

UNITED STATES PATENT AND
TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DATADOME S.A. AND DATADOME
SOLUTIONS, INC.

Petitioner,

v.

ARKOSE LABS HOLDINGS, INC.,

Patent Owner.

Case No. IPR2025-00694

U.S. Patent No. 9,148,427

PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	OVERVIEW OF THE TECHNOLOGY, THE '427 PATENT, AND THE PRIOR ART.....	5
A.	Technology Background	5
B.	The '427 Patent	5
1.	Prosecution History.....	6
2.	Challenged Claims – Parsing of Claim 1	8
C.	The Cited Prior Art.....	11
1.	Lim	11
2.	Lillibridge.....	18
3.	Guthrie.....	21
III.	LEVEL OF ORDINARY SKILL IN THE ART	23
IV.	CLAIM CONSTRUCTION	24
A.	Legal Standard.....	24
B.	“Undefined Originator”	24
C.	“Dropping ... a TCP connection”	27
D.	“Redirecting a TCP connection”	28
E.	“Initial Request”	30
V.	THE BOARD SHOULD NOT INSTITUTE REVIEW.....	32
A.	Ground 1: Claims 1, 5-6, 10-11, 15-16, and 20 Are Not Obvious Over Lim Alone.....	32
1.	Independent Claim 1	32
2.	Independent Claim 11	45
3.	Dependent Claims 5 and 15 (“... processing further requests from the undefined originator after the challenge has been successfully fulfilled”).....	46

4.	Dependent Claims 6 and 16 (“... stopping processing of further requests from the undefined originator after the challenge has not been successfully fulfilled”)	46
5.	Dependent Claims 10 and 20 (“... the location is X and Y coordinates of the undefined originator's click associated with the challenge”)	51
B.	Ground 2: Claims 2-4 and 12-14 Are Not Obvious Over Lim Alone or in Combination with Lillibridge	51
1.	Dependent Claims 2 and 12 (“... modifying the challenge in response to a second initial request”)	51
2.	Dependent Claims 3-4 and 13-14 (“... the modifying includes varying a coordinate location of the described one of the plurality of graphical forms” and “... the modifying includes varying which one of the plurality of graphical forms is described by the accompanying textual expression”)	54
C.	Ground 3: Claims 7-9 and 17-19 Are Not Obvious Over Lim Alone or in Combination with Guthrie	54
1.	Dependent Claims 7 and 17 (“... the stopping processing includes dropping or redirecting a TCP connection established with the undefined originator”)	54
2.	Dependent Claims 8 and 18 (“... logging a source IP address of the undefined originator, and starting a timer”)	58
3.	Dependent Claims 9 and 19	64
D.	Secondary Considerations	68
VI.	CONCLUSION	68

EXHIBIT LIST

Exhibit No.	Description
2001	Declaration of Christian E. Mammen Pursuant to 37 C.F.R. § 42.10(c)(2)
2002	Time to Trial for U.S. District Court for the District of Delaware, LexMachina (retrieved June 12, 2025)
2003	<i>Arkose Labs Holdings, Inc. et al v. DataDome et al</i> , C.A. No. 1:23-cv-01467-RGA (D. Del.), D.I. 1, Complaint (December 27, 2023)
2004	USPTO’s FAQs for Interim Processes for PTAB Workload Management
2005	Letter from Christian E. Mammen to Benjamin Fabre, dated October 6, 2022
2006	Letter from Christian E. Mammen to Stephen Smith, dated March 1, 2023
2007	Morris, A., “IPBC Global 2025: Acting USPTO Director Says IPR Use Needs to Change,” IAM (June 10, 2025)
2008	Declaration of Dr. Wenke M. Lee
2009	RFC 2068: Hypertext Transfer Protocol – HTTP/1.1 (January 1997)
2010	RFC 2616: Hypertext Transfer Protocol – HTTP/1.1 (June 1999)
2011	Network Performance Effects of HTTP_1.1, CSS1, and PNG
2012	Netscape Communicator 4.01 in 1997 - Web Design Museum

Exhibit No.	Description
2013	U.S. Patent No. 7,373,510 File History
2014	HTML 4.01 Specification: W3C Recommendation (December 24, 1999)

TABLE OF AUTHORITIES

Page(s)

Cases

<i>Catalina Marketing Int’l Inc. v. Coolsavings.com, Inc.</i> , 289 F.3d 801 (Fed. Cir. 2002)	32
<i>In re Xencor, Inc.</i> , 130 F.4th 1350 (Fed. Cir. 2025)	32
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005)	24

Rules

37 C.F.R. §42.107(a)	1
----------------------------	---

I. INTRODUCTION

Patent Owner Arkose Labs Holdings, Inc. (hereinafter “Patent Owner” or “Arkose”) respectfully requests that the Board deny institution because Petitioner has failed to demonstrate a reasonable likelihood of success on the grounds submitted in its Petition. Pursuant to 37 C.F.R. §42.107(a), Patent Owner submits this Preliminary Response to the Petition for *Inter Partes* Review of U.S. Patent No. 9,148,427 (“the ’427 Patent”) filed by DataDome S.A. and DataDome Solutions, Inc. (collectively, “Petitioner”).

Petitioner requested *Inter Partes* Review of claims 1, 5-6, 10-11, 15-16, and 20 of the ’427 Patent on the ground that these claims are allegedly obvious over Lim alone (“Ground 1”). Petitioner further requested *Inter Partes* Review of claims 2-4 and 12-14 of the ’427 Patent on the ground that these claims are allegedly obvious over Lim alone and/or Lim in combination with Lillibridge (“Ground 2”). Petitioner further requested *Inter Partes* Review of claims 7-9 and 17-19 of the ’427 Patent on the ground that these claims are allegedly obvious over Lim alone and/or in combination with Guthrie (“Ground 3”).

Patent Owner submits that none of these grounds warrant institution. Petitioner has not sought construction of any claim terms in the Challenged Claims. Applying proper constructions, the cited prior art is deficient in at least the following respects.

Claims 1, 5-6, 10-11, 15-16, and 20 are not obvious over Lim alone at least because:

- i. The preambles to claims 1 and 11 are limiting, and Lim does not prevent robots from browsing beyond a welcome page. Instead, Lim's use of quizzes or challenges is primarily to ensure that only humans who are logged-in registered users will receive credits to their accounts. Lim does not prevent "guests"—whether bot or human—from freely browsing websites;
- ii. Lim does not respond to an "initial request" from an "undefined originator" with a challenge, according to claims 1 and 11;
- iii. Lim's response to a challenge does not include "identification of a location" of the described graphical forms, according to claims 1 and 11; and
- iv. Lim does not "stop[] processing of any further requests" if a challenge is not fulfilled, according to claims 6 and 16.

Claims 2-4 and 12-14 are not obvious over Lim alone or in combination with Lillibridge because:

- i. Lim does not disclose the limitations of independent claims 1 and 11 identified in the preceding paragraph;

- ii. Lim or Lim in combination with Lillibridge do not teach or suggest the additional limitations found in dependent claims 2-4 and 12-14 because neither discloses or teaches “modifying” a challenge “in response to” a second initial request; and
- iii. A POSITA would not have been motivated to combine Lim with Lillibridge, in particular because Lillibridge’s authentication techniques would restrict those who are not registered users from freely browsing or searching, contradicting Lim’s objective of maintaining open access for non-monetized activities, and the implementation of IP tracking would render Lim’s system inoperable for those who are not registered users.

Claims 7-9 and 17-19 are not obvious over Lim alone or in combination with Guthrie because:

- i. Lim does not disclose the limitations of independent claims 1 and 11 identified in the preceding paragraphs;
- ii. Lim or Lim in combination with Guthrie do not teach or suggest the additional limitations found in dependent claims 7-9 and 17-19, in particular:
 - a. Neither Lim nor Guthrie teaches or suggests “dropping or redirecting a TCP connection” if a challenge is not fulfilled;

- b. Neither Lim nor Guthrie teaches or suggests the use of IP address logging, IP address matching, and timers in connection with failed challenges; and
- iii. A POSITA would not have been motivated to combine Lim with Guthrie, in particular because the functionalities identified and relied on by Petitioner occur at incompatible and inconsistent stages of computerized processes described in Lim and Guthrie.

As discussed below, Petitioner has characterized the technological challenge of detecting and blocking bots while allowing human users to continue to access websites, but has not adequately addressed the evolving state of the art concerning specific types of challenges or quizzes and specific enforcement mechanisms. This is exemplified by Petitioner's repeated use of "CAPTCHA"—an acronym for Completely Automated Public Turing test to tell Computers and Humans Apart that was not coined until nearly three years after the priority date of the '427 Patent—to refer to the entire field of bot detection. This broad characterization fails to account for the particular developments in the technology, before and after the Patent's priority date, and obscures the novel aspects of the claimed invention.

The Declaration of Dr. Wenke M. Lee, Ph.D. (EX2008) is submitted herewith in support of this POPR in which he provides his opinions as an expert in the field. EX2008 ¶¶1-20, 106-115, 131-134, 278.

II. OVERVIEW OF THE TECHNOLOGY, THE '427 PATENT, AND THE PRIOR ART

A. Technology Background

While there has been a long history of technology to prevent unwanted intrusion into computer systems by robots and others who lack authorization, that history is also marked by a variety of reasons to exclude, methods of exclusion, and consequences for failing security protocols. In the context presented here, Petitioner has used the now-commonplace term CAPTCHA as a catchall to describe a variety of technologies deployed from the mid-1990's forward, even as it acknowledges that the term CAPTCHA was not coined until 2003 – several years after the invention at issue in the Challenged Claims. Patent Owner's expert, Dr. Lee, explains this background in greater detail, as well as the particular improvements in types of challenges or quizzes, and in consequences for failing a challenge or quiz, that are covered by the '427 Patent. *See generally* EX2008 ¶¶21-33.

B. The '427 Patent

The '427 Patent (EX1001) was filed on May 1, 2008, and claims priority as a continuation of patent application No. 09/901,442, which was filed on July 9, 2001, and became U.S. Patent No. 7,373,510 ("the '510 Patent").

The '427 Patent, like the '510 Patent, also pertains to prevention of robots from browsing a website beyond a welcome page. The '427 Patent discloses a method and computer program by which an "initial request" from an "undefined

originator” is received, processed, and responded to with a challenge that prompts the undefined originator to provide a solution. The response from the undefined originator is processed, and if the challenge is successfully fulfilled (i.e., solved), the undefined originator is assumed to be human and can proceed past the welcome page. If the challenge is unsuccessfully fulfilled, the undefined originator is assumed to be a robot, and further access to the website is denied. In this way, the invention described by the ’427 Patent prevents a website’s contents from being investigated by robots without requiring a user to have to log in. EX2008 ¶¶33-50.

1. Prosecution History

Both the ’427 and ’510 Patents claim priority from an earlier-filed foreign application, which was filed on September 12, 2000. For the purposes of this POPR, Patent Owner presumes a priority date of September 12, 2000.

a. Prosecution of the ’510 Patent

During prosecution, the Examiner issued a first Office Action on November 8, 2004, rejecting the pending claims as anticipated by U.S. Patent No. 5,949,876 (“Ginter”). EX2013 at 63-70. In response, Applicant amended the claims, including by variously adding “dropping or redirecting a TCP connection” and “logging a source IP address” to certain claims. *Id.* at 71-93.

The Examiner subsequently rejected a number of claims, including the ones with TCP connection and IP logging limitations, as anticipated by U.S. Patent No.

6,195,698 (“Lillibridge”). *Id.* at 107-112. Applicant responded by amending the claims to include dropping or redirecting a TCP connection, logging a source IP address, IP address matching, and starting a timer, all in the independent claims. *Id.* at 124-137. The Examiner thereafter issued a Notice of Allowance. *Id.* at 146-151.

b. Prosecution of the ’427 Patent

The U.S. patent application leading to the ’427 Patent, No. 12/113,607 (“the ’607 application”), was filed on May 1, 2008. EX1002 at 1-63. It is a continuation of the ’510 Patent. EX1001 at 1.

In a first Office Action, the Examiner rejected numerous pending claims, *inter alia*, as anticipated by Lillibridge and/or obvious in view of Lillibridge combined with another reference. EX1002 at 68-96.

