

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 September 2007 (07.09.2007)

PCT

(10) International Publication Number
WO 2007/100867 A3

(51) International Patent Classification:

H04L 29/06 (2006.01)

(21) International Application Number:

PCT/US2007/005187

(22) International Filing Date:

28 February 2007 (28.02.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/365,043 28 February 2006 (28.02.2006) US

(71) Applicant (for all designated States except US): **THE BOEING COMPANY**; 100 North Riverside Plaza, Chicago, IL 60606-2016 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SCHNACKENBERG, Daniel, D.** [US/US]; 29944 56th Place South, Auburn, WA 98001 (US). **REID, Travis, S.** [US/US]; 810 12th Avenue #215, Seattle, WA 98122 (US). **ARNOLD, Steven, L.** [US/US]; 10807 106th Avenue Northeast,

Kirkland, WA 98033 (US). **BUNN, Kelly, S.** [US/US]; 14025 285th Circle Northeast, Duvall, WA 98019 (US). **DONOFRIO, Thomas, E.** [US/US]; 2100 South 375th Street, Federal Way, WA 98003 (US). **HAMMOND, Ryan, D.** [US/US]; 2033 250th Place Southeast, Sammamish, WA 98075 (US).

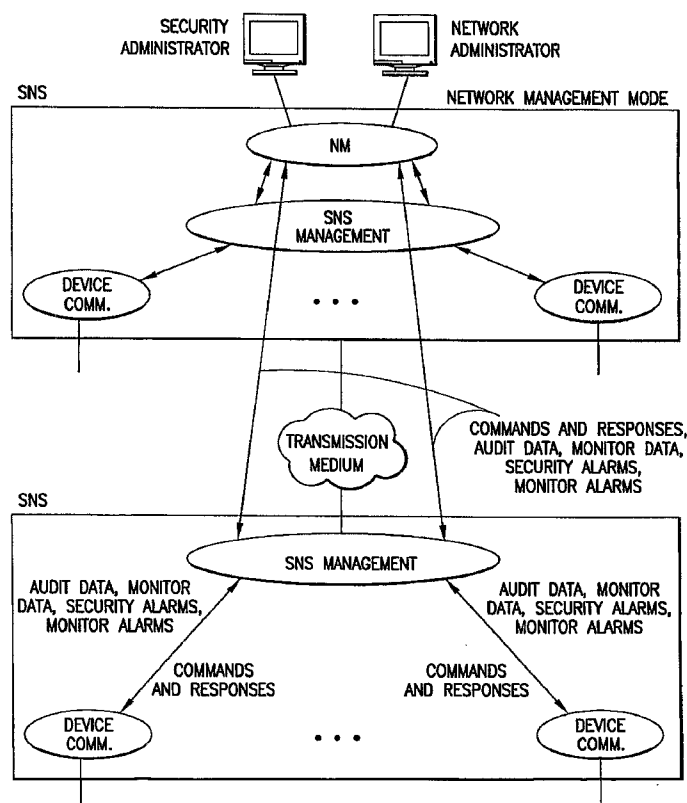
(74) Agents: **RAD, Fariba, K.** et al.; The Boeing Company, P.O. Box 2515, Mc 110-SD54, Seal Beach, CA 90740-1515 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, 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,

[Continued on next page]

(54) Title: HIGH-ASSURANCE FILE-DRIVEN CONTENT FILTERING FOR SECURE NETWORK SERVER



(57) Abstract: A server for transferring data between networks. The server is programmed to perform the following steps: (a) creating a receiving process, a filtering process and a forwarding process, the filtering process being dictated by a file that specifies filtering rules, wherein: (b) the receiving process receives data transmitted from a source host; (c) the filtering process filters the transmitted data based on the filtering rules; and (d) the forwarding process forwards only filtered data to a destination host.

WO 2007/100867 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

15 November 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/005187

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04L29/06

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)

H04L G06F

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 practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 604 143 B1 (NAGAR VIVEK [US] ET AL) 5 August 2003 (2003-08-05) abstract figures 2-6 column 1, line 10 - line 13 column 1, line 37 - column 2, line 55 column 3, line 6 - line 18 column 3, line 32 - column 4, line 6 column 4, line 36 - column 8, line 40 ----- -/--	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

* 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 document 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

11 September 2007

Date of mailing of the international search report

18/09/2007

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Kopp, Klaus

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/005187

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EPSTEIN J: "Architecture and concepts of the ARGuE Guard" COMPUTER SECURITY APPLICATIONS CONFERENCE, 1999. (ACSAC '99). PROCEEDINGS. 15TH ANNUAL PHOENIX, AZ, USA 6-10 DEC. 1999, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 6 December 1999 (1999-12-06), pages 45-54, XP010368591 ISBN: 0-7695-0346-2 page 47 - page 48	1,5,10, 14,19
A	IETF CIPSO WORKING GROUP: "COMMERCIAL IP SECURITY OPTION (CIPSO 2.2)" IETF STANDARD-WORKING-DRAFT, INTERNET ENGINEERING TASK FORCE, IETF, CH, vol. cipso, no. 1, 16 July 1992 (1992-07-16), XP015016704 ISSN: 0000-0004 page 1 - page 8	2-4,8,9, 11-13, 17,18,20
A	SMITH R E: "A secure Email gateway (building an RCAS external interface)" COMPUTER SECURITY APPLICATIONS CONFERENCE, 1994. PROCEEDINGS., 10TH ANNUAL ORLANDO, FL, USA 5-9 DEC. 1994, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, 5 December 1994 (1994-12-05), pages 202-211, XP010126051 ISBN: 0-8186-6795-8 abstract page 203 - page 208	6,8,9, 15,17,18
A	GALIK D ET AL: "Fielding multilevel security into command and control systems" COMPUTER SECURITY APPLICATIONS CONFERENCE, 1991. PROCEEDINGS., SEVENTH ANNUAL SAN ANTONIO, TX, USA 2-6 DEC. 1991, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 2 December 1991 (1991-12-02), pages 202-208, XP010025340 ISBN: 0-8186-2280-6 page 202 page 205	8,9,17, 18

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/005187

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6604143	B1	05-08-2003	NONE