See id.* at *7–8 (quoting *Rambus Inc. v. Rea*, 731 F.3d 1248, 1257 (Fed. Cir. 2013)).

Accordingly, we are not persuaded by Petitioner's arguments that either Mr. Griffiths's or Dr. Almeroth's testimony is entitled to no weight on

the issue of whether the TrueCount service embodied the challenged independent claims or whether there is a nexus between Patent Owner's evidence regarding TrueCount and the challenged independent claims. We also are not persuaded, as stated above, that the articles provided in support of these declarations have no probative value. We now consider whether the evidence supports each of the alleged indicia of nonobviousness as asserted by Patent Owner.

b. Long-Felt Need

Evidence that an invention satisfied a long-felt and unmet need that existed on the patent's filing date is a secondary consideration of nonobviousness. *See Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1332–33 (Fed. Cir. 2009). Patent Owner contends that TrueCount met a long-felt but unmet need for a solution to the "poorly-understood problem of efficiently delivering and accurately counting Internet banner advertisements." PO Resp. 38.[18] In support of this contention, Patent

[18] All of the challenged claims except claims 1, 6, 7, 9, and 11–16 recite counting the number of displays. *See* Ex. 1001, claims 2 ("counting each time said second portion of information is displayed on the terminal"), 5 ("updating a counter of displays of said second portion of information on the terminal"), 17 ("counting each display of said specified banner on the client device"), 30 ("counting the number of times said specified banner is displayed on the device"), 39 ("counting at least one rendering of the banner on the client device"), 44 ("method for enabling accurate counting of the number of times a banner is displayed on a client device"). We recognize that the challenged claims do not recite specifically the feature of efficient delivery. All of the challenged claims, however, are directed to solving the problems identified by Patent Owner, e.g., accurate counting as a result of providing a first request that cannot be blocked due to previous caching or storing, and later retrieving from local storage (e.g., a cache) if possible for

Owner relies on statements from the three articles above-described: the New York Times article (Ex. 2002), the Wall Street Journal article (Ex. 2001), and the Advertising Age article (Ex. 2003). PO Resp. 38–39. The New York Times article, dated October 6, 1997, states that "[o]ne of the biggest fetters on the growth of advertising on the World Wide Web has been advertisers' uncertainty about how many people are actually seeing the banners and other visual gadgets they are spending to promote." Ex. 2002.001 (also cited as Ex. A of Ex. 2016). The Wall Street Journal article, dated November 21, 1997, states that "caching prevents sites from counting part of [their] audience" and "[t]he online industry has understood for some time that the problem exists, but estimates of its magnitude have varied." Ex. 2001.003 (also cited as Ex. C of Ex. 2016). The Advertising Age article, dated October 13, 1997, states that caching at proxies has "long confounded commercial sites and advertisers, which lose control of both the targeting and counting of ads behind the proxy firewalls." Ex. 2003.001 (also cited as Ex. B of Ex. 2016).

The above-mentioned articles, taken together, paint the picture that at the time TrueCount was publicly announced, the use of caching (either locally or at a proxy server) was known to be advantageous to provide information quicker and reduce network congestion, but also was known to thwart efforts to accurately count banners displayed on computers accessing

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efficiency. *See id.* at col. 13, l. 1–col. 14, ll. 57 (stating that "the present invention solves the initial problem of how to create accurate counts of banner information displays on user terminals while avoiding the problems created by requiring the banner information to be retransmitted across the computer network each time the banner information is requested by a user or a user's terminal" and "while taking advantage of the performance gains possible with caching proxy servers").

web sites through proxies in the World Wide Web. That problem was not solved by avoiding caching, or "cache-busting," alone. As stated in the Advertising Age article, the practice of forcing advertisements to be delivered despite caching "slows the delivery time for users, which harms the viability of the Web medium." Ex. 2003.002; *see also* Ex. 2001.005 ("[S]ome sites' Webmasters mark their pages as 'uncacheable' to perform an end-run around caches. That ensures that people get fresh material, but it also means slower response time, which surfers don't like."). Caching, according to the Wall Street Journal article, was a "data black hole[]: [i]nformation goes in, but it doesn't come out." Ex. 2001.002. That is, it was recognized that caching, although important in speeding up access for users, was a problem for web sites that sought to count displays of banner advertisements. *See* Ex. 2003.001–003. The potential solution alluded to in these articles—avoiding the cache altogether—was not desirable.