In response, the Applicant cancelled the pending claims and added a new set of claims including two independent claims, 56 and 66, which disclosed receiving an initial request from an undefined originator, responding to the initial request with a challenge that prompts a response from the undefined originator, and receiving the response to the challenge, and adding a description of the challenge itself: wherein the challenge includes a plurality of graphical forms, and an accompanying textual expression describing one of the plurality of graphs, where the response from the undefined originator identifies the location of the described one of the plurality of graphical forms. *Id.* at 97-106.

On February 17, 2011, the Examiner issued a further Office Action, rejecting the claims as obvious in view of several prior art references, including Lillibridge, which was made final. *Id.* at 110-121. Applicant appealed. *Id.* at 146-169. In his responsive brief, the Examiner withdrew the prior obviousness rejection, but made new obviousness rejections in view of various prior art combinations, again including Lillibridge. *Id.* at 173-184. Applicant filed a second appeal, focusing in particular on the Examiner’s interpretation of the prior art references other than Lillibridge. *Id.* at 194-215.

The Board of Patent Appeals and Interferences (“the Board”) reversed the Examiner’s obviousness rejection, finding in particular that the combination does not teach or suggest an accompanying textual expression describing the plurality of graphical forms. *Id.* at 236-244.

A Notice of Allowance thereafter issued, *id.* at 245-248, and on September 9, 2015, a Determination of Patent Term Adjustment (“PTA”) issued under 35 U.S.C. 154(b), adding 2019 days to the term of the patent. Due to the PTA, the ’427 Patent has an adjusted expiration date of January 18, 2027. *See* EX2008 ¶¶51-79.

2. Challenged Claims – Parsing of Claim 1

The ’427 Patent has two independent claims and 18 dependent claims. All 20 claims are Challenged Claims in the Petition. In its Challenged Claim Listing (Petition, p. viii), Petitioner parses claim 1 into the preamble plus two broad

groupings of limitations. Petitioner’s parsing is not consistent with the structure of claim 1 as published in the ’427 Patent or as explained in the specification. EX2008 ¶¶135-137. In the chart below, the structure of claim 1 as published is indicated, along with Patent Owner’s parsing of limitations (identified in the second column and denoted with a prime (’) mark after the capital letters). For comparison, Petitioner’s parsing is identified in the first column of the table.

The proper parsing of claim 1 may be summarized as follows. Following the preamble, the first limitation (1-A’) is receiving the initial request, (1-B’) is responding to the request with a challenge. The third limitation (1-C’) entails receiving a response to the challenge. The fourth limitation (1-D’) describes the challenge itself. The fifth limitation (1-E’) describes the response to the challenge. Independent claim 11 follows the same structure as claim 1. Additionally, Patent Owner has parsed dependent claims 9 and 19 into separate limitations, as shown.

Petitioner Limitation No.	Patent Owner Limitation No.	Limitation
[1-PRE]		1. A method for preventing robots from browsing a Web site beyond a welcome page, comprising:
[1-A]	[1-A’]	receiving an initial request, directed to the Web site, from an undefined originator;
	[1-B’]	responding to the initial request with a challenge that prompts a response to the challenge from the undefined originator; and

Petitioner Limitation No.	Patent Owner Limitation No.	Limitation
[1-B]	[1-C']	receiving the response to the challenge from the undefined originator, wherein
	[1-D']	the challenge includes:
	[1-D'-1]	a plurality of graphical forms, and
	[1-D'-2]	an accompanying textual expression describing one of the plurality of graphical forms, and
	[1-E']	the response to the challenge includes an identification of a location of the described one of the plurality of graphical forms.
9		9. The method of claim 1, further comprising:
	[9-A']	receiving a new request;
	[9-B']	determining whether a source IP address of the new request matches the logged source IP address of the undefined originator;
	[9-C']	determining whether said timer is expired; and
	[9-D']	upon the source IP address of the new request matching the logged source IP address of the undefined originator and the timer being expired, responding to the new request with a second challenge that prompts a response to the second challenge.

C. The Cited Prior Art

1. Lim

U.S. Patent No. 8,527,337 (“Lim”) (EX1004)¹ focuses on the management of user accounts and profiles, and reward credits, and the authentication of human users serves these business purposes. Lim’s focus is specific and encapsulates a goal with a different and much narrower focus than the ’427 Patent. EX2008 ¶¶80-89.

At the time of the invention claimed in Lim, the Internet was configured to return information to users based on key words or search strings provided by the user. EX1004 1:58-59. Results were ranked by matching the user’s search terms with a website’s metatags and returned based on the quality of the match. *Id.* 1:35-38, 58-64. To get more engagement, advertisers and website owners would often repeat terms or include multiple similar metatag terms, to the potential detriment of the Internet user. *Id.* 2:1-10. EX2008 ¶81.

To address this, Lim describes a method of returning information to registered users who are also logged-in, where the information is ranked according to reward credits, instead of the quality of match between search terms and metadata terms. EX1004 4:10-13. These reward credits could be offered by advertisers and website

¹ For the purposes of this POPR, Patent Owner has not argued that the inventors of the ’427 Patent are entitled to an invention date earlier than September 12, 2000; however, if the Board institutes review, Patent Owner reserves the right to submit such argument and supporting evidence.

owners to Internet users who engaged with their content, and redeemed those reward credits for cash, gift certificates, airline miles, and more. *Id.* 4:10-18. Advertisers or website owners could offer more rewards if a user had the profile of their target demographic, which would rank the ad or website higher in a user's search return. *Id.* 4:25-30. Thus, a user may be incentivized to provide their demographic profile information to advertisers and content providers in exchange for more reward credits. *See id.* 2:63-65. Lim also identifies a need for managing this reward system, to ensure that only human Internet users were able to receive these rewards. *Id.* 9:54-56; EX2008 ¶82.

Because users are paid per ad and/or site viewed, an automated system that establishes or employs a registered user account would be able to earn money or credits without a desired human actually viewing the advertising or visiting the site. Accordingly, "some embodiments of the present invention make use of periodic quizzes ... to verify that a particular user is a human." EX1004 13:18-24. This is the context for Lim's disclosure that quizzes may be provided during new user registration. *Id.* 9:53-67 ("Before being allowed to register, these new users may be asked to answer one or more questions of a quiz to test whether they are a human users [sic] or not ... [Bots might otherwise be able to sign up] and thereby garner any rewards associated therewith, without having to subject a human user to this process. To avoid abuses of the present system, quizzes may be introduced at various

levels to thwart such automated processes and allow access only by live, human users.”). EX2008 ¶83.

To manage the reward system and authenticate human use, Lim describes a method that transmits a prompt, consisting of one or more graphical images, from a server to the user’s computer system. EX1004 23:50-54. Users may be provided a text-input box to write their answer in or may select the answer from the image itself. *Id.* 13:52-56. Due to the simple nature of these questions, this method allows a human operator, but not an automated one, to provide the correct response to the prompt. *Id.* 13:43-45; EX2008 ¶84.

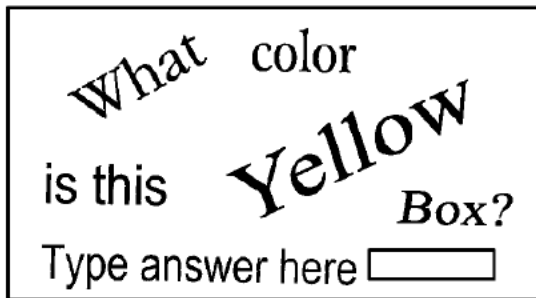


FIG. 4A



FIG. 4D

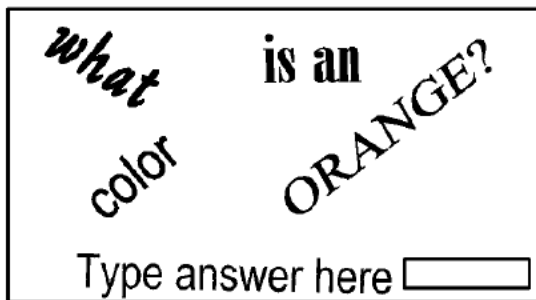


FIG. 4B

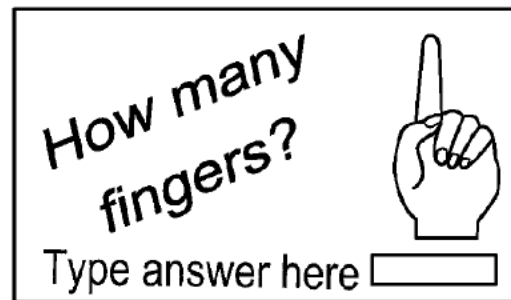


FIG. 4E

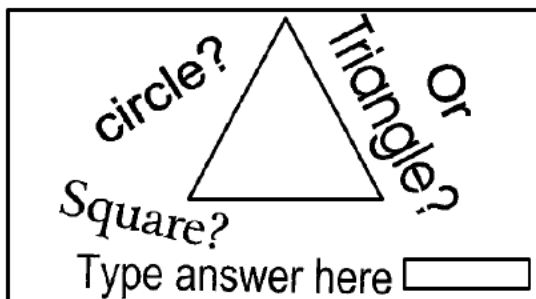


FIG. 4C

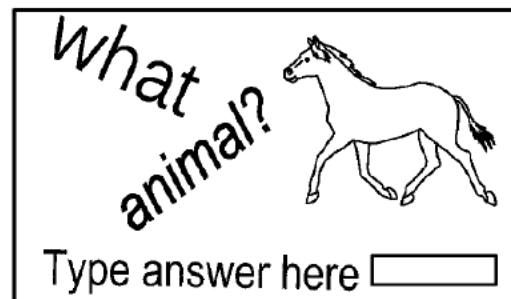


FIG. 4F

[EX1004 FIGs. 4a-4f]

Upon confirmation of the correct response by the logged-in registered user, the server computer grants access to the computer-based resource, enabling the user to receive reward credits. EX1004 24:4-8. The server computer determines the amount of time the human operator has access to the resource before another prompt is given. *Id.* 24:9-16. This interval of time may increase when more correct responses are given, as the response is inferred to have been provided by a human

operator. *Id.* 24:11-16. If the user fails a test, a retest is offered, and the retest resets the testing interval. *Id.* 14:56-67; EX2008 ¶85.

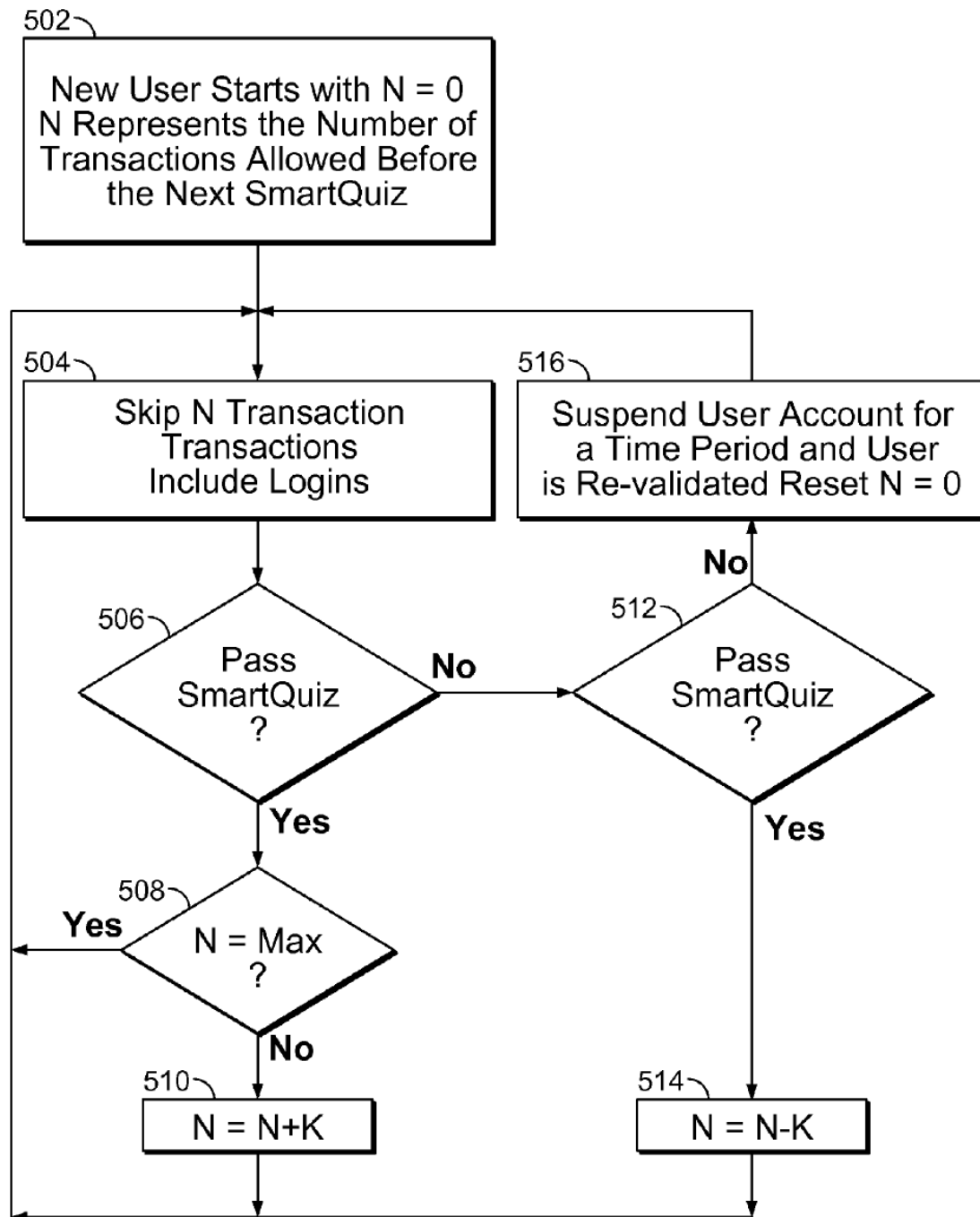


FIG. 5

[EX1004 FIG. 5]

