(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 22 May 2008 (22.05.2008)

(10) International Publication Number WO 2008/060756 A3

- (51) International Patent Classification: H04B 7/185 (2006.01)
- (21) International Application Number:

PCT/US2007/079563

(22) International Filing Date:

26 September 2007 (26.09.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/828,044

3 October 2006 (03.10.2006) US

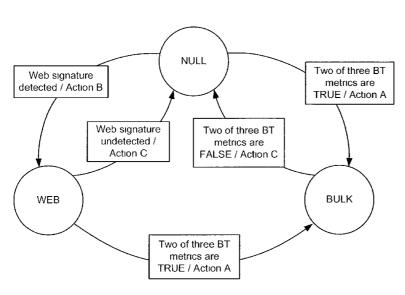
- (71) **Applicant** (for all designated States except US): **VIASAT**, INC. [US/US]; 6155 El Camino Real, Carlsbad, California 92009 (US).
- (72) Inventors: and
- (75) Inventors/Applicants (for US only): CONNORS.

Dennis, Patrick [US/US]; 4645 Exbury Court, San Diego, California 92130 (US). FREIER, Matthew, John [US/US]; 351 Acacia Avenue, Apt. 35, Carlsbad, California 92008 (US). DEVEAU, James, Edward [US/US]; 3626 Laredo Street, Carlsbad, California 92010 (US). WU, Xiao [CN/US]; 29930 Rancho California Road, Apt. 292, Temecula, California 92590 (US). JASKA, Kristi, Ann [US/US]; 372 Dollimore Road, Encinitas, California 92024 (US).

- (74) Agents: ALLEN, Kenneth, R. et al; Townsend And Townsend And Crew LIp, Two Embarcadero Center, 8th Floor, San Francisco, California 941 11-3834 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FT, 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, PG, PH, PL,

[Continued on next page]

(54) Title: WEB/BULK TRANSFER PREALLOCATION OF UPSTREAM RESOURCES IN A SATELLITE COMMUNICA-TION SYSTEM



(57) Abstract: In a data over satellite preallocation of upstream system, channel resources is provided by a scheduler at the gateway satellite modem termination system (SMTS) in response from the user terminal, wherein the user terminal detects web browser and/or bulk transfers involving large amounts of data transfer from users via the upstream channel. A type length value (TLV) field is included with data packets transmitted to the gateway SMTS, at which excess transfer capability is allocated to the user terminal in anticipation of load requirements.

Action A

- 1 Set application to BULK
- 2 Set paQuanta to paQuanta_{BULK}
- 3 Set paMultiplier to zero

Action B

- 1 Set application to WEB
- 2 Set paQuanta to paQuanta_{BULK}
- 3 Set paMultiplier to one

Action C

- 1 Set application to BULK
- 2 Set paQuanta to zero
- 3 Set paMultiplier to zero





WO 2008/060756 A3



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, 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, MT, 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: 17 July 2008

INTERNATIONAL SEARCH REPORT

International application No PCT/US2007/079563

A. CLASSIFICATION OF SUBJECT MATTER INV . H04B7/185

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)

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 , INSPEC

| C. | DOCUMEN | TS CON | SIDERED | то ве | RELEVAN | ١T |
|----|---------|--------|---------|-------|---------|----|
| | | | | | | |

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | | |
|-----------|--|-----------------------|--|--|
| Х | CONNORS D P ET AL: "RESPONSE INITIATED | 1,2,4, | | |
| Λ. | MULTIPLE ACCESS (RIMA), A MEDUM ACCESS | 11,13-18 | | |
| | CONTROL PROTOCOL FOR SATELLITE CHANNELS" | 11,13 10 | | |
| | GLOBECOM'OO. 2000 IEEE GLOBAL | | | |
| | TELECOMMUNICATIONS CONFERENCE. SAN | • | | |
| | FRANCISCO, CA, NOV. 27 - DEC. 1, 2000; | | | |
| | [IEEE GLOBAL TELECOMMUNICATIONS | | | |
| | CONFERENCE], NEW YORK, NY : IEEE, US, | , | | |
| | 27 November 2000 (2000-11-27), pages | | | |
| | 1124-1129, XP001017259 | | | |
| | ISBN: 978-0-7803-6452-3 | | | |
| | abstract; figures 1-4 | | | |
| | paragraphs [0001] - [0003], [0005] | | | |
| | | | | |
| | _/ | | | |
| | , | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| X Further documents are listed in the continuation of Box C. | X See patent family annex. |
|---|---|
| * Special categories of cited documents: 1A" 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) "O¹ document referring to an oral disclosure, use, exhibition or other means "P¹ document published prior to the international filing date but later than the priority date claimed | 1T" 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 1X- 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 | Date of mailing of the international search report , 05/06/2008 |
| 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 Staeger, Rainer |

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/079563

| C(Continua | tion). DOCUMENTS CONSIDERED TO BE RELEVANT | , |
|------------|---|-------------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | . Relevant to claim No. |
| X | US 6 778 509 BI (RAVISHANKAR CHANNASANDRA [US] ET AL) 17 August 2004 (2004-08-17) abstract ; figure 1 col umn 5, I i nes 1-56 col umn 2, I ines 37-55 | 1,2, 4-11, 13-18 |
| X | us 2003/050008 AI (PATTERSON DAVID P [US] ET AL PATTERSON DAVID P [US] ET AL) 13 March 2003 (2003-03-13) abstract ; figure 2 paragraphs [0009] , [0042] , [0049] , [0065] , [0074] - [0078] , [0101] | 1,2, 4-11, 13-18 |
| A | EVANS B ET AL: "Providing Di fferenti ated Service to TCP FI ows Over Bandwidth on Demand Geostationary Satel I ite Networks" IEEE JOURNAL ON SELECTED AREAS I N | 1-18 |
| | COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, US, vol . 22, no. 2, 1 February 2004 (2004-02-01) , pages 333-347, XP011106715 ISSN: 0733-8716 abstract paragraphs [001 .] - [OIL] | |
| Α. | TODOROVA P ET AL: ".Qual ity-of-service-oriented medi a access control for advanced mobile multimedi a satel lite systems" 6 January 2003 (2003-01-06) , SYSTEM SCIENCES, 2003. PROCEEDINGS OF THE 36TH ANNUAL HAWAII INTERNATI ONAL CONFERENCE ON 6-9 JAN. 2003, PISCATAWAY, NJ, USA 5 IEEE, PAGE(S) 309 - 316 , XP010626762 ISBN: 978-0-7695-1874-9 the whole document | 1-18 |
| | | |
| | | |
| | | |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

| | | | | | 1017001 | 2007/079303 |
|--|----|--|------|-------------------------|-------------|---------------------|
| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
| us 6778509 | ві | 17-08-2004 | NONE | | | |
| US 2003050008 | Al | 13-03-2003 | NONE | | | |
| | | د کاره است رسم پاک کارا کارو اینده است سم جوید مینا دست به دور | | | — — — — — — | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |