# United States Court of Appeals for the Federal Circuit

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**GOOGLE LLC,**
*Appellant*

**v.**

**AT HOME BONDHOLDERS' LIQUIDATING TRUST,**
*Appellee*

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2016-2727, 2016-2729

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Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2015-00657, IPR2015-00660, IPR2015-00662, IPR2015-00666.

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Decided: February 22, 2018

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DARYL JOSEFFER, King & Spalding LLP, Washington, DC, argued for appellant. Also represented by CHRISTOPHER ROBERT HEALY, JOSHUA NATHANIEL MITCHELL; MATTHIAS A. KAMBER, Keker, Van Nest & Peters LLP, San Francisco, CA.

GARLAND STEPHENS, Weil, Gotshal & Manges LLP, Houston, TX, argued for appellee. Also represented by

JUSTIN LILE CONSTANT, AUDREY LYNN MANESS; JARED BOBROW, Redwood Shores, CA.

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Before LOURIE, WALLACH, and STOLL, *Circuit Judges.*

LOURIE, *Circuit Judge.*

Google LLC ("Google") appeals from two final written decisions of the United States Patent and Trademark Office Patent Trial and Appeal Board ("the Board") resulting from four *inter partes* review ("IPR") proceedings concluding that claims 49–53, 55–59, 61–67, and 69–73 of U.S. Patent 6,286,045 ("'045 patent") and claims 1–3, 5–7, 9, 11–20, 22, 24–31, 34–39, 41–47, and 49 of U.S. Patent 6,014,698 ("'698 patent") are not unpatentable as obvious. *See Google Inc. v. At Home Bondholders' Liquidating Tr.*, Nos. IPR2015-00657, IPR2015-00660, 2016 WL 5104863, slip op. at 61 (P.T.A.B. Aug. 10, 2016) ("*'045 Decision*"); *Google Inc. v. At Home Bondholders' Liquidating Tr.*, Nos. IPR2015-00662, IPR2015-00666, 2016 WL 8969204, at *24 (P.T.A.B. Aug. 10, 2016) ("*'698 Decision*"). Because the Board did not err in its decisions, we *affirm*.

## BACKGROUND

At Home Bondholders' Liquidating Trust ("At Home") owns the '045 and '698 patents directed to a method of monitoring and controlling information delivered over a computer network. *See, e.g.*, '045 patent Abstract. The '698 patent is a continuation-in-part of the '045 patent and shares substantially the same specification.[1]

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[1]    The only substantive difference between the patent specifications are two paragraphs that were added to the '698 patent. *See* '698 patent col. 19 ll. 24–57. The added material does not implicate any issues in this appeal; therefore, for the purposes of this opinion, cita-

According to the patents, rapid advancements in internet technology and "visually pleasing" graphics have increased the use of advertising and other promotional materials displayed with web pages. *See* '045 patent col. 2 ll. 38–41. Typically, when a user clicks on a Uniform Resource Locator ("URL"), that action triggers the user's terminal to send a request over the network to retrieve the web page associated with the URL. *See id.* col. 1 ll. 61–67. The web page may include, *inter alia*, "a number of graphic images or elements, often referred to as banners." *See id.* col. 2 ll. 9–12. Those "banners" are commonly used in internet advertising. *See id.* col. 2 l. 38–col. 3 l. 6. The requested web page with its banners are often stored or "cached" on the user's terminal, or on an intermediary server like a proxy server, for a specified period of time. *See id.* col. 6 ll. 36–39. That way, if the user requests the same page within that time period, the web page and the banners "can be loaded directly from the terminal's memory." *See id.* col. 6 ll. 39–49. The cache therefore blocks the request from passing through to the network. *See id.* col. 6 l. 36–col. 7 l. 2.

While caching reduces the load on the network and allows for faster loading speeds, it creates problems for internet advertisers, who rely on maintaining an accurate count of the number of times their banners are requested, usually for calculating payments. *See id.* col 7 ll. 2–7; *see also id.* col. 13 ll. 2–27. While one could simply stop caching all requests, that would eliminate the efficiencies of caching, making this solution "highly impractical and undesirable." *See id.* col. 13 l. 28–col. 14 l. 10. The '045 and '698 patents purport to resolve those competing objectives by adding a non-blockable banner request

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tions will be to the '045 patent. Similarly, because both of the Board's decisions conduct substantially similar analyses, citations in this opinion will be to the *'045 Decision*.

before checking the cache for stored banners. *See id.* col. 14 l. 50–col. 15 l. 3.