Lim's system is focused primarily on providing additional benefits for registered users. *See, e.g.*, EX1004 FIG. 1 host **104**, 10:1-3, 11:52-56, 15:26-33. Lim further describes placing a cookie on the user's device for "automatic login for future sessions." *Id.* 11:26-33. Collectively, these mechanisms ensure that registered users' identities are defined, maintained, and recognized by Lim's system through authentication. *See also id.* 10:1-3. Lim repeatedly characterizes users (whether or not registered) as human—as distinct from "automated computer processes." *E.g., id.* 2:67-3:1, 9:55, 9:63-64, 9:67, 13:17; EX2008 ¶86.

While Lim prevents robotic systems from registering or logging into accounts which are linked to monetary rewards, the disclosed system permits access by others—including *robotic* systems—to access search features that lack financial incentives. EX1004 13:9-14 (explaining that Lim's system allows "automated access," such as robotic access, from a limited number of devices). EX2008 ¶87.

For instance, Lim allows search without verification, even after a putative new user fails registration quizzes. EX1004 at 15:18-23. After a logged-in registered user fails verification challenge sufficient to trigger account suspension (*id.* FIG 5 step 516, 15:1), a registered user may log out and submit requests from any device. Lim's system processes such anonymous requests without authentication or tracking (*id.*

15:18-22 (“If a user is not logged in, he/she will be able to perform searches”)), rendering account suspension ineffective at stopping requests. Lim’s system does not track users by IP address but rather tracks only registered users who are logged into their accounts. *Id.* 10:1-5 (noting that registered users are tracked); *see also* 11:26-29. Lim would not prevent new connections from the same or different devices, as Lim lacks user-level tracking for “guests.” *Id.* 15:15-22; EX2008 ¶¶88.

In sum, Lim describes a system that allows “guests” to engage with a website by submitting search queries, but their lack of registration and login credentials prevents them from accessing account-based functions, such as earning/redeeming rewards or receiving search results that are sorted/ranked according to “user-supplied demographic information” (EX1004 9:20-24), which must be associated with a registered user’s account (*id.* 10:38-56). EX2008 ¶¶89.

2. Lillibridge

U.S. Patent No. 6,195,698 (“Lillibridge”) (EX1008) describes challenges that take the form of noisy graphical representations of random alphanumeric strings. This is very specific and much narrower than the ’427 Patent, which includes graphical challenges. As explained above in § II.B.1, the Patent Examiner addressed Lillibridge in both the ’427 Patent’s and the ’510 Patent’s prosecution history, and the Applicant overcame rejections based, *inter alia*, on Lillibridge. *See* EX2008 ¶¶90-93.

Lillibridge identifies and attempts to address the problem of automated agents mimicking human users to gain access to Internet services. EX1008 1:20-28; EX2008 ¶91.

Lillibridge addresses this problem by proposing a particular method to selectively grant access requests. EX1008 2:66-67. The server computer, upon receiving an access request from the client computer via a network, generates a predetermined number of “human-perceptible random characters,” which are then used to form a string in the server computer. *Id.* 2:66-3:11. Lillibridge claims a method that adds visual or audial noise to a string to restrict automated agents from gaining access to Internet services. *Id.* 9:48-10:46. The string is then randomly modified, either visually (overlaid on a visually “noisy” background) or audibly (distorted through a speech synthesizer), creating a distorted image only a human

could easily discern. *Id.* 3:12-21. The server computer then presents this modified string to the client computer. *Id.* 3:21-23; EX2008 ¶92.

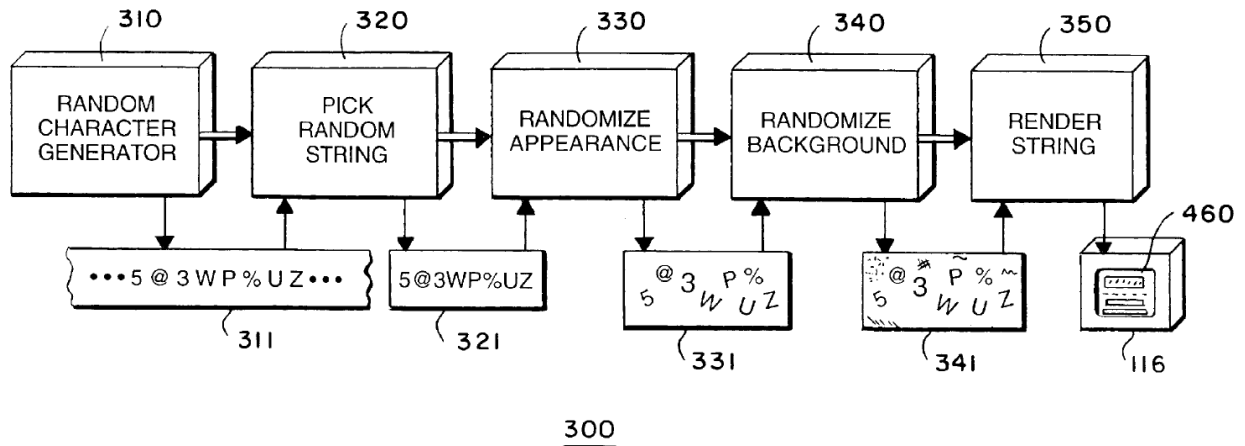


FIG. 3

[EX1008 FIG. 3]

The user inputs the string. EX1008 3:23-24. If the user input is the same as the unmodified string and has been received within a predetermined amount of time, the access request is accepted. *Id.* 3:28-29; EX2008 ¶93.

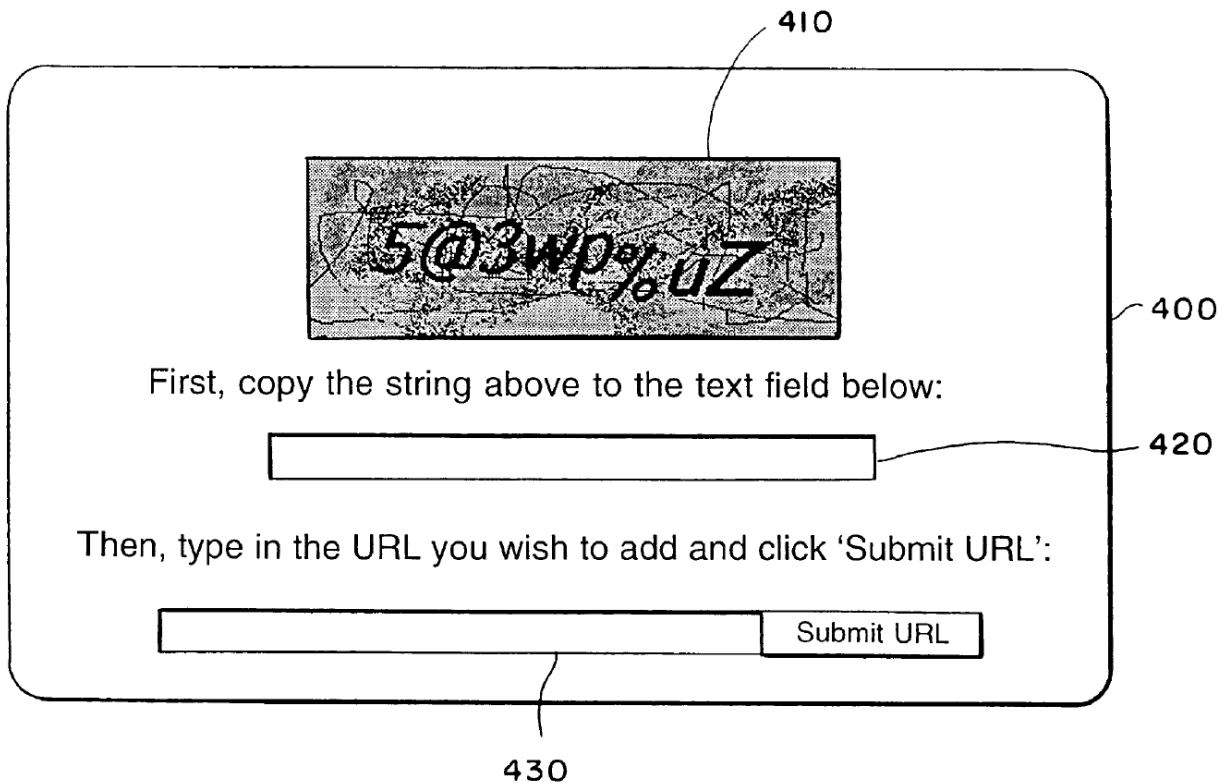


FIG. 4
[EX1008 FIG. 4]

3. Guthrie

U.S. Patent No. 6,161,185 (“Guthrie”) (EX1009) focuses on user authentication by combining the use of a password, response to a challenge from the server, and a serial number assigned to the client. The challenge-and-response method here is much weaker than the system described in the ’427 Patent because in Guthrie, the challenges, *e.g.*, completing the words based on parts of words

already provided, are not based on known hard problems that would be difficult for computer programs to solve accurately and quickly. EX2008 ¶¶94-100. While Guthrie describes a lock-out timer, it functions as a timer for user logins, which is fundamentally different from the timer described in the '427 Patent. *Id.*

Guthrie asserts that traditional password systems are vulnerable to attacks because they provide only one level of security. EX1009 1:22-25. Guthrie addresses this by claiming an authentication system that provides multiple levels of security, including: providing a challenge to the user, instituting a lockout timer, and creating a password lifecycle. *Id.* 16:60, 17:49-50, 17:65-18:02; EX2008 ¶95.

However, Guthrie's "lock-out timer" applies to failures during the initial login process—namely, incorrect username and password entries—but does not apply to its challenge/response mechanism. Specifically, Guthrie explains that "The lock-out timer flag is activated when the server **104** detects too many successive authorization failures in a row" (EX1009 8:10-12) where "'login' and 'authorization' are used interchangeably" (*id.* 8:29-30). This limits the lock-out timer's function to login failures: "the server **104** returns a failure message to the client **102**" over the existing TCP connection when the lock-out timer flag is set. *Id.* 9:6-10; EX2008 ¶96.

Furthermore, Guthrie's challenge/response process authenticates users by generating an encrypted response (EX1009 FIG. 3 (showing secure hashing algorithm)) from a server-issued challenge, client serial number, and user's

password, avoiding password transmission (*id.* Abstract; FIG. 3 (showing a secure hashing algorithm); 6:10-27 (explaining process of generating an encrypted response using the secure hashing algorithm). Guthrie’s lock-out timer, which counters repeated guessing, activates only *after* failed login attempts due to incorrect credentials exceeding a threshold, not *during* the challenge/response phase. *Id.* 4:3-6. Thus, Guthrie ties its timer solely to login failures—*not* its challenge/response phase. EX2008 ¶100.

