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(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, BN, 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, QA, RO, RS, RU, RW, 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.

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- (54) Title:** PROVIDING SECURITY TRACEABILITY OF CHANGES IN ENDPOINT PROGRAMMING THROUGH AUDITING

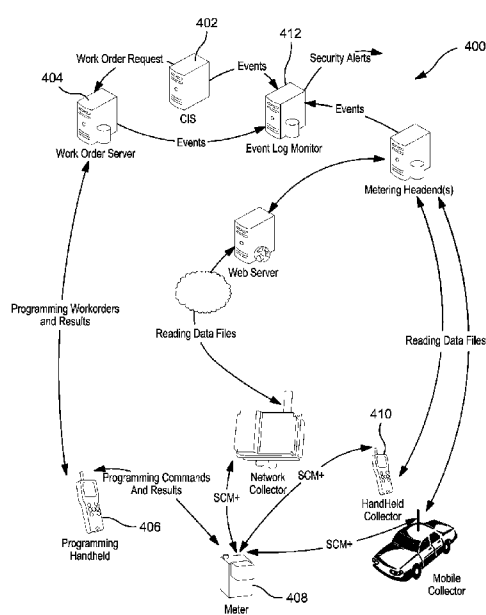


FIG. 4

- (57) Abstract:** The present subject matter is directed to methodologies, devices and systems for providing enhanced tamper detection in AMR/AMI systems. A consumption sensing meter has associated therewith an endpoint device. The endpoint device is configured to increment a tamper counter upon detection of various events including, such as, metrology and non-metrology programming events. A count of detected tamper events is conveyed to a head end device within the system is compared with a known count representing authorized programming events and an alarm is generated if the reported count and known count do not match.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 12/48477

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G08C 15/06 (2012.01)

USPC - 340/870.02

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)

USPC: 340/870.02

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

USPC: 340/870.02 (keyword limited - see search terms below)

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

PubWEST (PGPB, USPT, USOC, EPAB, JPAB); GOOGLE; Google Scholar

Search Terms Used: meter, metrology, utility, commodity, smart, tamper, fraud, detect, resistant, event, log, programming, code, software, firmware, count, automatic, read, authorized, field, register, alarm, alert, indicate, bits

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/0179714 A1 (Gilgenbach et al.) 25 September 2003 (25.09.2003), entire document, especially abstract, para [0006], [0007], [0009], [0034], [0047], [0048], [0056], [0057]	1-25
Y	US 2004/0030912 A1 (Merkle et al.) 12 February 2004 (12.02.2004), entire document, especially abstract, para [0011], [0012], [0030], [0087], [0092], [0133]	1-25
Y	US 2011/0115643 A1 (Gilbert et al.) 19 May 2011 (19.05.2011), entire document, especially abstract, para [0002], [0006], [0054], [0078]	1-25
Y	US 2002/0010688 A1 (Shah et al.) 24 January 2002 (24.01.2002), entire document, especially abstract, para [0013], [0033], [0034]	1-25
A	US 5,025,470 A (Thornborough et al.) 18 June 1991 (18.06.1991), entire document	1-25
A	US 5,910,774 A (Capriotti et al.) 08 June 1999 (08.06.1999), entire document	1-25
A	US 2007/0103334 A1 (Soni) 10 May 2007 (10.05.2007), entire document	1-25

☐ 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

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"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

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