Independent claim 49 is illustrative and reads in part:

49.  A method for enabling distribution of a banner over a computer network to a device . . . connected to the computer network via an intermediary server, comprising:

> causing a *first* banner request signal to be transmitted from the device . . . , wherein said first banner request signal includes information intended to make said first banner request signal *not blockable* by the device or the intermediary server *as a result of a storage in the device or the intermediary server* of said requested banner prior to the generation of said first banner signal by the device; [the "non-blockable limitation"]
>
> sending a banner location signal . . . to the device . . . ; and
>
> determining if said requested banner is stored on the device and, if . . . not . . . , then causing a *second* banner request signal to be transmitted . . . .

*Id.* col. 30 ll. 37–51 (emphases added).

According to the claim, the first non-blockable banner request will always pass through to the network, *i.e.*, the cache will not "block" the request, regardless whether the banner being requested has already been stored in the cache. *See id.* col. 14 l. 57–col. 15 l. 3.  The patents disclose multiple ways to configure the non-blockable request so that it will not be blocked by the cache. *See id.* col. 17 l. 22–col. 18 l. 61.  One such way is to have the URL address include the strings "cgi-bin" and "?," which are strings

"conventionally used" to generate dynamic responses, making it "unsuitable for caching." *See id.* col. 18 ll. 48–61. The method then proceeds as a conventional banner request would by checking the cache for the stored banner, and, if not previously stored in the cache, sending a second banner request for the banner. *See id.* col. 15 l. 48–col. 16 l. 22. The patents therefore achieve the goal of accurate counting while preserving the performance gains of caching. *See id.* col. 14 ll. 33–45.

Google petitioned for a series of IPRs arguing that certain claims of the '045 and '698 patents would have been obvious at the time their inventions were made. The Board instituted review as to claims 49–53, 55–59, 61–67, and 69–73 of the '045 patent and claims 1–3, 5–7, 9, 11–20, 22, 24–31, 34–39, 41–47, and 49 of the '698 patent (collectively, the "instituted claims"). The independent instituted claims all recite a similar non-blockable limitation. *Compare id.* col. 30 ll. 46–51 (claim 49), *with id.* col. 31 ll. 23–26 (claim 59), *and id.* col. 31 ll. 55–59 (claim 64), *and id.* col. 32 ll. 27–31 (claim 72), *and* '698 patent col. 28 ll. 17–23 (claim 1), *and id.* col. 29 ll. 15–20 (claim 17), *and id.* col. 30 ll. 6–10 (claim 30), *and id.* col. 30 ll. 53–57 (claim 39), *and id.* col. 31 ll. 25–30 (claim 44). Because Google relied solely on U.S. Patent 5,933,811 ("Angles") as disclosing the non-blockable limitation, the Board noted that determining whether Angles disclosed the non-blockable limitation would be dispositive of the obviousness inquiry as to all the cited prior art combinations. *See '045 Decision*, slip op. at 18.

Angles describes "a system and method for delivering customized electronic advertisements," Angles Abstract, and discloses an advertisement request that "references" a Common Gateway Interface ("CGI") script used to generate dynamic responses, *see id.* col. 12 l. 67–col. 13 l. 19. In its Patent Owner Response, At Home argued that the mere mention of requesting CGI scripts was insufficient for disclosure of a non-blockable request, because

not all requests that reference a CGI script are non-blockable. Google replied that because requests for CGI scripts are non-blockable by default due to its dynamic nature, a person of ordinary skill in the art would understand that disclosing a request to execute a CGI script would also disclose a non-blockable request.

The Board determined that Angles did not teach the non-blockable limitation. *See '045 Decision*, slip op. at 27. It found that the "essential problem with Angles is its lack of disclosure." *Id.* at 25. While Angles discloses an advertisement request for a CGI script, Angles is silent on any details regarding whether this request is non-blockable. *See id.* at 21–23. And "[w]hether such a request is non-blockable depends on the particular syntax used for the request," such as the strings "cgi-bin" and "?," which Angles also does not disclose. *Id.* at 21–22.

The Board also reviewed a 1996 textbook on CGI programming ("1996 textbook"), *see* J.A. 1521–30, and a 1995 World Wide Web Consortium ("W3C") publication, *see* J.A. 1566–70, which disclosed requests for CGI scripts that were blockable by cache. *See '045 Decision*, slip op. at 23–25. Dr. Kevin C. Almeroth, At Home's expert, testified that those documents represent how a person of ordinary skill would understand CGI requests, and support the position that a person of ordinary skill in the art "would not have assumed automatically that Angles's advertisement request is non-blockable." *See id.* The Board credited Dr. Almeroth's testimony, and, as a result, found that Angles was "inconclusive" about whether its advertisement request was a non-blockable request. *See id.* The Board therefore found that a person of ordinary skill in the art would not have understood Angles to disclose the non-blockable limitation. *See id.* at 29–30.