III. LEVEL OF ORDINARY SKILL IN THE ART

Petitioner has argued that a POSITA “at the time of the alleged invention would have had at least a Bachelor’s degree in computer science or computer engineering, or a similar discipline, along with 2-3 years of computer security, information security, or cybersecurity experience.” Petition at 7.

For the purpose of this POPR, Patent Owner would augment Petitioner’s description as follows. A POSITA should also have university-level courses or work experience in networking and Internet and the web, cybersecurity, machine learning and artificial intelligence, computer graphics, and computer vision. EX2008 ¶¶101-105. Additionally, a POSITA may have an advanced degree in lieu of work experience, or a mix thereof. *Id.* For example, someone with a Doctorate in computer science or computer engineering, or a similar discipline, and no work experience, to be a POSITA. *Id.* Similarly, someone with a Master’s degree in one

of those fields plus 1-2 years of work experience could also qualify as a POSITA.
Id.

IV. CLAIM CONSTRUCTION

Petitioner did not propose to construe any terms. Petition at 20. Patent Owner submits that four terms require construction, as detailed below. EX2008 ¶116.

A. Legal Standard

The Board construes claims under *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) and its progeny. Under *Phillips*, the words of a claim are given their “ordinary and customary meaning,” which is “the meaning that the term would have to a person of ordinary skill in the art at the time of the invention.” *Id.* at 1312-1313. This inquiry is undertaken “in the context of the particular claim[, and] ... in the context of the entire patent, including the specification.” *Id.* Extrinsic evidence may also be considered, but is “less significant than the intrinsic record.” *Id.* at 1317.

B. “Undefined Originator”

Petitioner has not proposed a construction for “undefined originator,” as that term is used in the ’427 Patent. Patent Owner proposes to construe “undefined originator” as **“a requester of access to a website, which is not a registered user and whose status as either a robot or a human being has not been determined by the system receiving the request at the time of the request.”** EX2008 ¶117.

Patent Owner’s proposed construction is fully supported by the specification. EX2008 ¶¶118-120. The requirement that the undefined originator requests access

to a website is supported by EX1001 Abstract (“When an initial request from an undefined originator is received, the Web site responds to it”), Fig. 3 (“Initial Request Forwarded to Web Site”), 2:47-50 (“On receiving an initial request from an undefined originator, the Web site responds to the request with a welcome page including a challenge.”), and 4:1-4 (“FIG. 3 depicts the steps of the method according to the invention when an originator of an initial request to access a Web site is responded to with a challenge. Upon receiving this initial request, the **300** Web site server responds”). EX2008 ¶118.

The requirement that it be not a registered user and not logged in is supported by EX1001 Abstract (“The invention prevents Web site contents from being investigated by robots while not requiring users to have to log on.”), 2:12-18 (“The standard way of achieving this is to protect a Web site through some form of authentication, of which the more common method is to manage a list of registered users having a password so as they have to sign on upon accessing the site. The obvious drawback of this is that administrators must manage and update a closed list of users.”), 2:33-34 (“ . . . to proceed further by not imposing a registration at first access and a log on procedure at each Subsequent access.”), 2:58-61 (“The invention prevents Web site contents from being investigated by robots without requiring end users to register or the site administrator to have to manage an access list of authorized users.”), and 3:41-44 (“ . . . while neither imposing to the people accessing

it the burden of having to register and to log on, nor requiring the administrators of the site to manage a list of legitimate users.”). EX2008 ¶119.

And the requirement that its status as a robot or human has not been determined by the website at the time of the request is supported by EX1001 Abstract (“Then, on receiving a further request from the undefined originator, the Web site can check whether the challenge is fulfilled or not. If fulfilled, the undefined originator is assumed to be a human being and authorized to go on. If the challenge is not fulfilled, the undefined originator is assumed to be a robot, in which case site access is further denied.”), Fig. 3 (“Web Site Server Checks if Challenge is Fulfilled”), 2:52-57 (“If fulfilled, the undefined originator is assumed to be a human being and the site keeps processing the further request and all Subsequent ones, if any. However, if the challenge is not fulfilled, the undefined originator is assumed to be a robot, in which case all requests from that originator are not further processed.”), 4:14-18 (“If the response matches the challenge prompt **340**, then the site server assumes that the originator is a human being and permits further access. However, if the Web server finds that challenge is not properly answered, it must assume that the originator is a robot **350**.”), and 4:51-54 (“FIG. 5-b is another alternative that combines images **520** and text **530** in an even more abstract way where the answer is suggested by the text, so it is even better adapted to discriminate a human being from a robot.”). EX2008 ¶120.

C. “Dropping ... a TCP connection”

Petitioner has not proposed a construction for “dropping ... a TCP connection,” as that term is used in the ’427 Patent. Patent Owner proposes to construe “dropping ... a TCP connection” as **“intentionally terminating an established TCP connection between a client and a server.”** This construction is supported by both intrinsic and extrinsic evidence, and is the standard meaning to a POSITA. EX2008 ¶¶121-123.

Intrinsically, the ’427 Patent specification repeatedly describes “dropping” a TCP connection as a purposeful server-side action taken in response to a failed challenge, thereby terminating communication with the originator. For example, Figure 3 and the accompanying text at column 4, lines 16-21 state that if the challenge is not fulfilled, the server “stops processing all current and further requests,” which “includes dropping the TCP connection or redirecting it to another site.” This is not a passive timeout but an active decision to sever the connection. EX2008 ¶122. Similarly, Figure 4 and the description at column 4, lines 33-43 explain that if a request is received from a previously logged IP address before a timer expires, “the TCP connection is dropped or redirected,” again confirming that “dropping” is a deliberate act of terminating the connection. EX2008 ¶122. The specification also clarifies that the TCP connection is “established” when the server initially responds to the originator with a challenge (EX1001 4:1-8), further

supporting that “dropping” refers to the termination of an already-established connection. EX2008 ¶122.

Extrinsically, RFC 2616: Hypertext Transfer Portal – HTTP/1.1 (June 1999) (EX2010) provides additional context, supporting the conclusion that Patent Owner’s proposed construction is how a POSITA would have understood the term. EX2008 ¶123. Section 8.1.1 explains that persistent TCP connections are maintained to allow multiple requests and responses between client and server, but may be closed by either party to manage resources or in response to errors or timeouts. *See* EX2010 at 44. More importantly, Section 8.1.2 states: “Once a close has been signaled, the client **MUST NOT** send any more requests on that connection.” *Id.* at 45 (emphasis in the original). This confirms that once a TCP connection is dropped, whether it is closed or terminated, it cannot be reused for further communication. EX2008 ¶123. This supports the interpretation that “dropping” a connection is a clear and intentional act of severing the communication channel.

D. “Redirecting a TCP connection”

Petitioner has not proposed a construction for “redirecting a TCP connection,” as that term is used in the ’427 Patent. Patent Owner proposes to construe “redirecting a TCP connection” as “**directing an established TCP connection to a**

different destination such as a different website.” This construction is supported by both intrinsic and extrinsic evidence. EX2008 ¶¶124-126.

Intrinsically, the '427 Patent specification describes redirection as a deliberate server-side action taken in response to a failed challenge. EX2008 ¶125. The specification states that if the challenge is not fulfilled, the server “stops processing all current and further requests, if any ..., which includes dropping the TCP connection or redirecting it to another site.” EX1001 4:16-21. This language makes clear that redirection is an intentional alternative to termination, involving the active rerouting of the connection. EX2008 ¶125. Figures 3 and 4 reinforce this understanding, depicting “Drop or Redirect TCP Connection” as a server-side action taken in response to a failed challenge (EX1001 Fig. 3, step 352) or a repeated request from a logged IP address (*Id.* Fig. 4, step 460). These disclosures confirm that “redirecting a TCP connection” refers to a purposeful act of instructing the client to initiate a new connection to a different website. EX2008 ¶125.

Extrinsically, EX2010 provides further support. EX2008 ¶126. Section 10.3, titled “Redirection 3xx,” explains that redirection is a mechanism by which a server informs the client that the requested resource resides temporarily or permanently under a different URI. Specifically, it states: “This class of status code indicates that further action needs to be taken by the user agent in order to fulfill the request.” EX2010 at 61. This redirection is communicated through specific HTTP status

codes (e.g., 301, 302, 307), which are defined in Section 10.3 as requiring the client to take additional steps, such as issuing a new request to a different URI, based on the server's instruction. *See, generally*, EX2010 §10.3. Additionally, Section 8.1.2 of EX2010 clarifies that once a TCP connection is closed, it cannot be reused: "Once a close has been signaled, the client MUST NOT send any more requests on that connection." *Id.* at 45. This distinction reinforces that redirection is not a continuation of the same connection, but rather a separate and intentional rerouting process. EX2008 ¶126.

E. "Initial Request"

Patent Owner proposes to construe "initial request" as **"a request to browse a website beyond a welcome page."** This construction is supported by intrinsic evidence. EX2008 ¶¶127-130.

Patent Owner's proposed construction is fully supported by multiple disclosures in the '427 Patent. EX2008 ¶128. The Abstract states that "[t]he invention prevents robots from browsing a Web site beyond a welcome page." EX1001 Abstract. Similarly, the specification explains that the invention describes "[a] method and a system for preventing robots from browsing a Web site beyond a welcome page." *Id.* at 2:46-47. Figure 1 is described as "illustrat[ing] the method according to the invention to prohibit robots from accessing a Web site beyond its welcome page." *Id.* at 3:10-12. The specification further states that the invention

“prevent[s] robots from browsing the site beyond the welcome page.” *Id.* at 3:40–41.

Patent Owner's proposed construction is also supported by claim 1's preamble: “A method for preventing robots from browsing a Web site beyond a welcome page” This preamble is not merely a statement of intended use or purpose; rather, it provides essential context for understanding the scope of the claimed method. EX2008 ¶129. The body of claim 1 refers back to the “initial request” received by the website, and the steps that follow are directed to determining whether that request is from a human or a robot. Because the entire method is framed around the goal of preventing access beyond a welcome page, the “initial request” must necessarily be understood as a request to proceed past that welcome page. *Id.* ¶130. This interpretation is consistent with the specification, as demonstrated in the preceding paragraph, which details multiple disclosures confirming that the invention is directed to preventing robots from accessing content beyond the welcome page. *Id.* Accordingly, the preamble provides a necessary limitation that informs the meaning of “initial request,” and should be read as part of the claim. *Id.*

V. THE BOARD SHOULD NOT INSTITUTE REVIEW

A. Ground 1: Claims 1, 5-6, 10-11, 15-16, and 20 Are Not Obvious Over Lim Alone

1. Independent Claim 1

Petitioner has parsed claim 1 into the preamble and two limitations, disregarding the structure, punctuation, logic, and specification support for the proper parsing of claim 1. EX2008 ¶¶135-137. Patent Owner identified the correct parsing of claim 1 above, §II.B.2, and the reasons therefor. Irrespective of how the limitations are labeled, Lim alone fails to render claim 1 obvious for the reasons stated below.

a. 1-PRE (“A method for preventing robots from browsing a Web site beyond a welcome page”)

Petitioner does not contend that the preamble is not limiting. In fact, the preamble is limiting because it gives life, meaning and vitality to the claim and/or recites essential steps. *E.g., In re Xencor, Inc.*, 130 F.4th 1350, 1358 (Fed. Cir. 2025); *Catalina Marketing Int’l Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). In particular, the preamble makes clear that, among the types of “undefined originators” with which the claimed method interacts, robots are intended to be blocked. Moreover, the preamble makes clear that the blocking is to occur at the threshold of the web site, preventing such robots from browsing “beyond a welcome page” to the website. EX2008 ¶¶138-139.