The challenged independent claims are not directed solely to cache-busting. To the contrary, the claimed subject matter works together with caching. The banner itself may be cached, but the initial request for the banner is not blocked due to caching, and, therefore, there is a more reliable way to count that the banner will be displayed. In effect, the claimed subject matter solves at the same time *both* issues known in the art—achieving an accurate count (by using a type of request that is non-blockable), while still retaining the speed and bandwidth advantages of caching (by retrieving from a cache if available when the actual banner is provided). *See* Ex. 1001, col. 13, l. 1–col. 14, l. 57 (describing how the claimed invention solves both problems). This solution is adduced in the Wall Street Journal article, which states that "MatchLogic, having demonstrated the extent of the caching

problem, thinks it has a way to please both sides." Ex. 2001.005. "Information doesn't go down the cache's black hole, but users still enjoy the speedy performance offered by cached pages." *Id.* at .006. The explanation provided in this article for how MatchLogic solved both issues is the "rudimentary" description that Mr. Griffiths explained during cross-examination. *See id.* at .005–.006. For example, TrueCount used variable header values, where the actual media is cached, but the first part of the transaction is a non-cacheable request. *Id.*; Ex. 1033, 89:10–91:1.

Petitioner argues that there is no nexus to the challenged claims. Reply 22–24. The arguments of Petitioner have been discussed above with regard to Mr. Griffiths's and Dr. Almeroth's testimony failing to provide sufficient nexus to the challenged independent claims of the '698 patent. We do not repeat them here, except to restate that the arguments are not persuasive. We found above that Patent Owner has shown that TrueCount embodied at least the challenged independent claims of the '698 patent, and that Mr. Griffiths's testimony is entitled to weight in this regard. Further, to the extent Petitioner alleges that the articles are not probative on the issue of nexus, that allegation has no support. The Wall Street Journal article in particular, we find, provides a detailed description of the impact of the use of caching in the industry, from the perspective of network administrators and web page developers. Indeed, the article reports on TrueCount as one solution, and also forecasts that improving bandwidth through caching would continue. *See* Ex. 2001.006–007.

Finally, Petitioner argues that Patent Owner "misleadingly promotes" TrueCount as a "novel solution," an assertion allegedly belied by a blog post authored by Rick Bruner, the author of the Advertising Age article.

Reply 24. The blog post states that "MatchLogic did not invent this cache counting methodology with its TrueCount service, it was simply the first to gain a lot of publicity about it." *Id.* (citing Ex. 1035, 2) (emphasis omitted). This evidence, Petitioner argues, contradicts Patent Owner's assertions of nonobviousness because the "indicia were due to factors such as product marketing, not novel aspects of the claims." *Id.* We are not persuaded that this blog post materially undercuts the evidence presented.

First, the relevance of the Advertising Age article is not on who invented the solution, but rather whether MatchLogic provided a solution to the "dilemma of ads cached on proxy servers with its new product, TrueCount," and solved the two issues described above. Ex. 2003.001. The blog article does not refute that TrueCount did solve those issues. Rather, it reports remarks by MatchLogic's competitors that, allegedly, they too had a solution, and that MatchLogic issued a press release first. *See* Ex. 2003.002 (identifying Imgis as a competitor of MatchLogic); Ex. 1035, 2 ("Imgis, Accipiter and NetGravity were eager to point out that MatchLogic did not invent [it]"). Further, to the extent the truthfulness of the reported statement of MatchLogic competitors is to be evaluated, we note, as Patent Owner pointed out during oral argument, that MatchLogic's competitors could not have known *when* MatchLogic invented its system because the application that ultimately issued as the '045 patent (the parent of the '698 patent) was not published for several years after it was filed on May 19, 1997. *See* Tr. 89:3–15; Ex. 1037, 229.

Second, Mr. Bruner's article for Advertising Age is not the only article reporting on the impact that caching had at the time on banner display tracking. The New York Times and Wall Street Journal both,

independently, issued articles announcing TrueCount, but more importantly, reporting on the impact of caching on reliable audits of displayed information that is transmitted through the Internet. We recognize that these articles may tend to show that MatchLogic's issuance of a press release may have triggered journalistic interest. Nevertheless, the articles appear to be independent reports of the development of the Internet vis-à-vis caching, and sufficiently support Patent Owner's arguments regarding secondary considerations.

