

(51) International Patent Classification:
H04L 9/32 (2006.01)(21) International Application Number:
PCT/US2011/023357(22) International Filing Date:
1 February 2011 (01.02.2011)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **NOKIA CORPORATION** [FI/FI]; Keilalahdentie 4, FI-02150 Espoo (FI).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **RAFFLE, Hayes** [US/US]; 970 Van Auken Circle, Palo Alto, California 94303 (US). **KUO, Cynthia** [US/US]; 650 Castro Street, #120-310, Mountain View, California 94041 (US).(74) Common Representative: **NOKIA CORPORATION**; IPR Department, Ari Aarnio, Keilalahdentie 4, FIN-02150 Espoo (FI).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,

CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:
20 March 2014

(54) Title: METHOD AND APPARATUS FOR A MULTI-PARTY CAPTCHA

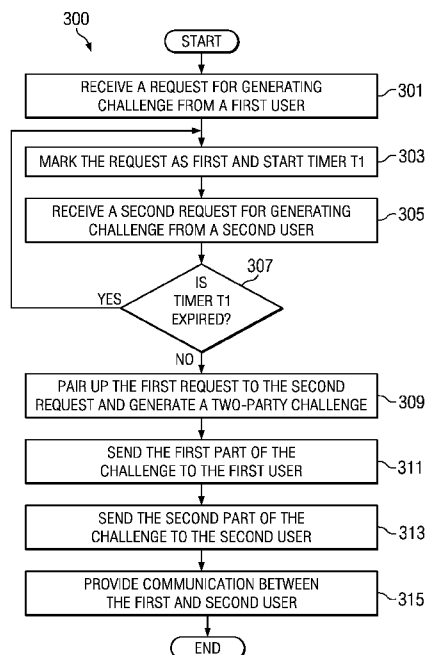


FIG. 3

(57) Abstract: In accordance with an example embodiment of the present invention, a method comprising: receiving at least one request for generating a challenge from at least one device; generating the challenge with at least two components; transmitting component of the challenge to the at least one device; causing presentation of at least part of the challenge to at least two users; causing communication between said at least two users; and receiving at least two responses to the challenge from the at least one device. Related apparatus and computer program product are also described.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/023357

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04L 9/32 (2011.01)

USPC - 713/168

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - H04L 9/00, 9/32 (2011.01)

USPC - 713/168, 726/5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Google Patent

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0251388 A1 (DORFMAN) 30 September 2010 (30.09.2010) entire document	1-27
Y	US 2004/0224772 A1 (CANESSA et al) 11 November 2004 (11.11.2004) entire document	1-27
Y	US 2008/0263636 A1 (GUSLER et al) 23 October 2008 (23.10.2008) entire document	2, 11, 20
Y	US 2010/0037147 A1 (CHAMPION et al) 11 February 2010 (11.02.2010) entire document	8-9, 17-18, 24-25

☐ Further documents are listed in the continuation of Box C.


* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

16 March 2011

Date of mailing of the international search report

01 APR 2011

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774