Petitioner contends that Lim alone discloses this limitation. Petition § VIII.A.1.a, EX1003 ¶¶92-95. Although Petitioner cites several passages from Lim (EX1004 Abstract, 2:33-39, 8:25-30, 9:45-67, 13:15-28, Fig. 1), none of those passages makes any reference to preventing a robot—or any user or other entity—from browsing beyond a welcome page. Instead, the purpose of quizzes in Lim is very different. Lim’s primary focus is on paying users for viewing ads and/or interacting with the website. EX2008 ¶¶140-141. Thus, as Lim explains, “Because users are paid per ad and/or site viewed, an automated system would be able to earn money or credits without the desired human actually viewing the advertising or visiting the site. Accordingly, some embodiments of the present invention make use of periodic quizzes ... to verify that a particular user is a human.” EX1004 13:18-24. Although Lim also refers to using a quiz in connection with new user registration, it is so that bots will not be allowed to reap monetary awards via a registered user account. *Id.* at 9:53-64. Contrary to Petitioner’s assertion, the cited passages *do not* have the purpose or effect of excluding robots from browsing beyond a welcome page. *See* EX2008 ¶¶142-143.

b. 1-A’ (“receiving an initial request, directed to the Web site, from an undefined originator”)

Petitioner contends that Lim alone discloses or renders obvious this limitation. Petition § VIII.A.1.b, EX1003 ¶¶96-99. Lim does not disclose this limitation. First, many of the passages in Lim relied on by Petitioner do not pertain to “initial

requests.” Second, none of the passages in Lim cited by Petitioner pertain to “undefined originators.” EX2008 ¶¶144-164.

First, the passages relied on by Petitioner do not disclose “initial requests.” EX2008 ¶¶128, 146. Lim is concerned with protecting registered user accounts from abuse by bots, particularly because those accounts can be used to earn financial rewards. *See* EX1004 13:15-22 (“Because users are paid per ad and/or site viewed, an automated system would be able to earn money or credits without the desired human actually viewing the advertising or visiting the site.”). EX2008 ¶146.

The periodic quizzes discussed in Lim at columns 13-14 occur after a registered user is logged in (*see, e.g.*, EX1004 13:24-28), or when an unregistered user initiates the process to “sign up” and become a registered user (*id.* 9:53 (“Before being allowed to register”)). *See also* EX1004 10:3-5 (“This form of registration process is commonly used in the Internet environment to track users”), 10:8-11 (explaining that users can provide “personal information”). EX2008 ¶¶146, 152. Lim’s system does not send quizzes to “guests” or unregistered users that are simply performing “searches.” EX1004 15:15-22 (“[G]uests may still be permitted to use the system without logging in (and without receiving the rewards offered to registered users). [] If a user is not logged in, he/she will be able to perform searches, but without the benefit of receiving the rewards.”). EX2008 ¶146.

Accordingly, Lim does not teach or suggest “responding to the initial request with a challenge that prompts a response to the challenge from the undefined originator,” because Lim does not send quizzes to “guests” or unregistered users who are simply sending search requests. EX2008 ¶148. Although Lim may send quizzes during the account registration process, a registration request is not equivalent to a request to browse beyond a welcome page of a website. *Id.* ¶¶147, 153. Lim is clear that its system only issues a quiz to an unregistered user if that user sends a request to register for an account. *See* EX1004, 9:53-56. However, a request to register for an account is not the same as an initial request to browse a website beyond a welcome page. EX2008 ¶147.

In contrast, the ’427 Patent specifically teaches away from user registration and logins. EX1001 2:58-61 (“The invention prevents Web site contents from being investigated by robots without requiring end users to register or the site administrator to have to manage an access list of authorized users.”), 2:58-61, 3:41-44. A challenge in the ’427 Patent is issued in response to an attempt to browse the site, not in response to a request to register for an account. *See* EX1001 2:47-50; EX2008 ¶154.

Second, the cited passages of Lim do not relate to an “undefined originator” as that term is used in the ’427 Patent. EX2008 ¶154. Petitioner has not proposed a construction of “undefined originator.” Nonetheless, throughout its argument on

limitation 1-A’, Petitioner repeatedly equates “unknown user” with “undefined originator.” *See* Petition § VIII.A.1.b. The two phrases are not interchangeable, particularly since an “originator” is not a registered user and has not yet been determined to be a new user. *See supra* § IV.B (construction of “undefined originator”). EX2008 ¶154.

Lim distinguishes between registered users and “guests.” Registered users, according to Lim, are those who, at the time of submitting an HTTP request to access a web page, have created a user account on Lim’s system and are logged into that account (e.g., host 104 in FIG. 1) using credentials such as a username and password (EX1004 10:1-3), or via cookies for automatic login (EX1004 11:52-56; *see also* 15:26-33, noting that logging in provides access to an account). On any plausible definition or interpretation of “undefined originator,” a registered user that has logged into an account is not an “undefined originator.” Accordingly, the portions of Lim relating to logged-in registered users are inapplicable to robot-detection from among undefined originators. EX2008 ¶155.

Petitioner erroneously relies on several passages describing how Lim’s system processes registered users, such as those requiring users to “sign up” (EX1004 9:30-31), provide “a username and a password” (EX1004 10:1-3), or use cookies for “automatic login” (EX1004 11:26-33), as well as passages discussing “accounts,”

“user rewards,” “credits,” or “transactions,” which are exclusively associated with registered users’ accounts. EX2008 ¶156.

But Lim’s registered users have accounts that are maintained by the website administrator (EX1004 10:1-14) so they can log back onto the website and earn rewards by interacting with advertisements (*see, e.g., id.* 12:4-8). In other words, the website described in Lim knows, logs, and monitors registered users who log into their accounts. *Id.* 10:3-7; 11:52-57, 14:58-60; EX2008 ¶157. Conversely, the website described in the ’427 Patent has yet to define the requester of access and does not maintain a list of registered users; in fact, the goal of the ’427 Patent is to avoid the need of maintaining lists of users. EX1001 3:39-44. But even if “undefined originators” is not separately construed and is given its plain and ordinary meaning, it is clear that a registered user is, by definition, one whose identity is known or defined. EX2008 ¶¶157.

Additionally, Lim’s use of login credentials allows Lim’s system to authenticate and verify the *identity* of users during login. *See* EX1004 10:1-7; 11:55-56. Lim explains that this process is designed “to track users,” meaning Lim’s system maintains a record of registered users’ identities for account management. EX1004 10:3-5; EX2008 ¶159. Lim’s disclosures relating to registered users is irrelevant to claim 1 because they are not “undefined originators.” *Id.*

Lim further describes placing a cookie on the user's device for "automatic login for future sessions." EX1004 11:26-33. This cookie stores account information, enabling Lim's system to recognize returning users without requiring repeated credential entry. *Id.* 11:26-29, 11:50-611; *see also id.* 10:1-3 (describing the requirement for a username and password to access account-related features); EX2008 ¶160.

To become registered users, Lim outlines a formal registration process that enables Lim's system to define their identity. EX2008 ¶158. This is the opposite goal of the '427 Patent, and administering a quiz during the registration process is not the same as administering a challenge at the welcome screen. *Id.* Thus, Lim does not disclose responding to an "initial request" with a challenge. The challenge in the '427 Patent is issued in response to an attempt to browse the site, not in response to a request to register for an account. *Id.* ¶149.

For the reasons discussed above, registered users cannot be "undefined originators" as defined by the '427 Patent. EX2008 ¶150. Lim is clear that its system only issues a quiz to an unregistered user if that user sends a request to register for an account. *See* EX1004 9:53-56; EX2008 ¶151. A request to register for an account is *not* the same as an initial request to browse a website beyond a welcome page. *Id.* ¶¶151.

A POSITA would understand that a registration request is an action undertaken to create a persistent identity within the system, typically involving the submission of personal information (EX1004 10:3-5 (“This form of registration process is commonly used in the Internet environment to track users”), 10:8-11 (users can provide “personal information”)). EX2008 ¶152. On the other hand, an initial browsing request—such as clicking a link to access content beyond a welcome page—does not imply any intent, effort, or step taken, to create an account or identify oneself. EX1004 15:18-22. The ’427 Patent is specifically designed to address this anonymous browsing scenario without requiring user registration. *See* EX1001 2:58-61; EX2008 ¶152.

And, as noted, Lim permits unregistered and/or logged-out users and “guests” to send a “search query” (EX1004 9:28; *see also* 15:15-23 (showing that “guests” and non-logged-in users can perform searches without receiving rewards)) to Lim’s system without authentication. EX2008 ¶162. While the system described in Lim prohibits unregistered users from receiving rewards for performing a “transaction” (EX1004 12:63-66) on the website because of the lack of an associated account or not being logged in, Lim explicitly states that “guests may still be permitted to use the system without logging in ... if a user is not logged in, he/she *will be able to perform searches*, but without the benefit of receiving the rewards (e.g., for the release of demographic profile information) and without receiving search results

having a corresponding sorting.” *Id.* 15:15-22 (emphasis added); *see also id.* FIG. 18A (“the customer’s profile will create a unique search result list sorted by resulting bids”).

c. 1-B’ (“responding to the initial request with a challenge that prompts a response to the challenge from the undefined originator”)

As discussed above, §V.A.1.b, Lim does not teach or suggest “responding to the initial request with a challenge that prompts a response to the challenge from the undefined originator,” as required by the ’427 Patent. EX2008 ¶¶165-170.

d. 1-C’ (“receiving the response to the challenge from the undefined originator, wherein”)

As discussed above, §V.A.1.b and §V.A.1.c, Lim does not teach or suggest “receiving the response to the challenge from the undefined originator” as required by the ’427 Patent because Lim’s system never sends quizzes to unregistered users in response to receiving a request from the unregistered user to browse beyond a welcome page of a website. Consequently, the unregistered user is never prompted to send a response to any challenge to Lim’s system. EX2008 ¶171.

e. 1-D’ (“the challenge includes:”)

i. 1-D’-1 (“a plurality of graphical forms”)

As discussed above in §V.A.1.b, Lim does not disclose “responding to the initial request with a challenge that prompts a response to the challenge from the

undefined originator” as required by claim 1 of the ’427 patent. Accordingly, Lim fails to disclose this limitation. *See, supra*, § IV; EX2008 ¶172.

ii. 1-D’-2 (“an accompanying textual expression describing one of the plurality of graphical forms”)

As discussed above in §V.A.1.b, Lim does not disclose “responding to the initial request with a challenge that prompts a response to the challenge from the undefined originator” as required by claim 1 of the ’427 patent. Accordingly, Lim fails to disclose this limitation. *See, supra*, § IV; EX2008 ¶173.

f. 1-E’ (the response to the challenge includes an identification of a location of the described one of the plurality of graphical forms”)

Petitioner’s argument that Lim discloses and renders obvious “the response to the challenge includes an identification of a location of the described one of the plurality of graphical forms” is unsupported by the cited disclosures. Petition at 33. Petitioner’s position depends on the assertion that “[a]n image map is a standard HTML input method to accomplish this by providing a server with the location of a user’s click in x,y coordinates and a POSITA would understand Lim’s image map to operate this way.” Petition at 35. Petitioner further contends that “it would have been most obvious for a POSITA to implement Lim’s image map on the server side.” Petition at 46. However, this assertion is both technically incorrect and inconsistent with the teachings of Lim. EX2008 ¶¶174-181.

While Lim describes quizzes that use image maps and instruct users to click on a described object, such as to “[c]lick on the yellow triangle” (EX1004 14:51-53), Lim does not disclose that the system receives or processes any data **identifying the location of the selected graphical form**. Instead, Lim’s system interprets the user’s click as a selection of a predefined answer choice associated with a region of the image map, not as a submission of coordinate data or any form of location identifier. *See* EX1004 14:51-53. EX2008 ¶175.

Lim’s use of image maps is consistent with standard web development practices, particularly the use of HTML image maps implemented **on the client-side**. (*See* HTML 4.01 Specification: W3C Recommendation (24 December 1999) (EX2014) §13.6). A client-side image map is a built-in feature of the HTML specification that allows developers to define interactive regions on an image using the <map> element in combination with one or more <area> elements. *See id.* Each <area> element specifies a region of the image using attributes such as shape and coords, which define the geometry and coordinates of the region, and the href attribute, which specifies the action to be triggered when that region is clicked. *See id.* These inputs defining the clickable area and the associated action **are processed entirely by the browser on the client side**. As explained in the HTML 4.01 Specification, “when a user activates a region of a client-side image map with a mouse, the pixel coordinates are interpreted by the user agent.” *Id.* In other words,

the browser itself determines whether the user's click falls within a defined region and, if so, executes the corresponding action. Importantly, the browser does not transmit the actual X and Y coordinates of the user's click to the server. Instead, it only performs the action associated with the predefined region that was clicked. As a result, the server receives no information about the spatial location of the click itself, only that the user selected a particular choice from the presented multiple choices. EX2008 ¶176.