In summary, Patent Owner's arguments and evidence show that there was a known need for allowing cached content while ensuring that the displayed content was tracked, and the challenged independent claims of the '698 patent (embodied by TrueCount) met that need. The TrueCount service was credited with obtaining the advantages of caching while offering accurate banner counts by ensuring that the banner request was received by a MatchLogic server. The challenged independent claims require precisely this combination of features. Therefore, we find that there is a nexus of the need to the claimed subject matter.

As for whether the need was felt for any length of time, we do not have evidence of a precise time when the need was known in the art, for Patent Owner acknowledges that the published articles do not state any particular time frame. *See* Tr. 80:23–82:16. Nevertheless, Patent Owner proffers that for "some" time the problem was well-known, and that the problem had "long" confounded advertisers, as stated in the articles. *See* Ex. 2002.001 ("[o]ne of the biggest fetters on the growth of advertising"); Ex. 2001.003 ("The on-line industry has understood for some time that the problem exists, but estimates of its magnitude have varied."); Ex. 2003.001

(reporting that the use of a cache to improve bandwidth has "long confounded commercial sites and advertisers, which lose control of both the targeting and counting of ads behind the proxy firewalls"). At oral argument, Patent Owner alluded also to the declaration testimony of Paul Leach, Petitioner's declarant, as supporting the contention that the problem was well-known. *See, e.g.*, Ex. 1005 ¶¶ 21, 38; Tr. 79:13–80:2, 84:3–8 (arguing also that Mr. Leach's declaration alludes to the W3C being aware of the problem and the group proposing a different solution); Pet. 4–5; -666 Pet. 4–5. From the totality of the evidence, it is undisputed that the problem was well-known and that there were others working on controlling the use of caching, since at least February 20, 1996. *See* Ex. 1005 ¶¶ 33–35.[19] Although the timeframe does not, at first blush, appear to be "long" in comparison to developments of other technologies, it nevertheless comports with the statements in the Background of the Invention of the '698 patent that at the time of the invention there had been "rapid advancements" in the field of computers and computer networking and "explosive growth" in the Internet. *See* Ex. 1001, col. 1, ll. 25–28. Therefore, we are persuaded that there is some evidence of a long-felt need, even though it may be weak on its longevity.

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[19] We do not fully credit Mr. Leach's declaration as to the details of prior cache-control mechanisms because there is no argument by either Petitioner or Patent Owner as to whether any of the mechanisms described in Mr. Leach's declaration actually solved the problems to which the challenged independent claims and TrueCount are directed. Therefore, the relevance of Mr. Leach's account is limited, in our review, to infer that the well-known problem had a lifespan of at least 15 months before the date of filing of the '045 patent (the parent of the '698 patent), and at least 20 months from the dates of the articles regarding TrueCount.

Finally, as to whether the need described above was satisfied by others, there is no persuasive evidence in the record that the cited prior art satisfied the alleged need (for at least the reasons stated above with regard to our determination regarding Angles), while there is evidence that the ’698 patent (and TrueCount) satisfied the need. Petitioner has not provided persuasive evidence of any other mechanism that, prior to the ’698 patent, solved the long-felt need. Accordingly, we are persuaded that Patent Owner has shown evidence of long-felt, unmet need as a secondary consideration of nonobviousness of the challenged independent claims.

c. Industry Praise

Industry praise for an invention may provide evidence of nonobviousness where the industry praise is linked to the claimed invention. *See Geo. M. Martin Co. v. Alliance Mach. Sys. Int’l LLC*, 618 F.3d 1294, 1305 (Fed. Cir. 2010); *Asyst Techs., Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1316 (Fed. Cir. 2008); *see also Vulcan Eng’g Co., Inc. v. Fata Aluminum, Inc.*, 278 F.3d 1366, 1373 (Fed. Cir. 2002) (“Appreciation by contemporaries skilled in the field of the invention is a useful indicator of whether the invention would have been obvious to such persons at the time it was made.”). Patent Owner relies on the Advertising Age article as supporting the contention that there was industry praise for TrueCount. PO Resp. 41–43. In particular, Patent Owner highlights three sources of praise embedded in the article: the Audit Bureau of Circulations (“ABC”), an analyst at Jupiter Communications, and the author of the article. *Id.* Finally, Patent Owner proffers evidence of adoption as an industry standard

by the Interactive Advertising Bureau ("IAB") as further evidence of industry praise. *Id.* at 43 (citing Ex. 2006.004).

Petitioner challenges the evidence by arguing that the Advertising Age article is flawed. Reply 24–25. We have found this argument unpersuasive as described above with regard to the showing of nexus. Petitioner further argues that the IAB standard provides no nexus to the '698 patent claims. *Id.* at 25. We find this argument also unpersuasive for the reasons that follow.

