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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
29 November 2007 (29.11.2007)

PCT

(10) International Publication Number
WO 2007/137085 A3

(51) International Patent Classification:
H04L 12/28 (2006.01) *H04J 3/06* (2006.01)

(21) International Application Number:
PCT/US2007/069066

(22) International Filing Date: 16 May 2007 (16.05.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/802,023 19 May 2006 (19.05.2006) US

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(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, 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, 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.

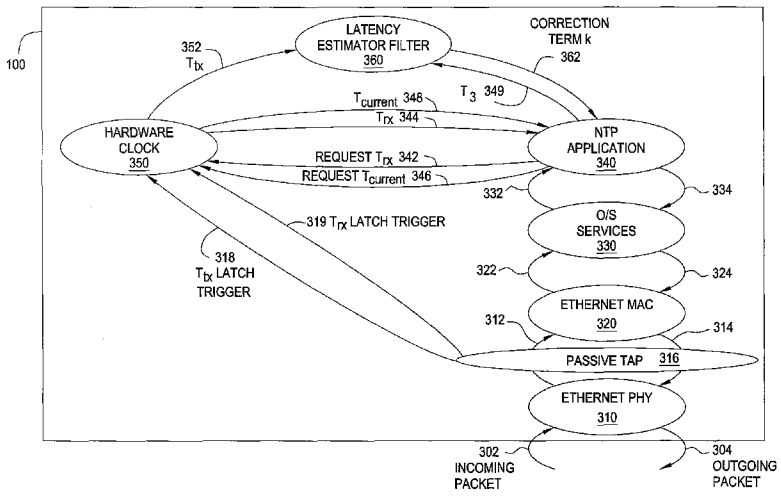
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, 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:
24 January 2008

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.

(54) Title: NETWORK TIME PROTOCOL PRECISION TIMESTAMPING SERVICE



(57) Abstract: Embodiments of the present invention set forth a method and system for reducing uncertainty in receive and transmit timestamps created by an NTP server. The uncertainty in the receive timestamps is removed by recording the time-of-arrival in the hardware clock of the NTP server before the incoming packets may be delayed by traversing the various layers of software in a timestamping system. The uncertainty in the transmit timestamps is removed by giving the outgoing packets a timestamp in the future using an estimate of the transmission latency calculated by the latency estimator filter. Subsequently, the actual time-of-departure is used to re-calculate and update the estimate of the transmission latency. In this fashion, superior control of the timestamping function may be implemented in existing NTP servers in a manner that retains interworking compatibility with the current NTP standards.

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