This client-side behavior is consistent with Lim's design, which relies on predefined answer choices rather than raw coordinate data. In contrast, Petitioner's suggestion that a POSITA would implement Lim's image map on the server side is speculative and contrary to the default and preferred implementation of image maps in HTML. As stated in the HTML 4.01 Specification, "**client-side image maps are preferred** over server-side image maps" (EX2014 §13.6) (emphasis added). Server side image maps, which use the ismap attribute, are rarely used in modern web development due to their complexity and inefficiency. EX2008 ¶177. Furthermore, Lim itself confirms that its system is intended to operate on the client side. For example, Lim states that the system includes "JavaScript or other code to embed in the relevant web site to enable such operation" (EX1004 20:50–51), and further explains that "the interface to the user is conventional HTML and JavaScript, allowing users of the system to rely on conventional web browsers for access"

(EX1004 23:9–12). These disclosures make clear that Lim’s architecture is built around client-side execution. JavaScript is a scripting language that executes in the browser, not on the server, and its use in Lim reinforces that the image map logic and user interaction were intended to be handled entirely on the client side. EX2008 ¶177.

Moreover, implementing Lim’s system using a server-side image map would introduce ambiguity and undermine the clarity of the user’s response. For example, if a ten-by-ten pixel image were used, the browser could send one hundred different coordinate-based responses to the server, one for each pixel. This proposed modification would fundamentally alter the operation of Lim’s system and render it unsuitable for its intended purpose. Lim’s claim 1 expressly requires that the system receive “a corresponding **single correct and distinct response** to the respective prompt presented by said graphical image.” EX1004 claim 1 (emphasis added). A server-side implementation, as proposed by Petitioner, would allow the browser to send numerous coordinate based responses, any of which could be interpreted as correct. This would defeat the requirement for a single distinct answer and undermine the reliability of the system’s verification process. EX2008 ¶178.

Therefore, the proposed modification would not merely be an obvious design alternative. It would change the principle of operation of Lim’s system in a way that is inconsistent with its intended function. Such a modification teaches away from

the claimed invention and cannot support a conclusion of obviousness. EX2008 ¶179.

Accordingly, in systems like Lim that rely on image maps for user interaction, **the user's response does not include or convey any location data.** The response is limited to the selection of a predefined region, which is functionally equivalent to choosing a labeled answer in a multiple-choice format. Furthermore, Lim does not teach or suggest that the system verifies the correctness of a response based on the location of the user's click. Instead, verification is based on whether the user selected the correct predefined region of the image map. *See* EX1004 13:54-14:5 (noting that the answers are “selectable from the image itself”). There is no disclosure in Lim that the system receives or evaluates the spatial coordinates of the user's click as part of the response. EX2008 ¶180.

2. Independent Claim 11

Petitioner incorporates by reference its arguments concerning claim 1. *See* Petition §VII.A.5. Patent Owner incorporates by reference its responsive arguments concerning claim 1. *See supra* §V.A.2. The preamble to claim 11 is also not limiting. EX2008 ¶184.

Claim 11 differs from claim 1 in that claim 11's preamble describes a computer program product rather than a method. Like the preamble to claim 1, the preamble to claim 11 is limiting. Any differences in the preamble do not impact

Patent Owner's arguments here because claim 11 is still not obvious in view of Lim, for the same reasons as claim 1. EX2008 ¶¶182-186.

3. Dependent Claims 5 and 15 (“... processing further requests from the undefined originator after the challenge has been successfully fulfilled”)

Patent Owner incorporates its arguments, above, concerning claim 1.

Furthermore, Petitioner asserts that Lim discloses this limitation and that after a user answers a quiz correctly, “further requests will be processed *because* they have been determined to be a human.” Petition at 40 (emphasis added). This is not correct. EX2008 ¶¶187-188. Lim does not disclose access or restrictions based on correct or incorrect responses to quizzes. Instead, quizzes are used to validate user accounts as human, in order to allow the user to be paid or credited for viewing ads or websites. *See, e.g.*, EX1004, 13:16-21. Guest access and browsing is generally permitted, regardless of whether quizzes have been passed, failed, provided or not provided. *See, id.* at 15:10-21; EX2008 ¶¶188-189, 201-203.

4. Dependent Claims 6 and 16 (“... stopping processing of further requests from the undefined originator after the challenge has not been successfully fulfilled”)

Lim does not disclose “stopping processing of any further requests” to access web pages based on incorrect answers to a challenge quiz. Petitioner has conflated Lim's discussion of suspending a user account with stopping access to web pages; the two are not the same. EX2008 ¶¶190-198, 204-206. As explained above, a user

account in Lim operates to allow the user to be compensated. Users and guests alike are permitted to navigate around the web site, i.e., request access to web pages, regardless of quiz status. *See, e.g.*, EX1004 15:10-21; EX2008 ¶¶191, 197.

Petitioner erroneously relies on Lim FIG. 5 and its corresponding description at 14:67-15:2 (Petition at 42-43) to support its position. EX2008 ¶192. But Figure 5 pertains solely to registered users, as evidenced by steps 502, 504, 508, 510, 514, and 516, which involve processing “N Transactions”, and step 516, which addresses “suspending the user account.” EX1004 15:1; *see also id.* FIG. 5:

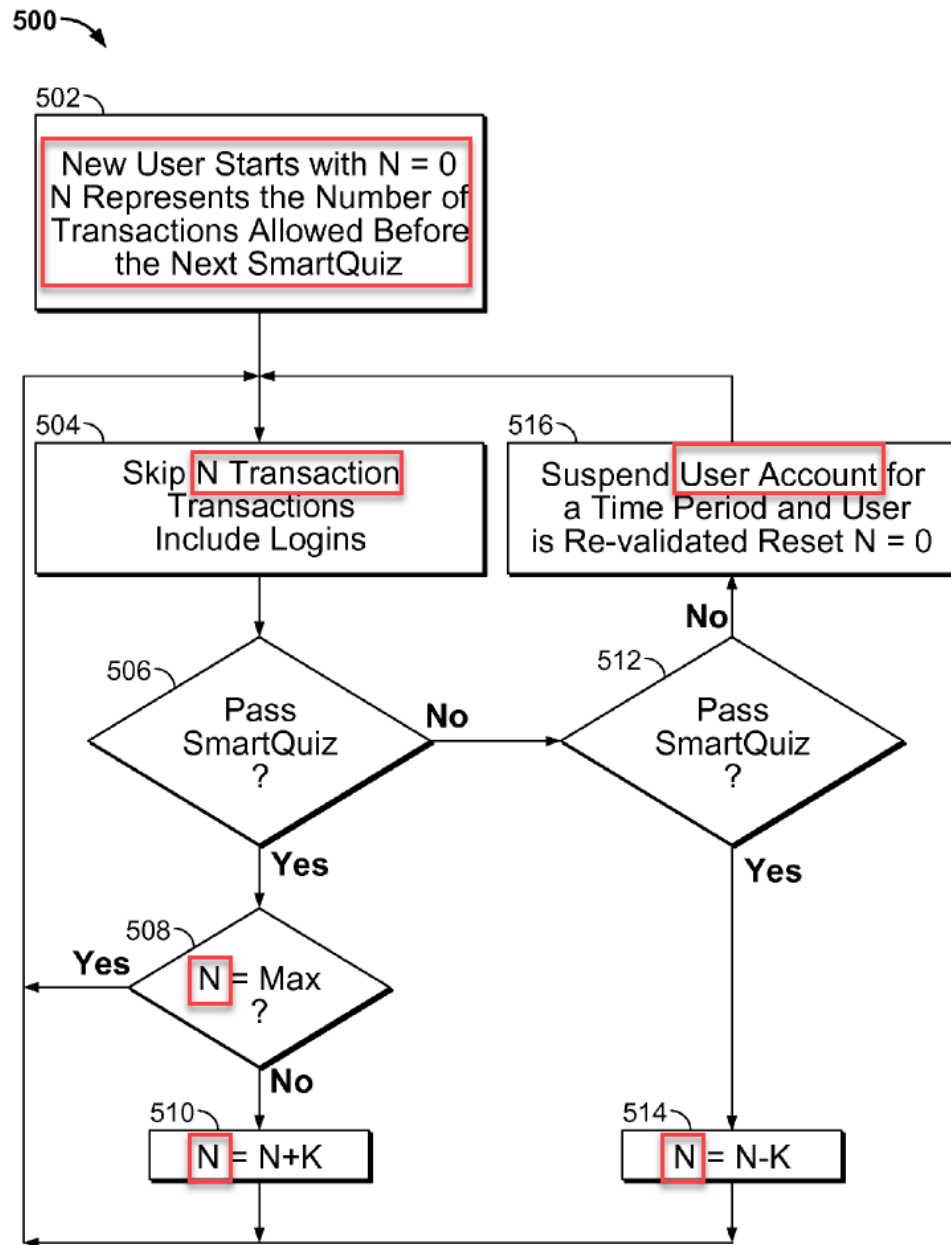


FIG. 5

[EX1004 FIG. 5 (Annotated)]

As previously discussed, registered users, who require accounts with credentials to perform transactions and earn rewards (EX1004 10:1-3, 10:19-24,

11:62-66), have defined identities and thus do not qualify as “undefined originators.” Consequently, Figure 5’s focus on registered users is irrelevant to the claimed limitation of “stopping processing of any further requests.” EX2008 ¶193.

Further, Figure 5’s account suspension step (EX1004 15:1, step 516) does not prevent a registered user from submitting further requests after logging out. Lim’s system processes searches from non-logged-in users without authentication or tracking. *See* EX1004 15:18-22 (“If a user is not logged in, he/she will be able to perform searches”). Indeed, Lim’s system does not disclose selectively stopping processing further requests from those who are not registered users, as it does not track such users. EX1004 15:15-17; EX2008 ¶194.

Petitioner also cites other portions of Lim, but none teach or suggest “if said challenge is not fulfilled: stopping processing of any further requests.” Specifically, Petitioner references EX1004 Abstract, 2:32-39, 9:45-59, and 9:59-61 (Petition at 36), each of which discusses a quiz process for verifying an Internet operation is being performed by a human or an automated process. These sections, however, do *not* address the consequences of failing to answer a quiz correctly and thus cannot teach or suggest that Lim’s system stops processing *further* requests. Petitioner also cites 8:19-30 of EX1004, which is irrelevant as it merely explains that users 100a-c in FIG. 1 can access content sources 108a-c—not that Lim’s system can stop processing further requests. EX2008 ¶196.

Petitioner also asserts that Lim’s claimed limitation, “quizzes may be introduced at various levels to thwart such automated processes and allow access only by live, human users” (EX1004 claim 1) teaches or suggests the concept of “stopping processing of further requests,” as recited in claim 1 of the ’427 Patent. Petition at 42. This is not the case. The claim’s use of the phrase “further requests” in the plural highlights that the limitation requires stopping the processing of any requests that follow the initial request. However, merely determining that a device operator failed to correctly answer a quiz in response to an initial request, as described in Lim, does not teach or suggest that Lim’s system would also stop processing *subsequent* requests from the same device. On the contrary, as discussed above, Lim’s system continues to process requests regardless of prior quiz results, even from devices that previously failed quizzes. EX1004 15:10-21; EX2008 ¶197.

Additionally, as discussed above, Lim does not selectively stop processing further requests from a particular “guest” or unregistered user because it does not track “guests” or unregistered users, as they perform searches without authentication, credentials, or accounts, and no identifying information is collected. EX1004 15:18-22. Thus, contrary to Petitioner’s assertion, a “guest” or unregistered user who fails to correctly answer a quiz—one that is presented in response to a registration request—would simply remain unregistered and still be able to submit additional requests, whether for registration or for search results. (EX1004 15:18-

22). Moreover, because Lim's system lacks the capability to track such users, it cannot prevent or block the submission of future request, nor can it avoid initiating the processing of such requests. In other words, Lim's system does not and cannot stop processing in the sense of refusing to begin processing subsequent requests at all. EX1004 15:18-22; EX2008 ¶198.

5. Dependent Claims 10 and 20 (“... the location is X and Y coordinates of the undefined originator's click associated with the challenge”)

As discussed above, §V.A.1.f, Lim does not teach or suggest “the response to the challenge includes an identification of a location of the described one of the plurality of graphical forms” as required by claim 1.

Accordingly, Lim does not teach or suggest “wherein the location is X and Y coordinates of the undefined originator's click associated with the challenge,” as required by claim 10 of the '427 Patent. EX2008 ¶¶199-200, 207-209.