First, we determine whether the evidence of industry praise for TrueCount has a nexus to the challenged independent claims. The ABC is a "voluntary organi[z]ation consisting of Publishers, Advertisers and Advertising Agencies." Ex. 2004. The organization claims to have done "pioneering work in developing audit procedures to verify the circulation data published by those newspapers and periodicals which have earned the right to display its emblem." *Id.* The Advertising Age article credits Michael Lavery, president and managing director of the ABC, as stating that TrueCount "raises the bar in terms of providing more complete activity reporting . . . . We have reviewed [TrueCount], and it works as [MatchLogic] says it does . . . . It allows for accounting of [online ad] activity heretofore not accounted [for]." Ex. 2003.001. The context of this statement, however, is not in isolation; it follows an explanation of MatchLogic's survey that verified TrueCount's ability to track ads served from proxy caches. *Id.* (quantifying that "76% more Web surfers are seeing ads served from proxy caches beyond what sites currently track"). This is what the '698 patent claims and TrueCount purport to solve—tracking displayed banner ads even though that information has been served from a

cache. Although we recognize that Mr. Lavery's statements do not attribute the more accurate reporting to the particular sets of steps recited in the challenged independent claims, we find informative that TrueCount is credited with providing "more complete activity reporting" because it accounts for information that was not counted, as it was served from a cache. *Id.*

Next, Evan Neufeld, an analyst at Jupiter Communications, is credited with stating that the "implications for the market are vast." *Id.* at .002. He predicted that TrueCount's technology, if adopted by competitors like Focalink and Imgis, would result in banner costs dropping. *Id.* We find this statement to be unrelated to the industry praise that is relevant to our inquiry. Whether proper accounting of banner information may result in a market drop of costs for advertisers is not relevant to the claims, at least not directly. Therefore, this statement is not indicative of industry praise for TrueCount that has a nexus to the challenged independent claims.

Further, Rick Bruner, the author of the Advertising Age article, writes that "TrueCount . . . delivers the best of both worlds." *Id.* In particular, the article states that TrueCount works in harmony with caching (it serves ads out of the institution's local cache or from the nearest TrueCount site), yet it counts the impressions shown behind proxies. *Id.* This statement refers to TrueCount's ability to receive the banner request notwithstanding the intermediary cache. Therefore, the statement reflects industry praise that has a nexus to the challenged independent claims. We give some credit to this statement, while recognizing that Mr. Bruner's blog post later recasts TrueCount in light of comparisons with and alleged statements by MatchLogic's competitors. *See* Ex. 1035.

We now turn to Patent Owner's evidence that the TrueCount technology was "so successful that it was adopted by the [Interactive] Advertising Bureau in 2004 as an industry standard." PO Resp. 43. Patent Owner cites Exhibit 2006, which is titled "Interactive Audience Measurements and Advertising Campaign Reporting and Audit Guidelines." Ex. 2006 ("IAB Guidelines"). "This document establishes a detailed definition for ad-impressions, which is a critical component of Internet measurement and provides certain guidelines for Internet advertising sellers . . . and ad serving organizations . . . for establishing consistent and accurate measurements." *Id.* at .002. The IAB Guidelines identify at least six different, but valid, implementation options. *See id.* at .012–.014 (showing Figures 1–6, each illustrating the request, counting, and serving of ad content). In its Response, Patent Owner points us to page 4 of the IAB Guidelines, PO Resp. 44, but we do not see how this page explains, or otherwise supports, the assertion that TrueCount technology was adopted as the standard. During oral argument, however, Patent Owner explained that page 6 of the IAB Guidelines is probative and that Dr. Almeroth provided testimony that maps the IAB Guidelines with the claimed invention. Tr. 89:23–90:12; *see* Ex. 2015 ¶¶ 124–28. In particular, this testimony points to the IAB Guidelines' reference to an HTTP request generated by a <IMG>, <IFRAME>, or <SCRIPT SRC> tag and using random number assignment techniques to identify unique serving occurrences of pages/ads. Ex. 2015 ¶ 125. The HTTP request, therefore, would not be blocked as a result of previous caching. *Id.*

We find that this evidence is probative of whether the TrueCount technology became part of the IAB Guidelines. Although there are multiple

options also adopted as valid implementations of the IAB Guidelines, it appears that *one* of the techniques tracks the features recited in the challenged independent claims. Petitioner does not persuasively rebut Dr. Almeroth's opinions in this regard, and merely argues that there is no basis for Patent Owner's argument that the IAB standard includes aspects of the challenged independent claims. Reply 25. We do not find this argument persuasive in light of the IAB Guidelines themselves and Dr. Almeroth's testimony mapping the IAB Guidelines to pertinent claim limitations of the challenged independent claims.