The Board next considered At Home's evidence of secondary considerations of nonobviousness: long felt but unsolved need, industry praise, and widespread adoption

by the industry. *See id.* at 44–59. The Board found that evidence of secondary considerations was weak, but found that At Home showed "persuasive" evidence of nonobviousness. *See id.* at 59–60.

Based on those findings, the Board concluded that Google had not met its burden to prove by a preponderance of the evidence that the instituted claims are unpatentable as obvious. *Id.* at 61. Google timely appealed to this court. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(4)(A).

## DISCUSSION

We review the Board's legal determinations *de novo*, and the Board's factual findings underlying those determinations for substantial evidence. *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015). A finding is supported by substantial evidence if a reasonable mind might accept the evidence to support the finding. *Consol. Edison Co. v. NLRB*, 305 U.S. 197, 229 (1938). Obviousness is a question of law based on underlying factual findings, including "the scope and content of the prior art, differences between the prior art and the claims at issue, the level of ordinary skill in the pertinent art, and any objective indicia of non-obviousness." *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (citing *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007)).

We first address the disclosure of Angles, which is key to this appeal. Google argues that the Board erred in determining that Angles did not disclose a non-blockable request by failing to assess it from the perspective of a person of ordinary skill in the art. As support for its position, Google contends that requests for CGI scripts are non-blockable by default. And because Angles uses a standard web server, a person of ordinary skill in the art would have had no reason to consider that Angles referred to anything other than standard CGI requests, which are "typically" non-blockable. Appellant's Br. 31.

At Home responds that substantial evidence supports the Board's finding that Angles does not disclose a non-blockable request. Specifically, At Home argues that the Board found persuasive the 1996 textbook, the 1995 W3C publication, and Dr. Almeroth's testimony, all of which confirm that requests to CGI scripts can be blockable, and are therefore not necessarily non-blockable. Based on this evidence, At Home contends that the Board correctly determined that Angles was at best inconclusive, and a person of ordinary skill in the art would not have automatically assumed that the mere mention of a CGI request would also be a disclosure of a non-blockable request.

We agree with At Home that the Board's determination that a person of ordinary skill would not have understood Angles to disclose a non-blockable request was supported by substantial evidence. The Board found persuasive the 1996 textbook and 1995 W3C publication, which disclosed CGI requests that were blockable. *See '045 Decision*, slip op. at 23–25. The Board also credited Dr. Almeroth's testimony, which stated that the 1996 textbook and 1995 W3C publication represent how a person of ordinary skill would have understood CGI requests. *See id.* Based on that evidence, the Board found that a person of ordinary skill would not assume that Angles disclosed a non-blockable request. *See id.* Without more, such as specifics regarding the advertisement request's functionality or syntax, the Board found Angles "inconclusive." *Id.* at 21–23.

We see no error in the Board's analysis of the cited references or its decision to credit Dr. Almeroth's testimony. We therefore conclude that the Board's finding that Angles does not disclose the non-blockable limitation was supported by substantial evidence. Because all the independent instituted claims recite a non-blockable limitation and were argued together, *see id.* at 30, the Board did not err in concluding that none of the instituted claims

would have been obvious over the cited prior art combinations.

At oral argument, Google characterized a "request" as a genus consisting of two species:  blockable requests and non-blockable requests.  *See* Oral Argument at 3:31–4:17, *Google LLC v. At Home Bondholders' Liquidating Tr.*, Nos. 16-2727, 16-2729 (Fed. Cir. Jan. 8, 2018), http://oralarguments.cafc.uscourts.gov/default.aspx?fl=20 16-2727.mp3.  According to Google, because Angles discloses a CGI request, which can only be blockable or non-blockable, Angles must disclose a non-blockable request by virtue of disclosing a generic CGI request.  *See id.* That argument, while a good try, ultimately misses the mark.  The genus-species analysis is not applicable here. Silence is not a genus.  The issue here is whether there is any disclosure of a non-blockable request at all.  As discussed above, the Board properly determined that there was not.  *See '045 Decision*, slip op. at 20–30.

At Home also argues that secondary considerations support the Board's conclusion of nonobviousness.  Google argues that the Board found "nearly every piece of evidence . . . was of limited or no value," Appellant's Br. 38, and thus there could not have been substantial evidence to support the Board's nonobviousness decision.  Because we have agreed with the Board that the principal reference itself does not lead to a conclusion of obviousness, we need not evaluate those arguments relating to secondary considerations.

We have considered the remaining arguments, but find them unpersuasive.

CONCLUSION

For the foregoing reasons, we affirm the decisions of the Board.

**AFFIRMED**