B. Ground 2: Claims 2-4 and 12-14 Are Not Obvious Over Lim Alone or in Combination with Lillibridge

1. Dependent Claims 2 and 12 (“... modifying the challenge in response to a second initial request”)

Petitioner's argument (Petition §VIII.B.1) that Lim and/or Lillibridge discloses or renders obvious the limitation of “modifying the challenge in response to a second initial request,” as recited in claim 2, is not supported by the cited disclosures. EX2008 ¶¶210-218, 221-223.

Petitioner relies on Lim Figure 5 (which discusses “transactions” and “accounts”), claim 1 of Lim (which discusses “adjusting an interval for a next prompt”), and various passages (e.g., EX1004 4:7-35, 7:62-8:17, and 9:20-30) that describe user profiles, credits, rewards, and the process of registering and creating an account. However, as discussed above in §V.A.1, all of these features relate only to registered users. Only registered users have accounts that store profile and demographic information, track credits and rewards, and enable the performance of transactions. EX2008 ¶211.

Lim’s registered users are not “undefined originators,” because they are authenticated users known to Lim’s system. Therefore, any challenge logic that applies only to registered users cannot satisfy the limitations of claim 1 and cannot satisfy the “modifying the challenge” limitation of claim 2. EX2008 ¶212.

Petitioner has not identified any disclosure in Lim that teaches or suggests modifying a challenge in response to a second initial request from an undefined originator. Because Petitioner’s argument is based entirely on portions of Lim that are directed to a different class of users than those recited in the claims, it fails to establish that Lim discloses or renders obvious the limitation of claim 2. EX2008 ¶213.

Lillibridge also does not disclose this subject matter. EX2008 ¶214.

Lillibridge teaches generating a new riddle for each request, with each riddle selected at random from a pool of riddles. For example, Lillibridge explains that “the server computer generates a predetermined number of random characters” and that “[t]he string is randomly modified either visually or audibly to form a riddle” (EX1008 2:45–52). The riddle is then rendered to the user, and the original string becomes the correct answer (*id.*, 2:52-55). EX2008 ¶215.

This process is repeated for each access request. Lillibridge states that “by default, the server computer requires the user to solve one riddle for each request” (*id.*, 8:48-49), and that this default behavior may be relaxed to present a new riddle less frequently (*id.*, 8:50-52). EX2008 ¶216.

However, Lillibridge does not describe *modifying* a previously issued riddle in response to a second request. Instead, each riddle is independently generated and selected from a pool of available riddles. This is fundamentally different from modifying a challenge. Selecting a new riddle involves choosing a different challenge from a predefined set, whereas modifying a challenge, as required by claim 2, involves altering the content or structure of a previously issued challenge in response to a subsequent request from the same originator. EX2008 ¶217.

Accordingly, neither Lim nor Lillibridge, whether alone or in combination, teach or suggest the subject matter of claim 2. EX2008 ¶218.

2. Dependent Claims 3-4 and 13-14 (“... the modifying includes varying a coordinate location of the described one of the plurality of graphical forms” and “... the modifying includes varying which one of the plurality of graphical forms is described by the accompanying textual expression”)

As discussed above in §V.B.1, neither Lim nor Lillibridge, whether alone or in combination, teaches or suggests “modifying the challenge in response to a second initial request” as required by claim 2 of the ’427 Patent.

Accordingly, Lim does not teach or suggest “wherein the modifying includes varying a coordinate location of the described one of the plurality of graphical forms,” nor does it teach or suggest that “the modifying includes varying which one of the plurality of graphical forms is described by the accompanying textual expression,” as required by claims 3/13 and 4/14, respectively, of the ’427 Patent. EX2008 ¶¶219-220, 224-226.

C. Ground 3: Claims 7-9 and 17-19 Are Not Obvious Over Lim Alone or in Combination with Guthrie

1. Dependent Claims 7 and 17 (“... the stopping processing includes dropping or redirecting a TCP connection established with the undefined originator”)

Petitioner asserts that these dependent claims are obvious in view of Lim alone or in combination with Guthrie. Petition §VIII.C.1. This is incorrect. EX2008 ¶¶227-238, 269-271.

Petitioner does not assert that Lim discloses “wherein the stopping processing includes dropping or redirecting a TCP connection established with the undefined

originator,” as required by claim 7, but argues that a POSITA would find it obvious to “suspend” a user’s account in Lim’s system by dropping or redirecting their device’s TCP connection. Petition at 62. EX2008 ¶227.

As an initial matter, Petitioner mischaracterizes Lim’s system by asserting that a POSITA would “have understood that network communications made using IP addresses would have been suspended or ended by dropping or redirecting a TCP connection.” Petition at 61. Rather, FIG. 5, step 516, makes clear that Lim’s system suspends only a registered user’s account, not the network communications of any particular device associated with a particular IP address (EX1004 step 516 in FIG. 5; *see also* 15:1 (“suspends the user’s account”)). EX2008 ¶227.

Furthermore, a POSITA would not find it obvious to suspend a registered user’s account in Lim’s system by dropping or redirecting their device’s TCP connection, as Petitioner proposes. Petition at 61; *see* EX2008 ¶¶228-238. Registered users can access accounts from any compatible device (EX1004 9:40-46), so terminating one device’s connection would not prevent login attempts from another. Moreover, after failing a verification challenge triggering account suspension (EX1004 FIG. 5 step 516, 15:1), a registered user may log out and submit requests as a “guest” or unregistered user from any device. EX1004 15:15-22 (“If a user is not logged in, he/she will be able to perform searches”). This renders account suspension ineffective at stopping requests. EX2008 ¶228. Accordingly, a POSITA

would not have found it obvious to modify Lim to drop or redirect a TCP connection to enforce account suspension. EX2008 ¶228.

Petitioner’s obviousness argument further misrepresents Lim. EX2008 ¶¶229-230. Lim’s targeted approach to preventing account payments to robots (EX1004 13:18-28), while permitting robotic search activity, demonstrates that suspending a registered user’s account by dropping or redirecting their TCP connection would *not have been obvious* to a POSITA. EX1004 13:9-14 (explaining that Lim’s system allows “automated access,” such as robotic access, from a limited number of devices); EX2008 ¶229. Letting robotic systems access a website *at all* conflicts with the teaching of the ’427 Patent. *See id.* ¶230.

Although Petitioner does not assert that Lim discloses stopping processing of further requests via “dropping or redirecting a TCP connection,” Patent Owner submits that Lim’s account suspension causes neither effect because dropping or redirecting the TCP connection would prevent content viewing and quiz delivery for re-validation, which is inconsistent with Lim’s temporary suspension design. EX2008 ¶231. Lim, with an alleged priority date of July 20, 1999, operates under HTTP/1.1, introduced in January 1997 (RFC 2068: Hypertext Transfer Protocol – HTTP/1.1 (January 1997) (EX2009)) and adopted by browsers expressly identified in Lim, such as “Netscape Navigator” and “Internet Explorer,” in 1997. EX1004 4:18-22; EX2008 ¶232; EX2011; EX2012. HTTP/1.1 specifies persistent TCP

connections that remain open by default, absent server-initiated closure (e.g., “Connection: close” header) or redirection (e.g., 301/302 responses). EX2008 ¶232; EX2009 § 8.1; EX2010 Sections §§ 8.1, 8.1.2, 10.3, 14.10. Suspending a registered user’s account, which step 516 of FIG. 5 temporarily imposes for a time period (EX1004 FIG. 5; 14:10–14), does not teach or suggest server actions to close or redirect the TCP connection. EX2008 ¶233.

Petitioner incorrectly asserts that Guthrie teaches “redirecting a TCP connection,” citing the server’s transmission of a failure message when a lock-out timer is active (EX1009, 9:6-10). Petition at 65. But this action does not constitute redirecting a TCP connection. EX2008 ¶¶234-235. In Guthrie, “the server 104 returns a failure message to the client 102” over the existing TCP connection when the lock-out timer flag is set. EX1009 9:6-10. A POSITA would understand TCP redirection, in the context of claim 1, to involve an HTTP redirect response, such as a 301 or 302 status code with a new URL, directing the client to establish a connection to a different resource. EX2008 ¶235; EX2010 §10.3. Guthrie discloses no such URL transmission, HTTP redirect response, or initiation of a new connection to another server or resource. EX2008 ¶235. Rather, the failure message in Guthrie is merely a notification of authentication denial, sent within the same client-server session. EX2008 ¶235.

Petitioner contends that dropping or redirecting a TCP connection is the most obvious way to suspend a user's account. Petition at 65. It is not. A POSITA would recognize that Lim suspends accounts **server-side**, storing user account information on host 104 (EX1004, 8:38-40) and restricting login or activities until verification is completed (EX1004 FIG. 5 step 516), without manipulating TCP connections. EX2008 ¶238.

Further, a POSITA would not be motivated to combine Guthrie's failure message with Lim's teachings, even assuming, *arguendo*, it teaches redirection, as this would undermine Lim's design of permitting unregistered, non-logged-in users and "guests" (including potential robots) to perform searches. EX1004 15:15-23; EX2008 ¶238. Conversely, Guthrie's "failure message," if interpreted as dropping or redirecting a TCP connection, would disrupt the user's network session and block system access. EX1009, 9:6-10; EX2008 ¶238.

2. Dependent Claims 8 and 18 ("... logging a source IP address of the undefined originator, and starting a timer")

Petitioner argues that Lim alone or in combination with Guthrie renders obvious the limitation of "logging a source IP address of the undefined originator, and starting a timer." Petition §VIII.C.2. Petitioner contends that Lim discloses that, when an unknown user fails a challenge, their account will be suspended for a time period, during which time processing of their requests will be stopped, because they have been determined to be a robot. *Id.* Petitioner also argues that Lim

discloses using IP addresses to uniquely identify and restrict users. *Id.* This is not the case. EX2008 ¶¶239-258, 272-274.

Lim and Guthrie, whether alone or in combination, do not teach or suggest this. EX2008 ¶240. As an initial matter, Petitioner mischaracterizes Lim, asserting that “when an **unknown user** fails a challenge, their account will be suspended for a time period, during which time processing of their requests will be stopped.” Petition at 66 (emphasis added). This characterization is incorrect because Lim suspends accounts only for **registered users**, who are logged in and identified by host 104’s account information. *See* EX1004 8:38-40 (“host 104 stores information about user accounts”); *see also* 15:1-1 (“suspends the user’s account”), 15:15-23, 10:1-3 (showing that a registered user logs into their account using “username and password”). EX2008 ¶240.

Lim also does not teach or suggest “logging a source IP address of the undefined originator.” EX2008 ¶243. Petitioner asserts that Lim “expressly discusses limiting or restricting the number of users using unique identifiers such as the user’s IP address” (Petition at 66), but supports this assertion by selectively merging portions of two separate sentences from Lim (e.g., EX1004 13:5-14) into a single, misleading quotation that omits key phrases. EX2008 ¶243.

Specifically, Petitioner omits a portion of the original disclosure at EX1004 13:5-14; *see* Petition at 66-67. The original reads as follows:

Computer systems configured in accordance with the present invention may limit or restrict **the number of users which are allowed access from a particular computer or terminal based upon a certain number of cookies or Java applets installed on the user's computer or terminal. Such systems may also constrain automated access by allowing a limited number of** users access from computers or other web-capable devices associated with certain unique identifiers such as a medium access control (MAC) addresses, IP addresses, or central processing unit (CPU) serial numbers.

EX1004 13:5-14. Petitioner has overlooked the **bolded, underlined** text above.

EX2008 ¶244.

When presented with this portion of Lim in its *entirety*, a POSITA would have several reasons for understanding that the particular passage (EX1004 13:5-14) from Lim is not relevant to “guests” and non-logged-in, unregistered users (i.e., anonymous users), but instead pertains solely to registered users (who do not qualify as “undefined originators”). EX2008 ¶245.

First, a POSITA would understand Lim differently than Petitioner’s mischaracterization because Lim explains that its system can limit or restrict the number of users which are allowed access from a particular computer or terminal **“based upon a certain number of cookies or Java applets installed on the user’s computer or terminal.”** EX2008 ¶246. Because Lim discloses the use of cookies and applets only for registered users, *e.g.*, EX1004 11:29-33, this does not apply to “unknown originators.” EX2008 ¶246.

