



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
**United States Patent and Trademark Office**  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/566,690	08/03/2012	Shekhar Deo	110524-8801.US01	7615
22862	7590	10/02/2019	EXAMINER	
GLENN PATENT GROUP c/o Perkins Coie LLP P.O. Box 1247 Seattle, WA 98111-1247			CHEN, YAHAO	
			ART UNIT	PAPER NUMBER
			2177	
			NOTIFICATION DATE	DELIVERY MODE
			10/02/2019	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentprocurement@perkinscoie.com

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

*Ex parte* SHEKHAR DEO and MANOJ RAJSHEKAR<sup>1</sup>

---

Appeal 2018-008546  
Application 13/566,690  
Technology Center 2100

---

Before GREGG I. ANDERSON, JON M. JURGOVAN and  
MICHAEL M. BARRY, *Administrative Patent Judges*.

ANDERSON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1 through 21.<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

---

<sup>1</sup> Appellant and the real party in interest is 24/7 CUSTOMER, INC. App. Br. 1.

<sup>2</sup> In this Decision, we refer to the Final Office Action ("Final Act.," mailed December 14, 2017), the Appeal Brief ("App. Br.," filed March 23, 2018), the Corrected Appeal Brief ("Cor. App. Br.," filed May 11, 2018), Examiner's Answer ("Ans.," mailed June 28, 2018), the original Specification ("Spec.," filed August 3, 2012).

## I. STATEMENT OF THE CASE

### A. *The Invention*

The Specification describes techniques for generating and serving a multimedia object “which may be used in online advertising, brand engagement, online promotions, surveys, security, and user-defined security.” Spec., Abstract. Specifically, “Human Interactive Proof (HIP) technology . . . can be presented via software to a user to help insure that a human being, as opposed to an automated system, is interacting with the software.” *Id.* at 2:23–25; *see also id.* at 3:15–23.

A website first determines whether a user is a human or a bot. Spec. 10:1–2. Upon receipt of a request for the multimedia object, a further determination is made as to whether the website 104 is a legitimate website or publisher. *Id.* at 10:16–17. In determining whether a website is legitimate, a matching algorithm compares various parameters with parameters of stored multimedia objects to determine a matching multimedia object. Spec. 10:20–22. The parameters compared include “data about a device that is sending the request; temporal information of the request; spatial information of the request; Internet Protocol (IP) address associated with the request and the device sending the request; software information of the software that is sending the request; and webpage related information comprising any of information context, language of the webpage, industry category of the webpage, global positioning system location (GPS) for GPS enabled devices, and a theme of the multimedia object.” *Id.* at 28:16–22; *see also id.* at 34:14–30, 38:21–39:14, 40:18–44:14.

Once the match is found, the matched multimedia object is returned along with a challenge. Spec. 10:24–25. The user “sees the multimedia

object and interacts with the multimedia object via the challenge” and responds to the challenge. *Id.* at 10:25–11:2. The server then compares the received response against validated responses and, if valid, a success notification is returned to the website. *Id.* at 11:4–7. From that point on, website continues with its flow, based on having received a success indication. Spec. 11:4–7. When it is determined that “there is no match for the received response,” a failure notification is sent, but the website continues with its flow based on having received a failure indication. *Id.* at 11:9–11.

The Specification describes the use of “[s]uspicion engines [to] detect suspicious activities by monitoring active and passive transactions of the MMOs [multimedia objects].” *Id.* at 26:28–29. “The suspicion engine uses historical data from the databases where all the MMO transactions are stored, to interpret such transactions of the MMOs.” *Id.* at 27:1–3. An AI component of the suspicion engine “uses machine learning algorithms to develop a classification and recognition model to detect the incoming traffic and classify them into various levels of suspicion buckets, such as very suspicious, low suspicious, fatal, etc.” *Id.* at 27:12–16.