Accordingly, in summary, having reviewed the totality of the evidence proffered by Patent Owner and the rebuttal arguments and evidence proffered by Petitioner, we find that, though not very strong, there is some evidence of industry praise that is tied to the challenged independent claims.

d. Widespread Adoption by Industry

Patent Owner seeks to show widespread adoption by industry as an indicia of nonobviousness by relying on the following references:

a) The IAB Guidelines discussed above with regard to industry praise (Ex. 2006);
b) A published draft guideline authored by a MatchLogic competitor (NetGravity) (Ex. 2005); and
c) A white paper attributed to DoubleClick, another MatchLogic competitor (Ex. 2008) ("DoubleClick white paper").

PO Resp. 43–44. With regard to the IAB Guidelines, we discussed above that one of the multiple options adopted by the IAB Guidelines appears to track the claimed subject matter. Consequently, the IAB Guidelines tend to

show that the Internet advertising industry saw merit in the patented techniques.

We cannot infer the same conclusion of widespread industry adoption from the proposed standard embodied in Exhibit 2005. This document alleges to be a "Working Draft for review by IAB members" and is "NOT approved [by the IAB] for implementation." Ex. 2005.001. Although Exhibit 2005 provides an example (at pages .004–.005) that appears to track the claimed features, Patent Owner does not offer any explanation as to how this proposed standard embodies the challenged independent claims or how it refers to the techniques utilized by TrueCount.[20] Further, the author, an individual affiliated with NetGravity (Tom Shields), does not mention TrueCount or MatchLogic in any way that leads us to credit the proposed standard to either. To be sure, the document expresses appreciation for Mr. Griffiths's "feedback on this proposal." *Id.* at .005. This mention of Mr. Griffiths and MatchLogic alone, however, is insufficient to infer that the article refers to TrueCount or the subject matter of the challenged independent claims.

As for the DoubleClick white paper, Patent Owner points out that adoption by DoubleClick, as of at least 2001, is evidence of industry adoption that we should consider as a secondary consideration of nonobviousness. PO Resp. 44. This document describes DoubleClick's "impression counting method," which included using "'Random, or unique, numbers [] appended to the end of each DART HTML tag,' 'HTTP 302

[20] Nor do we find any explanation in the declaration of Dr. Almeroth, whose testimony with regard to this document is verbatim from what is offered in Patent Owner's Response, and, therefore, sheds no light onto the issue. *See* PO Resp. 44; Ex. 2015 ¶ 123.

commands,' and question marks 'appended to the end of each ad request URL in the DART HTML tags.'" *Id.* (citing Ex. 2008.007–.008). Patent Owner further asserts that these techniques are combined to defeat caching. *Id.* The DoubleClick white paper supports these assertions, by stating, for example, that "[i]nstead of only counting the initial page view, DART counts an impression each time the Web page is viewed, even if it is served from a browser or proxy cache." Ex. 2008.007. In explaining one of the three techniques disclosed, the white paper states that the use of random or unique numbers appended to the HTML tag makes each image unique and "proxy servers do not recognize the URLs as ones they have seen before." *Id.* "Instead, browsers and proxy servers must request a new ad image each time the page is loaded, even if the ad image is already stored in the browser or proxy server cache." *Id.* We are further persuaded that the DoubleClick white paper has a nexus to the challenged independent claims, as it states that "because a new request is sent to the DART ad servers . . . even when the HTML page is loaded from the cache, DART counts an impression." *Id.* at .008.

Petitioner counters that there is no basis for Patent Owner's contention that the DoubleClick white paper includes aspects of the challenged independent claims. Reply 25. Petitioner argues that in light of Mr. Bruner's blog post, NetGravity (acquired by DoubleClick) was alleged to have been practicing TrueCount's methodology before TrueCount came on the market, and this only "shows that the '698 patent claims well-known techniques used throughout the industry before the '698 patent was ever filed." *Id.* We are not persuaded by these arguments.