Second, a POSITA would understand that Lim’s system is concerned only with limiting or restricting access for registered users—and *not* “guests” or unregistered users—because of the financial awards Lim contemplates. EX1004 13:18-23; EX2008 ¶247.

Third, the passage (EX1004 13:5-14) from Lim relied upon by Petitioner appears in a section of the specification titled “4. Constraints on Automated Usage.” EX1004 13:4. These are activities that are exclusive to registered users that have accounts. A POSITA would understand that this section, in context, pertains solely to registered users. EX2008 ¶248; *see also* EX1004 12:3-13:3.

Thus, even assuming that Lim 13:5-14 teaches or suggests “logging a source IP address,” it does not do so for an “undefined originator,” as required by claims 8 and 18 of the ’427 Patent. EX2008 ¶249, 272-274.

Petitioner’s reliance on Guthrie also fails. Petition at 69. Claim 8 depends from claim 7, which requires that “starting a timer,” as recited in claim 8, occurs **“after the challenge has not been successfully fulfilled”** (emphasis added). Guthrie does not teach or suggest this subject matter. EX2008 ¶251. While Guthrie’s “lock-out timer” applies to failures during the initial login process—namely, incorrect username and password entries—it does not apply to its challenge/response mechanism. Specifically, Guthrie explains that “[t]he lock-out timer flag is activated when the server 104 detects too many successive authorization

failures in a row” (EX1009 8:10-12) “to thwart an unauthorized user from repeatedly ‘hammering’ the server 104 manually or through an automated application with authorization attempts, while still eventually allowing a legitimate user access... [where] ‘login’ and ‘authorization’ are used interchangeably” (EX1009 8:24-30), clearly **limiting the lock-out timer’s function to login failures**. EX2008 ¶251.

And Guthrie’s challenge/response mechanism is a distinct and subsequent phase that occurs only after successful login, and therefore is not subject to the lock-out timer. EX2008 ¶252. That is, Guthrie explains:

The user **114** initially inputs the user's account and correct password to the client **102**. Secondly, the client 102, via the client application **112**, transmits the user account and account password to the server **104**. Third, the server **104** validates the user account and password... If such initial validation is successful, then the server **104** employs a challenge generator... and transmits the challenge to the client **102**.

(EX1009 7:16-25). This passage, along with the data flow sequence depicted in FIG. 4, confirms that the login step is a prerequisite to the challenge/response phase and that the two are logically and functionally distinct:

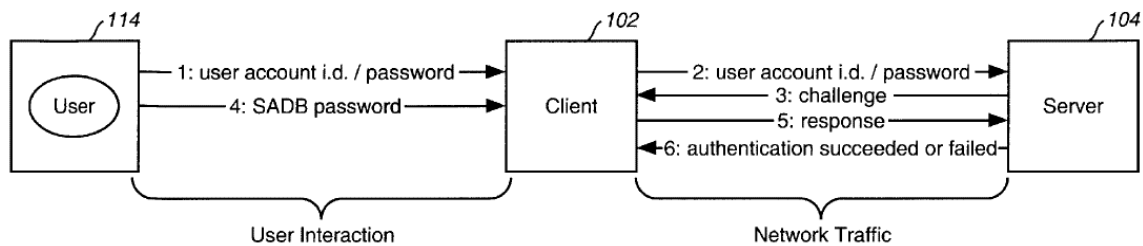


FIG. 4
[EX1009 FIG. 4]

Moreover, Guthrie states that “The server 104 records audit information for each log-on attempt” (EX1009 13:46-47), reinforcing that monitoring and enforcement – including the lock-out timer—are exclusively tied to the login phase and are unrelated to the challenge/response phase. EX2008 ¶253.

Furthermore, Guthrie’s challenge/response process authenticates users by generating an encrypted response (EX1009 FIG. 3 (showing secure hashing algorithm)) from a server-issued challenge, client serial number, and user’s password, avoiding password transmission (EX1009 Abstract; FIG. 3 (showing a secure hashing algorithm); 6:10-27 (explaining process of generating an encrypted response using the secure hashing algorithm)). A POSITA would understand that this encryption mechanism resists brute-force attacks, as valid responses require the password and algorithm, unlike password guessing during login attempts (EX1009 2:37-42 (“a predetermined number of system accesses are permitted before being locked out”). EX2008 ¶254.

Even if Guthrie's feature were considered relevant, no motivation exists to combine its lockout mechanism with Lim's suspension feature. EX2008 ¶255. And Guthrie's timer, triggered only by failed logins to registered accounts exceeding a failure threshold, is inapplicable to Lim's "guests" and non-registered users who access search features without logging in and can do so *even after failing registration quizzes*. EX2008 ¶256. Applying Guthrie's lockout timer would block these users' searches, contradicting Lim's design of open access to non-monetized search features. *Id.*

3. Dependent Claims 9 and 19

a. 9-PRE, 9-A', 19-PRE and 19-A'

There is no dispute as to the preamble of claims 9 and 19 and limitations 9-A' and 19-A'. EX2008 ¶¶257, 275-277.

b. 9-B' and 19-B' ("determining whether a source IP address of the new request matches the logged source IP address of the undefined originator")

Petitioner argues that Lim and Guthrie, both alone and in combination, renders obvious "determining whether a source IP address of the new request matches the logged source IP address of the undefined originator." Petition at 74-75. Patent Owner submits this is incorrect. Petitioner repeats several mischaracterizations of Lim in making this argument. EX2008 ¶¶258-262, 275-277.

First, as previously discussed, Lim's system does not track users by IP address. Rather, Lim's system tracks only registered users who are logged into their

accounts. EX1004 10:1-5 (noting that registered users are tracked); *see also* 11:26-29 (noting that cookies are only placed on the computer systems for registered users). And, as discussed above, registered users that are logged into Lim's system do not qualify as "undefined originators." EX2008 ¶259.

Second, Petitioner incorrectly asserts:

A POSITA would also have understood that, upon receipt of a new request, it would have been obvious for Lim to determine whether the source IP address of the new request matches the logged source IP address of the suspended undefined originator and present them with a new challenge if the timer measuring their suspension has expired. This must be the case, because otherwise Lim would have no way of determining that the interval that user is suspended for . . . had passed or not. Similarly, if Lim did not issue a new challenge after their suspension ends, Lim's disclosure of suspending the user only for a particular time period would not make sense.

Petition at 76 (citations omitted). This argument appears to rest on Petitioner's continued mischaracterization of Lim as tracking and suspending the IP addresses of devices that are not permitted to use the system. EX2008 ¶¶260-261. As previously discussed, Lim does not suspend IP addresses as taught by the '427 Patent, it suspends user accounts (EX1004 step 516 in FIG.5; *see also* 15:1 ("(step 516) suspends the user's account")). This means that the suspension mechanism disclosed in Lim is account-based, not IP-based. Accordingly, tracking the duration of an account suspension does not require the system to monitor or compare IP addresses. Lim's system relies on account credentials and stored user information

(EX1004 8:38-40 (“host 104 stores information about user accounts”)), not on IP address matching, to enforce account suspensions. Petitioner’s argument conflates account-level control with network-level identifiers, and in doing so, imposes functionality that Lim neither teaches nor suggests. EX2008 ¶261.

Last, Petitioner also incorrectly asserts that “[a] POSITA would have considered it obvious to apply Guthrie’s teaching of the benefits of a lockout timer lockout timer [which depends on the ability to log IP addresses] to Lim’s account suspension procedures.” Petition at 78. This argument fails. Petitioner ignores the fundamental design principles of Lim and misapplies Guthrie’s teachings. EX2008 ¶262. In particular, there is no motivation to modify Lim to track IP addresses of “guests” or unregistered users for the following reasons. First, Lim is designed to allow users to perform searches and access content *without* authentication or identification. EX1004 15:18-22. This reflects a deliberate choice to support anonymous access. A POSITA would understand that introducing IP tracking of unregistered users would undermine Lim’s stated goal of enabling frictionless, anonymous user interaction. EX1004 15:18-22. Second, Guthrie’s system is fundamentally different from Lim’s. Guthrie logs IP addresses in the context of user login attempts, (EX1009 13:46-47) which is part of a broader security and auditing framework for managing authenticated user accounts. Guthrie does not suggest or teach logging IP addresses of users who are not attempting to authenticate. EX2008

¶262. Thus, a POSITA would recognize that Guthrie’s IP tracking is inapplicable to Lim’s unregistered user model, which allows “guests” and unregistered users to interact with the system without logging into an account. *Id.*

c. 9-C’ and 19-C’ (“determining whether said timer is expired”)

Contrary to the Petitioner’s assertions (Petition at 74-78), Lim and Guthrie, alone or in combination, do not teach or suggest “determining whether said timer has expired,” as required by claim 9 of the ’427 Patent. Specifically, Lim does not teach or suggest logging the IP address of “guests” or unregistered users (*see* §V.C.2), nor starting a timer in response to an unregistered user failing to correctly answer a quiz (*see* §V.C.2). EX2008 ¶¶263-264, 275. Furthermore, a POSITA would not be motivated to combine Guthrie’s lock-out timer with Lim’s handling of unregistered users (*see* §V.C.2), nor to combine Guthrie’s IP logging with Lim’s unregistered users (*see* §V.C.2). EX2008 ¶265, 275.

d. 9-D’ and 19-D’ (“upon the source IP address of the new request matching the logged source IP address of the undefined originator and the timer being expired, responding to the new request with a second challenge that prompts a response to the second challenge”)

Contrary to the Petitioner’s assertions (Petition at 74-78), Lim and Guthrie, alone or in combination, do not teach or suggest “upon the source IP address of the new request matching the logged source IP address of the undefined originator and the timer being expired, responding to the new request with a second challenge that

prompts a response to the second challenge.” Specifically, Lim does not teach or suggest logging the IP address of “guests” or unregistered users (*see* §V.C.2), nor starting a timer in response to a “guest” or unregistered user failing to correctly answer a quiz (*see* §V.C.2). Furthermore, a POSITA would not be motivated to combine Guthrie’s lock-out timer with Lim’s handling of “guests” or unregistered users (*see* §V.C.2), nor to combine Guthrie’s IP logging with Lim’s “guests” or unregistered users (*see* §V.C.2). EX2008 ¶¶266-268, 275-277.

Without disclosing both the logging of a source IP address and the starting of a timer, Lim cannot disclose “responding to the new request with a second challenge that prompts a response to the second challenge,” as required by claims 9 and 19, because this response must occur only “upon the source IP address of the new request matching the logged source IP address of the undefined originator and the timer being expired.” EX2008 ¶268.

D. Secondary Considerations

For the purposes of this POPR, Patent Owner does not rely on secondary considerations concerning non-obviousness. However, if review is instituted, Patent Owner reserves the right to rely on secondary considerations in its Response.

VI. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board deny institution.

Dated: July 15, 2025

Respectfully submitted,

/Preston H. Heard/

Preston H. Heard (Reg. No. 64,675)
Lead Counsel for Patent Owner

Christian E. Mammen (*pro hac vice*)
Back-up Counsel for Patent Owner

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. §42.24(d), the undersigned certifies that this Preliminary Response complies with the type-volume limitation of 37 C.F.R. § 42.24(b). The word count application of the word processing program used to prepare this Preliminary Response indicates that the Preliminary Response contains 13,881 words.

Dated: July 15, 2025

/Preston H. Heard/

Preston H. Heard (Reg. No. 64,675)

Lead Counsel for Patent Owner

CERTIFICATE OF SERVICE

The undersigned certifies that on July 15, 2025, that a true and correct copy of the foregoing was served on Counsel for Petitioner via filing through the P-TACTS, as well as by delivering a copy via electronic mail to the following email address(es):

Petitioner's Lead Counsel

Richard F. Martinelli
Reg. No. 52,003
Orrick, Herrington & Sutcliffe LLP
51 West 52nd Street
New York, NY 10019-6142
Email: RFMPTABDocket@orrick.com

Back-Up Counsel

Joseph A. Chern
Reg. No. 63,246
Orrick, Herrington & Sutcliffe LLP
2050 Main Street, Suite 1100
Irvine, CA 92614-8255
Email: 2JAPTABDocket@orrick.com

Tyler Miller
Reg. No. 68,881
Orrick, Herrington & Sutcliffe LLP
51 West 52nd Street
New York, NY 10019-6142
Email: T61PTABDocket@orrick.com

/Preston H. Heard/

Preston H. Heard (Reg. No. 64,675)

Lead Counsel for Patent Owner