Independent claim 1, reproduced below, is illustrative:

1. An apparatus for generating and serving a multimedia object with human interaction proof capabilities on a webpage, comprising:

a multimedia object server having at least a processor and at least a memory, said multimedia object server configured to:

receive a request for the multimedia object, wherein the request includes parameters, said parameters comprise:

device data, wherein the device data includes data about a device that is sending the request; temporal information of the request;

spatial information of the request;

Internet Protocol (IP) address associated with the request and the device sending the request;

software information of the software that is sending the request; and

webpage related information comprising any of information context, language of the webpage, industry category of the webpage, global positioning system location (GPS) for GPS enabled devices, and a theme of the multimedia object;

determine a level of suspicion using the parameters of the request including the IP address, spatial information, temporal information, the software information, and the webpage related information, and wherein the determination of the level of suspicion includes analyzing historical data to interpret the IP address;

classify the request into suspicion buckets based on the level of suspicion, wherein each distinct suspicion bucket is a buffer associated with a degree of suspiciousness and a level of difficulty of a challenge associated with the multimedia object, and wherein the suspicion buckets include a very suspicious suspicion bucket, low suspicious suspicion bucket, and a fatal suspicion bucket;

determine a device capability of the device associated with the request, wherein the device capability includes an interaction type of click, draw or type;

determine a matched multimedia object and associated challenge using the level of difficulty of one of the suspicion buckets associated with the request and the interaction type associated the device, wherein the matched multimedia object is a video comprising any of a bundled advertisement, personal images, corporate internal branding images/texts, house advertisement, and promotion information, and wherein the associated challenge involves any part of said matched multimedia object;

send the matched multimedia object and the associated challenge to the webpage;

receive a response to the challenge associated with the matched multimedia object including the video, and response-related informational data, said response-related informational data comprising any of what was clicked on, how long the multimedia object was on active screen, how many times an interaction was performed, how the multimedia object was interacted with, question of the challenge, current time, the IP address from where the response and informational data arrived, the device and software from where the response and informational data arrived, and duration of any interaction;

when human interactive proof is enabled in the response, compare the received response against validated responses and send a success

notification or a failure notification to said webpage based on the comparison;

when human interactive proof is not enabled, validation is performed but validation notification is not sent;

store the response related information data and the validation response as historical data; and

generate analytics about the matched multimedia object, the associated challenge, and the webpage using said response-related informational data, wherein the analytics include the updated level of difficulty associated with the matched multimedia object and the associated challenge.

App. Br. 12.

*B. The Rejections*

1. Claims 1–4, 6, 8, and 13–21 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu et al. (US 2012/0254971 A1, published October 4, 2012 “Hu”), Clark et al. (US 2011/0029781 A1, published February 3, 2011 “Clark”), Sobel et al. (US 7,366,919 B1, issued April 29, 2008 “Sobel”), Gargi (US 8,510,795 B1, issued August 13, 2013 “Gargi”), Brown et al. (US 2010/0302255 A1, issued December 2, 2010 “Brown”), Pennock et al. (US 2008/0133321 A1, published June 5, 2008 “Pennock”), Roy (US 8,613,064 B1, issued December 17, 2013 “Roy”), and Fisk et al. (US 2013/0031640 A1, published January 31, 2013 “Fisk”).<sup>3</sup> *Id.* at 4–16.

---

<sup>3</sup> A rejection of claims 1–21 under 35 U.S.C. § 112(a) or pre-AIA 35 U.S.C. § 112, first paragraph, was withdrawn based on Appellant’s argument in the Appeal Brief. Ans. 17 (citing App. Br. 9–11).

2. Claim 5 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu, Clark, Sobel, Gargi, Brown, Pennock, McCarthy (US 2005/0288954 A1, published December 29, 2005 “McCarthy”), Roy, Fisk, and Inbar (US 2011/0166916 A1, published July 7, 2011 “Inbar”). *Id.* at 16–17.

3. Claim 7 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu, Clark, Sobel, Gargi, Brown, Pennock, Roy, Fisk, and Baranov et al. (US 2012/0130801 A1, published May 24, 2012 “Baranov”). *Id.* at 17–18.

4. Claim 9 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu, Clark, Sobel, Gargi, Brown, Pennock, Roy, Fisk, and Shen et al. (US 2012/0297190 A1, published November 22, 2012 “Shen”). *Id.* at 18.