First, Petitioner does not challenge the assertion that the technique described in the DoubleClick white paper defeats caching of the banner request while serving the content from the cache, if it is stored there, as recited in the challenged independent claims. Second, we do not reach the same conclusion Petitioner urges us to reach upon reading Mr. Bruner's blog post (Ex. 1035). There is no assertion in the blog post that either Accipiter or NetGravity practiced the invention before TrueCount came on the market. At best, the blog post credits these companies with enabling the "cache counting approach" as of the time of the post, which is allegedly March 1998 (after TrueCount came on the market). *See* Ex. 1035, 2 (Petitioner offering Ex. 1036 to document the date of the article). Accordingly, we find that this blog post does not imply or suggest that MatchLogic's competitors had been employing the same TrueCount techniques or that these techniques were well-known before the application that issued as the '045 patent (the parent of the '698 patent) was filed, as Petitioner argues.

In summary, the whole of the evidence and arguments Patent Owner presents are indicative of efforts to standardize a process for counting banner ads in the industry of Internet advertising. Although the IAB Guidelines are indicative of this effort and tend to show that the Internet advertising industry saw merit in the patented techniques, the proposed standard authored by Tom Shields is not as persuasive and, by itself, is not evidence of widespread adoption in the industry. The DoubleClick white paper also seems to be indicative of someone adopting the disputed techniques, but adoption by one entity does not show widespread industry adoption. This evidence, on the whole, is some indication of nonobviousness, but is weak,

especially in light of the evidence that the patented technique was but one of several techniques that the IAB Guidelines advocated.

6. Conclusion

Based on all of the evidence of record, including evidence of secondary considerations of nonobviousness submitted by Patent Owner, we determine that Petitioner has not shown, by a preponderance of the evidence, that independent claims 1, 17, 30, 39, and 44, as well as dependent claims 2, 3, 5–7, 9, 11–16, 18–20, 22, 24–29, 34–38, 41–43, and 45–47, would have been obvious over Angles, Merriman, and HTTP1.0 under 35 U.S.C. § 103(a).

D. Obviousness Ground Based on Angles, Merriman, HTTP1.0, and Davis

Petitioner argues that claims 31 and 49 are unpatentable over Angles, Merriman, HTTP1.0, and Davis under 35 U.S.C. § 103(a). -666 Pet. 38–39. Claim 31 depends from claim 30, and claim 49 depends from claim 44. Petitioner has not shown, by a preponderance of the evidence, that claims 30 and 44 would have been obvious over Angles, Merriman, and HTTP1.0 under 35 U.S.C. § 103(a), for the reasons explained above, and Petitioner does not rely on Davis as allegedly teaching the missing non-blockable first request limitations. *See id.*; *supra* Section II.C. Accordingly, we determine that Petitioner has not shown, by a preponderance of the evidence, that claims 31 and 49 would have been obvious over Angles, Merriman, HTTP1.0, and Davis under 35 U.S.C. § 103(a).

E. Petitioner's Objection to Patent Owner's Demonstrative Exhibits

During the oral hearing, Petitioner objected to the set of demonstrative exhibits relied on by Patent Owner, in particular slides 25, 26, 44, 88–90, and 100, on the basis that they allegedly contain new argument. Tr. 41:7–42:7. Demonstrative exhibits are not evidence, the parties' demonstrative exhibits have not been filed in this proceeding, and we do not rely on any of them in rendering our Decision. Accordingly, Petitioner's objection is overruled.

III. ORDER

Petitioner has not demonstrated, by a preponderance of the evidence, that claims 1–3, 5–7, 9, 11–20, 22, 24–30, 34–39, and 41–47 are unpatentable over Angles, Merriman, and HTTP1.0 under 35 U.S.C. § 103(a), or that claims 31 and 49 are unpatentable over Angles, Merriman, HTTP1.0, and Davis under 35 U.S.C. § 103(a).

In consideration of the foregoing, it is hereby:

ORDERED that claims 1–3, 5–7, 9, 11–20, 22, 24–31, 34–39, 41–47, and 49 of the '698 patent have not been shown to be unpatentable.

This is a final 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.

PETITIONER:

Michelle K. Holoubek
Michael V. Messinger
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
mholoubek-PTAB@skgf.com
mikem-PTAB@skgf.com

Matthias A. Kamber
KEKER & VAN NEST LLP
mkamber@kvn.com

PATENT OWNER:

Garland Stephens
Justin Constant
WEIL, GOTSHAL & MANGES LLP
garland.stephens@weil.com
justin.constant@weil.com