5. Claim 10 is rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu, Clark, Sobel, Gargi, Brown, Pennock, Roy, Fisk, and Veen et al. (US 2010/0201478 A1, published August 12, 2010 “Veen”). *Id.* at 19.

6. Claims 11 and 12 are rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Hu, Clark, Sobel, Gargi, Brown, Pennock, Roy, Fisk, and further in view of Sankaran et al. (US 2008/0005126 A1, published January 3, 2008 “Sankaran”).

### *C. Issue*

Appellant’s arguments present the following dispositive issue:

Is the rejection based on the combination of Hu, Clark, Sobel, Gargi, Brown, Pennock, Roy, and Fisk based on hindsight? App. Br. 8–9.

## II. ANALYSIS

The Examiner relies on the teachings of eight distinct pieces of prior art to find claim 1 obvious. Final Act. 5–11. The Examiner finds different motivations to make the necessary combinations. *Id.* at 6 (Hu and Clark; finding motivation of a “human friendly way to defeat bots” (citing Clark ¶ 25)), 7 (Hu and Sobel; finding motivation to “improve the accuracy of spambot tester” of Clark, as adapted into Hu), 7 (Hu and Gargi; finding it would have been obvious to include video based CAPTCHA<sup>4</sup>), 8 (Hu and Roy; finding motive based on “more security”), 8 (Hu and Fisk; finding motive based on “more security”), 9 (Hu and Brown; finding motivation “for rendering more relevant advertisements”). Petitioner argues that the number of references necessary to reject claim 1 is indicative of the use of use of “impermissible hindsight reasoning to combine references.” App. Br. 8 (citing *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007)).

In the Answer the Examiner also cites to *KSR*, arguing that hindsight is not the basis for combining the references

because all of these references are in the same field for enhancing the security of a computer system, thus one of ordinary skill in the art would be motivated to combine all of these references to enhance the security of a computer system, without taking any hindsight motivation from the disclosure of the claimed invention. Because such motivation can be found in the knowledge generally available to one of ordinary skill in the art, and need not be expressly found in the references themselves.

---

<sup>4</sup> CAPTCHA/Captcha (Completely Automated Public Turing Test to Tell Computers and Humans Apart). Hu ¶ 2.

Ans. 18 (citations omitted). Appellant responds that the alleged motivations are insufficient, in part because “the alleged field for ‘enhancing the security of a computer system’ is overly broad and encompasses many distinct fields.” Reply Br. 5. By way of example, Appellant argues “Hu relates to Turing techniques for distinguishing humans and machines while Roy relates to login monitoring and authentication” and that “a person skilled in Turing techniques may not be familiar with authentication processes.” *Id.* (also contending ordinarily skilled artisans would recognize that other cited references are unrelated even to enhancing computer system security, such as Sobel’s spam detection disclosure). Appellant’s argument is persuasive.

We look to

interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

*KSR*, 550 U.S. at 418. The rejection “cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441, F.3d 977, 988 (Fed. Cir. 2006). Further, “[i]t is not enough to say that there would have been a reason to combine two references because to do so would ‘have been obvious to one of ordinary skill.’ Such circular reasoning is not

sufficient—more is needed to sustain an obviousness rejection.” *In re Chaganti*, 554 F. App’x 917, 922 (Fed. Cir. 2014).

The combination argued by the Examiner requires hindsight. Although the Examiner finds a motivation for combining each reference with Hu, we are not persuaded that the articulated reasons would have been considered by a person of ordinary skill in the art. The overarching motive identified by the Examiner is more or enhanced security (Ans. 18). We agree with Appellant that this is overly broad (Reply Br. 5) and, absent hindsight reconstruction of the claim limitations, would not have provided the necessary motive. Combined with the number of references, we find there is an insufficient articulated basis that would have led a person of ordinary skill to combine the various teachings from the eight references.

### III. CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1–21	§ 103		1–21
<b>Overall Outcome</b>			X

### IV. DECISION

The Examiner’s decision rejecting claims 1–21 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED